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

MD/ENV/ 186 / 103 / 2025
Date: 29.05.2025

Ref: **I. Environmental Clearance letter no. J-11015/104/2011-IA.II (M) DATED 06.09.2021.**
II. Environmental Clearance letter no. J-11015/104/2011. IA. II (M) dated: 29.10.2021.

Sub: **Half-yearly compliance status report of Environmental Clearance conditions for the period October 2024 – March 2025 in respect of Noamundi Iron Mine, M/s Tata Steel Limited.**

Dear Sir,

Kindly find attached herewith the half-yearly compliance status report in respect of the stipulated Environmental Clearance conditions of Noamundi Iron Mine, M/s Tata Steel Limited for the period from **October 2024 – March 2025.**

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

Chief (Mine planning & Projects), OMQ

Encl. : As above

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

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 2024 to March 2025)

Sl. No.	Conditions	Compliance
A. Specific conditions		
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 **Annexure-I, II and III respectively.**
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 **Annexure-IV.**
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 **Annexure-V**.
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. The mine has 1160.06 ha lease area, out of which 762.42 ha is forest land and rest is non-forest land. Out of 762.42 ha, forest land diverted for mining is 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014.
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 MoEFandCC, New Delhi has accorded "In-Principle" Stage-I Forest clearance under section 2 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 and the Stage-II Forest clearance is under process. After the grant of stage II FC for remaining area of 391.51 Ha. we shall approach the Ministry with proper mining plan for undertaking mining in the remaining area.
B. Standard conditions		

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

I. Statutory Compliance		
(1)	This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.	Noted.
(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. Out of 762.42 ha, forest land diverted for mining is 370.92 ha vide letter no. 8-279, 1985 FC (Pt) dated 4th Sept., 2014 and Stage-I “in-principle” approval for remaining 391.51 ha (including safety zone), has been granted vide File No. 8-65/2018FC, dated 08.12.2022.
(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	Noted and shall be abided.

	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 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 **Annexure-VI**.
(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 **Annexure-VII.**
(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 **Annexure-VIII.**
(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,	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, MoEFandCC, Ranchi with letter no: MD/ENV/210/97/2021 dated 13.09.2021. The copy of advertisement is attached as **Annexure-IX.**

	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 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, NO_2, 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	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 **Annexure X**. 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 for the period October 2024 to March 2025 is enclosed as **Annexure XI.** 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 **Annexure-XII.**
(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	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 **Annexure-XIII**. Photographs of fixed water sprinkler, mobile water

		tankers, mist cannons and dry-fog systems are attached as **Annexure-XIV.**
III. Water quality monitoring and preservation		
(1)	In case, immediate mining scheme envisages 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	Being Complied 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.
(2)	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.	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 **Annexure-XV.** 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 **Annexure-XVI**. The copy of ground water level report is attached as **Annexure-XVII**.
(3)	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.	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 **Annexure XVIII.** 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.
(4)	The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/	Being Complied Water quality monitoring of perennial nallahs (upstream and downstream) present inside and outside the mine

	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 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.	lease area is done regularly. The copy of surface water quality monitoring report is attached as **Annexure XIX)** 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. 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.
(5)	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.	Being Complied There is no wastewater discharge from the mine and mineral processing plant, i.e entire unit is "Zero Discharge Unit". 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. 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 (https://www.tatasteel.com/corporate/our-organisation/environment/environment-compliance-reports/). In addition to this all the monitored data is shown in display board present at the entrance gate.

		Photograph of display Board attached as **Annexure-XII.**
(6)	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in 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.	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 **Annexure-XX**. Approval from Ground Water Directorate, Water Resources Dept. Jharkhand for RWH pond structure was received vide letter no. GWD 317/Ranchi, dated 14th 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 buffer zone of Noamundi mine leases.
(7)	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.	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 analysis is done on regular basis and the ETP quality analysis is attached as **Annexure-XXI**. 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 **Annexure-XXII.** We have started to maintain a logbook of oil and grease recovered from ETP. The copy of logbook is attached as **Annexure-XXIII**.
(8)	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	Noted. Evaluation of water consumption is being carried out and suitable measures for reducing water consumption have been identified such as commissioning of paste thickener

	Pollution Control Board/Committee.	etc. There is zero waste-water discharge by the mine and it will be maintained in the future as well. Optimization of the water consumption will be done to reduce the specific water consumption year-on-year.
IV. Noise and vibration monitoring and prevention		
(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 **Annexure XXIV**.
(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 **Annexure-XXV.**
V. Mining plan		
(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	Being Complied All mining activities are being carried out in accordance with approved mining plan by IBM. O.B generated during FY 2024-25: 391255.481 Tonnes. ROM produced during FY 2024-25: 9.043 MT

	State Govt. in the form to Short Term Permit (STP), Query license or any other name.	
(2)	The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of 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.	This is not applicable in this financial year as it is an operational mine.
(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.	Noted. Being Complied Land-use of the mine lease area shall be governed as per the approved mining plan. 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. In FY 25 around 25,608 saplings have planted in the mine lease area.
VI. Land reclamation		
(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.	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 **Annexure XXVI**.
(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	Being Complied 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.

	adhered to maintain the stability of waste dumps.	
(3)	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.	Being Complied 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 direction of MoEFandCC. In FY 25 around 25608 saplings have been planted in the mine lease area. Grassing on bunds of haul roads to control wind pollution also been practiced as per kind suggestion from MoEFandCC office at mine.
(4)	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.	Being Complied The inactive dump slopes are vegetated with native species, vetiver grass and coir matting are done for better slope stabilization. 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. The details and photographs of retaining wall, garland drains, coir-mat, Settling ponds, gully plugs is attached as **Annexure-XXVII.**
(5)	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.	Being Complied 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 MoEFandCC vide letter no: MD/ENV/303/103/2021 dated 19.11.2021.
(6)	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	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)	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	Being Complied Check dams of appropriate size, gradient and length are constructed along with sedimentation pits as per progressive mine closure plan.

	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.	
(8)	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	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.
VII. Transportation		
(1)	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.	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 **Annexure XXVIII**.
(2)	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	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.

	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 while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions	Mist cannons have placed at strategic points to prevent and control of fugitive dust emission. Photographs attached as **Annexure-XIV**. The beneficiated ore from processing plant to railway sidings being transported through covered conveyors only. Dust Extraction system is present at Primary crusher.
VIII. Green Belt		
(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 **Annexure XXIX.**
(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 2023-24 plantation of about 25608 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	Being Complied The site-specific wildlife conservation plan (SSWLCP) has been approved by Chief Wildlife Warden on

	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 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.	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 FY24) is provided as **Annexure-XXX**.
IX. Public hearing and human health issues		
(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 2024: 3034 nos. of IME and 175 nos. of PME. Some of the best practices related to occupational health adopted in mine are: • Employees' health check-up under Wellness @ workplace program • Health awareness classes on weekly basis for shop floor employees • Officers' health check-up on yearly basis for lifestyle disease • Counseling to high blood pressure, sugar cholesterol, hypertension employees through medical board.
(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	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- ▪ Mega health camps, Malaria parasite control programme, Cataract surgery camp, Prenatal care ▪ MANSI project: Reducing infant and maternal mortality ▪ Providing financial assistance and waivers for needy patients, on a case-to-case basis

	five years.	▪ Preventing and treating communicable diseases like malaria, tuberculosis and HIV / AIDS ▪ Treating and rehabilitating persons with disabilities ▪ RISHTA project: working on adolescent and reproductive sexual health issues Details of health camps and awareness sessions along with
(3)	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).	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. 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: • Employees' health check-up under Wellness @ workplace program • Health awareness classes on weekly basis for shop floor employees • Officers' health check-up on yearly basis for lifestyle disease • Counseling to high blood pressure, sugar cholesterol, hypertension employees through medical board • Observation of important health days like World No Tobacco day, AIDS day, Heart day, Diabetic day etc • Display of calorie chart in canteens alongside the menu No adverse cases have been found till date.
(4)	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	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. No adverse cases have been found till date.

	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 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 **Annexure-XXXI**.
(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.
X. Corporate Environment Responsibility (CER)		
(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 **Annexure-V**.
(2)	Project Proponent shall keep the funds earmarked	Being Complied

	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.	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 MoEFandCC and its Regional Office every year during half yearly compliance submission. Expenditure details for the year 2023-24 is enclosed as **Annexure XXXI**.
XI. Miscellaneous		
(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, Bhubaneshwar. The land use land cover change map is enclosed as **Annexure XXXIII**.
(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 **Annexure-XXXIV**
(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 2022to March 2023)

S.No	Specific Condition	Compliance
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 the Ministry for information.	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- ro.ranchi-mef@gov.in Video Noamundi Jamda.mp4
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.

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	Purchase Order placement is in progress
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 25608 saplings were planted in FY:2024-25
3	Remediation Plan- Biological Environment	Increase green cover	Rapid forest development (Miyawaki plots)	Within lease	1 ha.	This is a continuous job. Plantation is done over an area of 0.50 ha till FY'25.
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	2 Nos of Check dams constructed. 1200m length garland drain constructed.

Annexure-2 Implementation of Natural Resource Augmentation Plan

Proposed Activity	Description	Location	Compliance Status
Tree Plantation	Development of fruit-bearing trees plot at village	Hesapi Dwarsahi	Work completed
Avenue plantation	Development of Greenbelt by road-side plantation along 15000 meters	Mahudi to Bhangaon, Noamundi to Kutingta, Noamundi to Jamda	Work completed.
Rain- water harvesting	Construction and maintenance of Rain-water harvesting pond structure in villages at 8 nos. of ponds	Noamundi Basti, Mahudi, Meralgara, Deogaon	Work completed at 10 locations against proposed 8 locations.

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

Natural Resource Augmentation Plan: No.2 Development of Greenbelt by road-side 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
Provision of solar light	Installation of solar lights in village areas	Mahudi, Sialjoda, Meralghra, Balijodi	Work completed at 23 Locations as per proposal. Mahudi: 5, Sialjoda: 6, Meralgara: 6 Balijodi: 6
Provision of solar powered borewell	Installation of solar-powered bore-well in schools	Mahudi, Sialjoda, Meralghra	Work completed
Drinking water	Installation of RO plants in surrounding school	Mahudi, Noamundi Basti, Sarbil, Bhangaon, Legaon, Lepang, Jampani.	Work completed
Health facility	Sponsoring Eye-camps in collaboration with Shankar Netralaya	Jaganathpur, Sarbil	2 Nos. of Eye check-up camps were conducted in 2022 and 2023 in partnership with Shankar Netralaya. Additionally, at Noamundi Hospital we have engaged a qualified eye specialist for public consultation on daily basis.
Agriculture	Installation of lift irrigation	Kumirta	Work completed at Kumirta by laying of pipeline from Baitarani river.
Agriculture	Construction of check dams along with feeder canals	Kutinga, Kotgarh	Work completed
Infrastructure development	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
Air Quality				
1	AAQ-4 locations	Twice in a week	416	403
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	20	20
4	Fugitive dust emission monitoring	Once in a fortnight	120	120
Meteorology				
1	Meteorological data	Daily	365	365
Water and Wastewater Quality				
A	Industrial/Domestic wastewater			
1	ETP/STP inlet and outlet	Monthly	144	144
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
Noise Levels				
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
Soil Characteristics				
1	Soil quality-core & buffer zone (6 locations)	Half-yearly	12	12

Annexure-5 Implementation Status of Public hearing Commitment

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

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 carrieout 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	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 chould be ascertained. the covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carriedout within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the competent authority.	Being Complied. No blasting is being carrioeut 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 detonetors 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 minimate/micromate Seismograph.
F	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.	Being complied. Fixed water spniklers installed at permanent haul road. Additionally, water sprinkling is carrioeud on haul road, loadin 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.
G	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-srve such an objective, shall take responsibility for securing such crop liability policy.	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 **Annexure- XXXV**.
H	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 rind MCR,1960 met.	Not Applicable. As no village present within the mining lease area.
I	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.	Not Applicable. Mineral transportation is done through conveyor belts to railway siding and further the products are transported to destination through rail.
J	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 arangements 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.	Not Applicable. Mineral transportation is done through conveyor belts to railway siding and further the products are transported to destination through rail.

K	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&R plan/compensation details for he project affected people (PAP) should be furnished. while preparing the R&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 undetaken 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&R and social-economic aspects should be discussed in the EIA report.	Being Complied.

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।

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

AGREEMENT

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

This agreement made on this 20th 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 13th September 2019 for allowing to pump **10.6 MCM/** Annum **(1210.04 m3/Hr on average)** of water on annual basis in the river at Latitude22 ^{0} 5 ′ 17.73 ″ North and Longitude E 85 ^{0} 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 m3/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 24th 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

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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 m3/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 m3/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. **<u>General condition to be made applicable to any industry under consideration.</u>**

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 &

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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

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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

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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 pare -2, soas 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

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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

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 1st April to 31stMarch 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

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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.**

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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

M/s Tata Steel Limited

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

Signed, seal & delivered on behalf of

कार्यपालक अभियन्ता
जलाशय प्रमंडल, चाईबासा

Governor of Jharkhand through
Water Resources Department,
Government of Jharkhand

In presence of

WITNESSES:

1-	(D. VIJAYENDRA) 20/10/21	1-	20/10/21
2-	20/10/21 (Deepak Shrivastava) Tata Steel Ltd.	2-	20/10/21 Suresh Kr. Rajak
3-	20/10/2021 (Jaydip Prasad)	3-	20.10.21 (Sidhesh Kr. Ruidas)

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 ^{0} 5 ' 17.73 " North and Longitude E 85 ^{0} 38 ' 14.01 " East from Baitarni River and or through the storage constructed for this purpose by the Company at Latitude 22 ^{0} 9 ' 5 " North and Longitude E 85 ^{0} 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 1st 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 2nd 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 3rd 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 dereserved.

Signed, seal & delivered on behalf of

M/s Tata Steel Limited

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

कार्यपालक अभियन्ता
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

Received
16/09/2021

Encl: EC of Noamundi Iron Mine

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

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

मुखिया,
ग्राम पंचायत- कादाजामदा
नोवामुण्डी, प0 सिंहभूम

Encl: EC of Noamundi Iron Mine

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,
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))

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

16/9/2021
मुखिया
ग्राम पंचायत-महुदी
प्रखण्ड-नोवामुण्डी
जिला-प० सिंहभूम

Encl: EC of Noamundi Iron Mine

TATA STEEL LIMITED
Mines Division Noamundi 833 217 India
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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.

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

Resving
16/09/2021
मुखिया
ग्राम पंचायत - नोवमुण्डी बस्ती
प्रखण्ड नोवामण्डी

TATA STEEL LIMITED
Mines Division Noamundi 833 217 India
Tel 91 9234301340 Fax 91 6596 290737
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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
बालीझरन पंचायत
नोवामुण्डी, प० सिंहभूम

TATA STEEL LIMITED
Mines Division Noamundi 833 217 India
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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). 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
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Work for people, not position, Kejriwal's golden advice to AAP cadre

New Delhi, Sep 11 (IANS) Aam Aadmi Party (AAP) convenor Arvind Kejriwal on Saturday advised his cadre to work for people and not for some party positions or election ticket as he does not want masses to point fingers and say that this party too, has become just like the BJP and the Congress."We have to work and we have to work hard for our people. Do your work so brilliantly that we have to come to you to appoint you for a position and not vice-versa. Remember, if you have to approach us for a position or ticket then it means you do not deserve it. Your happiness should come from serving the community," Delhi chief minister said while addressing a virtual conference to welcome the new members of National Council."Look at other parties, they are fighting amongst themselves for a seat. This should not happen in AAP," he said so while possibly indicating towards the Indian National Congress (INC) which is going through a rough patch with one of its ministers in Chhattisgarh currently [illegible]

Congress announces new chief in poll-bound Manipur

Imphal, Sep 11 (IANS) [illegible]

Could've averted 9/11 if world had accepted Vivekananda's message: President Kovind

Prayagraj,Sep 11 (IANS) [illegible]

NCW takes cognizance of Sakinaka rape case

Mumbai, Sep 11 (IANS) A 30-year-old [illegible]

Pending cases will be resolved soon: Minorities' panel chief

By Mohammad Saad Khan

New Delhi, Sep 11 (IANS) [illegible]

'Blot on humanity,' says Thackeray as Mumbai rape-assault victim dies in hospital

Mumbai,Sep 11 (IANS) [illegible]

Vijay Rupani: Fourth BJP CM to quit in 6 months

New Delhi,Sep 11 (IANS) [illegible]

Gandhinagar, Sep 11 (IANS) [illegible]

Rupani made a scapegoat to hide failures of remote-controlled BJP govt: Congress

[illegible]

Replacing Rupani might help BJP beat anti-incumbency'

New Delhi, Sep 11 (IANS) [illegible]

Karnal standoff ends: Haryana govt orders probe into Aug 28 incident, farmers call off sit-in

Karnal, Sep 11 (IANS) [illegible]

India, Sudan navies carry out maritime drill in Red Sea

New Delhi, Sep 11 (IANS) [illegible]

[illegible]

TATA STEEL

TATA

NOTICE

पर्यावरण, वन व जलवायु परिवर्तन मंत्रालय पत्र संख्या : I A-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 ओर बेनेफिसिएशन प्लांट (फीड टू प्लांट) की 18 एम टी पी ए से 27 एम टी पी ए तक क्षमता बढ़ोतरी भी शामिल है। ईसी पत्र की प्रतिलिपि झारखंड राज्य प्रदूषण नियंत्रण बोर्ड और पर्यावरण, वन व जलवायु परिवर्तन मंत्रालय की वेबसाइट (*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

