

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

<b>Proposal No</b>	IA/JH/MIN/190924/2019
<b>Compliance ID</b>	717720578
<b>Compliance Number(For Tracking)</b>	EC/M/COMPLIANCE/717720578/2026
<b>Reporting Year</b>	2026
<b>Reporting Period</b>	01 Jun(01 Oct - 31 Mar)
<b>Submission Date</b>	31-05-2026
<b>RO/SRO Name</b>	Shri Senthil Kumar Sampath
<b>RO/SRO Email</b>	agmu156@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 Shri Senthil Kumar Sampath, JHARKHAND with Notification to Project Proponent.



**Deputy Director General Forests (C)**  
**Ministry of Environment, Forest & Climate Change,**  
**Integrated Regional Office, 2<sup>nd</sup> Floor, Headquarter – Jharkhand State Housing Board,**  
**Harmu Chowk, Ranchi, Jharkhand – 834002**  
**Email: [ro.ranchi-mef@gov.in](mailto:ro.ranchi-mef@gov.in)**

MD/ENV/ 103 /103/2026

Date: 25.05.2026

**Ref: I. Environment Clearance Letter No. J-11015/5/90 - IA.II (M) dated 18.05.1994.**  
**II. Environment Clearance Letter No. J-11015/49/2003.IA.II (M) dated 06.04.2005.**  
**III. Environment Clearance Letter No. J-11015/159/2007-IA.II (M) dated 26.08.2008.**  
**IV. Environment Clearance Letter No. J-11015/104/2011-IA.II (M) dated 10.06.2013.**  
**V. Environment Clearance Letter No. J-11015/104/2011-IA.II (M) dated 06.09.2021.**  
**VI. Environment Clearance Letter No. J-11015/104/2011-IA.II (M) dated 29.10.2021.**

**Sub: Half-yearly Compliance status report of Environment Clearance Conditions for the Period**  
**October 2025 – March 2026 in respect of Noamundi Iron Mine, Tata Steel Limited.**

Dear Sir

Kindly find attach herewith the half-yearly compliance status report in respect of the stipulated Environmental Clearance condions of Noamundi Iron Mine , Tata Steel Limited for the period **October 2025 – March 2026**.

We trust that the measures taken towards environmental safeguards comply with the stipulated environmental conditions. We look forward to your further guidance which shall certainly help us in our endeavor for further improve upon our Environmental Management practices.

Thanking you,

Yours faithfully,  
f: M/s Tata Steel Limited

**Area Manager (Environment), OMQ**

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, JSPCB, T A Division (Ground Floor), Dhurwa, Ranchi-834004  
: The Regional Officer, JSPCB, MB/12 New Housing Colony, Adityapur, Jamshedpur

**TATA STEEL LIMITED**

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**HALF-YEARLY EC COMPLIANCE REPORT FOR  
NOAMUNDI IRON MINE OF TATA STEEL LIMITED**

**ENVIRONMENTAL CLEARANCE NO. J-11015/104/2011-IA.II (M) DATED 06.09.2021**

**(Period of Compliance: October 2025 to March 2026)**

Sl. No.	Conditions	Compliance
<b>A. Specific conditions</b>		
1.	Implementation of the revised remediation plan, natural resource augmentation plan (NRAP) and community resource augmentation plan (CRAP) which was submitted by PP after the EAC meeting.	Complied Remediation plan, Natural resource augmentation plan (NRAP) and Community resource augmentation plan (CRAP) are now complete. Detailed status of the same is attached as <b>Annexure-I, II and III respectively.</b>
2.	Implementation of the environmental monitoring plan with emphasis on air quality, noise and vibration, water quality as well as soil degradation to be submitted.	Being Complied The implementation of the environmental monitoring plan with emphasis on air quality, noise and vibration, water quality as well as soil degradation is being carried out as per the proposal. The copy of the implementation status is enclosed as <b>Annexure-IV.</b>
3.	Wildlife conservation plan be augmented with additional points revised in the light of guidance given by EAC during the meeting with more emphasis on wildlife conservation rather than creating infrastructure which cannot be controlled by project proponent.	Complied As guided by the EAC committee a revised Site-Specific Wildlife Conservation Plan is prepared in consultation with forest department officials and is approved by PCCF, WL and CWLW, Jharkhand vide Office order No. 33, dated: 15.05.2024
4.	Public hearing concerns must be addressed as committed.	Complied All the concerns raised in Public Hearing are addressed. Detailed status is enclosed as <b>Annexure-V.</b>
5.	The EMP cost should include plantation within the mine lease area whereas plantation outside the mine lease area will be given to NRAP cost.	Noted. Being Complied All the cost involved for plantation within mine lease area has been included in EMP cost and plantation outside the mine lease area has already been included in NRAP cost.
6.	No mining activities will be allowed in the forest area for which forest clearance is not available.	Noted. Complied Noamundi Iron Mine of Tata Steel has restricted its operations in diverted forest and non-forest area as per approvals obtained. 762.42 ha is forest land and rest is non-forest land. 762.42 ha, forest land has been diverted for mining in two phases 1. 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014 and 2. For remaining 391.51 ha (including safety zone), has been granted vide File No. 8-65/2018FC, dated 02.05.2026.
7.	As the public hearing has been carried out for the entire project area and PP has paid the NPV for entire forest land involved in the project area, PP after taking stage- II Forest Clearance for remaining area i.e. 391.51 Ha; may again approach the Ministry for undertaking mining in the remaining area with the proper mining plan.	Being Complied MoEF and CC, New Delhi has accorded Stage-II Forest clearance under section 2 (1) (ii) of the Forest (Conservation) Act, 1980 for non-forestry use of the remaining area i.e. 391.51 ha including 8.14 ha of safety zone area on 2 <sup>nd</sup> May 2026. The compliance of Stage-II
<b>B. Standard conditions</b>		
<b>I. Statutory Compliance</b>		
(1)	This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of	Noted.

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	India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.	
(2)	The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India andOrs before commencing the mining operations.	Complied A payment of Rs 56,96,51,093.00/- is made as per demand notice no. 1986/M dated 12.09.2017. The Project Proponent is complying with all the statutory requirements and judgements of Hon. Supreme Court dated the 2nd August 2017 in writ petition (civil) no. 114 of 2014 in the matter of common cause vs union of India and Ors.
(3)	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining and Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India andOrs.	Complied A payment of Rs 56,96,51,093.00/- is made as per demand notice no. 1986/M dated 12.09.2017. The Project Proponent is complying with all the statutory requirements and judgements of Hon. Supreme Court dated the 2nd August 2017 in writ petition (civil) no. 114 of 2014 in the matter of common cause vs union of India and Ors.
(4)	This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEFandCC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.	Not applicable. There are no protected areas/ eco-sensitive zones within 10 km of the mine lease area.
(5)	This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.	Being Complied Noamundi Iron Mine of Tata Steel has restricted its operations in diverted forest and non-forest area as per approvals obtained. The mine has 1160.06 ha lease area, out of which 762.42 ha is forest land and rest is non-forest land. 762.42 ha, forest land has been diverted for mining in two phases 1. 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014 and 2. For remaining 391.51 ha (including safety zone), has been granted vide File No. 8-65/2018FC, dated 02.05.2026.
(6)	Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.	Complied Consent to Establish (CTE) has been granted by JSPCB vide letter no: JSPCB/HO/RNC/CTE-10765772/2021/354 dated 17.12.2021. Consent to Operate (CTO) has been granted by JSPCB vide letter no: JSPCB/HO/RNC/CTO-13904751/2022/1713 dated 06.12.2022 which is valid till 31.12.2026. All the conditions stipulated in CTE and CTO are being implemented effectively.
(7)	The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development and Regulation), Act, 2015 and rules and regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines	Noted and shall be abided.

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	Safety (DGMS) and Indian Bureau of Mines from time to time.	
(8)	The Project Proponent shall obtain consents from all the concerned landowners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.	Since it is an old mine, this is not applicable. Further the expansion is proposed within the mine lease area.
(9)	The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57 /2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".	Being Complied All the conditions mentioned in the MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014 are being followed. The compliance status of condition is enclosed as <b>Annexure-VI</b> .
(10)	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.	Being Complied Only Surface water from Baitarani river is being used for mining and allied activities. No ground water withdrawal is required for this project. Approval for drawing 10.6 MCM water on annual basis (29000 KLD) from Baitarini river vide letter no: - 1/PMC/VIVIDH/975/2020-514 dated 24.08.2021 has been granted by Water Resources Department, GoJ. Subsequently an agreement was signed on 20.10.2021 with the Executive Engineer, Water ways Division Chaibasa. The copy of the same is attached as <b>Annexure-VII</b> .
(11)	A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.	Complied A copy of EC letter was submitted to local panchayats i.e Noamundi, Balijore, Diriburu, Kadajamda and Mahudi panchayat. Copy of submitted letters is attached as <b>Annexure-VIII</b> .
(12)	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar'sOffice for 30 days	Noted.
(13)	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded ECand copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and	Complied Details of Environment Clearance with respect to Noamundi Iron Mine were published both in English (Avenue Mail) and Hindi (Prabhat Khabar) in local newspapers on 12.09.2021. The copy of the newspaper advertisement was sent to the Regional Office, MoEF and CC, Ranchi with letter no: MD/ENV/210/97/2021 dated 13.09.2021. The copy of advertisement is attached as <b>Annexure-IX</b> .

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	record.	
(14)	The Project Proponent shall inform the MoEFandCC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.	Noted.

**II. Air quality monitoring and preservation**

(1)	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.	<p>Being Complied</p> <p>Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM10, PM2.5, SOx, NOx and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b>.</p> <p>Manual ambient air quality stations are installed at prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b>.</p> <p>Monitored data is being displayed using electronic display board in front of the main gate of mines site as well as public domain. Photograph of display Board is attached as <b>Annexure-XII</b>.</p>
(2)	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water- soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board	<p>Being Complied</p> <p>Fugitive dust emissions from all the sources are being controlled regularly on daily basis.</p> <p>A network of fixed water sprinklers has been laid on permanent haul roads. Two mobile water tankers of large capacity namely 50 KL which can cover the entire width of the haul road has been commissioned.</p> <p>All feed hoppers where ore is unloaded, and all transfer chutes have been provided with dry-fog dust suppression system.</p> <p>Mist cannons have been placed at strategic points to prevent and control fugitive dust emission.</p> <p>Ambient air quality conforms to the CPCB norms.</p> <p>The copy of Fugitive Dust Monitoring report is attached as <b>Annexure-XIII</b>.</p> <p>Photographs of fixed water sprinkler, mobile water tankers, mist cannons and dry-fog systems are attached as <b>Annexure-XIV</b>.</p>

**III. Water quality monitoring and preservation**

(1)	In case, immediate mining scheme envisages	Being Complied
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	<p>intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area</p>	<p>As per approved mining plan, the mining operations are restricted above the ground water table. The ultimate working depth is 480 mRL while the Ground water table is at 478 mRL. Hence, the mine workings will never intersect ground water during the entire life of the mine. However, in case of working below ground water table prior approval for CGWA shall be taken.</p>
(2)	<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 maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/ State Pollution Control Board.</p>	<p>Being Complied Regular monitoring of flow rate of springs and nallahs are being carried out and records are maintained. The copy of flow rate monitoring report is attached as <b>Annexure-XV</b>. Streams (Balijhore nallah and Jojo nallah) which are present in and around the mine lease area shall not be disturbed. Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. Dugwells are located in villages adjacent to the mine lease area while piezometric borewells are located within the mine lease area. All the monitored data is being submitted to various agencies on six monthly basis along with half yearly EC compliance reports.  The copy of Ground Water Quality Report is attached as <b>Annexure-XVI</b>. The copy of ground water level report is attached as <b>Annexure-XVII</b>.</p>
(3)	<p>Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six- monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/ State Pollution Control Board.</p>	<p>Being Complied Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. The photograph of Piezometers is attached as <b>Annexure XVIII</b>.  All the monitored data is being submitted on six monthly basis along with Half yearly EC compliance reports to the Regional Office of the Ministry, CGWA/CGWB and Jharkhand State Pollution Control Board.</p>
(4)	<p>The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing</p>	<p>Being Complied Water quality monitoring of perennial nallahs (upstream and downstream) present inside and outside the mine lease area is done regularly. The copy of surface water quality monitoring report is attached as <b>Annexure XIX</b></p>

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	<p>within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFandCC. The monitoring of water courses/bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.</p>	<p>All the water quality parameters are within the stipulated limits. No obstruction or alteration is being/will be made to water bodies during mining operations.</p> <p>The monitoring is carried out four times in a year and monitoring reports are submitted to Regional Office of Ministry of Environment, Forest and Climate Change, Central Ground Water Authority and Regional Director, Central Ground Water Board, Jharkhand State Pollution Control Board and Central Pollution Control Board as part of EC compliance reports.</p>
(5)	<p>Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.</p>	<p>Being Complied</p> <p>There is no wastewater discharge from the mine and mineral processing plant, i.e entire unit is "Zero Discharge Unit".</p> <p>After mineral processing in wet plant, the slime slurry is thickened in the thickener and pumped to the slime pond, where slime settles down and decanted water is recycled back to circuit. All the slime slurry is sent only to mined-out voids which have been converted into in-pit slime ponds. The decanted water from the slime pond is completely recycled and reused in the beneficiation plant and generated slime is stored for future use like briquette making. Thus, no water is being discharged to outside mining lease area.</p> <p>The environmental monitoring data is regularly uploaded on the company website as a part of six-monthly EC compliance reports. The link for the same is attached here (<a href="https://www.tatasteel.com/corporate/our-organisation/environment/environment-compliance-reports/">https://www.tatasteel.com/corporate/our-organisation/environment/environment-compliance-reports/</a>).</p> <p>In addition to this all the monitored data is shown in display board present at the entrance gate. Photograph of display Board attached as <b>Annexure-XII</b>.</p>
(6)	<p>Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in</p>	<p>Being Complied</p> <p>Rainwater harvesting (RWH) ponds and ground water recharge structures have been constructed and approved</p>

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	<p>the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.</p>	<p>by the Ground Water Directorate, Jharkhand, Ranchi. The capacity of RWH ponds is 19,785 cum. The catchment area of the RWH pond complex is approx. 117 Ha hence it has been calculated that the rainwater harvesting potential of the RWH pond structure is approx. 12,50,000 cum/annum. Photographs of RWH structures are attached as <b>Annexure-XX</b>.</p> <p>Approval from Ground Water Directorate, Water Resources Dept. Jharkhand for RWH pond structure was received vide letter no. GWD 317/Ranchi, dated 14<sup>th</sup> June, 2012.</p> <p>Further, the rainwater collected in the mine pits are allowed to be collected in the lowest level sumps to augment the ground water resources gradually. Various RWH structures in the form of Check Dams, Saucer ponds, Gabion Structures, Trenches and contour are also made based on recommendation in available area.</p> <p>To augment the ground water level of surrounding village areas new additional ponds are constructed in buffer zone of Noamundi mine leases.</p>
(7)	<p>Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.</p>	<p>Being Complied</p> <p>A 30 KLD CETP along with Oil and grease pit with collection system has been installed at HEMM maintenance area. Oil is separated by gravitational technique and solids settle by sedimentation. Clear water flows to next chamber after passing through baffle wall. Clear water is again re-used. Water quality analysis is done on regular basis and the ETP quality analysis is attached as <b>Annexure-XXI</b>.</p> <p>Two Sewage Treatment Plant (STP) of 50 KLD each and two Effluent Treatment Plant (ETP) of 10 KLD each are also installed and working smoothly in mine lease area of Noamundi. Copy of STP quality analysis is enclosed as <b>Annexure-XXII</b>.</p> <p>We are maintaining a logbook of oil and grease recovered from ETP. The copy of logbook is attached as <b>Annexure-XXIII</b>.</p>
(8)	<p>The water balance/ water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEFandCC and State Pollution Control Board/Committee.</p>	<p>Noted.</p> <p>Evaluation of water consumption is being carried out and suitable measures for reducing water consumption have been identified such as commissioning of paste thickener etc.</p> <p>There is zero waste-water discharge by the mine and it will be maintained in the future as well.</p> <p>Optimization of the water consumption will be done to reduce the specific water consumption year-on-year.</p>

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<b>IV. Noise and vibration monitoring and prevention</b>		
(1)	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	Being Complied Monitoring of peak particle velocity (ppv) is done after every blast as per DGMS guidelines and the copy of sample reports are attached as <b>Annexure XXIV</b> .
(2)	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours	Being Complied The illumination and sound has been done in such a way that the villagers are not disturbed. Additionally developed green belt all along the boundary of railway siding area to reduce the propagation of sound and light to the surrounding area. we are also planning to install noise barriers around the railway siding boundary to significantly reduce the noise propagation outside the mine premises.
(3)	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.	Being Complied Adequate measures are taken for control of work noise levels such as all HEMMs have acoustic cabins with air conditioners and the exhaust manifold have silencers. Noisy operations have been identified and persons engaged in such operations are provided with ear plugs/muffs. All persons working in dusty areas are provided with protective dust masks. Adequate training, awareness and information on safety and health aspects are provided on regular basis. Noise Monitoring reports is attached as <b>Annexure-XXV</b> .
<b>V. Mining plan</b>		
(1)	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. No change in basic mining proposal like mining technology, total excavation, mineral and waste production, lease area and scope of working (viz. method of mining, overburden and dump management, O.B and dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.	Being Complied All mining activities are being carried out in accordance with approved mining plan by IBM.
(2)	The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of	This is not applicable in this financial year as it is an operational mine.

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	Mines/Department of Mining and Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.	
(3)	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis- a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFandCC and its concerned Regional Office.	<p>Noted. Being Complied</p> <p>Land-use of the mine lease area shall be governed as per the approved mining plan.</p> <p>Excavation, backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area are governed as per approved mining plan. Report on plantation activities is being submitted regularly to the Board along with monthly reports.</p> <p>In FY 26 around 25,221 saplings have planted in the mine lease area.</p>
<b>VI. Land reclamation</b>		
(1)	The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.	<p>Being Complied</p> <p>Over burden is stacked at earmarked places only. The slopes of the OB dumps are terraced, and the overall height width and slope angle is maintained as per approved Mining Plan.</p> <p>Generation of topsoil is very minimal because no fresh area is being broken for mining and the topsoil generated, is being kept at the earmarked site(s) only inside the mining lease area and is being subsequently used for plantation and other vegetation and grassing activities.</p> <p>The inactive dump slopes are vegetated with native species, vetiver grass and coir matting is done for better slope stabilization.</p> <p>The photograph of stabilized OB dump is attached as <b>Annexure XXVI</b>.</p>
(2)	The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.	<p>Being Complied</p> <p>Reject/waste is stacked at the earmarked places only. The slopes of the dumps are terraced, and the overall height width and slope angle is maintained as per approved Mining Plan.</p>
(3)	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.	<p>Being Complied</p> <p>Currently two Over Burden (OB) dumps are made as per plan at earmarked area which are progressively stabilized by native species plantation and grass vegetation as per</p>

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		<p>direction of MoEF and CC.</p> <p>In FY 25 around 25221 saplings have been planted in the mine lease area.</p> <p>Grassing on bunds of haul roads to control wind pollution also been practiced as per kind suggestion from MoEF and CC office at mine.</p>
(4)	<p>The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners/ Bentonite etc. shall be undertaken for stabilization of the dump.</p>	<p>Being Complied</p> <p>The inactive dump slopes are vegetated with native species, vetiver grass and coir matting are done for better slope stabilization.</p> <p>The dump mass is consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, laying of coir mat along with grass seeding is practiced.</p> <p>The details and photographs of retaining wall, garland drains, coir-mat, Settling ponds, gully plugs is attached as <b>Annexure-XXVII</b>.</p>
(5)	<p>The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEFandCC.</p>	<p>Being Complied</p> <p>Slope stability study has been done for dumps at Noamundi Iron Mine by CSIR-Central Institute of Mining and Fuel Research, Dhanbad. The report has been submitted to Regional Office of MoEF and CC vide letter no: MD/ENV/303/103/2021 dated 19.11.2021.</p>
(6)	<p>Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.</p>	<p>Being Complied</p> <p>Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).</p>
(7)	<p>Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.</p>	<p>Being Complied</p> <p>Check dams of appropriate size, gradient and length are constructed along with sedimentation pits as per progressive mine closure plan.</p>

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(8)	<p>The top soil, if any, shall temporarily be stored at earmarked sile(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose</p>	<p>Being Complied Generation of topsoil is very minimal because no fresh area is being broken for mining and the topsoil generated, is being kept at the earmarked site(s) only inside the mining lease area and is being subsequently used for plantation and other vegetation and grassing activities.</p>
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**VII. Transportation**

(1)	<p>No Transportation of the minerals shall be allowed in case of roads passing through villages/habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.</p>	<p>Being Complied All the finished iron ore product is transported to end-users through Noamundi captive railway siding. As an interim arrangement, it is proposed to additionally use the public railway sidings (Bokaro siding and Line no.5 Siding) for dispatch to end users. Therefore the road between Bottom bin and public railway sidings will be used for transporting the material through trucks. This is as per approval granted by MoEFCC.  Pollution Under Control (PUC) certificate has been obtained for all the vehicles from authorized pollution testing centers. Sample PUC certificate is attached as <b>Annexure XXVIII</b>.</p>
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(2)	<p>The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust</p>	<p>Being Complied A network of fixed water sprinklers has been laid on permanent haul roads. Mobile water tankers of large capacity namely 50 KL which can cover the entire the entire width of the haul road has been commissioned.  All feed hoppers where ore is unloaded and all transfer chutes have been provided with dry-fog dust suppression system. Mist cannons have placed at strategic points to prevent and control of fugitive dust emission. Photographs attached as <b>Annexure-XIV</b>. The beneficiated ore from processing plant to railway sidings being transported through covered conveyors</p>
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	while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions	only. Dust Extraction system is present at Primary crusher.
<b>VIII. Green Belt</b>		
(1)	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.	Complied Safety zone of 7.5 meters all along the mine lease boundary is maintained with plantation of saplings. Photographs of SZ plantation is attached as <b>Annexure XXIX.</b>
(2)	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.	Being Complied Plantation of saplings on waste dumps, backfilled area is done as per approved mine plan. In this financial year i.e 2024-25 plantation of about 25221 saplings is done on Waste dump D2, Kurtha dump. In addition to this Avenue plantation outside the mine lease is also carried out.
(3)	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.	No grazing land has been acquired.
(4)	The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State	Being Complied The site-specific wildlife conservation plan (SSWLCP) has been approved by Chief Wildlife Warden on 28.08.2020. The impact of mining project on wildlife of the study area and detailed mitigative measures are part of this plan. The total approved cost for implementation of SSWLCP is Rs.25.26 crores (to be spent over a 10-year period).

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	Govt. and implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.	Site specific wild life conservation plan and its approval has been submitted to the Ministry and its Regional Office. A Modified SSWLCP was approved vide. Order No. 33, dated: 15.05.2024. The annual implementation status of the plan (for FY25) is provided as <b>Annexure-XXX</b> .
<b>IX. Public hearing and human health issues</b>		
(1)	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.	Being Complied Noamundi hospital is well-equipped with an Occupational Health Center OHS center employs a full-time occupational health specialist. Health of the employees through audiometry, x-ray, pathology, ophthalmology, lung-function test, etc monitored. During the period January to December 2025: 2784 nos. of IME and 206 nos. of PME was carriedout. Some of the best practices related to occupational health adopted in mine are: <ul style="list-style-type: none"> <li>• Employees' health check-up under Wellness @ workplace program</li> <li>• Health awareness classes on weekly basis for shop floor employees</li> <li>• Officers' health check-up on yearly basis for lifestyle disease</li> <li>• Counseling to high blood pressure, sugar cholesterol, hypertension employees through medical board.</li> </ul>
(2)	The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.	Being Complied The company's commitment in the area of Health and Safety is well supported by implementation of: Safety Principles and Occupational Health Policy Occupational Health and Safety Management System (ISO 45001:2018). Hazards in work place are identified as a part of occupational health policy and appropriate control measures are in place to protect the health and well being of workers. Various awareness programs regarding health, sanitation etc. have been conducted with the help of Tata Steel Foundation(TSF). The health-related initiatives in place are- <ul style="list-style-type: none"> <li>▪ Mega health camps, Malaria parasite control programme, Cataract surgery camp, Prenatal care</li> <li>▪ MANSI project: Reducing infant and maternal mortality</li> <li>▪ Providing financial assistance and waivers for needy patients, on a case-to-case basis</li> <li>▪ Preventing and treating communicable diseases like malaria, tuberculosis and HIV / AIDS</li> <li>▪ Treating and rehabilitating persons with disabilities</li> <li>▪ RISHTA project: working on adolescent and reproductive sexual health issues</li> </ul>

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		Details of health camps and awareness sessions along with
(3)	<p>The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminum, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).</p>	<p>Being Complied Noamundi hospital is well-equipped with an Occupational Health Center OHS center employs a full-time occupational health specialist. Health of the employees through audiometry, x-ray, pathology, ophthalmology, lung-function test, etc monitored.</p> <p>Pre-placement medical examination and periodical examination of the workers engaged is being conducted and record maintained. The schedule of Periodical Medical Examination is once in every 3 years for the employees of age more than 45 years and once in 5 years for the employees of age less than 45 years. Some of the best practices related to occupational health adopted in mine are:</p> <ul style="list-style-type: none"> <li>• Employees' health check-up under Wellness @ workplace program</li> <li>• Health awareness classes on weekly basis for shop floor employees</li> <li>• Officers' health check-up on yearly basis for lifestyle disease</li> <li>• Counseling to high blood pressure, sugar cholesterol, hypertension employees through medical board</li> <li>• Observation of important health days like World No Tobacco day, AIDS day, Heart day, Diabetic day etc</li> <li>• Display of calorie chart in canteens alongside the menu</li> </ul> <p>No adverse cases have been found till date.</p>
(4)	<p>The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 - 24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,{c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented}, (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to</p>	<p>Being Complied All the performance indicators for workers during IME and PME are maintained. In addition to health check-ups, health awareness classes on weekly basis for shop floor employees, counselling to high blood pressure, sugar, cholesterol etc is done.</p> <p>No adverse cases have been found till date.</p>

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	the Regional Office, MoEFandCC annually along with details of the relief and compensation paid to workers having above indications.	
(5)	The Project Proponent shall ensure that 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.	Being Complied All the personnel working in dusty areas are provided with protective respiratory devices such as masks and also provided adequate training and information on safety and health aspects. Photograph of workers using PPEs is attached as <b>Annexure-XXXI</b> .
(6)	Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.	Being Complied Township has been developed for workers with all the adequate facilities such as hospital, schools, STP etc.
(7)	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status report on implementation of action plan shall be submitted to the concerned Regional office of the Ministry along with District Administration.	Shall be complied.
<b>X. Corporate Environment Responsibility (CER)</b>		
(1)	The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude and longitude of infrastructure developed and road constructed needs to be submitted to Regional Office MoEFCC annually along with audited statement.	Being Complied All the activities proposed during Public Consultation are being implemented. The detailed status (is attached as <b>Annexure-V</b> ).
(2)	Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEFandCC and its concerned Regional Office.	Being Complied Funds allocated for environmental management are spent only for environment related purposes and not diverted to any other purpose. Expenditure details of environmental protection measures are reported to MoEF and CC and its Regional Office every year during half yearly

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		compliance submission. Expenditure details for the year 2025-26 is enclosed as <b>Annexure XXXII.</b>
<b>XI. Miscellaneous</b>		
(1)	The Project Proponent shall prepare digital map (land use and land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEFandCC.	Being Complied The digital processing of entire lease area is being carried out regularly. The current land use pattern is made by M/s Geo Consultants Pvt. Ltd. the authorized agency by ORSAC, Bhubaneswar. The land use land cover change map is enclosed as <b>Annexure XXXIII.</b>
(2)	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Not applicable. Noamundi is an operational Iron mine of Tata Steel Ltd from last several decades. Thus, financial closure and it's approval is not applicable.
(3)	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC and its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.	Being Complied Six monthly compliance reports are being submitted regularly on the status of implementation of the stipulated environmental safeguards to the MoEFandCC, its Regional Office, Central Pollution Control Board and Jharkhand State Pollution Control Board.
(4)	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFandCC.	Being Complied A separate environmental management cell is in place with people having relevant qualification on environmental science. Organization has adequate environmental reporting system for adequate decision making. Copy of Environment Management Cell is attached as <b>Annexure-XXXIV</b>
(5)	The concerned Regional Office of the MoEFandCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFandCC officer(s) by furnishing the requisite data/information/ monitoring reports.	Full cooperation shall be extended to the officers in furnishing the requisite data/ information/ monitoring reports.

**ENVIRONMENTAL CLEARANCE NO. J-11015/104/2011-IA.II (M) DATED 29.10.2021  
(Period of Compliance: October 2025 to March 2026)**

<b>S.No</b>	<b>Specific Condition</b>	<b>Compliance</b>
1	After this road is brought into utilization for transport, 6 monthly monitoring report as well as videography of the transportation undertaken to be submitted to Ministry.	It shall be complied after the road is brought into utilization. Currently all the finished iron ore product is transported to end-users through Noamundi captive railway siding.
2	The project proponent is advised to undertake a videography of 10.5 km road for those who are already using this road for transportation of the mineral other than M/s Tata Steel Limited from their respective mines to Jamda site and submit to	Videography of the 10.5 km road has been completed. It is being shared herewith through One-drive link. It is requested to click on the link below to view the video. Access has been provided to- <a href="mailto:ro.ranchi-mef@gov.in">ro.ranchi-mef@gov.in</a>

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	the Ministry for information.	<a href="#">Video Noamundi Jamda.mp4</a>
3	It was also mentioned by the project proponent that they are willingly accepting not to use Jamda siding and this will stay till the information on Jamda transportation available with the Ministry and within 5 years `project proponent must bring conveyer system till railway siding and stop using road.	Jamda siding shall not be used for transportation of mineral by Noamundi Iron Mine of Tata Steel Limited.

**ENVIRONMENTAL CLEARANCE NO. J-11015/104/2011-IA.II (M) DATED 10.06.2013  
(Period of Compliance: October 2025 to March 2026)**

<b>Specific Condition</b>		
<b>Sl No.</b>	<b>Condition</b>	<b>Compliance</b>
1	No mining activities will be allowed in forest area for which the Forest Clearance is not available.	Noted. Complied Noamundi Iron Mine of Tata Steel has restricted its operations in diverted forest and non-forest area as per approvals obtained. 762.42 ha is forest land and rest is non-forest land. 762.42 ha, forest land has been diverted for mining in two phases 1. 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014 and 2. For remaining 391.51 ha (including safety zone), has been granted vide File No. 8-65/2018FC, dated 02.05.2026.
2	The project proponent will seek and obtain approval under the FC Act, 1980 for diversion of the entire forest land located within the mining lease within a period of two years from 01.02.2013 i.e. the date of issue of guidelines by FC vide there letter F. No. 11-362/2012-FC, failing which the mining lease area will be reduced to the non forest area plus the forest area for which the project proponent has been able to obtain the FC at the end of this time period. In the case of reduction in mine lease area, the project proponent will need to get a revised mining plan approved from the competent authority for reduced area and enter into a new mining lease as per reduced lease area. The EC will be construed to be available for the mining lease area as per the revised mining lease deed.	Noted. Being complied. MoEFandCC, New Delhi has accorded Stage-II Forest clearance for non-forestry use of the remaining area i.e. 391.51 ha including 8.14 ha of safety zone area on 2 <sup>nd</sup> May 2026.. Preparation of revised mining plan is in progress, after modification of mining plan we shall approach the Ministry for undertaking mining in the remaining area.
3	Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.	Not Applicable.
4	Prior environmental clearance from the Standing Committee of the National Board for Wildlife shall be obtained if applicable, due to location of the mine within the core zone of Singhbhum Elephant	Not Applicable. As the mines is not located within the Singhbhum elephant reserve.

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	Reserve, before starting any activity relating to the project at site. All the conditions stipulated by the Standing Committee shall be effectively implemented in the project. It shall be noted that this clearance does not necessarily imply that wildlife clearance shall be granted to the project and that your proposal for wildlife clearance shall be considered by the competent authorities on its merit and decision taken. The investment made in the project, if any based on environmental clearance granted to the project, in anticipation of the clearance from wildlife clearance shall be entirely at the cost and risk of the project proponent and Ministry of Environment and Forests shall not be responsible in this regard in any manner.	
5	The project proponent shall obtain Consent to Establish and Consent to Operate from the State Pollution Control Board, Jharkhand and effectively implement all the conditions stipulated therein.	Complied Consent to Establish (CTE) has been granted by JSPCB vide letter no: JSPCB/HO/RNC/CTE-10765772/2021/354 dated 17.12.2021. Consent to Operate (CTO) has been granted by JSPCB vide letter no: JSPCB/HO/RNC/CTO-13904751/2022/1713 dated 06.12.2022 which is valid till 31.12.2026. All the conditions stipulated in CTE and CTO are being implemented effectively.
6	Environmental clearance is subject to 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.	Complied A payment of Rs 56,96,51,093.00/- is made as per demand notice no. 1986/M dated 12.09.2017. The Project Proponent is complying with all the statutory requirements and judgements of Hon. Supreme Court dated the 2nd August 2017 in writ petition (civil) no. 114 of 2014 in the matter of common cause vs union of India and Ors.
7	As part of ambient air quality monitoring during operational phase of the project, the air samples shall also be analyzed for their mineralogical composition and records maintained.	Being complied. Mineralogical composition of dustfall is being carried out.
8	The beneficiated ore shall be transported to railway sidings only through closed conveyor.	Being complied. Mineral is being transported through covered conveyor belts.
9	Effective safeguard measures such as conditioning of ore with water, regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Being Complied A network of fixed water sprinklers has been laid on permanent haul roads. Mobile water tankers of large capacity namely 50 KL which can cover the entire the entire width of the haul road has been commissioned.  All feed hoppers where ore is unloaded and all transfer chutes have been provided with dry-fog dust suppression system. Mist cannons have placed at strategic points to prevent and control of fugitive dust emission.

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		Photographs attached as <b>Annexure-XIV</b> .
10	The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	<p>Being Complied</p> <p>Rainwater harvesting (RWH) ponds and ground water recharge structures have been constructed and approved by the Ground Water Directorate, Jharkhand, Ranchi. The capacity of RWH ponds is 19,785 cum. The catchment area of the RWH pond complex is approx. 117 Ha hence it has been calculated that the rainwater harvesting potential of the RWH pond structure is approx. 12,50,000 cum/annum. Photographs of RWH structures are attached as <b>Annexure-XX</b>.</p> <p>Approval from Ground Water Directorate, Water Resources Dept. Jharkhand for RWH pond structure was received vide letter no. GWD 317/Ranchi, dated 14<sup>th</sup> June, 2012.</p> <p>Further, the rainwater collected in the mine pits are allowed to be collected in the lowest level sumps to augment the ground water resources gradually. Various RWH structures in the form of Check Dams, Saucer ponds, Gabion Structures, Trenches and contour are also made based on recommendation in available area.</p> <p>To augment the ground water level of surrounding village areas new additional ponds are constructed in buffer zone of Noamundi mine leases.</p>
11	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 installing new piezometers during the mining operation. The periodic monitoring ((at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.	<p>Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. Dugwells are located in villages adjacent to the mine lease area while piezometric borewells are located within the mine lease area.</p> <p>All the monitored data is being submitted to various agencies on six monthly basis along with half yearly EC compliance reports.</p> <p>The copy of Ground Water Quality Report is attached as <b>Annexure-XVI</b>. The copy of ground water level report is attached as <b>Annexure-XVII</b>.</p>
12	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry	As per approved mining plan, the mining operations are restricted above the ground water table. The ultimate working depth is 480 mRL while the Ground water table is at 478 mRL. Hence, the mine workings will never

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	of Environment and Forests and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.	intersect ground water during the entire life of the mine. However, in case of working below ground water table prior approval for CGWA shall be taken.
13	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. The Balijore Nallah shall be left undisturbed and protected.	Being complied. No water body is obstructed due to mining operation and Balijore Nallah shall be left undisturbed and protected.
14	The project proponent shall regularly monitor the flow rate of the Balijore Nallah flowing through the mine lease and maintain the records.	Being Complied Regular monitoring of flow rate of springs and nallahs are being carried out and records are maintained. The copy of flow rate monitoring report is attached as <b>Annexure-XV</b> .
15	There shall be no external over burden dumps at the end of the mine life. The reclaimed and rehabilitated area shall be afforested. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment and Forests and its Regional Office located at Bhubaneswar on six monthly basis.	Being Complied Over burden is stacked at earmarked places only. The slopes of the OB dumps are terraced, and the overall height width and slope angle is maintained as per approved Mining Plan. Generation of topsoil is very minimal because no fresh area is being broken for mining and the topsoil generated, is being kept at the earmarked site(s) only inside the mining lease area and is being subsequently used for plantation and other vegetation and grassing activities. The inactive dump slopes are vegetated with native species, vetiver grass and coir matting is done for better slope stabilization. The photograph of stabilized OB dump is attached as <b>Annexure XXVI</b> .
16	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, soil, mineral and temporary OB dump(s) to prevent run off of water and flow of sediments directly into Balijore Nallah, Kundra Nallah, Jojo Nallah, Mahadev Nallah, Baitarni River 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 desilted particularly after monsoon and maintained properly. 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(s) to prevent run off of water and flow of sediments directly into Balijore Nallah, Kundra Nallah, Jojo Nallah, Mahadev Nallah, Baitarni River 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	Being Complied Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).

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	arca 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 desilted at regular intervals.	
17	Dimension of the retaining wall at the toe of temporary over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.	Retaining wall of appropriate dimension has been constructed at the toe of over burden dumps.
18	Plantation shall be raised in an area of 990.601ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around the higher benches of excavated void to be converted in to water body, 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.	In this financial year i.e 2024-25 plantation of about 25221 saplings is done on Waste dump D2, Kurtha dump. In addition to this Avenue plantation outside the mine lease is also carried out.
19	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 RPM 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.	Being Complied A network of fixed water sprinklers has been laid on permanent haul roads. Mobile water tankers of large capacity namely 50 KL which can cover the entire the entire width of the haul road has been commissioned. AAQ monitoring reports are confirming to NAAQ standards.
20	Mine water discharge and/or any waste water shall be properly treated to meet the prescribed standards before reuse/discharge. The run off from temporary OB dumps and other surface run off shall be analyzed for iron and in case its concentration is found higher than the permissible limit, the waste water should be treated before discharge/reuse.	Being Complied Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).
21	The decanted water from the beneficiation plant and slime/tailing pond shall be re-circulated within the mine and there shall be zero discharge from the mine.	Being complied. De-canted water from slime/ tailing pond is being re-circulated. We are ensuring zero effluent discharge from the mines.
22	Regular monitoring of the flow rate of the springs and perennial nallahs shall be carried out and records maintained.	Being Complied Regular monitoring of flow rate of springs and nallahs are being carried out and records are maintained. The copy of flow rate monitoring report is attached as <b>Annexure-XV</b> .
23	Regular monitoring of water quality upstream and downstream of Balijore Nallah, Kundra Nallah, Jojo Nallah, Mahadev Nallah shall be carried out and record of monitoring data should be	Being Complied Water quality monitoring of perennial nallahs (upstream and downstream) present inside and outside the mine lease area is done regularly.

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	maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	The copy of surface water quality monitoring report is attached as <b>Annexure XIX</b> .
24	Appropriate mitigative measures shall be taken to prevent pollution of Baitarni River, if any, in consultation with the State Pollution Control Board.	Being Complied Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).
25	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water for the project. Ground water shall not be used for the mining operations.	Not applicable. We are not extracting any ground water.
26	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.	Being Complied Rainwater harvesting (RWH) ponds and ground water recharge structures have been constructed and approved by the Ground Water Directorate, Jharkhand, Ranchi. The capacity of RWH ponds is 19,785 cum. The catchment area of the RWH pond complex is approx. 117 Ha hence it has been calculated that the rainwater harvesting potential of the RWH pond structure is approx. 12,50,000 cum/annum. Photographs of RWH structures are attached as <b>Annexure-XX</b> .
27	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations 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.	Pollution Under Control (PUC) certificate has been obtained for all the vehicles from authorized pollution testing centers. Sample PUC certificate is attached as <b>Annexure XXVIII</b> .
28	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.	Being Complied Monitoring of peak particle velocity (ppv) is done after every blast as per DGMS guidelines and the copy of sample reports are attached as <b>Annexure XXIV</b> .
29	Drills shall either be operated with dust extractors or equipped with water injection system,	Being Complied Drills are being operated with dust extractors and equipped with water injection system,
30	Mineral handling plant shall be provided with	Being Complied

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	adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	<p>Fugitive dust emissions from all the sources are being controlled regularly on daily basis.</p> <p>A network of fixed water sprinklers has been laid on permanent haul roads. Two mobile water tankers of large capacity namely 50 KL which can cover the entire width of the haul road has been commissioned.</p> <p>All feed hoppers where ore is unloaded, and all transfer chutes have been provided with dry-fog dust suppression system.</p> <p>Mist cannons have been placed at strategic points to prevent and control fugitive dust emission.</p> <p>Ambient air quality conforms to the CPCB norms.</p> <p>The copy of Fugitive Dust Monitoring report is attached as <b>Annexure-XIII</b>.</p> <p>Photographs of fixed water sprinkler, mobile water tankers, mist cannons and dry-fog systems are attached as <b>Annexure-XIV</b>.</p>
31	Consent to operate shall be obtained from State Pollution Control Board prior to start of enhanced production from the mine.	Consent to Operate (CTO) has been granted by JSPCB vide letter no: JSPCB/HO/RNC/CTO-13904751/2022/1713 dated 06.12.2022 which is valid till 31.12.2026.
32	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for workshop and wastewater generated during mining operation.	<p>Being Complied</p> <p>A 30 KLD CETP along with Oil and grease pit with collection system has been installed at HEMM maintenance area. Oil is separated by gravitational technique and solids settle by sedimentation. Clear water flows to next chamber after passing through baffle wall. Clear water is again re-used. Water quality analysis is done on regular basis and the ETP quality analysis is attached as <b>Annexure-XXI</b>.</p> <p>Two Sewage Treatment Plant (STP) of 50 KLD each and two Effluent Treatment Plant (ETP) of 10 KLD each are also installed and working smoothly in mine lease area of Noamundi. Copy of STP quality analysis is enclosed as <b>Annexure-XXII</b>.</p>
33	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Bhubneswar.	<p>Being Complied</p> <p>The digital processing of entire lease area is being carried out regularly. The current land use pattern is made by M/s Geo Consultants Pvt. Ltd. the authorized agency by ORSAC, Bhubaneshwar.</p> <p>The land use land cover change map is enclosed as <b>Annexure XXXIII</b>.</p>
34	Regular monitoring of ambient air quality including free silica shall be carried out and records maintained.	<p>Being Complied</p> <p>Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM10, PM2.5, SO<sub>x</sub>, NO<sub>x</sub> and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b>.</p>

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		Manual ambient air quality stations are installed at prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b> .
35	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.	During the period January to December 2025: 2784 nos. of IME and 206 nos. of PME was carried out.
36	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna such as wolf, elephant, sloth bear, rhesus macaque etc. spotted in the core and buffer zone of the mine and contribute towards the cost of implementation of the plan and/or Regional Wildlife Management Plan for conservation of flora and fauna so prepared by the State Forest and Wildlife Department. The amount so contributed shall be included in the project cost. A copy of action plan shall be submitted to the Ministry and its Regional Office, Bhubaneswar within 3 months.	Being Complied The site-specific wildlife conservation plan (SSWLCP) has been approved by Chief Wildlife Warden on 28.08.2020. The impact of mining project on wildlife of the study area and detailed mitigative measures are part of this plan. The total approved cost for implementation of SSWLCP is Rs.25.26 crores (to be spent over a 10-year period).
37	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment and Forests 5 years in advance of final mine closure for approval.	This is not applicable in this financial year as it is an operational mine.
<b>B. General Conditions</b>		
1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Being complied. There is no change in mining technology. Mining is being carried out as per the approved mining plan by IBM.
2	No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.	Being complied. There is no change in calendar plan including excavation, quantum of mineral iron ore and waste. Mining is being carried out as per the approved mining plan by IBM.
3	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency	Being Complied Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM10, PM2.5, SOx, NOx and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b> .  Manual ambient air quality stations are installed at

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	of monitoring should be undertaken in consultation with the State Pollution Control Board. The data so recorded 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.	prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b> .
4	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.	Being Complied Adequate measures are taken for control of work noise levels such as all HEMMs have acoustic cabins with air conditioners and the exhaust manifold have silencers. Noisy operations have been identified and persons engaged in such operations are provided with ear plugs/muffs. All persons working in dusty areas are provided with protective dust masks. Adequate training, awareness and information on safety and health aspects are provided on regular basis. Noise Monitoring reports is attached as <b>Annexure-XXV</b> .
5	There will be zero waste water discharge from the plant.	Being complied We are ensuring zero effluent discharge from the mines.
6	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.	Being Complied Adequate measures are taken for control of work noise levels such as all HEMMs have acoustic cabins with air conditioners and the exhaust manifold have silencers. Noisy operations have been identified and persons engaged in such operations are provided with ear plugs/muffs. All persons working in dusty areas are provided with protective dust masks. Adequate training, awareness and information on safety and health aspects are provided on regular basis. Noise Monitoring reports is attached as <b>Annexure-XXV</b> .
7	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.	During the period January to December 2025: 2784 nos. of IME and 206 nos. of PME was carriedout.
8	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.	Being Complied A separate environmental management cell is in place with people having relevant qualification on environmental science. Organization has adequate environmental reporting system for adequate decision making. Copy of Environment Management Cell is attached as <b>Annexure-XXXIV</b>
9	The funds earmarked for environmental protection measures should be kept in separate	Being Complied Funds allocated for environmental management are

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	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.	spent only for environment related purposes and not diverted to any other purpose. Expenditure details of environmental protection measures are reported to MoEF and CC and its Regional Office every year during half yearly compliance submission. Expenditure details for the year 2025-26 is enclosed as <b>Annexure XXXII</b> .
10	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.	Not applicable. Noamundi is an operational Iron mine of Tata Steel Ltd from last several decades. Thus, financial closure and it's approval is not applicable.
11	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.	Full cooperation shall be extended to the officers in furnishing the requisite data/ information/ monitoring reports.
12	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubaneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.	Being Complied Six monthly compliance reports are being submitted regularly on the status of implementation of the stipulated environmental safeguards to the MoEFandCC, its Regional Office, Central Pollution Control Board and Jharkhand State Pollution Control Board.
13	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied A copy of EC letter was submitted to local panchayats i.e Noamundi, Balijore, Diriburu, Kadajamda and Mahudi panchayat. Copy of submitted letters is attached as <b>Annexure-VIII</b> .
14	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the	Complied

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	Collector's office/Tehsildar's Office for 30 days.	
15	The environmental statement for each financial year ending 31 March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, Bhubaneswar by e-mail.	Being complied.
16	The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at 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 at Bhubaneswar.	Complied Details of Environment Clearance with respect to Noamundi Iron Mine were published both in English (Avenue Mail) and Hindi (Prabhat Khabar) in local newspapers on 12.09.2021. The copy of the newspaper advertisement was sent to the Regional Office, MoEF and CC, Ranchi with letter no: MD/ENV/210/97/2021 dated 13.09.2021. The copy of advertisement is attached as <b>Annexure-IX</b> .

**ENVIRONMENTAL CLEARANCE NO. J-11015/159/2007-IA.II (M) DATED 26.08.2008  
(Period of Compliance: October 2025 to March 2026)**

<b>Specific Condition</b>		
<b>Sl No.</b>	<b>Condition</b>	<b>Compliance</b>
1	All the conditions stipulated by the Jharkhand State Pollution Control Board in their NOC shall be effectively implemented.	Being complied. All the conditions stipulated in JSPCB's Consent to Establish is being complied.
2	Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 762.43ha forestland shall be obtained before starting mining operation in that area. Till such time mining activities shall be restricted to an area of 346.49ha, for which forestry clearance has been obtained from the Ministry on 23.04.1999. Environmental clearance is subject to grant of forestry clearance.	Noted. Complied Noamundi Iron Mine of Tata Steel has restricted its operations in diverted forest and non-forest area as per approvals obtained. 42 ha is forest land and rest is non-forest land. 762.42 ha, forest land has been diverted for mining in two phases 1. 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014 and 2. For remaining 391.51 ha (including safety zone), has been granted vide File No. 8-65/2018FC, dated 02.05.2026.
3	The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below	Being Complied As per approved mining plan, the mining operations are restricted above the ground water table. The ultimate

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	ground water table, prior approval of the Ministry of Environment and Forests and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.	working depth is 480 mRL while the Ground water table is at 478 mRL. Hence, the mine workings will never intersect ground water during the entire life of the mine. However, in case of working below ground water table prior approval for CGWA shall be taken.
4	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. The Balijore Nallah shall be left undisturbed and protected.	Being complied. No water body is obstructed due to mining operation and Balijore Nallah shall be left undisturbed and protected.
5	The project proponent shall regularly monitor the flow rate of the Balijore Nallah flowing through the mine lease and maintain the records.	Being Complied Regular monitoring of flow rate of springs and nallahs are being carried out and records are maintained. The copy of flow rate monitoring report is attached as <b>Annexure-XV</b> .
6	The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for a period more than 3years. The topsoil shall be used for land reclamation and plantation,	Being Complied Generation of topsoil is very minimal because no fresh area is being broken for mining and the topsoil generated, is being kept at the earmarked site(s) only inside the mining lease area and is being subsequently used for plantation and other vegetation and grassing activities.
7	There shall be no external over burden dumps at the end of the mine life. The reclaimed and rehabilitated area shall be afforested. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment and Forests and its Regional Office located at Bhubaneswar on six monthly basis.	Being Complied Over burden is stacked at earmarked places only. The slopes of the OB dumps are terraced, and the overall height width and slope angle is maintained as per approved Mining Plan. Generation of topsoil is very minimal because no fresh area is being broken for mining and the topsoil generated, is being kept at the earmarked site(s) only inside the mining lease area and is being subsequently used for plantation and other vegetation and grassing activities. The inactive dump slopes are vegetated with native species, vetiver grass and coir matting is done for better slope stabilization. The photograph of stabilized OB dump is attached as <b>Annexure XXVI</b> .
8	The void left unfilled in an area of 93.89ha shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out all along the excavated area.	Shall be governed as per the approved final mine closure plan.
9	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, soil, mineral and temporary OB dump(s) to prevent run off of water and flow of sediments directly into	Being Complied Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-

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	<p>Balijore Nallah, Kundra Nallah, Jojo Nallah, Mahadev Nallah, Baitarni River 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 desilted particularly after monsoon and maintained properly. 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(s) to prevent run off of water and flow of sediments directly into Balijore Nallah, Kundra Nallah, Jojo Nallah, Mahadev Nallah, Baitarni River 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 desilted at regular intervals.</p>	<p>siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).</p>
10.	<p>Dimension of the retaining wall at the toe of temporary over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rain fall data.</p>	<p>Retaining wall of appropriate dimension has been constructed at the toe of over burden dumps.</p>
11	<p>Plantation shall be raised in an area of 990.601ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around the higher benches of excavated void to be converted in to water body, 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>In this financial year i.e 2024-25 plantation of about 25221 saplings is done on Waste dump D2, Kurtha dump. In addition to this Avenue plantation outside the mine lease is also carried out.</p>
12	<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 RPM 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>Being Complied A network of fixed water sprinklers has been laid on permanent haul roads. Mobile water tankers of large capacity namely 50 KL which can cover the entire width of the haul road has been commissioned.  All feed hoppers where ore is unloaded and all transfer chutes have been provided with dry-fog dust suppression system. Mist cannons have placed at strategic points to prevent and control of fugitive dust emission. Photographs attached as <b>Annexure-XIV</b>.</p>
13	<p>Mine water discharge and/or any waste water shall be properly treated to meet the prescribed standards before reuse/discharge. The run off from temporary OB dumps and other surface run off shall be analyzed for iron and in case its</p>	<p>Being Complied Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The desiltation of these check dams, settling pits are done</p>

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	concentration is found higher than the permissible limit, the waste water should be treated before discharge/reuse.	regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).
14	The decanted water from the beneficiation plant and slime/tailing pond shall be re-circulated within the mine and there shall be zero discharge from the mine.	After mineral processing in wet plant, the slime slurry is thickened in the thickener and pumped to the slime pond, where slime settles down and decanted water is recycled back to circuit. All the slime slurry is sent only to mined-out voids which have been converted into in-pit slime ponds. The decanted water from the slime pond is completely recycled and reused in the beneficiation plant and generated slime is stored for future use like briquette making. Thus, no water is being discharged to outside mining lease area.
15	Regular monitoring of the flow rate of the springs and perennial nallahs. shall be carried out and records maintained.	<p>Being Complied</p> <p>Regular monitoring of flow rate of springs and nallahs are being carried out and records are maintained. The copy of flow rate monitoring report is attached as <b>Annexure-XV</b>.</p> <p>Streams (Balijhore nallah and Jojo nallah) which are present in and around the mine lease area shall not be disturbed.</p> <p>Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. Dugwells are located in villages adjacent to the mine lease area while piezometric borewells are located within the mine lease area.</p> <p>All the monitored data is being submitted to various agencies on six monthly basis along with half yearly EC compliance reports.</p> <p>The copy of Ground Water Quality Report is attached as <b>Annexure-XVI</b>. The copy of ground water level report is attached as <b>Annexure-XVII</b>.</p>
16	Regular monitoring of water quality upstream and downstream of Balijore Nallah, Kundra Nallah, Jojo Nallah, Mahadev Nallah shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	<p>Being Complied</p> <p>Regular monitoring of flow rate of springs and nallahs are being carried out and records are maintained. The copy of flow rate monitoring report is attached as <b>Annexure-XV</b>.</p> <p>Streams (Balijhore nallah and Jojo nallah) which are present in and around the mine lease area shall not be disturbed.</p> <p>Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. Dugwells are located in villages adjacent to</p>

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		<p>the mine lease area while piezometric borewells are located within the mine lease area.</p> <p>All the monitored data is being submitted to various agencies on six monthly basis along with half yearly EC compliance reports.</p> <p>The copy of Ground Water Quality Report is attached as <b>Annexure-XVI</b>. The copy of ground water level report is attached as <b>Annexure-XVII</b>.</p>
17	<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>Being Complied</p> <p>Rainwater harvesting (RWH) ponds and ground water recharge structures have been constructed and approved by the Ground Water Directorate, Jharkhand, Ranchi. The capacity of RWH ponds is 19,785 cum. The catchment area of the RWH pond complex is approx. 117 Ha hence it has been calculated that the rainwater harvesting potential of the RWH pond structure is approx. 12,50,000 cum/annum. Photographs of RWH structures are attached as <b>Annexure-XX</b>.</p> <p>Approval from Ground Water Directorate, Water Resources Dept. Jharkhand for RWH pond structure was received vide letter no. GWD 317/Ranchi, dated 14<sup>th</sup> June, 2012.</p> <p>Further, the rainwater collected in the mine pits are allowed to be collected in the lowest level sumps to augment the ground water resources gradually. Various RWH structures in the form of Check Dams, Saucer ponds, Gabion Structures, Trenches and contour are also made based on recommendation in available area.</p> <p>To augment the ground water level of surrounding village areas new additional ponds are constructed in buffer zone of Noamundi mine leases.</p>
18	<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 operation. The monitoring shall be carried out four times in a year pre monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment and Forests and its Regional Office, Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board.</p>	<p>Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. Dugwells are located in villages adjacent to the mine lease area while piezometric borewells are located within the mine lease area.</p> <p>All the monitored data is being submitted to various agencies on six monthly basis along with half yearly EC compliance reports.</p> <p>The copy of Ground Water Quality Report is attached as <b>Annexure-XVI</b>. The copy of ground water level report is attached as <b>Annexure-XVII</b>.</p>
19	<p>Appropriate mitigative measures shall be taken to prevent pollution of Baitarni River, if any, in</p>	<p>Being Complied</p> <p>Garland drains with settling pits have been constructed</p>

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	consultation with the State Pollution Control Board.	all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).
20	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water for the project. Ground water shall not be used for the mining operations.	Being Complied Only Surface water from Baitarani river is being used for mining and allied activities. No ground water withdrawal is required for this project. Approval for drawing 10.6 MCM water on annual basis (29000 KLD) from Baitarani river vide letter no: - 1/PMC/VIVIDH/975/2020-514 dated 24.08.2021 has been granted by Water Resources Department, GoJ. Subsequently an agreement was signed on 20.10.2021 with the Executive Engineer, Water ways Division Chaibasa. The copy of the same is attached as <b>Annexure-VII</b> .
21	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.	Being Complied Rainwater harvesting (RWH) ponds and ground water recharge structures have been constructed and approved by the Ground Water Directorate, Jharkhand, Ranchi. The capacity of RWH ponds is 19,785 cum. The catchment area of the RWH pond complex is approx. 117 Ha hence it has been calculated that the rainwater harvesting potential of the RWH pond structure is approx. 12,50,000 cum/annum. Photographs of RWH structures are attached as <b>Annexure-XX</b> .
22	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations 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.	Pollution Under Control (PUC) certificate has been obtained for all the vehicles from authorized pollution testing centers. Sample PUC certificate is attached as <b>Annexure XXVIII</b> .
23	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.	Being Complied Monitoring of peak particle velocity (ppv) is done after every blast as per DGMS guidelines and the copy of sample reports are attached as <b>Annexure XXIV</b> .
24	Drills shall either be operated with dust extractors or equipped with water injection system.	Being Complied Drills are being operated with dust extractors and equipped with water injection system,
25	Mineral handling plant shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all	Being Complied Fugitive dust emissions from all the sources are being controlled regularly on daily basis.