Continuous Ambient Air Quality Monitoring Station

ANNEXURE-XI

Summarised Ambient Air Quality Monitoring Report of Buffer Zone								
Noamundi Iron Ore Mine of M/s Tata Steel Limited								
Period: October 2024 to March 2025								
Mine location	**Sampling location**	**Month**	**Range**	**Results in µg/m3**				
				PM10	**PM2.5**	**SO2**	**NOx**	**CO**
Noamundi Iron Ore Mine	Tankura Village	Oct 24	Avg.	52.9	18.4	8.4	20.2	BLQ (LOQ-0.5)
		Nov 24	Avg.	55.6	19.5	10.2	19.1	BLQ (LOQ-0.5)
		Dec 24	Avg.	53.7	17.1	8.9	17.9	BLQ (LOQ-0.5)
		Jan 25	Avg.	50.5	16.4	9.5	17.1	BLQ (LOQ-0.5)
		Feb 25	Avg.	53.9	17.2	9.1	18.4	BLQ (LOQ-0.5)
		Mar 25	Avg.	49.5	17.6	8.8	19.7	BLQ (LOQ-0.5)
	Miralgara Village	Oct 24	Avg.	57.2	20.4	9.6	21.3	BLQ (LOQ-0.5)
		Nov 24	Avg.	55.1	19.0	9.9	19.1	BLQ (LOQ-0.5)
		Dec 24	Avg.	56.4	20.5	12.2	22.7	BLQ (LOQ-0.5)
		Jan 25	Avg.	56.7	23.7	10.5	23.2	BLQ (LOQ-0.5)
		Feb 25	Avg.	56.1	21.8	12.9	23.6	BLQ (LOQ-0.5)
		Mar 25	Avg.	55.0	20.2	10.4	18.4	BLQ (LOQ-0.5)
	Kitabeda Village	Oct 24	Avg.	54.2	19.9	10.1	19.0	BLQ (LOQ-0.5)
		Nov 24	Avg.	51.6	19.3	9.9	16.9	BLQ (LOQ-0.5)
		Dec 24	Avg.	50.5	16.7	9.0	18.0	BLQ (LOQ-0.5)
		Jan 25	Avg.	49.9	17.4	9.5	17.0	BLQ (LOQ-0.5)
		Feb 25	Avg.	50.6	16.3	8.2	18.0	BLQ (LOQ-0.5)
		Mar 25	Avg.	51.9	17.0	8.8	17.8	BLQ (LOQ-0.5)
	Balita Village	Oct 24	Avg.	55.1	19.0	8.5	20.4	BLQ (LOQ-0.5)
		Nov 24	Avg.	56.6	18.7	8.0	22.6	BLQ (LOQ-0.5)
		Dec 24	Avg.	55.1	19.6	10.3	22.7	BLQ (LOQ-0.5)
		Jan 25	Avg.	53.5	20.2	12.1	20.3	BLQ (LOQ-0.5)
		Feb 25	Avg.	57.2	24.8	13.9	21.8	BLQ (LOQ-0.5)
		Mar 25	Avg.	55.0	20.5	11.0	20.5	BLQ (LOQ-0.5)

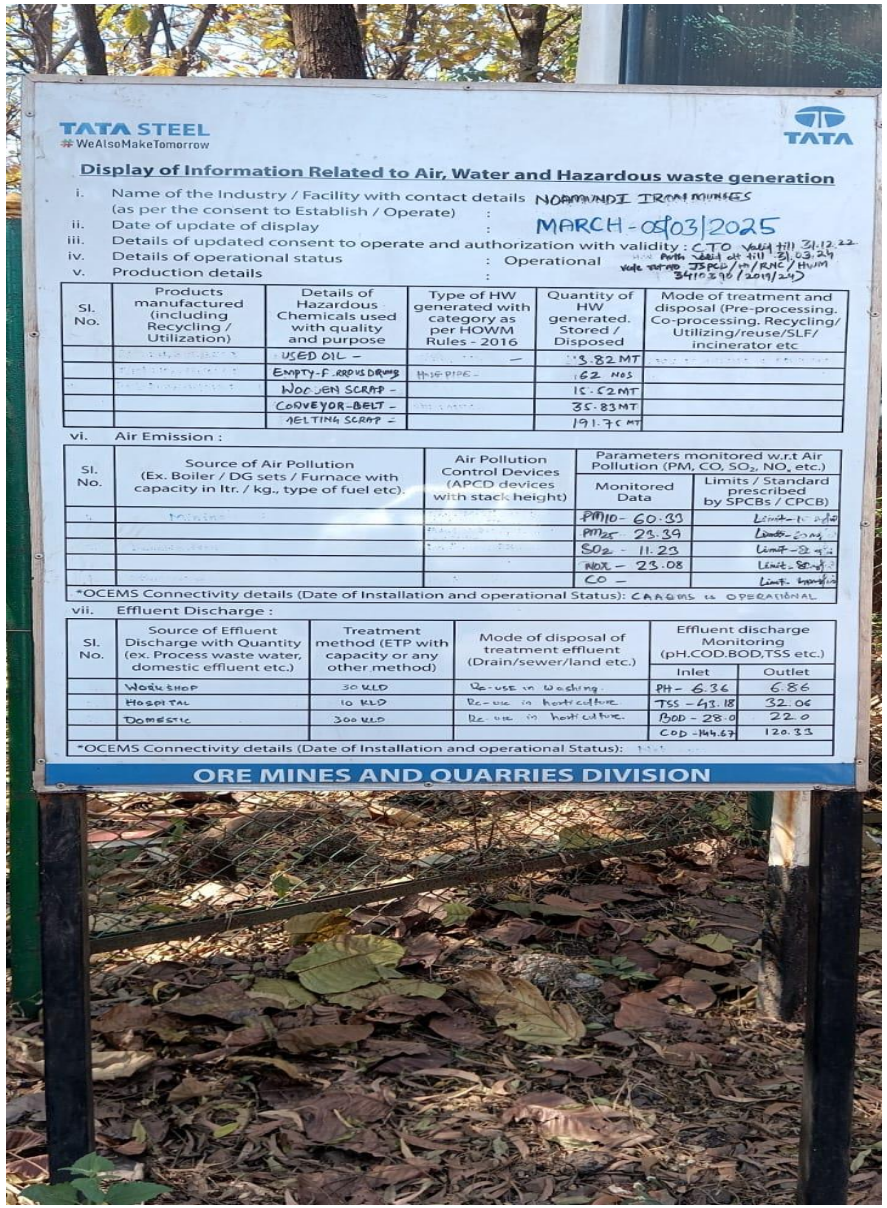
ANNEXURE-XI

Summarised Ambient Air Quality Monitoring Report of Core Zone								
Noamundi Iron Ore Mine of M/s Tata Steel Limited								
Period: October 2024 to March 2025								
Mine location	**Sampling location**	**Month**	**Range**	**Results in µg/m3**				
				PM10	**PM2.5**	**SO2**	**NOx**	**CO**
Noamundi Iron Ore Mine	Near WTP	Oct 24	Avg.	61.3	26.0	12.4	21.9	BLQ (LOQ-0.5)
		Nov 24	Avg.	60.3	26.6	11.5	31.9	BLQ (LOQ-0.5)
		Dec 24	Avg.	60.8	23.5	11.1	21.8	BLQ (LOQ-0.5)
		Jan 25	Avg.	62.8	23.9	12.2	23.0	BLQ (LOQ-0.5)
		Feb 25	Avg.	62.9	23.7	11.8	22.3	BLQ (LOQ-0.5)
		Mar 25	Avg.	59.4	20.6	10.8	19.8	BLQ (LOQ-0.5)
	Near Sports Complex	Oct 24	Avg.	57.1	24.7	11.3	21.7	BLQ (LOQ-0.5)
		Nov 24	Avg.	51.8	20.7	6.9	23.0	BLQ (LOQ-0.5)
		Dec 24	Avg.	59.4	22.6	10.4	21.9	BLQ (LOQ-0.5)
		Jan 25	Avg.	56.9	20.2	10.5	22.8	BLQ (LOQ-0.5)
		Feb 25	Avg.	57.7	20.3	10.6	21.4	BLQ (LOQ-0.5)
		Mar 25	Avg.	60.6	21.5	10.7	20.6	BLQ (LOQ-0.5)
	MRSS	Oct 24	Avg.	57.8	22.3	12.5	23.8	BLQ (LOQ-0.5)
		Nov 24	Avg.	69.3	27.4	11.4	26.2	BLQ (LOQ-0.5)
		Dec 24	Avg.	64.2	25.6	11.7	23.6	BLQ (LOQ-0.5)
		Jan 25	Avg.	65.7	27.2	13.0	25.4	BLQ (LOQ-0.5)
		Feb 25	Avg.	60.6	21.9	11.0	20.5	BLQ (LOQ-0.5)
		Mar 25	Avg.	66.4	28.1	12.7	25.3	BLQ (LOQ-0.5)
	Bottom Bin	Oct 24	Avg.	60.4	22.2	11.4	22.6	BLQ (LOQ-0.5)
		Nov 24	Avg.	63.4	21.8	11.7	22.4	BLQ (LOQ-0.5)
		Dec 24	Avg.	60.5	21.5	10.9	22.4	BLQ (LOQ-0.5)
		Jan 25	Avg.	58.4	19.7	10.2	21.0	BLQ (LOQ-0.5)
		Feb 25	Avg.	56.4	20.3	11.3	21.5	BLQ (LOQ-0.5)
		Mar 25	Avg.	60.6	23.0	10.9	21.0	BLQ (LOQ-0.5)

ANNEXURE-XI

Summarised Ambient Air Quality Monitoring Report of 12 Parameters of Core Zone										
Noamundi Iron Ore Mine of M/s Tata Steel Limited										
Period: October 2024 to March 2025										
Parameters			December 2024				March 2025			
		NAAQMS Standards	Near WTP	Near Hospital	Near MRSS	Near Bottom Bin	Near WTP	Near Sports Complex	Near MRSS	Near Bottom Bin
1	Particulate Matter (PM_{10})	100 (24 hrs)	72.4	72.4	72.4	72.4	62.9	58.3	58.2	61.9
2	Particulate Matter ($PM_{2.5}$)	60 (24 hrs)	26.8	26.8	26.8	26.8	21.6	21.4	24.6	17.4
3	Sulphur dioxide	80 (24 hrs)	10.9	10.9	10.9	10.9	12.8	9.2	9.1	8.2
4	Oxides of Nitrogen	80 (24 hrs)	16.7	16.7	16.7	16.7	23.7	18.4	18.2	18.7
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)	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)	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)	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)	BLQ (LOQ-2.0)	BLQ (LOQ-2.0)	BLQ (LOQ-2.0)	BLQ (LOQ-2.0)
9	Ozone (as O_3)	100 (8 hrs)	10.1	10.1	10.1	10.1	9.7	7.2	11.7	9.3
10	Ammonia (as NH_3)	400 (24 hrs)	17.5	17.5	17.5	17.5	13.6	12.8	16.3	17.1
11	Benzene	5.0 (annual)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	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	Benzo-Pyrene	1.0 (annual)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)

ANNEXURE-12 Digital Display Board



TATA STEEL
#WeAlsoMakeTomorrow

TATA

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

i. Name of the Industry / Facility with contact details (as per the consent to Establish / Operate) : NOAMUNDI IRON MINES
ii. Date of update of display : MARCH-05/03/2025
iii. Details of updated consent to operate and authorization with validity : CTO valid till 31.12.22 Auth. valid till 31.03.24 vide letter no. JSPCB/PR/RNC/HO/M 3410 396/2019/247
iv. Details of operational status : Operational
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.DRUMS DRUMS	HW PIPE –	62 NOS	
		WOOLEN SCRAP –		15.52 MT	
		CONVEYOR-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_2, NO, etc.)	
			Monitored Data	Limits / Standard prescribed by SPCBs / CPCB)
			PM10 – 60.33	Limit – 100 mg/Nm³
			PM_{25} 23.39	Limit – 60 mg/Nm³
			SO_2 – 11.23	Limit – 80 mg/Nm³
			NOX – 23.08	Limit – 80 mg/Nm³
			CO –	Limit – 100 mg/Nm³

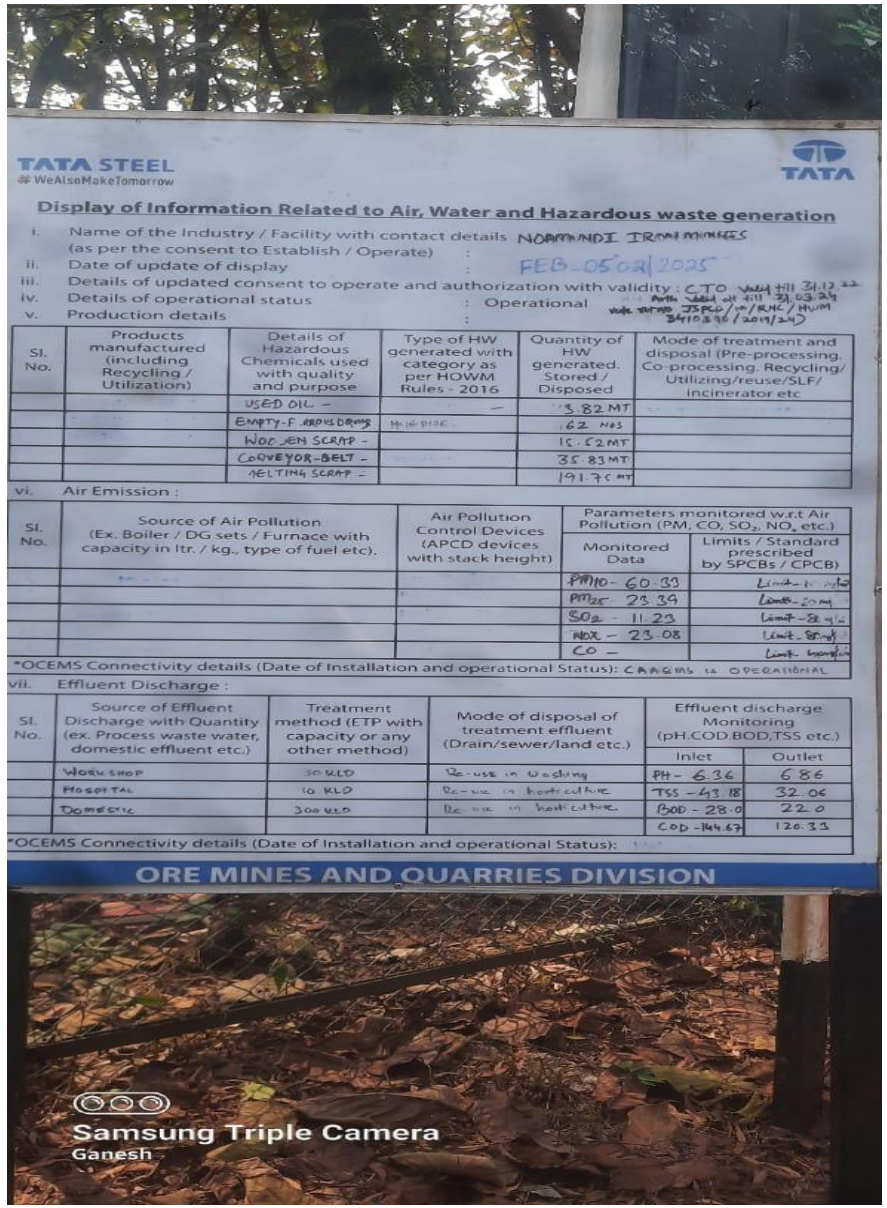
*OCEMS Connectivity details (Date of Installation and operational Status): CAAQMS is OPERATIONAL

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

TATA

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

i. Name of the Industry / Facility with contact details (as per the consent to Establish / Operate) : NOAMUNDI IRON MINES
ii. Date of update of display : FEB-05/02/2025
iii. Details of updated consent to operate and authorization with validity : CTO valid till 31.12.22 Auth. valid till 31.03.24 vide letter no. JSPCB/PR/RNC/HO/M 3410 396/2019/247
iv. Details of operational status : Operational
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.DRUMS DRUMS	HW PIPE –	62 NOS	
		WOOLEN SCRAP –		15.52 MT	
		CONVEYOR-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_2, NO, etc.)	
			Monitored Data	Limits / Standard prescribed by SPCBs / CPCB)
			PM10 – 60.33	Limit – 100 mg/Nm³
			PM_{25} 23.39	Limit – 60 mg/Nm³
			SO_2 – 11.23	Limit – 80 mg/Nm³
			NOX – 23.08	Limit – 80 mg/Nm³
			CO –	Limit – 100 mg/Nm³

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

ANNEXURE-XIII

Summarised Fugitive Dust Monitoring Report					
Noamundi Iron Ore Mine of M/s Tata Steel Limited					
Period: October 2024 to March 2025					
Mine Location	**Sampling Location**	**Month**	**Unit**	**Results**	**Norms**
Noamundi Iron Ore Mine	Crushing & Screening Plant	October 2024	µg/m3	502.50	1200
		November 2024	µg/m3	615.50	1200
		December 2024	µg/m3	615.50	1200
		January 2025	µg/m3	587.50	1200
		February 2025	µg/m3	611.00	1200
		March 2025	µg/m3	612.50	1200
	Loading & Stacking	October 2024	µg/m3	592.50	1200
		November 2024	µg/m3	528.50	1200
		December 2024	µg/m3	528.50	1200
		January 2025	µg/m3	538.50	1200
		February 2025	µg/m3	599.50	1200
		March 2025	µg/m3	692.00	1200
	Haul Road	October 2024	µg/m3	694.50	1200
		November 2024	µg/m3	573.50	1200
		December 2024	µg/m3	573.50	1200
		January 2025	µg/m3	667.50	1200
		February 2025	µg/m3	674.00	1200
		March 2025	µg/m3	620.00	1200
	Waste Dump Site	October 2024	µg/m3	499.00	1200
		November 2024	µg/m3	415.50	1200
		December 2024	µg/m3	415.50	1200
		January 2025	µg/m3	504.50	1200
		February 2025	µg/m3	409.50	1200
		March 2025	µg/m3	389.00	1200
	Mining Face (Near Drill)	October 2024	µg/m3	528.00	1200
		November 2024	µg/m3	542.50	1200
		December 2024	µg/m3	542.50	1200
		January 2025	µg/m3	598.00	1200
		February 2025	µg/m3	605.50	1200
		March 2025	µg/m3	603.00	1200