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	the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	<p>A network of fixed water sprinklers has been laid on permanent haul roads. Two mobile water tankers of large capacity namely 50 KL which can cover the entire width of the haul road has been commissioned.</p> <p>All feed hoppers where ore is unloaded, and all transfer chutes have been provided with dry-fog dust suppression system.</p> <p>Mist cannons have been placed at strategic points to prevent and control fugitive dust emission.</p> <p>Ambient air quality conforms to the CPCB norms.</p> <p>The copy of Fugitive Dust Monitoring report is attached as <b>Annexure-XIII</b>.</p> <p>Photographs of fixed water sprinkler, mobile water tankers, mist cannons and dry-fog systems are attached as <b>Annexure-XIV</b>.</p>
26	Consent to operate shall be obtained from State Pollution Control Board prior to start of enhanced production from the mine.	Consent to Operate (CTO) has been granted by JSPCB vide letter no: JSPCB/HO/RNC/CTO-13904751/2022/1713 dated 06.12.2022 which is valid till 31.12.2026.
27	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for workshop and wastewater generated during mining operation.	<p>Being Complied</p> <p>A 30 KLD CETP along with Oil and grease pit with collection system has been installed at HEMM maintenance area. Oil is separated by gravitational technique and solids settle by sedimentation. Clear water flows to next chamber after passing through baffle wall. Clear water is again re-used. Water quality analysis is done on regular basis and the ETP quality analysis is attached as <b>Annexure-XXI</b>.</p> <p>Two Sewage Treatment Plant (STP) of 50 KLD each and two Effluent Treatment Plant (ETP) of 10 KLD each are also installed and working smoothly in mine lease area of Noamundi. Copy of STP quality analysis is enclosed as <b>Annexure-XXII</b>.</p>
28	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Bhubneswar.	<p>Being Complied</p> <p>The digital processing of entire lease area is being carried out regularly. The current land use pattern is made by M/s Geo Consultants Pvt. Ltd. the authorized agency by ORSAC, Bhubaneshwar.</p> <p>The land use land cover change map is enclosed as <b>Annexure XXXIII</b>.</p>
29	Regular monitoring of ambient air quality including free silica shall be carried out and records maintained.	<p>Being Complied</p> <p>Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM10, PM2.5, SOx, NOx and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b>.</p> <p>Manual ambient air quality stations are installed at prominent places such as Hospital, Mega Centre,</p>

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		Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b> .
30	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.	During the period January to December 2025: 2784 nos. of IME and 206 nos. of PME was carried out.
31	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna such as wolf, elephant, sloth bear, rhesus macaque etc. spotted in the core and buffer zone of the mine and contribute towards the cost of implementation of the plan and/or Regional Wildlife Management Plan for conservation of flora and fauna so prepared by the State Forest and Wildlife Department. The amount so contributed shall be included in the project cost. A copy of action plan shall be submitted to the Ministry and its Regional Office, Bhubaneswar within 3 months.	Being Complied The site-specific wildlife conservation plan (SSWLCP) has been approved by Chief Wildlife Warden on 28.08.2020. The impact of mining project on wildlife of the study area and detailed mitigative measures are part of this plan. The total approved cost for implementation of SSWLCP is Rs.25.26 crores (to be spent over a 10-year period). Site specific wild life conservation plan and its approval has been submitted to the Ministry and its Regional Office. A Modified SSWLCP was approved vide. Order No. 33, dated: 15.05.2024. The annual implementation status of the plan (for FY25) is provided as <b>Annexure-XXX</b> .
32	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment and Forests 5 years in advance of final mine closure for approval.	Not applicable.
<b>General Conditions</b>		
1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Being complied. There is no change in mining technology. Mining is being carried out as per the approved mining plan by IBM.
2	(ii) No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.	Being complied. There is no change in calendar plan including excavation, quantum of mineral iron ore and waste. Mining is being carried out as per the approved mining plan by IBM.
3	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO, and NOX monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Being Complied Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM10, PM2.5, SOx, NOx and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b> . Manual ambient air quality stations are installed at prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b> .

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4	Data on ambient air quality (RPM, SPM, SO <sub>2</sub> , and 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.	<p>Being Complied</p> <p>Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b>.</p> <p>Manual ambient air quality stations are installed at prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b></p>
5	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>Being Complied</p> <p>Fugitive dust emissions from all the sources are being controlled regularly on daily basis.</p> <p>A network of fixed water sprinklers has been laid on permanent haul roads. Two mobile water tankers of large capacity namely 50 KL which can cover the entire width of the haul road has been commissioned.</p> <p>All feed hoppers where ore is unloaded, and all transfer chutes have been provided with dry-fog dust suppression system.</p> <p>Mist cannons have been placed at strategic points to prevent and control fugitive dust emission.</p> <p>Ambient air quality conforms to the CPCB norms.</p> <p>The copy of Fugitive Dust Monitoring report is attached as <b>Annexure-XIII</b>.</p> <p>Photographs of fixed water sprinkler, mobile water tankers, mist cannons and dry-fog systems are attached as <b>Annexure-XIV</b>.</p>
6	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>Being Complied</p> <p>Adequate measures are taken for control of work noise levels such as all HEMMs have acoustic cabins with air conditioners and the exhaust manifold have silencers. Noisy operations have been identified and persons engaged in such operations are provided with ear plugs/muffs.</p> <p>All persons working in dusty areas are provided with protective dust masks.</p> <p>Adequate training, awareness and information on safety and health aspects are provided on regular basis.</p> <p>Noise Monitoring reports is attached as <b>Annexure-XXV</b>.</p>
7	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 31 December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	<p>Being Complied</p> <p>A 30 KLD CETP along with Oil and grease pit with collection system has been installed at HEMM maintenance area. Oil is separated by gravitational technique and solids settle by sedimentation. Clear water flows to next chamber after passing through baffle wall. Clear water is again re-used. Water quality</p>

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		<p>analysis is done on regular basis and the ETP quality analysis is attached as <b>Annexure-XXI</b>.</p> <p>Two Sewage Treatment Plant (STP) of 50 KLD each and two Effluent Treatment Plant (ETP) of 10 KLD each are also installed and working smoothly in mine lease area of Noamundi. Copy of STP quality analysis is enclosed as <b>Annexure-XXII</b>.</p> <p>We are maintaining a logbook of oil and grease recovered from ETP. The copy of logbook is attached as <b>Annexure-XXIII</b>.</p>
8	<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>All the personnel working in dusty areas are provided with protective respiratory devices such as masks and also provided adequate training and information on safety and health aspects.</p> <p>Photograph of workers using PPEs is attached as <b>Annexure-XXXI</b></p>
9	<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>Being Complied</p> <p>A separate environmental management cell is in place with people having relevant qualification on environmental science. Organization has adequate environmental reporting system for adequate decision making.</p> <p>Copy of Environment Management Cell is attached as <b>Annexure-XXXIV</b>.</p>
10	<p>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.</p>	<p>Being Complied</p> <p>Funds allocated for environmental management are spent only for environment related purposes and not diverted to any other purpose. Expenditure details of environmental protection measures are reported to MoEF and CC and its Regional Office every year during half yearly compliance submission.</p> <p>Expenditure details for the year 2025-26 is enclosed as <b>Annexure XXXII</b>.</p>
11	<p>The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.</p>	<p>Not applicable. Noamundi is an operational Iron mine of Tata Steel Ltd from last several decades. Thus, financial closure and it's approval is not applicable.</p>
12	<p>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.</p>	<p>Full cooperation shall be extended to the officers in furnishing the requisite data/ information/ monitoring reports.</p>
13	<p>The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the</p>	<p>Being complied.</p>

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	Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board.	
14	The project proponent shall submit six monthly report 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.	Being complied.
15	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 A copy of EC letter was submitted to local panchayats i.e Noamundi, Balijore, Diriburu, Kadajamda and Mahudi panchayat. Copy of submitted letters is attached as <b>Annexure-VIII</b> .
16	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.	Noted.
17	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at 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.	Complied Details of Environment Clearance with respect to Noamundi Iron Mine were published both in English (Avenue Mail) and Hindi (Prabhat Khabar) in local newspapers on 12.09.2021. The copy of the newspaper advertisement was sent to the Regional Office, MoEF and CC, Ranchi with letter no: MD/ENV/210/97/2021 dated 13.09.2021. The copy of advertisement is attached as <b>Annexure-IX</b> .

**ENVIRONMENTAL CLEARANCE NO. J-11015/49/2003-IA.II (M) DATED 06.04.2005**

**(Period of Compliance: October 2025 to March 2026)**

<b>I. Specific conditions</b>		
1.	No mining operation shall be taken in forestland within the lease area for which forestry clearance/permission from MOEF has not been obtained,	Noted. Complied Noamundi Iron Mine of Tata Steel has restricted its operations in diverted forest and non-forest area as per approvals obtained. 762.42 ha is forest land and rest is non-forest land. 762.42 ha, forest land has been diverted for mining in two phases 1. 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014 and 2. For remaining 391.51 ha (including safety zone), has been granted vide File No. 8-65/2018FC, dated 02.05.2026.
2.	Overburden and mineral rejects should be stacked at earmarked site(s) only/storage dumps only. The OB dumps shall be stabilised and terraced and reclaimed by plantation. Dimension of retaining wall at the toe of OB	Being Complied Over burden is stacked at earmarked places only. The slopes of the OB dumps are terraced, and the overall height width and slope angle is maintained as per approved Mining Plan.

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	<p>dumps and benches within the mine to check run-off and siltation should be based on the rainfall data.</p>	<p>Generation of topsoil is very minimal because no fresh area is being broken for mining and the topsoil generated, is being kept at the earmarked site(s) only inside the mining lease area and is being subsequently used for plantation and other vegetation and grassing activities.</p> <p>The inactive dump slopes are vegetated with native species, vetiver grass and coir matting is done for better slope stabilization.</p> <p>The photograph of stabilized OB dump is attached as <b>Annexure XXVI</b>.</p>
3.	<p>Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The drains should be regularly desilted and maintained properly.</p> <p>Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall. and maximum discharge in the area adjoining the mine site. Sump capacity should also provide-adequate retention period to allow proper settling of silt material.</p> <p>Storm water return system should be provided. Storm water should not be allowed to go to the effluent treatment plant during high rainfall/super cyclone period. A separate storm water sump for this purpose should be created.</p>	<p>Being Complied</p> <p>Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).</p>
4.	<p>Mine water discharge and/or any wastewater should be properly treated to meet the prescribed standards before reuse/discharge.</p> <p>Run-off from OB dumps and other surface run-off should be analyzed for iron and in case its concentration is found higher than the permissible limit, the water should be treated before discharge/reuse.</p>	<p>Being Complied</p> <p>Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).</p>
5.	<p>There shall be no discharge, of water/ effluents from the mineral beneficiation plant and the entire water shall be recycled.</p>	<p>After mineral processing in wet plant, the slime slurry is thickened in the thickener and pumped to the slime pond, where slime settles down and decanted water is recycled back to circuit. All the slime slurry is sent only to mined-out voids which have been converted into in-pit slime ponds. The decanted water from the slime pond is completely recycled and reused in the beneficiation plant and generated slime is stored for future use like briquette making. Thus, no water is being discharged to outside mining lease area.</p>

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6.	Groundwater shall not be used for the mining operations. Prior permission shall be taken from the SGWB and from the MOEF.	Being Complied Only Surface water from Baitarani river is being used for mining and allied activities. No ground water withdrawal is required for this project.
7.	Permission of the State Government shall be obtained for drawl of 12,700 m <sup>3</sup> /d of water. ,	Noted.
8.	Drills should be wet operated with dust extractors and controlled blasting shall be practised.	Being Complied Drills are being operated with dust extractors and equipped with water injection system.
9.	Dust fall and soil samples should be analysed for trace elements and metal ions, for at least three years during summer and winter seasons. If concentrations of these, elements are found below the standards then, with prior approval of MOEF, this specific monitoring could be discontinued	Being complied. Mineralogical composition of dustfall is being carriedout.
10.	A total area of 701.10 ha being disturbed, 202 ha area that has been afforested so far, 63 ha shall be reclaimed after backfilling of the mined out area, 104 ha shall be diverted for rainwater harvesting and 197 ha shall be afforested. Plantation should also be raised along the roads. dump sites, all around the ML area, safety zone, etc. by planting native plant species in consultation with local DFO/ Agriculture Department. At least 2000 plant species/ha should be planted.	Shall be as per the approved mining plan by IBM.
11.	Water harvesting and water conservation measures such as construction of check dams, ponds, water holes, in and around the mining lease area shall be undertaken. A total of 107 ha shall be diverted for rainwater harvesting.	Being Complied Rainwater harvesting (RWH) ponds and ground water recharge structures have been constructed and approved by the Ground Water Directorate, Jharkhand, Ranchi. The capacity of RWH ponds is 19,785 cum. The catchment area of the RWH pond complex is approx. 117 Ha hence it has been calculated that the rainwater harvesting potential of the RWH pond structure is approx. 12,50,000 cum/annum. Photographs of RWH structures are attached as <b>Annexure-XX</b> .  Approval from Ground Water Directorate, Water Resources Dept. Jharkhand for RWH pond structure was received vide letter no. GWD 317/Ranchi, dated 14 <sup>th</sup> June, 2012.  Further, the rainwater collected in the mine pits are allowed to be collected in the lowest level sumps to augment the ground water resources gradually. Various RWH structures in the form of Check Dams, Saucer ponds, Gabion Structures, Trenches and contour are also made based on recommendation in available area.  To augment the ground water level of surrounding village areas new additional ponds are constructed in

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		buffer zone of Noamundi mine leases.
12.	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. The monitoring of ground water level should be done at least four times a year in pre-monsoon (April/May), monsoon. (August), post-monsoon (November) and winter (January) seasons and for groundwater quality once (May). Data thus collected should be submitted to the Ministry of Environment and Forests and to Regional Office of the CGWB regularly. .	<p>Being Complied</p> <p>Regular monitoring of flow rate of springs and nallahs are being carried out and records are maintained. The copy of flow rate monitoring report is attached as <b>Annexure-XV</b>.</p> <p>Streams (Balijhore nallah and Jojo nallah) which are present in and around the mine lease area shall not be disturbed.</p> <p>Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. Dugwells are located in villages adjacent to the mine lease area while piezometric borewells are located within the mine lease area.</p> <p>All the monitored data is being submitted to various agencies on six monthly basis along with half yearly EC compliance reports.</p> <p>The copy of Ground Water Quality Report is attached as <b>Annexure-XVI</b>. The copy of ground water level report is attached as <b>Annexure-XVII</b>.</p>
13.	Digital processing of the entire lease area using remote sensing techniques should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional Office at Bhubaneshwar.	<p>Being Complied</p> <p>Ground water quality and Ground water level are being monitored periodically in and around the lease area through a network of dugwells and piezometric borewells. The photograph of Piezometers is attached as <b>Annexure XVIII</b>.</p> <p>All the monitored data is being submitted on six monthly basis along with Half yearly EC compliance reports to the Regional Office of the Ministry, CGWA/CGWB and Jharkhand State Pollution Control Board.</p>
14.	A "Consent to Operate" should be obtained from SPCB before expanding mining activities.	Consent to Operate (CTO) has been granted by JSPCB vide letter no: JSPCB/HO/RNC/CTO-13904751/2022/1713 dated 06.12.2022 which is valid till 31.12.2026.
15.	The Conservation Plan for conservation of endangered fauna including the Indian Elephant found in and around the mine area shall be prepared and implemented in consultation with identified agencies/institutions and with the State Forest Department. The Plan should be dovetailed with that prepared/under implementation/proposed for the endangered fauna found in the Reserve Forest in the buffer zone of the project site. The costs for the specific activities/tasks should be earmarked in the Conservation Plan and shall not be diverted for any other purpose. Year-wise status of the implementation of the Plan and the	<p>Being Complied</p> <p>The site-specific wildlife conservation plan (SSWLCP) has been approved by Chief Wildlife Warden on 28.08.2020. The impact of mining project on wildlife of the study area and detailed mitigative measures are part of this plan. The total approved cost for implementation of SSWLCP is Rs.25.26 crores (to be spent over a 10-year period).</p> <p>Site specific wild life conservation plan and its approval has been submitted to the Ministry and its Regional Office.</p> <p>A Modified SSWLCP was approved vide. Order No. 33, dated: 15.05.2024. The annual implementation status of</p>

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	expenditure thereon should be reported to the Ministry of Environment and Forests, RO, Bhubaneswar.	the plan (for FY25) is provided as <b>Annexure-XXX</b> .
16.	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment and Forests 5 years in advance of final mine closure for approval.	This is not applicable in this financial year as it is an operational mine.
17.	The Proponent shall earmark a separate fund of 1% subject to a minimum of Rs. 50,000/- of the total project cost for eco development measures including community welfare measures in the project area. The amount shall be deposited by the Company in a separate account within three months to be maintained by the Jharkhand State Pollution Control Board (SPCB).The action plan in this regard shall be submitted to the SPCB as well as to MOEF and its Regional Office at Bhubaneswar within three months of issue of this letter. After approval of the action plan by the SPCB, the amount deposited shall be released in two instalments to the project authorities based on progress of implementation. The SPCB shall ensure that implementation of the action plan for eco-development measures is completed within two years from date of its approval by SPCB. Further, the interest accrued during this period on the amount deposited by the proponent with the SPCB shall be ploughed back to the same eco development fund.	Being Complied Funds allocated for environmental management are spent only for environment related purposes and not diverted to any other purpose. Expenditure details of environmental protection measures are reported to MoEF and CC and its Regional Office every year during half yearly compliance submission. Expenditure details for the year 2025-26 is enclosed as <b>Annexure XXXII</b> .

**II. General conditions**

1.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Being complied. There is no change in mining technology. Mining is being carried out as per the approved mining plan by IBM.
2.	No change in the calendar plan including excavation, quantum of iron ore and waste produced should be made.	Being complied. There is no change in calendar plan including excavation, quantum of mineral iron ore and waste. Mining is being carried out as per the approved mining plan by IBM.
3.	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> and CO monitoring. Location of the stations should be decided based on the meteorological data, topographical features, and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Being Complied Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> , NO <sub>x</sub> and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b> .  Manual ambient air quality stations are installed at prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are

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		being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b> .
4.	Data on ambient air quality (RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> ) should be regularly submitted to the Ministry including its Regional office at Bhubaneswar and to the State Pollution Control Board / Central Pollution Control Board once in six months.	Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> , NO <sub>x</sub> and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b> . Manual ambient air quality stations are installed at prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b>
5.	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dumpers, trucks, loading and unloading points should be provided and properly maintained. Crushers and conveyors shall be enclosed and provided with dust extraction systems near the sources of generation.	Being Complied Fugitive dust emissions from all the sources are being controlled regularly on daily basis. A network of fixed water sprinklers has been laid on permanent haul roads. Two mobile water tankers of large capacity namely 50 KL which can cover the entire width of the haul road has been commissioned. All feed hoppers where ore is unloaded, and all transfer chutes have been provided with dry-fog dust suppression system. Mist cannons have been placed at strategic points to prevent and control fugitive dust emission. Ambient air quality conforms to the CPCB norms. The copy of Fugitive Dust Monitoring report is attached as <b>Annexure-XIII</b> . Photographs of fixed water sprinkler, mobile water tankers, mist cannons and dry-fog systems are attached as <b>Annexure-XIV</b> .
6.	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc. should be provided with ear plugs/muffs. Workers in noise generating areas and engaged with noise generating machinery should be subjected to audiometric tests annually.	Being Complied Adequate measures are taken for control of work noise levels such as all HEMMs have acoustic cabins with air conditioners and the exhaust manifold have silencers. Noisy operations have been identified and persons engaged in such operations are provided with ear plugs/muffs. All persons working in dusty areas are provided with protective dust masks. Adequate training, awareness and information on safety and health aspects are provided on regular basis. Noise Monitoring reports is attached as <b>Annexure-XXV</b> .
7.	Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap and retention ponds should be installed before discharge of	Being Complied A 30 KLD CETP along with Oil and grease pit with collection system has been installed at HEMM maintenance area. Oil is separated by gravitational technique and solids settle by sedimentation. Clear water flows to next chamber after passing through baffle wall. Clear water is again re-used. Water quality

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	workshop effluents.	<p>analysis is done on regular basis and the ETP quality analysis is attached as <b>Annexure-XXI</b>.</p> <p>Two Sewage Treatment Plant (STP) of 50 KLD each and two Effluent Treatment Plant (ETP) of 10 KLD each are also installed and working smoothly in mine lease area of Noamundi. Copy of STP quality analysis is enclosed as <b>Annexure-XXII</b>.</p> <p>We are maintaining a logbook of oil and grease recovered from ETP. The copy of logbook is attached as <b>Annexure-XXIII</b>.</p>
8.	The data on environmental quality should be collected and analyzed either through an in-house environmental laboratory established with adequate number and type of pollution monitoring and analysis equipment or got analysed through an approved laboratory under the Environment (Protection) Rules, 1986 in consultation with the State Pollution Control Board.	Being complied.
9.	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.	<p>Being Complied</p> <p>Adequate measures are taken for control of work noise levels such as all HEMMs have acoustic cabins with air conditioners and the exhaust manifold have silencers. Noisy operations have been identified and persons engaged in such operations are provided with ear plugs/muffs.</p> <p>All persons working in dusty areas are provided with protective dust masks.</p> <p>Adequate training, awareness and information on safety and health aspects are provided on regular basis.</p> <p>Noise Monitoring reports is attached as <b>Annexure-XXV</b></p>
10.	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>Being Complied</p> <p>Noamundi hospital is well-equipped with an Occupational Health Center OHS center employs a full-time occupational health specialist. Health of the employees through audiometry, x-ray, pathology, ophthalmology, lung-function test, etc monitored.</p> <p>During the period January to December 2025: 2784 nos. of IME and 206 nos. of PME was carriedout.</p>
11.	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>Being Complied</p> <p>A separate environmental management cell is in place with people having relevant qualification on environmental science. Organization has adequate environmental reporting system for adequate decision making.</p> <p>Copy of Environment Management Cell is attached as <b>Annexure-XXXIV</b></p>
12.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise	<p>Being Complied</p> <p>Funds allocated for environmental management are spent only for environment related purposes and not diverted to</p>

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	expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.	any other purpose. Expenditure details of environmental protection measures are reported to MoEF and CC and its Regional Office every year during half yearly compliance submission. Expenditure details for the year 2025-26 is enclosed as <b>Annexure XXXII.</b>
13.	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.	Full cooperation shall be extended to the officers in furnishing the requisite data/ information/ monitoring reports.
14.	A copy of clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom and suggestion/representation has been received while processing the proposal.	Complied A copy of EC letter was submitted to local panchayats i.e Noamundi, Balijore, Diriburu, Kadajamda and Mahudi panchayat. Copy of submitted letters is attached as <b>Annexure-VIII.</b>
15.	The State Pollution Control Board should display a copy of the clearance letter at the regional office, District Industry Centre and Collector's office/Tehsildar's Office for 30 days.	Noted.
16.	The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days. of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State. Pollution Control Board and may also be seen 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 at Bhubaneswar.	Complied Details of Environment Clearance with respect to Noamundi Iron Mine were published both in English (Avenue Mail) and Hindi (Prabhat Khabar) in local newspapers on 12.09.2021. The copy of the newspaper advertisement was sent to the Regional Office, MoEF and CC, Ranchi with letter no: MD/ENV/210/97/2021 dated 13.09.2021. The copy of advertisement is attached as <b>Annexure-IX.</b>

**ENVIRONMENTAL CLEARANCE NO. J-11015/5/90-IA.II (M) DATED 18.05.1994  
(Period of Compliance: October 2025 to March 2026)**

Sl. No.	Conditions	Compliance
<b>A. Specific conditions</b>		
1.	The levels of SPM concentration should not exceed 500 micro grams, per 'cubic meter at any observation point within the mining leasehold, The emission of S02, NOx, and CO should be maintained below the levels prescribed by the competent authority. The measures suggested in the EMP for controlling the air quality levels should be strictly implemented.	Being Complied Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM10, PM2.5, SOx, NOx and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X.</b>  Manual ambient air quality stations are installed at

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		prominent places such as Hospital, Mega Centre, Bottom bin, etc. and monitoring of the NAAQS parameters are being carried out on regular basis. The Average air quality data is enclosed as <b>Annexure XI</b> .
2.	The quality of effluent finally discharged after treatment should confirm the standard prescribed under GSR 422' (E), dated '19.05.93., Treated water should be discharged to drainage system only through a channel. Regular, monitoring of treated effluent quality and depth of water table should be done at certain points within the core zone as well as in the nearby area. The recorded data should be furnished to this ministry once in three months.	Two Sewage Treatment Plant (STP) of 50 KLD each and two Effluent Treatment Plant (ETP) of 10 KLD each are also installed and working smoothly in mine lease area of Noamundi. Copy of STP quality analysis is enclosed as <b>Annexure-XXII</b> .
3.	The project authority must set up at least, three air quality monitoring stations and data should be recorded regularly. The recorded data should be furnished to this Ministry once in three months and to the State Board once in three months.	Being Complied Three continuous ambient air quality monitoring stations are installed in the core zone (two nos.) and buffer zone (one no.) of mine lease area. Various parameters such as PM10, PM2.5, SOx, NOx and CO are being monitored as per guidelines. Photograph of same is attached as <b>Annexure X</b> .
4.	No change in the method of working (including Calendar program of excavation) without prior approval of this ministry.	Being complied. There is no change in calendar plan including excavation, quantum of mineral iron ore and waste. Mining is being carried out as per the approved mining plan by IBM.
5.	The project authority must restrict their mining activity in a forest land to the extent of additional 109.994 ha. The balanced forest land to the extent of 142.70 ha. Should be released after evaluating the successful implementation of the stipulation made therein.	Noted. Complied Noamundi Iron Mine of Tata Steel has restricted its operations in diverted forest and non-forest area as per approvals obtained. 42 ha is forest land and rest is non-forest land. 762.42 ha, forest land has been diverted for mining in two phases 1. 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014 and 2. For remaining 391.51 ha (including safety zone), has been granted vide File No. 8-65/2018FC, dated 02.05.2026.
6.	Construction of check dams and plantation of grasses, shrubs and trees shall be taken, to prevent wash off from the existing ore dump,	Being Complied Garland drains with settling pits have been constructed all along the OB dumps. Settling pits have also been provided to arrest the silt flow from mines area. The de-siltation of these check dams, settling pits are done regularly and properly maintained. Sedimentation pits have been constructed at the corners of the garland drains to take care of run-off of water even during peak rain fall and they are being de-silted regularly before and after the monsoon. Garland drains, settling tanks and Check dams had been constructed both around the mine pit and over burden dump(s).
7.	A thick green belt of 100m should be provided along with periphery of tailing pond to prevent the fine particles from becoming air borne.	Greenbelt of 7.5 meters width is maintained all along the mining lease ara.

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8.	No new construction of township and office building should be made on the forest land.	Being complied.
9.	Out of total 6.2 MT of rejects/ OB 4.58 MT (rejects) should be dumped in Western pit.	Not applicable.
10.	The damaged land should be biologically reclaimed and should be afforested in consultation with the State Forest Department at the project cost before handing back the land to the State Forest Department.	Complied.
11.	Detailed biological resource survey should be carry out and should be submitted to this ministry.	Being complied.
12.	A green belt should be provided around the fine ore handling system.	In FY 26 around 25,221 saplings have planted in the mine lease area.
13.	A separate environmental management cell- with suitable qualified people to carry out various functions relating - to environmental management should be set up under the control of senior technical officer who will directly -report _to Chief Executive. A laboratory facility should be set up for collection and analysis of samples.	Being Complied A separate environmental management cell is in place with people having relevant qualification on environmental science. Organization has adequate environmental reporting system for adequate decision making. Copy of Environment Management Cell is attached as <b>Annexure-XXXIV</b>
14.	Adequate fund provision (capital and recurring expenditure) provided towards environmental control measures should, not be diverted for any other purpose.	Being Complied Funds allocated for environmental management are spent only for environment related purposes and not diverted to any other purpose. Expenditure details of environmental protection measures are reported to MoEF and CC and its Regional Office every year during half yearly compliance submission. Expenditure details for the year 2025-26 is enclosed as <b>Annexure XXXII.</b>
15.	The Ministry may stipulate additional conditions, if necessitated either by change in scope of project or basis of feedback bn the impact of the monitoring.	Noted.
16.	The Ministry may revoke the clearance implementation of stipulated condition is not satisfactory.	Noted.

## ANNEXURE-I

### Status of Remediation Plan: Noamundi Iron Mine

Sl No.	Component	Proposed Activity	Description	Location	Qty	Compliance Status
1	Remediation Plan- Air & Noise Environment	Fugitive Dust control & Noise attenuation	Installation of Wind-shield cum Noise barrier	Within lease (Bottom Bin Railway siding)	1500m boundary	Constructed concrete boundary wall of 1500 m length.
2	Remediation Plan- Air Environment	Fugitive dust control	Develop green zone along prominent wind direction	Within project area	16 ha.	Continuous work and plantation is in progress. Nearly 25221 saplings were planted in FY:2025-26.
3	Remediation Plan- Biological Environment	Increase green cover	Rapid forest development (Miyawaki plots)	Within lease	1 ha.	Complied.
4	Remediation Plan- Air & Noise Environment	Surface water run-off management	Construction of check dams, gully plugs & garland drains	Within lease	2 check dams; 10 gully plugs; 1000m garland drain	Complied.

## Annexure-2 Implementation of Natural Resource Augmentation Plan

Proposed Activity	Description	Location	Compliance Status
<b>Tree Plantation</b>	Development of fruit-bearing trees plot at village	Hesapi Dwarsahi	Work completed
<b>Avenue plantation</b>	Development of Greenbelt by roadside plantation along 15000 meters	Mahudi to Bhangaon, Noamundi to Kutingta, Noamundi to Jamda	Work completed.
<b>Rain- water harvesting</b>	Construction and maintenance of Rain-water harvesting pond structure in villages at 8 nos. of ponds	Noamundi Basti, Mahudi, Meralgara, Deogaon	Work completed

## Natural Resource Augmentation Plan: No.1 Development of fruit-bearing trees plot at village



**Natural Resource Augmentation Plan: No.2** Development of Greenbelt by roadside plantation along 15000 meters



# Natural Resource Augmentation Plan: No.3 Construction and maintenance of Rain-water harvesting pond structure in villages (Proposed 8 Nos. and actual construction 10 Nos.)



## Natural Resource Augmentation Plan: No.3 Construction and maintenance of Rain-water harvesting pond structure in villages at 8 nos. of ponds



## Natural Resource Augmentation Plan: No.3 Construction and maintenance of Rain-water harvesting pond structure in villages at 8 nos. of ponds



## Implementation of Community Resource Augmentation Plan

Proposed Activity	Description	Location	Compliance Status
<b>Provision of solar light</b>	Installation of solar lights in village areas	Mahudi, Sialjoda, Meralghra, Balijodi	Work completed
<b>Provision of solar powered borewell</b>	Installation of solar-powered borewell in schools	Mahudi, Sialjoda, Meralghra	Work completed
<b>Drinking water</b>	Installation of RO plants in surrounding school	Mahudi, Noamundi Basti, Sarbil, Bhangaon, Legaon, Lelang, Jampani.	Work completed
<b>Health facility</b>	Sponsoring Eye-camps in collaboration with Shankar Netralaya	Jaganathpur, Sarbil	Work completed
<b>Agriculture</b>	Installation of lift irrigation	Kumirta	Work completed
<b>Agriculture</b>	Construction of check dams along with feeder canals	Kutinga, Kotgarh	Work completed
<b>Infrastructure development</b>	Construction of Munda/Manki Bhavan	Dukasai, Baljora, Gundijoda, Meralgara	Work completed

# Community Resource Augmentation Plan: No.1 Installation of solar lights in village areas



## Community Resource Augmentation Plan: No.2 &3 Installation of solar-powered bore-well along with RO system in schools



# Community Resource Augmentation Plan: No.4 Sponsoring Eye-camps in collaboration with Shankar Netralaya



## Community Resource Augmentation Plan: No.5 Installation of lift irrigation from Baitarani river



## Community Resource Augmentation Plan: No. 6 Construction of check dams along with feeder canals



# Community Resource Augmentation Plan: No.7 Construction of Munda/Manki Bhavan



## ANNEXURE-IV

Sl.No.	Particulars	Frequency	Yearly PROPOSED Sample	Yearly ACHIEVED Sample
<b>Air Quality</b>				
1	AAQ-4 locations	Twice in a week	416	409
2	Continuous ambient air quality monitoring system- 2 stations	Located in 02 locations		02 nos. of CAAQMS installed.
3	Stack monitoring (DG Set)	Once in a quarter	4	4
4	Fugitive dust emission monitoring	Once in a fortnight	120	120
<b>Meteorology</b>				
1	Meteorological data	Daily	365	365
<b>Water and Wastewater Quality</b>				
A	Industrial/Domestic wastewater			
1	ETP/STP inlet and outlet	Monthly	48	48
B	Water quality in the study area			
1	Ground water quality	4 times in a year	16	16
2	Ground water level (well water)	Monthly	48	48
3	Surface water quality	Once in quarter	08	08
4	Water flows in nearby streams	Once in a season	08	08
<b>Noise Levels</b>				
A	Industrial Noise Levels/Ground Vibrations			
1	Noise quality-mine workings, plant	Fortnight	48	48
B	Ambient Noise Levels			
1	Ambient noise at 6 locations around the mine lease area	Fortnight	144	144
<b>Soil Characteristics</b>				
1	Soil quality-core & buffer zone (6 locations)	Half-yearly	12	12

## Annexure-5 Implementation Status of Public hearing Commitment

Particulars/ PH Requirements	Status
<b>Road Maintenance in village area- (Road from Mohudi village to Sarbil Road from Bobonga petrol pump to Dondiya sahi)</b>	Work Completed
<b>Provision of drinking water with pipeline (Noamundi, Mahudi)</b>	Work Completed
<b>Providing toilets in schools (5 schools in surrounding villages)</b>	Work Completed
<b>Solar-powered micro lift irrigation (Surrounding villages)</b>	Work Completed
<b>Provision of toilet facility DVC Gate Bus Stand</b>	Work Completed.
<b>Provision of critical care ambulance (Surrounding villages)</b>	Work completed. 2 numbers of critical care ambulances provided
<b>Provision of community toilet and bathing complex</b>	Work completed
<b>Augmentation of solid waste management facility (Noamundi Bazar, Kotgarh)</b>	Work completed
<b>Provision of school bus (Baitarini route)</b>	Work Completed. School bus provided
<b>Provision of lab-on-wheels (Noamundi Block)</b>	Work Completed. Vehicle Handed over to Jagannathpur ITI Principal.
<b>Construction of Science Lab (Kothghar, Sialjoda)</b>	Completed.
<b>Construction of rooms, hostel, computer lab and auditorium (Noamundi)</b>	Work completed
<b>Increase in capacity of ITI College, construction &amp; equipping of related infrastructure (Jagannath)</b>	Work Completed.
<b>Development of playgrounds for promoting sport activities (Mahudi, Sarbil, Bhangaon)</b>	Work completed.
<b>Construction of haat (market sheds) (Bhangaon, Kotgarh, Jetia)</b>	Work completed
<b>Infrastructure support for Mushroom cultivation (Surrounding villages)</b>	Work Completed.
<b>Provision of Goatery sheds (Surrounding villages)</b>	Work Completed.

# Public Hearing Commitment: Road Maintenance in village area



# Public Hearing Commitment: Provision of drinking water with pipeline

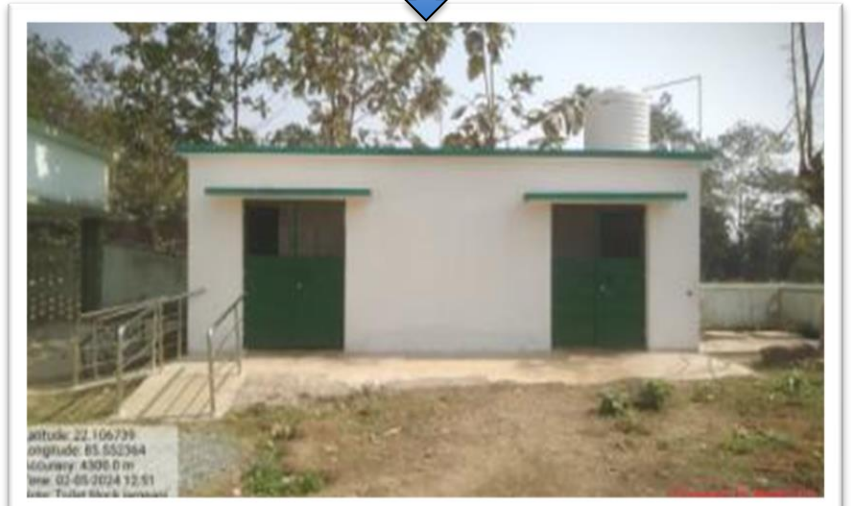


# Public Hearing Commitment: Provision of toilet in School

Toilet-1



Toilet-2



# Public Hearing Commitment: Provision of toilet in School

Toilet-3



Toilet-4



# Public Hearing Commitment: Provision of toilet in School

Toilet-5



**Public Hearing Commitment:** Solar-powered micro lift irrigation in Surrounding villages



# Public Hearing Commitment: Provision of toilet facility



Latitude: 22.162166  
Longitude: 85.49476  
Elevation: 480.71±13 m  
Accuracy: 29.9 m  
Time: 03-11-2025 10:46  
Note: toilet DVC

Powered by NoteCam

**Public Hearing Commitment:** Provision of critical care ambulance to Surrounding villages (2 Nos.)



**Public Hearing Commitment:** Provision of community toilet and bathing complex



**Public Hearing Commitment:** Augmentation of solid waste management facility



**Public Hearing Commitment: Provision of school bus along Baitarini route**



## Public Hearing Commitment: Provision of lab-on-wheels for Noamundi Block



# Public Hearing Commitment: Construction of Science Lab



**Public Hearing Commitment:** Construction of rooms, hostel, computer lab and auditorium at Noamundi Collage



# Public Hearing Commitment: Increase in capacity of ITI College, construction & infrastructure (Jagannathpur)

Entrance Gate



Boundary wall



## Public Hearing Commitment: Development of playgrounds for promoting sport activities



# Public Hearing Commitment: Construction of haat



# Public Hearing Commitment: Infrastructure support for Mushroom cultivation to surrounding villagers



**Public Hearing Commitment: Provision of Goatery sheds to Surrounding villages**



**Compliance Report of MoEFCC's Office Memorandum No. Z-11013/57 /2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".**

SL No.	Condition	Compliance
A	the project authority shall adopt best mining practice for the given mining conditions. In the mining area, adequate number of check dams, retaining walls/structures, garland drains and settling ponds should be provided to arrest the wash-off with rain water in catchment area.	Complied. Mining is strictly being carriedout as per the Approved Mining Plan by IBM. We have constructed retaining walls, garland drains, settling ponds at appropriate locations inside mines area to arrest the run-off with rainwater in catchment area.
B	the natural water bodies and or streams which are flowing in and around the village should not be disturbed. The water table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the project authorities have to provide water to villagers for their use. a provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table.	Being complied. No natural water bodies or strams are flowing within the mining lease area. For augmentation of ground water table, we have constructed water harvesting ponds. Water level is monitored on regular basis by installation of automatic piezometers in core zone area & manual water level meter in buffer zone area.
C	the illumination and sound at night at project sites distribute the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. the project proponents (PPs) must ensure that the biological clock of the villagers is not disturbed by orienting the floodlights/masks away from the villages and keeping the noise levels well within the prescribed limits for day/night hours.	Being complied. No mining activities are carriedout within an area of 500 meters from village boundary. Blasting is being carriedout during day time only. And latest controlled blasting technologies by using NONEL to control noise & vibration are being carriedout. Lighting arrangements is done towards active mining areas away from village areas/ forest areas, there is no disturbance caused to nearby villages/ forest due to illumination and noise during night time.
D	the project authority shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing. In this context, project Authority should implement the directions of the hon'ble Supreme Court with regard to acquiring grazing land. the sparce trees on such grazing ground, which provide mid-day shelter from the scorching sun should be scrupulously guarded against felling lest the cattle abandon the grazing ground or return home by noon.	No grazing land present within the mining lease area.

E	<p>where ever blasting is undertaken as part of mining activity, the project authority shall carry out vibration studies well before approaching any such habitats or other buildings to evaluate the zone of influence and impact of blasting on the neighbourhood. within 500 meters of such sites vulnerable to blasting vibrations, avoidance of use of explosives and adoption of alternative means of mineral extraction, such as ripper/dozer combination/ rock breakers/ surface miners etc. should be seriously considered and practiced wherever practicable. a provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units should be ascertained. the covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the competent authority.</p>	<p>Being Complied. No blasting is being carried out within an area of 500 meters near habitats or other public buildings. Additionally, controlled blasting techniques with latest blasting technologies by using non-electric down detonators with hole delay system and non-electronic trunk line delay system at surface which gives minimum vibration level as well as low value of air blast on the surface. ground vibration is being regularly monitored with the help of latest miniature/micromate Seismograph.</p>
F	<p>main haul road in the mine should be provided with permanent sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. Crusher and material transfer points should invariably be provided with bag filters and or dry fogging system. belt conveyors should be fully covered to avoid air borne dust.</p>	<p>Being complied. Fixed water sprinklers installed at permanent haul road. Additionally, water sprinkling is carried out on haul road, loading/unloading points with help of mobile water tankers. Primary Crusher is also fitted with dry-fog system. The iron ores are transported to the railway siding through conveyor belts.</p>
G	<p>the project authority shall ensure that the productivity of agricultural crops is not affected due to mining operations. Crop liability insurance policy has to be taken by the PP as a precaution to compensate for any crop loss. The impact zone shall be 5km from the boundary of mine lease-area for such insurance policy. in case, several mines are located in a cluster, the associations of owners of the cluster mines, formed inter-alia, to sub-serve such an objective, shall take responsibility for securing such crop liability policy.</p>	<p>Being Complied. We have General Liability Insurance Policy which includes for any accidental crop damage due to mining activities. The copy of General Liability Insurance is attached as <b>Annexure- XXXV</b>.</p>
H	<p>in case any village is located within the mining leasehold which is not likely to be affected due to mining activities during the life of mine, the expert appraisal committee (EAC) should consider the proposal of environment clearance (EC) for reducing mining area. the mining lease may be executed for the area for which EC is accorded. the mining plan may also be accordingly revised and required stipulated stipulations under the MMDR Act, 1957 and MCR, 1960 met.</p>	<p>Not Applicable. As no village present within the mining lease area.</p>
I	<p>transportation of the minerals by road passing through the village shall not be allowed, A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sounds dust and accidents could be mitigated. the PP shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the project. no road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.</p>	<p>Not Applicable. Mineral transportation is done through conveyor belts to railway siding and further the products are transported to destination through rail.</p>
J	<p>likewise, alteration or re-routing of foot paths, pagdandies, card roads, the villages infrastructure/public utilities or roads (for purposes of land acquisition for mining) shall be avoided to the extent possible and in case such acquisition is inevitable, alternative arrangements shall be made first and then only the area acquired. in these types of cases, inspection reports by site visit by experts may be insisted upon which should be done through reputed institutes.</p>	<p>Not Applicable. Mineral transportation is done through conveyor belts to railway siding and further the products are transported to destination through rail.</p>

K	<p>as CSR activities by companies including the mining Establishments has become mandatory upto 2% of their financial turnover, Socio Economic Development of the neighbourhood Habitats could also be planned and executed by the PPs more systematically based on the 'need based door to door survey' by established Social Institutes/ Workers on the lines as required under TOR. "R&amp;R plan/compensation details for he project affected people (PAP) should be furnished. while preparing the R&amp;R plan, the relevant state/National Rehabilitation 7 Resettlement Policy should be kept in view. In respect of SC's/ST's and other weaker sections of the society in the study area, a need based sample survey, family wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line department of the state government. it may be clearly brought out whether the village located in the mine lease area will be shifted or not. the issue relating to shifting of village including their R&amp;R and social-economic aspects should be discussed in the EIA report.</p>	Being Complied.
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Agreement NO → 01/21-22/WTA  
Dated → 20.10.2021

## Government of Jharkhand

### Receipt of Online Payment of Stamp Duty

NON JUDICIAL

**Receipt Number :** 2c9a2f12bc74f9831981

**Receipt Date :** 19-Oct-2021 10:28:05 am

**Receipt Amount :** 100/-

**Amount In Words :** One Hundred Rupees Only

**Document Type :** Agreement or Memorandum of an Agreement

**District Name :** West Singhbhum

**Stamp Duty Paid By :** TATA STEEL LIMITED NOAMUNDI

**Purpose of stamp duty paid :** AGREEMENT

**First Party Name :** TATA STEEL LIMITED NOAMUNDI

**Second Party Name :** NA

**GRN Number :** 2107993701

**-: This stamp paper can be verified in the jharnibandhan site through receipt number :-**



This Receipt is to be used as proof of payment of stamp duty only for one document. The use of the same receipt as proof of payment of stamp duty in another document through reprint, photo copy or other means is penal offence under section-62 of Indian Stamp Act, 1899

इस रसीद का उपयोग केवल एक ही दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु ही किया जा सकता है। पुनः प्रिन्ट कर अथवा फोटो कॉपी आदि द्वारा इसी रसीद का दुसरे दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु उपयोग भारतीय मुद्रांक अधिनियम, 1899 की धारा 62 अन्तर्गत दण्डनीय अपराध है।

*[Signature]*  
General Manager  
Ore Mines & Quarries  
Tata Steel, Mines Division,  
Noamundi  
कारपालक अभियन्ता  
जलपथ प्रमण्डल, चाईबासा  
20.10.21

## AGREEMENT


### AGREEMENT FOR WATER SUPPLY FROM BAITARNI RIVER TO NOAMUNDI IRON MINE OF M/s TATA STEEL LIMITED, NOAMUNDI

This agreement made on this 20<sup>th</sup> day of October 2021 (Twenty day of October Two Thousand Twenty-One) between the Governor of Jharkhand through Water Resources Department (WRD), Government of Jharkhand herein after referred to as "The Government" which term shall unless excluded by or repugnant to the context, includes its legal representatives, successors, executors, administrator & assigners on the one part

And

Tata Steel Limited having its registered & administrative office at Bombay House, 24, Homi Modi Street, Fort, Mumbai-400001 and its Iron Ore Mine office at Office of the General Manager, Noamundi Iron Mine, Ore Mines and Quarries, Tata Steel Limited, Noamundi (PO), West Singhbhum (Dist.), Jharkhand- 833217 herein after referred to as "The Company" which expression shall unless excluded by or repugnant to the context of the meaning thereof, be deemed to include its successor and assigners and also mean Tata Steel Limited for all transactions & acts,

Whereas the company approached the Government on 13<sup>th</sup> September 2019 for allowing to pump 10.6 MCM/ Annum (1210.04 m<sup>3</sup>/Hr on average) of water on annual basis in the river at Latitude 22° 5' 17.73" North and Longitude E 85° 38' 14.01" East for setting up expansion of its Noamundi Iron Mine and whereas the Government is in a position to allow withdrawal of 10.6 MCM/ Annum on annual basis (1210.04 m<sup>3</sup>/Hr on average) of water as per the concurrence issued by Water Resource Department (WRD), Government of Jharkhand to Tata Steel Limited vide letter no. -1/PMC/Vividh/975/2020-514 dated 24<sup>th</sup> August 2021 and the parties hereto have agreed to have a formal agreement in this regard.

  
General Manager  
Ore Mines & Quarries  
Tata Steel, Mines Division,  
Noamundi

कार्यपालक-अभिषेक्ता  
जलपथ प्रमण्डले, चाईबासा  
20.10.21

Now it is hereby agreed by and between the parties as follows:

1. That "The Government" agrees to allow 10.6 MCM/Annum (1210.04 m<sup>3</sup>/Hr on average) withdrawal of required quantity of water as per the details given herein at para 2.1 below:
2. The water withdrawal schedule for the plant:

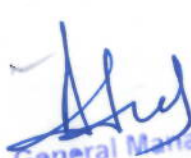
PERIOD (DD/MM/YYYY)	QUANTITY OF WATER TO BE DRAWN DURING THE YEAR (in MCM)
1.	2.
20/10/2021 to 31/03/2022 (2021-22)	10.6
01/04/2022 to 31/03/2023 (2022-23)	10.6
01/04/2023 to 31/03/2024 (2023-24)	10.6
01/04/2024 to 31/03/2025 (2024-25)	10.6
01/04/2025 to 31/03/2026 (2025-26)	10.6

2.1. The water charges for quantity of water to be drawn by the company will come into effect from the period as indicated in column-I of the table at para – 2 above.

2.2. The quantity of water to be drawn will be restricted to 10.6 MCM/Annum on annual basis (1210.04 m<sup>3</sup>/Hr on average) and the measurement of water will be done at the intake point. The measurement of this quantity of water will be checked up jointly by the consumer and the representative of Water Resources Department, Govt. of Jharkhand (WRD, GOJ) at least in every month. The measuring instruments shall be installed by the consumer at his own cost and shall remain exclusively under the control of WRD, GOJ.

A. General condition to be made applicable to any industry under consideration.

A.1. The availability of water may be interrupted temporarily for doing repairs or for such other works on the basis of jointly signed protocol &

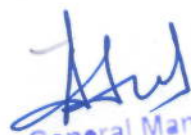
  
General Manager  
Ore Mines & Quarries  
Tata Steel, Mines Division,  
Noamundi  
कार्यपालक अभियन्ता  
जलपथ प्रमण्डल, चाईबासा  
20.10.21

such interruption shall not ordinarily exceed thirty days. No claim by the company shall be preferred against the Government for such fluctuation in the discharge.

- A.2. The quantity of water indicated in para - 2 is based on the phasing demand of water put up by the company. In future, if it is found by computation as based on scientific methodology or otherwise that the consumption of water is more than as indicated in para -2, charges for such enhanced quantity of water so assessed, shall become payable to Government by the company.
- A.3. The company will install a water meter near the point of intake to measure the quantity of water pumped. If the quantity of water exceeds the quantity mentioned in para -2, the company will have to pay the bill based on actual withdrawal of water as per meter reading, but the minimum water rent for supply of water will be charged for the quantity as indicated at para -2.
- A.4. The company will have to establish online monitoring system of water drawl based on latest technology available at its own cost as and when the same will be implemented by WRD, Govt. of Jharkhand.
- A.5. The Government will not be responsible for any interruption of diminution or stoppage of supply of water due to lockout, strikes, breakdowns of mechanical units or other force majeure or other causes beyond the control of the Government. In view of the production technology & need of water supply to some other usage, the Government shall take such action, as is deemed necessary to restore availability of water with the least possible delay & ensure resumption of interruption or diminution or stoppage of water supply within shortest period.
- A.6. If due to any unforeseen reasons, the Govt. is not able to make available the quantity of water as envisaged in para 2, no legal action can be taken against the Govt.
- A.7. The company will make sure that the effluent (waste water along with Pollutants), if needed to be drained in the river or nala, will conform to the latest prescribed effluent quality parameters as prescribed by State Pollution Control Board and shall be safe for disposal in river or nala and shall not be injurious to human and aquatic life. The Water Resources Department as well as authorities specifically authorised in this regard

will also get the test checks conducted at regular interval to testify the same. The installation of equipment or plant needed for this purpose, shall be done by the company. The company will also have to get clearance from the respective State Pollution Control Board and submit the report to WRD at regular interval not exceeding one year for continuance of supply of allocated water. The effluent disposal point should be fixed in the upstream of the respective intake point.

- A.8. The company shall make every endeavour to use minimum possible water and shall make use of all latest technology to reduce the extent of usage of water.
- A.9. That the required water will be withdrawn or pumped by the company from either Left or Right bank of river Baitarni by constructing a suitable water harvesting structure and intake near plant site.
- A.10. That the cost of land required for building intake well, pump house, water meter & other allied infrastructure shall be borne by the Company.
- A.11. The company shall pay water charge at the rate fixed by the WRD, GOJ from time to time. As and when this rate is revised by the WRD from time to time, the company will be required to make payment at the revised rates of water charge. The rate fixed by the Government shall be binding on the Company.
- A.12. All the infrastructures including the intake and water harvesting structure commensurate with the requirement of water as per stipulated in para -2 needed for uninterrupted drawl of water shall be constructed by the company at their own cost, as per the design/drawing approved by the WRD,GOJ. The construction of the infrastructure shall be taken up by company only after joint inspection of the water tapping point by the representatives of WRD. GOJ and the Company and approval there on by the WRD, GOJ. This infrastructure shall be operated and maintained by the company at their own cost.
- A.13. That the formal approval of the Government on detailed design, drawing & specification of the water harvesting structure, intake well, pump & pump house shall be obtained by the Company within six months from the date of signing of Agreement.
- A.14. The WRD will have the right to inspect the infrastructures from time to time and suggest corrective mechanism for removing the deficiencies. if

  
General Manager  
Ore Mines & Quarries  
Tata Steel, Mines Di.  
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जलपथ प्रमण्डल, चाईबासा  
20/10/21

any. The company will have to undertake the remedial measures, as suggested by WRD, at their own expenses.