Air Pollution Control Devices

Fixed Sprinklers

Mist canons

Mobile Sprinklers

Dry-fog System

ANNEXURE - XV

Surface Water Flow Rate Measurement Report				
Noamundi Iron Ore Mine of M/s Tata Steel Limited				
Period: October 2024 to March 2025				
Mine Location	**Sample Location**	**Month**	**Unit**	**Results**
Noamundi iron Ore Mine	Balijhore Nalla	October 2024	Cu.m/hr	615
		November 2024	Cu.m/hr	547
		December 2024	Cu.m/hr	510
		January 2025	Cu.m/hr	389
		February 2025	Cu.m/hr	280
		March 2025	Cu.m/hr	258
	Jojo Nalla	October 2024	Cu.m/hr	642
		November 2024	Cu.m/hr	623
		December 2024	Cu.m/hr	559
		January 2025	Cu.m/hr	516
		February 2025	Cu.m/hr	376
		March 2025	Cu.m/hr	321

GROUND WATER QUALITY REPORT (OCTOBER 2024 TO MARCH 2025)
NOAMUNDI IRON MINE

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		November 2024			
I	**Biological Testing 1. Water**				
1	*Escherichia coli*	Absent	Absent	Absent	Absent
II	**Chemical Testing 1. Water**				
2	Alkalinity (as $CaCO_3$) (as MBAS)	176.39	182.41	186.92	162.73
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)	18.76	26.43	26.43	18.24
7	Calcium (as Ca)	43.37	52.76	46.27	47.91
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	0.17	0.14	0.17	0.18
10	Magnesium (as Mg)	12.91	11.92	9.53	13.87
11	Nitrate (as NO_3)	5.82	3.91	5.27	6.93
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	6.97	7.21	6.81	7.26
14	Phenolic compounds (as C_6H_5OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	9.36	6.39	8.26	6.82
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	473	471	467	476
18	Turbidity	0.2	0.2	0.3	0.3
19	Total hardness (as $CaCO_3$)	162	180	154	176
II	**Chemical Testing 2. Residues In Water**				
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)	0.16	0.24	0.26	0.13
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 2024 TO MARCH 2025)
NOAMUNDI IRON MINE

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		November 2024			
34	Mineral Oil	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)
35	**Pesticide Residues Organochlorine**				
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	Malaoxon	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)

GROUND WATER QUALITY REPORT (OCTOBER 2024 TO MARCH 2025)
NOAMUNDI IRON MINE

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		February 2025			
I	**Discipline: Biological**				
1	*Escherichia coli*	Absent	Absent	Absent	Absent
II	**Discipline: Chemical**				
2	Alkalinity (as $CaCO_3$) (as MBAS)	197.73	136.52	193.57	195.31
3	Anionic surface active agents	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
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)	26.37	16.97	21.47	23.57
7	Calcium (as Ca)	53.48	43.81		53.28
8	Free residual chlorine	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Fluoride (as F)	0.27	0.21	0.24	0.14
10	Magnesium (as Mg)	13.53	13.57	11.97	11.36
11	Nitrate (as NO_3)	9.31	7.91	8.16	7.19
12	Odour	Agreeable	Agreeable	Agreeable	Agreeable
13	pH	7.26	6.97	7.16	6.73
14	Phenolic compounds (as C_6H_5OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
15	Sulphate (as SO_4)	21.47	18.24	19.34	
16	Taste	Agreeable	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	352	439	426	431
18	Turbidity	0.1	0.1	0.1	0.1
19	Total hardness (as $CaCO_3$)	188	166	170	180
III	**Discipline: Chemical**				
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)	0.17	0.16	0.17	0.19
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 2024 TO MARCH 2025)
NOAMUNDI IRON MINE

	Parameters	Noamundi Basti (Nr. Play Ground)	Noamundi Bazar (Nr. Petrol Pump)	Mahudi Village (Railway Station Road)	Bottom Bin (Nr. Barrack)
		February 2025			
IV	**Discipline: Chemical**				
34	Mineral Oil	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)	BLQ LOQ– 0.001)
V	**Discipline: Chemical**				
35	**Pesticide Residues Organochlorine**				
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	Malaoxon	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)

ANNEXURE-XVII

Summarised Ground Water Level Report			
Noamundi Iron Ore Mine of M/s Tata Steel Limited			
Period: October 2024 to March 2025			
Month	**Locations wise Ground Water Level in Mtrs. (BGL)**		
	Noamundi Basti	**Noamundi petrol Pump**	**Mahudi Village**
October 2024	3.82	3.61	4.16
November 2024	3.87	3.92	4.38
December 2024	3.98	3.99	4.46
January 2025	4.07	4.11	4.63
February 2025	1.97	4.39	2.58
March 2025	2.17	3.71	2.58

Piezometer


PIEZOMETER BOREWELL
Latitude : 22.14674°
Longitude : 85.49607°
Elevation : 518.00 m
Accuracy : 2.40 m
Pitch : 90.0°(-0.00°)
Date : 05/07/2024
Time : 10:00:55 AM


Latitude : 22.14676°
Longitude : 85.49603°
Elevation : 518.00 m
Accuracy : 1.94 m
Pitch : 90.0°(-0.00°)
Date : 05/07/2024
Time : 10:01:51 AM

ANNEXURE - XIX

Summarized Surface Water Quality Monitoring Report					
Noamundi Iron Ore Mine of M/s tata Steel Limited					
Period: October 2024 to March 2025					
Location		**Balijhore Nallah (Upstream)**		**Balijhore Nallah (Downstream)**	
Parameters		**November 2024**	**February 2025**	**November 2024**	**February 2025**
I	**Discipline : Biological**				
1	Coliform	Absent	Absent	Absent	Absent
II	**Discipline : Chemical**				
2	pH value	6.42	6.51	6.76	6.82
3	Colour	14	18	12	16
4	Dissolved Oxygen	6.4	6.5	6.1	6.2
5	Total Suspended Solid (as TSS)	23	26	16	18
6	BOD (3 days at 27°C)	2.68	2.71	2.51	2.64
7	Chemical oxygen demand	6.87	7.39	5.26	6.52
8	Total Dissolved Solids (TDS)	1392	1427	1168	1394
9	Copper (as Cu)	0.06	0.07	0.04	0.06
10	Chloride (as Cl)	182	172	164	153
11	Sulphate (as SO4)	163	204	158	192
12	Nitrate (as NO3)	26.43	21.52	21.93	18.46
13	Fluoride (as F)	0.52	0.61	0.46	0.53
14	Cyanide (as CN)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)
15	Phenolic compounds (as C6H5OH)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
16	Anionic Detergent	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
III	**Discipline : Chemical**				
17	Iron (as Fe)	0.41	0.43	0.37	0.38
18	Cadmium (as Cd)	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)
20	Arsenic (as As)	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)
22	Zinc (as Zn)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)
23	Hexa Chromium (as Cr+6)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
24	Mercury (as Hg)	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)

RWH Structure

ANNEXURE-XXI

ETP Report (October 2024 t0 March 2025)
Noamundi Iron Mine

Test Parameter		Hospital ETP 15 KLD - OUTLET					
		Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	Mar'25
I	**Chemical Testing Pollution & Environment**						
1	pH value	6.96	6.92	7.26	6.91	6.57	7.21
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	38	37	36	38	46
4	Ammonical Nitrogen (as N)	18	21	26	28	26	28
5	Total Kjeldahl Nitrogen (as N)	24	26	38	37	32	32
6	BOD (3 days at 27°C)	16	18	16	24	16	24
7	Chemical Oxygen Demand	67	82	74	92	119	138
8	Cyanide (as CN)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Phenolic Compounds (as C_6H_5OH)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)
II	**Chemical Testing 2. Residues In Water**						
10	Iron (as Fe)	1.47	1.18	1.21	1.14	1.53	2.16
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)
I	**Biological Testing 1.Water**						
1	Fecal coliform	164	109	141	72	108	82
II	**Chemical Testing Pollution & Environment**						
2	Colour	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	25^{0}C	25^{0}C	25^{0}C	25^{0}C	25^{0}C	25^{0}C
5	Free residual chlorine	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-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 NH_3)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
8	Fluoride (as F)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)
9	Sulphide (as S)	BDL(DL-0.03)	BDL(DL-0.03)	BDL(DL-0.03)	BDL(DL-0.03)	BLQ (LOQ-0.03)	BLQ (LOQ-0.03)
10	Nitrate Nitrogen	BDL(DL-2)	BDL(DL-2)	BDL(DL-2)	BDL(DL-2)	BLQ (LOQ-2)	BLQ (LOQ-2)
11	Bio Assay Test	92%	94%	94%	92%	94%	92%
12	Hexavalent Chromium (as Cr^{+6})	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BDL(DL-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
13	Dissolved Phosphate (as P)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)

ETP Report (April 2024 t0 September 2024)
Noamundi Iron Mine

Test Parameter		B/Bin ETP 10 KLD - OUTLET					
		Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	Mar'25
I	**Chemical Testing Pollution & Environment**						
1	pH value	6.92	6.61	6.42	6.93	6.57	6.92
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)	42	47	42	64	46	56
4	Ammonical Nitrogen (as N)	27.93	28.46	31.46	36.29	38.93	37.92
5	Total Kjeldahl Nitrogen (as N)	32.64	37.52	47.19	48.17	47.39	42.97
6	BOD (3 days at 27°C)	24	24	21	24	22	24
7	Chemical Oxygen Demand	103	119	156	154	142	162
8	Cyanide (as CN)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Phenolic Compounds (as C_6H_5OH)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)
II	**Chemical Testing 2. Residues In Water**						
10	Iron (as Fe)	0.87	0.67	1.26	0.93	1.17	1.93
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)
I	**Biological Testing 1.Water**						
1	Fecal coliform	119	175	84	101	94	58
II	**Chemical Testing Pollution & Environment**						
2	Colour	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	25^{0}C	25^{0}C	25^{0}C	25^{0}C	25^{0}C	25^{0}C
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	<850	<850
7	Free Ammonia (as NH_3)	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)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-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%	94%	94%	92%	94%	92%
12	Hexavalent Chromium (as Cr^{+6})	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	Dissolved Phosphate (as P)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)

ANNEXURE-XXII

STP Report (October 2024 t0 March 2025)
Noamundi Iron Mine

	Test Parameter	Measurement Unit	New Town Ship STP 50 KLD - Outlet					
			Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	Mar'25
I	**Chemical Testing Pollution & Environment**							
1	pH value	-	6.19	6.38	6.42	6.51	6.62	6.71
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	42	46	43	32	47	52
4	Ammonical Nitrogen (as N)	mg/l	18.76	21.54	24.18	23.91	24.52	28.43
5	Total Kjeldahl Nitrogen (as N)	mg/l	24.53	27.52	28.46	27.37	26.43	52.87
6	BOD (3 days at 27°C)	mg/l	18	16	18	21	18	24
7	Chemical Oxygen Demand	mg/l	96	82	109	113	119	194
8	Cyanide (as CN)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Phenolic Compounds (as C_6H_5OH)	mg/l	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)
II	**Chemical Testing 2. Residues in Water**							
10	Iron (as Fe)	mg/l	0.76	0.93	0.87	0.62	1.31	1.73
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)
I	**Biological Testing 1.Water**							
1	Faecal coliform	MPN/100 ml	92	109	94	106	121	92
II	**Chemical Testing Pollution & Environment**							
2	Colour	Hazen units	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	°C	25^0C	25^0C	25^0C	25^0C	25^0C	25^0C
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 NH_3)	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)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-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%	92%	92%	94%	94%	92%
12	Hexavalent Chromium (as Cr^{+6})	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	Dissolved Phosphate (as P)	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)

STP Report (October 2024 t0 March 2025)
Noamundi Iron Mine

	Test Parameter	Measurement Unit	Central Camp STP 50 KLD -Outlet					
			Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	Mar'25
I	**Chemical Testing Pollution & Environment**							
1	pH value	-	6.58	7.16	7.13	7.16	6.87	7.13
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	28	26	41	43	56	36
4	Ammonical Nitrogen (as N)	mg/l	18.32	21.92	26.36	28.19	27.93	28.74
5	Total Kjeldahl Nitrogen (as N)	mg/l	32.17	26.46	34.47	36.43	32.47	34.68
6	BOD (3 days at 27°C)	mg/l	18	21	24	21	24	24
7	Chemical Oxygen Demand	mg/l	76	84	146	156	162	152
8	Cyanide (as CN)	mg/l	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Phenolic Compounds (as C_6H_5OH)	mg/l	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)	BLQ (LOQ-0.5)
II	**Chemical Testing 2. Residues in Water**							
10	Iron (as Fe)	mg/l	1.36	1.32	1.28	1.18	1.57	1.94
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)
I	**Biological Testing 1.Water**							
1	Faecal coliform	MPN/100 ml	163	130	177	116	119	82
II	**Chemical Testing Pollution & Environment**							
2	Colour	Hazen units	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)	0 (Colourless)
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	°C	25^0C	25^0C	25^0C	25^0C	25^0C	25^0C
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 NH_3)	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)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-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%	94%	92%	92%	94%
12	Hexavalent Chromium (as Cr^{+6})	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	Dissolved Phosphate (as P)	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)

Location:- 30KLD ETP at Mega Centre

Record for the month October - 2024

Sl. No.	DATE	No. of vehicle washed	Quantity of Oil & grease recovered in kg
1	1/10/2024	2	0.16
2	2/10/2024	1	0.13
3	3/10/2024	1	0.13
4	4/10/2024	2	0.13
5	5/10/2024	3	0.2
6	6/10/2024	3	0.2
7	7/10/2024	2	0.2
8	8/10/2024	1	0.12
9	9/10/2024	2	0.21
10	10/10/2024	3	0.22
11	11/10/2024	2	0.18
12	12/10/2024	2	0.19
13	13/10/2024	2	0.18
14	14/10/2024	1	0.14
15	15/10/2024	1	0.16
16	16/10/2024	1	0.16
17	17/10/2024	2	0.24
18	18/10/2024	3	0.22
19	19/10/2024	1	0.16
20	20/10/2024	1	0.16
21	21/10/2024	1	0.13
22	22/10/2024	2	0.15
23	23/10/2024	2	0.15
24	24/10/2024	1	0.14
25	25/10/2024	1	0.14
26	26/10/2024	3	0.2
27	27/10/2024	3	0.2
28	28/10/2024	3	0.21
29	29/10/2024	2	0.13
30	30/10/2024	1	0.15
31	31/10/2024.	1	0.14
		Total	5.23

P. Rajak

Area Manager Environment, OMQ
TATA STEEL LIMITED

Head (Operations)
Noamundi Iron Mines

Location :- 30 KLD ETP at Mega Center.

Record for the month November - 2024

Sl. No.	Date	No. of. Vehicle washed	Quantity of oil & grease recovered in kg
1	1-11-2024	1	0.16
2	2-11-2024	3	0.24
3	3-11-2024	2	0.22
4	4-11-2024	2	0.16
5	5-11-2024	2	0.16
6	6-11-2024	1	0.13
7	7-11-2024	1	0.15
8	8-11-2024	1	0.15
9	9-11-2024	1	0.14
10	10-11-2024	1	0.17
11	11-11-2024	1	0.16
12	12-11-2024	1	0.16
13	13-11-2024	2	0.2
14	14-11-2024	2	0.2
15	15-11-2024	2	0.2
16	16-11-2024	2	0.2
17	17-11-2024	2	0.21
18	18-11-2024	3	0.25
19	19-11-2024	3	0.22
20	20-11-2024	3	0.23
21	21-11-2024	2	0.2
22	22-11-2024	2	0.2
23	23-11-2024	3	0.21
24	24-11-2024	2	0.16
25	25-11-2024	2	0.19
26	26-11-2024	2	0.21
27	27-11-2024	3	0.22
28	28-11-2024	3	0.23
29	29-11-2024	3	0.23
30	30-11-2024	1	0.18
	ToTal =		5.74

P. Rajak

Area Manager Environment, OMQ
TATA STEEL LIMITED

Head (Operations)
Noamundi Iron Mines

Location :- 30 KLD ETP at Mega Centre

Record For the Month December - 2024

Sl. No.	Date	No. of Vehicle Washed	Quantity of Oil & grease recovered in kg
1	1-12-2024	1	0.18
2	2-12-2024	1	0.16
3	3-12-2024	1	0.17
4	4-12-2024	2	0.2
5	5-12-2024	2	0.2
6	6-12-2024	3	0.2
7	7-12-2024	3	0.21
8	8-12-2024	3	0.22
9	9-12-2024	1	0.18
10	10-12-2024	1	0.19
11	11-12-2024	1	0.18
12	12-12-2024	1	0.14
13	13-12-2024	2	0.16
14	14-12-2024	2	0.16
15	15-12-2024	3	0.24
16	16-12-2024	3	0.22
17	17-12-2024	1	0.16
18	18-12-2024	1	0.16
19	19-12-2024	1	0.16
20	20-12-2024	2	0.16
21	21-12-2024	3	0.24
22	22-12-2024	3	0.22
23	23-12-2024	1	0.16
24	24-12-2024	1	0.13
25	25-12-2024	1	0.12
26	26-12-2024	1	0.12
27	27-12-2024	2	0.21
28	28-12-2024	2	0.16
29	29-12-2024	2	0.19
30	30-12-2024	3	0.21
31	31-12-2024	3	0.22
	Total	=	5.63

P. Rajak

Area Manager Environment, OMQ
TATA STEEL LIMITED

Head (Operations)
Noamundi Iron Mines

Location :- 30 KLD ETP at Mega Center

Record For the month January - 2025

Sl. No.	Date	No. of vehicle washed	Quantity of Oil & grease recovered in kg
1	01/01/2025	1	0.14
2	02/01/ 2025	2	0.17
3	03/01/ 2025	2	0.18
4	04/01/ 2025	2	0.21
5	05/01/ 2025	3	0.23
6	06/01/02025	3	0.2
7	07/01/ 2025	2	0.2
8	08/01/ 2025	2	0.18
9	09/01/ 2025	1	0.21
10	10/01/2025	2	0.22
11	11/01/ 2025	2	0.14
12	12/01/ 2025	1	0.16
13	13/01/ 2025	2	0.16
14	14/01/ 2025	1	0.16
15	15/01/ 2025	2	0.18
16	16/01/2025	2	0.19
17	17/01/2025	2	0.16
18	18/01/2025	1	0.14
19	19/01/ 2025	1	0.15
20	20/01/ 2025	1	0.16
21	21/01/ 2025	2	0.2
22	22/01/ 2025	2	0.21
23	23/01/ 2025	3	0.23
24	24/01/2025	3	0.22
25	25/01/2025	2	0.16
26	26/01/2025	3	0.24
27	27/01/2025	3	0.24
28	28/01/ 2025	3	0.21
29	29/01/2025	3	0.24
30	30/01/2025	3	0.22
31	31/01/2025	2	0.16
		Total =	5.89

P. Rajak

Area Manager Environment, OMQ
TATA STEEL LIMITED

Head (Operations)
Noamundi Iron Mines

Location :- 30 KLD ETP at Mega Centen.

Record For the month February - 2025.

Sl. No.	Date	No. of vehicle washed	Quantity of oil & grease recovered in kg
1	1-02-2025	3	0.24
2	2-02-2025	3	0.23
3	3-02-2025	2	0.20
4	4-02-2025	3	0.24
5	5-02-2025	3	0.21
6	6-02-2025	2	0.20
7	7-02-2025	1	0.19
8	8-02-2025	2	0.19
9	9-02-2025	2	0.2
10	10-02-2025	1	0.14
11	11-02-2025	1	0.16
12	12-02-2025	1	0.16
13	13-02-2025	2	0.23
14	14-02-2025	1	0.18
15	15-02-2025	3	0.25
16	16-02-2025	2	0.20
17	17-02-2025	Break Down	
18	18-02-2025	3	0.24
19	19-02-2025	1	0.17
20	20-02-2025	2	0.21
21	21-02-2025	2	0.19
22	22-02-2025	1	0.18
23	23-02-2025	1	0.17
24	24-02-2025	2	0.19
25	25-02-2025	2	0.20
26	26-02-2025	3	0.23
27	27-02-2025	2	0.20
28	28-02-2025	1	0.17
		Total. =	5.18

DUR-10

Area Manager Environment, OMQ
TATA STEEL LIMITED

Head (Operations)
Noamundi Iron Mines

Location:- 30 KLD ETP at Mega Center.

Record for the month March-2025

Sl. No.	Date	No. of vehicles washed	Quantity of oil & grease recovered in kg.
1	1/03/2025	1	0.14
2	2/03/2025	2	0.19
3	3/03/2025	2	0.20
4	4/03/2025	2	0.18
5	5/03/2025	1	0.14
6	6/03/2025	3	0.28
7	7/03/2025	2	0.21
8	8/03/2025	2	0.21
9	9/03/2025	1	0.15
10	10/03/2025	1	0.16
11	11/03/2025	2	0.21
12	12/03/2025	2	0.25
13	13/03/2025	3	0.28
14	14/03/2025	2	0.14
15	15/03/2025	1	0.15
16	16/03/2025	1	0.14
17	17/03/2025	2	0.21
18	18/03/2025	2	0.23
19	19/03/2025	3	0.26
20	20/03/2025	2	0.22
21	21/03/2025	1	0.14
22	22/03/2025	1	0.12
23	23/03/2025	2	0.16
24	24/03/2025	3	0.27
25	25/03/2025	3	0.25
26	26/03/2025	2	0.22
27	27/03/2025	1	0.14
28	28/03/2025	1	0.16
29	29/03/2025	2	0.19
30	30/03/2025	3	0.26
31	31/03/2025	1	0.15
		Total -	6.17

Assistant Manager Environment-OMQ
Tata Steel Ltd.

Suraj

Head (Operations)
Noamundi Iron Mines

Waveform Trigger Source	Long at October 3, 2024 14:00:23
Trigger Level(s)	Geo 0.909 mm/s,Mic 2.00 pa
Pre-Trigger/Record Time	0.25 sec/6.8 sec (Auto)
Sample Rate	2048 sps
Setup File Name	TATA STEEL.MMB
Operator	Operator

Serial Number	UM15994
Model Number	Micromate ISEE 10.90FB
Battery Level	3.8 volts
Unit Calibration	January 29, 2024 by UES New Delhi
Event File Name	UM15994_20241003140023.IDFW
USB Sensor Support	Disabled

Notes
Location:
Client: TSL
User Name:
General:

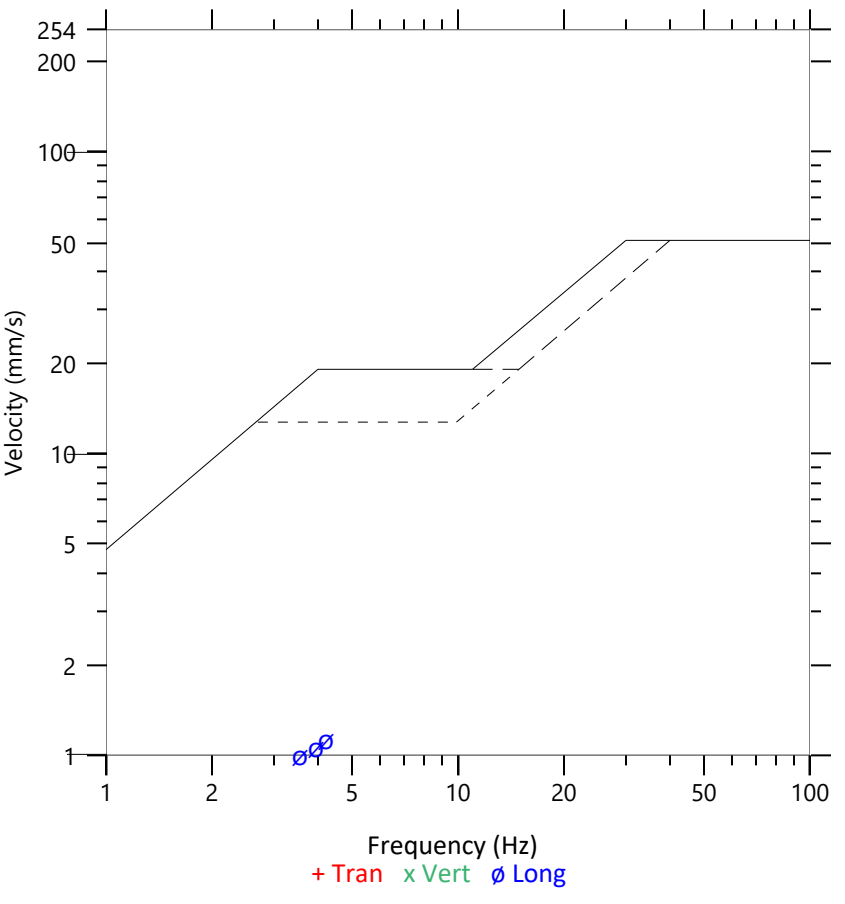
	GPS Location	**Latitude**	**Longitude**
	Source Location	000 0.000 N	000 0.000 W
	Sensor Location	000 0.000 N	000 0.000 W
	Distance	0.0 m	

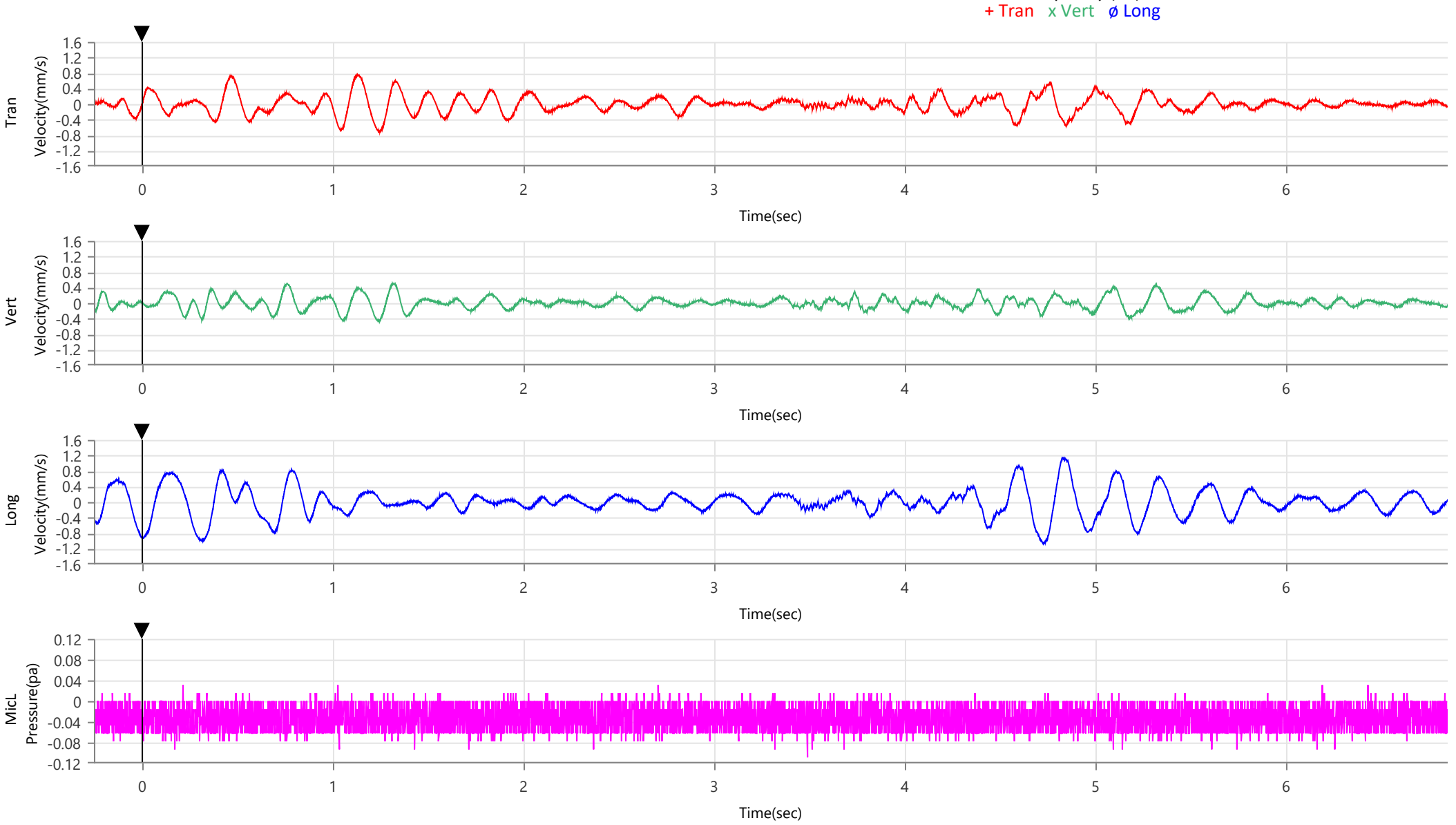
Extended Notes No text to be displayed.
Post Event Notes No text to be displayed.

Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.757 mm/s	0.504 mm/s	1.143 mm/s
Zero Crossing Frequency	4.8 Hz	6.4 Hz	4.2 Hz
Time (Relative to Trigger)	1.131 sec	0.762 sec	4.828 sec
Peak Acceleration	0.010 g	0.010 g	0.012 g
Peak Displacement	0.025 mm	0.015 mm	0.046 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.5 Hz	7.5 Hz
Overswing Ratio	4.3	4.3	4.4
Peak Vector Sum	1.251 mm/s at 4.839 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	<0.5 pa
Time (Relative to Trigger)	3.489 sec
Zero Crossing Frequency	>100 Hz
Sensor Check	X Check
Frequency	0.0 Hz
Test Amplitude	0 mv

USBM RI8507 And OSMRE
Velocity versus Frequency (Zero Crossing)





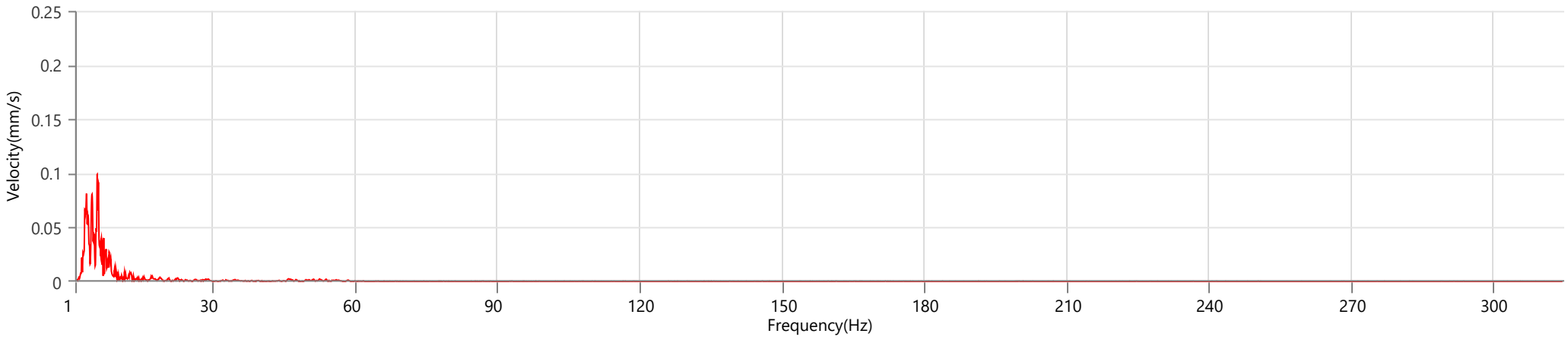
Waveform Trigger Source	Long at October 3, 2024 14:00:23	**Serial Number**	UM15994
Trigger Level(s)	Geo 0.909 mm/s,Mic 2.00 pa	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	0.25 sec/6.8 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	January 29, 2024 by UES New Delhi
Setup File Name	TATA STEEL.MMB	**Event File Name**	UM15994_20241003140023.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

Notes

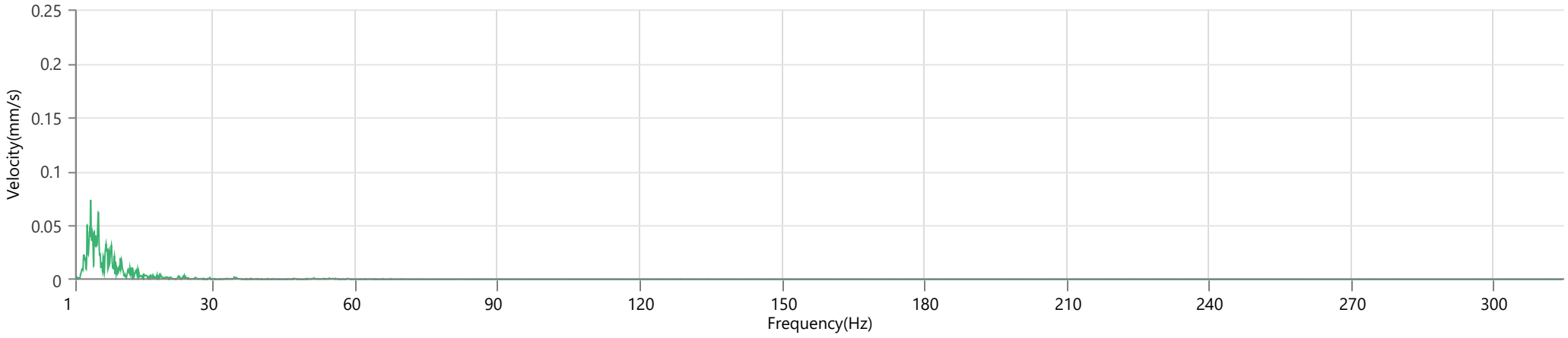
Location:		**GPS Location**	**Latitude**	**Longitude**
Client:	TSL	**Source Location**	000 0.000 N	000 0.000 W
User Name:		**Sensor Location**	000 0.000 N	000 0.000 W
General:		**Distance**	0.0 m	

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

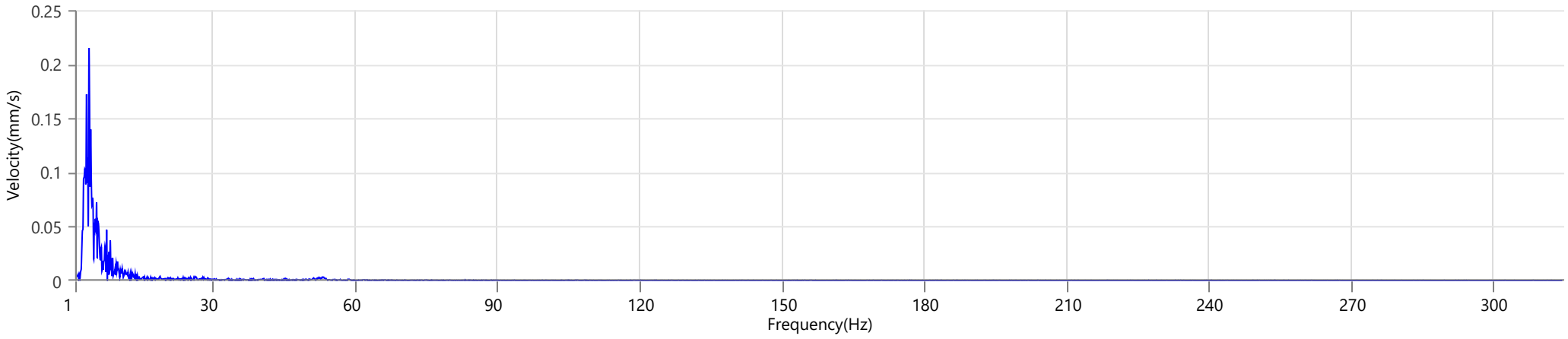
Tran - Dominant Frequency 5.6 Hz, Amplitude 0.099 mm/s (Peak Particle Velocity: 0.757 mm/s)