- A.15. The company shall have to bear the cost of rehabilitation and resettlement of the families so displaced. The cost of land acquisition, forest land compensation, etc., as per prevailing norms of the Government, shall have to be borne by the company. The company shall also obtain forest, environmental and other mandatory clearances, wherever required from the concerned departments/Ministry of the State Government/Government of India.
- A.16. The company will not be allowed to draw additional water than the quantity committed above without specific permission.
- A.17. The company shall utilize the water for the agreed purpose only and will have no right to sublet this water to any other company.
- A.18. The Govt. will have right to review the quantum of water required by the Company for its bonafide usage and shall be at liberty to reduce the quantum as allocated in para -2, so as to optimize the usage of water in the interest of the State.
- A.19. The Company has to liaison with the concerned Chief Engineer, WRD to sign an agreement related to the utilisation of allocated water and making payment of the water charge, as per the terms and conditions stipulated under para -A.11 of this agreement. The allocation of water will come into effect from the day of execution of the agreement with the WRD, Jharkhand.
- A.20. The company shall install appropriate devices to minimise water use consumption and also provide for recycling & conservation of industrial water.
- A.21. The drawl of water from intake structure, shall under no circumstances be detrimental to the safety and operational procedures of reservoirs/barrages lying in the upstream or downstream or on both sides of the intake structure.
- A.22. The company will have to go for the construction of Rain Water harvesting (RWH) Pond and Pit of appropriate capacity as per the design and plan approved by Ground Water Directorate, Water Resources department (WRD), Government of Jharkhand at its own cost for the

conservation of rain water to meet the water demand of the plant during emergency/non-monsoon period and also for ground water recharging commensurate with ground water withdrawn for meeting only the domestic water demand during exigency.


A.22.1 A comprehensive plan of Rain Water Harvesting Project for ground water recharging must be submitted by the Company to Ground water Directorate of Water Resources Department, Govt. of Jharkhand within two months from the date of Agreement under intimation to WRD, GOJ. This plan has to get approved by Ground Water Directorate, WRD, GOJ within one month from the date of submission of the above plan.

A.22.2 Rain Water Harvesting Project for ground water recharging must be completed within three months from the date of approval of the plan.

A.23. The company will have to construct a reservoir at a suitable location to meet the water requirement of the plant during non-monsoon (November to May) on the basis of realistic quantum of water availability computed with the help of actual observed hydro-meteorological data from where it has been intended to meet the water demand of the plant. Lean season flow of the river will not be intercepted at all. To ensure this inlet in the intake well will be provided above lowest water level (LWL) which will be fixed by the concerned Chief Engineer, WRD, after approval of WRD, GOJ.

A.24. The flood water will be optimally stored and utilized by the installation of a rubber dam/a series of rubber dams or any other suitable techniques for flexible storage at suitable locations across the river (from where the water is to be drawn) by the company at his own cost. The storage planning will be approved by WRD, GOJ.

The designed height of the flexible storage dam will be restored during flood period only by inflating /raising it to store the flood water within the river section and also to store it into some other suitable storages limited to the quantity of water earmarked to the industrial unit. This height of flexible dam will be gradually-decreased and finally deflated/lowered fully in accordance with the balance quantity of flood water needed to be stored. However, the height of the flexible storage dam during normal flow of the river will not exceed the upstream level of the river on which the irrigation/municipal/industrial projects have been planned in the downstream. The water levels at different river

  
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20.10.21

flows near to the flexible dam site in the upstream will be marked by the Company at his own cost. These marked water levels of the river will be finally checked and approved by the WRD. The Company at his own cost has to remove the silt from the river bed likely to be deposited in the upstream of the rubber dam just after the monsoon each year to ensure no adverse impact on the river regime.

- A.25. A joint review by the representatives of Govt. of Jharkhand and the company shall be made periodically at least once in every three years on the observed industrial water consumption pattern of the unit to assess the possibility and the technological interventions needed for reducing down the quantum of industrial water already earmarked in order to effect the same from the mutually accepted data.
- A.26. That the accounting year shall be from 1<sup>st</sup> April to 31<sup>st</sup> March of two consecutive calendar years. The bills for payment of water charges shall be prepared by the Government every month on the basis of demand stipulated in para – 2, 2.1 & 2.2.
- A.27. The company shall ensure to make payment of the bill within 30 days of its presentation, failing which a penalty at the rate of 10% of the water rate in prevalence as on the concerned date shall be charged over and above the normal rate. If, however, any discrepancy or error is found in the bill the same will be intimated to the Government within 15 days for necessary rectification, but the payment against the original bill will have to be made within stipulated period. The rectification in the bill, however, will be adjusted in the next accounts and accordingly the next bill be charged from the company.
- A.28. In case of non-payment of water charge for more than two consecutive months by the company, the Government shall have the right to stop withdrawal of water from the river by the company.
- A.29. That the date of receipt of the bill or the revised bill, as the case may be at company's office, will be treated as the date of receipt from which date the period of 30 days or 15 days referred to above, would be counted.
- A.30. All disputes and differences, except the matter for which provision has been expressly made in the agreement between the parties arising out of or in connection with this agreement, shall be referred to the Arbitrator, who will be an officer of WRD, Jharkhand and not below the rank of

Superintending Engineer & will be nominated by the State Government. There shall be no objection to the appointment of the Arbitrator on the ground that the Arbitrator so appointed, is a State Government servant or that he had to deal with the matters to which this agreement relates to & that in the course of his duties as Government servant, he had expressed views on all or one of the matters in disputes or differences. The provision of the Arbitration and Conciliation Act, 1996 & any statutory modification thereof for the time being in force, shall apply.

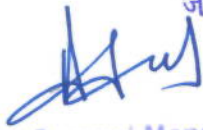
- A.31. This agreement shall remain valid for a period of five years. For making a fresh agreement, the company will be required to submit an application to the department 6 months prior to expiry of the existing agreement. The fresh agreement will be executed after reviewing the average actual usage by the Company. In case. the average utilisation of water during the last four years have been less by more than 10%, the company will have to submit the justification to WRD for allocating the earlier quantum of water as envisaged in para-2 or else the WRD will revise the allocation of water.

In case the company do not submit the application to WRD within the stipulated time frame or submit the application after the stipulated time frame without substantiating the justification for the allocation of earlier quantum of water, the WRD will have the right to reduce the water allocation to the average use of water made by the company during the last four years or to the quantity to which the WRD deems fit.

- A.32. In case the company violates any of the conditions stipulated in this agreement. WRD, GOJ will be free to take decision regarding termination of the agreement.

B. Specific technical conditions to the industry on case to case basis.


WRD, GOJ will be free to include any specific technical condition/conditions to the industry on case to case basis as and when required and mutually agreed between either parties, in Annexure - A which will be treated as part of this agreement.


  
कार्यपालक आसियरिती  
जलपथ प्रमण्डले, चाईबासा  
20.10.21  
General Manager  
Ore Mines & Quarries  
Tata Steel, Mines Division  
Noamundi

In witness whereof, the parties of this agreement have herein put their respective hands & seals, the day and year of agreement first above written.

Signed, seal & delivered on behalf of

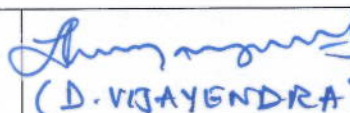
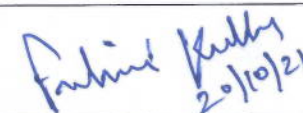
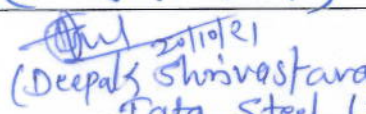
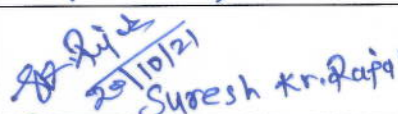
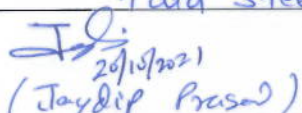
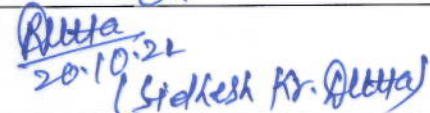
Signed, seal & delivered on behalf of

  
M/s Tata Steel Limited  
General Manager  
Ore Mines & Quarries  
Tata Steel, Mines Division  
Noamundi

  
कार्यपालक अभियन्ता  
मिनेरल डेपार्टमेंट  
चाईबासा  
20.10.21  
Government of Jharkhand through  
Water Resources Department,  
Government of Jharkhand

In presence of

WITNESSES:

1-	 (D. VIJAYENDRA) 20/10/21	1-	 Anil Kumar 20/10/21
2-	 (Deepak Shrivastava) Tata Steel Ltd. 20/10/21	2-	 Suresh Kr. Gupta 20/10/21
3-	 (Jaydeep Prasad) 20/10/21	3-	 Satish Kr. Gupta 20.10.21

Annexure-A

Specific Technical Conditions to the industry


1. The drawal of water will be done by the company from the intake point located at Latitude 22<sup>o</sup> 5' 17.73" North and Longitude E 85<sup>o</sup> 38' 14.01" East from Baitarni River and or through the storage constructed for this purpose by the Company at Latitude 22<sup>o</sup> 9' 5" North and Longitude E 85<sup>o</sup> 30' 15" East at Noamundi Iron Mine, Noamundi, Dist.-West Singhbhum.
2. The drawal of water must start as per the schedule indicated in clause-2 of the agreement.
3. The schedule of drawal of water must start within two years from the date of signing of agreement.
4. In the event of delay in drawal of water as per schedule indicated in clause-2 of the agreement, the delay will be penalized as below:

(i) Up to one-year delay from schedule mentioned in clause-2 of the agreement.	(i) 25 % of water charges for the quantity of water drawal indicated for the 1 <sup>st</sup> year under column-2 of the table in clause-2 of the agreement.
(ii) Up to two years delay from schedule mentioned in clause -2 of the agreement	(ii) 50% of water charges for the quantity of water drawal indicated for the 2 <sup>nd</sup> year under column- 2 of the table in clause 2 of the agreement
(iii) Beyond two years delay from schedule mentioned in clause-2 of the agreement.	(iii) Full water charges for the quantity of water indicated for the 3 <sup>rd</sup> year and onwards under column-2 of the table in clause-2 of the agreement.

5. The schedule of drawal of water will be fixed in such a manner so that the total quantity of water allocated must be drawn within five years from the starting date of the scheduled water drawal as per clause-2 of the agreement. The quantity of water which cannot be used within five years will be deemed as surrendered and undeserved.

Signed, seal & delivered on behalf of

  
M/s Tata Steel Limited  
General Manager  
Ore Mines & Quarries  
Tata Steel, Mines Division  
Noamundi

  
कार्यपालक अतिरिक्त  
जलपथ प्रमण्डल, चाईबासा  
Governor of Jharkhand  
through Water Resources Department,  
Government of Jharkhand



**Mukhiya,  
Diriburu Panchayat,  
AT/Po Noamundi,  
Dist: West Singhbhum, Jharkhand,  
Pin-833218**

Ref: MD/ENV/ 215 / 97 /2021

Dated: 08.09.2021

**Sub: Environmental Clearance for Expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited (File No. J-11015/104/2011-IA.II (M))**

**Ref: Vide letter ref no. J-11015/104/2011-IA.II (M) Dated 06.09.2021.**

Dear Sir,

This is to inform you that Environment Clearance has been granted for expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited. A copy of EC is enclosed for reference.

Thanking you,

Yours sincerely,  
f: Tata Steel Limited

**Chief (Mine Planning & Projects) OMQ**

Encl: EC of Noamundi Iron Mine

Received  
16/09/2021  
मुखिया  
दिग्बुरु पंचायत  
पश्चिम सिंहभूम जिल्हा  
जार्खण्ड

**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

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



Mukhiya,  
Kadajamda Panchayat,  
AT/Po Noamundi,  
Dist: West Singhbhum, Jharkhand,  
Pin-833218

Ref: MD/ENV/ 216 / 97 /2021

Dated: 08.09.2021

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**Ref: Vide letter ref no. J-11015/104/2011-IA.II (M) Dated 06.09.2021.**

Dear Sir,

This is to inform you that Environment Clearance has been granted for expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited. A copy of EC is enclosed for reference.

Thanking you,

Yours sincerely,  
f: Tata Steel Limited

*Rec*  
*Ramkrishna*  
*मुखिया*  
*कादाजामडा*  
*पंचायत*  
*नोवामुण्डी*  
Chief (Mine Planning & Projects) OMQ

Encl: EC of Noamundi Iron Mine

**TATA STEEL LIMITED**

Mines Division Noamundi 833 217 India

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Mukhiya,  
Mohudi Panchayat,  
AT/Po Noamundi,  
Dist: West Singhbhum, Jharkhand,  
Pin-833218

Ref: MD/ENV/ 217 / 97 /2021

Dated: 08.09.2021

**Sub: Environmental Clearance for Expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited (File No. J-11015/104/2011-IA.II (M))**

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Thanking you,

Yours sincerely,  
f: Tata Steel Limited

Chief (Mine Planning & Projects) OMQ

Encl: EC of Noamundi Iron Mine

Ry Bango  
16/9/2021  
मुखिया  
ग्राम पंचायत-महुदी  
प्रखण्ड-नोवामुन्डी  
जिला-प० सिंहभूम

**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  
Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



Mukhiya,  
Noamundi Panchayat,  
AT/Po Noamundi,  
Dist: West Singhbhum, Jharkhand,  
Pin-833218

Ref: MD/ENV/ 213 /97/2021

Dated: 08.09.2021

**Sub: Environmental Clearance for Expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited (File No. J-11015/104/2011-IA.II (M))**

**Ref: Vide letter ref no. J-11015/104/2011-IA.II (M) Dated 06.09.2021.**

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This is to inform you that Environment Clearance has been granted for expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited. A copy of EC is enclosed for reference.

Thanking you,

Yours sincerely,  
f: Tata Steel Limited

Chief (Mine Planning & Projects) OMQ

Encl: EC of Noamundi Iron Mine

Resving  
Munni  
16/09/2021  
मुखिया  
ग्राम पंचायत - नोवमण्डी बस्ती  
प्रखण्ड नोवमण्डी

**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

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



**Mukhiya,  
Balijhore Panchayat,  
AT/Po Noamundi,  
Dist: West Singhbhum, Jharkhand,  
Pin-833218**

Ref: MD/ENV/ 214 / 97 /2021

Dated: 08.09.2021

**Sub: Environmental Clearance for Expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited (File No. J-11015/104/2011-IA.II (M))**

**Ref: Vide letter ref no. J-11015/104/2011-IA.II (M) Dated 06.09.2021.**

Dear Sir,

This is to inform you that Environment Clearance has been granted for expansion of Noamundi Iron Ore Mine from 10 MTPA To 19 MTPA (ROM) with total excavation of 27 MTPA (ML Area 1160.06 Ha) along with increase of Iron Ore Beneficiation Plant Capacity (feed to plant) from 18 MTPA To 27 MTPA in total project area 1230.42 Ha located at Mahudi, Balijore, Korta, Noamundi, Sarbil and Barabalijori Villages, West Singhbhum District, Jharkhand of M/s Tata Steel Limited. A copy of EC is enclosed for reference.

Thanking you,

Yours sincerely,  
f: Tata Steel Limited

**Chief (Mine Planning & Projects) OMQ**

Encl: EC of Noamundi Iron Mine

**मुखिया  
बालीसरन पंचायत  
नोवापुड्डी, प० सिंहभूम**

**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

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



**Regional Office  
Ministry of Environment, Forest & Climate Change  
Regional Office (ECZ), Bunglow No. A-2  
Shyamali Colony  
Ranchi – 834002**

MD/ENV/ 210 / 97 /2021

Date: 13.09.2021

**Sub: Advertisement regarding grant of Environmental Clearance for expansion of Noamundi Iron Mine of M/s Tata Steel Limited.**

**Ref: Environmental Clearance letter no. J-11015/104/2011-IA.II (M) dated: 06.09.2021.**

Dear Sir,

In compliance to the standard condition no. 13 in EC granted with vide letter no. J-11015/104/2011-IA.II (M) dated: 06.09.2021 which states that *"The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of clearance letter mentioning that the instant project has been accorded EC and copy of EC letter is available with the State Pollution Control Board/Committee and website of Ministry of Environment, Forest and Climate Change([www.parivesh.nic.in](http://www.parivesh.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional office for compliance and record"* we hereby advertised in two newspapers i.e Avenue Mail(English) and Prabhat Khabar(Hindi) on 12.09.2021. A copy is enclosed as annexure.

Thanking you,

Yours faithfully,  
f: Tata Steel Limited

**Chief (Mine Planning & Projects), OMQ**

**Encl: As above**

**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

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website [www.tatasteel.com](http://www.tatasteel.com)



**TATA STEEL**



# NOTICE

पर्यावरण, वन व जलवायु परिवर्तन मंत्रालय पत्र संख्या : IA-J&11015/104/2011&IA-II (M) दिनांक 06 सितंबर, 2021 के द्वारा मेसर्स टाटा स्टील लिमिटेड के नोआमुंडी आयरन माइन को 10 एम टी पी ए से 19 एम टी पी ए (आर ओ एम) तक लौह अयस्क उत्पादन विस्तार के लिए पर्यावरण मंजूरी दी गई है, जिसमें 27 एम टी पी ए (एम एल एरिया 1160.06 हेक्टेयर) के कुल उत्खनन के साथ-साथ महुदी, बालिजोर, कोरटा, नोआमुंडी, सरबिल और बाराबालिजोरी गांव, पश्चिमी सिंहभूम जिला, झारखंड में स्थित 1230.42 हेक्टेयर के कुल परियोजना क्षेत्र में आयरन और बेनेफिसिएशन प्लांट (फीड टू प्लांट) की 18 एम टी पी ए से 27 एम टी पी ए तक क्षमता बढ़ोतरी भी शामिल है। इसी पत्र की प्रतिलिपि झारखंड राज्य प्रदूषण नियंत्रण बोर्ड और पर्यावरण, वन व जलवायु परिवर्तन मंत्रालय की वेबसाइट ([www.parivesh.nic.in](http://www.parivesh.nic.in)) पर भी उपलब्ध है।

Registered Office: Bombay House, 24, Homi Mody Street, Fort, Mumbai 400 001, India  
Tel.: 022 66658282 Fax: 022 66657724 (CIN) - L27100MH1907PLC000260  
Website: [www.tatasteel.com](http://www.tatasteel.com)



# Continuous Ambient Air Quality Monitoring Station



## ANNEXURE-XI


Summarised Ambient Air Quality Monitoring Report of Core Zone								
Noamundi Iron Ore Mine, Tata Steel Limited								
Period: October 2025 to March 2026								
Mine location	Sampling location	Month	Range	Results in µg/m <sup>3</sup>				
				PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	CO
Noamundi Iron Ore Mine	Near WTP	Oct 25	Avg.	62.1	21.1	13.4	19.8	BLQ (LOQ-0.5)
		Nov 25	Avg.	72.2	30.4	15.6	20.6	BLQ (LOQ-0.5)
		Dec 25	Avg.	59.9	19.3	9.3	17.9	BLQ (LOQ-0.5)
		Jan 26	Avg.	58.7	22.4	4.6	11.0	BLQ (LOQ-0.5)
		Feb 26	Avg.	51.7	23.7	6.6	9.0	BLQ (LOQ-0.5)
		Mar 26	Avg.	57.3	26.3	6.8	9.9	BLQ (LOQ-0.5)
	Near Sports Complex	Oct 25	Avg.	63.4	20.7	12.7	19.3	BLQ (LOQ-0.5)
		Nov 25	Avg.	69.1	26.4	13.6	21.4	BLQ (LOQ-0.5)
		Dec 25	Avg.	62.1	20.8	9.1	17.1	BLQ (LOQ-0.5)
		Jan 26	Avg.	55.8	20.7	9.2	16.6	BLQ (LOQ-0.5)
		Feb 26	Avg.	64.1	28.0	10.3	20.3	BLQ (LOQ-0.5)
		Mar 26	Avg.	60.8	29.2	9.9	13.4	BLQ (LOQ-0.5)
	MRSS	Oct 25	Avg.	60.0	21.0	13.9	20.9	BLQ (LOQ-0.5)
		Nov 25	Avg.	65.6	25.1	12.4	19.8	BLQ (LOQ-0.5)
		Dec 25	Avg.	56.8	23.6	7.3	16.2	BLQ (LOQ-0.5)
		Jan 26	Avg.	59.0	22.3	18.8	14.4	BLQ (LOQ-0.5)
		Feb 26	Avg.	61.5	25.9	14.3	18.5	BLQ (LOQ-0.5)
		Mar 26	Avg.	63.9	28.6	9.4	13.0	BLQ (LOQ-0.5)
	TSRDS & Bottom Bin	Oct 25	Avg.	63.7	21.3	14.3	21.0	BLQ (LOQ-0.5)
		Nov 25	Avg.	61.7	22.6	10.3	17.5	BLQ (LOQ-0.5)
		Dec 25	Avg.	55.6	23.0	6.9	15.1	BLQ (LOQ-0.5)
		Jan 26	Avg.	52.5	23.6	19.3	17.3	BLQ (LOQ-0.5)
		Feb 26	Avg.	55.0	26.7	19.2	25.4	BLQ (LOQ-0.5)
		Mar 26	Avg.	74.6	26.9	14.1	19.1	BLQ (LOQ-0.5)

## ANNEXURE-XI

Summarised Ambient Air Quality Monitoring Report of Buffer Zone								
Noamundi Iron Ore Mine of M/s Tata Steel Limited								
Period: October 2025 to March 2026								
Mine location	Sampling location	Month	Range	Results in µg/m <sup>3</sup>				
				PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	CO
Noamundi Iron Ore Mine	Tankura Village	Oct 25	Avg.	61.7	21.3	12.7	20.2	BLQ (LOQ-0.5)
		Nov 25	Avg.	67.1	24.8	12.1	16.8	BLQ (LOQ-0.5)
		Dec 25	Avg.	71.6	28.7	8.5	17.9	BLQ (LOQ-0.5)
		Jan 26	Avg.	51.0	16.9	7.2	10.5	BLQ (LOQ-0.5)
		Feb 26	Avg.	49.0	17.7	5.9	7.8	BLQ (LOQ-0.5)
		Mar 26	Avg.	45.3	18.9	6.3	9.4	BLQ (LOQ-0.5)
	Miralgara Village	Oct 25	Avg.	63.3	21.5	16.8	23.2	BLQ (LOQ-0.5)
		Nov 25	Avg.	73.8	32.4	14.2	23.1	BLQ (LOQ-0.5)
		Dec 25	Avg.	73.8	29.4	8.4	17.3	BLQ (LOQ-0.5)
		Jan 26	Avg.	45.0	18.0	5.7	13.4	BLQ (LOQ-0.5)
		Feb 26	Avg.	56.5	18.7	5.7	8.0	BLQ (LOQ-0.5)
		Mar 26	Avg.	52.4	19.7	7.2	8.6	BLQ (LOQ-0.5)
	Kitabeda Village	Oct 25	Avg.	64.6	22.0	14.5	21.5	BLQ (LOQ-0.5)
		Nov 25	Avg.	63.7	23.6	12.7	19.6	BLQ (LOQ-0.5)
		Dec 25	Avg.	72.8	29.5	7.4	17.6	BLQ (LOQ-0.5)
		Jan 26	Avg.	51.7	21.2	12.1	13.5	BLQ (LOQ-0.5)
		Feb 26	Avg.	67.7	17.4	7.5	13.3	BLQ (LOQ-0.5)
		Mar 26	Avg.	48.3	19.7	5.7	8.3	BLQ (LOQ-0.5)
	Balita Village	Oct 25	Avg.	65.1	22.8	14.5	21.1	BLQ (LOQ-0.5)
		Nov 25	Avg.	59.2	20.6	11.1	17.1	BLQ (LOQ-0.5)
		Dec 25	Avg.	63.3	24.3	8.5	17.8	BLQ (LOQ-0.5)
		Jan 26	Avg.	48.9	23.7	6.8	10.4	BLQ (LOQ-0.5)
		Feb 26	Avg.	54.5	14.7	6.0	5.3	BLQ (LOQ-0.5)
		Mar 26	Avg.	49.3	18.3	6.0	8.8	BLQ (LOQ-0.5)

<b>Summarised Ambient Air Quality Monitoring Report of 12 Parameters of Core Zone</b>						
<b>Noamundi Iron Mine Iron Ore Mine of M/s Tata Steel Limited</b>						
<b>Period: October 2025 to March 2026</b>						
Parameters		February 2026				
		NAAQMS Standards	Near GM Office (LAB)	Near SPORT Complex	Near MRSS	Near TSRDS & Bottom Bin
1	Particulate Matter (PM <sub>10</sub> )	100 (24 hrs)	44.1	49.2	67.4	57.9
2	Particulate Matter (PM <sub>2.5</sub> )	60 (24 hrs)	22.7	34.8	31.5	30.2
3	Sulphur dioxide	80 (24 hrs)	BLQ (LOQ-5)	9.4	14.3	18.3
4	Oxides of Nitrogen	80 (24 hrs)	8.0	18.3	18.8	21.9
5	Carbon Monoxide (as CO)	2.0 (8 hrs)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)
6	Lead as Pb	1.0 (24 hrs)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
7	Nickel as Ni	20.0 (annual)	BLQ (LOQ-10.0)	BLQ (LOQ-10.0)	BLQ (LOQ-10.0)	BLQ (LOQ-10.0)
8	Arsenic as As	6.0 (annual)	BLQ (LOQ-2.0)	BLQ (LOQ-2.0)	BLQ (LOQ-2.0)	BLQ (LOQ-2.0)
9	Ozone (as O <sub>3</sub> )	100 (8 hrs)	BLQ (LOQ-19.6)	BLQ (LOQ-19.6)	BLQ (LOQ-19.6)	BLQ (LOQ-19.6)
10	Ammonia (as NH <sub>3</sub> )	400 (24 hrs)	BLQ (LOQ-20.0)	BLQ (LOQ-20.0)	BLQ (LOQ-20.0)	BLQ (LOQ-20.0)
11	Benzene	5.0 (annual)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
12	Benzo-Pyrene	1.0 (annual)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

# ANNEXURE-12 Digital Display Board



**TATA STEEL**  
#WeAlsoMakeTomorrow

### Display of Information Related to Air, Water and Hazardous waste generation

i. Name of the Industry / Facility with contact details **NORMANDI IRON MINES**  
 (as per the consent to Establish / Operate) :

ii. Date of update of display : **MARCH - 05/03/2025**

iii. Details of updated consent to operate and authorization with validity : C.T.O. valid till 31.12.22  
 with valid till 31.03.24

iv. Details of operational status : Operational  
 with valid till 31.03.24  
 vide no. JSPD/M/RNC/HUM  
 3410.2/16/2019/247

v. Production details :

Sl. No.	Products manufactured (including Recycling / Utilization)	Details of Hazardous Chemicals used with quality and purpose	Type of HW generated with category as per HOWM Rules - 2016	Quantity of HW generated. Stored / Disposed	Mode of treatment and disposal (Pre-processing, Co-processing, Recycling/ Utilizing/reuse/SLF/ incinerator etc)
		USED OIL -		3.82 MT	
		EMPTY-F. BROS/DROPS	HURDLE -	62 HAS	
		WOODEN SCRAP -		15.52 MT	
		CORVEYOR-BELT -		35.83 MT	
		MELTING SCRAP -		191.75 MT	

vi. Air Emission :

Sl. No.	Source of Air Pollution (Ex. Boiler / DG sets / Furnace with capacity in ltr. / kg., type of fuel etc.)	Air Pollution Control Devices (APCD devices with stack height)	Parameters monitored w.r.t Air Pollution (PM, CO, SO <sub>2</sub> , NO <sub>x</sub> , etc.)	
			Monitored Data	Limits / Standard prescribed by SPCBs / CPCB)
			PM10 - 60.33	Limit - 100 µg/m <sup>3</sup>
			PM2.5 - 23.39	Limit - 50 µg/m <sup>3</sup>
			SO <sub>2</sub> - 11.23	Limit - 80 µg/m <sup>3</sup>
			NO <sub>x</sub> - 23.08	Limit - 80 µg/m <sup>3</sup>
			CO -	Limit - 1000 µg/m <sup>3</sup>


\*OCEMS Connectivity details (Date of Installation and operational Status): C.A.R.G.M.S IS OPERATIONAL

vii. Effluent Discharge :

Sl. No.	Source of Effluent Discharge with Quantity (ex. Process waste water, domestic effluent etc.)	Treatment method (ETP with capacity or any other method)	Mode of disposal of treatment effluent (Drain/sewer/land etc.)	Effluent discharge Monitoring (pH, COD, BOD, TSS etc.)	
				Inlet	Outlet
	WORKSHOP	30 KLD	Re-use in Washing	PH - 6.36	6.86
	HOSPITAL	10 KLD	Re-use in horticulture	TSS - 43.18	32.06
	DOMESTIC	300 KLD	Re-use in horticulture	BOD - 28.0	22.0
				COD - 144.67	120.33

\*OCEMS Connectivity details (Date of Installation and operational Status):

**ORE MINES AND QUARRIES DIVISION**



**TATA STEEL**  
#WeAlsoMakeTomorrow

### Display of Information Related to Air, Water and Hazardous waste generation

i. Name of the Industry / Facility with contact details **NORMANDI IRON MINES**  
 (as per the consent to Establish / Operate) :

ii. Date of update of display : **FEB - 05/01/2025**

iii. Details of updated consent to operate and authorization with validity : C.T.O. valid till 31.12.22  
 with valid till 31.03.24

iv. Details of operational status : Operational  
 with valid till 31.03.24  
 vide no. JSPD/M/RNC/HUM  
 3410.2/16/2019/247

v. Production details :

Sl. No.	Products manufactured (including Recycling / Utilization)	Details of Hazardous Chemicals used with quality and purpose	Type of HW generated with category as per HOWM Rules - 2016	Quantity of HW generated. Stored / Disposed	Mode of treatment and disposal (Pre-processing, Co-processing, Recycling/ Utilizing/reuse/SLF/ incinerator etc)
		USED OIL -		3.82 MT	
		EMPTY-F. BROS/DROPS	HURDLE -	62 HAS	
		WOODEN SCRAP -		15.52 MT	
		CORVEYOR-BELT -		35.83 MT	
		MELTING SCRAP -		191.75 MT	

vi. Air Emission :

Sl. No.	Source of Air Pollution (Ex. Boiler / DG sets / Furnace with capacity in ltr. / kg., type of fuel etc.)	Air Pollution Control Devices (APCD devices with stack height)	Parameters monitored w.r.t Air Pollution (PM, CO, SO <sub>2</sub> , NO <sub>x</sub> , etc.)	
			Monitored Data	Limits / Standard prescribed by SPCBs / CPCB)
			PM10 - 60.33	Limit - 100 µg/m <sup>3</sup>
			PM2.5 - 23.39	Limit - 50 µg/m <sup>3</sup>
			SO <sub>2</sub> - 11.23	Limit - 80 µg/m <sup>3</sup>
			NO <sub>x</sub> - 23.08	Limit - 80 µg/m <sup>3</sup>
			CO -	Limit - 1000 µg/m <sup>3</sup>


\*OCEMS Connectivity details (Date of Installation and operational Status): C.A.R.G.M.S IS OPERATIONAL

vii. Effluent Discharge :

Sl. No.	Source of Effluent Discharge with Quantity (ex. Process waste water, domestic effluent etc.)	Treatment method (ETP with capacity or any other method)	Mode of disposal of treatment effluent (Drain/sewer/land etc.)	Effluent discharge Monitoring (pH, COD, BOD, TSS etc.)	
				Inlet	Outlet
	WORKSHOP	30 KLD	Re-use in Washing	PH - 6.36	6.86
	HOSPITAL	10 KLD	Re-use in horticulture	TSS - 43.18	32.06
	DOMESTIC	300 KLD	Re-use in horticulture	BOD - 28.0	22.0
				COD - 144.67	120.33

\*OCEMS Connectivity details (Date of Installation and operational Status):

**ORE MINES AND QUARRIES DIVISION**



**Samsung Triple Camera**  
Ganesh

## ANNEXURE-XIII

Summarised Fugitive Dust Monitoring Report					
Noamundi Iron Ore Mine of M/s Tata Steel Limited					
Period: October 2025 to March 2026					
Mine Location	Sampling Location	Month	Unit	Results	Norms
Noamundi Iron Ore Mine	Crushing & Screening Plant	October 2025	µg/m <sup>3</sup>	548.00	1200
		November 2025	µg/m <sup>3</sup>	515.00	1200
		December 2025	µg/m <sup>3</sup>	543.00	1200
		January 2026	µg/m <sup>3</sup>	669.00	1200
		February 2026		632.80	
		March 2026	µg/m <sup>3</sup>	665.90	1200
	Loading & Stacking	October 2025	µg/m <sup>3</sup>	503.50	1200
		November 2025	µg/m <sup>3</sup>	432.00	1200
		December 2025	µg/m <sup>3</sup>	413.00	1200
		January 2026	µg/m <sup>3</sup>	634.95	1200
		February 2026	µg/m <sup>3</sup>	574.50	1200
		March 2026	µg/m <sup>3</sup>	682.05	1200
	Haul Road	October 2025	µg/m <sup>3</sup>	432.00	1200
		November 2025	µg/m <sup>3</sup>	385.00	1200
		December 2025	µg/m <sup>3</sup>	405.00	1200
		January 2026	µg/m <sup>3</sup>	493.45	1200
		February 2026	µg/m <sup>3</sup>	480.30	1200
		March 2026	µg/m <sup>3</sup>	571.30	1200
	Waste Dump Site	October 2025	µg/m <sup>3</sup>	420.00	1200
		November 2025	µg/m <sup>3</sup>	323.00	1200
		December 2025	µg/m <sup>3</sup>	377.00	1200
		January 2026	µg/m <sup>3</sup>	590.30	1200
		February 2026	µg/m <sup>3</sup>	606.40	1200
		March 2026	µg/m <sup>3</sup>	730.35	1200
Mining Face (Near Drill)	October 2025	µg/m <sup>3</sup>	592.00	1200	
	November 2025	µg/m <sup>3</sup>	611.00	1200	
	December 2025	µg/m <sup>3</sup>	633.00	1200	
	January 2026	µg/m <sup>3</sup>	702.75	1200	
	February 2026	µg/m <sup>3</sup>	692.00	1200	
	March 2026	µg/m <sup>3</sup>	687.80	1200	

# Air Pollution Control Devices



Fixed Sprinklers



Mist canons



Mobile Sprinklers



Dry-fog System

**Annexure-XV****Surface Water Flow Rate Moniotring Report**

<b>BALIJHARAN NALLA</b>			<b>JOJO NALLA</b>		
Oct-25	Cu.m/hr	249	Oct-25	Cu.m/hr	481
Nov-25	Cu.m/hr	250.57	Nov-25	Cu.m/hr	380.25
Dec-25	Cu.m/hr	232.2	Dec-25	Cu.m/hr	275.42
Jan-26	Cu.m/hr	210.54	Jan-26	Cu.m/hr	252.34
Feb-26	Cu.m/hr	195.84	Feb-26	Cu.m/hr	210.15
Mar-26	Cu.m/hr	208.54	Mar-26	Cu.m/hr	228.5

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**  
**NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		October 2025			
<b>I</b>	<b>Biological Testing 1. Water</b>				
1	<i>Escherichia coli</i>	Absent	Absent	Absent	Absent
<b>II</b>	<b>Chemical Testing 1. Water</b>				
2	Alkalinity (as CaCO <sub>3</sub> ) (as MBAS)	148.26	165.82	184.23	142.23
3	Anionic surface active agents	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
4	Colour	1	1	1	1
5	Cyanide (as CN)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
6	Chloride (as Cl)	22.54	18.45	16.25	18.24
7	Calcium (as Ca)	41.26	38.42	30.26	40.25
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	13.56	10.26	12.46	10.26
11	Nitrate (as NO <sub>3</sub> )	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	7.06	7.46	7.12	7.12
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO <sub>4</sub> )	32.56	22.54	6.85	20.23
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	325	341	295	312
18	Turbidity	0.1	0.1	0.1	0.1
19	Total hardness (as CaCO <sub>3</sub> )	162	174	158	188
<b>II</b>	<b>Chemical Testing 2. Residues In Water</b>				
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Aluminium (as Al)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
22	Barium (as Ba)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Boron (as B)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Copper (as Cu)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
26	Iron (as Fe)	0.12	0.14	0.12	0.20
27	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
28	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
29	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
30	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
32	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)  
NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		<b>OCTOBER 2025</b>			
34	Mineral Oil	BLQ (LOQ- 0.001)	BLQ (LOQ- 0.001)	BLQ (LOQ- 0.001)	BLQ (LOQ- 0.001)
<b>35</b>	<b>Pesticide Residues Organochlorine</b>				
i	Alpha-HCH	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
ii	Beta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Delta- HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
v	Alachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vi	Aldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Dieldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Butachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	p,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	o,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	p,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	o,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiii	o,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiv	p,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Monocrotophos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Atrazine	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvii	Parathion methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xix	Malathion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xx	Malaaxon	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxi	Ethion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxiii	Phorate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
	Phorate-sulfone				
	Phorate-sulfoxide				

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**  
**NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		<b>November 2025</b>			
<b>I</b>	<b>Discipline: Biological</b>				
1	<i>Escherichia coli</i>	Absent	Absent	Absent	Absent
<b>II</b>	<b>Discipline: Chemical</b>				
2	Alkalinity (as CaCO <sub>3</sub> ) (as MBAS)	162.5	148.2	168.22	152.3
3	Anionic surface active agents	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
4	Colour	1	1	1	1
5	Cyanide (as CN)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
6	Chloride (as Cl)	20.56	16.25	18.25	23.65
7	Calcium (as Ca)	38.2	26.32	34.2	52.12
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	14.25	12.36	10.26	15.23
11	Nitrate (as NO <sub>3</sub> )	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	7.25	7.25	7.35	8.05
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO <sub>4</sub> )	20.5	15.26	8.25	25.11
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	412	288	325	412
18	Turbidity	0.1	0.1	0.1	0.1
19	Total hardness (as CaCO <sub>3</sub> )	176	144	162	184
<b>III</b>	<b>Discipline: Chemical</b>				
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Aluminium (as Al)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
22	Barium (as Ba)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Boron (as B)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Copper (as Cu)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
26	Iron (as Fe)	0.12	0.09	0.16	0.14
27	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
28	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
29	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
30	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
32	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

33	Polynuclear aromatic hydrocarbon (PAH)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
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## GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)

### NOAMUNDI IRON MINE

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		<b>November 2025</b>			
<b>IV</b>	<b>Discipline: Chemical</b>				
34	Mineral Oil	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)
<b>V</b>	<b>Discipline: Chemical</b>				
<b>35</b>	<b>Pesticide Residues Organochlorine</b>				
i	Alpha-HCH	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
ii	Beta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Delta- HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
v	Alachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vi	Aldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Dieldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Butachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	p,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	o,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	p,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	o,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiii	o,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiv	p,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Monocrotophos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Atrazine	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvii	Parathion methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xix	Malathion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xx	Malaaxon	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxi	Ethion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxiii	Phorate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
	Phorate-sulfone				
	Phorate-sulfoxide				



**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**

**NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		December 2025			
<b>I</b>	<b>Discipline: Biological</b>				
1	<i>Escherichia coli</i>	Absent	Absent	Absent	Absent
<b>II</b>	<b>Discipline: Chemical</b>				
2	Alkalinity (as CaCO <sub>3</sub> ) (as MBAS)	158.9	156.2	166.56	162.8
3	Anionic surface active agents	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
4	Colour	1	1	1	1
5	Cyanide (as CN)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
6	Chloride (as Cl)	14.25	19	33.25	47.50
7	Calcium (as Ca)	39.56	34.52	41.2	48.23
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	17.03	19.36	9.96	14.68
11	Nitrate (as NO <sub>3</sub> )	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	7.19	7.50	7.18	8.13
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO <sub>4</sub> )	22.5	16.23	14.26	29.21
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	399	388	299	425
18	Turbidity	0.1	0.1	0.1	0.1
19	Total hardness (as CaCO <sub>3</sub> )	169	166	144	181
<b>III</b>	<b>Discipline: Chemical</b>				
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Aluminium (as Al)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
22	Barium (as Ba)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Boron (as B)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Copper (as Cu)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
26	Iron (as Fe)	0.15	0.16	0.19	0.21
27	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
28	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
29	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
30	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
32	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

**GROUND WATER QUALITY REPORT (APRIL 2025 TO SEPTEMBER 2025)**

**NOAMUNDI IRON MINE**

	<b>Parameters</b>	<b>Noamundi Basti (Nr. Play Ground)</b>	<b>Noamundi Bazar (Nr. Petrol Pump)</b>	<b>Mahudi Village (Railway Station Road)</b>	<b>Bottom Bin (Nr. Barrack)</b>
		<b>December 2025</b>			
<b>IV</b>	<b>Discipline: Chemical</b>				
34	Mineral Oil	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
<b>V</b>	<b>Discipline: Chemical</b>				
<b>35</b>	<b>Pesticide Residues Organochlorine</b>				
i	Alpha-HCH	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
ii	Beta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Delta- HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
v	Alachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vi	Aldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Dieldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Butachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	p,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	o,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	p,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	o,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiii	o,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiv	p,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Monocrotophos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Atrazine	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvii	Parathion methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xix	Malathion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xx	Malaaxon	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxi	Ethion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxiii	Phorate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
	Phorate-sulfone				
	Phorate-sulfoxide				

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**

**NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		January 2026			
<b>I</b>	<b>Discipline: Biological</b>				
1	<i>Escherichia coli</i>	Absent	Absent	Absent	Absent
<b>II</b>	<b>Discipline: Chemical</b>				
2	Alkalinity (as CaCO <sub>3</sub> ) (as MBAS)	145.2	166.5	174.5	178.6
3	Anionic surface active agents	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
4	Colour	1	1	1	1
5	Cyanide (as CN)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
6	Chloride (as Cl)	52.3	50.4	52.3	55.6
7	Calcium (as Ca)	51.6	44.6	35.6	49.6
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	14.09	15.43	19.44	15.31
11	Nitrate (as NO <sub>3</sub> )	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	7.68	8.02	7.65	7.5
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO <sub>4</sub> )	32.4	23.5	23.6	35.6
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	468	441	456	468
18	Turbidity	0.1	0.1	0.1	0.1
19	Total hardness (as CaCO <sub>3</sub> )	187	175	169	187
<b>III</b>	<b>Discipline: Chemical</b>				
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Aluminium (as Al)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
22	Barium (as Ba)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Boron (as B)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Copper (as Cu)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
26	Iron (as Fe)	0.33	0.21	0.31	0.27
27	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
28	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
29	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
30	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
32	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
33	Polynuclear aromatic hydrocarbon (PAH)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**

**NOAMUNDI IRON MINE**

	<b>Parameters</b>	<b>Noamundi Basti (Nr. Play Ground)</b>	<b>Noamundi Bazar (Nr. Petrol Pump)</b>	<b>Mahudi Village (Railway Station Road)</b>	<b>Bottom Bin (Nr. Barrack)</b>
		<b>January 2026</b>			
<b>IV</b>	<b>Discipline: Chemical</b>				
34	Mineral Oil	BLQ (LOQ- 0.001)	BLQ (LOQ- 0.001)	BLQ (LOQ- 0.001)	BLQ (LOQ- 0.001)
<b>V</b>	<b>Discipline: Chemical</b>				
<b>35</b>	<b>Pesticide Residues Organochlorine</b>				
i	Alpha-HCH	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
ii	Beta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Gamma - HCH (Lindane)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Delta- HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
v	Alachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vi	Aldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Dieldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Butachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	p,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	o,p'-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	p,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	o,p'-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiii	o,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiv	p,p'- DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Monocrotophos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Atrazine	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvii	Parathion methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xviii	Paraoxon methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xix	Malathion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xx	Malaaxon	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxi	Ethion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxii	Chlorpyrifos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xxiii	Phorate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
	Phorate-sulfone				
	Phorate-sulfoxide				

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)  
NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		February 2026			
<b>I</b>	<b>Biological Testing 1.Water</b>				
1	<i>Escherichia coli</i>	Absent	Absent	Absent	Absent
<b>II</b>	<b>Biological Testing 1.Water</b>				
2	Alkalinity (as CaCO3) (as MBAS)	139.30	159.20	134.33	164.18
3	Anionic surface active agents	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
4	Colour	BLQ (LOQ-1))	BLQ (LOQ-1))	BLQ (LOQ-1)	BLQ (LOQ-1)
5	Cyanide (as CN)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
6	Chloride (as Cl)	40.20	43.67	42.68	41.69
7	Calcium (as Ca)	48.90	42.49	36.07	38.48
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	12.17	14.12	16.56	11.69
11	Nitrate (as NO3)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	7.63	8.01	7.89	7.20
14	Phenolic compounds (as C6H5OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO4)	10.2	9.81	11.23	10.2
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	256	256	266	301
18	Turbidity	0.1	0.1	0.12	0.1
19	Total hardness (as CaCO3)	172	164	158	144
<b>II</b>	<b>Chemical Testing 2. Residues In Water</b>				
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Aluminium (as Al)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
22	Barium (as Ba)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Boron (as B)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Copper (as Cu)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
26	Iron (as Fe)	0.49	0.57	0.49	0.51
27	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
28	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
29	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
30	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
32	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
33	Mineral Oil	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
<b>34</b>	<b>Polynuclear aromatic hydrocarbon (PAH)</b>				

i	Indeno(1,2,3- cd)pyrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ii	Acenaphthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Acenaphthylene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Anthracene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**

**NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Station Road)	Bottom Bin (Nr. Barrack)
<b>February 2026</b>					
v	Benz(a)anthracene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vi	Benzo(a)pyrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Benzo(b)fluoranthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Benzo(g,h,i)perylene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	Benzo(k)fluoranthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	Chrysene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	Dibenz(a,h)anthracene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	Fluoranthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiii	Fluorene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiv	Naphthalene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Phenanthrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Pyrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
35	<b>Pesticide Residues Organochlorine</b>				
i	Alachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ii	Atrazine	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Aldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Dieldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
v	Alpha HCH	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
vi	Beta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Butachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Chlorpyrifos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	Delta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	2,4-Dichlorophenoxy Acetic Acid	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	DDT (o, p and p, p – Isomers of DDT,DDE and DDD)				
a	p,p-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
b	o,p-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
c	p,p-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
d	o,p-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
e	o,p-DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
f	p,p-DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	Endosulfan (alpha, beta and sulphate)				
a	Alpha Endosulfan	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
b	Beta Endosulfan	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
c	Endosulfan sulfate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

xiii	Ethion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ivx	Gamma HCH (Lindane)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Isoproturon	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Malathion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvii	Parathion methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xviii	Monocrotophos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xix	Phorate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**

**NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Station Road)	Bottom Bin (Nr. Barrack)
		March 2026			
<b>I</b>	<b>Biological Testing 1.Water</b>				
1	<i>Escherichia coli</i>	Absent	Absent	Absent	Absent
<b>II</b>	<b>Biological Testing 1.Water</b>				
2	Alkalinity (as CaCO <sub>3</sub> ) (as MBAS)	158.75	171.45	133.35	152.4
3	Anionic surface active agents	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
4	Colour	BLQ (LOQ-1))	BLQ (LOQ-1))	BLQ (LOQ-1))	BLQ (LOQ-1))
5	Cyanide (as CN)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
6	Chloride (as Cl)	63.56	64.55	66.03	65.04
7	Calcium (as Ca)	60	59.2	61.6	55.2
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
10	Magnesium (as Mg)	9.23	10.69	8.75	14.09
11	Nitrate (as NO <sub>3</sub> )	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	7.69	8.01	7.65	7.51
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO <sub>4</sub> )	32.4	23.6	24.5	35.6
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	468	445	450	470
18	Turbidity	0.1	0.1	0.1	0.1
19	Total hardness (as CaCO <sub>3</sub> )	188	192	190	196
<b>II</b>	<b>Chemical Testing 2. Residues In Water</b>				
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Aluminium (as Al)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
22	Barium (as Ba)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Boron (as B)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Copper (as Cu)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
25	Cadmium (as Cd)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
26	Iron (as Fe)	0.21	0.22	0.17	0.16
27	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
28	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

29	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
30	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
31	Total Chromium (as Cr)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
32	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
33	Mineral Oil	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
<b>34</b>	<b>Polynuclear aromatic hydrocarbon (PAH)</b>				
i	Indeno(1,2,3- cd)pyrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ii	Acenaphthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Acenaphthylene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Anthracene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

**GROUND WATER QUALITY REPORT (OCTOBER 2025 TO MARCH 2026)**

**NOAMUNDI IRON MINE**

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Station Road)	Bottom Bin (Nr. Barrack)
		<b>February 2026</b>			
v	Benz(a)anthracene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vi	Benzo(a)pyrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Benzo(b)fluoranthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Benzo(g,h,i)perylene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	Benzo(k)fluoranthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	Chrysene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	Dibenz(a,h)anthracene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	Fluoranthene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiii	Fluorene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiv	Naphthalene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Phenanthrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Pyrene	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
<b>35</b>	<b>Pesticide Residues Organochlorine</b>				
i	Alachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ii	Atrazine	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iii	Aldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
iv	Dieldrin	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
v	Alpha HCH	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
vi	Beta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
vii	Butachlor	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
viii	Chlorpyrifos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ix	Delta HCH	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
x	2,4-Dichlorophenoxy Acetic Acid	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xi	DDT (o, p and p, p – Isomers of DDT,DDE and DDD)				
a	p,p-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
b	o,p-DDE	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
c	p,p-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
d	o,p-DDD	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

e	o,p-DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
f	p,p-DDT	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xii	Endosulfan (alpha, beta and sulphate)				
a	Alpha Endosulfan	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
b	Beta Endosulfan	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
c	Endosulfan sulfate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xiii	Ethion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
ivx	Gamma HCH (Lindane)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xv	Isoproturon	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvi	Malathion	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xvii	Parathion methyl	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xviii	Monocrotophos	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
xix	Phorate	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)

<b>Summarise Ground Water Level Report</b>				
<b>Katamati Iron Ore Mine of Tata Steel Limited</b>				
<b>Period: October 2025 to March 2026</b>				
<b>Month</b>	<b>Locations wise Ground Water Level in Mtrs. = mbmp- magl</b>			
	<b>Noamundi Bazar</b>	<b>Noamundi Basti</b>	<b>Noamundi Village</b>	<b>Near Bottom Bin</b>
October 2025	0.87	0.82	0.69	0.54
November 2025	1.52	1.32	1.15	1.02
December 2025	1.12	1.06	0.99	0.84
January 2026	1.94	1.38	2.59	1.32
February 2026	1.80	1.26	2.40	1.30
March 2026	1.68	1.20	1.98	2.28

# Piezometer



## ANNEXURE - XIX

SUMMERISED SURFACE WATER QUALITY REPORT							
NOAMUNDI IRON MINE							
PERIOD : OCTOBER 2025 TO MARCH 2026							
	Location	SW1 – Balijhore Nalla upstream					
	Parameters	Oct 25	Nov 25	Dec 25	Jan 26	Feb 26	Mar 26
<b>I</b>							
1	Coliform	Absent	Absent	Absent	Absent	211	175
<b>II</b>							
2	pH	6.89	6.88	6.29	6.56	6.63	6.59
3	Colour	5	10	10	10	10	10
4	Total Dissolved Solids (TDS)	1325	1425	1456	1456	1356	1450
5	Chloride (as Cl)	415	521	565.29	401.2	412.3	370.06
6	Sulphate (as SO <sub>4</sub> )	352	302	299	311.2	243.3	312.2
7	Nitrate (as NO <sub>3</sub> )	18.23	25.32	26.23	35.6	35.5	35.9
8	Fluoride (as F)	1.06	1.32	1.38	0.98	1.01	0.98
9	Cyanide	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
10	Phenolic compounds	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
12	Dissolved Oxygen	3.5	3.2	3.8	4.2	4.4	7.3
13	Total Suspended Solid (as TSS)	35	42.3	42	71	69.3	74
14	BOD (3 days at 27°C)	1.88	2.12	2.5	2.1	2.6	2.8
15	Chemical oxygen demand	7.23	6.58	16.29	30.8	33.6	25.9
16	Hexa Chromium (as Cr+6)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
<b>II</b>	<b>Discipline : Chemical</b>						
17	Iron as (Fe)	0.68	0.42	0.35	0.39	0.52	0.43
18	Cadmium as Cd	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
19	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
22	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
25	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
26	Copper (as Cu)	BLQ (LOQ-0.02)	0.99	1.23	1.19	0.50	BLQ (LOQ-0.02)

SURFACE WATER QUALITY REPORT							
NOAMUNDI IRON MINE							
PERIOD : OCTOBER 2025 TO MARCH 2026							
	Location	SW2 – Balijhore Nalla downstream					
	Parameters	Oct 25	Nov 25	Dec 25	Jan 26	Feb 26	Mar 26
I							
1	Coliform	Absent	Absent	Absent	Absent	354	177
II							
2	pH	7.12	7.25	7.16	6.66	8.22	6.67
3	Colour	10	10	10	10	10	10
4	Total Dissolved Solids (TDS)	1189	1265	1215	1356	1321	1360
5	Chloride (as Cl)	342	485	456.03	356.6	411.3	350.35
6	Sulphate (as SO4)	288	241	236	303.8	301.2	303.8
7	Nitrate (as NO3)	12.47	13.25	12.29	24.6	25.5	31.6
8	Fluoride (as F)	0.88	1.02	1.06	1.11	0.88	0.88
9	Cyanide	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
10	Phenolic compounds	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
11	Anionic Detergents (as MBAS)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
12	Dissolved Oxygen	3.1	2.4	2.9	4.3	4.1	7.6
13	Total Suspended Solid (as TSS)	30	26.5	28	65	80.3	65
14	BOD (3 days at 27°C)	1.66	1.69	1.5	2.3	2.6	2.3
15	Chemical oxygen demand	6.48	5.28	5.69	25.6	41.9	30.6
16	Hexa Chromium (as Cr+6)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
II	<b>Discipline : Chemical</b>						
17	Iron as (Fe)	0.38	0.22	0.20	0.51	0.51	0.55
18	Cadmium as Cd	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
19	Selenium (as Se)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
20	Arsenic (as As)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
21	Lead (as Pb)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
22	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
24	Mercury (as Hg)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
25	Manganese (as Mn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
26	Copper (as Cu)	0.62	0.54	0.51	0.31	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)

# RWH Structure



Latitude : 22.14622°  
Longitude : 85.496°  
Elevation : 517.00 m  
Accuracy : 1.97 m  
Pitch : 90.0°(-0.00°)  
Date : 05/07/2024  
Time : 10:07:00 AM

**STP Report (October 2025 to March 2026)**  
**Noamundi Iron Mine**

	Test Parameter	Measurement Unit	New Town Ship STP 50 KLD - Outlet					
			Oct '25	Nov'25	Dec'25	Jnn'26	Feb '26	Msr '26
<b>I</b>	<b>Chemical Testing Pollution &amp; Environment</b>							
1	pH value	-	6.71	7.25	7.29	7.55	7.49	7.28
2	Oil & Grease	mg/l	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)
3	Total Suspended Solid (TSS)	mg/l	52	46	49	52	42	84
4	Ammonical Nitrogen (as N)	mg/l	28.43	28	29.4	30.5	22.4	9.52
5	Total Kjeldahl Nitrogen( N)	mg/l	52.87	52.08	39.48	40.2	33.6	28
6	BOD (3 days at 27°C)	mg/l	24	20	21	19.2	21	18
7	COD	mg/l	194	191.98	184.03	162.3	199.94	194.16
8	Cyanide (as CN)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
9	Phenolic Compounds (as C6H5OH)	mg/l	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
<b>II</b>	<b>Chemical Testing 2. Residues in Water</b>							
10	Iron (as Fe)	mg/l	1.73	2.12	2.08	1.02	2.19	1.53
11	Manganese (as Mn)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
12	Mercury (as Hg)	mg/l	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
13	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
14	Selenium (as Se)	mg/l	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
15	Lead (as Pb)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
16	Arsenic (as As)	mg/l	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
17	Nickel (as Ni)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
18	Zinc (as Zn)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
19	Total Chromium	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
20	Vanadium (as V)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
21	Copper (as Cu)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
<b>I</b>	<b>Biological Testing 1.Water</b>							
1	Faecal coliform	MPN/100 ml	92	70	67	52	52	94
<b>II</b>	<b>Chemical Testing Pollution &amp; Environment</b>							
2	Colour	Hazen units	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	BLQ (LOQ-0.01)	BLQ (LOQ-1)
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	°C	250C	250C	25	25	25	25
5	Free residual chlorine	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
6	Particulate size of SS		<850	<850	<850	<850	BLQ (LOQ-850)	BLQ (LOQ-850)
7	Free Ammonia (as NH3)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
8	Fluoride (as F)	mg/l	BDL(DL-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Sulphide (as S)	mg/l	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
10	Nitrate Nitrogen	mg/l	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
11	Bio Assay Test	%	92%	92%	90	90	90	90
12	Hexavalent Chromium (as Cr+6)	mg/l	BLQ (LOQ-0.01)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
13	Dissolved Phosphate (as P)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)