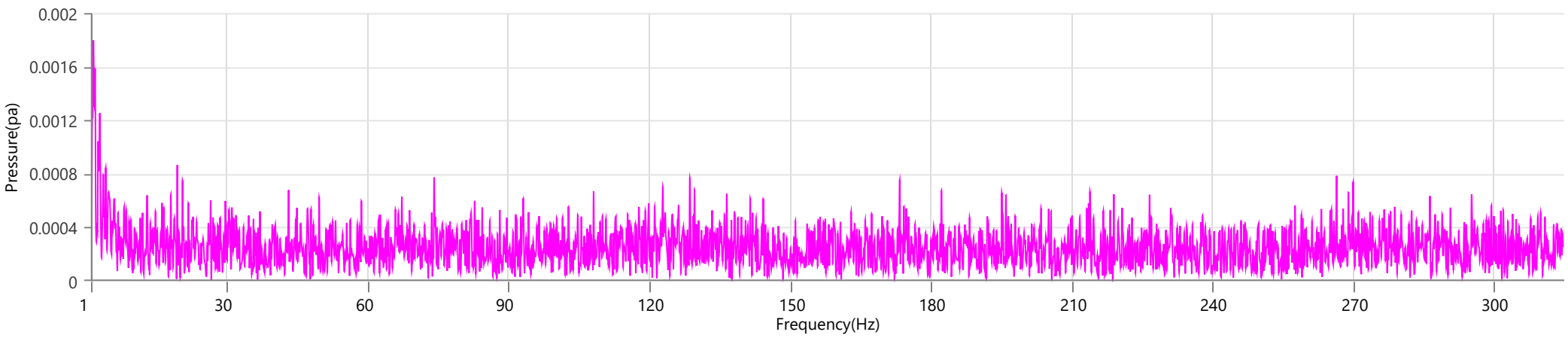
Vert - Dominant Frequency 4.2 Hz, Amplitude 0.074 mm/s (Peak Particle Velocity: 0.504 mm/s)



Long - Dominant Frequency 3.9 Hz, Amplitude 0.210 mm/s (Peak Particle Velocity: 1.143 mm/s)



MicL - Dominant Frequency 1.5 Hz, Amplitude 0.00 pa (Peak Sound Pressure Level: 0.11 pa)



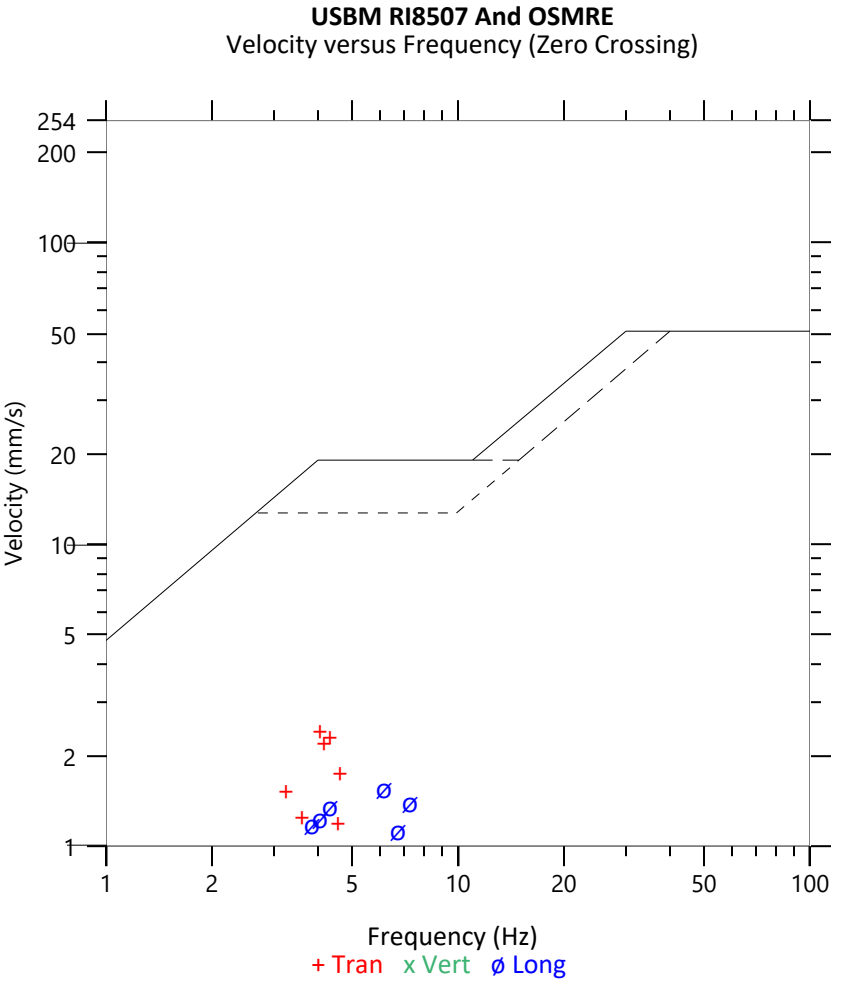
Waveform Trigger Source	Long at November 1, 2024 14:11:06	**Serial Number**	UM22707
Trigger Level(s)	Geo 0.127 mm/s,Mic 2.00 pa	**Model Number**	Micromate ISEE 10.90GC
Pre-Trigger/Record Time	0.25 sec/10.8 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	July 10, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM22707_20241101141106.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

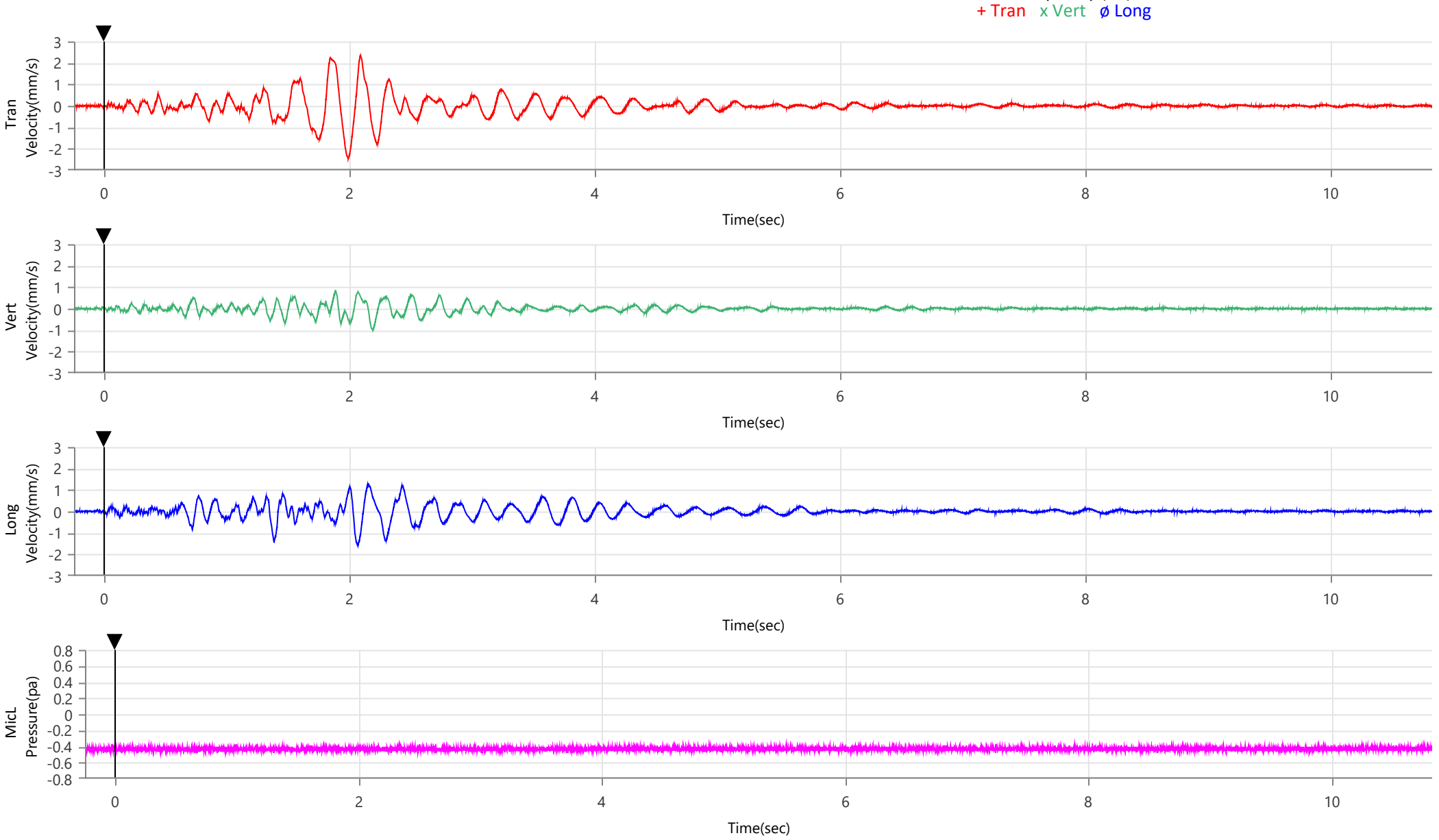
Notes
Location:
Client:
User Name:
General:

Post Event Notes No text to be displayed.

Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	2.459 mm/s	0.969 mm/s	1.592 mm/s
Zero Crossing Frequency	4.1 Hz	6.3 Hz	6.1 Hz
Time (Relative to Trigger)	1.988 sec	2.184 sec	2.066 sec
Peak Acceleration	0.018 g	0.013 g	0.013 g
Peak Displacement	0.092 mm	0.025 mm	0.042 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.3 Hz	7.3 Hz
Overswing Ratio	4.5	4.3	4.4
Peak Vector Sum	2.708 mm/s at 1.991 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	<0.5 pa
Time (Relative to Trigger)	-0.236 sec
Zero Crossing Frequency	N/A
Sensor Check	X Check
Frequency	0.0 Hz
Test Amplitude	0 mv



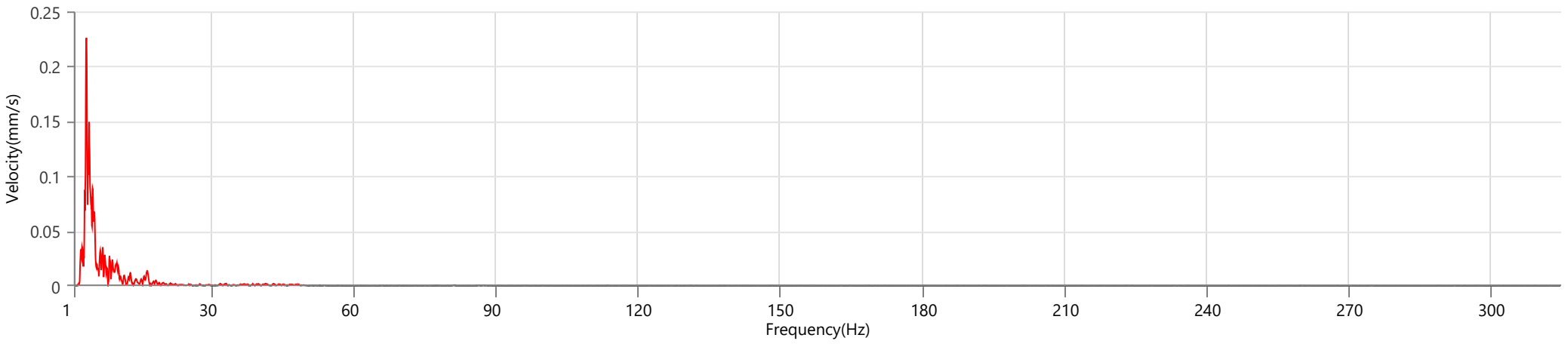


Waveform Trigger Source	Long at November 1, 2024 14:11:06	**Serial Number**	UM22707
Trigger Level(s)	Geo 0.127 mm/s,Mic 2.00 pa	**Model Number**	Micromate ISEE 10.90GC
Pre-Trigger/Record Time	0.25 sec/10.8 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	July 10, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM22707_20241101141106.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

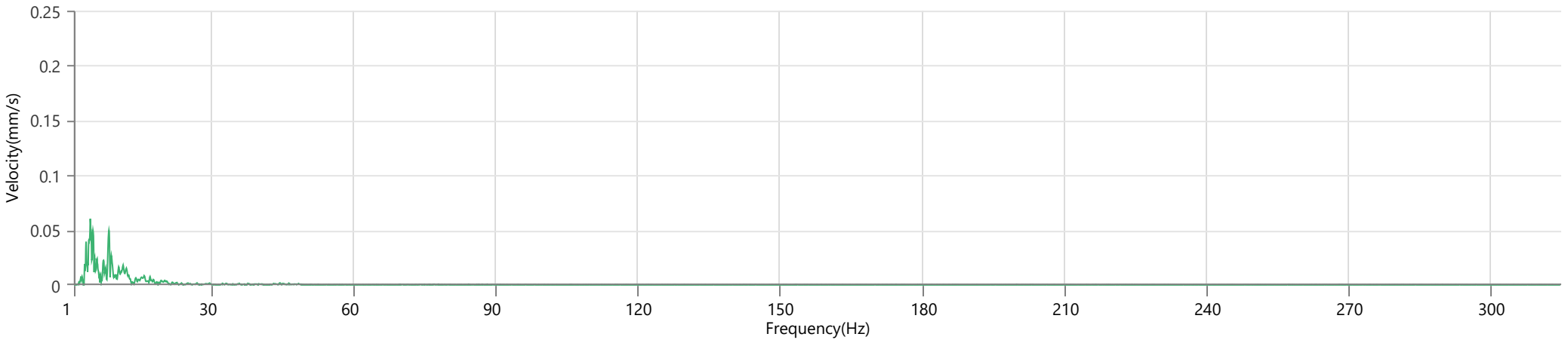
Notes
Location:
Client:
User Name:
General:

Post Event Notes No text to be displayed.

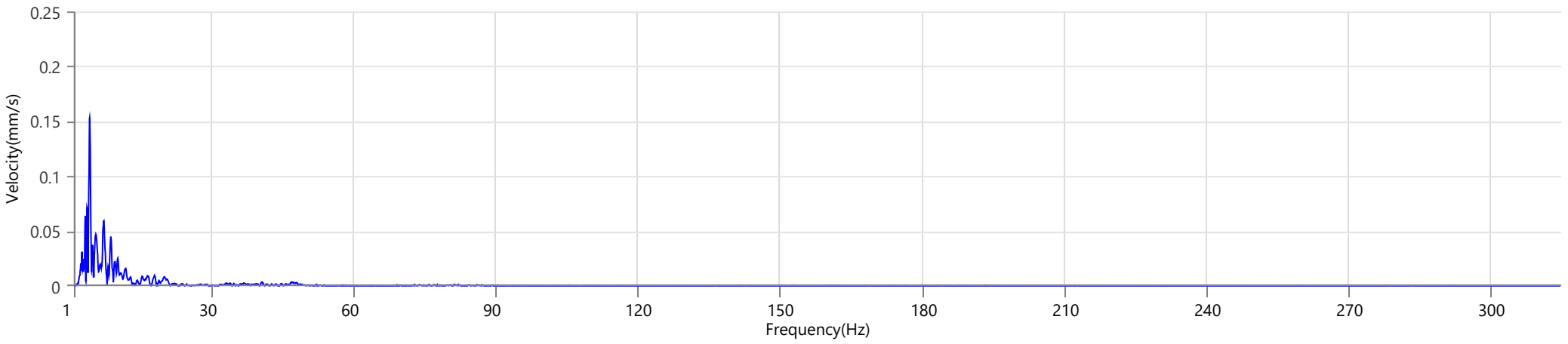
Tran - Dominant Frequency 3.6 Hz, Amplitude 0.226 mm/s (Peak Particle Velocity: 2.459 mm/s)



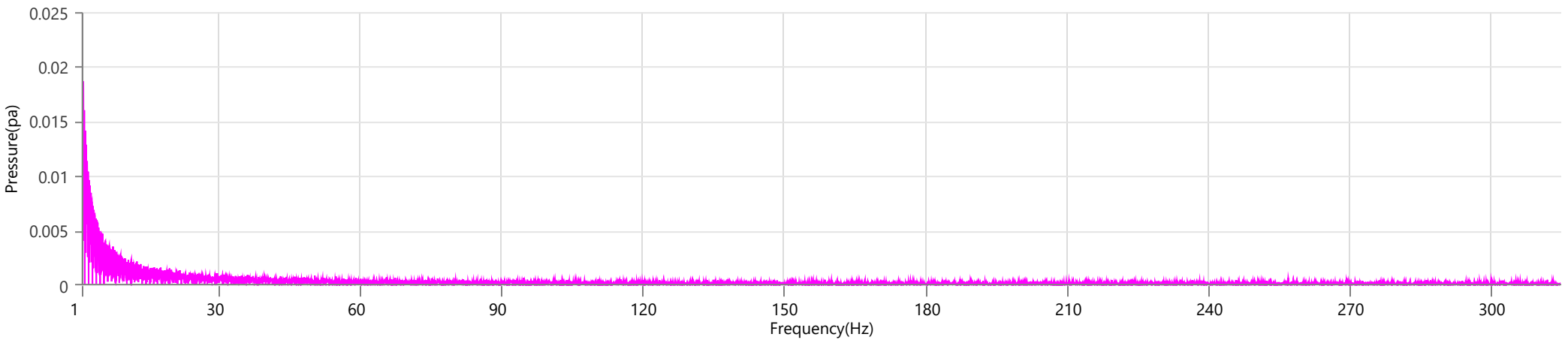
Vert - Dominant Frequency 4.4 Hz, Amplitude 0.060 mm/s (Peak Particle Velocity: 0.969 mm/s)