**STP Report (October 2025 to March 2026)**  
**Noamundi Iron Mine**

	Test Parameter	Measurement Unit	Central camp STP 50 KLD - Outlet					
			Oct '25	Nov'25	Dec'25	Jnn'26	Feb '26	Msr '26
<b>I</b>	<b>Chemical Testing Pollution &amp; Environment</b>							
1	pH value	-	7.13	6.98	6.85	8.05	7.18	7.03
2	Oil & Grease	mg/l	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)
3	Total Suspended Solid (TSS)	mg/l	36	48	62	56	56	70
4	Ammonical Nitrogen (as N)	mg/l	28.74	28	39.2	40.3	33.6	9.24
5	Total Kjeldahl Nitrogen (as N)	mg/l	34.68	33.88	44.8	35.6	47.6	31.36
6	BOD (3 days at 27°C)	mg/l	24	26	24	24	20	16
7	COD	mg/l	152	151.56	173.81	152.3	118.14	155.33
8	Cyanide (as CN)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
9	Phenolic Compounds (as C6H5OH)	mg/l	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
<b>II</b>	<b>Chemical Testing 2. Residues in Water</b>							
10	Iron (as Fe)	mg/l	1.94	2.22	2.04	1.4	2.17	1.82
11	Manganese (as Mn)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
12	Mercury (as Hg)	mg/l	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
13	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
14	Selenium (as Se)	mg/l	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
15	Lead (as Pb)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
16	Arsenic (as As)	mg/l	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
17	Nickel (as Ni)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
18	Zinc (as Zn)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
19	Total Chromium	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
20	Vanadium (as V)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
21	Copper (as Cu)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
<b>I</b>	<b>Biological Testing 1. Water</b>							
1	Faecal coliform	MPN/100 ml	82	109	112	112	71	120
<b>II</b>	<b>Chemical Testing Pollution &amp; Environment</b>							
2	Colour	Hazen units	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	BLQ (LOQ-0.01)	BLQ (LOQ-1)
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	°C	25C	25C	25	25	25	25
5	Free residual chlorine	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
6	Particulate size of SS		<850	<850	<850	<850	<850	<850
7	Free Ammonia (as NH3)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
8	Fluoride (as F)	mg/l	BDL(DL-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Sulphide (as S)	mg/l	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
10	Nitrate Nitrogen	mg/l	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
11	Bio Assay Test	%	94%	90%	96	95	90	90
12	Hexavalent Chromium (as Cr+6)	mg/l	BLQ (LOQ-0.01)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
13	Dissolved Phosphate (as P)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)

**STP Report (October 2025 to March 2026)**  
**Noamundi Iron Mine**

	Test Parameter	Measurement Unit	Sangramsai Ship STP 10 KLD - Outlet					
			Oct '25	Nov'25	Dec'25	Jnn'26	Feb '26	Msr '26
<b>I</b>	<b>Chemical Testing Pollution &amp; Environment</b>							
1	pH value	-	7.02	7.05	7.19	7.33	8.08	8.01
2	Oil & Grease	mg/l	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)
3	Total Suspended Solid (TSS)	mg/l	52	50	52	45.5	36	70
4	Ammonical Nitrogen (as N)	mg/l	25	25.2	26.6	25.5	18.2	24.92
5	Total Kjeldahl Nitrogen(N)	mg/l	32.15	31.92	38.08	35.3	35.28	42
6	BOD (3 days at 27°C)	mg/l	20	21	22	20	18	20
7	COD	mg/l	184.24	171.77	163.58	120.3	172.67	116.50
8	Cyanide (as CN)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
9	Phenolic Compounds (as C6H5OH)	mg/l	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
<b>II</b>	<b>Chemical Testing 2. Residues in Water</b>							
10	Iron (as Fe)	mg/l	1.05	1.56	1.88	1.25	2.89	2.22
11	Manganese (as Mn)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
12	Mercury (as Hg)	mg/l	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
13	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
14	Selenium (as Se)	mg/l	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
15	Lead (as Pb)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
16	Arsenic (as As)	mg/l	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
17	Nickel (as Ni)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
18	Zinc (as Zn)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
19	Total Chromium	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
20	Vanadium (as V)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
21	Copper (as Cu)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
<b>I</b>	<b>Biological Testing 1.Water</b>							
1	Faecal coliform	MPN/100 ml	58	49	52	55	88.00	76.00
<b>II</b>	<b>Chemical Testing Pollution &amp; Environment</b>							
2	Colour	Hazen units	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	BLQ (LOQ-1)	BLQ (LOQ-1)
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	°C	250C	250C	25	25	25	25
5	Free residual chlorine	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
6	Particulate size of SS		<850	<850	<850	<850	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
7	Free Ammonia (as NH3)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
8	Fluoride (as F)	mg/l	BDL(DL-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Sulphide (as S)	mg/l	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
10	Nitrate Nitrogen	mg/l	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
11	Bio Assay Test	%	92%	90%	95	90	92	90
12	Hexavalent Chromium (as Cr+6)	mg/l	BLQ (LOQ-0.01)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
13	Dissolved Phosphate (as P)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)

## ETP Report (October 2025 to March 2026)

## Noamundi Iron Mine

Test Parameter	Tata Main Hospital ETP 15 KLD - OUTLET						
	Oct '25	Nov'25	Dec'25	Jnn'26	Feb '26	Msr '26	
<b>I</b>	<b>Chemical Testing Pollution &amp; Environment</b>						
1	pH value	7.21	7.06	6.98	7.98	7.39	7.08
2	Oil & Grease	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)
3	Total Suspended Solid (TSS)	46	24	46	36.5	53	78
4	Ammonical Nitrogen (as N)	28	28	35	23.4	30.8	19.32
5	Total Kjeldahl Nitrogen (as N)	32	29.96	42	32.1	48.44	33.6
6	BOD (3 days at 27°C)	24	19	18	20.5	18	18
7	Chemical Oxygen Demand	138	131.35	153.36	130.5	109.05	126.20
8	Cyanide (as CN)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
9	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
<b>II</b>	<b>Chemical Testing 2. Residues In Water</b>						
10	Iron (as Fe)	2.16	2.35	2.45	1.52	1.81	1.06
11	Manganese (as Mn)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
12	Mercury (as Hg)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
13	Cadmium (as Cd)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
14	Selenium (as Se)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
15	Lead (as Pb)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
16	Arsenic (as As)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
17	Nickel (as Ni)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
18	Zinc (as Zn)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
19	Total Chromium	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
20	Vanadium (as V)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
21	Copper (as Cu)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
<b>I</b>	<b>Biological Testing 1.Water</b>						
1	Fecal coliform	82	84	92	89	63	84
<b>II</b>	<b>Chemical Testing Pollution &amp; Environment</b>						
2	Colour	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	BLQ (LOQ-0.01)	BLQ (LOQ-1)
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	250C	250C	25	25	25	25
5	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
6	Particulate size of SS	<850	<850	<850	<850	BLQ (LOQ-850)	BLQ (LOQ-850)
7	Free Ammonia (as NH <sub>3</sub> )	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
8	Fluoride (as F)	BDL(DL-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Sulphide (as S)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
10	Nitrate Nitrogen	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
11	Bio Assay Test	92%	92%	91	95	95	90
12	Hexavalent Chromium (as Cr <sup>+6</sup> )	BLQ (LOQ-0.01)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
13	Dissolved Phosphate (as P)	BLQ (LOQ-0.1)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)

## ETP Report (October 2025 to March 2026)

## Noamundi Iron Mine

Test Parameter	Mrga Centre ETP 30 KLD - OUTLET						
	Oct '25	Nov'25	Dec'25	Jnn'26	Feb '26	Msr '26	
<b>I</b>	<b>Chemical Testing Pollution &amp; Environment</b>						
1	pH value	7.12	7.88	7.85	7.55	7.28	7.13
2	Oil & Grease	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)	BLQ (LOQ-4)
3	Total Suspended Solid (TSS)	32	45	56	55	61	82
4	Ammonical Nitrogen (as N)	32	23.8	30.8	40.2	32.2	24.08
5	Total Kjeldahl Nitrogen (as N)	23.84	28.84	37.8	38.7	45.36	31.64
6	BOD (3 days at 27°C)	16	20	22	23	22	21
7	Chemical Oxygen Demand	154	161.66	143.14	153.2	136.32	106.79
8	Cyanide (as CN)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
9	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
<b>II</b>	<b>Chemical Testing 2. Residues In Water</b>						
10	Iron (as Fe)	2.12	2.34	2.14	1.52	1.02	0.90
11	Manganese (as Mn)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
12	Mercury (as Hg)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
13	Cadmium (as Cd)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
14	Selenium (as Se)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
15	Lead (as Pb)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
16	Arsenic (as As)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
17	Nickel (as Ni)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
18	Zinc (as Zn)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
19	Total Chromium	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
20	Vanadium (as V)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
21	Copper (as Cu)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
<b>I</b>	<b>Biological Testing 1.Water</b>						
1	Fecal coliform	94	79	84	55	101	94
<b>II</b>	<b>Chemical Testing Pollution &amp; Environment</b>						
2	Colour	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	BLQ (LOQ-1)	BLQ (LOQ-1)
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	250C	250C	25	25	25	25
5	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
6	Particulate size of SS	<850	<850	<850	<850	BLQ (LOQ-850)	BLQ (LOQ-850)
7	Free Ammonia (as NH <sub>3</sub> )	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
8	Fluoride (as F)	BDL(DL-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Sulphide (as S)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
10	Nitrate Nitrogen	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
11	Bio Assay Test	92%	92%	90	90	90	90
12	Hexavalent Chromium (as Cr <sup>+6</sup> )	BLQ (LOQ-0.01)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.2)	BLQ (LOQ-0.2)
13	Dissolved Phosphate (as P)	BLQ (LOQ-0.1)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.1)	

Location - 30 KLD ETP AT MEGACENTER  
 Record for the Oct - 2025

SLNO	Date	NO of vehicle washed	Quality of Grease Recovered in Kg.
1.	01/10/25	2	0.23
2.	02/10/25	2	0.21
3.	03/10/25	3	0.18
4.	04/10/25	3	0.18
5.	05/10/25	2	0.15
6.	06/10/25	1	0.16
7.	07/10/25	2	0.13
8.	08/10/25	2	0.12
9.	09/10/25	3	0.17
10.	10/10/25	1	0.17
11.	11/10/25	1	0.21
12.	12/10/25	2	0.21
13.	13/10/25	2	0.14
14.	14/10/25	3	0.17
15.	15/10/25	1	0.16
16.	16/10/25	3	0.16
17.	17/10/25	2	0.23
18.	18/10/25	2	0.21
19.	19/10/25	1	0.18
20.	20/10/25	1	0.21
21.	21/10/25	3	0.18
22.	22/10/25	2	0.16
23.	23/10/25	2	0.15
24.	24/10/25	1	0.29
25.	25/10/25	1	0.24
26.	26/10/25	3	0.20
27.	27/10/25	2	0.18
28.	28/10/25	2	0.18
29.	29/10/25	3	0.16
30.	30/10/25	1	0.23

*[Signature]*  
 Assistant Manager Environment-Ohio  
 Tata Steel Ltd.

*[Signature]*

Location - 30 KLD ETP AT MEGACENTER  
 Record for the NOV - 2025

SLNO	Date	No of vehicle/ward	Quality of grease
1	01/11/25	3	0.18 Record in KG
2	02/11/25	2	0.23
3	03/11/25	3	0.18
4	04/11/25	2	0.16
5	05/11/25	2	0.16
6	06/11/25	1	0.23
7	07/11/25	1	0.24
8	08/11/25	3	0.21
9	09/11/25	2	0.15
10	10/11/25	2	0.18
11	11/11/25	1	0.18
12	12/11/25	1	0.18
13	13/11/25	3	0.20
14	14/11/25	3	0.21
15	15/11/25	2	0.16
16	16/11/25	2	0.16
17	17/11/25	1	0.17
18	18/11/25	1	0.17
19	19/11/25	3	0.15
20	20/11/25	2	0.16
21	21/11/25	2	0.17
22	22/11/25	3	0.20
23	23/11/25	3	0.21
24	24/11/25	2	0.16
25	25/11/25	2	0.16
26	26/11/25	1	0.18
27	27/11/25	2	0.16
28	28/11/25	1	0.18
29	29/11/25	3	0.24
30	30/11/25	2	0.18
		2	0.18

Area Manager Environment, OMO  
 TATA STEEL LIMITED

*Abin*

*(N)ish*

Location - 30 KLD ETP AT MEGACENTER  
 RECORD FOR THE DECEMBER - 2025

SLNO	Date	NO OF VEHICLE WASHED	QUALITY OIL & GREASE RECORD IN KG
1	01/12/25	2	0.18
2	02/12/25	2	0.21
3	03/12/25	3	0.16
4	04/12/25	1	0.16
5	05/12/25	1	0.15
6	06/12/25	3	0.21
7	07/12/25	2	0.16
8	08/12/25	2	0.18
9	09/12/25	1	0.15
10	10/12/25	1	0.15
11	11/12/25	2	0.20
12	12/12/25	2	0.21
13	13/12/25	3	0.18
14	14/12/25	2	0.18
15	15/12/25	3	0.16
16	16/12/25	2	0.16
17	17/12/25	3	0.21
18	18/12/25	3	0.23
19	19/12/25	2	0.18
20	20/12/25	2	0.16
21	21/12/25	2	0.16
22	22/12/25	3	0.21
23	23/12/25	1	0.16
24	24/12/25	1	0.16
25	25/12/25	2	0.18
26	26/12/25	3	0.21
27	27/12/25	3	0.23
28	28/12/25	2	0.18
29	29/12/25	1	0.16
30	30/12/25	1	0.16
31	31/12/25	3	0.23

Area Manager Environment, OMQ  
 TATA STEEL LIMITED

*Abhinav*

*Abhinav*

Location - 30KLD ETP AT MEGACENTER  
Record for the January - 2026

SLNO	Date	NOOF VehicleWashed	Quality oil Grease Record in Kg.
1	01/01/26	2	0.18
2	02/01/26	2	0.21
3	03/01/26	1	0.18
4	04/01/26	1	0.16
5	05/01/26	3	0.21
6	06/01/26	2	0.18
7	07/01/26	2	0.16
8	08/01/26	3	0.21
9	09/01/26	1	0.17
10	10/01/26	1	0.16
11	11/01/26	3	0.21
12	12/01/26	2	0.18
13	13/01/26	2	0.16
14	14/01/26	3	0.21
15	15/01/26	3	0.22
16	16/01/26	2	0.17
17	17/01/26	2	0.16
18	18/01/26	2	0.16
19	19/01/26	1	0.18
20	20/01/26	2	0.16
21	21/01/26	1	0.16
22	22/01/26	1	0.16
23	23/01/26	3	0.21
24	24/01/26	2	0.18
25	25/01/26	1	0.16
26	26/01/26	2	0.18
27	27/01/26	1	0.16
28	28/01/26	2	0.18
29	29/01/26	2	0.18
30	30/01/26	3	0.21

31/01/26 Manager Environment, OMO  
TATA STEEL LIMITED

OMO Incharge, OMO  
TATA STEEL LIMITED

Abhinav

(M:Kishan)

Location - 30KLD ETP AT MEGACENTER  
 Record for the february - 2026

SLNO	Date	NOOF Vehicle Washed	Quality Oil Grease Record in Kg.
1	01/02/26	2	0.18
2	02/02/26	1	0.16
3	03/02/26	2	0.18
4	04/02/26	1	0.16
5	05/02/26	1	0.16
6	06/02/26	3	0.21
7	07/02/26	3	0.22
8	08/02/26	2	0.18
9	09/02/26	1	0.16
10	10/02/26	1	0.16
11	11/02/26	2	0.17
12	12/02/26	2	0.18
13	13/02/26	1	0.15
14	14/02/26	1	0.16
15	15/02/26	3	0.22
16	16/02/26	2	0.18
17	17/02/26	3	0.21
18	18/02/26	2	0.17
19	19/02/26	2	0.16
20	20/02/26	2	0.18
21	21/02/26	1	0.15
22	22/02/26	1	0.16
23	23/02/26	2	0.17
24	24/02/26	3	0.21
25	25/02/26	1	0.15
26	26/02/26	2	0.18
27	27/02/26	2	0.18
28	28/02/26	3	0.22

*[Signature]*

*[Signature]*

Location 30KLD ETP AT MEGACENTER  
 Record for the march - 2026

SLNO	Date	No of Vehicle washed	Quality oil grease Record in K
01	01/03/26	2	0.18
02	02/03/26	2	0.17
03	03/03/26	1	0.15
04	04/03/26	3	0.21
05	05/03/26	1	0.16
06	06/03/26	2	0.18
07	07/03/26	2	0.18
08	08/03/26	3	0.22
09	09/03/26	1	0.15
10	10/03/26	1	0.16
11	11/03/26	2	0.16
12	12/03/26	2	0.16
13	13/03/26	2	0.16
14	14/03/26	3	0.23
15	15/03/26	2	0.18
16	16/03/26	1	0.16
17	17/03/26	3	0.22
18	18/03/26	2	0.18
19	19/03/26	2	0.18
20	20/03/26	1	0.16
21	21/03/26	1	0.16
22	22/03/26	1	0.14
23	23/03/26	2	0.18
24	24/03/26	2	0.16
25	25/03/26	2	0.17
26	26/03/26	3	0.23
27	27/03/26	2	0.18
28	28/03/26	1	0.16
29	29/03/26	2	0.18
30	30/03/26	3	0.22
31	31/03/26	1	0.16

Manager Environment, OMO  
 TATA STEEL LIMITED

*Abhinav*

Manager Environment, OMO  
 TATA STEEL LIMITED

*M. S. K.*

**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**  
**Job Number**

Long at December 12, 2025 14:31:36  
 Geo 0.500 mm/s, Mic 50.0 dB(A)  
 0.25 sec/9.0 sec (Auto)  
 2048 sps  
 factory A.MMB  
 Operator  
 1

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

UM15991  
 Micromate ISEE 10.90GC  
 3.7 volts  
 February 10, 2025 by UES New Delhi  
 UM15991\_20251212143136.IDFW  
 Disabled

**Notes**

Location  
 Client  
 Company  
 General Notes

TSL  
 ORICA

**Post Event Notes** No text to be displayed.

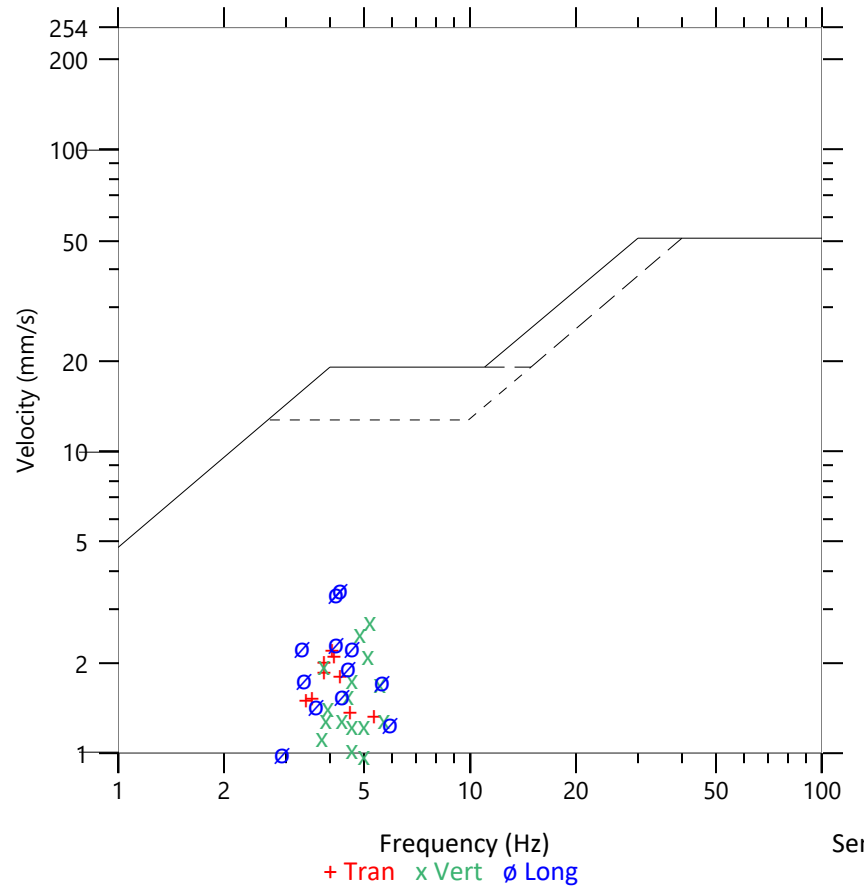
**Geophone**

	Tran	Vert	Long
Peak Particle Velocity	2.246 mm/s	2.759 mm/s	3.531 mm/s
Zero Crossing Frequency	4.0 Hz	5.2 Hz	4.3 Hz
Time (Relative to Trigger)	1.097 sec	1.063 sec	0.878 sec
Peak Acceleration	0.013 g	0.015 g	0.016 g
Peak Displacement	0.082 mm	0.084 mm	0.125 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.1 Hz	7.1 Hz	7.1 Hz
Overswing Ratio	4.8	4.8	4.7
Peak Vector Sum	3.805 mm/s at 0.875 sec		

**Sound Level Microphone**

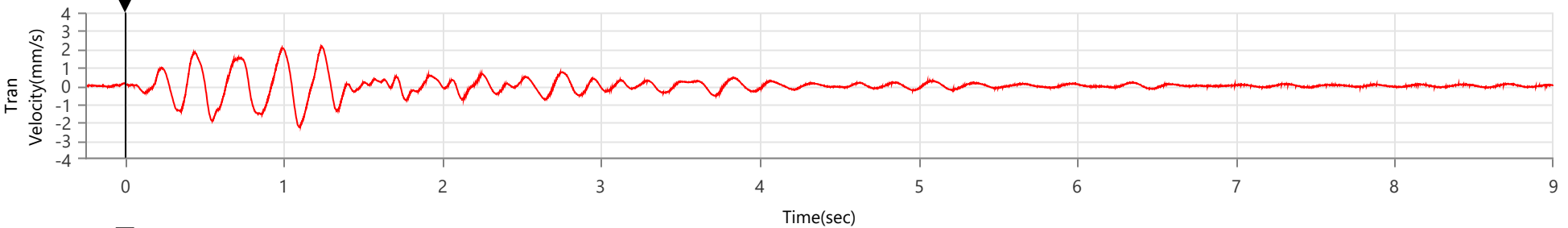
	A-Weight Slow			
LMax	<30 dB(A)			
Time (Relative to Trigger)	-0.250 sec			
Sound(dB(A))	LMin	L10	L90	Leq
Sensor Check	<30	30	30	<30
Test Amplitude	✗ Check			
	0 mv			

**USBM RI8507 And OSMRE**  
Velocity versus Frequency (Zero Crossing)

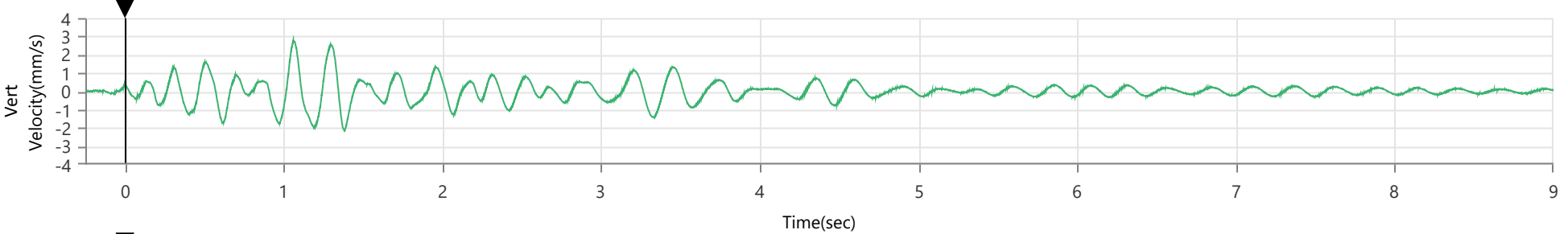


Sensor Check

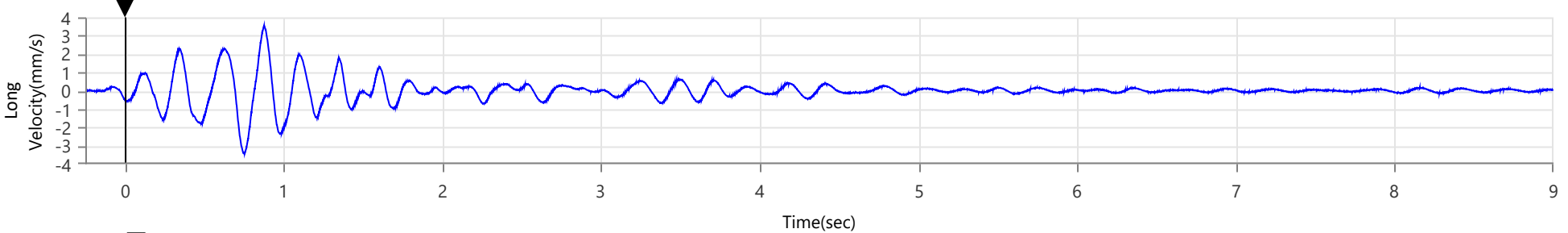
+ Tran x Vert o Long



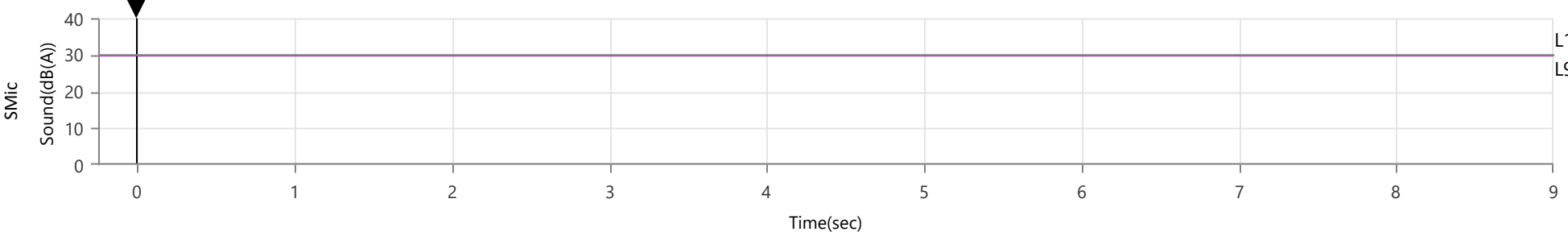
✓ Passed



✓ Passed



✓ Passed



✗ Check

**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**  
**Job Number**

Long at December 12, 2025 14:31:36  
 Geo 0.500 mm/s  
 0.25 sec/9.0 sec (Auto)  
 2048 sps  
 factory A.MMB  
 Operator  
 1

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

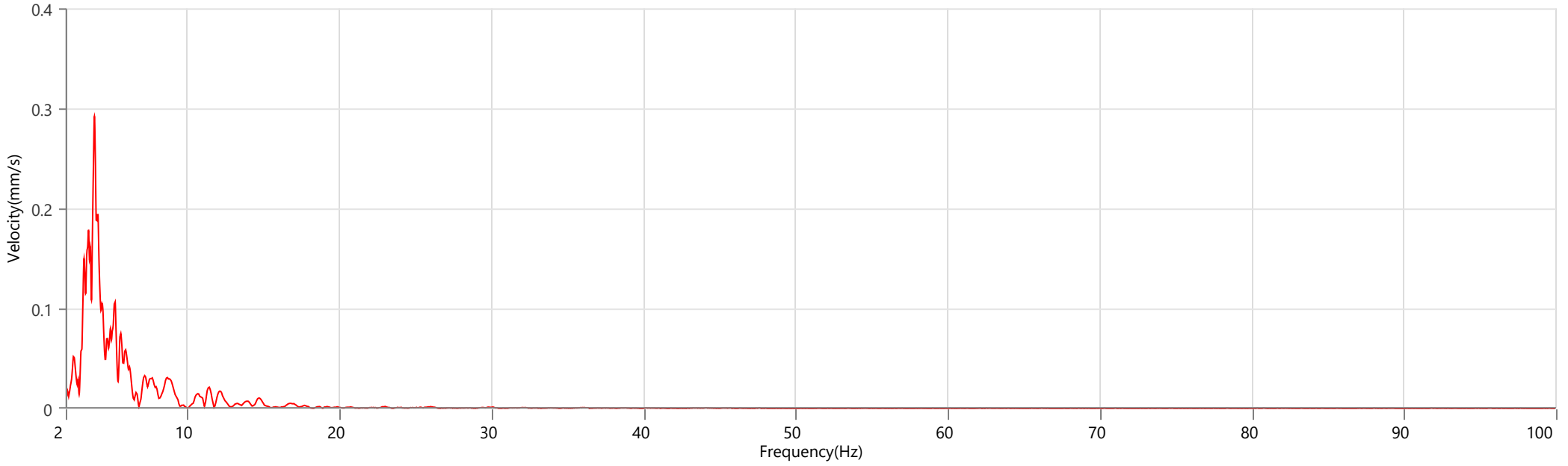
UM15991  
 Micromate ISEE 10.90GC  
 3.7 volts  
 February 10, 2025 by UES New Delhi  
 UM15991\_20251212143136.IDFW  
 Disabled

**Notes**

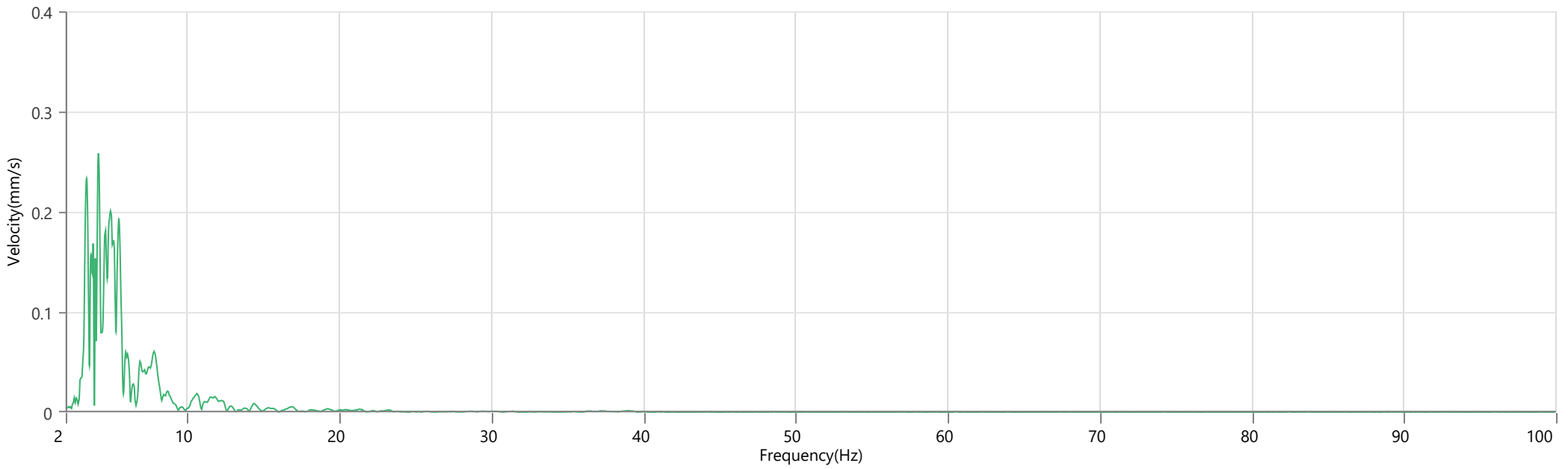
Location  
 Client  
 Company TSL  
 General Notes ORICA

**Post Event Notes** No text to be displayed.

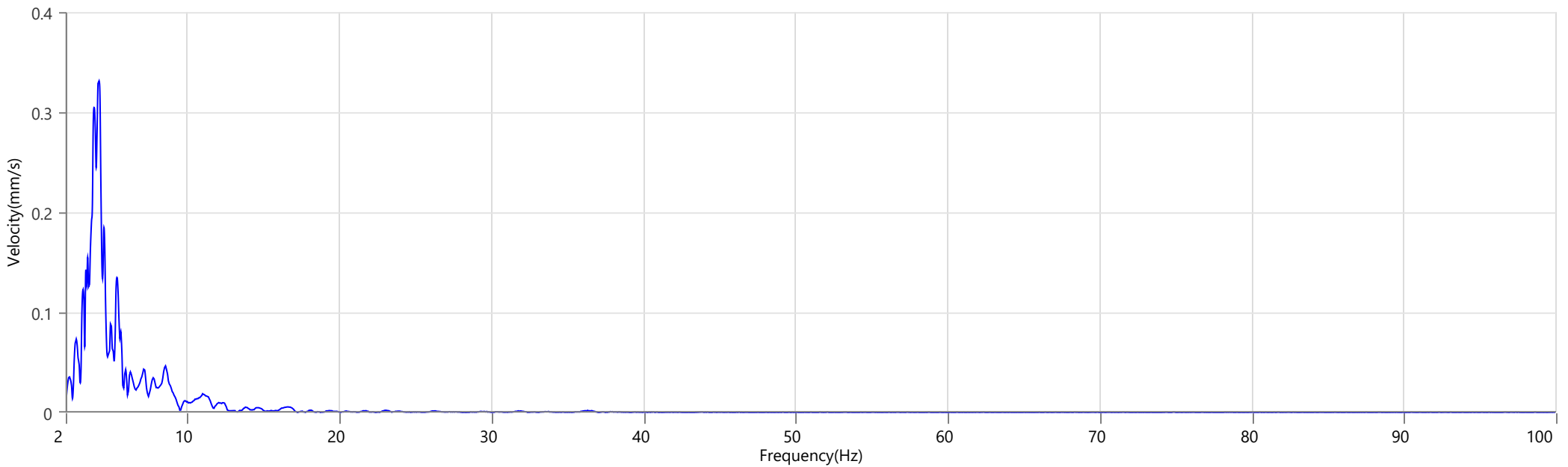
**Tran - Dominant Frequency 3.9 Hz, Amplitude 0.292 mm/s (Peak Particle Velocity: 2.246 mm/s)**



**Vert - Dominant Frequency 4.1 Hz, Amplitude 0.251 mm/s (Peak Particle Velocity: 2.759 mm/s)**



**Long - Dominant Frequency 4.2 Hz, Amplitude 0.331 mm/s (Peak Particle Velocity: 3.531 mm/s)**



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**  
**Job Number**

Long at December 20, 2025 13:55:05  
 Geo 0.500 mm/s, Mic 50.0 dB(A)  
 0.25 sec/9.0 sec (Auto)  
 2048 sps  
 factory A.MMB  
 Operator  
 1

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

UM15991  
 Micromate ISEE 10.90GC  
 3.7 volts  
 February 10, 2025 by UES New Delhi  
 UM15991\_20251220135505.IDFW  
 Disabled

**Notes**

Location  
 Client  
 Company  
 General Notes

TSL  
 ORICA

**Post Event Notes** No text to be displayed.

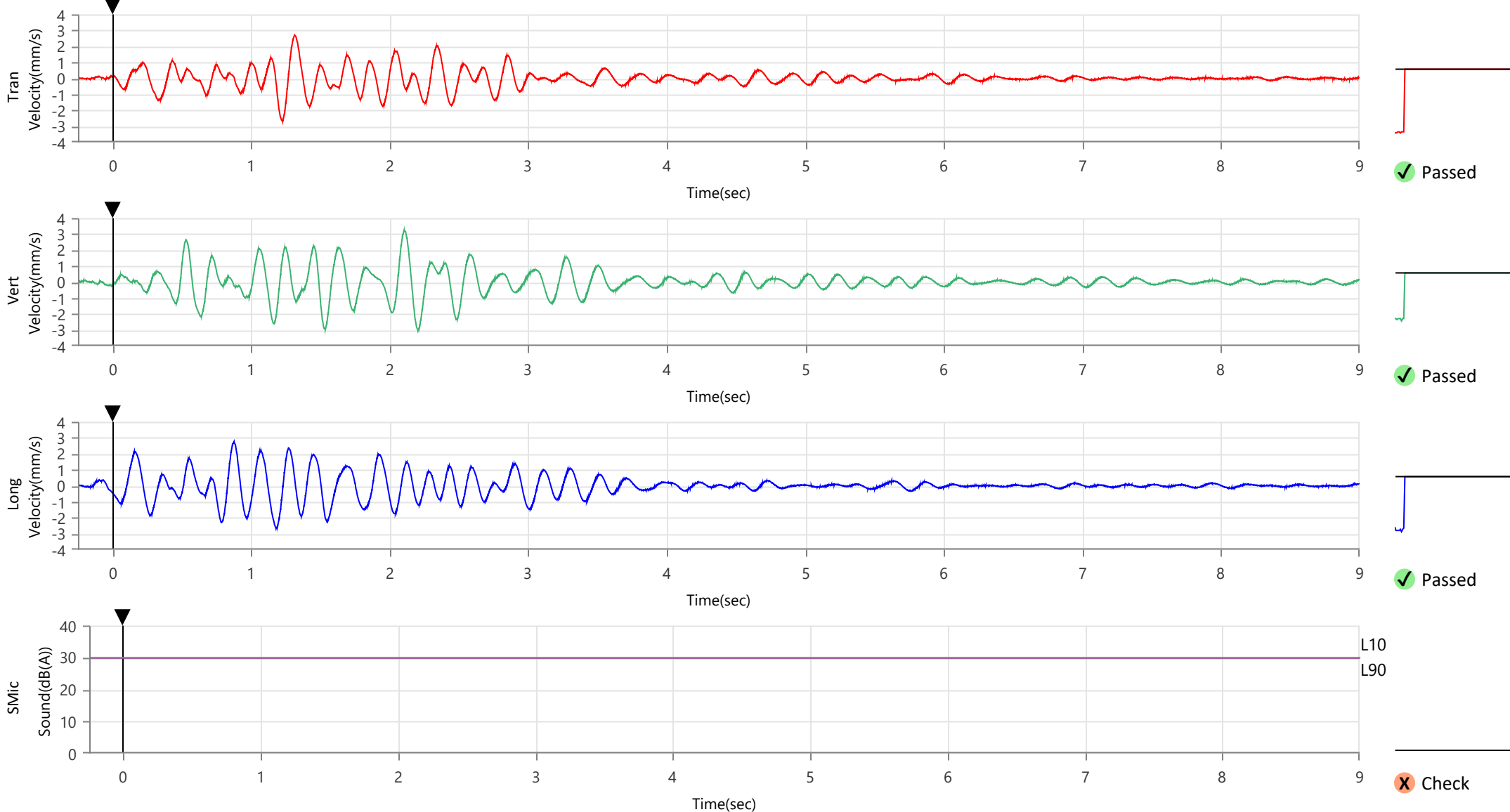
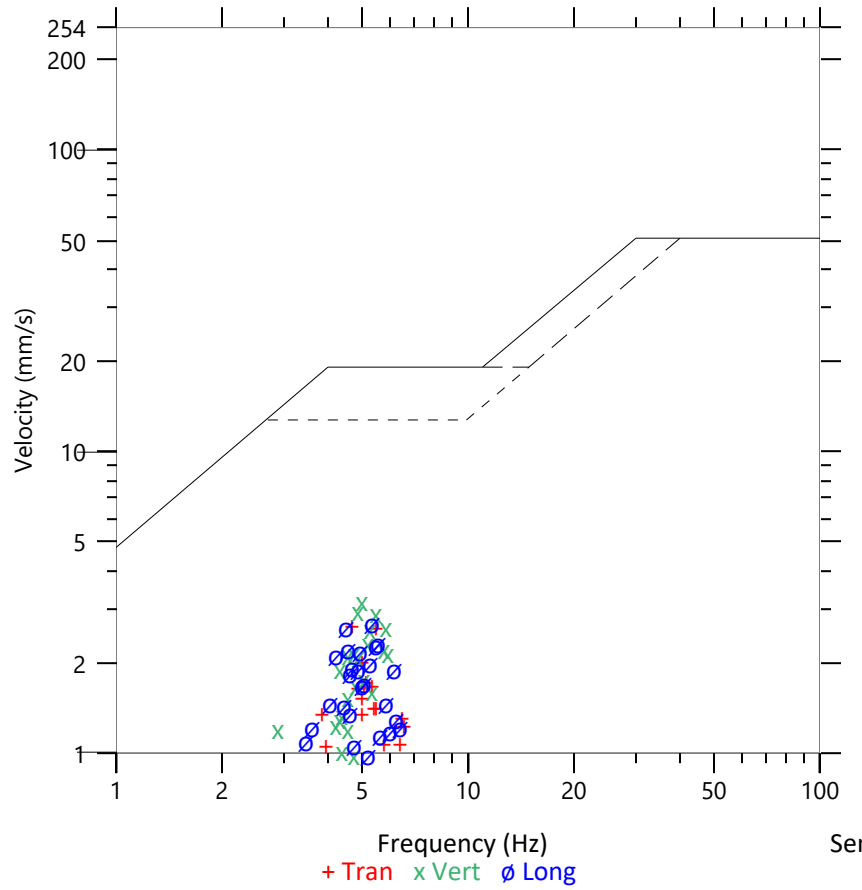
**Geophone**

	Tran	Vert	Long
Peak Particle Velocity	2.711 mm/s	3.239 mm/s	2.743 mm/s
Zero Crossing Frequency	4.7 Hz	5.0 Hz	5.3 Hz
Time (Relative to Trigger)	1.314 sec	2.106 sec	0.875 sec
Peak Acceleration	0.015 g	0.021 g	0.021 g
Peak Displacement	0.088 mm	0.102 mm	0.090 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.1 Hz	7.1 Hz	7.1 Hz
Overswing Ratio	4.7	4.8	4.6
Peak Vector Sum	3.605 mm/s at 1.537 sec		

**Sound Level Microphone**

	A-Weight Slow			
LMax	<30 dB(A)			
Time (Relative to Trigger)	-0.250 sec			
Sound(dB(A))	LMin	L10	L90	Leq
Sensor Check	<30	30	30	<30
Test Amplitude	✗ Check			
	0 mv			

**USBM R18507 And OSMRE**  
Velocity versus Frequency (Zero Crossing)



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**  
**Job Number**

Long at December 20, 2025 13:55:05  
 Geo 0.500 mm/s  
 0.25 sec/9.0 sec (Auto)  
 2048 sps  
 factory A.MMB  
 Operator  
 1

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

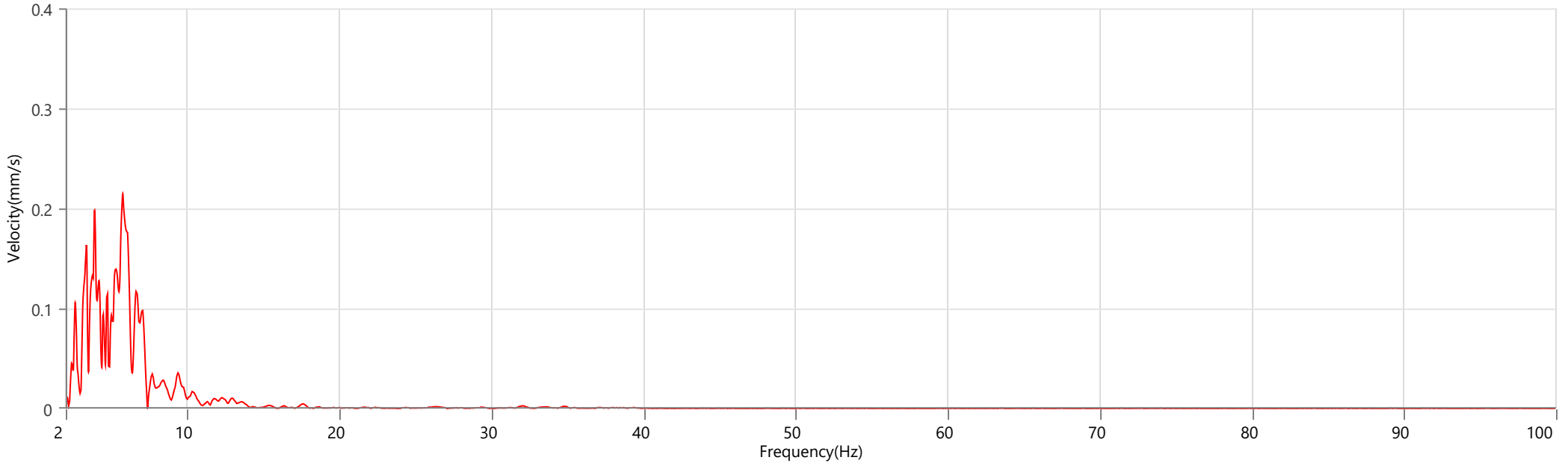
UM15991  
 Micromate ISEE 10.90GC  
 3.7 volts  
 February 10, 2025 by UES New Delhi  
 UM15991\_20251220135505.IDFW  
 Disabled

**Notes**

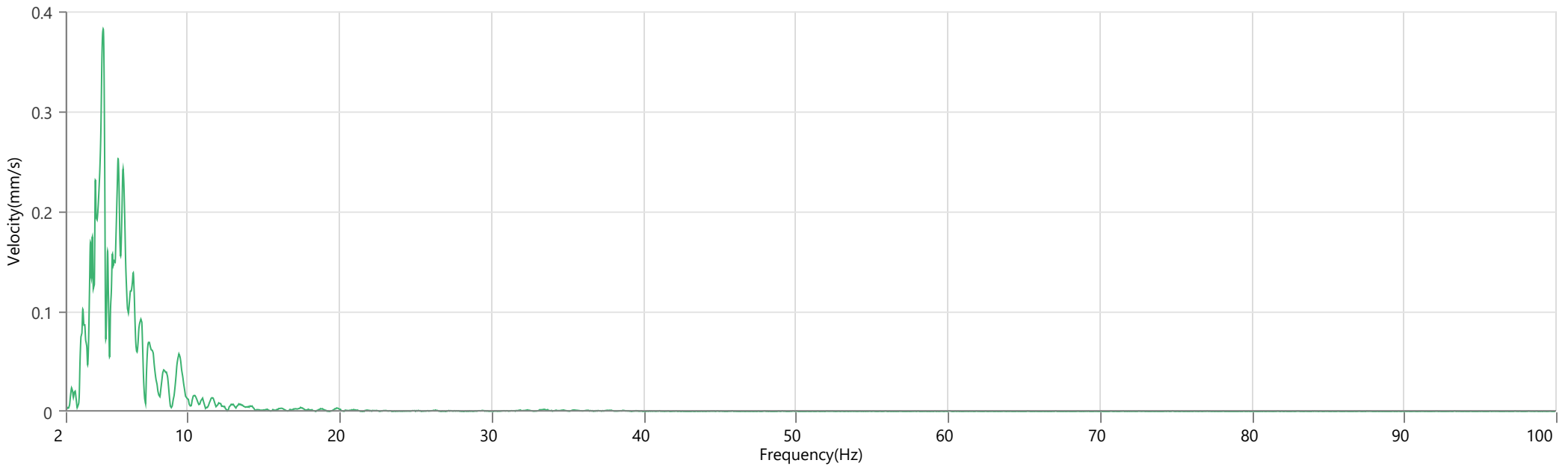
Location  
 Client  
 Company TSL  
 General Notes ORICA

**Post Event Notes** No text to be displayed.

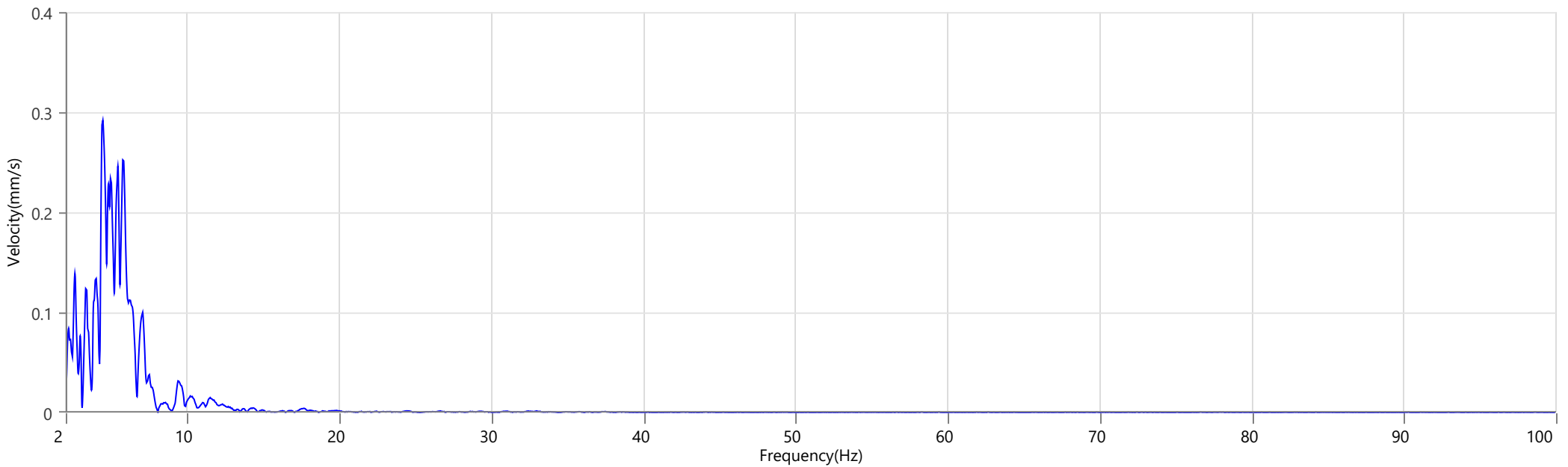
**Tran - Dominant Frequency 5.8 Hz, Amplitude 0.215 mm/s (Peak Particle Velocity: 2.711 mm/s)**



**Vert - Dominant Frequency 4.4 Hz, Amplitude 0.381 mm/s (Peak Particle Velocity: 3.239 mm/s)**



**Long - Dominant Frequency 4.4 Hz, Amplitude 0.292 mm/s (Peak Particle Velocity: 2.743 mm/s)**



Waveform Trigger Source  
 Trigger Level(s)  
 Pre-Trigger/Record Time  
 Sample Rate  
 Setup File Name  
 Operator  
 Job Number

Long at January 17, 2026 14:19:28  
 Geo 0.500 mm/s, Mic 50.0 dB(A)  
 0.25 sec/4.8 sec (Auto)  
 2048 sps  
 factory A.MMB  
 Operator  
 1

Serial Number  
 Model Number  
 Battery Level  
 Unit Calibration  
 Event File Name  
 USB Sensor Support

UM15991  
 Micromate ISEE 10.90GC  
 3.8 volts  
 February 10, 2025 by UES New Delhi  
 UM15991\_20250523135305.IDFW  
 Disabled

**Notes**

Location  
 Client  
 Company  
 General Notes

**Post Event Notes** No text to be displayed.

**Geophone**

Peak Particle Velocity  
 Zero Crossing Frequency  
 Time (Relative to Trigger)  
 Peak Acceleration  
 Peak Displacement  
 Sensor Check  
 Frequency  
 Overswing Ratio

Tran	Vert	Long
1.529 mm/s	1.135 mm/s	2.577 mm/s
4.5 Hz	4.6 Hz	3.9 Hz
1.251 sec	0.788 sec	1.731 sec
0.010 g	0.013 g	0.013 g
0.051 mm	0.034 mm	0.108 mm
✓ Passed	✓ Passed	✓ Passed
7.1 Hz	7.1 Hz	7.1 Hz
4.8	4.8	4.9

Peak Vector Sum 2.658 mm/s at 1.610 sec

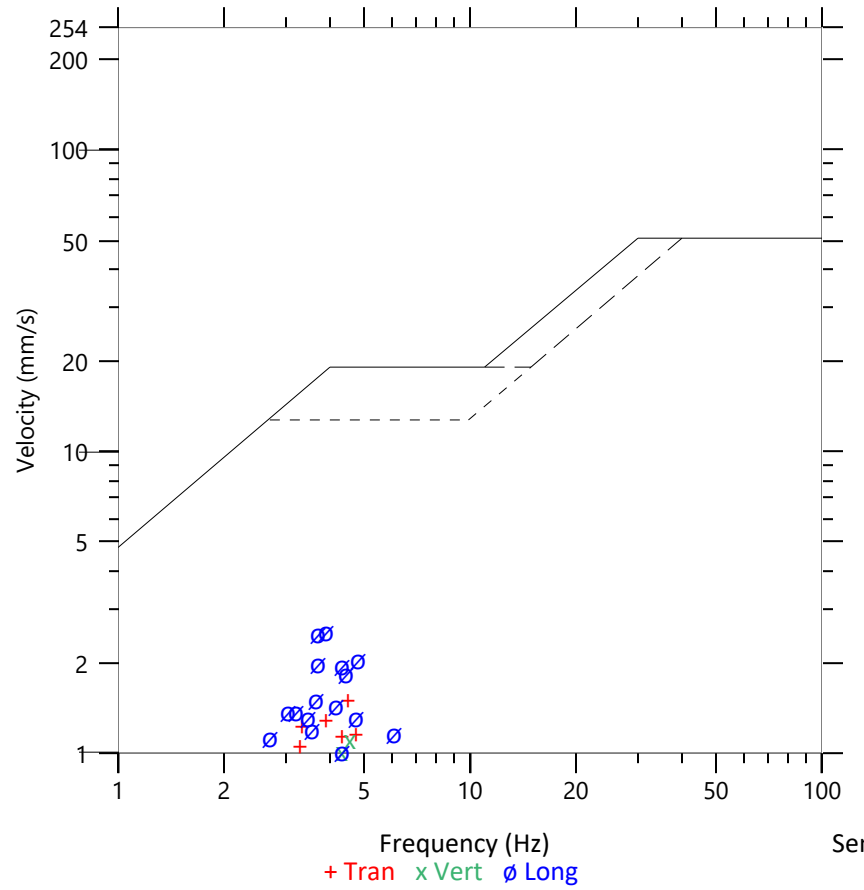
**Sound Level Microphone**

LMax  
 Time (Relative to Trigger)  
 Sound(dB(A))  
 Sensor Check  
 Test Amplitude

**A-Weight Slow**  
 <30 dB(A)  
 -0.250 sec

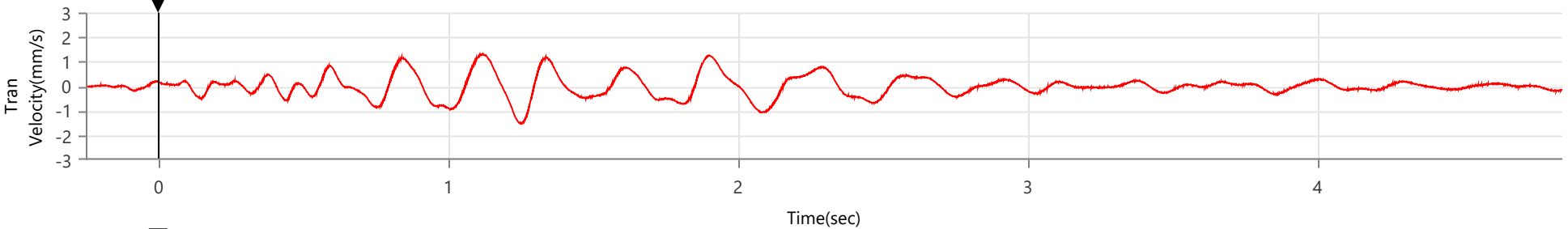
LMin	L10	L90	Leq
<30	30	30	<30
✗ Check			
3256 mv			