Long - Dominant Frequency 4.3 Hz, Amplitude 0.153 mm/s (Peak Particle Velocity: 1.592 mm/s)



MicL - Dominant Frequency 1.1 Hz, Amplitude 0.02 pa (Peak Sound Pressure Level: 0.48 pa)



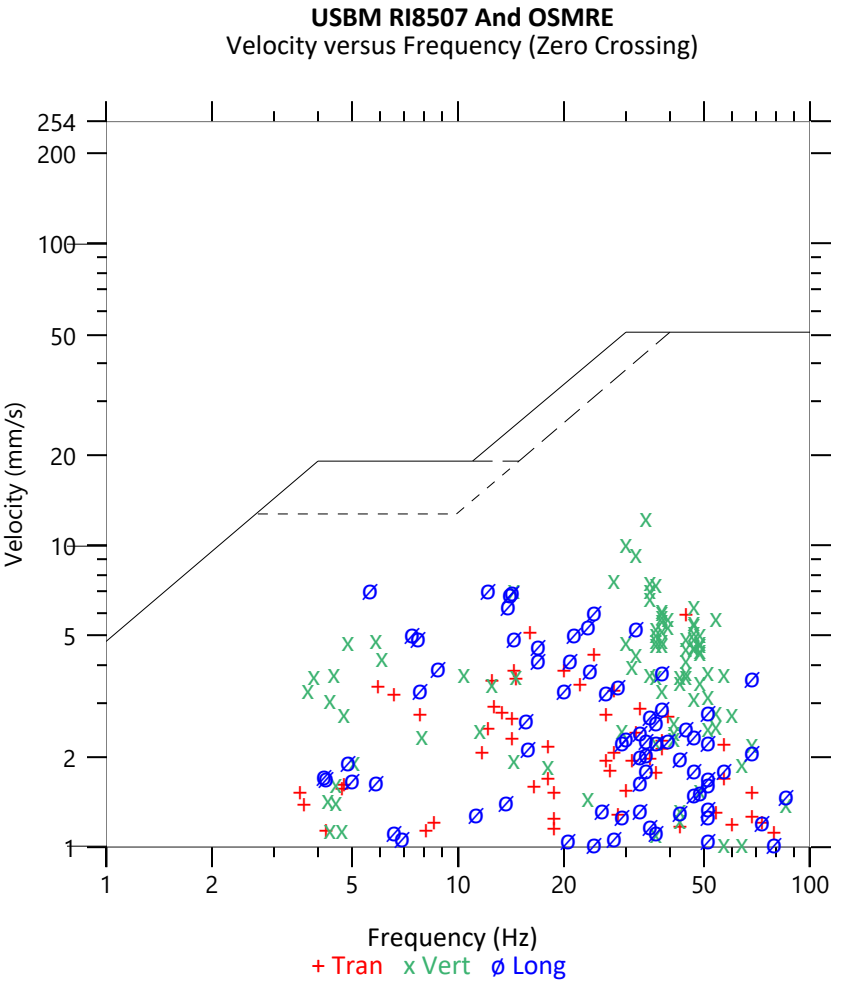
Waveform Trigger Source	Tran at December 3, 2024 14:00:35	**Serial Number**	UM22707
Trigger Level(s)	Geo 0.127 mm/s,Mic 2.00 pa	**Model Number**	Micromate ISEE 10.90GC
Pre-Trigger/Record Time	0.25 sec/11.4 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	July 10, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM22707_20241203140035.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

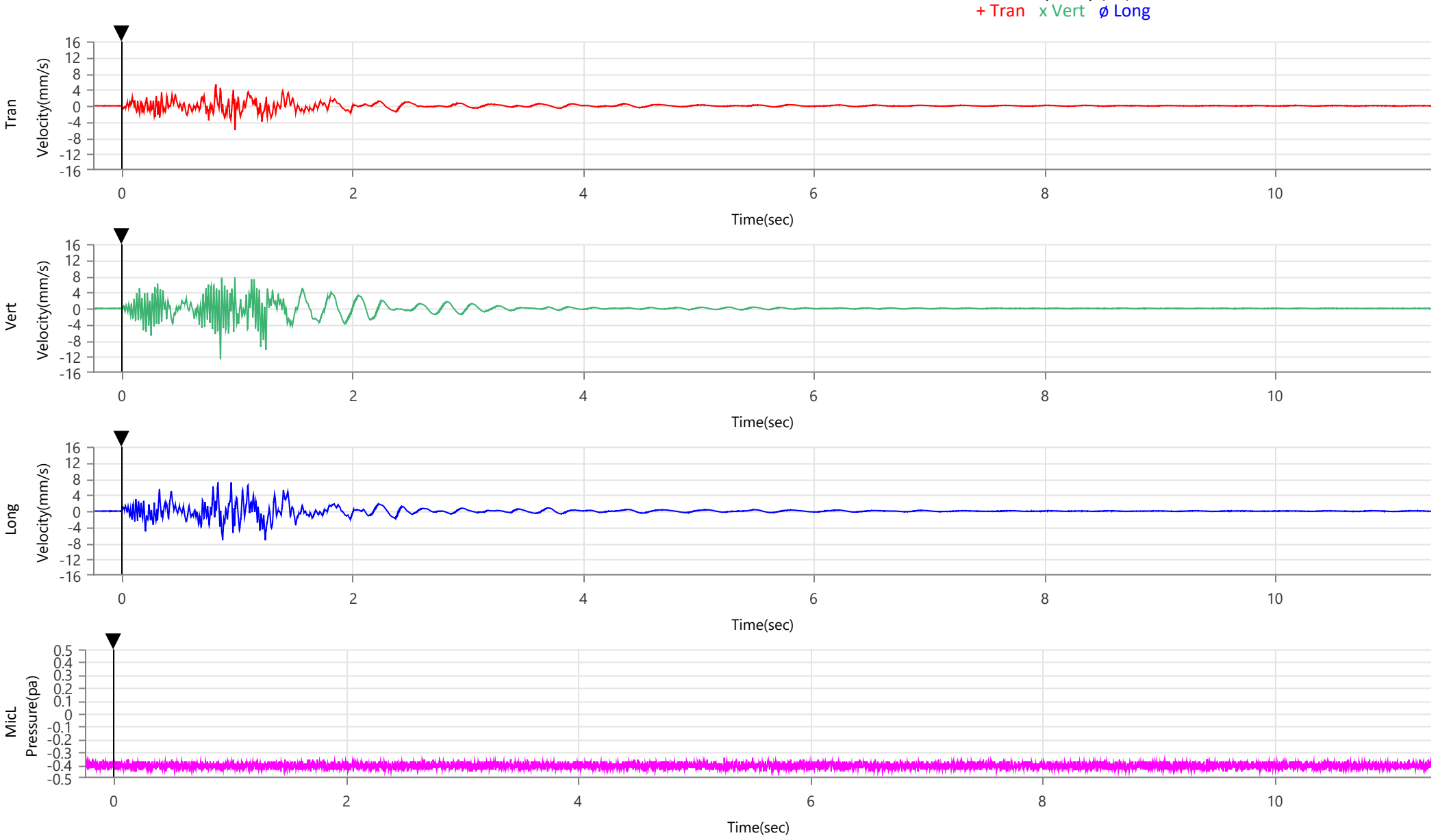
Notes
Location:
Client:
User Name:
General:

Post Event Notes No text to be displayed.

Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	6.045 mm/s	12.674 mm/s	7.267 mm/s
Zero Crossing Frequency	46.5 Hz	34.1 Hz	5.6 Hz
Time (Relative to Trigger)	0.981 sec	0.855 sec	1.243 sec
Peak Acceleration	0.176 g	0.416 g	0.193 g
Peak Displacement	0.074 mm	0.138 mm	0.131 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.3 Hz	7.3 Hz
Overswing Ratio	4.6	4.3	4.5
Peak Vector Sum	13.168 mm/s at 0.854 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	<0.5 pa
Time (Relative to Trigger)	0.154 sec
Zero Crossing Frequency	N/A
Sensor Check	X Check
Frequency	0.0 Hz
Test Amplitude	0 mv



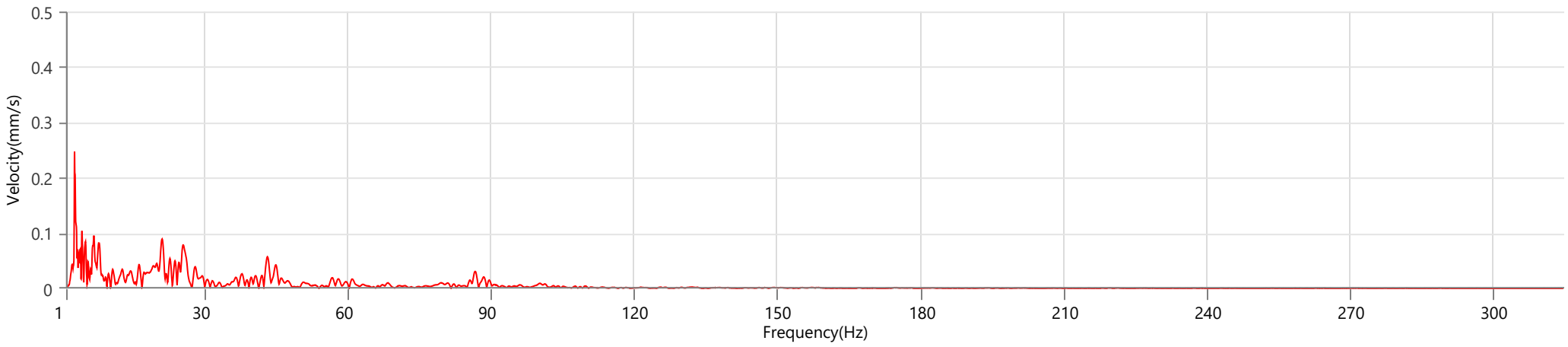


Waveform Trigger Source	Tran at December 3, 2024 14:00:35	**Serial Number**	UM22707
Trigger Level(s)	Geo 0.127 mm/s,Mic 2.00 pa	**Model Number**	Micromate ISEE 10.90GC
Pre-Trigger/Record Time	0.25 sec/11.4 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	July 10, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM22707_20241203140035.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

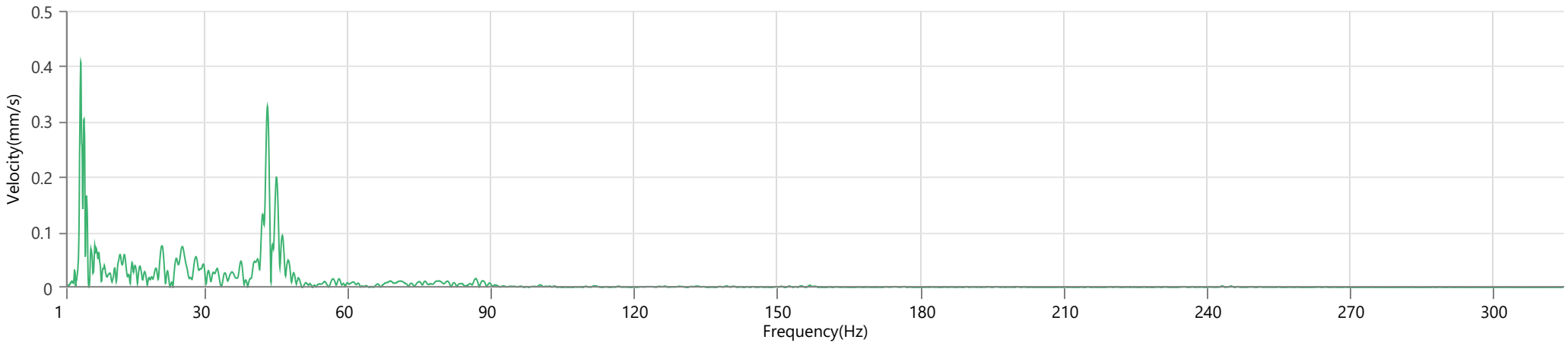
Notes
Location:
Client:
User Name:
General:

Post Event Notes No text to be displayed.

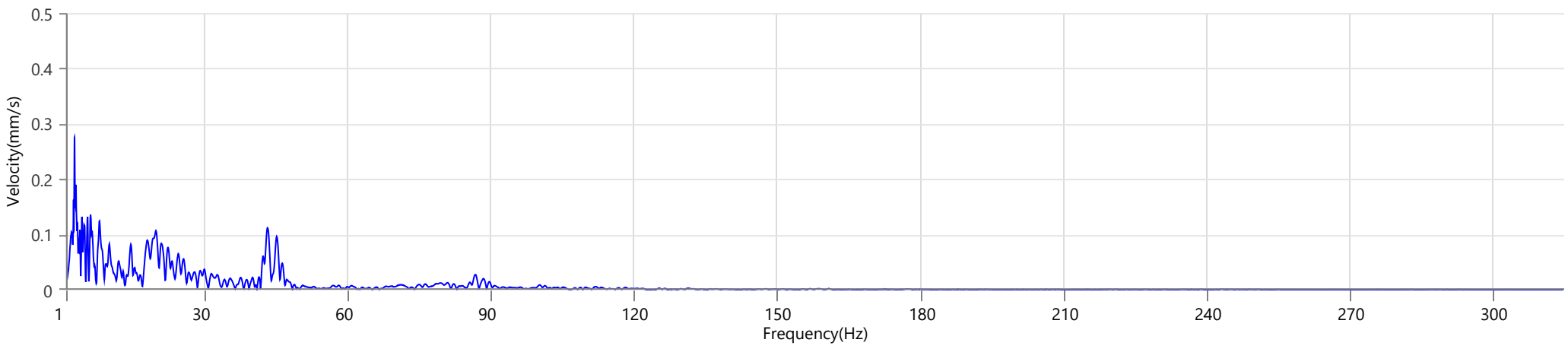
Tran - Dominant Frequency 2.8 Hz, Amplitude 0.245 mm/s (Peak Particle Velocity: 6.045 mm/s)



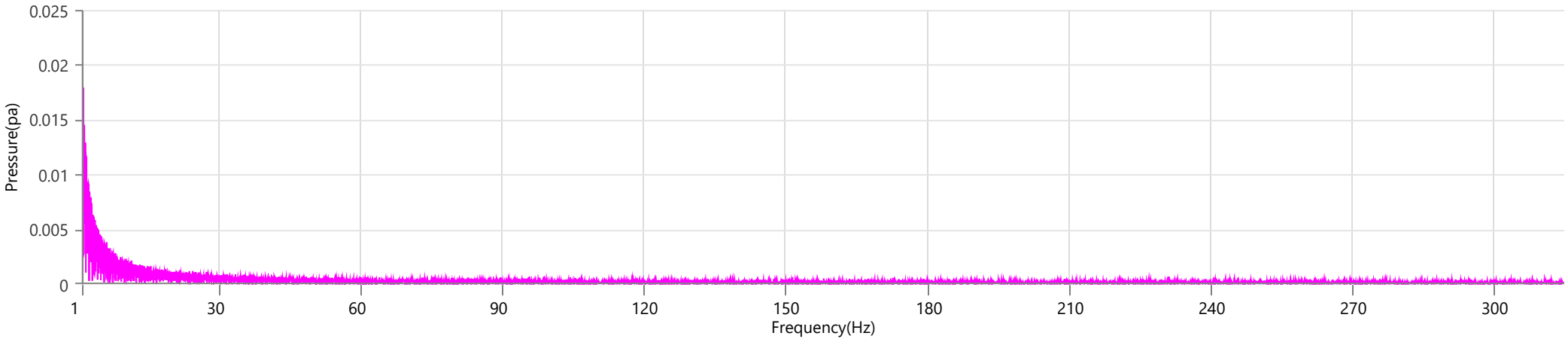
Vert - Dominant Frequency 4.1 Hz, Amplitude 0.407 mm/s (Peak Particle Velocity: 12.674 mm/s)



Long - Dominant Frequency 2.8 Hz, Amplitude 0.275 mm/s (Peak Particle Velocity: 7.267 mm/s)



MicL - Dominant Frequency 1.0 Hz, Amplitude 0.02 pa (Peak Sound Pressure Level: 0.45 pa)



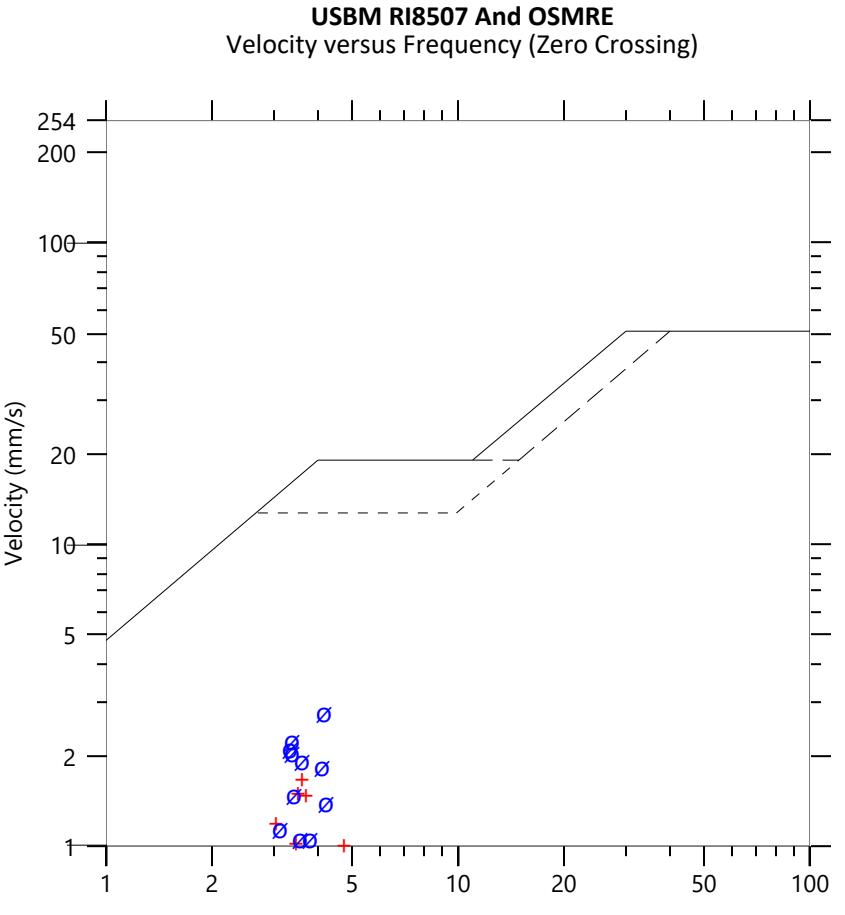
Waveform Trigger Source	Long at January 30, 2025 14:13:52	**Serial Number**	UM22707
Trigger Level(s)	Geo 0.127 mm/s,Mic 2.00 pa	**Model Number**	Micromate ISEE 10.90GC
Pre-Trigger/Record Time	0.25 sec/10.5 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	July 10, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM22707_20250130141352.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

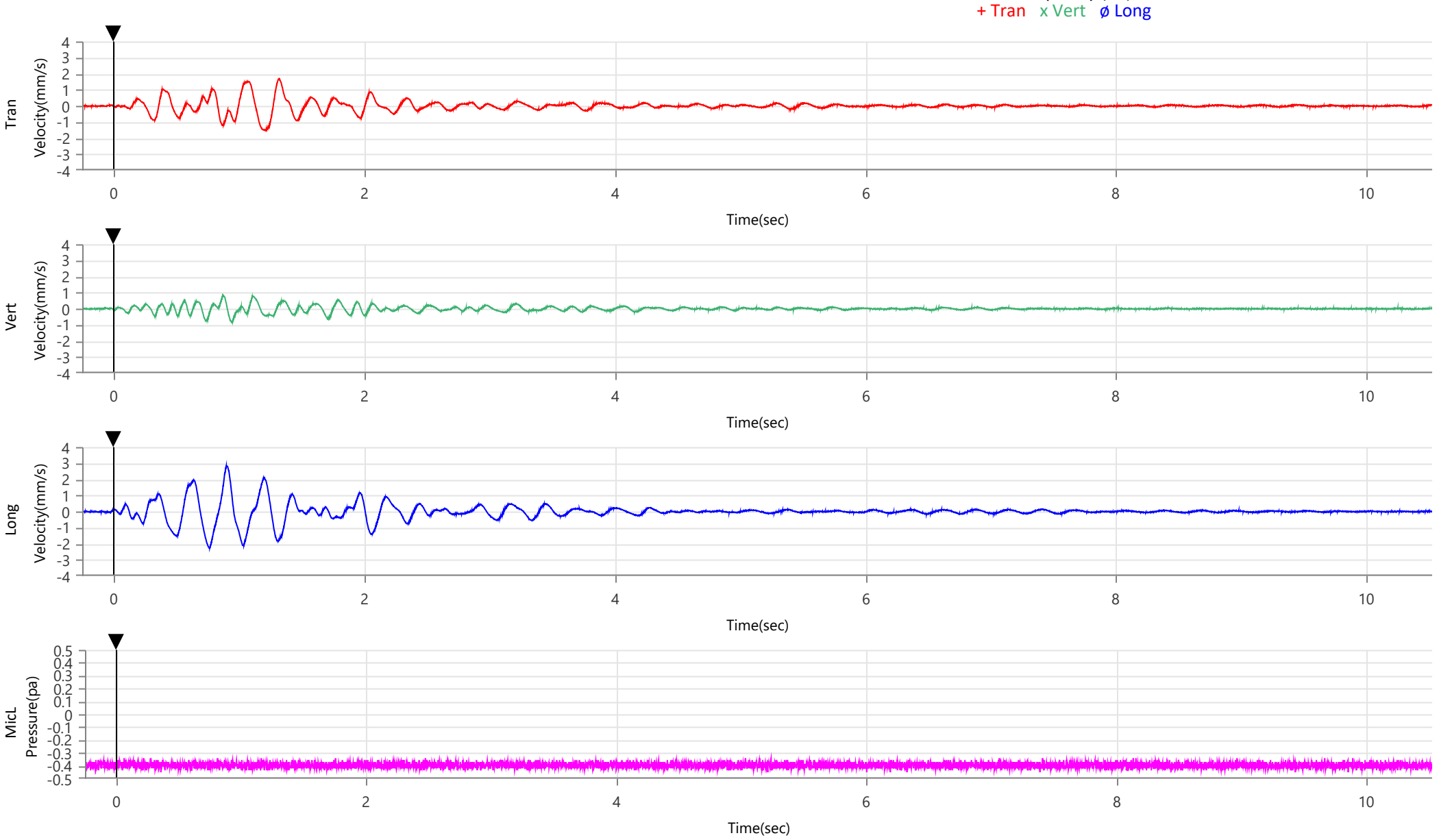
Notes
Location:
Client:
User Name:
General:

Post Event Notes No text to be displayed.

Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	1.695 mm/s	0.843 mm/s	2.837 mm/s
Zero Crossing Frequency	3.6 Hz	5.0 Hz	4.2 Hz
Time (Relative to Trigger)	1.321 sec	0.945 sec	0.903 sec
Peak Acceleration	0.015 g	0.012 g	0.013 g
Peak Displacement	0.074 mm	0.023 mm	0.095 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.3 Hz	7.3 Hz	7.3 Hz
Overswing Ratio	4.5	4.2	4.4
Peak Vector Sum	2.910 mm/s at 0.900 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	<0.5 pa
Time (Relative to Trigger)	0.357 sec
Zero Crossing Frequency	N/A
Sensor Check	X Check
Frequency	0.0 Hz
Test Amplitude	0 mv



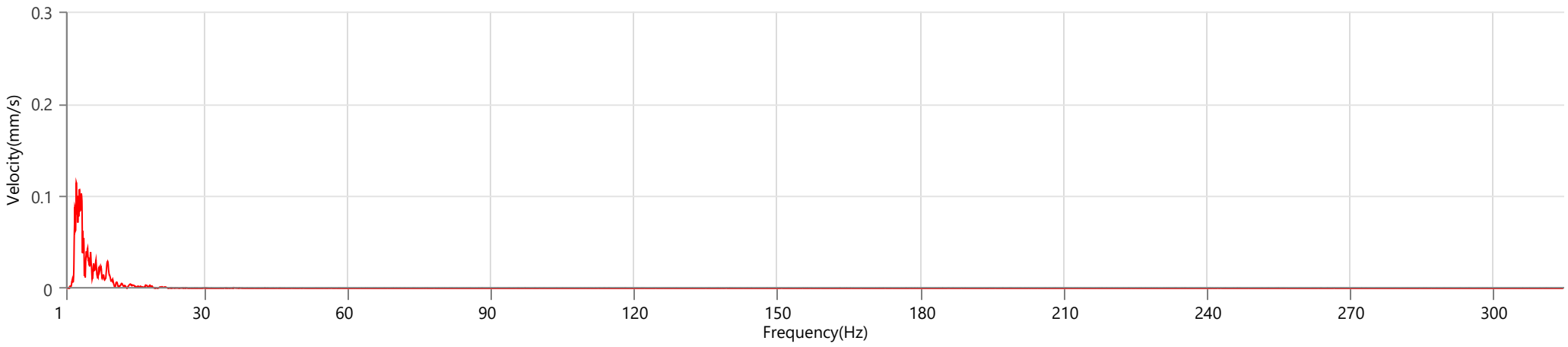


Waveform Trigger Source	Long at January 30, 2025 14:13:52	**Serial Number**	UM22707
Trigger Level(s)	Geo 0.127 mm/s,Mic 2.00 pa	**Model Number**	Micromate ISEE 10.90GC
Pre-Trigger/Record Time	0.25 sec/10.5 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	July 10, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM22707_20250130141352.IDFW
Operator	Operator	**USB Sensor Support**	Disabled

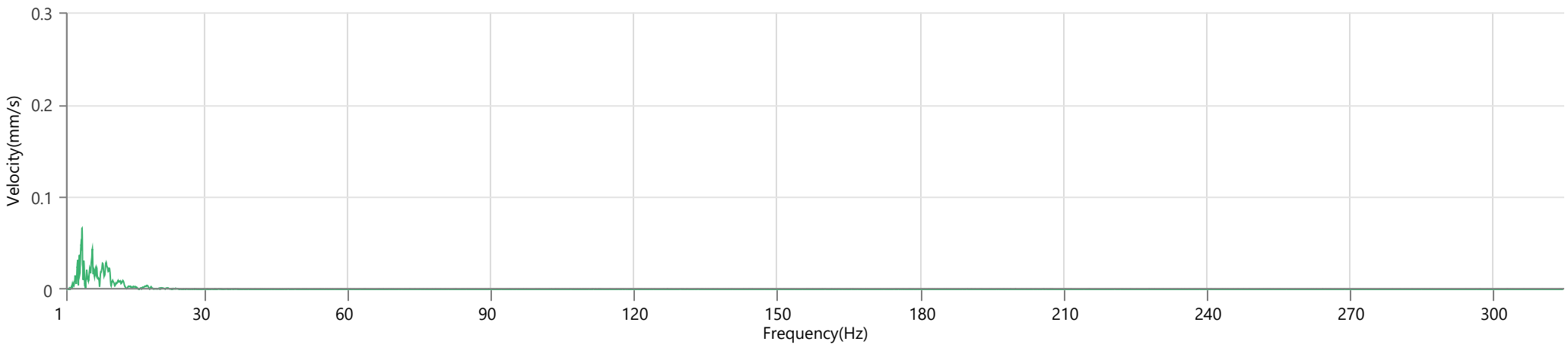
Notes
Location:
Client:
User Name:
General:

Post Event Notes No text to be displayed.

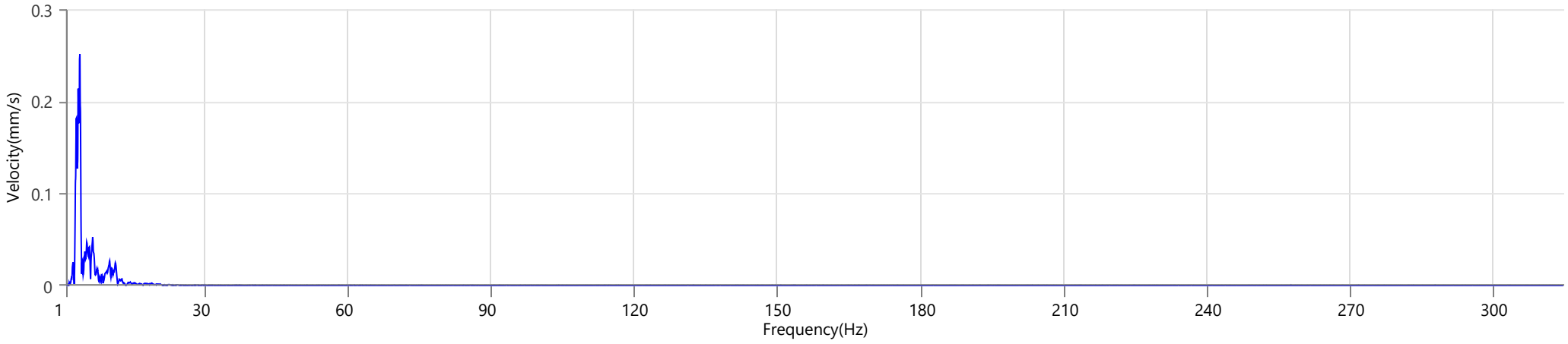
Tran - Dominant Frequency 3.1 Hz, Amplitude 0.115 mm/s (Peak Particle Velocity: 1.695 mm/s)



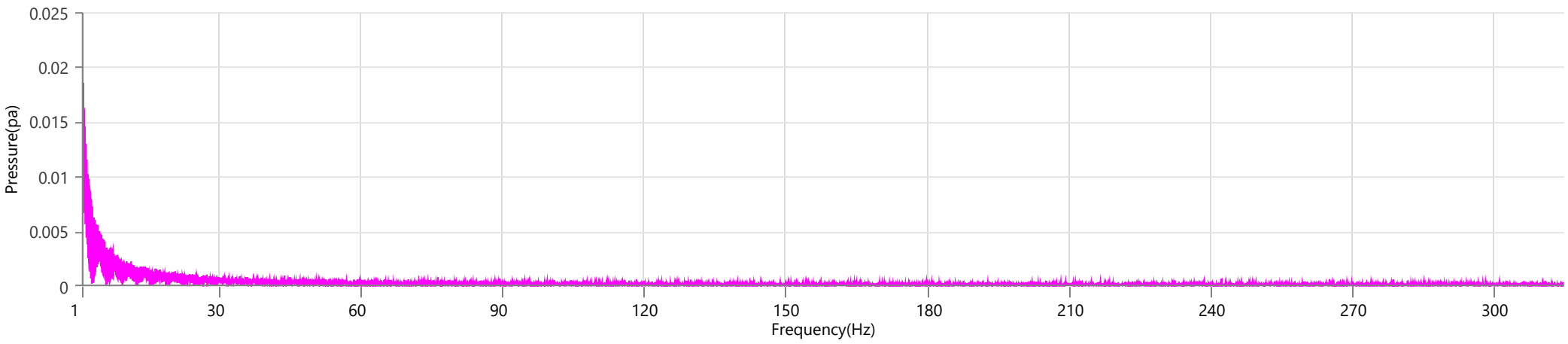
Vert - Dominant Frequency 4.3 Hz, Amplitude 0.066 mm/s (Peak Particle Velocity: 0.843 mm/s)



Long - Dominant Frequency 3.9 Hz, Amplitude 0.251 mm/s (Peak Particle Velocity: 2.837 mm/s)



MicL - Dominant Frequency 1.1 Hz, Amplitude 0.02 pa (Peak Sound Pressure Level: 0.45 pa)



Event Report

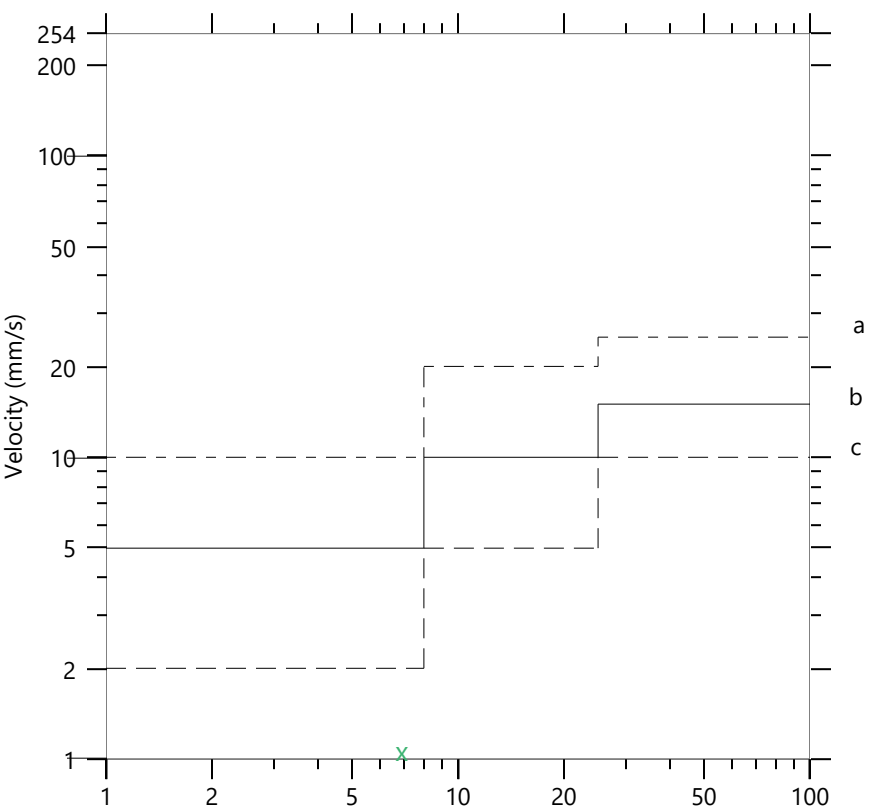
Waveform Trigger Source	Long at March 1, 2025 13:52:00	**Serial Number**	UM15992
Trigger Level(s)	Geo 0.500 mm/s,Mic 6.32 pa	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	0.25 sec/11.1 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	December 13, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM15992_20250301135200.IDFW
Operator	Operator	**USB Sensor Support**	Disabled
Job Number	1		