**USBM R18507 And OSMRE**  
 Velocity versus Frequency (Zero Crossing)

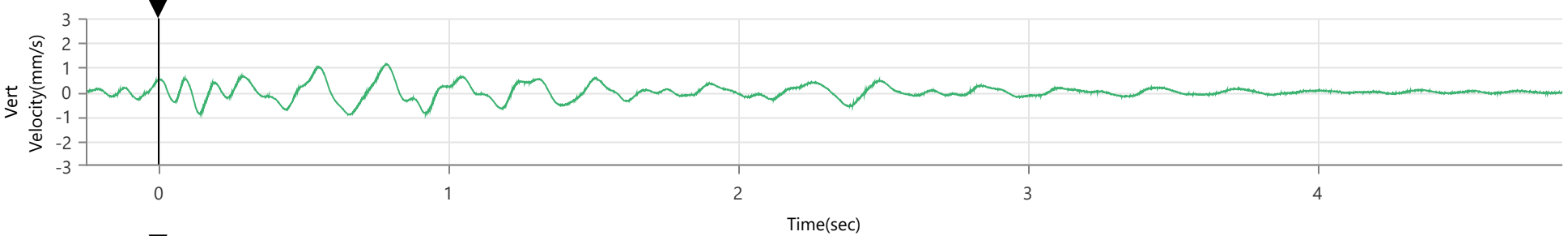


Sensor Check

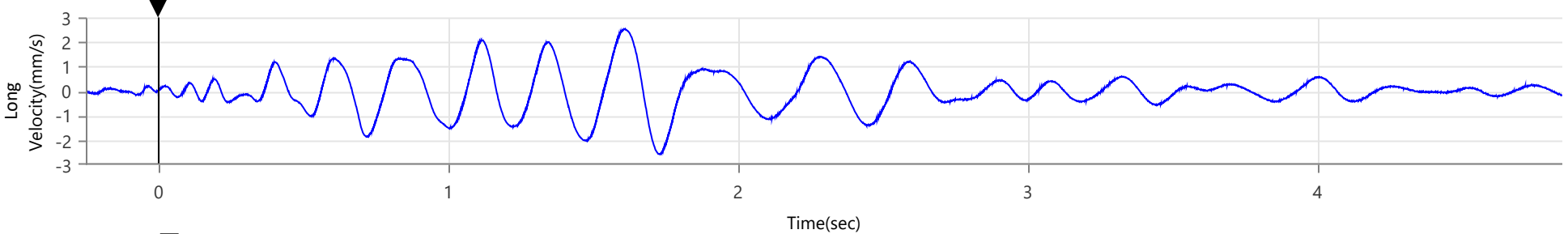
+ Tran x Vert o Long



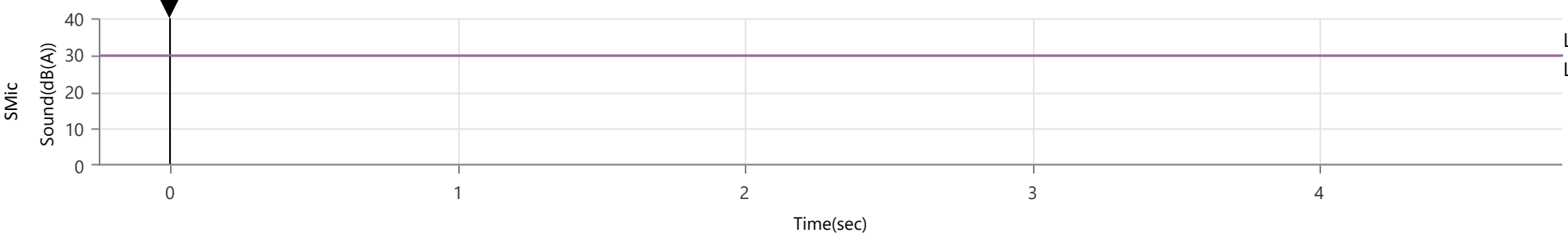
✓ Passed



✓ Passed



✓ Passed



L10  
L90

✗ Check

Waveform Trigger Source  
Trigger Level(s)  
Pre-Trigger/Record Time  
Sample Rate  
Setup File Name  
Operator  
Job Number

Long at January 17, 2026 14:19:28  
Geo 0.500 mm/s  
0.25 sec/4.8 sec (Auto)  
2048 sps  
factory A.MMB  
Operator  
1

Serial Number  
Model Number  
Battery Level  
Unit Calibration  
Event File Name  
USB Sensor Support

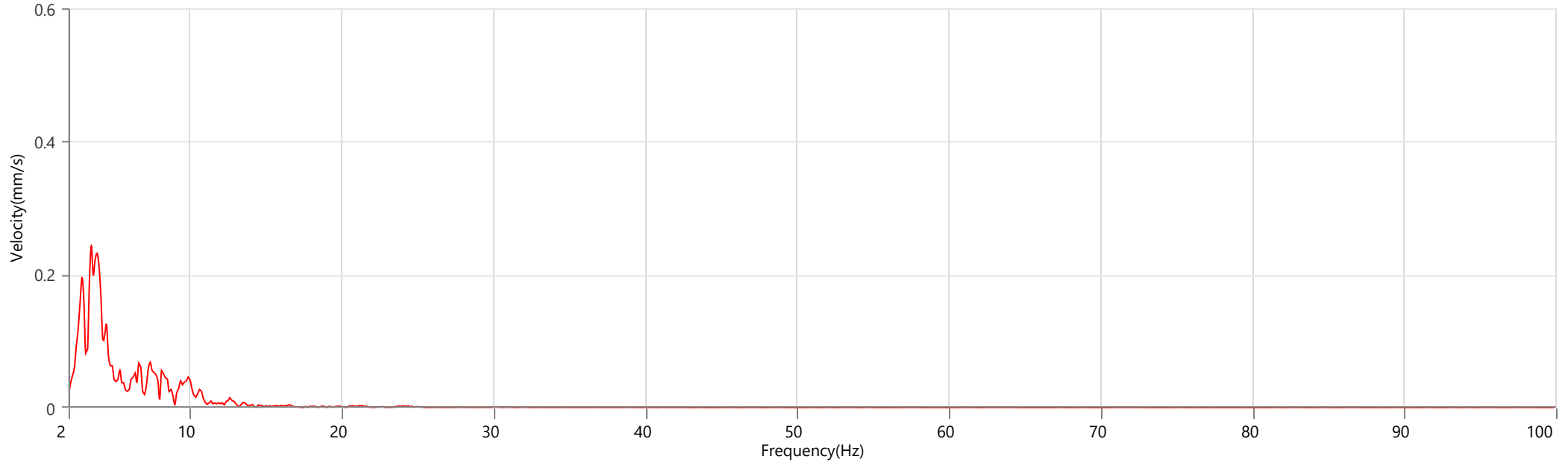
UM15991  
Micromate ISEE 10.90GC  
3.8 volts  
February 10, 2025 by UES New Delhi  
UM15991\_20250523135305.IDFW  
Disabled

### Notes

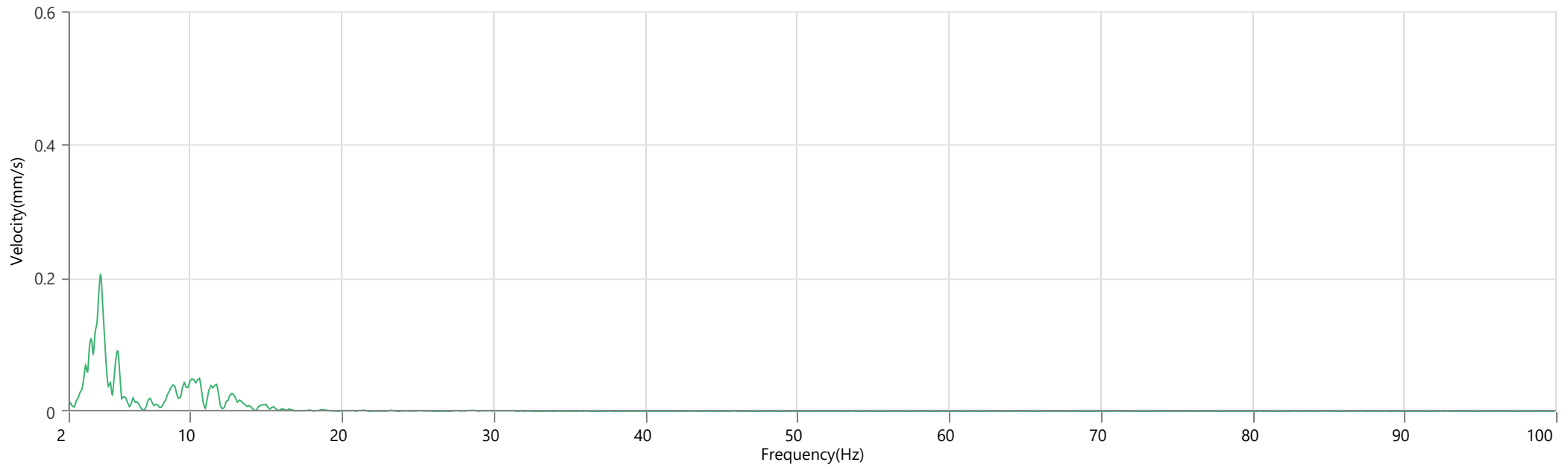
Location  
Client  
Company  
General Notes

**Post Event Notes** No text to be displayed.

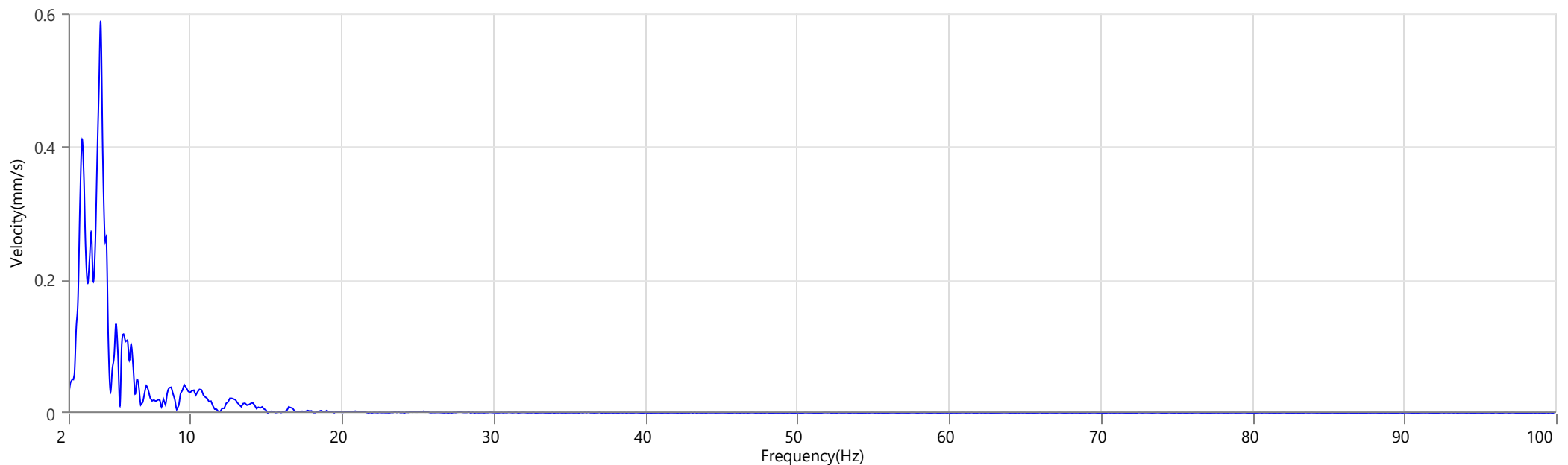
### Tran - Dominant Frequency 3.5 Hz, Amplitude 0.243 mm/s (Peak Particle Velocity: 1.529 mm/s)



### Vert - Dominant Frequency 4.1 Hz, Amplitude 0.204 mm/s (Peak Particle Velocity: 1.135 mm/s)



### Long - Dominant Frequency 4.1 Hz, Amplitude 0.586 mm/s (Peak Particle Velocity: 2.577 mm/s)



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**  
**Job Number**

Long at January 19, 2026 14:44:40  
 Geo 0.500 mm/s, Mic 50.0 dB(A)  
 0.25 sec/9.0 sec (Auto)  
 2048 sps  
 factory A.MMB  
 Operator  
 1

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

UM15991  
 Micromate ISEE 10.90GC  
 3.8 volts  
 February 10, 2025 by UES New Delhi  
 UM15991\_20260119144440.IDFW  
 Disabled

**Notes**

Location  
 Client  
 Company  
 General Notes

TSL  
 ORICA

**Post Event Notes** No text to be displayed.

**Geophone**

	Tran	Vert	Long
Peak Particle Velocity	2.530 mm/s	3.389 mm/s	3.129 mm/s
Zero Crossing Frequency	4.9 Hz	4.6 Hz	4.9 Hz
Time (Relative to Trigger)	0.701 sec	1.620 sec	0.506 sec
Peak Acceleration	0.013 g	0.026 g	0.021 g
Peak Displacement	0.078 mm	0.117 mm	0.098 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.1 Hz	7.1 Hz	7.3 Hz
Overswing Ratio	4.8	4.8	4.6

Peak Vector Sum 3.791 mm/s at 0.690 sec

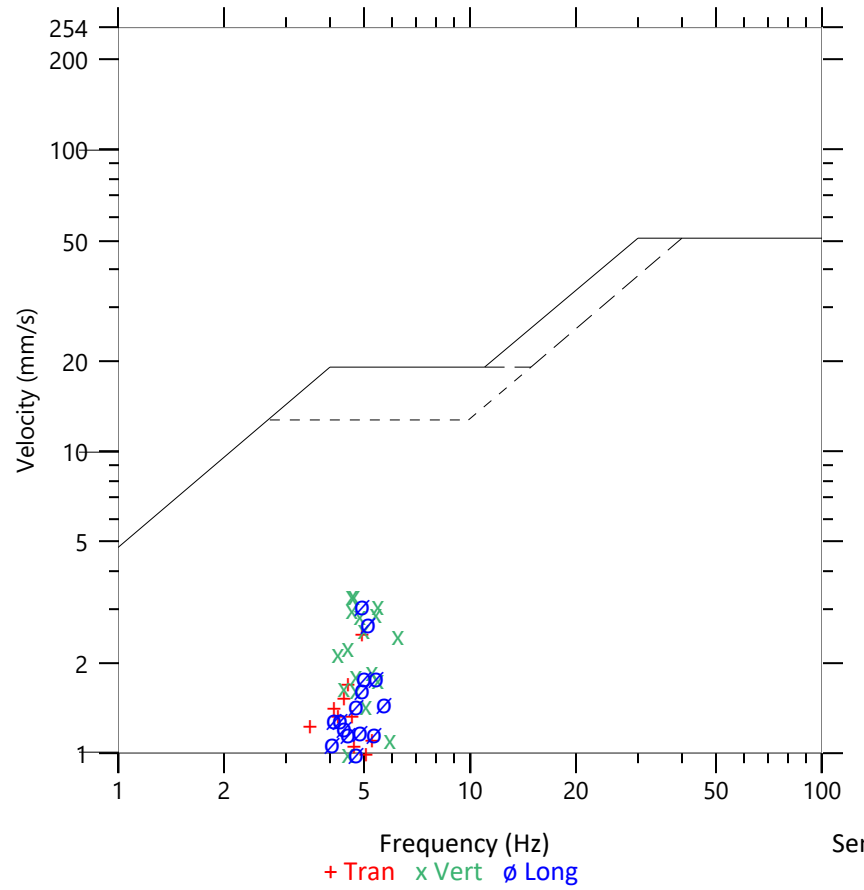
**Sound Level Microphone**

LMax  
 Time (Relative to Trigger)

**A-Weight Slow**  
 <30 dB(A)  
 -0.250 sec  
**LMin** **L10** **L90** **Leq**  
 <30 30 30 <30  
 ✗ Check  
 0 mv

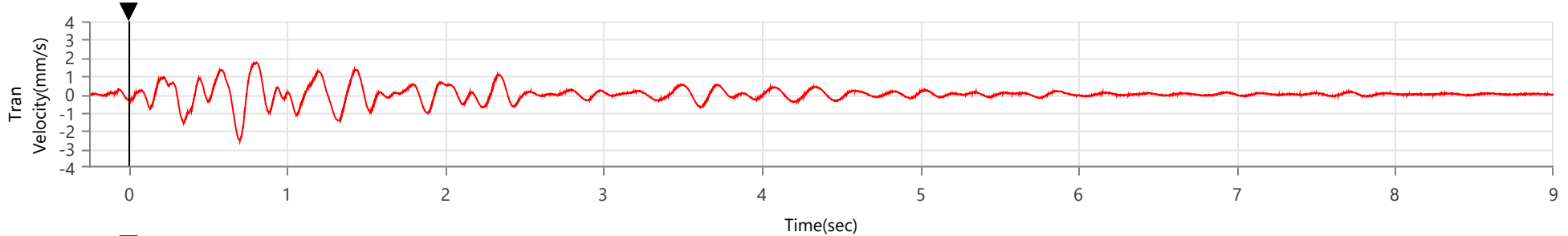
Sound(dB(A))  
 Sensor Check  
 Test Amplitude

**USBM R18507 And OSMRE**  
Velocity versus Frequency (Zero Crossing)

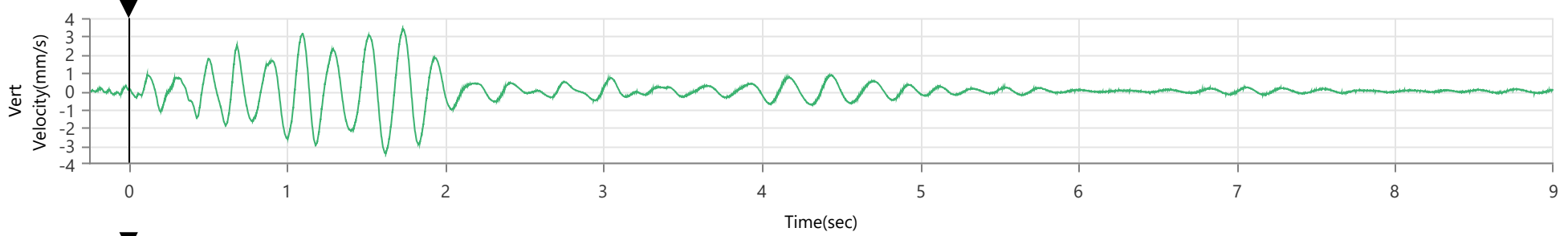


Sensor Check

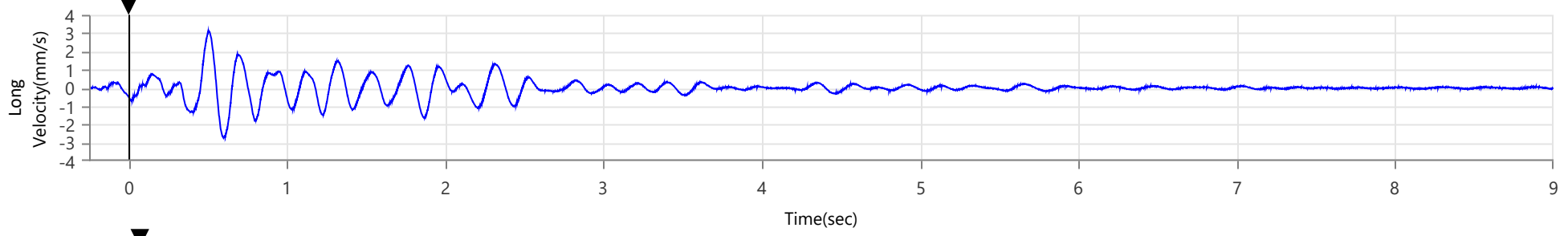
+ Tran x Vert o Long



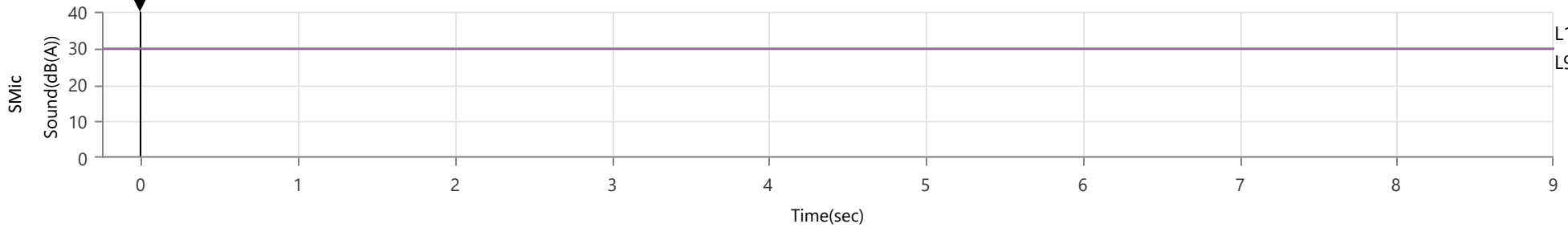
✓ Passed



✓ Passed



✓ Passed



✗ Check

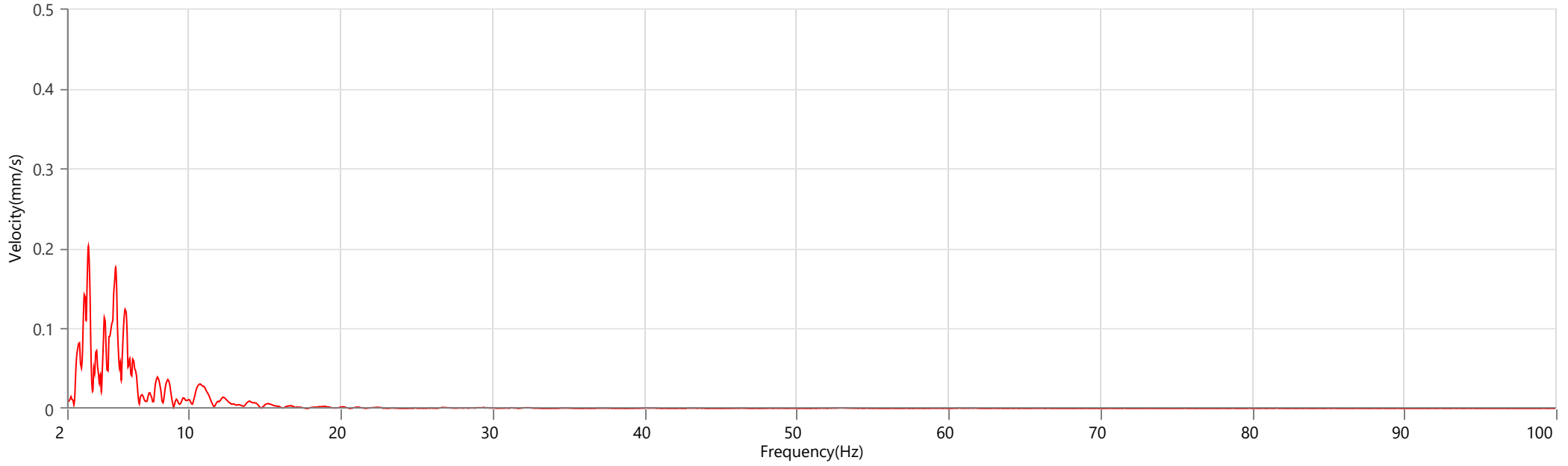
**Waveform Trigger Source** Long at January 19, 2026 14:44:40  
**Trigger Level(s)** Geo 0.500 mm/s  
**Pre-Trigger/Record Time** 0.25 sec/9.0 sec (Auto)  
**Sample Rate** 2048 sps  
**Setup File Name** factory A.MMB  
**Operator** Operator  
**Job Number** 1

**Serial Number** UM15991  
**Model Number** Micromate ISEE 10.90GC  
**Battery Level** 3.8 volts  
**Unit Calibration** February 10, 2025 by UES New Delhi  
**Event File Name** UM15991\_20260119144440.IDFW  
**USB Sensor Support** Disabled

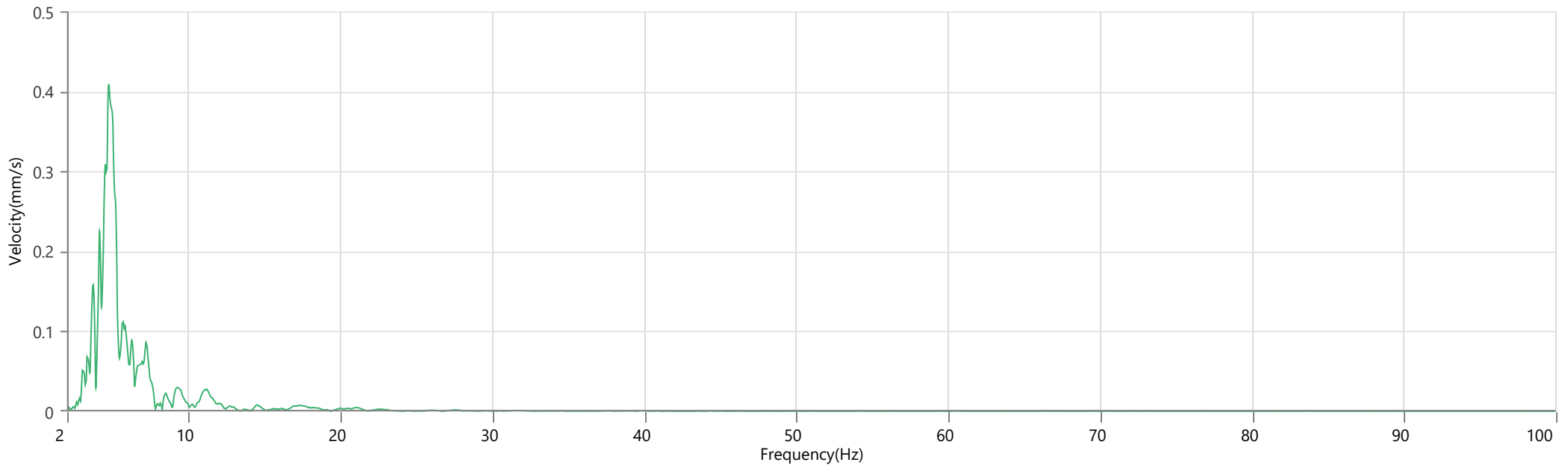
**Notes**  
Location  
Client  
Company TSL  
General Notes ORICA

**Post Event Notes** No text to be displayed.

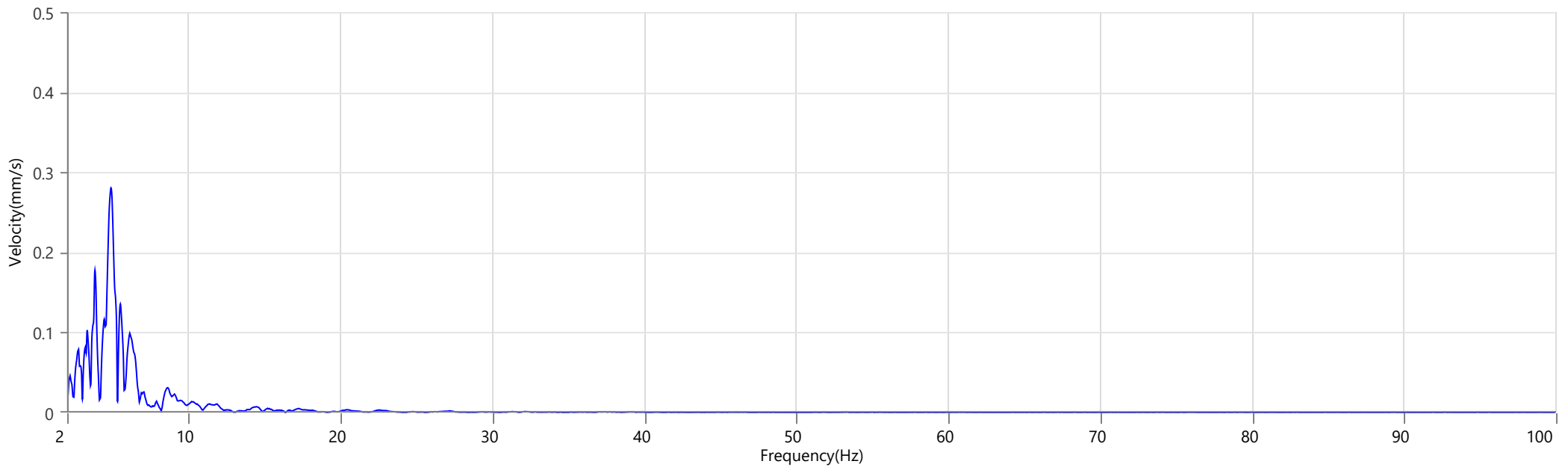
**Tran - Dominant Frequency 3.4 Hz, Amplitude 0.201 mm/s (Peak Particle Velocity: 2.530 mm/s)**



**Vert - Dominant Frequency 4.8 Hz, Amplitude 0.408 mm/s (Peak Particle Velocity: 3.389 mm/s)**



**Long - Dominant Frequency 4.9 Hz, Amplitude 0.280 mm/s (Peak Particle Velocity: 3.129 mm/s)**



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**

Long at February 11, 2026 14:10:30  
 Geo 0.500 mm/s  
 0.25 sec/13.6 sec (Auto)  
 2048 sps  
 SRS.mmb  
 Operator

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

UM15331  
 Micromate ISEE 10.90FB  
 3.8 volts  
 February 15, 2025 by UES New Delhi  
 UM15331\_20260103142430.IDFW  
 Disabled

**Notes**

Location  
 Client TSL  
 Company  
 General Notes

**Post Event Notes** No text to be displayed.

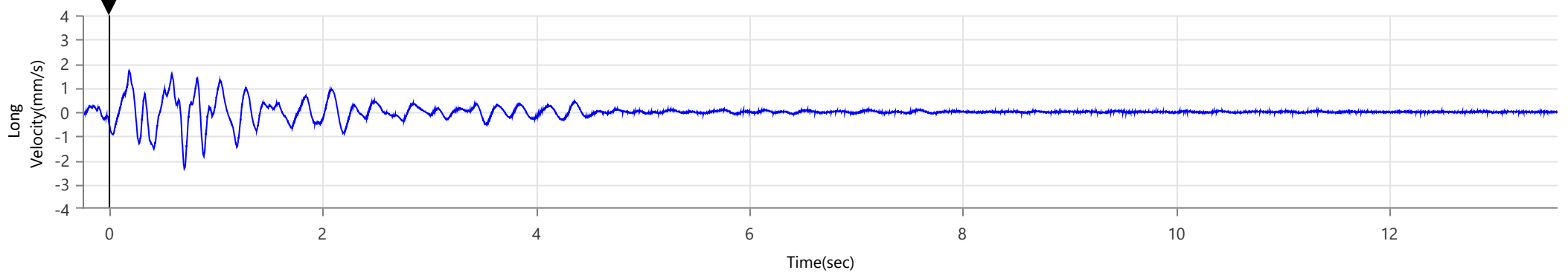
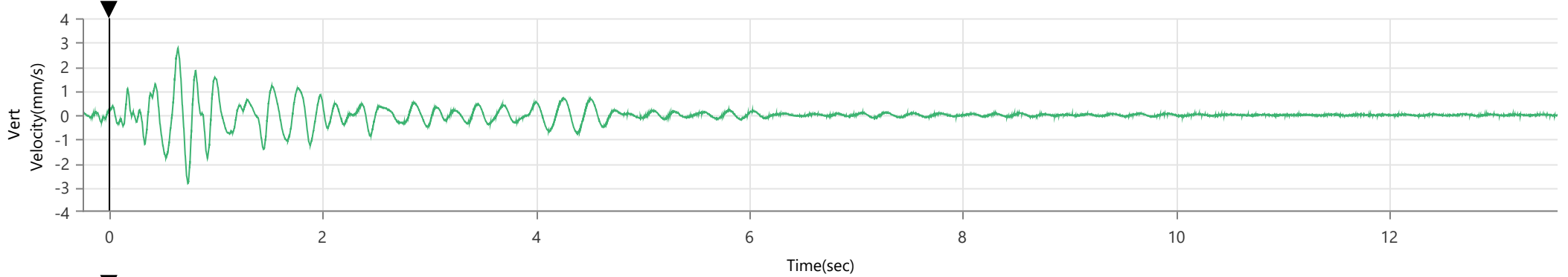
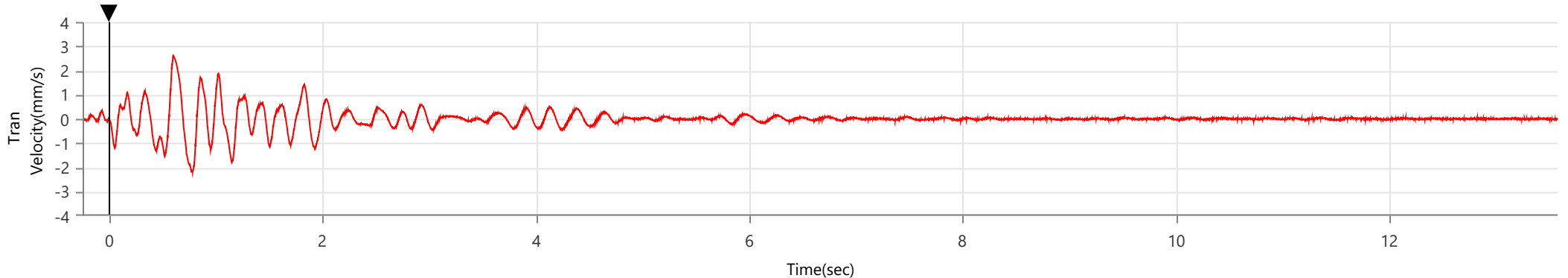
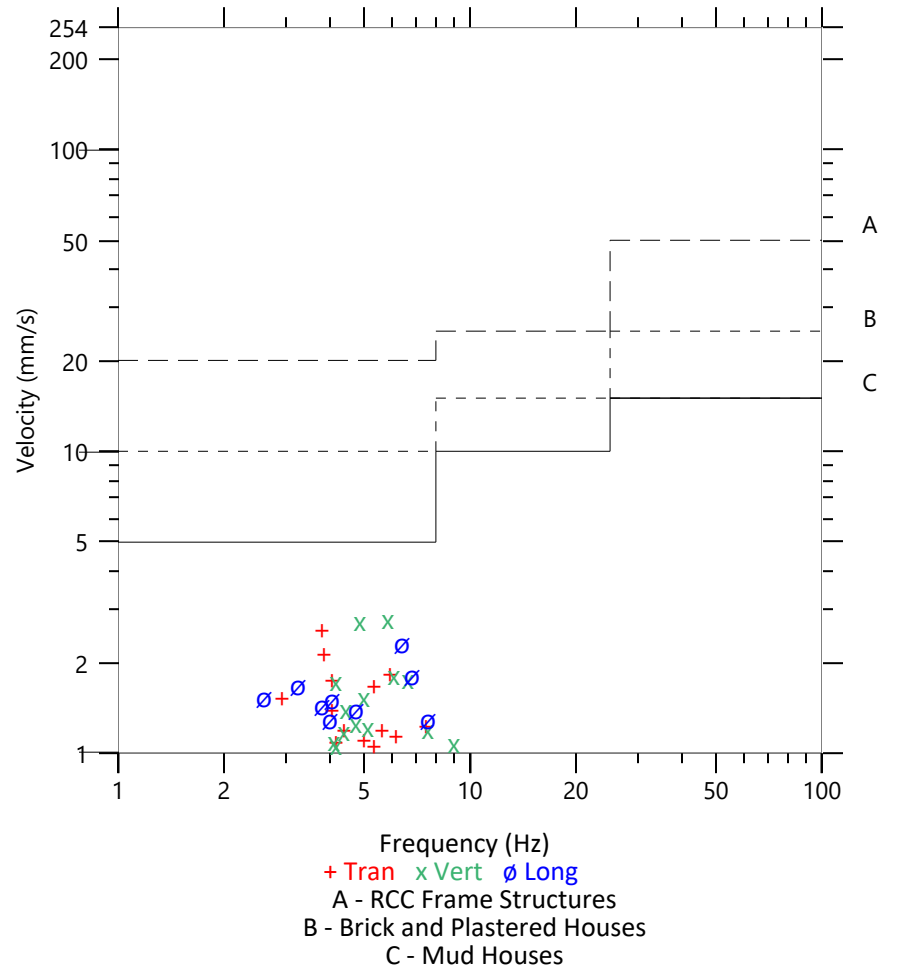
**Geophone**

Peak Particle Velocity  
 Zero Crossing Frequency  
 Time (Relative to Trigger)  
 Peak Acceleration  
 Peak Displacement  
 Sensor Check  
 Frequency  
 Overswing Ratio

Tran	Vert	Long
2.609 mm/s	2.830 mm/s	2.349 mm/s
3.8 Hz	5.8 Hz	6.4 Hz
0.602 sec	0.737 sec	0.704 sec
0.016 g	0.016 g	0.016 g
0.110 mm	0.082 mm	0.070 mm
✓ Passed	✓ Passed	✓ Passed
7.3 Hz	7.5 Hz	7.3 Hz
4.3	4.5	4.6

Peak Vector Sum 3.448 mm/s at 0.641 sec

**Indian Bureau of Standards**  
Velocity versus Frequency (Zero Crossing)



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**

Long at February 11, 2026 14:10:30  
 Geo 0.500 mm/s  
 0.25 sec/13.6 sec (Auto)  
 2048 sps  
 SRS.mmb  
 Operator

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

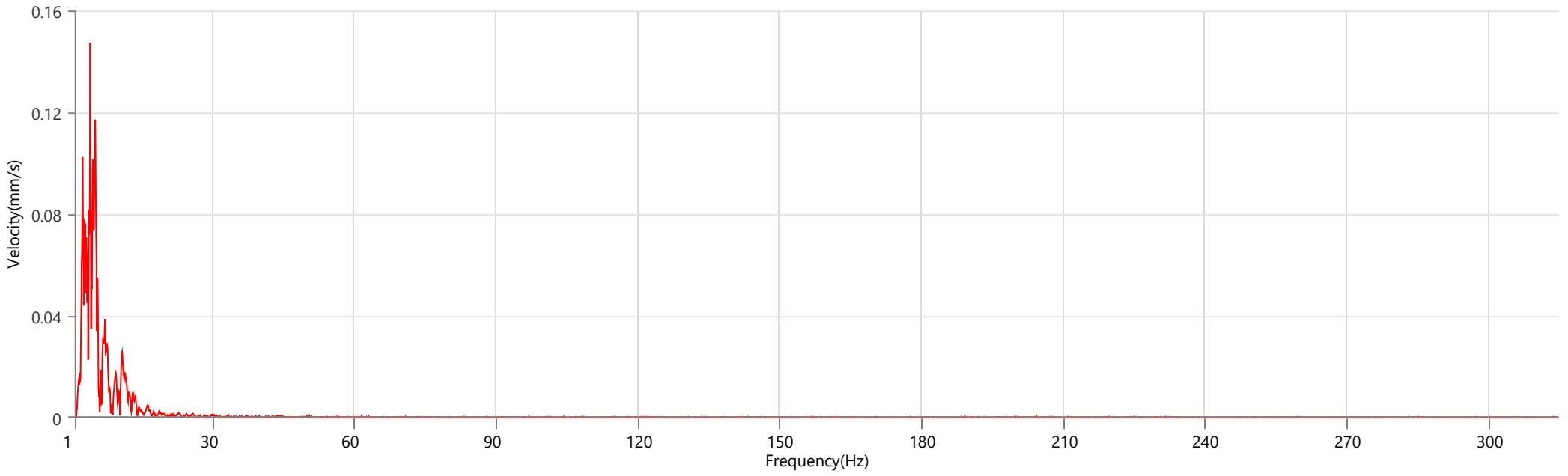
UM15331  
 Micromate ISEE 10.90FB  
 3.8 volts  
 February 15, 2025 by UES New Delhi  
 UM15331\_20260103142430.IDFW  
 Disabled

**Notes**

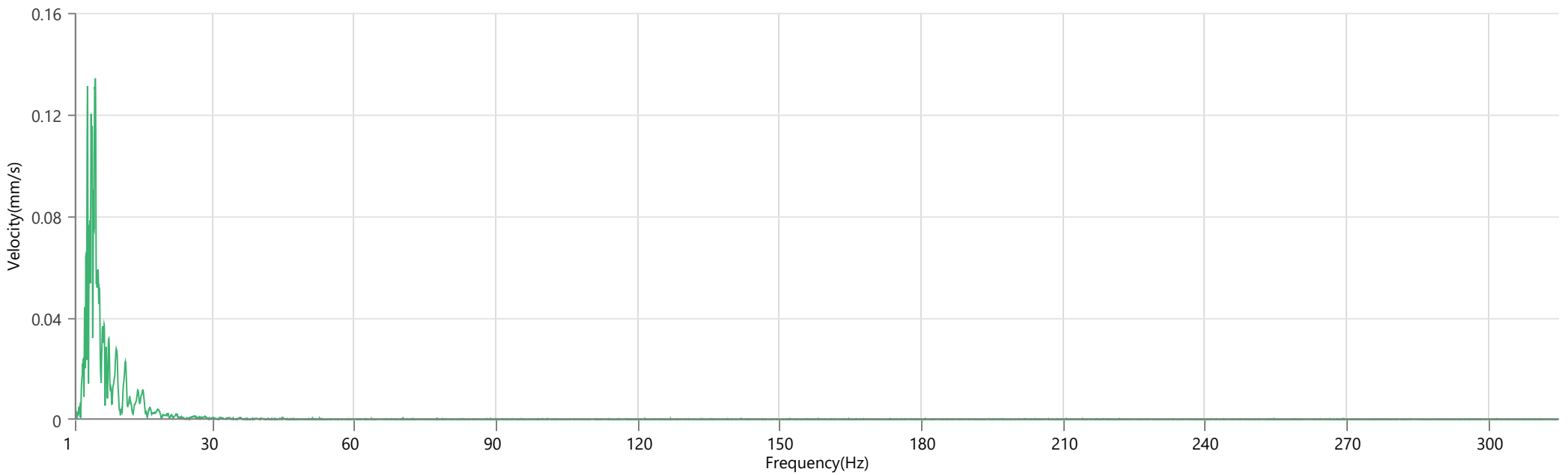
Location  
 Client TSL  
 Company  
 General Notes

**Post Event Notes** No text to be displayed.

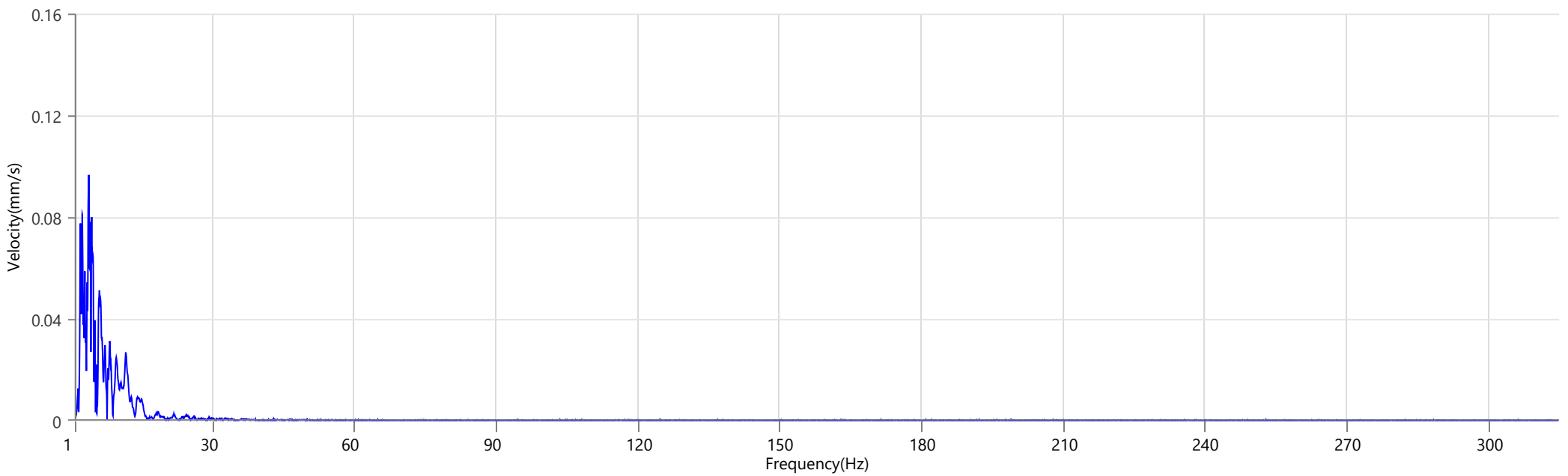
**Tran - Dominant Frequency 4.2 Hz, Amplitude 0.147 mm/s (Peak Particle Velocity: 2.609 mm/s)**



**Vert - Dominant Frequency 5.3 Hz, Amplitude 0.134 mm/s (Peak Particle Velocity: 2.830 mm/s)**



**Long - Dominant Frequency 3.9 Hz, Amplitude 0.097 mm/s (Peak Particle Velocity: 2.349 mm/s)**



Waveform Trigger Source  
 Trigger Level(s)  
 Pre-Trigger/Record Time  
 Sample Rate  
 Setup File Name  
 Operator

Vert at February 17, 2026 14:00:37  
 Geo 0.500 mm/s  
 0.25 sec/11.3 sec (Auto)  
 2048 sps  
 SRS.mmb  
 Operator

Serial Number  
 Model Number  
 Battery Level  
 Unit Calibration  
 Event File Name  
 USB Sensor Support

UM15331  
 Micromate ISEE 10.90FB  
 3.8 volts  
 February 15, 2025 by UES New Delhi  
 UM15331\_20260217140037.IDFW  
 Disabled

**Notes**

Location  
 Client TSL  
 Company  
 General Notes

**Post Event Notes** No text to be displayed.

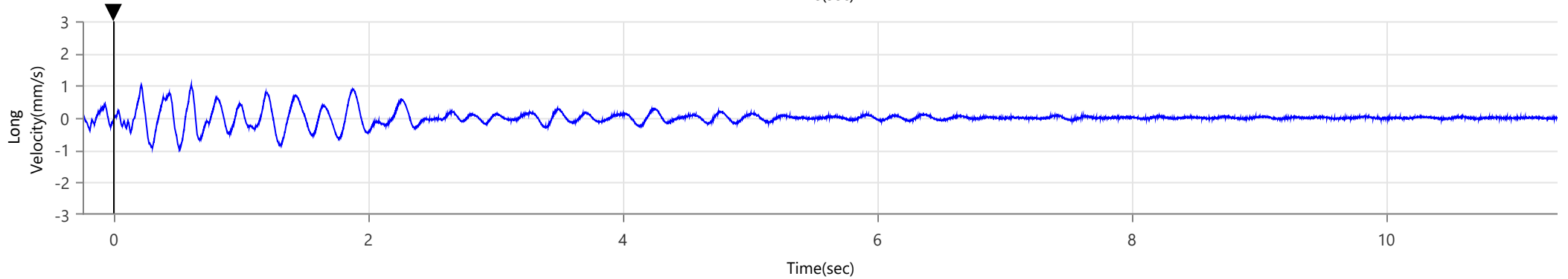
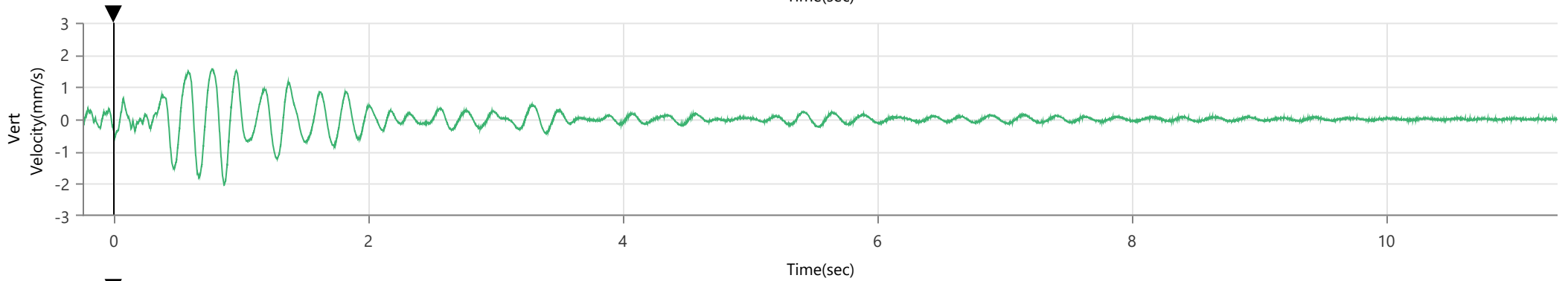
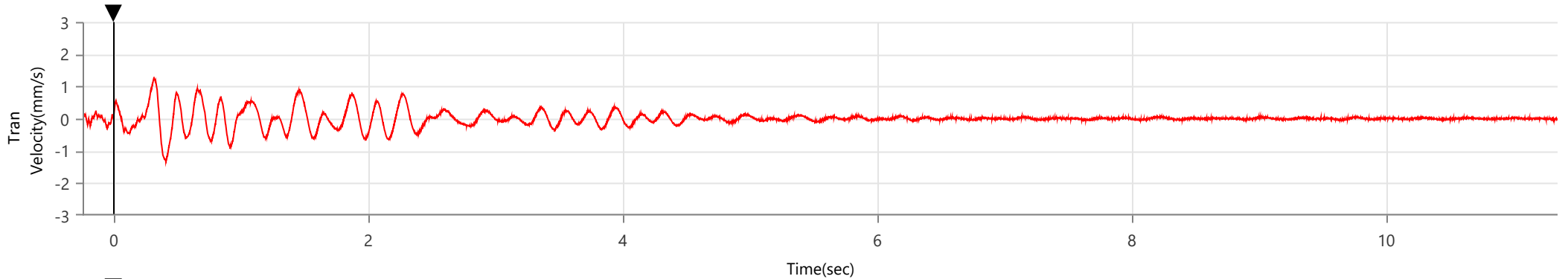
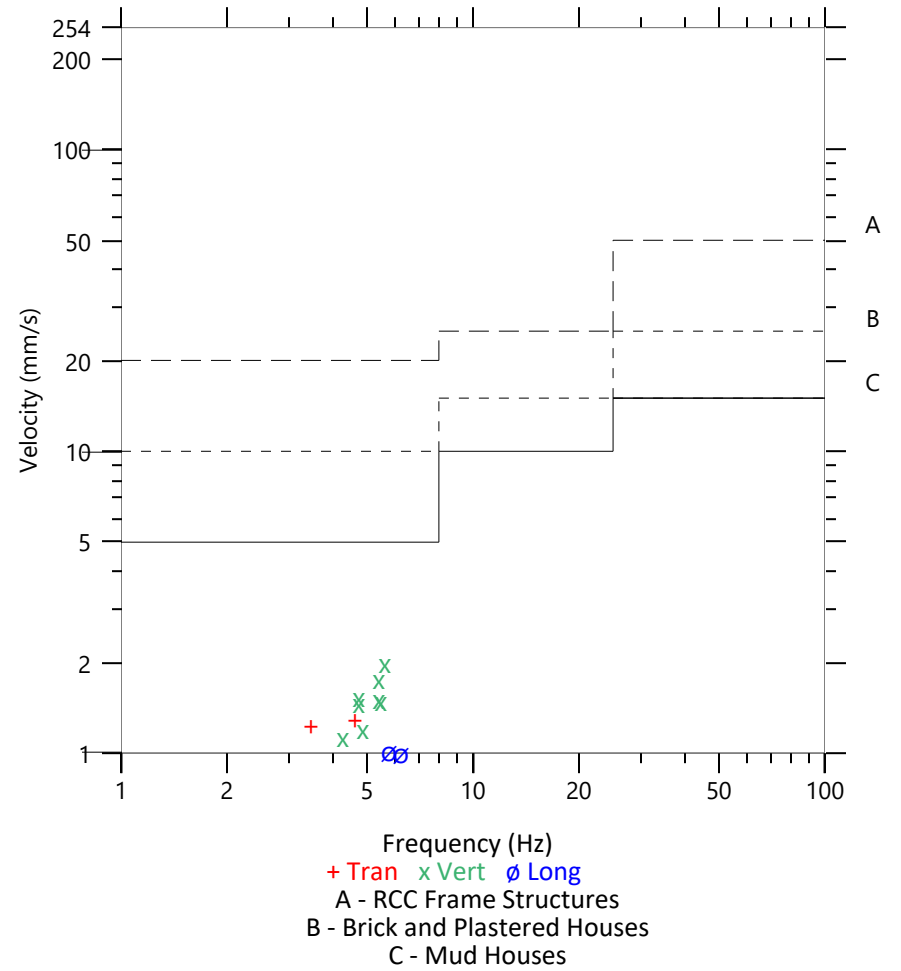
**Geophone**

Peak Particle Velocity  
 Zero Crossing Frequency  
 Time (Relative to Trigger)  
 Peak Acceleration  
 Peak Displacement  
 Sensor Check  
 Frequency  
 Overswing Ratio

Tran	Vert	Long
1.324 mm/s	2.026 mm/s	1.033 mm/s
4.6 Hz	5.6 Hz	5.8 Hz
0.405 sec	0.863 sec	0.212 sec
0.012 g	0.018 g	0.012 g
0.045 mm	0.056 mm	0.034 mm
✓ Passed	✓ Passed	✓ Passed
7.3 Hz	7.5 Hz	7.3 Hz
4.2	4.4	4.5

Peak Vector Sum 2.097 mm/s at 0.665 sec

**Indian Bureau of Standards**  
 Velocity versus Frequency (Zero Crossing)



Waveform Trigger Source  
Trigger Level(s)  
Pre-Trigger/Record Time  
Sample Rate  
Setup File Name  
Operator

Vert at February 17, 2026 14:00:37  
Geo 0.500 mm/s  
0.25 sec/11.3 sec (Auto)  
2048 sps  
SRS.mmb  
Operator

Serial Number  
Model Number  
Battery Level  
Unit Calibration  
Event File Name  
USB Sensor Support

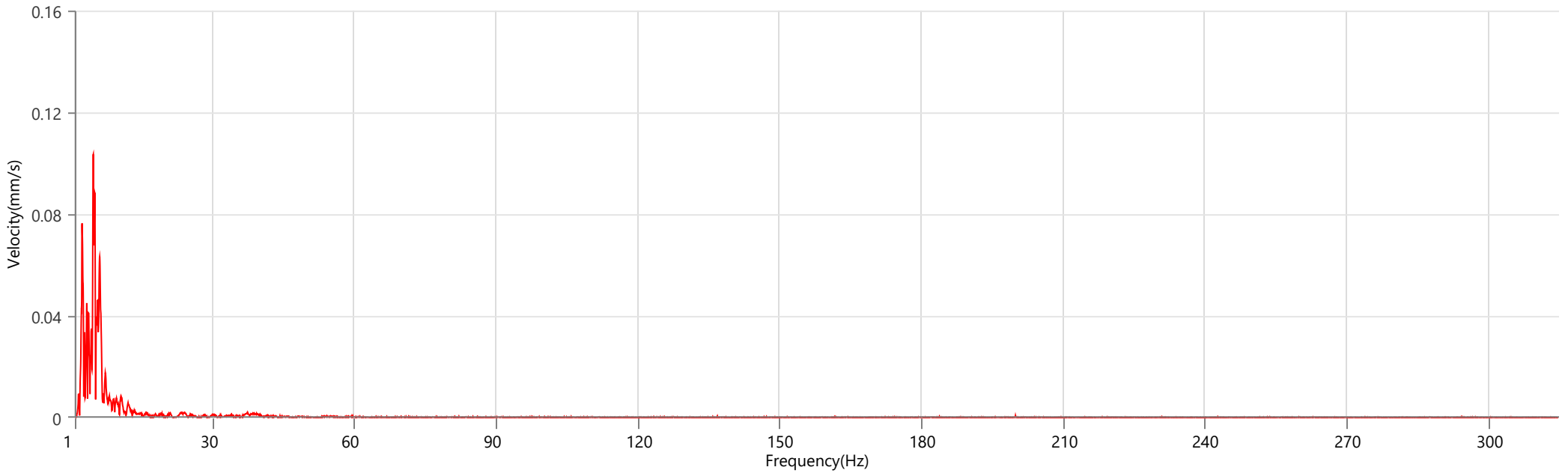
UM15331  
Micromate ISEE 10.90FB  
3.8 volts  
February 15, 2025 by UES New Delhi  
UM15331\_20260217140037.IDFW  
Disabled

**Notes**

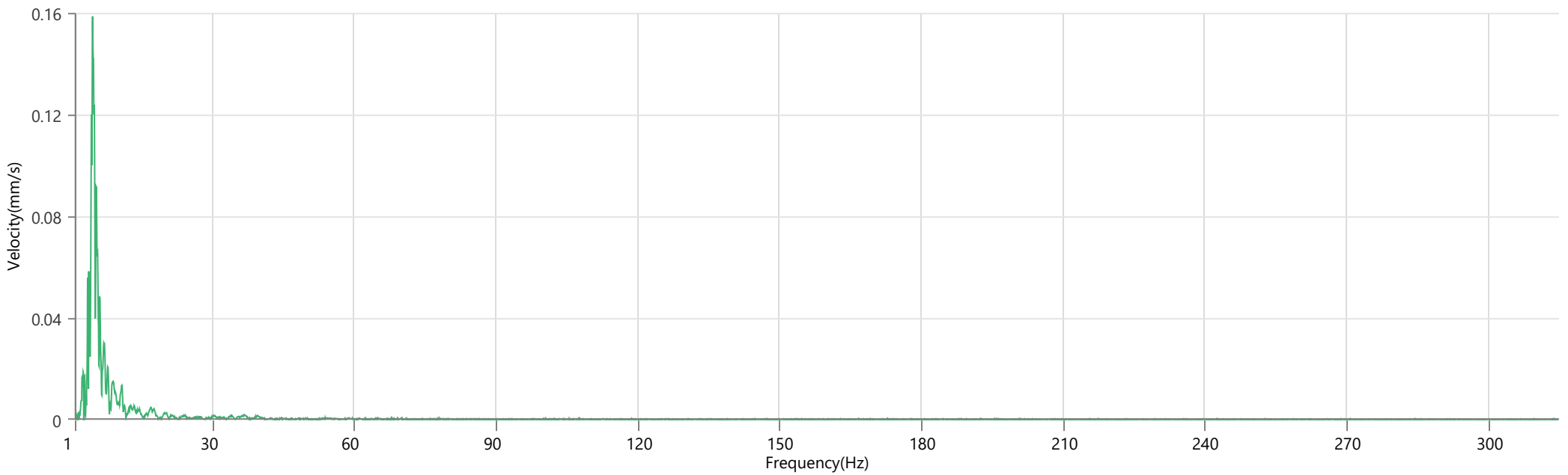
Location  
Client TSL  
Company  
General Notes

**Post Event Notes** No text to be displayed.

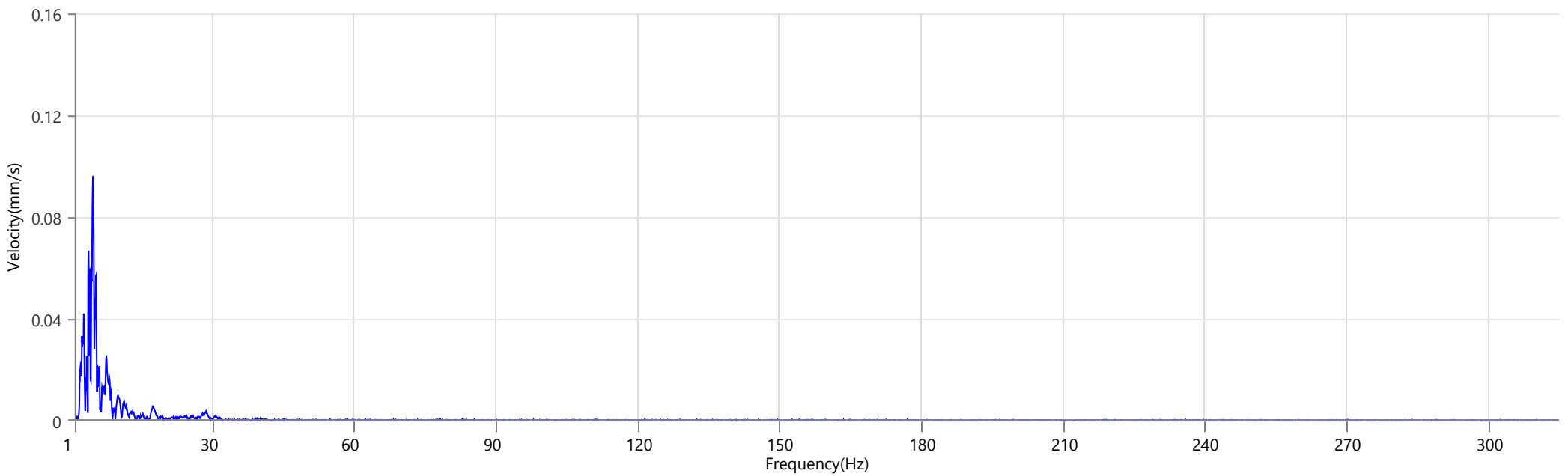
**Tran - Dominant Frequency 4.9 Hz, Amplitude 0.103 mm/s (Peak Particle Velocity: 1.324 mm/s)**



**Vert - Dominant Frequency 4.8 Hz, Amplitude 0.159 mm/s (Peak Particle Velocity: 2.026 mm/s)**



**Long - Dominant Frequency 4.9 Hz, Amplitude 0.096 mm/s (Peak Particle Velocity: 1.033 mm/s)**



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**

Long at February 21, 2026 14:03:50  
 Geo 0.500 mm/s  
 0.25 sec/15.1 sec (Auto)  
 2048 sps  
 SRS.mmb  
 Operator

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

UM15331  
 Micromate ISEE 10.90FB  
 3.4 volts  
 February 15, 2025 by UES New Delhi  
 UM15331\_20251212143750.IDFW  
 Disabled

**Notes**

Location  
 Client TSL  
 Company  
 General Notes

**Post Event Notes** No text to be displayed.

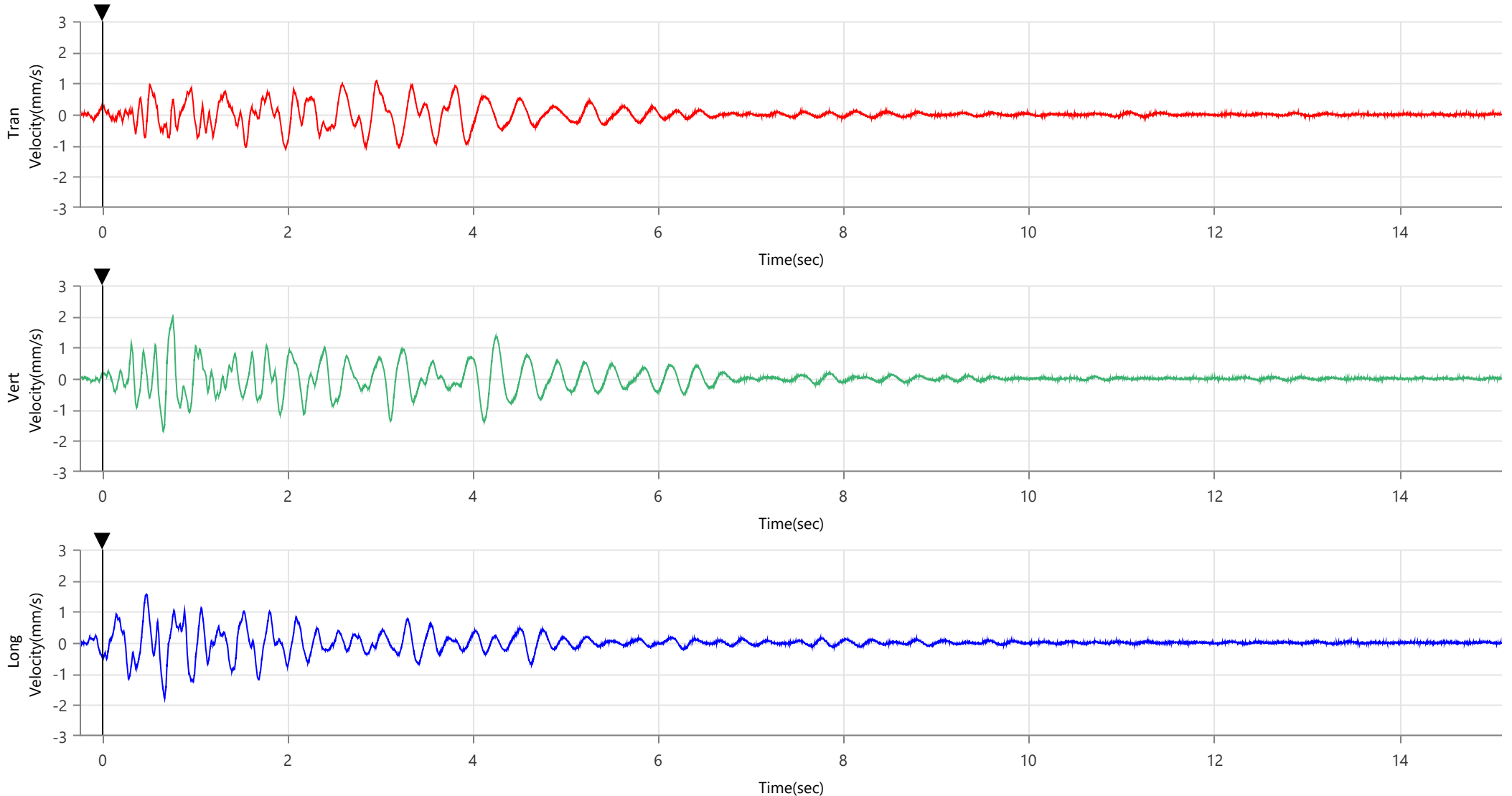
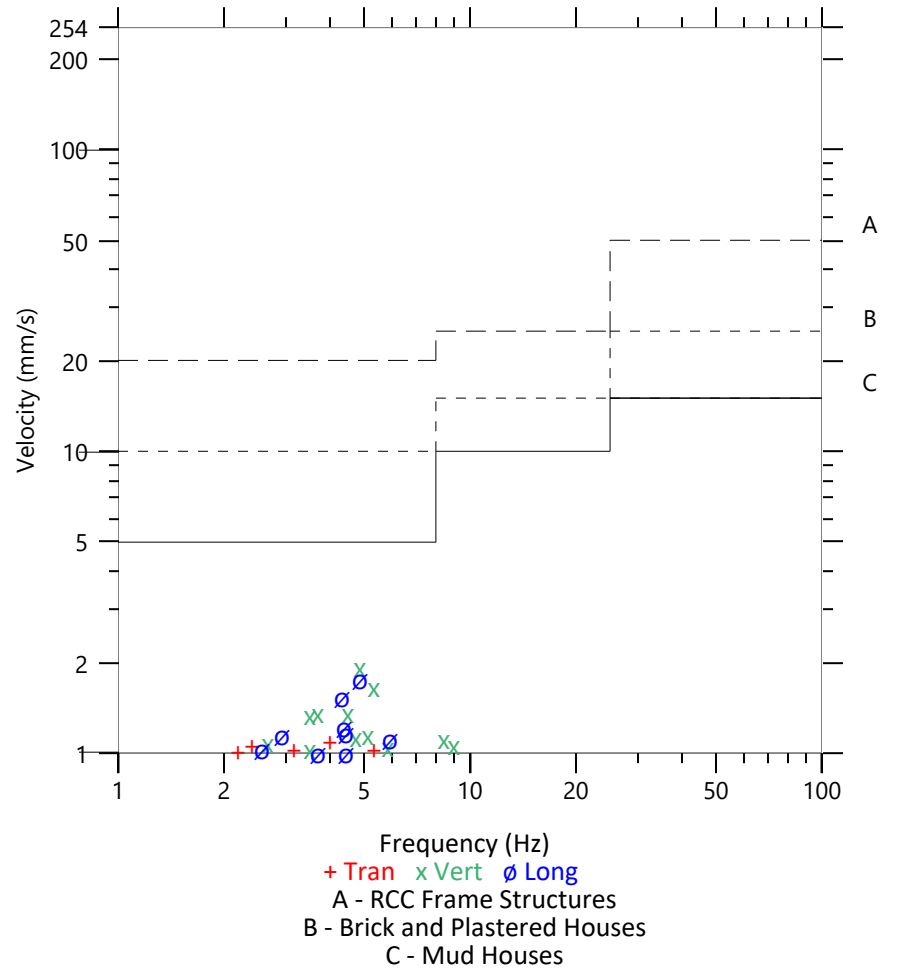
**Geophone**

Peak Particle Velocity  
 Zero Crossing Frequency  
 Time (Relative to Trigger)  
 Peak Acceleration  
 Peak Displacement  
 Sensor Check  
 Frequency  
 Overswing Ratio

	Tran	Vert	Long
Peak Particle Velocity	1.111 mm/s	1.955 mm/s	1.789 mm/s
Zero Crossing Frequency	4.0 Hz	4.9 Hz	4.9 Hz
Time (Relative to Trigger)	1.975 sec	0.755 sec	0.669 sec
Peak Acceleration	0.013 g	0.020 g	0.013 g
Peak Displacement	0.052 mm	0.068 mm	0.057 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.5 Hz	7.5 Hz
Overswing Ratio	4.3	4.5	4.4

Peak Vector Sum 2.417 mm/s at 0.661 sec

**Indian Bureau of Standards**  
Velocity versus Frequency (Zero Crossing)



Waveform Trigger Source  
Trigger Level(s)  
Pre-Trigger/Record Time  
Sample Rate  
Setup File Name  
Operator

Long at February 21, 2026 14:03:50  
Geo 0.500 mm/s  
0.25 sec/15.1 sec (Auto)  
2048 sps  
SRS.mmb  
Operator

Serial Number  
Model Number  
Battery Level  
Unit Calibration  
Event File Name  
USB Sensor Support

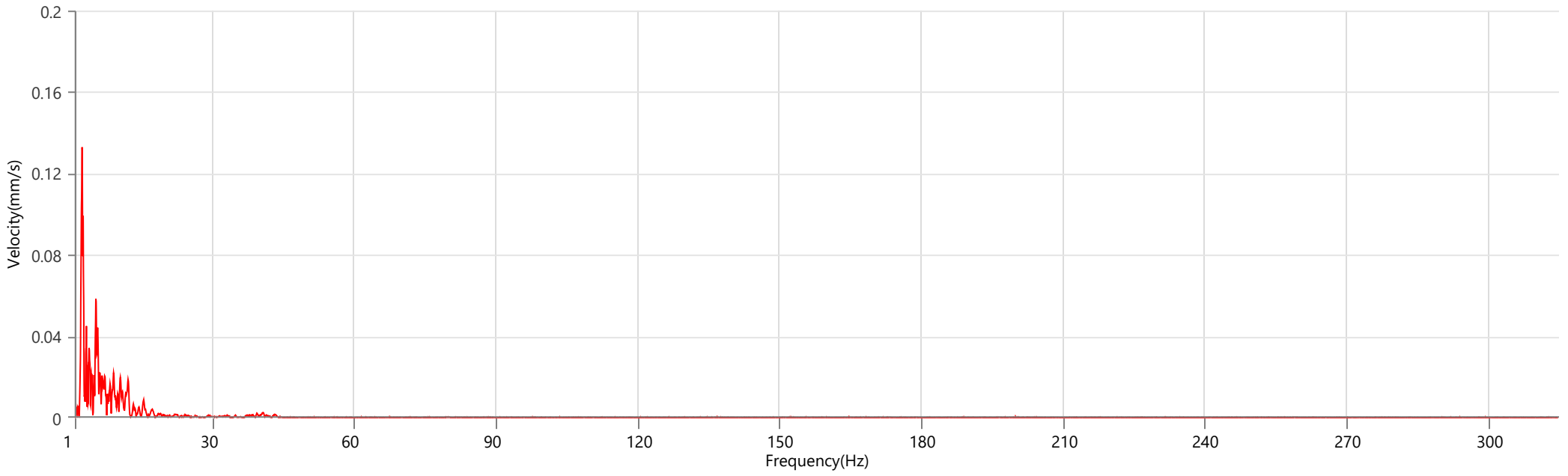
UM15331  
Micromate ISEE 10.90FB  
3.4 volts  
February 15, 2025 by UES New Delhi  
UM15331\_20251212143750.IDFW  
Disabled

**Notes**

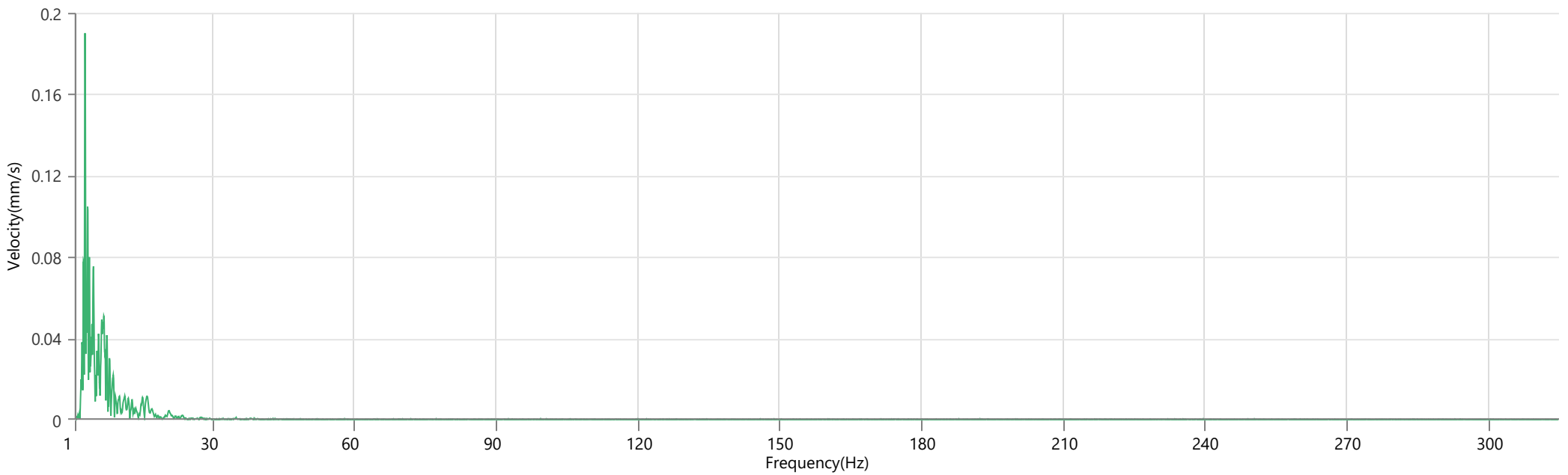
Location  
Client TSL  
Company  
General Notes

**Post Event Notes** No text to be displayed.

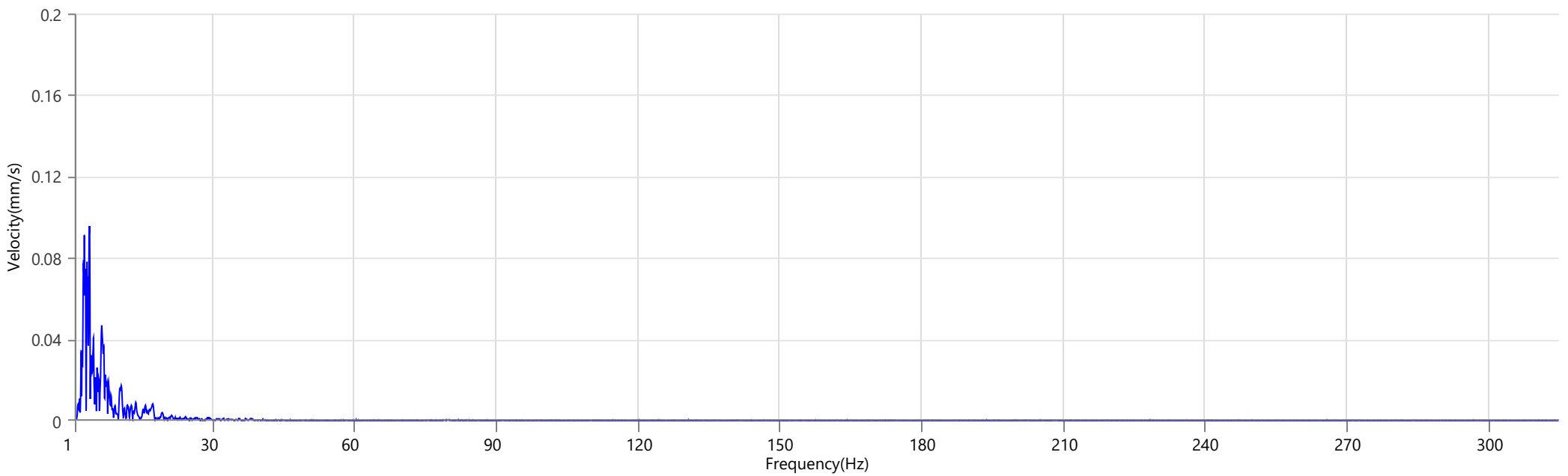
**Tran - Dominant Frequency 2.6 Hz, Amplitude 0.131 mm/s (Peak Particle Velocity: 1.111 mm/s)**



**Vert - Dominant Frequency 3.1 Hz, Amplitude 0.185 mm/s (Peak Particle Velocity: 1.955 mm/s)**



**Long - Dominant Frequency 4.1 Hz, Amplitude 0.096 mm/s (Peak Particle Velocity: 1.789 mm/s)**



Waveform Trigger Source  
 Trigger Level(s)  
 Pre-Trigger/Record Time  
 Sample Rate  
 Setup File Name  
 Operator

Vert at March 3, 2026 14:18:49  
 Geo 0.500 mm/s  
 0.25 sec/14.2 sec (Auto)  
 2048 sps  
 SRS.mmb  
 Operator

Serial Number  
 Model Number  
 Battery Level  
 Unit Calibration  
 Event File Name  
 USB Sensor Support

UM15331  
 Micromate ISEE 10.90FB  
 3.7 volts  
 February 15, 2025 by UES New Delhi  
 UM15331\_20260303141849.IDFW  
 Disabled

**Notes**

Location  
 Client TSL  
 Company  
 General Notes

**Post Event Notes** No text to be displayed.

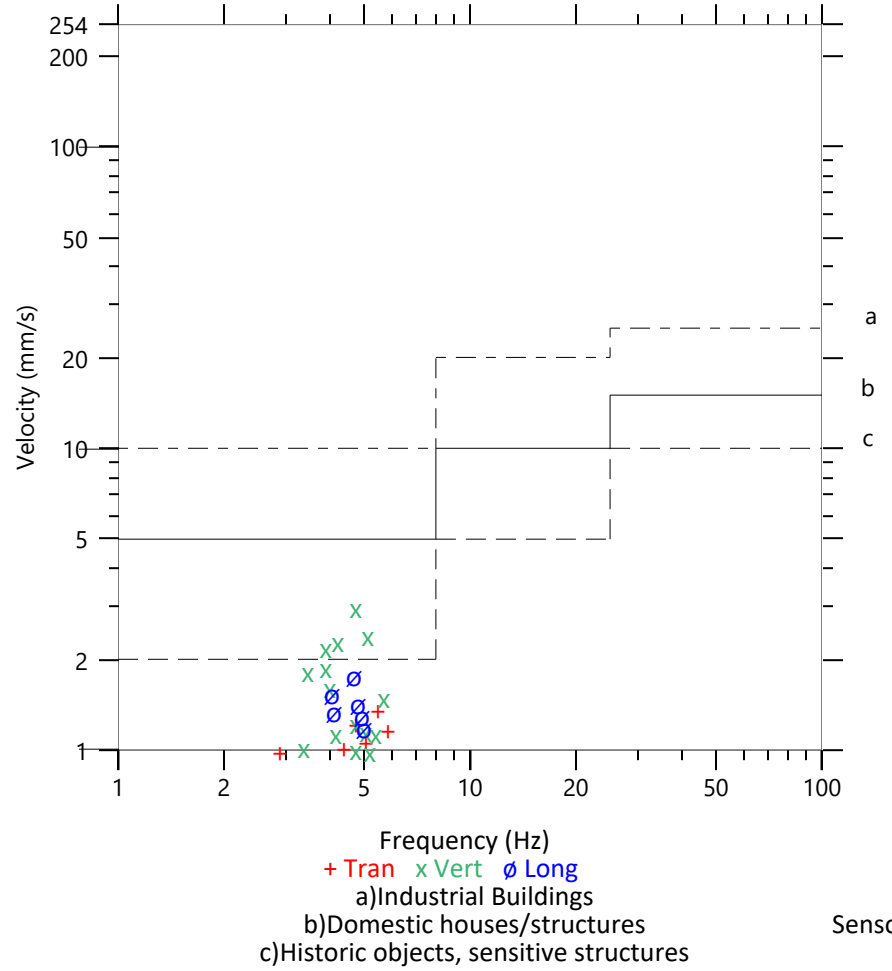
**Geophone**

Peak Particle Velocity  
 Zero Crossing Frequency  
 Time (Relative to Trigger)  
 Peak Acceleration  
 Peak Displacement  
 Sensor Check  
 Frequency  
 Overswing Ratio

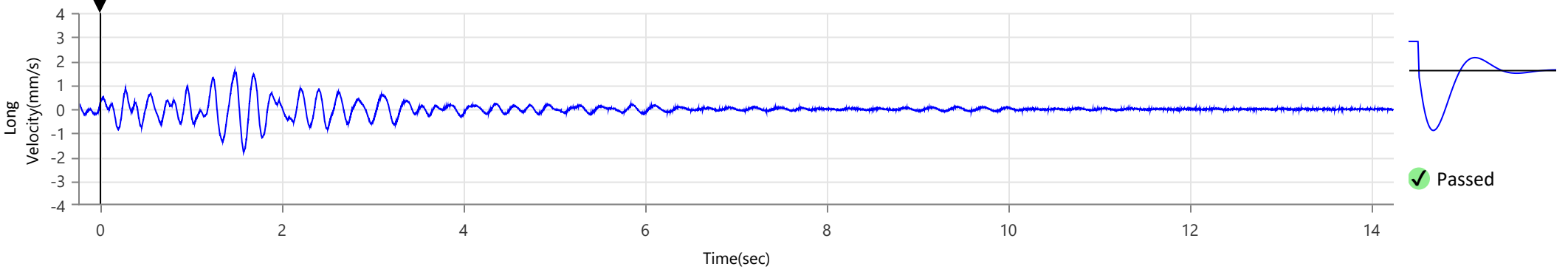
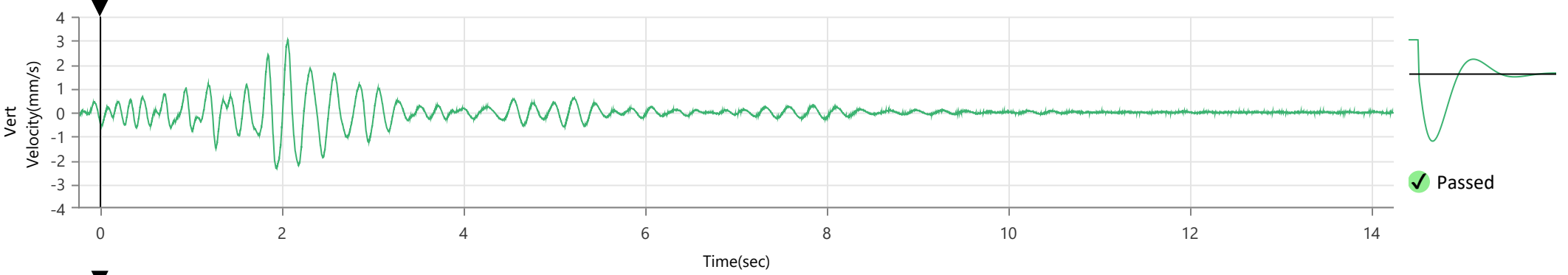
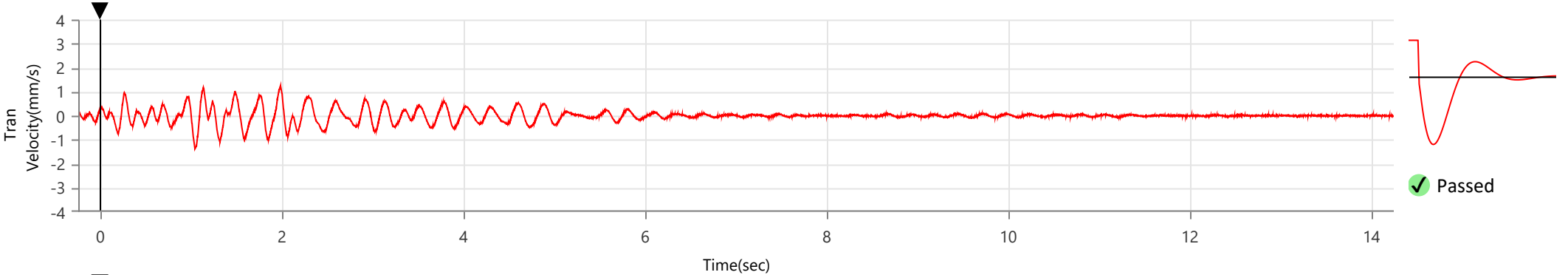
Tran	Vert	Long
1.371 mm/s	3.019 mm/s	1.789 mm/s
5.5 Hz	4.7 Hz	4.7 Hz
1.039 sec	2.059 sec	1.576 sec
0.013 g	0.018 g	0.013 g
0.040 mm	0.098 mm	0.059 mm
✓ Passed	✓ Passed	✓ Passed
7.3 Hz	7.5 Hz	7.3 Hz
4.3	4.4	4.5

Peak Vector Sum 3.173 mm/s at 2.059 sec

**DGMS India (A)**  
 Velocity versus Frequency (Zero Crossing)



Sensor Check



Waveform Trigger Source  
Trigger Level(s)  
Pre-Trigger/Record Time  
Sample Rate  
Setup File Name  
Operator

Vert at March 3, 2026 14:18:49  
Geo 0.500 mm/s  
0.25 sec/14.2 sec (Auto)  
2048 sps  
SRS.mmb  
Operator

Serial Number  
Model Number  
Battery Level  
Unit Calibration  
Event File Name  
USB Sensor Support

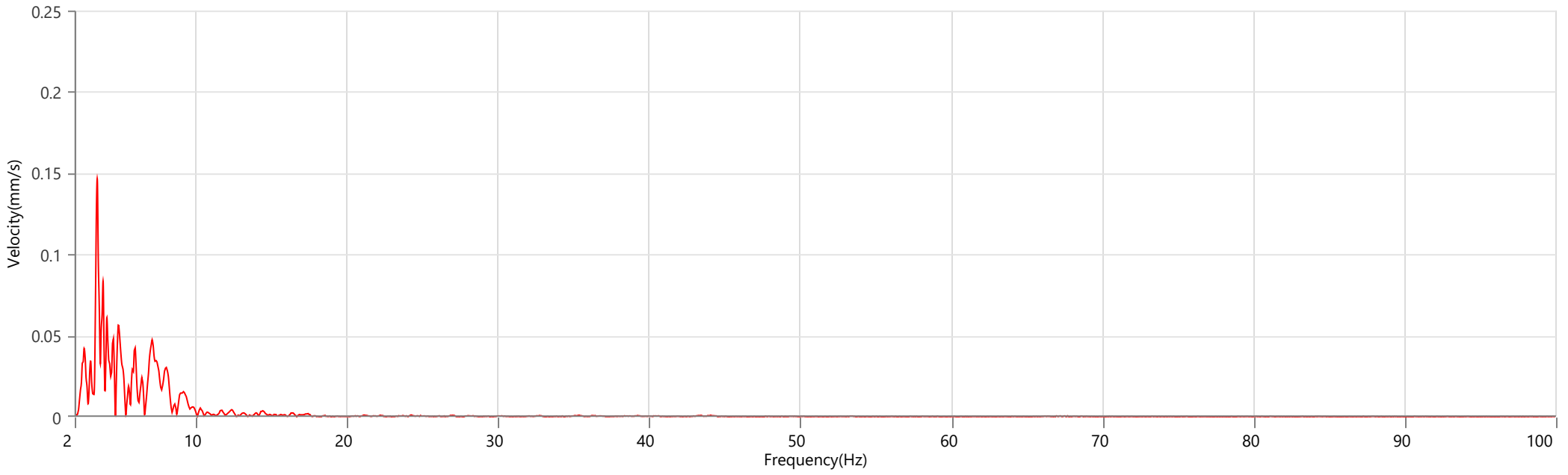
UM15331  
Micromate ISEE 10.90FB  
3.7 volts  
February 15, 2025 by UES New Delhi  
UM15331\_20260303141849.IDFW  
Disabled

### Notes

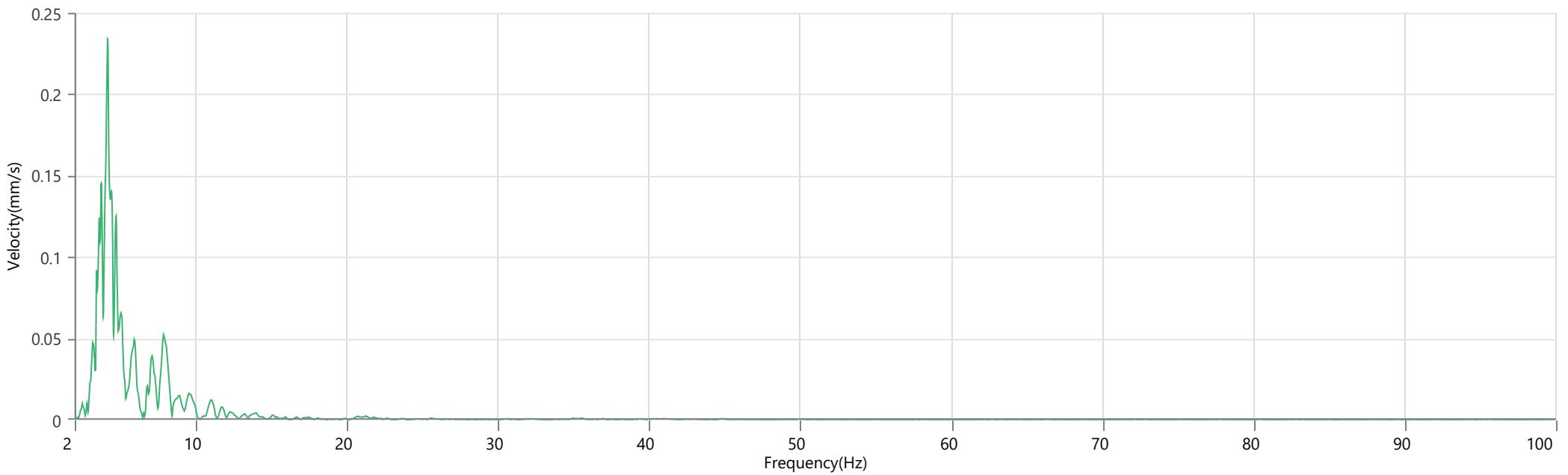
Location  
Client TSL  
Company  
General Notes

Post Event Notes No text to be displayed.

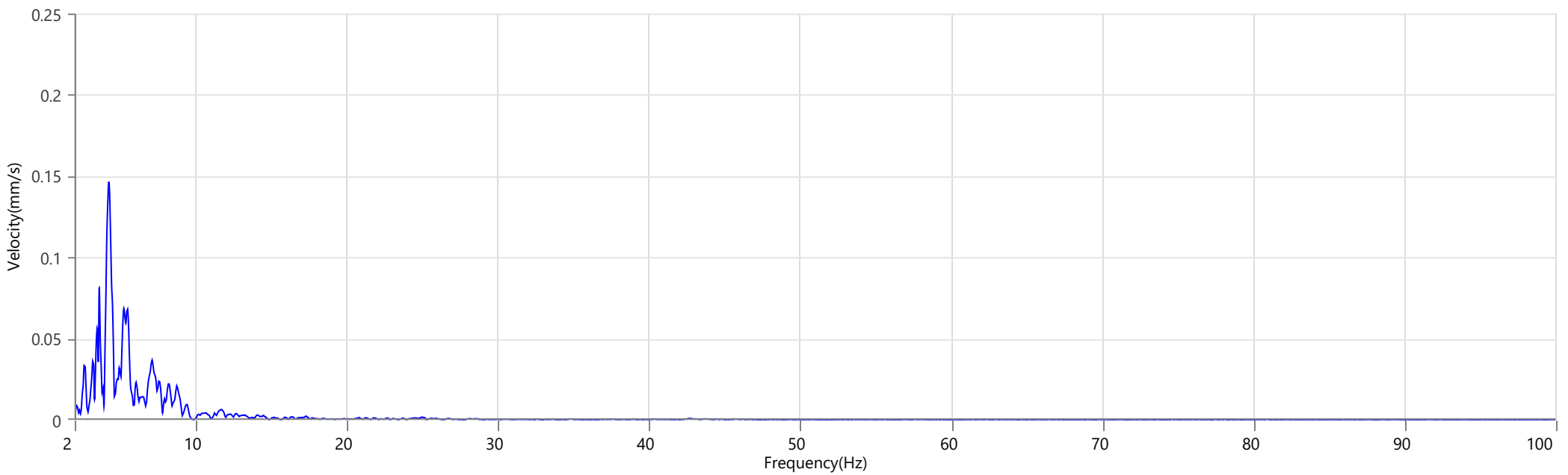
### Tran - Dominant Frequency 3.5 Hz, Amplitude 0.145 mm/s (Peak Particle Velocity: 1.371 mm/s)



### Vert - Dominant Frequency 4.2 Hz, Amplitude 0.233 mm/s (Peak Particle Velocity: 3.019 mm/s)



### Long - Dominant Frequency 4.2 Hz, Amplitude 0.146 mm/s (Peak Particle Velocity: 1.789 mm/s)



Waveform Trigger Source  
 Trigger Level(s)  
 Pre-Trigger/Record Time  
 Sample Rate  
 Setup File Name  
 Operator

Long at March 9, 2026 14:31:58  
 Geo 0.500 mm/s  
 0.25 sec/15.6 sec (Auto)  
 2048 sps  
 SRS.mmb  
 Operator

Serial Number  
 Model Number  
 Battery Level  
 Unit Calibration  
 Event File Name  
 USB Sensor Support

UM15331  
 Micromate ISEE 10.90FB  
 3.7 volts  
 February 15, 2025 by UES New Delhi  
 UM15331\_20260313201458.IDFW  
 Disabled

**Notes**

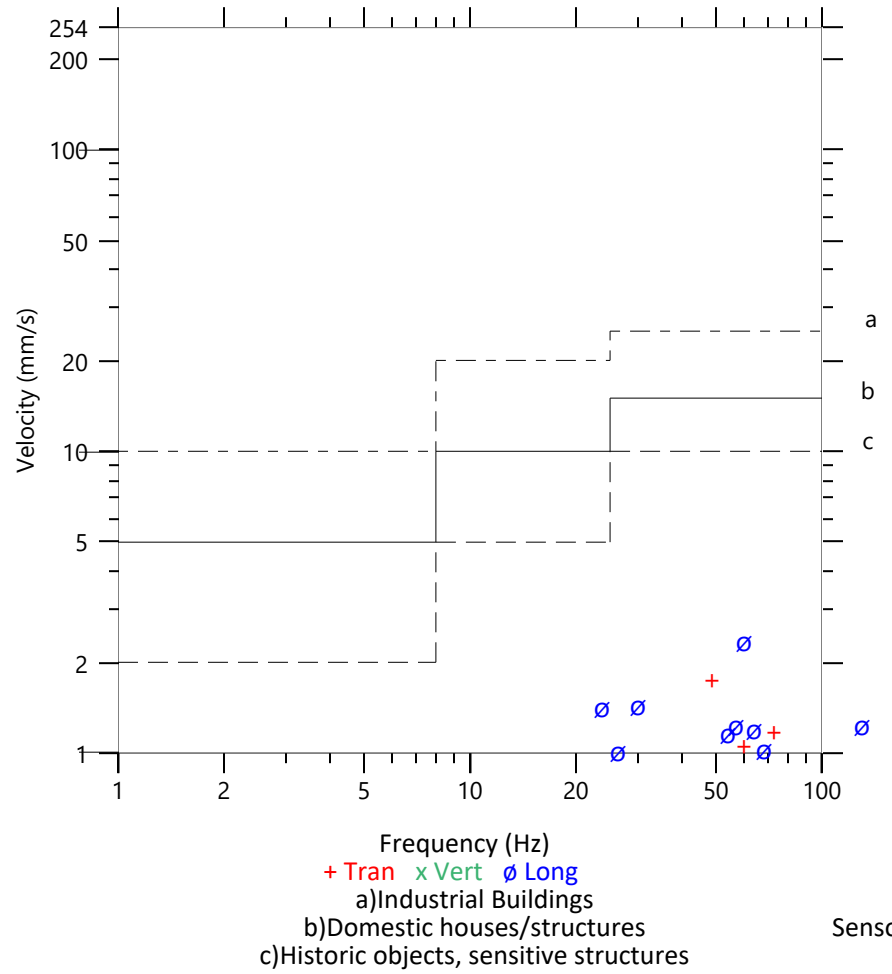
Location  
 Client TSL  
 Company  
 General Notes

**Post Event Notes** No text to be displayed.

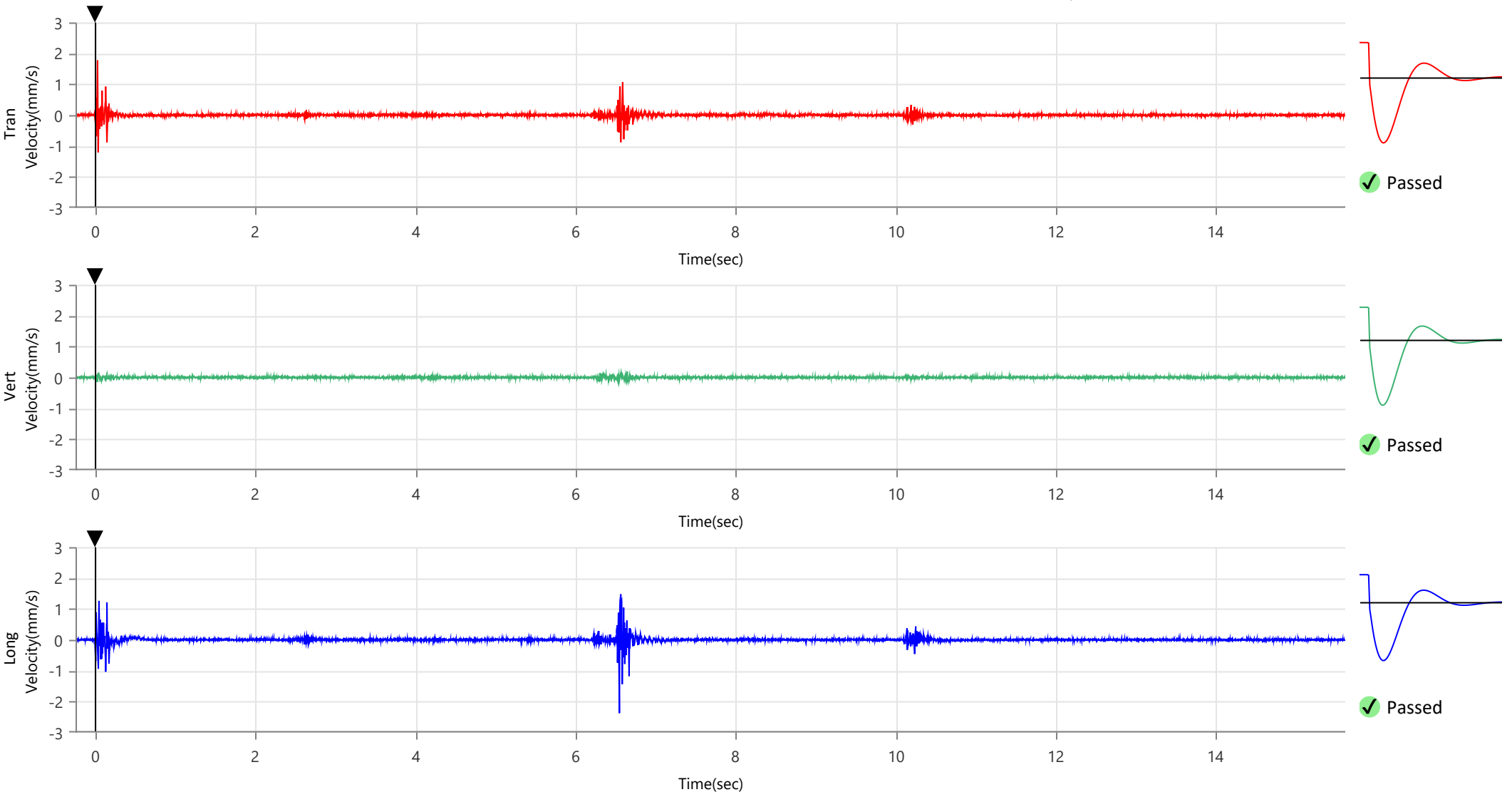
**Geophone**

	Tran	Vert	Long
Peak Particle Velocity	1.773 mm/s	0.197 mm/s	2.372 mm/s
Zero Crossing Frequency	48.8 Hz	>100 Hz	60.2 Hz
Time (Relative to Trigger)	0.027 sec	6.646 sec	6.548 sec
Peak Acceleration	0.081 g	0.020 g	0.110 g
Peak Displacement	0.005 mm	0.001 mm	0.006 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.5 Hz	7.3 Hz
Overswing Ratio	4.3	4.5	4.6
Peak Vector Sum	2.429 mm/s at 6.548 sec		

**DGMS India (A)**  
 Velocity versus Frequency (Zero Crossing)



Sensor Check



Waveform Trigger Source  
Trigger Level(s)  
Pre-Trigger/Record Time  
Sample Rate  
Setup File Name  
Operator

Long at March 9, 2026 14:31:58  
Geo 0.500 mm/s  
0.25 sec/15.6 sec (Auto)  
2048 sps  
SRS.mmb  
Operator

Serial Number  
Model Number  
Battery Level  
Unit Calibration  
Event File Name  
USB Sensor Support

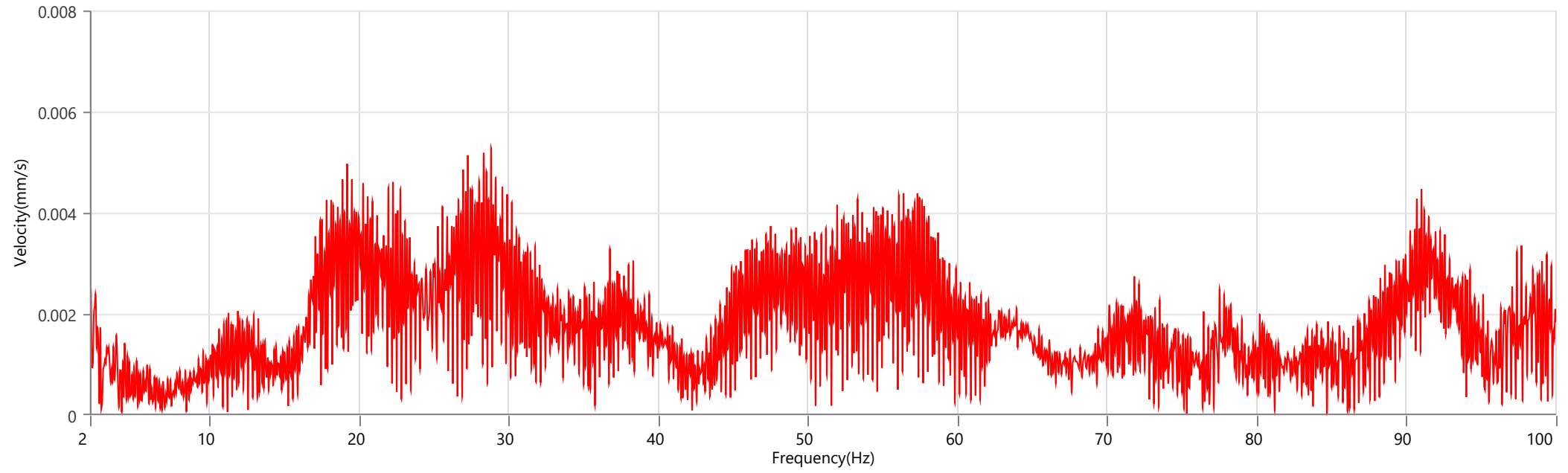
UM15331  
Micromate ISEE 10.90FB  
3.7 volts  
February 15, 2025 by UES New Delhi  
UM15331\_20260313201458.IDFW  
Disabled

### Notes

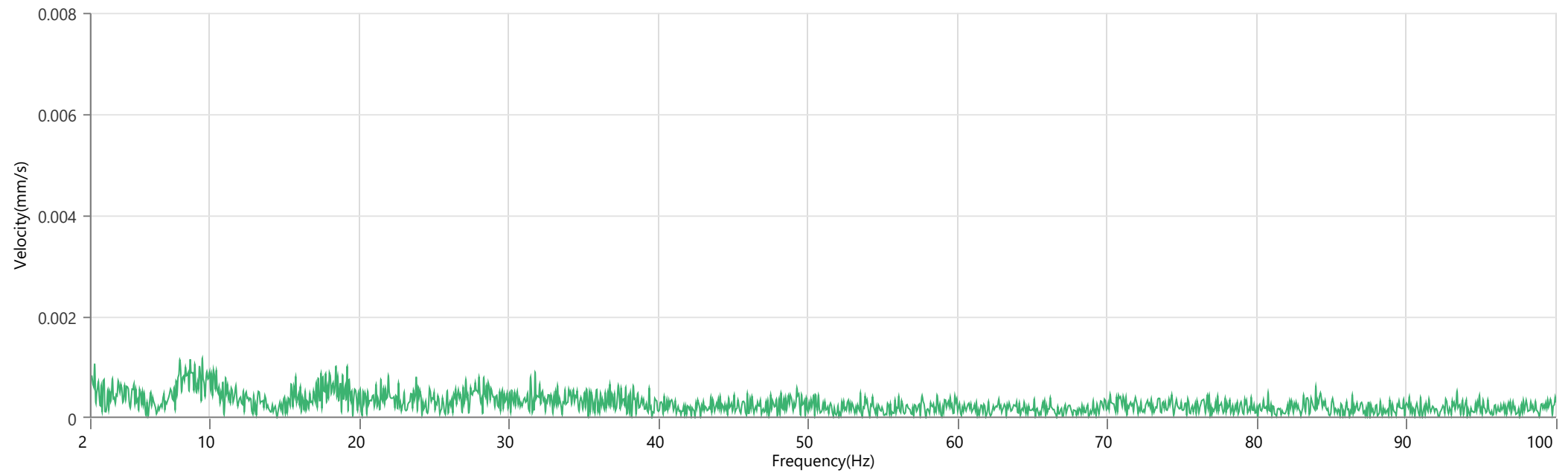
Location  
Client TSL  
Company  
General Notes

Post Event Notes No text to be displayed.

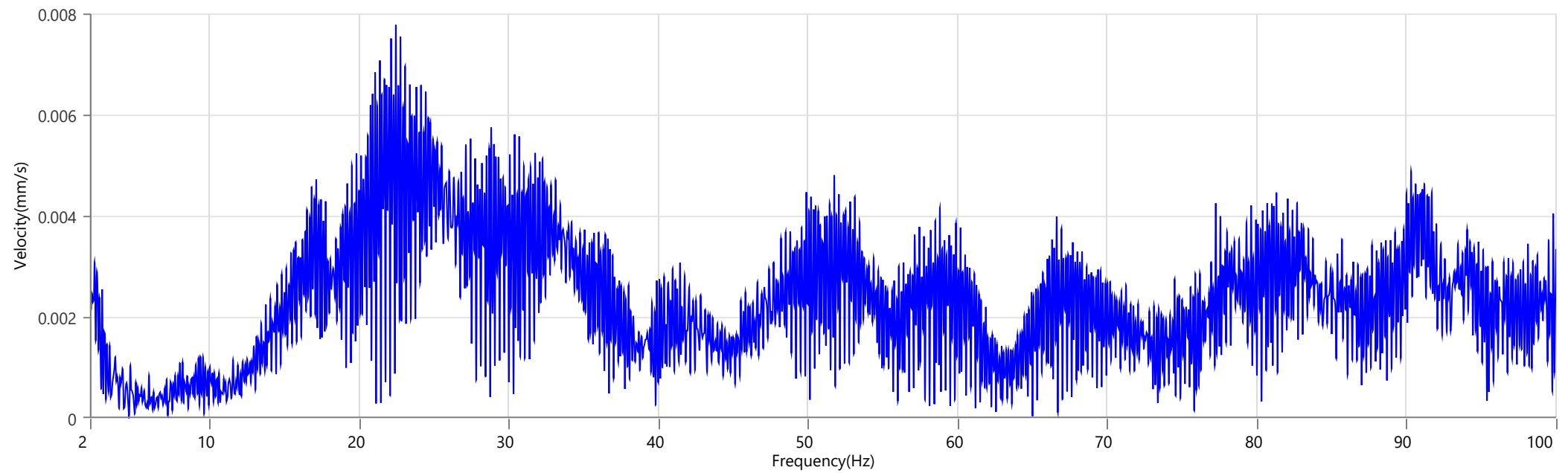
### Tran - Dominant Frequency 28.8 Hz, Amplitude 0.005 mm/s (Peak Particle Velocity: 1.773 mm/s)



### Vert - Dominant Frequency 2.0 Hz, Amplitude 0.001 mm/s (Peak Particle Velocity: 0.197 mm/s)



### Long - Dominant Frequency 22.4 Hz, Amplitude 0.008 mm/s (Peak Particle Velocity: 2.372 mm/s)



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**

Long at March 13, 2026 14:04:25  
 Geo 0.500 mm/s  
 0.25 sec/12.6 sec (Auto)  
 2048 sps  
 SRS.mmb  
 Operator

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

UM15331  
 Micromate ISEE 10.90FB  
 3.7 volts  
 February 15, 2025 by UES New Delhi  
 UM15331\_20260313140425.IDFW  
 Disabled

**Notes**

Location  
 Client TSL  
 Company  
 General Notes

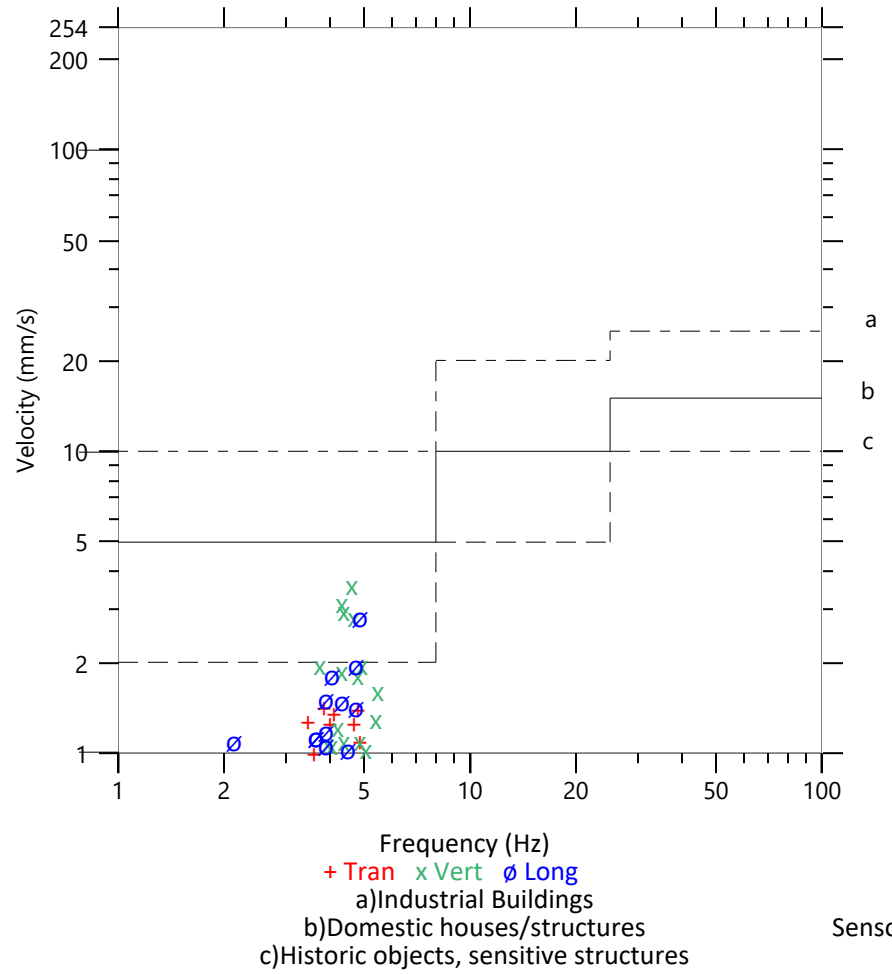
**Post Event Notes** No text to be displayed.

**Geophone**

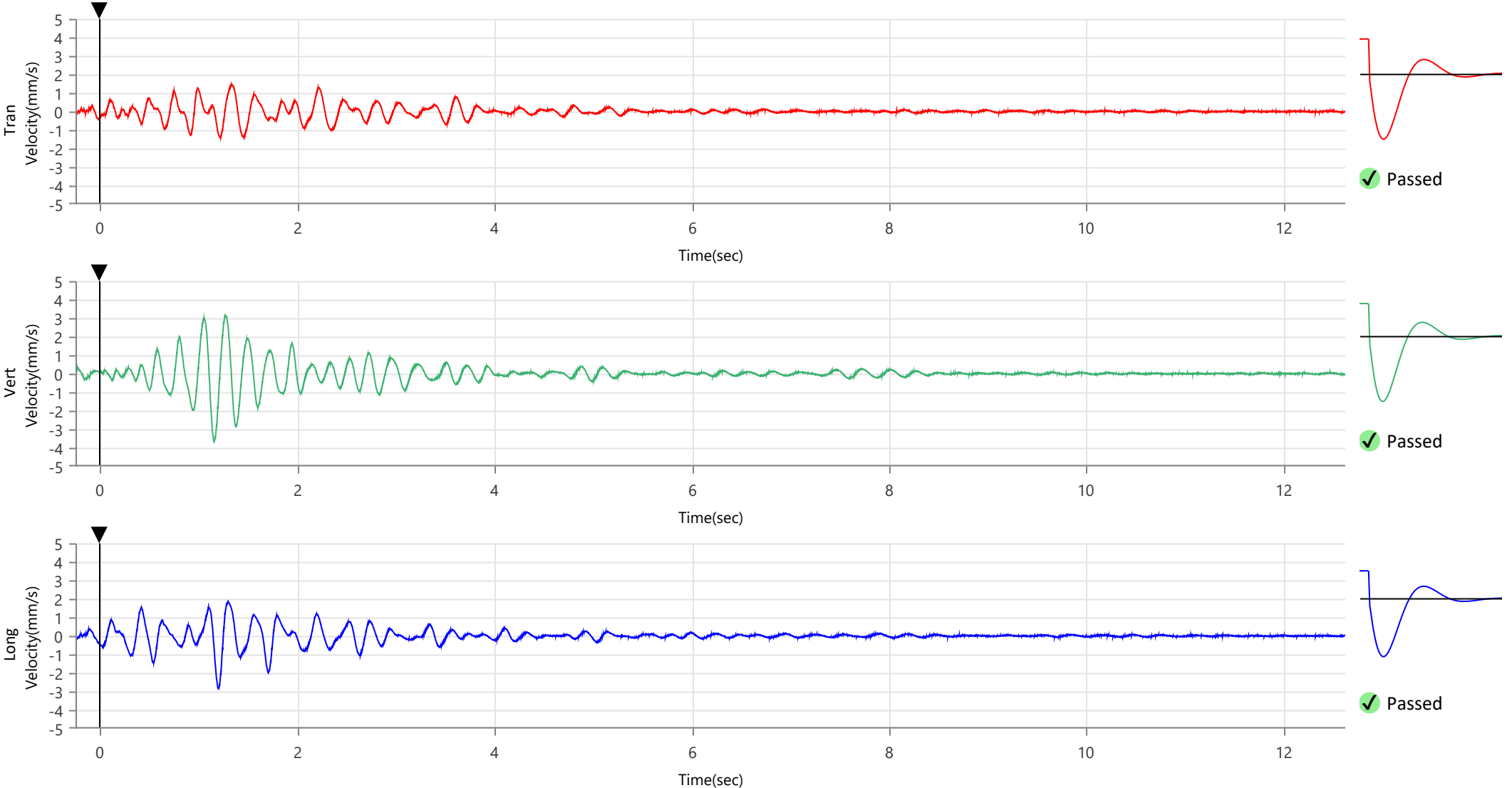
	Tran	Vert	Long
Peak Particle Velocity	1.434 mm/s	3.673 mm/s	2.861 mm/s
Zero Crossing Frequency	3.8 Hz	4.6 Hz	4.9 Hz
Time (Relative to Trigger)	1.337 sec	1.157 sec	1.203 sec
Peak Acceleration	0.012 g	0.021 g	0.016 g
Peak Displacement	0.062 mm	0.125 mm	0.091 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.5 Hz	7.3 Hz
Overswing Ratio	4.3	4.5	4.6

Peak Vector Sum 3.822 mm/s at 1.171 sec

**DGMS India (A)**  
Velocity versus Frequency (Zero Crossing)



Sensor Check



**Waveform Trigger Source**  
**Trigger Level(s)**  
**Pre-Trigger/Record Time**  
**Sample Rate**  
**Setup File Name**  
**Operator**

Long at March 13, 2026 14:04:25  
Geo 0.500 mm/s  
0.25 sec/12.6 sec (Auto)  
2048 sps  
SRS.mmb  
Operator

**Serial Number**  
**Model Number**  
**Battery Level**  
**Unit Calibration**  
**Event File Name**  
**USB Sensor Support**

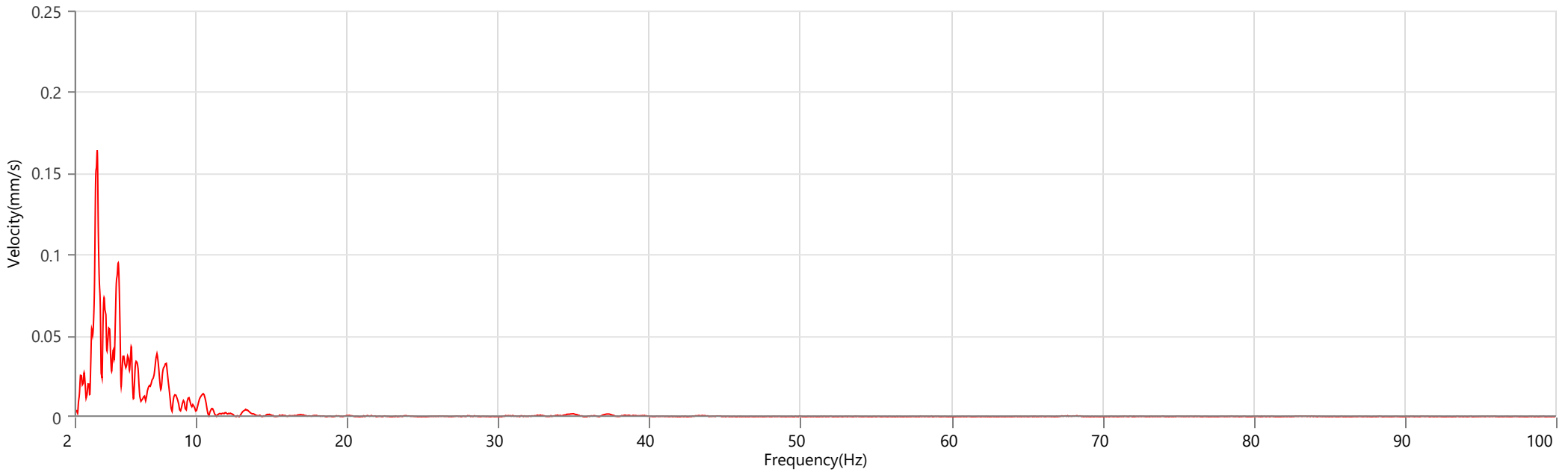
UM15331  
Micromate ISEE 10.90FB  
3.7 volts  
February 15, 2025 by UES New Delhi  
UM15331\_20260313140425.IDFW  
Disabled

**Notes**

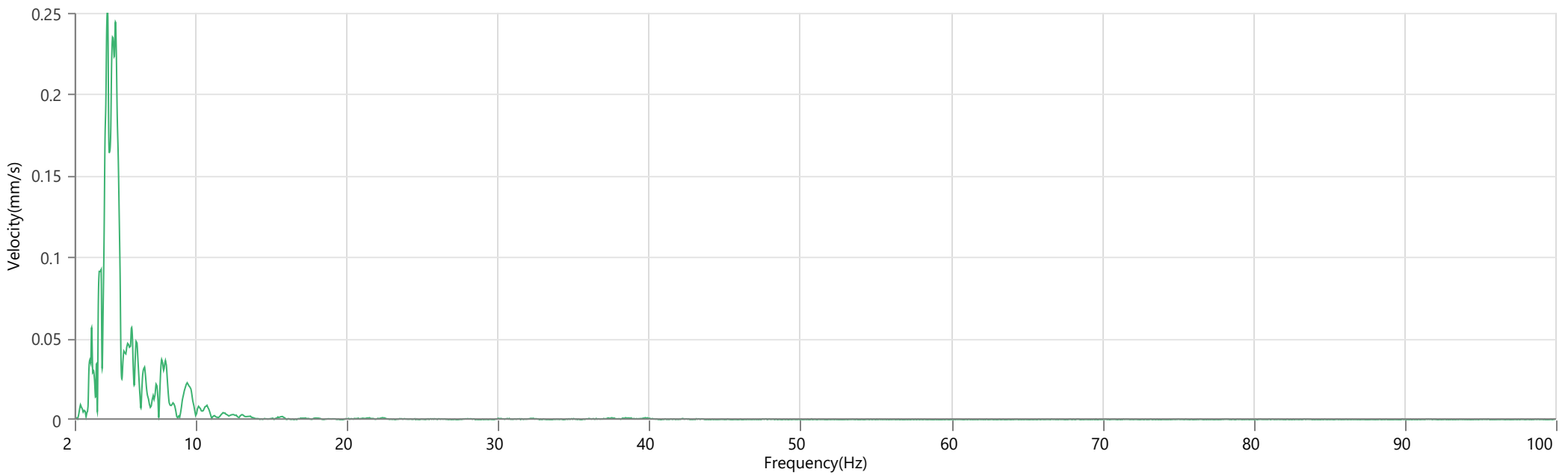
Location  
Client TSL  
Company  
General Notes

**Post Event Notes** No text to be displayed.

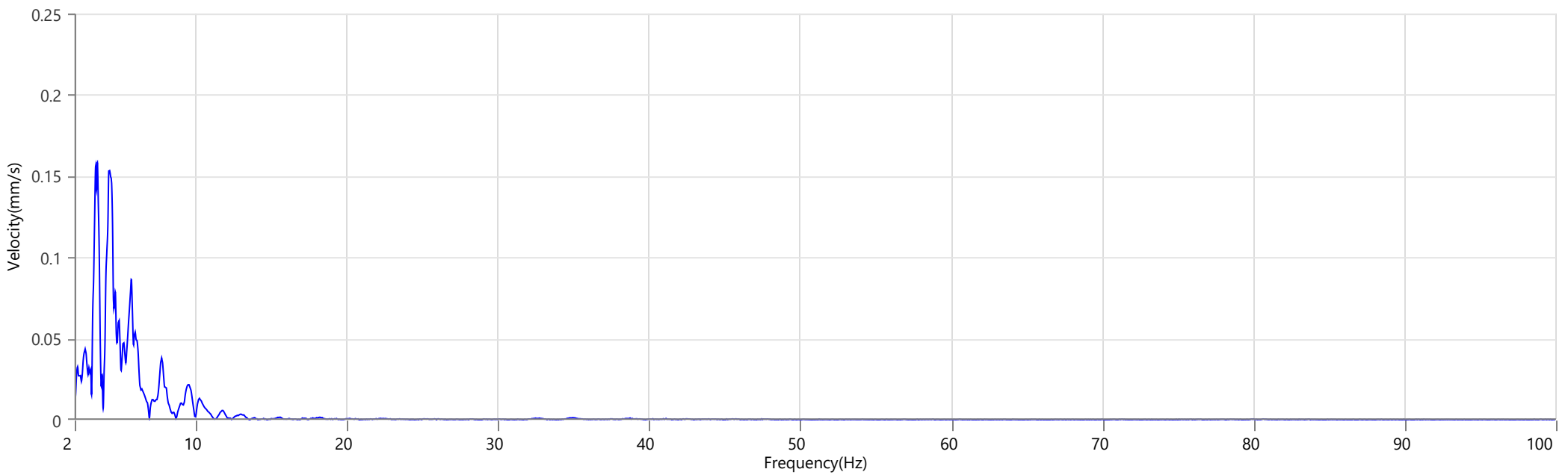
**Tran - Dominant Frequency 3.5 Hz, Amplitude 0.162 mm/s (Peak Particle Velocity: 1.434 mm/s)**



**Vert - Dominant Frequency 4.2 Hz, Amplitude 0.248 mm/s (Peak Particle Velocity: 3.673 mm/s)**



**Long - Dominant Frequency 3.5 Hz, Amplitude 0.158 mm/s (Peak Particle Velocity: 2.861 mm/s)**



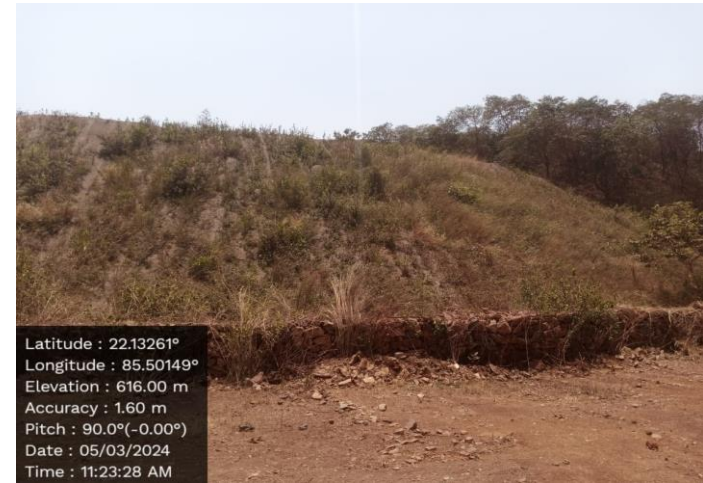
## ANNEXURE-XV

<b>Summarised Noise Monitoring Report</b>					
<b>Noamundi Iron Ore Mine of M/s Tata Steel Limited</b>					
<b>Period: October 2025 to March 2026</b>					
<b>Mine Location</b>	<b>Sampling Location</b>	<b>Month</b>	<b>Unit</b>	<b>Results</b>	
				<b>Day</b>	<b>Night</b>
Noamundi Iron Ore Mine	Hospital Premises	October 2025	dB(A)	48.1	37.1
		November 2025	dB(A)	47.2	38.6
		December 2025	dB(A)	48.2	39.6
		January 2026	dB(A)	45.6	35.2
		February 2026	dB(A)	46.3	34.9
		March 2026	dB(A)	45.0	32.2
	Training Centres	October 2025	dB(A)	63.4	48.2
		November 2025	dB(A)	62.4	51.9
		December 2025	dB(A)	63.9	49.5
		January 2026	dB(A)	60.2	45.3
		February 2026	dB(A)	61.7	51.1
		March 2026	dB(A)	60.3	50.2
	Township	October 2025	dB(A)	61.9	52.7
		November 2025	dB(A)	62.9	53.1
		December 2025	dB(A)	63.5	52.8
		January 2026	dB(A)	58.9	50.5
		February 2026	dB(A)	60.1	51.3
		March 2026	dB(A)	61	52.7
	GM's Office	October 2025	dB(A)	61.8	45.3
		November 2025	dB(A)	63.2	50.2
		December 2025	dB(A)	62.9	49.5
		January 2026	dB(A)	55.2	46.7
		February 2026	dB(A)	52.2	41.3
		March 2026	dB(A)	50.1	42.1

# Dump Stabilization Photographs



OB Dump



OB Dump



Vetiver grass



Coir mat

# Surface Run-off Control Measures



Retaining wall



Garland Drain



Settling Pond



Gully Plug

## Form 59

[See rules 115 (2)]

**Pollution Under Control Certificate**

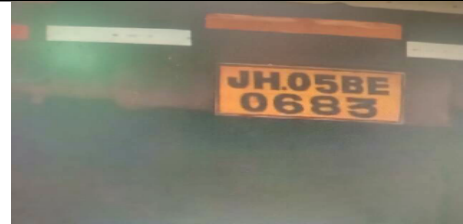
Authorised By :  
Government of Jharkhand

**Date** : **10/01/2026**  
**Time** : **13:05:35 PM**  
**Validity upto** : **09/07/2026**



Certificate SL. No. : JH01002920002254  
Registration No. : JH05BE0683  
Date of Registration : 16/May/2015  
Month & Year of Manufacturing : March-2015  
Valid Mobile Number : \*\*\*\*\*7757  
Emission Norms : BHARAT STAGE III  
Fuel : DIESEL  
PUC Code : JH0100292  
GSTIN :  
Fees : Rs.300.00  
MIL observation : No

Vehicle Photo with Registration plate  
60 mm x 30 mm



Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	2	3	4	5
Idling Emissions	Carbon Monoxide (CO)	percentage (%)		
	Hydrocarbon, (THC/HC)	ppm		
High idling emissions	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre	2.45	0.42
This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.				

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC Operator  
60mm x 20 mm

HRISHIKESH KISAN SEWA KENDRA



# Safety Zone Plantation





To  
The Divisional Forest Officer  
Chaibasa Forest Division  
Chaibasa, West Singhbhum,  
Jharkhand  
PIN- 833201

GM/LO/ 508 / 441/2025  
Dated – 15.01.26

Sub: Quarterly Progress Report of approved SSWLCP of Noamundi Iron Mine of M/s Tata Steel Limited for the period of Oct. 25 to Dec. 25

Respected Sir,

With reference to the above subject, we would like to inform you that as per office order no 28 dated 28.08.20 of Principle Chief Conservator of Forest, Wildlife & Chief Wildlife Warden, Jharkhand Ranchi of Site Specific Wildlife Conservation Plan of Noamundi Iron Mine of M/s Tata Steel Limited, we are submitting here with the Quarterly Progress Report for the period of Oct. 25 to Dec. 25 of various activities as per chapter– 4 of approved SSWLCP which are to be executed by User Agency under the guidance of Divisional Forest Officer of Chaibasa Forest Division.

This is for kind information and record.

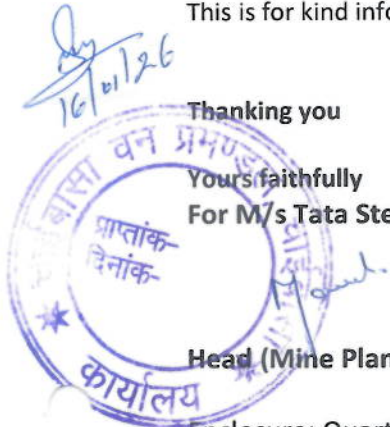
Thanking you

Yours faithfully

For M/s Tata Steel Limited

Head (Mine Planning ) – OMQ

Enclosure: Quarterly progress report



**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

***Quarterly Progress and Quality report of SSWLCP***

***2025 -26***

***(Oct. 25 to Dec.25)***

***Noamundi Iron Mine***


***M/s Tata Steel Limited***

***in compliance to***


***Condition no – 6 (i) &(ii) of Site Specific Wildlife & Biodiversity Plan of Noumundi Iron Mine of M/s Tata Steel Limited, District - West Singhbhum (Forest Division Chaibasa)***

***Vide office order no. 28 dated 28.08.2020***



***Office of Principal Chief Conservator of Forests, Wildlife & Chief Wildlife Warden, Jharkhand Ranchi***

Sl. No.	Conditions	Compliance
(A)	<b>Wild Animal Rescue and Release</b>	
1	<p>(a) Payment towards cost of establishing wild animal Rescue team including services of One Veterinary Doctor@60000/-, One paramedics/Paravet@15000/- and three daily wage worker @6689.6x3=20069/-per month stationed at Chaibasa for lease period under the supervision of DFO, Chaibasa. Expenditure will be incurred based on demand note and direction received from the DFO, Chaibasa. (for rescue and treating wild animals).</p> <p>(b) Equipment for wild animal rescue Double barrel Dart Gun (Dan inject) @5.5 lakh, Portable cage @30000x2=60000/-, Nylon net@30000/,stretcher@20000x2=40000/-, First aid kit for staff-20000/- Medicine for tranquilization etc. 20000/, and Training of forest officials-2.00 lakh as per specification from DFO, Chaibasa.</p> <p>(c) One vehicle for housing cage, dart gun etc. as per direction received from the DFO, Chaibasa.</p>	<p>Payment is made as per demand note of DFO, Chaibasa towards the cost of wild animal rescue team. April 25 to Dec.25 –  Veterinary Doctor- Rs.432600.00  Paramedics – Rs. 106260.00  Three workers – Rs. 321998.00</p> <p>Double Barrel Dart Gun (Dan Injection) JMDBCASE Hard case for projector model JMDB, CO2 container and other accessories have been handed over to DFO, Chaibasa Forest Division on 04.09.2023 vide letter no. GML/LO/784/441-B/23 dated 04.09.23.  Three wild animal rescue Nylon net have been handed over to RFO, Noamundi vide letter no. GM/LO/340/441-B Dt. 02.11.2022.  Two animal stretcher and Four sets of first aid kits have been provided to RFO office, Noamundi vide letter no. GM.LO/264/441- B/22 Dt.29.08.2022.</p>
		 <p>For Animal rescue, one vehicle -Tata 407 Gold has been provided to Chaibasa Forest Division.</p>


	(d) Operational cost Rs.1.00 lakh per year	Operational cost is being made as per demand note.
(B)	Forest Conservation, fire protection and GIS Cell	All necessary software and hardware as per direction of DFO's office have been purchased and installed in GIS Cell, "86" Multimedia LED display board, Video Conference system. Cordless Mic-camera etc. Blind, Signage board at GIS Cell vide letter no. GM/LO/220/441-B/21 Dt. 11.08.2021. One HP Desktop Computer and one HP Printer have been handed over to DFO office vide letter no. GM/LO/181-8/21 Dt.11.08.2021.
2	a) Establishment of a GIS Cell at Division headquarters. (including software and other accessories).	Workstation for GIS, PC and ARCGIS software Dongle with Licence Key: EFL 4380199559 have been handed over to DFO office vide letter no. GM/LO/40/441-B/22 Dt.07.02.2022  One plotter cum Scanner of HP have been handed over vide letter no. GM/LO/31/441-8/22 Dt. 12.05.2022.  Four Air-conditions have been handed over to forest department vide letter no GM/LO/131/441-8/22 Dt. 12.05.2022  Broadband connectivity was installed at GIS cell and WIFI router, dual band network cable and net connection provided.  One "LG 32" LED Monitor, Battery Inverter, LT change over, Generator wiring, MCB fitting etc. have been installed vide RFO letter no.361 Dt.20.11.2022. RFO, Noamundi raised a demand note vide note no. 25 dated 05.01.2023 for procurement of cartridge for plotter/printer and payment has been made to beneficiary. P.C. point through RTGS in the month of January 23.
	b) Wages of two skilled persons one GIS expert @ 35000/- and one computer operator@9589/- per month, Expenditure will be incurred based on demand note and direction received from the DFO, Chaibasa.	Wages of GIS expert and one Computer Operator are made as per received demand note of DFO Chaibasa. Total expenditure from April 25 to Dec.25 -- GIS expert -- Rs. 331200.00 Computer operator -- RS. 254700.00


<p>Office furniture such as (Thirty-two) office Chairs, conference table, 05(five) Executive chairs and tables for GIS Cell /forest fire management centre have been handed over to DFO Office Chaibasa, vide letter no. GM/LO/286/441-B dt.03.11.2021, GM/LO/05/441-B/22 Dt. 05.01.2022 and GM/LO/131/441-B/22 Dt.12.05.2021.</p>	<p>(c) Office furniture and accessory to house GIS Cell and forest fire management centre as per specification from respective office.</p>																																	
<p>Ten motorcycles have been procured, registered in the name of State Forest Dept. and handed over to Range office, Noamundi vide letter no. GM/LO/101/441/21 Dt. 23.02.2021.</p> 	<p>(d) Ten (10) motorcycles to be procured by UA for RFO Office @ 125000x10 nos. as per specification from respective office for patrolling.</p>																																	
<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Make of Model</th> <th>Registration No.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P1319</td> </tr> <tr> <td>2</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P1251</td> </tr> <tr> <td>3</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P9593</td> </tr> <tr> <td>4</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P1781</td> </tr> <tr> <td>5</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P7516</td> </tr> <tr> <td>6</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P0457</td> </tr> <tr> <td>7</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P3498</td> </tr> <tr> <td>8</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P7041</td> </tr> <tr> <td>9</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P1345</td> </tr> <tr> <td>10</td> <td>Bajaj Pulsar 180 DTS-i</td> <td>JH06P8223</td> </tr> </tbody> </table>	Sl. No.	Make of Model	Registration No.	1	Bajaj Pulsar 180 DTS-i	JH06P1319	2	Bajaj Pulsar 180 DTS-i	JH06P1251	3	Bajaj Pulsar 180 DTS-i	JH06P9593	4	Bajaj Pulsar 180 DTS-i	JH06P1781	5	Bajaj Pulsar 180 DTS-i	JH06P7516	6	Bajaj Pulsar 180 DTS-i	JH06P0457	7	Bajaj Pulsar 180 DTS-i	JH06P3498	8	Bajaj Pulsar 180 DTS-i	JH06P7041	9	Bajaj Pulsar 180 DTS-i	JH06P1345	10	Bajaj Pulsar 180 DTS-i	JH06P8223	
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<p>e) One fire protection squad stationed at Range Forest Office, Noamundi with 10 members with hired vehicle for 5 months for the year @ Rs. 6.50 lakhs each over the plan, Expenditure will be incurred based on demand note and direction received from the RFO, Noamundi.</p>	<p>Expenditure of vehicle with 10 workers for 5 Months is incurred based on demand note. Payment of Manpower – Rs. 611988.00 during this year from Feb.25 to June 25.</p>
<p>f) Purchase of firefighting equipment with 10 nos. of fire blowers@60000/-, Bush cutter-10@Rs. 25000/-, Firefighting suit-10@Rs.7000/- . As per specification from DFO, Chaibasa.</p>	<p>10 no. of Fire Blowers and 10 nos. Bush Cutters have been handed over to Range Forest Office, Noamundi vide letter no. GM/LO/1018/441/21 Dt. 23.02.2021. 10 sets of firefighting suits consisting of Jacket &amp; Trouser, hood, helmet, gloves and boots have been handed over to Range Forest Office, Noamundi, vide letter no. GM/LO/190/44-8/21 Dt. 18.08.2021.</p>
<p>g) One anti-depredation squad stationed at Range Forest Office, Noamundi with 5 members @ 6689.6 per year over the plan period, Expenditure will be incurred based on demand note and direction received from the DFO, Chaibasa.</p>	<p>Payment is made as per demand note. Payment has been made from April 25 to Dec.25 - Rs. 519666.00</p>
<p>h) Procurement of anti-depredation items like crackers, torch etc., @1.0 lakh per year each for the plan period of 10 years Expenditure will be incurred based on demand note and direction received from the DFO, Chaibasa</p>	<p>Crackers have been delivered to RFO, Noamundi vide demand note 434 dated 07.11.23. 10 numbers of Torches (LED search light) have been handed over to DFO office vide letter no. GM/LO/182/441-B/21 dated 11.08.2022. 20 numbers of torches (LED Search light) have been handed over to DFO Office vide letter no. GM/LO/341/441-B/22 dated 02.11.2022. Payment (Rs. 81066 &amp; Rs.98459.00) of Crackers have been made as per demand note vide letters no. 371 dated 19.11.24 and 195 dated 18.07.25.</p>
<p>i) Provision for use of Drones fitted with cameras for monitoring of wild animals in stress in forest area. As per the specification from DFO, Chaibasa.</p>	<p>Payment against demand note 239 dated 15.02.25 of Drone purchase has been made. Vide payment intimation letter no.GM/LO/137/441/2025 dated 16.04.25.</p>

<p>(j) Procurement of night vision binoculars 3 pieces, Hand held GPS 3 pieces, Digital camera-1 pieces. As per the specification from DFO, Chaibasa.</p>	<p>Three numbers handheld GPS ( GARMIN Montana 680) have been handed over to DFO office vide letter no. GM/LO/182/441-B/21 dated 01.11.2021.</p>  <p>One Night vision Binocular have been handed over to DFO office Chaibasa vide letter no. GM/LO/170/441-B/21 dated 03.05.2022.</p> <p>One Digital Camera has been handed over to DFO office vide letter no. GM/LO/341/441-B/22 dated 02.11.2022.</p> 
<p>(k) Providing one DG set, Computer, printer to Division office and Range office. As per the specification from DFO, Chaibasa.</p>	<p>01 (one) DG set (Kirkloskar koel green) have been handed over to DFO Office Chaibasa vide letter no. GM/LO/103/441-B/21 Dt. 18.06.2021.</p> <p>Two numbers "All in one Desktop computer", Two numbers "A4 size colour Printer cum scanner/copier" have been handed over to DFO Office vide letter no. GM/LO/265/441-B/22 Dt. 29.08.2022.</p>

	(f) Operational cost for maintaining motorcycle and firefighting equipment. Expenditure will be incurred based on demand note and direction received from the DFO, Chaibasa.	Payment is made as per demand note.																				
(C)	<b>Monitoring and supervision of site-specific plan</b>																					
3	(a) 2 vehicles procured by UA (one Vehicle for DFO, Chaibasa @20.00 lakh & one for RFO, Noamundi@15.00 lakh each for monitoring of Site-Specific Wildlife Scheme as per specification from respective office.	02 (Two) vehicles vide letter no. GM/LO/840-1/441/20 dated 06.10.2020 ref. no. 1483 dated 15.09.2020 and bearing Registration No. JH06N-2331, Scorpio 57 and JH06N-9744, Scorpio S11, handed over to DFO's office Chaibasa.																				
	b) Payment of Wages for 2 daily wages driver @2.30 lakh per year for 10 years, Expenditure will be incurred as per demand note from DFO, Chaibasa	Paid as per demand note of DFO Chaibasa. Payment done from April 25 to Dec.25 – Rs. 315702.00																				
	c) POL @ 10 litres per day for 300 days per year for 10 years x 2 vehicle as per demand note from DFO, Chaibasa	POL is provided as per demand of Chaibasa Forest Division and Noamundi Range office. HSD supplied details –																				
		<table border="1"> <thead> <tr> <th>Department</th> <th>Period</th> <th>HSD (Liter)</th> <th>Cost (Rs)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>Range Office</td> <td>April 25 to Dec.25</td> <td>3180</td> <td>287311.5</td> <td></td> </tr> <tr> <td>Division office</td> <td>April.25 to Dec.25</td> <td>2935</td> <td>273100.00</td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td>6115</td> <td>560411.50</td> <td></td> </tr> </tbody> </table>	Department	Period	HSD (Liter)	Cost (Rs)	Remark	Range Office	April 25 to Dec.25	3180	287311.5		Division office	April.25 to Dec.25	2935	273100.00		Total		6115	560411.50	
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Total		6115	560411.50																			
	(d) Cost for vehicle repair etc @50000/- per year per vehicle for 10 years as per demand note from respective office.	Cost of vehicle repair is being paid as per demand note of DFO Chaibasa. Maintenance cost – Rs.30589.00 Rs. 28200.00 Rs. 22223.00 <b>Total by Nov. Rs. 81012.00</b> during this year.																				
	(e) Contingency @2.00 lakhs/year x 10 years Expenditure will be incurred by UA as per demand note from DFO, Chaibasa	Payment has been made to beneficiary M/s Aranyak Creation, towards making of video, documentary on CAMPA scheme vide demand note 769 dated 26.04.2023 for an amount of Rs. 141600.00. Payment (Rs.188413.00) made against demand note vide letter No. 151 dated 23.05.2025.																				

(D)	Public Awareness and education	<p>(a) Construction of Nature interpretation centre at Chaibasa with bore well with pump</p> <p>(b) Mini library, visual display multimedia system (LED TV to runs wild life/nature documentary.</p> <p>(c) Live hedge fencing with entrance gate</p> <p>(d) Aesthetic plantation/Medicinal garden/lotus pond etc.</p> <p>(e) 2 Unskilled @6689.6x2=13379.20/- and one computer operator@9589/- per month</p> <p>(f) Running expenditure like electricity bill etc. as per the actual bill received</p> <p>(g) D.G. set @ 5.00 lakh as per demand note from respective office.</p> <p>(h) Installation of 8 KW Solar Panels</p>	<p>Architectural drawings of Nature Interpretation Centre (NIC) have been prepared by CEE, Ahmedabad. Foundation stone had laid on 30.01.2022. Construction of NIC and Auditorium have been completed and handed over to Forest department. NIC was inaugurated on 10.07.2024.</p> <p>Manpower expenditure- from April 25 to Dec.25 – Rs. 1997327.00</p> <p>Running expenditure Electricity payment –</p> <p>i. Rs. 231195.00 dated 04.08.25</p> <p>ii. Rs. 148563.00 dated 19.09.25</p> <p>iii. Rs. 47685.00 dated 10.10.25</p>
5	<p>(a) Public awareness by organising wildlife week, Run for wildlife, Wildlife painting and essay competition etc. in collaboration and direction from DFO, Chaibasa @6.0 lakh per years. Expenditure will be incurred as per the demand note of DFO, Chaibasa.</p> <p>(b) Signages at strategic places.</p>	<p>Wildlife Week is celebrated through painting, essay competition etc.</p>	<p>Seven visual signages have been installed.</p> 

<b>(E)</b>	<b>Capacity building</b>	Mission LIFE at Chaibasa under the direction of Forest department in the month of May 23.
6	Training and capacity building of front-line staff and daily wages engage in wild life rescue Expenditure will be incurred as per the demand note of DFO, Chaibasa.	
<b>(F)</b>	<b>Mitigative measures to protect Sambhar Deer, Elephant, Wild Boar, Hare and other wildlife to avoid Human- Wildlife Conflict</b>	Six Active and Six Passive ANIDERS have been Installed at village Angardiha vide our intimation letter no. GM/LO/978/21 Dt. 25.01.2021.
7	(a) Installation of ANIDERS: An Animal Intrusion Detection & Repellent System is proposed to effectively solve Human- Wildlife Conflict. It works as a Smart Scarecrow. Solar powered, Uses IR sensors and alarm system to repel. Makes multiple sounds and light pattern. Uses GSM for real time communication. Installation of such system for 18 KMs (1 Km per Forest Fringe village Boundary) ; 6 active system and 6 passive system per km; @ Rs. 31500 per Active system; @ Rs. 12,100 per Passive system	
	(b) Maintenance for above system	
<b>(G)</b>	<b>Strengthening of infrastructure for forest and wild life protection: Upgradation of forest check post @Bada Jamda</b>	
8	(a) Automated Barrier	Completed
	(b) CCTV 4 nos.	
	(c) Solar Panel of 4 kwh	

**CHAPTER- V**

Interventions to be implemented by Forest Department.

Sl. No.	Condition	Compliance
1	Payment against activities to be undertaken by State Forest department under the approved Site-Specific Wildlife Conservation Plan in to State CAMPA Fund.	Deposited online an amount of Rs. 14,98,70,000/- (Rupees fourteen crore ninety-eight lakh seventy thousand only) through RTGS on 28.12.2020 into State CAMPA fund, Jharkhand vide letter no. GM/LO/965/441-B/21 Dt. 12.01.2020.

- ❖ Modification of the Site-Specific Wildlife Conservation Plan (MSSWCP) was approved by Principal Chief Conservation of Forests, Wildlife and Chief Wildlife Warden, Jharkhand vide memo no. 479 dated 15.05.24. The cost of the proposed 10 years modified SSWCP with respect to the activities to be carried out by DFO, Chaibasa Forest Division and accordingly, we have paid Rs. 40746800.00(Four crores Seven lakhs Fourty- Six thousand Eight hundred) through RTGS to CAMPA account no.150725836198330, IFSC code -- UBIN0996335 dated 05.09.2024.

*M. P. Singh*

# Workers Using PPEs



**ANNEXURE-XXXII****Environment Expenditure at Noamundi Iron Mine****FY 2025-26**

<b>SI No.</b>	<b>Details</b>	<b>Expenditure (Lakhs)</b>
1	General housekeeping at HEMM shed & upkeeping of recycling pit at mega center	6.70
2	Air pollution control measures such as closed conveyors and DFDS in C&S plant	12.8
3	Operation & maintenance of STPs, ETPs & WTP	294.00
4	Development of Nursery, gardens, saplings plantation & maintenance in and around Noamundi	280.50
5	Operation and maintenance of Wet drilling system	16.70
6	Environment monitoring in and around Noamundi	12.77
7	Operation & maintenance of CAAQMS & Digital display board	54.36
8	Practice of controlled blasting Methods	701.00
9	Ground vibration and rock fragmentation study	8.49
10	Testing of Explosives & blasting accessories study	27.0
11	Construction and maintenance of Slime dam	822.75
12	Housekeeping & Maintenance of Rapid Loading System, stackers, bins over laying conveyors at Railway siding areas.	128.00
13	Operation & Maintenance of dry-fog, mist cannon system & mobile water tanker at railway sidings	45.00
14	Operation & maintenance of municipal solid waste (Collection, segregation, development of compost) in colony & Other area	288.00
15	Construction & maintenance of Retaining Wall	21.24
	Top soil preservation	2.03
16	Backfilling of mined out area	16.29
17	Construction & maintenance of Surface Run-off management measures (Construction of settling pond, Check dams, garland drains, gully plugs etc.)	8.65
18	Operation & Maintenance of Road Sweeping machine	61.00
	<b>Total Expenditure</b>	<b>2807.28</b>



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*LAND USE / LAND COVER MAPPING  
FOR NOAMUNDI IRON ORE MINES OF  
M/s. TATA STEEL LTD. AT-NOAMUNDI,  
DIST- WEST SINGHBHUM, JHARKHAND.*

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September 2024

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**LAND USE / LAND COVER MAPPING  
OF MINE AND 5 K.M BUFFER ZONE  
OF NOAMUNDI IRON ORE MINES OF  
M/s. TATA STEEL LTD. AT- NOAMUNDI,  
DIST- WEST SINGHBUM , JHARKHAND.**

*Prepared for :*

**M/s. TATA STEEL LTD.**  
OMQ DIVISION  
NOAMUNDI, WEST SINGHBUM  
JHARKHAND

*Prepared by:*

**M/s. Digital Cartography and Services Pvt. Ltd.**

Authorized By ORSAC  
1015, Bhagabat Sandhan, GGP Canal Road, Bhubaneswar – 751025

**SEPTEMBER-2024**

## **1. BACKGROUND**

The Noamundi lease of M/s Tata Steel was granted from 01.01.1922 for a period of 30 years over an area of 1160.06 ha. The first renewal was granted for a period of 30 years w.e.f 01.01.1952 over an area of 1160.06 ha. The second renewal was granted over an area of 1160.06 ha. Third renewal of lease was applied on 17.12.2009 and was granted upto 31.12.2031 by govt. of Jharkhand. In view of the Mines and Minerals (Development & Regulation ) Amendment Act 2015, the lease has been extended upto 31.03.2030.

Noamundi iron deposits lies in the western portion of Singhbhum – Orissa craton. The Iron ore group (IOG) surrounds the batholithic complex and consists of low grade meta sediments, acid intermediate and mafic volcanoes and sills. The IOG rocks are exposed in three major basins around the Singhbhum granite batholith. The eastern basin extends from south of Jamshedpur through Gorumahisani-badampahar and extends southward up to near Nausahi. The Southern basin lies between Daitari – Tomka, while the northern-western basin is represented by the western Singhbhum – Bonai – Keonjhar Iron ore basin which extends for about 100km in length 20 to 30km width in NNE-SSW direction from Chakradharpur to south of Koira.

Noamundi Iron Mine has a capacity of producing 1.90MTPA of ROM. ROM is being sent to the processing plant (Both Wet and Dry plant) of Noamundi in which the ore of both the mines (Noamundi and Katamati-) are fed simultaneously. The finished product is being sent to the steel plant through company's own railway siding located at Bottom bin area of Noamundi. The slime generated is kept in the slime dam located at Noamundi only. The finished product is being sent to the steel plant through railway siding either through Noamundi or through public siding. The entire material is being used for captive consumption only. Noamundi Iron Mine lease is captive and the ore mainly feeds to its steel plant at Jamshedpur and Kalinganagar along with sister concern company like Tata Metalliks Limited, Tata Sponge Iron Limited, TAYO Rolls.

## **2. OBJECTIVE**

- Interpretation of the satellite Image and identification of the present land use pattern in surrounding area (5 km buffer area from the Project area)
- Integration of the topographical features from ortho-rectified Satellite Image
- Generation of Land use / Land cover maps for the Project area and its 5km Buffer Zone

## **3. SCOPE OF WORK**

- Procurement of High resolution Latest Satellite image for the Project area
- Satellite image Interpretation, digital image analysis and pre-field map generation
- Generation of land use / land cover map for the study area
- Post field processing and incorporation of ground truth information on maps
- Finalizations of land use/ land cover map
- Generation of land use statistics
- Preparation of final maps and report

## **4. METHODOLOGY**

### **Selection & Procurement of Satellite Data**

High-resolution satellite images of multispectral sensors were chosen. Selection of the cloud free satellite images were executed through browsing of the available satellite images through the utility provided by the National Remote Sensing Centre (NRSC), Hyderabad. The details of the satellite images procured for the study are as:

- a. Satellite Image: Resourcesat-II , Multispectral LISS IV FX (5.0 meter resolution)

Path/Row : 105 / 56-D  
Date of Pass : 10 May 2024

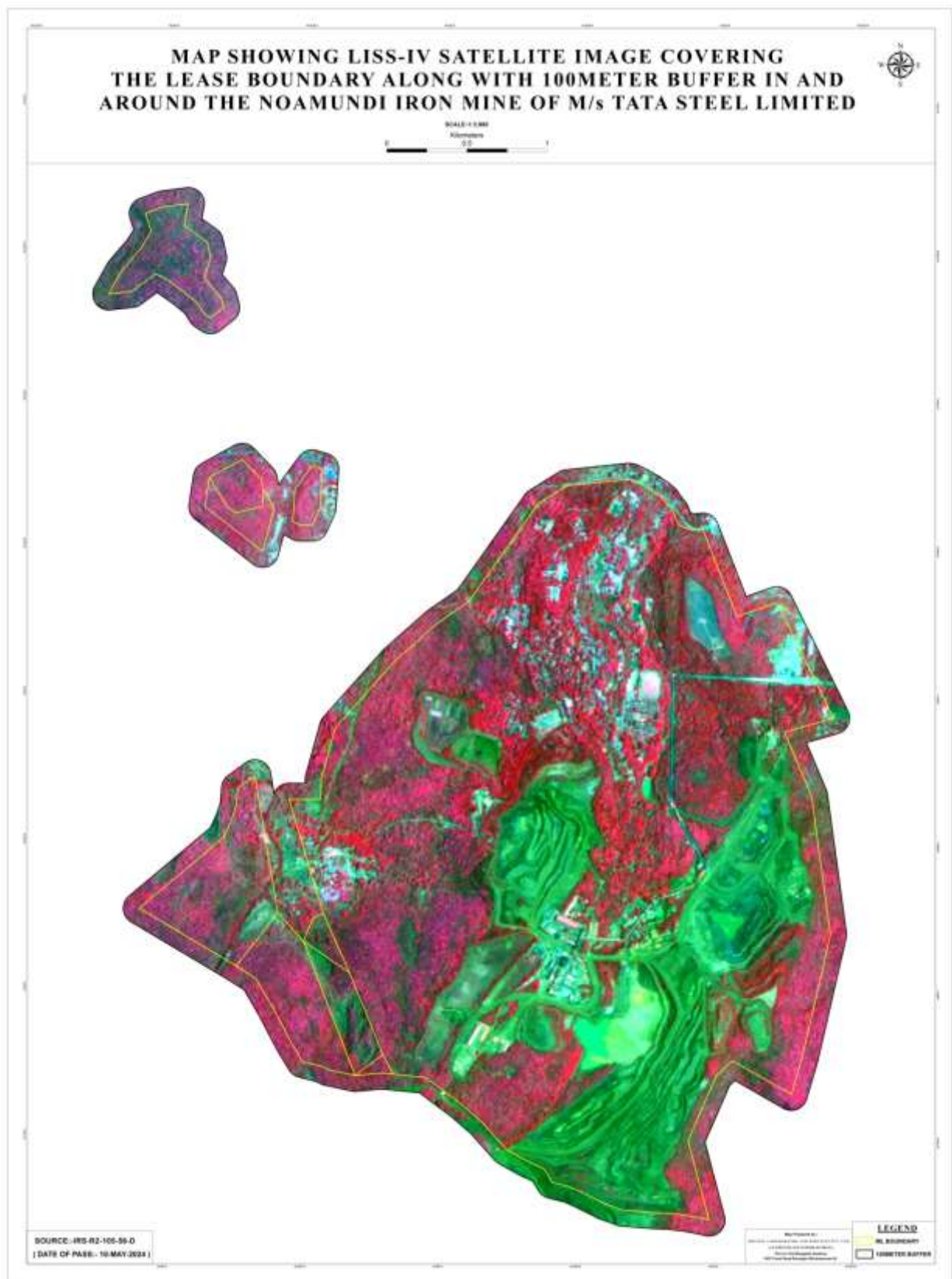
- b. Satellite Image : Cartosat II-E, Multispectral(1.65 meter resolution)

Path/ Row: 36743 / 63      Path/Row:36743/64  
Date of Pass: 07 FEB 2024      Date of Pass: 07 FEB 2024

Path/Row:36743/65  
Date of Pass: 07 FEB 2024

- c. Satellite image : Cartosat III, Multispectral (1.15 meter resolution)

Path/ Row: 13155 /7  
Date of Pass: 13 JUNE 2024



**Fig-1: LISS- IV Satellite Image of Noamundi Iron Ore Mines**



**Fig-2: Cartosat Image of Noamundi Iron Ore Mines**

**Pre-field Interpretation of Satellite Image**

The satellite images were enhanced through application of image processing techniques to facilitate better interpretation through use of appropriate image processing software. The geo-rectified multispectral Cartosat satellite image and the multispectral Resourcesat LISS IV Satellite images were merged together to obtain high-resolution multispectral satellite image having the characteristics of both the images in-terms of sharp features and vegetation signatures. The False Color Composition (FCC) of the merged satellite image along with the topographic sheet was used to identify the land features and delineate the land feature boundaries. The land features were identified on the image through their image characteristics such as tone, texture, color, shape, size, pattern and association.

**Preparation of Pre-field Maps**

The spatial datasets generated through interpretation of the satellite images, data extraction from the survey of India topographic maps were assembled with the help of a GIS software to generate map based thematic datasets. The thematic data sets were logically organized on the GIS base to generate the pre-field base map as the land use/ land cover maps. The classification used for preparation of the map is depicted below:-

**Table-1: Land Use / Land Cover classification**

LEVEL I	LEVEL II	LEVEL III
BIULT-UP LAND	SETTLEMENT	URBAN SETTLEMENT
		RURAL SETTELMENT
	TRANSPORT	NATIONAL HIGHWAY
		ROAD
		RAILWAYLINE/RAILWAY SLIDING
AGRICULTURAL LAND	CROP LAND	CROP LAND
FOREST & VEGETATION	FOREST	OPEN FOREST
		SCRUB FOREST
		FOREST AREA
	NON FOREST	TREE COVER AREA
	FOREST	DENSE FOREST
		FOREST PLANTATION
		VEGETATION AREA
NON FOREST	PLANTATION AREA	
WASTELAND	WASTELAND	LAND WITH SCRUB
		AREA UNTOUCHED
		LAND WITHOUT SCRUB
MINES & INDUSTRY	QUARRY	QUARRY
	INFRASTRUCTURE	CRUSHER UNIT/SCREEN PLANT

		EQUIPMENT MAINTENANCE
	STOCK	ROM STOCK
		STOCK
		ORE STOCK
	DUMP	DUMP
		SUB GRADE DUMP
		WASTE DUMP
		MINERAL REJECT DUMP
	SLIME DAM	SLIME DAM
	INFRASTRUCTURE	MAGAZINE
		VIEW POINT
		INFRASTRUCTURE
	ADMINISTRATIVE	OFFICE INFRASTRUCTURE
	INFRASTRUCTURE	POWER HOUSE
		PARKING
		THICKNER
		WEIGH BRIDGE
	INDUSTRIAL	SOLAR PLANT
	SAFETY ZONE	7.5 METER SAFETY ZONE ALONG WITH MINES BOUNDARY
MINES BUILD-UP	TRANSPORT	HAUL ROAD
		OTHER ROAD
	SETTLEMENT	COLONY INFRASTRUCTURE
		CLUB HOUSE
	EDUCATIONAL	SCHOOL
	RECREATIONAL AREA	STADIUM
		PLAYGROUND
PARK		
WATERBODY	WATERBODY	WATER HARVESTING
		WATER RESERVOIR
		NALA
		POND
MINING AREA	MINING	OTHER MINING
	CRUSHEER	CRUSHER
	PLANT	INDUSTRY

## **Ground Truth Collection**

The Pre-field maps generated in the above process were subjected to a detailed study along with the satellite images and the survey of India topographic map sheets to access the accuracy of the pre-field identification of land features and also identification of doubtful interpretations. About 35 numbers of uniformly distributed locations within the study area were identified on the maps for the purpose of site visit and ground truth collection. A detailed traverse plan was prepared using the existing road network to cover as many representative sample areas as possible to observe the broad land use features and field conditions. Detailed field observations and investigations for the identified sites were carried out and suitably marked on the maps.

## **Generation of Final Map**

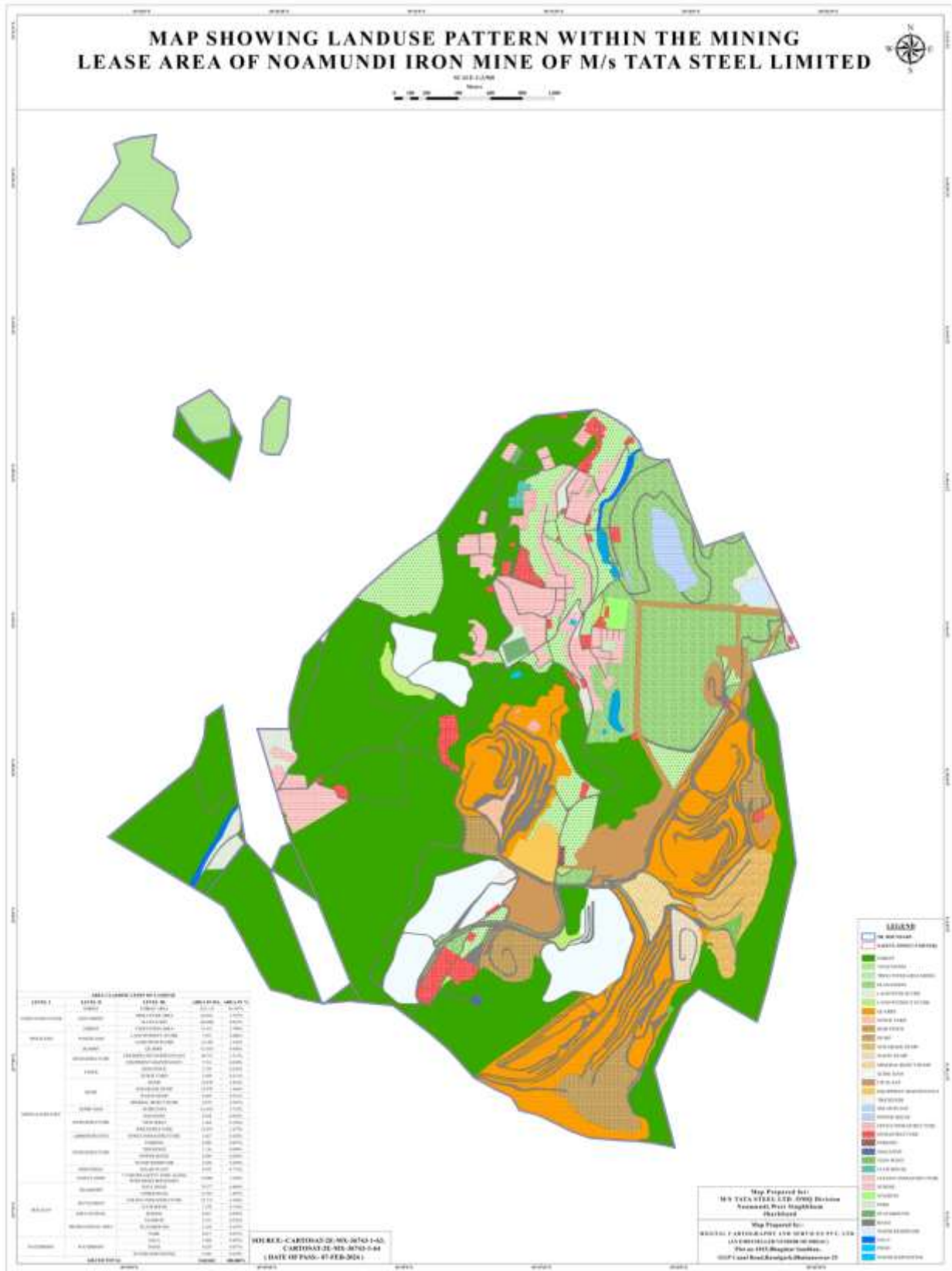
The results obtained in the ground truth exercise were applied to the pre-field maps for carrying out the required modifications. The modified thematic data layers were used to generate the base maps as well as the land use map. The final interpreted and classified maps were subjected to cartography for generation of maps. The map features were colored with the standard map color code and were provided with appropriate symbols to represent the map features. Each of the land classes were provided with identification colors and suitably represented with map legend.

## **3. RESULTS**

### **Mine area:**

The land use statistics for the Mine area of the Iron ore lease area was calculated as per the level-III land classification standards and is tabulated as follows the distribution of different land use of the Mine area is depicted below:

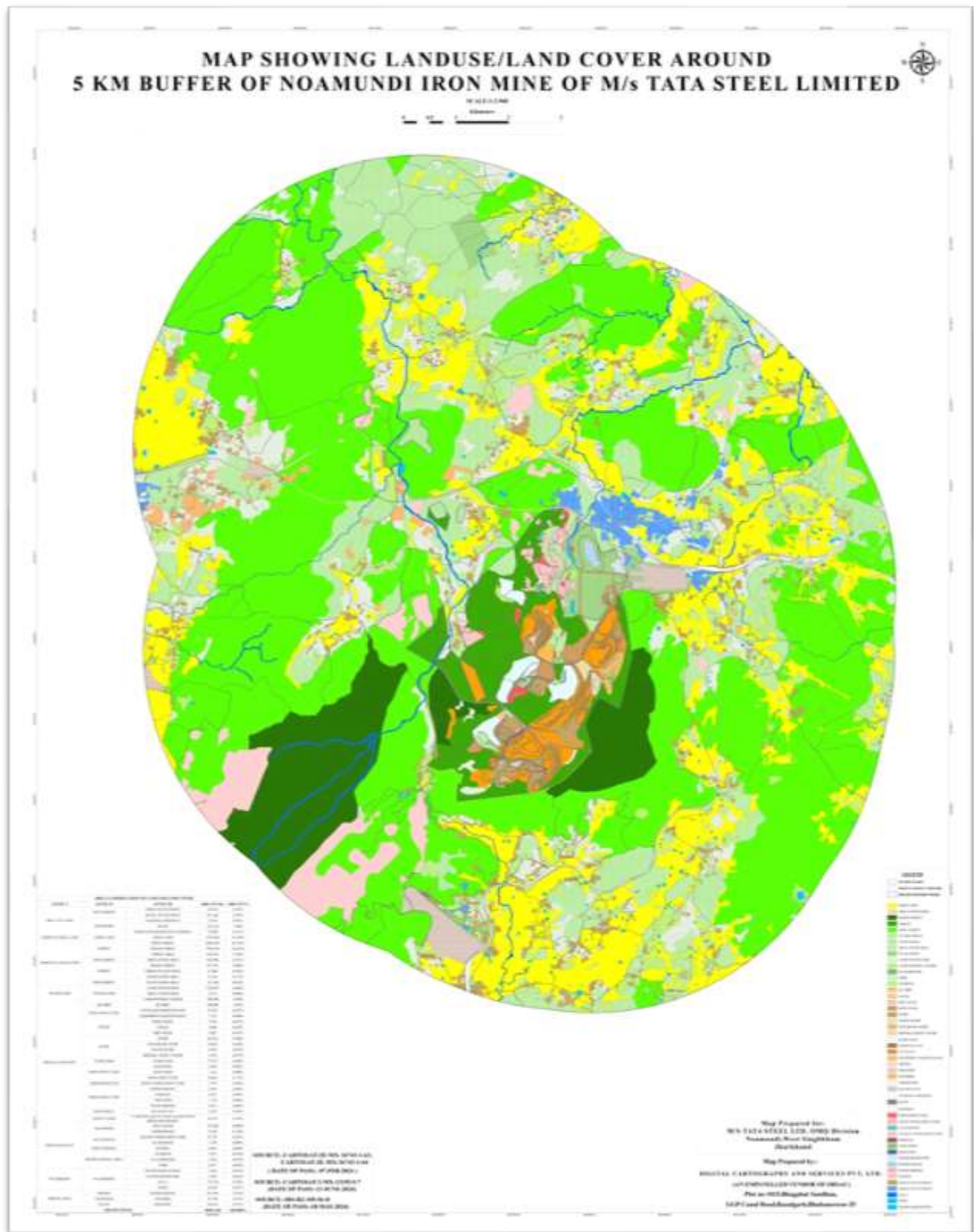
Fig3:Landuse/Land Cover map of Mine Area



<b>AREA CLASSIFICATION OF LANDUSE</b>				
<b>LEVEL I</b>	<b>LEVEL II</b>	<b>LEVEL III</b>	<b>AREA IN HA.</b>	<b>AREA IN %</b>
VEGETATION COVER	FOREST	FOREST AREA	422.110	36.387%
	NON FOREST	TREE COVER AREA	66.442	5.727%
		PLANTATION	104.808	9.035%
	FOREST	VEGETATION AREA	31.431	2.709%
WESTLAND	WASTELAND	LAND WITHOUT SCURB	7.033	0.606%
		LAND WITH SCURB	14.108	1.216%
MINES & INDUSTRY	QUARRY	QUARRY	112.015	9.656%
	INFRASTRUCTURE	CRUSHER UNIT/SCREEN PLANT	40.753	3.513%
		EQUIPMENT MAINTENANCE	7.314	0.630%
	STOCK	ROM STOCK	2.756	0.238%
		STOCK YARD	2.450	0.211%
	DUMP	DUMP	32.870	2.833%
		SUB GRADE DUMP	16.978	1.464%
		WASTE DUMP	6.039	0.521%
		MINERAL REJECT DUMP	6.879	0.593%
	SLIME DAM	SLIME DAM	61.624	5.312%
	INFRASTRUCTURE	MAGAZINE	0.368	0.032%
		VIEW POINT	1.464	0.126%
		INFRASTRUCTURE	19.397	1.672%
	ADMINISTRATIVE	OFFICE INFRASTRUCTURE	3.267	0.282%
	INFRASTRUCTURE	PARKING	0.386	0.033%
		THICKENER	1.136	0.098%
		POWER HOUSE	0.296	0.026%
WATER RESERVOIR		2.650	0.228%	
INDUSTRIAL	SOLAR PLANT	8.292	0.715%	
SAFETY ZONE	7.5 METER SAFETY ZONE ALONG WITH MINES BOUNDARY	19.006	1.638%	
BUILD-UP	TRANSPORT	HAUL ROAD	79.577	6.860%
		OTHER ROAD	21.981	1.895%
	SETTLEMENT	COLONY INFRASTRUCTURE	52.715	4.544%
		CLUB HOUSE	1.278	0.110%
	EDUCATIONAL	SCHOOL	0.667	0.058%
	RECREATIONAL AREA	STADIUM	2.531	0.218%
PLAYGROUND		2.164	0.187%	
PARK		0.617	0.053%	
WATERBODY	WATERBODY	NALA	3.284	0.283%
		POND	0.429	0.037%
		WATER HARVESTING	2.944	0.254%
<b>GRAND TOTAL</b>			<b>1160.062</b>	<b>100.000%</b>

**Table-2: Land Use/ Land Cover distribution in Mine Area**





**Fig-5: Landuse/LandCover Map of Buffer Area**

<b>AREA CLASSIFICATION OF LAND USE/LAND COVER</b>				
<b>LEVEL I</b>	<b>LEVEL II</b>	<b>LEVEL III</b>	<b>AREA IN HA.</b>	<b>AREA IN %</b>
BIULT-UP LAND	SETTLEMENT	URBAN SETTLEMENT	144.052	0.783%
		RURAL SETTELMENT	441.382	2.399%
	TRANSPORT	NATIONAL HIGHWAY	15.943	0.087%
		ROAD	239.216	1.300%
		RAILWAYLINE/RAILWAY SLIDING	57.880	0.315%
AGRICULTURAL LAND	CROP LAND	CROP LAND	2720.406	14.784%
FOREST & VEGETATION	FOREST	OPEN FOREST	6686.049	36.335%
		SCRUB FOREST	1956.938	10.635%
		FOREST AREA	610.556	3.318%
	NON FOREST	TREE COVER AREA	832.988	4.527%
	FOREST	DENSE FOREST	917.433	4.986%
		FOREST PLANTATION	47.046	0.256%
	NON FOREST	VEGETATION AREA	31.431	0.171%
WASTELAND	WASTELAND	LAND WITH SCRUB	1259.457	6.844%
		AREA UNTOUCHED	0.714	0.004%
		LAND WITHOUT SCRUB	598.708	3.254%
MINES & INDUSTRY	QUARRY	QUARRY	198.864	1.081%
	INFRASTRUCTURE	C/W PLANT/SCREEN PLANT	47.355	0.257%
		EQUIPMENT MAINTENANCE	7.314	0.040%
	STOCK	ROM STOCK	2.756	0.015%
		STOCK	4.098	0.022%
		ORE STOCK	2.687	0.015%
	DUMP	DUMP	66.224	0.360%
		SUB GRADE DUMP	18.823	0.102%
		WASTE DUMP	6.039	0.033%
		MINERAL REJECT DUMP	6.879	0.037%
	SLIME DAM	SLIME DAM	74.573	0.405%
	INFRASTRUCTURE	MAGAZINE	0.368	0.002%
		VIEW POINT	1.516	0.008%
	ADMINISTRATIVE	INFRASTRUCTURE	20.849	0.113%
		OFFICE INFRASTRUCTURE	3.770	0.020%
	INFRASTRUCTURE	POWER HOUSE	0.296	0.002%
		PARKING	0.872	0.005%
THICKNER		1.136	0.006%	
WEIGH BRIDGE		0.012	0.000%	
INDUSTRIAL	SOLAR PLANT	8.292	0.045%	
SAFETY ZONE	7.5 METER SAFETY ZONE ALONG WITH MINES BOUNDARY	26.375	0.143%	
MINES BUILD-UP	TRANSPORT	HAUL ROAD	127.024	0.690%
		OTHER ROAD	21.981	0.119%
	SETTLEMENT	COLONY INFRASTRUCTURE	52.727	0.287%
		CLUB HOUSE	1.278	0.007%
	EDUCATIONAL	SCHOOL	0.667	0.004%
	RECREATIONAL AREA	STADIUM	2.531	0.014%
		PLAYGROUND	2.164	0.012%
PARK		0.617	0.003%	
WATERBODY	WATERBODY	WATER HARVESTING	2.944	0.016%
		WATER RESERVOIR	2.650	0.014%
		NALA	172.876	0.939%
		POND	84.047	0.457%
MINING AREA	MINING	OTHER MINING	491.994	2.674%
	CRUSHEER	CRUSHER	82.188	0.447%
	PLANT	INDUSTRY	144.833	0.787%
<b>GRAND TOTAL</b>			<b>18401.184</b>	<b>100.000%</b>

**Table-3: Land Use/ Land Cover distribution in Buffer Area**



Date: 31.03.2024

OMQ/EMP/02/ /2024

## **DECLARATION**

### **Formation of Environment Management Cell**

**Location:** Ore Mines & Quarry Division which includes following locations→

1. Noamundi Iron Mine, over 1160.06 Ha located at Mahul, Balijore, Korta, Noamundi, Sarbil & Balijori villages, West Singhbhum District, Jharkhand.
2. Katamati Iron Mine, over 403.3238 Ha. At village Deojhar & Thakurani RF, Keonjhar District, Odisha.
3. Joda East Iron Mines, over 671.093 Ha. Located in village Joda, Kamarjoda, Banspani, Khuntpani & Baitarani RF in Barbil Taluka, Keonjhar District, Odisha.
4. Khondbond Iron & Mn. Mines, over 978 Ha. Located in village Khondbandh, Tehsil Barbil, Keonjhar District, Odisha.
5. Vijaya-II Iron Ore Mines, over 155.078 Ha. Located in village Ghatkuri, Tehsil: Noamundi, West Singhbhum District, Jharkhand.
6. Kalamang West (Northern Part) Block Iron Ore Mines, over 92.875 Ha. Located at village Gandalpada, Keonjhar District in villages Kalamang & Ghodabudani, Sundargarh Districts, Odisha.
7. Neelachal Iron Ore Mines, over 874.290 Ha. Located at Keonjhar & Sundargarh Districts, Odisha.
8. Gandhalpada Iron Ore Mine, over 241.10 Ha. At Gandhalpada, Guali and Barpada Villages, Barbil Tehsil, Keonjhar District, Odisha.

A separate Environment Management Cell has been formed, with suitable qualified personnel, under the control of Chief Mine Planning & Projects, who reports directly to the General Manager of Ore Mines & Quarry Division. The environment Management Cell will ensure compliance of following Acts & Rules but not limited to:

1. The Environment (Protection) Act, 1986.
2. Environmental Impact Assessment Notification, 14th Sep-2006.
3. Wildlife Protection Act 1972
4. Air (Prevention and Control of Pollution) Act, 1981
5. Water (Prevention and Control of Pollution) Act 1974
6. Noise Pollution (Regulation and Control Act) 1990
7. Public Liability and Insurance Act 1991
8. The Forest (Conservation) Act. 1980
9. Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016.
10. E-waste Management Rules, 2022
11. Bio-medical Waste Management Rules, 2016

12. Battery Waste Management Rules, 2022
13. Plastic Waste Management Rules, 2022

The Environment Management Cell Consists of Following Personnels:

1. Shri. Awnish Kumar (Chief-Mine Planning & Projects)
2. Shri. Mukesh Kumar Prasad (Head-Environment Management)
3. Shri. Pinku Kumar (Head- Mine Planning)
4. Shri. Vivek Kumar Agarwal (Senior Area Manager- Planning)
5. Shri. Abinash Das (Area Manager- Environment)
6. Shri. Gaurav Dubey (Area Manager- Environment)
7. Shri. Roshan Singh (Area Manager- Horticulture)
8. Shri. Gaurav Mukherjee (Area Manager- Planning)
9. Shri. Vishal Kumar Singh (Area Manager- Planning)
10. Shri. Debasish Das (Senior Manager- Environment)
11. Shri. Sudhanshu Ranjan (Manager- Environment)
12. Shri. Shubham Singh (Manager-Environment)
13. Shri. Rishi Raj Kashyap (Manager-Environment)
14. Shri. Ramendra Kumar (Officer- Environment)
15. Shri. Jhasketan Pradhan (Senior Environment Assistant)
16. Shri. Soumyak Palei (Environment Assistant)
17. Shri. Pragyan Prakash Mohanto (Environment Assistant)
18. Shri. Ganesh Karua (Environment Assistant)
19. Shri. Bharat Pan (Environment Assistant)
20. Shri. Gurucharan Laguri (Environment Assistant)

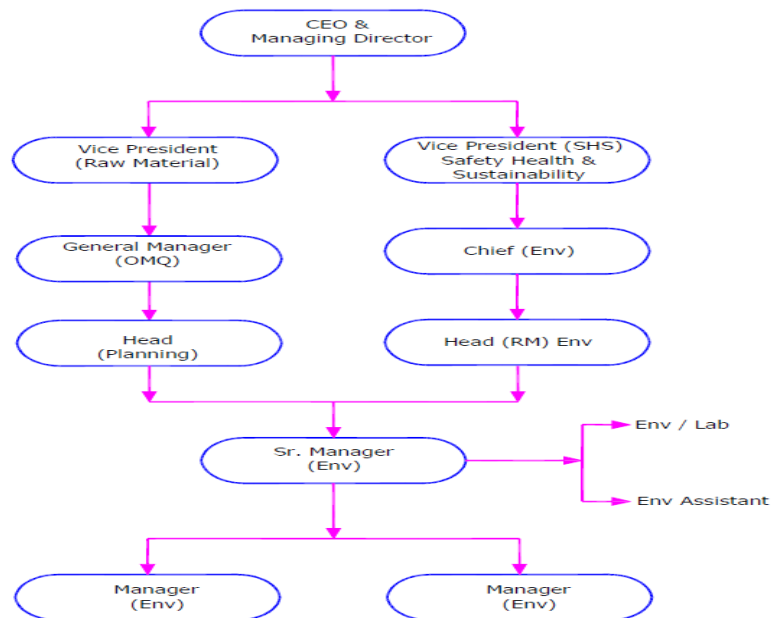
The detailed Organogram is as follows:

f: Tata Steel Limited



Awnish Kumar

Chief- Mine Planning & Projects (OMQ)



January 20, 2026

**Tata Steel Limited & New Merged Entities**

Bombay House 24 Homi Mody, Street Fort Mumbai  
400001 Mumbai Maharashtra 400001, Mumbai,  
Maharashtra-400001  
8655924055

Dear Customer,

**Sub: Public Liability Insurance (Under PLI Act 1991) Policy No: 3133208123239400000**

We thank you for having preferred us for your *Insurance* requirements. We at HDFC ERGO General Insurance believe "**Insurance**" as not only to be an assurance to indemnify in the event of unfortunate circumstances, but one that signifies protection and support, which you can count on when you need it most.

The Insurance Policy enclosed herewith is a written agreement providing confirmation of our responsibility towards you that puts insurance coverage into effect against stipulated perils.

Please note that the policy has been issued based on the information contained in the proposal form and / or documents received from you or your representative / broker.

Name of the Intermediary: Not Applicable

Intermediary Code: Not Applicable

Where the proposal form is not received, information obtained from you or your representative / broker, whether orally or otherwise, is captured in the policy document.

If you wish to contact us in reference to your existing policy and /or other general insurance solutions offered by us, you may write to our correspondence address as mentioned below. Alternatively, you may visit our website [www.hdfcergo.com](http://www.hdfcergo.com). To enable us to serve you better, you are requested to quote your Policy Number in all correspondences.

Thanking you once again for choosing HDFC ERGO General Insurance Company Limited and looking forward to many more years of association.

Yours sincerely,



Authorised Signatory

## Public Liability Insurance (Under PLI Act 1991)

### SCHEDULE

Policy No: 3133208123239400000

<b>Item 1. Insured</b>	:	Tata Steel Limited & New Merged Entities
<b>Item 2. Producer</b>	:	Not Applicable
<b>Item 3. Financial Interest</b>	:	Not Applicable
<b>Item 4. Mailing address of the Insured</b>	:	Bombay House 24 Homi Mody, Street Fort Mumbai Ꞇ 400001mumbai Maharashtra 400001, Mumbai, Maharashtra, 400001.
<b>Item 5. Pan Card Number</b>	:	AAACT2803M
<b>Item 6. Business</b>	:	Principally including but not limited to: Manufacture of Steel & Steel related finished products (Coils, Sheets, Billets, Pipes, Tubes, Bearings, Wires, growth shops, Agricultural tools tackles & equipment, etc), By-Products, Ferro Chrome & Ferro Manganese, Chrome Ore, Chrome Concentrate (Beneficiated Chrome Ore), Manganese Ore, Mining & Washing of Coal, Iron Ore & Limestone for captive use & Trading, any other related activities including the new activities taken up during the policy period and supporting activities anywhere in India
<b>Item 7. Policy Period</b>	:	From 00:01 hours : 01 January 2026 To (Midnight) : 31 December 2026
<b>Item 8. Premium</b>	:	Rs. 817,500.00
<b>Item 9. Premium &amp; Coverage Statement</b>	:	Refer to Page 2
9.1 Premium Computation		
9.2 Insurance Limits & Excess		
<b>Item 10. Clauses, Conditions &amp; Warranties :</b>		

Form Number	Form Name	Effective Date	Date Issued
PL-02-0032	Policy Schedule	1 January 2026	20 January 2026
PL-02-0031	Insurance Contract	1 January 2026	20 January 2026
PL-02-0038	Co-Insurance Clause	01 January 2026	20 January 2026
XX-XX-XXX2	Endorsment- Sanctions Clause	01 January 2026	20 January 2026
XX-XX-XXX1	Endorsement- PFAS Exclusion	01 January 2026	20 January 2026
4	Arbitration clause - No	01 January 2026	20 January 2026

Subject otherwise to terms and conditions of Public Liability Insurance Policy.

Signed for and on behalf of HDFC ERGO General Insurance Company Limited, on 20 January 2026



Authorised Signatory

GST Registration No: 27AABCL5045N1Z8. The contract will be cancelled ab intio in case; the consideration under the policy is not realized.

The stamp duty of Rs. 0.5/- paid vide Order No:(LOA/ENF-1/CSD/64/2024-25/ Validity Period Dt. 15/10/2024 to Dt. 31/12/2028, OW No. 4742 Dt 04/10/2024 GRN NO. MH007778466202425M, Dt. 10/09/2024, SBI Bank & DEFACE No. 0005045616202425, Dt. 03/10/2024) as prescribed by Government of Maharashtra Notification No. Mudrank 2017/C.R.97/M-1, Dt.09/01/2018

**Note:** Where the proposal form is not received, information obtained from insured, whether orally or otherwise, is captured in the policy document. Discrepancies, if any, in the information contained in the policy document may be pointed out by an insured within 15 days from the policy issue date after which information contained in the policy document shall be deemed to have been accepted as correct.

I/ We hereby declare that though our aggregate turnover in any preceding financial year from 2017-18 onwards is more than the aggregate turnover notified under sub-rule (4) of rule 48, we are not required to prepare an invoice in terms of the provisions of the said sub-rule

Please note that your communication address is treated as the address for underwriting purposes, which is generally address where you would be currently and temporarily residing, and is different from your permanent address. Details along with the proof for your permanent address is provided either from reference of C-KYC Registry and/or on Aadhaar. Any submission for change in address is treated as change in communication address. Please go to the self-help page or your nearest branch if case you intend to change the 'permanent address' provided.

<b>Branch</b>	Leela Business Park, 6th Flr, Andheri - Kurla Rd, Mumbai, 400059. Tel.: +91-22-66383600
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**Warranties :**

Warranted that there are no known losses and /or circumstances that may lead to losses or claims under this policy (except the claims and / or circumstances already reported to HDFC ERGO General Insurance Co. Ltd.).

This policy is issued basis the information and representations provided by or on behalf of the insured (whether by way of a proposal form or otherwise), and it is thus warranted that such information/representations are true, accurate, and complete, and that no other material information has been withheld.

If the policy document, schedule or endorsement contains any inadvertent error or omission in regards the information provided to us, you are requested to inform us within 15 days of receipt of the policy document so that we can correct any such error or omission.

This is with reference to the KYC norms prescribed by the Authority, whereby this policy is being issued relying on the undertaking / power of attorney / letter of authorisation / Board resolution provided by the authorized signatory of your Entity. Should the signatory be not authorized to provide such a declaration, please inform the Company within 15 days from the date of receipt of this policy

Warranty-Based on information submitted by you/ your representative to obtain quote/ policy, you have been classified as Non Micro, Small and Medium Enterprise (Non MSME) as per definition published by Min-istry of Micro, Small and Medium Enterprises via extraordinary Gazette notification dated 01st June 2020, effective 01st July 2020.However, in case if you are not falling under definition of MSME as per above stated Gazette notifica-tion, please contact our nearest office / policy issuing branch to get your quote/policy rectified accordingly.

## Premium & Coverage Statement

(Item. 9 of Schedule, Attached to and forming part of Policy No: 3133208123239400000)

### 9.1 Premium Computation

Premium Details	Amount (Rs.)
Net Premium	375,000.00
GST 18% : Central Tax 9% ( Rs. 33750 ) + State Tax 9% ( Rs. 33750 )	67,500.00
Add: Contribution to Environment Relief Fund	375,000.00
Total Premium	817,500.00
Invoice Number :	6012001050881
GSTN :	27AAACT2803M2ZA
Place of Supply	Maharashtra
SAC Code	997139

### 9.2 Insurance Limits & Excess

#### Insurance Limits

Details	Amount (Rs.)
Each Accident Insurance Limit	2,500,000,000.00
Aggregate Insurance Limit	5,000,000,000.00

#### Excess

Compulsory Excess	Not Applicable
Voluntary Excess	Not Applicable

## Public Liability Insurance (Under PLI Act 1991)

### 1. OPERATIVE CLAUSE

WHEREAS the Insured named in the Schedule hereto and carrying on the business described in the said schedule has applied to HDFC ERGO GENERAL INSURANCE COMPANY LIMITED (hereinafter called 'the Company') for the indemnity hereinafter contained and has made a written proposal and declaration which shall be the basis of this contract and is deemed to be incorporated herein and has paid the premium and statutory contribution towards the Environment Relief Fund as consideration for or on account of such indemnity in accordance with the manner prescribed under Section 64VB of the Insurance Act, 1938 and as per the provisions of the Public Liability Insurance Act and the rules framed there under.

NOW THIS POLICY WITNESSETH that subject to the terms, conditions and exclusions herein contained or endorsed or otherwise expressed herein, to indemnify the Insured or Owner against the statutory liability arising out of accidents occurring during the currency of the policy due to handling of hazardous substances as provided for in the said Act and the Rules framed thereunder.

### 2. DEFINITIONS

For the purpose of this policy, the following terms shall have the meaning as set forth hereunder:

- (i) "Act" unless otherwise specifically mentioned shall mean the Public Liability Insurance Act 1991 as amended from time to time;
- (ii) "Accident" means an accident involving a fortuitous, sudden or unintentional occurrence while handling any hazardous substance resulting in continuous, intermittent or repeated exposure to death of, or injury to any person or damage to any property but does not include an accident by reason only of war or radioactivity;
- (iii) "Handling" in relation to any hazardous substance means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance;
- (iv) "Hazardous Substance" and group means any substance or preparation which is defined as hazardous substance under the Public Liability Insurance Act, 1991 and the Rules framed thereunder;
- (v) "Owner" or "Insured" means a person who owns, or has control over handling of any hazardous substance at the time of accident and includes:
  - (a) in the case of a firm, any of its partners
  - (b) in the case of an association, any of its members, and
  - (c) in the case of a company, any of its directors, managers, secretaries or other officers who is/are directly in charge of, and is/are responsible to the company for the conduct of the business of the company;
- (vi) "Turnover" shall mean
  - (a) In case of Manufacturing Units - Entire annual gross sales turnover including all levies and taxes of manufacturing units handling hazardous substance as defined in the Public Liability Insurance Act, 1991. For the purpose of this insurance, the term "Units" shall mean all operations being carried out in the manufacturing complex in one location.
  - (b) In case of Godowns/ Warehouse Owners - Total annual rental receipts of premises handling hazardous substance as defined in the Public Liability Insurance Act, 1991.
  - (c) In case of Transport Operators - Total annual freight receipts

(d) In all other cases – Total annual gross receipts

### 3. EXCLUSIONS

The Company shall not be liable:

- (i) for any wilful or intentional non-compliance of any statutory requirements;
- (ii) in respect of fines, penalties, punitive and /or exemplary damages;
- (iii) under any law or legislation except in so far as provided for in Section 8 (1) & 8 (2) of the Act;
- (iv) in respect of damage to property owned, leased or hired or under hire purchase or on loan to the Insured or otherwise in the Insured or Owner's control, care or custody;
- (v) for any liability directly or indirectly occasioned by, happening through or in consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not) civil war, rebellion, revolution, insurrection or military or usurped power;
- (vi) for any liability directly or indirectly caused by or contributed to by:
  - (a) Ionising radiation or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel
  - (b) the radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
- (vii) for matter outside the scope of Public Liability Insurance Act, 1991.
- (viii) in respect of losses/liability arising outside India.

### 4. CONDITIONS

- 1) The Insured Owner shall give written notice to the Company as soon as reasonable practicable of any claim made against the Insured Owner or of any specific event or circumstance that may give rise to a claim. The Insured Owner shall immediately give to the Company copies of notice of application forwarded by the Collector and all such additional information and/or assistance that the company may require.
- 2) No admission, offer, promise or payment shall be made or given by or on behalf of the Insured owner under this policy without the written consent of the Company.
- 3) The Company shall not be liable for any claim for relief made after five years from the date of occurrence of the accident.
- 4) The Insured Owner shall keep record of annual turnover, and at the time of renewal of insurance declare such turnover and all other details as may be required by the Company. The Company shall at all reasonable times have full rights to call for and examine such records.
- 5) If at the time of happening of any accident resulting in a claim under the policy there be any other insurance covering the same liability,

Liability Insurance

Public Liability

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Insurance Contract

3133208123239400000

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then the Company shall not be liable to pay or contribute more than its rateable proportion of such liability.

- 6) The Company may cancel this policy by giving seven days' notice in writing of such cancellation to the Insured's last known address and in such an event the Company will return a pro-rata portion of the premium (subject to a minimum retention of 25 per cent of the annual premium) for the unexpired part of the insurance.

The policy may also be cancelled by the Insured by giving thirty days' notice in writing to the Company, in which event the Company will retain premium at short period scale as set forth in the table below, provided there is no claim under the policy during the Policy Period.

In case of any claim under the policy no refund of premium shall be allowed.

The Company shall have no obligation to give notice that the policy is due for renewal or renew this policy upon expiration or termination.

Table of Short Period Scales	
Period of Risk(Not exceeding)	Premium to be retained by the Company (% of the Annual Rate).
1 week	10%
1 month	25%
2 months	35%
3 months	50%
4 months	60%
6 months	75%
8 months	85%
Exceeding 8 months	Total Annual Premium

- 7) If the Company shall disclaim by the Insured Owner for any claim hereunder and such claim shall not within 12 calendar months from the date of such disclaimer have been made the subject matter of a suit in a competent Court of Law. Then the claim for all practical purpose shall be deemed to have been abandoned and shall not thereafter be recoverable hereunder or be made the subject matter of any suit.
- 8) The Company shall not be liable to make any payment in respect of any claim if such be in any manner fraudulent or support by any person on behalf of the insured Owner and/or if the insurance has been continued in consequence of any material misstatement or non-disclosure of any material information by or on behalf of the Insured Owner. In such a case if the Company pays any amount to the claimant due to any statutory provision such amount shall be recoverable from the Insured Owner.
- 9) The policy and the Schedule shall be read together as one contract and any word or expression to which a specific meaning has been assigned in the Act and the Rules framed there under or this policy shall bear such as specific meaning.
- 10) Any dispute regarding interpretation of the terms, conditions and exceptions of the Policy shall be determined in accordance with the law and practice of a court of competent jurisdiction within India.
- 11) Any person who has a grievance against the Company, may himself or through his legal heirs make a complaint in writing to the Insurance Ombudsman in accordance with the procedure contained in The Redressal of Public Grievance Rules, 1998 (Ombudsman Rules). Proviso to Rule 16(2) of the Ombudsman Rules however, limits compensation that may be awarded by the Ombudsman, to the lower of compensation necessary to cover the loss suffered by the insured as a direct consequence of the insured peril or Rs. 20 lakhs Rupees Twenty Lakhs Only) inclusive of ex-gratia and other expenses. A copy of the said Rules shall be made available by the Company upon prior written request by the Insured.

## Public Liability Insurance (Under PLI Act 1991)

### Endorsement

Policy Period	From: 01 January 2026 To: 31 December 2026
Effective Date	01 January 2026
Policy Number	3133208123239400000
Insured	Tata Steel Limited & New Merged Entities
Name of Company	HDFC ERGO General Insurance Company Limited
Date Issued	20 January 2026

#### Coinsurance Clause

1. It is hereby declared and agreed that insurers named hereunder severally agree and accept the following for the proportion set against its name:

1.1. In event of any claim being admissible by the insurer towards the liability, to pay or make good to the insured the value of the property at the time of the happening of its loss or destruction or the amount of such damage thereto as provided for under the policy and or

1.2. To indemnify the insured against liability at law or damage to any property or injuries to persons as provided for under the policy

#### 1. Co-insurance Schedule:

SN	Name of the Insurer	Share (%)
1	(HDFC ERGO General Insurance Company Limited)	40
2	(ICICI Lombard General Insurance Company)	30
3	(SBI General Insurance Company)	30

#### 1. Conditions forming part of this clause

It is hereby agreed and understood that:

3.1 The Insured in exercise of his option has after having understood the implications, selected the above named lead Insurer and the named Co-insurers vide sr. Nos. of the co-Insurance schedule as in point no. 2 under the policy.

3.2 The duties of insured would devolve upon the authorized intermediary licensed by IRDA (referred to as authorized representative thereafter) where the insured appoints such authorized intermediary to transact on his behalf with the insurer/s.

3.3 It shall be the responsibility of the insured or his authorized intermediary licensed by IRDA to decide on the panel of co-insurers and their respective shares of the risk herein as set out in co-insurance share under paragraph 2 above and communicate the same to all such participating co-insurers, prior to assumption of risk.

3.4 The lead Insurer shall finalize the terms and conditions applicable to the risk in the form of an underwriting slip with a unique code to be handed over to the Insured/Authorized intermediary.

3.5 It shall be the responsibility of the insured or his authorized representative to ensure that all insurers listed in the co-insurance schedule under paragraph 2 above, are fully aware of the terms and conditions of this policy and shall secure their unqualified acceptance of such terms and conditions prior to issuance of cover and inclusion of names of insurers in this co-insurance arrangement.

3.6 During the currency of the policy, if there are any material changes in risk or as changes in original terms and conditions such as variation in Sum Insured, changes in premium charged, extension of policy period, etc., the same shall be communicated by the insured or his authorized representative giving sufficient advance notice of 7 days to the leader as well as all other participating co-insurers listed in the co-insurance schedule under paragraph 2 above and procure confirmation thereon. The endorsement to this effect shall be executed by the lead insurer under advice to all other participating co-insurers.

3.7 The liability of the insurers shall in no case exceed in respect of each item of the sum expressed in the set schedule to be insured thereon or in the all, the total sum insured hereby or sums as may be substituted thereof by endorsement.

3.8 In the event of any of the insurers, chosen by the Insured as per paragraph 3.1 above and listed in the co-insurance schedule, withdrawing from participation in this Policy at any time during its currency after giving due notice of 14 days, the insured shall arrange for an alternative insurer to take up the full share of risk vacated by the existing insurer. In the event of insured failing to do so, the insured shall be considered as his own insurer for such share of risk or part there of which is not taken up by such alternative co-insurer.

3.9 In the event of a claim under this policy, the insured shall give notice of its occurrence to the Lead Insurer with a copy to all the insurers as listed in clause 2 above.

3.10 Upon receipt of such notification of claim, all claim related activities including appointment of surveyors, etc shall be done by the lead insurer who shall decide the admissibility as well as quantum of the claim and the co-insurers shall abide by the same.

3.11 In the event of any claim being value of more than 5 crores the lead insurer can immediately demand and the following co-insurer shall pay the cash call of their proportionate share of loss.

3.12 In all other cases, where the Lead Insurer pays 100% of the assessed loss, the following co-insurer/s shall remit their share of the loss to the Lead Insurers within a maximum period of 21 days from the date on which the Lead Insurer makes the demand.

Lead Insurer's declaration that the Claim and the amount there of was in accordance with terms and conditions of the Policy issued shall be considered sufficient by the co-insurers for the purpose of remitting their share of the loss to the Lead Insurer.

3.13 The co-insurers forming part of this agreement shall be entitled to demand and obtain from the Lead Insurer/ Intermediaries copies of all policies, endorsements or other claim related documents relevant to this co-insurance clause.

In witness, whereof, this policy has been signed by HDFC ERGO General Insurance Company (Lead Insurer) for itself and as authorized agents for other participating insurers named herein

Subject otherwise to the terms, exceptions, conditions and limitations of this policy.



All other terms and conditions remain unchanged.

A handwritten signature in black ink, appearing to read "Ashima", written over a horizontal line.

Authorized Representative

## Public Liability Insurance (Under PLI Act 1991)

### Endorsement

Policy Period	From: 01 January 2026 To: 31 December 2026
Effective Date	01 January 2026
Policy Number	3133208123239400000
Insured	Tata Steel Limited & New Merged Entities
Name of Company	HDFC ERGO General Insurance Company Limited
Date Issued	20 January 2026

#### PERFLUORINATED COMPOUNDS, PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES (PFAS) EXCLUSION

1. This policy does not cover any claim for actual or alleged loss, liability, damage, compensation, injury, sickness, disease, death, medical payment, defense cost, cost, expense or any other amount, directly or indirectly and regardless of any other cause contributing concurrently or in any sequence, originating from, caused by, arising out of, contributed to by, resulting from, or otherwise in connection with any PFAS.

2. For the purposes of this Exclusion, loss, liability, damage, compensation, injury, sickness, disease, death, medical payment, defense cost, cost, expense or any other amount, includes, but is not limited to, any cost to clean-up, detoxify, remove, monitor, contain, test for or in any way respond to or assess the effect of any PFAS.

PFAS means any chemical or substance that contains one or more alkyl carbons where fluorine partially or completely replaces the hydrogen atoms.

All other terms and conditions remain unchanged.



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Authorized Representative

## Public Liability Insurance (Under PLI Act 1991)

### Endorsement

Policy Period	From: 01 January 2026 To: 31 December 2026
Effective Date	01 January 2026
Policy Number	3133208123239400000
Insured	Tata Steel Limited & New Merged Entities
Name of Company	HDFC ERGO General Insurance Company Limited
Date Issued	20 January 2026

#### ENDORSEMENT - SANCTIONS

No (re)insurer shall be deemed to provide cover and no (re)insurer shall be liable to pay any claim or provide any benefit hereunder to the extent that the provision of such cover, payment of such claim or provision of such benefit would expose that (re)insurer to any sanction, prohibition or restriction under United Nations resolutions or the trade or economic sanctions, laws or regulations of the European Union. This shall also apply to the trade or economic sanctions, laws or regulations enacted by the United Kingdom and the United States of America and India.

Subject otherwise to the terms, conditions and exclusions of this Policy.

All other terms and conditions remain unchanged.



\_\_\_\_\_  
Authorized Representative



## Public Liability Insurance (Under PLI Act 1991)

### Endorsement

Policy Period	From: 01 January 2026 To: 31 December 2026
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**ARBITRATION CLAUSE** (Arbitration wordings forming part of the policy wording, will be read and replaced as stated below: The parties to the contract may mutually agree and enter into a separate Arbitration Agreement to settle any and all disputes in relation to this policy. Arbitration shall be conducted under and in accordance with the provisions of the Arbitration and Conciliation Act, 1996.)

All other terms and conditions remain unchanged.

A handwritten signature in black ink, appearing to read "A. Sharma".

Authorized Representative

**GRIEVANCE REDRESSAL PROCEDURE**

If you have a grievance that you wish us to redress, you may contact us with the details of your grievance through:

- Call Centre : 022-62346234/ 0120-62346234
- Emails - care@hdfcergo.com
- Designated Grievance Officer in each branch.
- Company Website - www.hdfcergo.com
- Courier : Any of our Branch office or corporate office

You may also approach the Complaint & Grievance (C&G) Cell at any of our branches with the details of your grievance during our working hours from Monday to Friday.

If you are not satisfied with our redressal of your grievance through one of the above methods, you may contact our Head of Customer Service at

The Complaint & Grievance Cell ,  
HDFC ERGO General Insurance Company Ltd.  
Customer Happiness Center,  
D-301, 3rd Floor, Eastern Business District (Magnet Mall),  
LBS Marg, Bhandup (West),MUMBAI - 400078.  
State : Maharashtra, City : Mumbai  
Pincode : 400078  
Email: grievance@hdfcergo.com

In case you are not satisfied with the response / resolution given / offered by the C&G cell, then you can write to the Principal Grievance Officer of the Company at the following address

The Chief Grievance Officer  
HDFC ERGO General Insurance Company Limited  
Customer Happiness Center,  
D-301, 3rd Floor, Eastern Business District (Magnet Mall),  
LBS Marg, Bhandup (West),Mumbai - 400078.  
State : Maharashtra, City : Mumbai  
Pincode : 400078  
E Mail: cgo@hdfcergo.com

You may also approach the nearest Insurance Ombudsman for resolution of your grievance. The contact details of Ombudsman offices are mentioned below if your grievance pertains to:

- Insurance claim that has been rejected or dispute of a claim on legal construction of the policy
- Delay in settlement of claim
- Dispute with regard to premium
- Non-receipt of your insurance document

Names of Ombudsman and Addresses of Ombudsmen Centers	
Jurisdiction	Office Address
Gujarat, Dadra & Nagar Haveli, Daman and Diu	AHMEDABAD - Shri Kuldip Singh Office of the Insurance Ombudsman, Jeevan Prakash Building, 6th floor, Tilak Marg, Relief Road, Ahmedabad - 380 001. Tel.: 079 - 25501201/02/05/06 Email: bimalokpal.ahmedabad@ecoi.co.in (mailto:bimalokpal.ahmedabad@ecoi.co.in)
Karnataka	BENGALURU - Smt. Neerja Shah Office of the Insurance Ombudsman, Jeevan Soudha Building, PID No. 57-27-N-19 Ground Floor, 19/19, 24th Main Road, JP Nagar, 1st Phase, Bengaluru - 560 078. Tel.: 080 - 26652048 / 26652049 Email: bimalokpal.bengaluru@gbic.co.in (mailto:bimalokpal.bengaluru@ecoi.co.in)
Madhya Pradesh, Chattisgarh	BHOPAL - Shri Guru Saran Shrivastava Office of the Insurance Ombudsman, Janak Vihar Complex, 2nd Floor, 6, Malviya Nagar, Opp. Airtel Office, Near New Market, Bhopal - 462 003. Tel.: 0755 - 2769201 / 2769202 Fax: 0755 - 2769203 Email: bimalokpal.bhopal@ecoi.co.in (mailto:bimalokpal.bhopal@ecoi.co.in)
Orissa.	BHUBANESHWAR - Shri Suresh Chandra Panda Office of the Insurance Ombudsman, 62, Forest park, Bhubneshwar - 751 009. Tel.: 0674 - 2596461 / 2596455 Fax: 0674 - 2596429 Email: bimalokpal.bhubaneswar@ecoi.co.in (mailto:bimalokpal.bhubaneswar@ecoi.co.in)
Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Chandigarh	CHANDIGARH - Dr. Dinesh Kumar Verma Office of the Insurance Ombudsman, S.C.O. No. 101, 102 & 103, 2nd Floor, Batra Building, Sector 17 - D, Chandigarh - 160 017. Tel.: 0172 - 2706196 / 2706468 Fax: 0172 - 2708274 Email: bimalokpal.chandigarh@ecoi.co.in (mailto:bimalokpal.chandigarh@ecoi.co.in)
Tamil Nadu, Pondicherry Town and Karaikal (which are part of Pondicherry).	CHENNAI - Shri M. Vasantha Krishna Office of the Insurance Ombudsman, Fatima Akhtar Court, 4th Floor, 453, Anna Salai, Teynampet, CHENNAI - 600 018. Tel.: 044 - 24333668 / 24335284 Fax: 044 - 24333664 Email: bimalokpal.chennai@ecoi.co.in (mailto:bimalokpal.chennai@ecoi.co.in)
Delhi	DELHI - Shri Sudhir Krishna Office of the Insurance Ombudsman, 2/2 A, Universal Insurance Building, Asaf Ali Road, New Delhi - 110 002. Tel.: 011 - 23232481/23213504 Email: bimalokpal.delhi@ecoi.co.in (mailto:bimalokpal.delhi@ecoi.co.in)
Assam, Meghalaya, Manipur, Mizoram, Arunachal Pradesh, Nagaland and Tripura.	GUWAHATI - Shri Kiriti .B. Saha Office of the Insurance Ombudsman, Jeevan Nivesh, 5th Floor, Nr. Panbazar over bridge, S.S. Road, Guwahati - 781001 (ASSAM). Tel.: 0361 - 2632204 / 2602205 Email: bimalokpal.guwahati@ecoi.co.in (mailto:bimalokpal.guwahati@ecoi.co.in)

Andhra Pradesh, Telangana, Yanam and part of Territory of Pondicherry.	HYDERABAD - Shri I. Suresh Babu Office of the Insurance Ombudsman,6-2-46, 1st floor, "Moin Court",Lane Opp. Saleem Function Palace,A. C. Guards, Lakdi-Ka-Pool,Hyderabad - 500 004. Tel.: 040 - 67504123 / 23312122 Fax: 040 - 23376599 Email: bimalokpal.hyderabad@ecoi.co.in (mailto:bimalokpal.hyderabad@ecoi.co.in)
Rajasthan	JAIPUR - Smt. Sandhya Baliga Office of the Insurance Ombudsman,Jeevan Nidhi - II Bldg., Gr. Floor,Bhawani Singh Marg,Jaipur - 302 005. Tel.: 0141 - 2740363 Email: Bimalokpal.jaipur@ecoi.co.in (mailto:bimalokpal.jaipur@ecoi.co.in)
Kerala, Lakshadweep, Mahe-a part of Pondicherry.	ERNAKULAM - Ms. Poonam Bodra Office of the Insurance Ombudsman,2nd Floor, Pulinat Bldg.,Opp. Cochin Shipyard, M. G. Road,Ernakulam - 682 015. Tel.: 0484 - 2358759 / 2359338 Fax: 0484 - 2359336 Email: bimalokpal.ernakulam@ecoi.co.in (mailto:bimalokpal.ernakulam@ecoi.co.in)
West Bengal, Sikkim, Andaman & Nicobar Islands.	KOLKATA - Shri P. K. Rath Office of the Insurance Ombudsman,Hindustan Bldg. Annexe, 4th Floor,4, C.R. Avenue, KOLKATA - 700 072. Tel.: 033 - 22124339 / 22124340 Fax : 033 - 22124341 Email: bimalokpal.kolkata@ecoi.co.in (mailto:bimalokpal.kolkata@ecoi.co.in)
Districts of Uttar Pradesh : Laitpur, Jhansi, Mahoba, Hamirpur, Banda, Chitrakoot, Allahabad, Mirzapur, Sonbhadra, Fatehpur, Pratapgarh, Jaunpur,Varanasi, Gazipur, Jalaun, Kanpur, Lucknow, Unnao, Sitapur, Lakhimpur, Bahraich, Barabanki, Raebareli, Sravasti, Gonda, Faizabad, Amethi, Kaushambi, Balrampur, Basti, Ambedkarnagar, Sultanpur, Maharajgang, Santkabirnagar, Azamgarh, Kushinagar, Gorkhpur, Deoria, Mau, Ghazipur, Chandauli, Ballia, Sidharathnagar	LUCKNOW -Shri Justice Anil Kumar Srivastava Office of the Insurance Ombudsman,6th Floor, Jeevan Bhawan, Phase-II,Nawal Kishore Road, Hazratganj, Lucknow - 226 001. Tel.: 0522 - 2231330 / 2231331 Fax: 0522 - 2231310 Email: bimalokpal.lucknow@ecoi.co.in (mailto:bimalokpal.lucknow@ecoi.co.in)
Goa, Mumbai Metropolitan Region excluding Navi Mumbai & Thane.	MUMBAI - Shri Milind A. Kharat Office of the Insurance Ombudsman,3rd Floor, Jeevan Seva Annexe,S. V. Road, Santacruz (W),Mumbai - 400 054. Tel.: 022 - 26106552 / 26106960 Fax: 022 - 26106052 Email: bimalokpal.mumbai@ecoi.co.in (mailto:bimalokpal.mumbai@ecoi.co.in)
State of Uttaranchal and the following Districts of Uttar Pradesh: Agra, Aligarh, Bagpat, Bareilly, Bijnor, Budaun, Bulandshehar,Etah, Kanoj, Mainpuri, Mathura, Meerut, Moradabad, Muzaffarnagar, Oraiyya, Pilibhit, Etawah, Farrukhabad, Firozbad, Gautambodhanagar, Ghaziabad, Hardoi, Shahjahanpur, Hapur, Shamli, Rampur, Kashganj, Sambhal, Amroha, Hathras, Kanshiramnagar, Saharanpur.	NOIDA - Shri Chandra Shekhar Prasad Office of the Insurance Ombudsman,Bhagwan Sahai Palace 4th Floor, Main Road,Naya Bans, Sector 15, Distt: Gautam Buddh Nagar, U.P-201301. Tel.: 0120-2514250 / 2514252 / 2514253 Email: bimalokpal.noida@ecoi.co.in (mailto:bimalokpal.noida@ecoi.co.in)
Bihar, Jharkhand.	PATNA - Shri N. K. Singh Office of the Insurance Ombudsman,1st Floor,Kalpana Arcade Building,Bazar Samiti Road,Bahadurpur, Patna 800 006. Tel.: 0612-2680952 Email: bimalokpal.patna@ecoi.co.in (mailto:bimalokpal.patna@ecoi.co.in)



Maharashtra, Area of Navi Mumbai and Thane excluding Mumbai Metropolitan Region.

PUNE - Shri Vinay Sah  
Office of the Insurance Ombudsman, Jeevan Darshan Bldg., 3rd Floor, C.T.S.  
No.s. 195 to 198, N.C. Kelkar Road, Narayan Peth, Pune - 411 030.  
Tel.: 020-41312555  
Email: [bimalokpal.pune@ecoi.co.in](mailto:bimalokpal.pune@ecoi.co.in)  
(<mailto:bimalokpal.pune@ecoi.co.in>)

### CUSTOMER INFORMATION SHEET / KNOW YOUR POLICY

This document provides only key information about your policy 3133208123239400000 . Please refer to the policy document for detailed terms and conditions.

S.No	Title	Description (Please refer to applicable Policy Clause Number in next column)	Policy Clause Number	
1	Product Name	Public Liability Insurance Policy (Under PLI Act), 1991	NA	
2	Unique Identification Number (UIN) allotted by IRDAI	IRDAN125CP0002V01200809.	NA	
3	Structure	State basis of Sum / Limit Insured • Indemnity Basis	NA	
4	Interests Insured	People/owners associated with the production or handling of any hazardous chemicals who have availed for this policy.	NA	
5	Sum Insured	<b>Details</b>	Refer policy schedule	
		Each Accident Insurance Limit		2,500,000,000.00
		Aggregate Insurance Limit		5,000,000,000.00
6	Policy Coverage	to indemnify the Insured or Owner against the statutory liability arising out of accidents occurring during the currency of the policy due to handling of hazardous substances as provided for in the said Act and the Rules framed thereunder. This Policy provides coverages subject to terms, conditions and exclusions outlined in the policy document.	Operative Clause	
7	Add-on Cover	<<as per policy schedule>>	Refer policy schedule	
8	Loss Participation	Compulsory Excess: Not Applicable Voluntary Excess: Not Applicable	Refer policy schedule	
9	Exclusions	The Company shall not be liable: (i) for any willful or intentional non-compliance of any statutory requirements; (ii) in respect of fines, penalties, punitive and /or exemplary damages; (iii) under any law or legislation except in so far as provided for in Section 8 (1) & 8(2) of the Act; (iv) in respect of damage to property owned, leased or hired or under hire purchase or on loan to the Insured or otherwise in the Insured or Owner's control, care or custody;	Exclusions	

		<p>(v) for any liability directly or indirectly occasioned by, happening through or in consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not) civil war, rebellion, revolution, insurrection or military or usurped power;</p> <p>(vi) for any liability directly or indirectly caused by or contributed to by:</p> <p>(a) Ionising radiation or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel.</p> <p>(b) the radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;</p> <p>4. arising out of loss of a pure financial nature, including but not limited to, loss of goodwill and/or loss of market.</p> <p>(vii) for matter outside the scope of Public Liability Insurance Act, 1991.</p> <p>(viii) in respect of losses/liability arising outside India.</p> <p>This Policy provides coverages subject to terms, conditions and exclusions outlined in the policy document.</p>													
10	Special Conditions and Warranties (if any)	<<as per policy schedule>>	Policy schedule												
11	Admissibility of Claim	<p>1.Intimation of a claim or any circumstances which may give rise to any claim should be reported immediately.</p> <p>2.No admission, offer, promise or payment of liability without Insurer consent.</p> <p>3.Provide all such information and assistance to company which is required.</p> <p>4.Company has right to defend the claim against Insured</p> <p>Claim shall be paid as per following calculation:-</p> <table border="1"> <thead> <tr> <th>Head</th> <th>Example</th> </tr> </thead> <tbody> <tr> <td>Legal liability as covered under the policy (a)</td> <td>100000</td> </tr> <tr> <td>Defense cost (b)</td> <td>20000</td> </tr> <tr> <td>total loss amount (c = a+b)</td> <td>120000</td> </tr> <tr> <td>Deductible (d)</td> <td>10000</td> </tr> <tr> <td>Net Payable amount (c-d)</td> <td>110000</td> </tr> </tbody> </table>	Head	Example	Legal liability as covered under the policy (a)	100000	Defense cost (b)	20000	total loss amount (c = a+b)	120000	Deductible (d)	10000	Net Payable amount (c-d)	110000	NA
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Net Payable amount (c-d)	110000														



12	Policy Servicing - Claim Intimation and Processing	<ul style="list-style-type: none"> <li>• Toll free / IVRS number of the Insurer 120 6234 6234 / 022-6234 6234</li> <li>• Website - <a href="http://www.hdfcergo.com">www.hdfcergo.com</a></li> <li>Email- <a href="mailto:care@hdfcergo.com">care@hdfcergo.com</a></li> <li>• Details of designated company officials to be contacted in time of claim</li> <li>• Liability Claims Manager – email ID - <a href="mailto:care@hdfcergo.com">care@hdfcergo.com</a></li> <li>• Details of procedure to be followed for <b>Turn Around Time (TAT)</b> for claims settlement                         <ol style="list-style-type: none"> <li>1. Registration of claim – T +1 days</li> <li>2. List of requirement – 7 days from registration</li> <li>3. Claim settlement / Denial = T+30 days ( T = date of receipt of last documents)</li> </ol> </li> <li>• Escalation Matrix when TAT is not satisfied</li> <li>Email to – <a href="mailto:liabilityclaims@hdfcergo.com">liabilityclaims@hdfcergo.com</a></li> </ul>	
13.	Grievance Redressal and Policyholders Protection	<p>If You have a grievance about any matter relating to the Policy, or Our decision on any matter, or the claim, You can address Your grievance as follows:</p> <p><b>1. Our Grievance Redressal Officer</b></p> <p>If you have a grievance that you wish us to redress, you may contact us with the details of your grievance through:</p> <ul style="list-style-type: none"> <li>• Call Centre - 120 6234 6234 / 022-6234 6234</li> </ul> <p>If you have a grievance that you wish us to redress, you may contact us with the details of your grievance through:</p> <ul style="list-style-type: none"> <li>• Call Centre - 120 6234 6234 / 022-6234 6234</li> </ul> <p>If you have a grievance that you wish us to redress, you may contact us with the details of your grievance through:</p> <ul style="list-style-type: none"> <li>• Call Centre - 120 6234 6234 / 022-6234 6234</li> </ul> <p>If you have a grievance that you wish us to redress, you may contact us with the details of your grievance through:</p> <p>If you are not satisfied with our redressal of your grievance through one of the above methods, you may contact our Head of Customer Service at</p> <p><b>The Complaint &amp; Grievance Redressal Cell , HDFC ERGO General Insurance The Company Ltd. D-301,3rd Floor, Eastern Business District (Magnet Mall), LBS Marg, Bhandup (West), Mumbai – 400078, Maharashtra</b></p> <p>In case you are not satisfied with the response / resolution given / offered by the C&amp;G cell, then you can write to the Chief Grievance Officer of the Company at the following address</p>	redressal of grievances

		<p><b>To the Chief Grievance Officer HDFC ERGO General Insurance The Company Limited D-301, 3rd Floor, Eastern Business District (Magnet Mall), LBS Marg, Bhandup (West), Mumbai - 400078, Maharashtra</b>  <b>e-mail: <a href="mailto:cgo@hdfcergo.com">cgo@hdfcergo.com</a></b></p> <p>Grievance may also be lodged at IRDAI Integrated Grievance Management System- <a href="https://bimabharosa.irdai.gov.in">https://bimabharosa.irdai.gov.in</a></p> <p>You may also approach the nearest Insurance Ombudsman for resolution, if your grievance is not redressed by the Company. The contact details of Ombudsman offices are below if your grievance pertains to:</p> <ul style="list-style-type: none"> <li>• Insurance claim that has been rejected or dispute of a claim on legal construction of the policy</li> <li>• Delay in settlement of claim</li> <li>• Dispute with regard to premium</li> <li>• Non-receipt of your insurance document</li> </ul> <p>You may also refer Our website <a href="http://www.hdfcergo.com">www.hdfcergo.com</a>  <a href="https://www.hdfcergo.com/customer-care/grievances.html">https://www.hdfcergo.com/customer-care/grievances.html</a> for detailed grievance redressal procedure</p>	
14	Obligations of the Policyholder	<ul style="list-style-type: none"> <li>• To disclose all information correctly sought by the insurer at time of filling the proposal form</li> <li>• In case of any change / modification / addition to the already declared information the same shall be brought to the notice of the Insurer immediately</li> <li>• Non-disclosure of material information may affect the claim settlement.</li> </ul> <p>Disclosure of other material information during the policy period.</p>	

Declaration by the Policyholder;

I have read the above and confirm having noted the details.

Place:

Date: (Signature of the Policyholder)

**Note:**

- i. Insurer shall provide web-link where the product related documents including the Customer Information sheet are available on the website of the Insurer.
- ii. In case of any conflict, the terms and conditions mentioned in the policy document shall prevail.
- iii. **Insurer to take confirmation of the Policyholder regarding receiving of the Customer Information Sheet.**