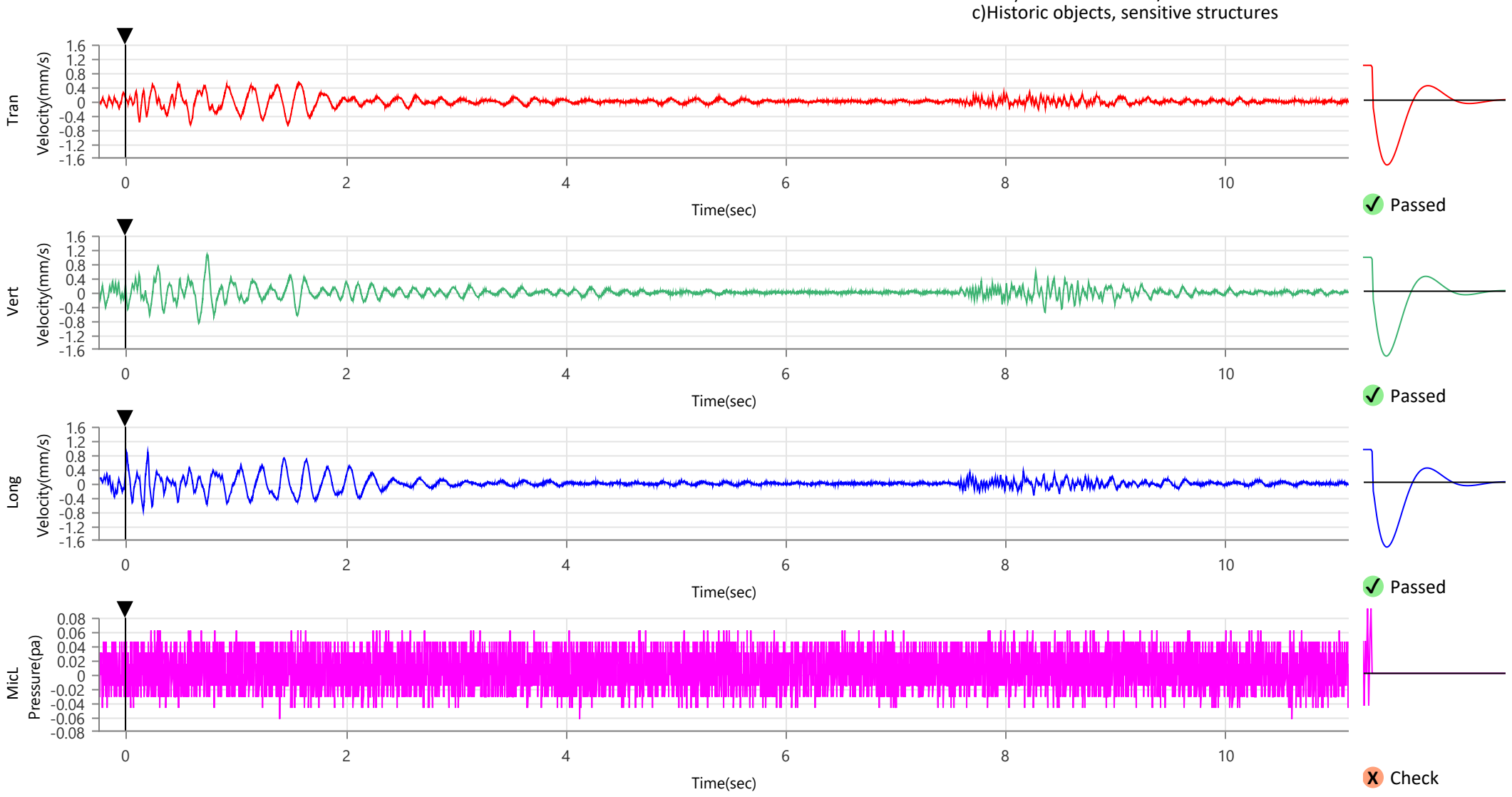
Notes
Location:
Client:
User Name: ORICA
General:

Post Event Notes No text to be displayed.

Geophone	**Tran**	**Vert**	**Long**
Peak Particle Velocity	0.654 mm/s	1.072 mm/s	0.891 mm/s
Zero Crossing Frequency	5.1 Hz	6.9 Hz	12.0 Hz
Time (Relative to Trigger)	1.473 sec	0.739 sec	0.200 sec
Peak Acceleration	0.010 g	0.016 g	0.013 g
Peak Displacement	0.018 mm	0.022 mm	0.018 mm
Sensor Check	✓ Passed	✓ Passed	✓ Passed
Frequency	7.1 Hz	7.5 Hz	7.3 Hz
Overswing Ratio	4.4	4.3	4.5
Peak Vector Sum	1.230 mm/s at 0.739 sec		

ISEE Linear Microphone	
Peak Sound Pressure Level	<0.5 pa
Peak Sound Pressure Level	<88 dB(L)
Time (Relative to Trigger)	0.229 sec
Zero Crossing Frequency	>100 Hz
Sensor Check	X Check
Frequency	0.0 Hz
Test Amplitude	0 mv





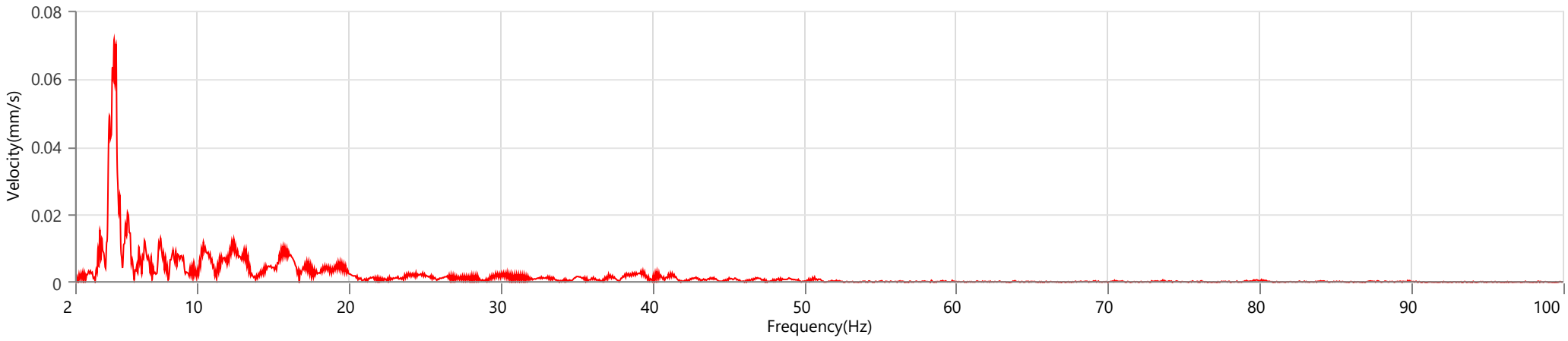
FFT Report

Waveform Trigger Source	Long at March 1, 2025 13:52:00	**Serial Number**	UM15992
Trigger Level(s)	Geo 0.500 mm/s,Mic 6.32 pa	**Model Number**	Micromate ISEE 10.90FB
Pre-Trigger/Record Time	0.25 sec/11.1 sec (Auto)	**Battery Level**	3.8 volts
Sample Rate	2048 sps	**Unit Calibration**	December 13, 2024 by UES New Delhi
Setup File Name	factory.MMB	**Event File Name**	UM15992_20250301135200.IDFW
Operator	Operator	**USB Sensor Support**	Disabled
Job Number	1		

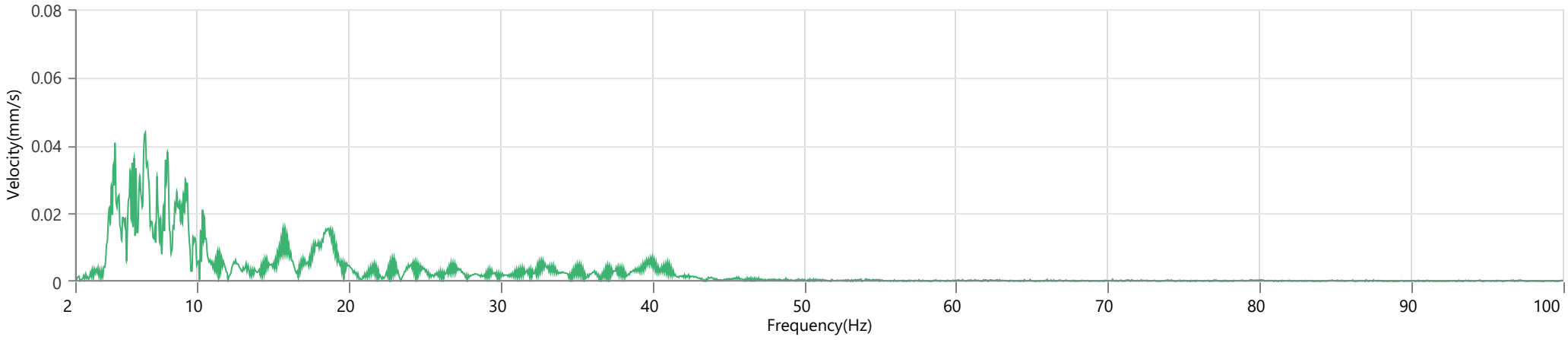
Notes
Location:
Client:
User Name: ORICA
General:

Post Event Notes No text to be displayed.

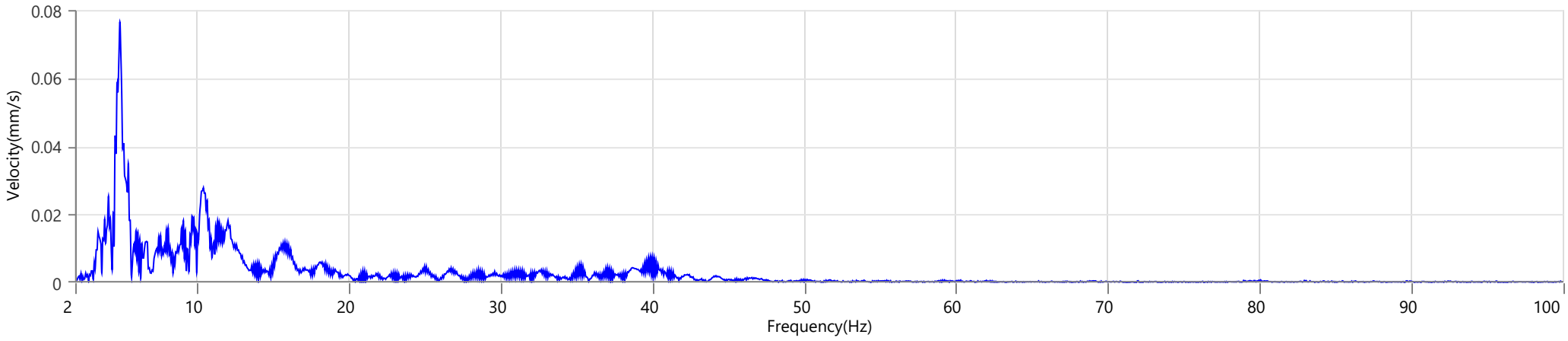
Tran - Dominant Frequency 4.6 Hz, Amplitude 0.072 mm/s (Peak Particle Velocity: 0.654 mm/s)



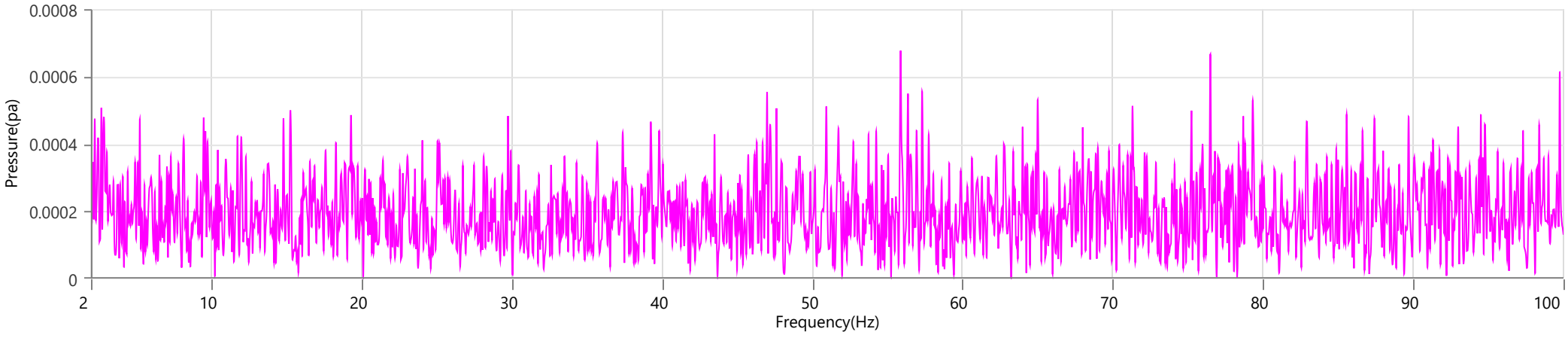
Vert - Dominant Frequency 6.6 Hz, Amplitude 0.044 mm/s (Peak Particle Velocity: 1.072 mm/s)



Long - Dominant Frequency 4.9 Hz, Amplitude 0.076 mm/s (Peak Particle Velocity: 0.891 mm/s)



MicL - Dominant Frequency 55.9 Hz, Amplitude 0.00 pa (Peak Sound Pressure Level: 0.06 pa)

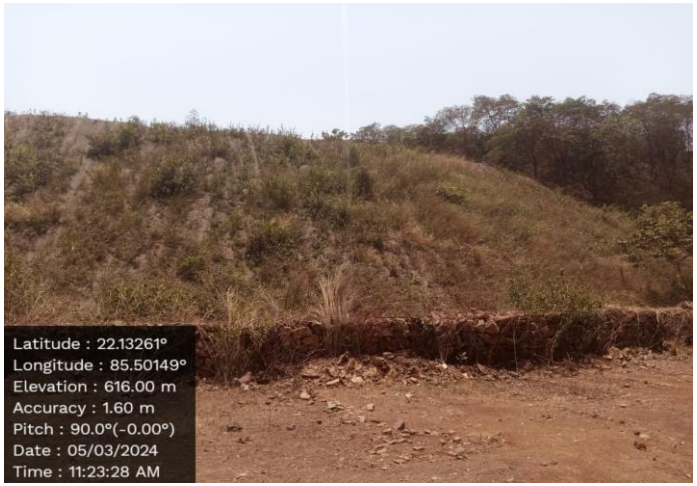


ANNEXURE-XV

Summarised Noise Monitoring Report					
Noamundi Iron Ore Mine of M/s Tata Steel Limited					
Period: October 2024 to March 2025					
Mine Location	**Sampling Location**	**Month**	**Unit**	**Results**	
				Day	**Night**
Noamundi Iron Ore Mine	Hospital Premises	October 2024	dB(A)	47.6	39.2
		November 2024	dB(A)	48.2	37.8
		December 2024	dB(A)	47.6	39.1
		January 2025	dB(A)	48.2	37.8
		February 2025	dB(A)	47.1	38.6
		March 2025	dB(A)	46.1	37.8
	Training Centres	October 2024	dB(A)	48.2	37.6
		November 2024	dB(A)	51.6	41.7
		December 2024	dB(A)	54.3	42.8
		January 2025	dB(A)	53.9	41.7
		February 2025	dB(A)	51.4	42.6
		March 2025	dB(A)	54.2	43.9
	Township	October 2024	dB(A)	51.9	42.6
		November 2024	dB(A)	53.7	42.1
		December 2024	dB(A)	53.6	41.6
		January 2025	dB(A)	52.9	43.7
		February 2025	dB(A)	53.9	41.7
		March 2025	dB(A)	54.1	42.8
	GM's Office	October 2024	dB(A)	52.3	39.1
		November 2024	dB(A)	54.2	41.9
		December 2024	dB(A)	54.7	43.8
		January 2025	dB(A)	54.2	42.6
		February 2025	dB(A)	53.2	43.6
		March 2025	dB(A)	53.9	44.1
	Plant Area	October 2024	dB(A)	71.3	62.9
		November 2024	dB(A)	61.4	61.4
		December 2024	dB(A)	71.3	62.8
		January 2025	dB(A)	69.1	58.7
		February 2025	dB(A)	71.6	57.3
		March 2025	dB(A)	72.6	64.1
	Sangramsahi colony	October 2024	dB(A)	53.9	42.7
		November 2024	dB(A)	51.8	43.7
		December 2024	dB(A)	52.1	41.3
		January 2025	dB(A)	53.2	41.6
		February 2025	dB(A)	51.3	39.1
		March 2025	dB(A)	49.7	38.6

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	:	**07/01/2025**
Time	:	**18:15:20 PM**
Validity upto	:	**06/07/2025**

Certificate SL. No.	:	JH00600110004505
Registration No.	:	OD11A1739
Date of Registration	:	29/Apr/2013
Month & Year of Manufacturing	:	November-2012
Valid Mobile Number	:	******8748
Emission Norms	:	BHARAT STAGE III
Fuel	:	DIESEL
PUC Code	:	JH0060011
GSTIN	:	
Fees	:	Rs.120.00
MIL observation	:	No

Vehicle Photo with Registration plate
60 mm x 3O 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	0.59

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 0perator
60mm x 20 mm

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date	:	**07/01/2025**
Time	:	**18:04:51 PM**
Validity upto	:	**06/07/2025**

Certificate SL. No.	:	JH00600110004504
Registration No.	:	OD11A1738
Date of Registration	:	29/Apr/2013
Month & Year of Manufacturing	:	November-2012
Valid Mobile Number	:	******8748
Emission Norms	:	BHARAT STAGE III
Fuel	:	DIESEL
PUC Code	:	JH0060011
GSTIN	:	
Fees	:	Rs.120.00
MIL observation	:	No

Vehicle Photo with Registration plate
60 mm x 3O 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	0.59

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 0perator
60mm x 20 mm

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date	:	**15/10/2024**
Time	:	**17:37:30 PM**
Validity upto	:	**14/04/2025**

JH05AM6561

Certificate SL. No.	:	JH00600110004232
Registration No.	:	JH05AM6561
Date of Registration	:	14/Feb/2012
Month & Year of Manufacturing	:	February-2012
Valid Mobile Number	:	******8748
Emission Norms	:	BHARAT STAGE III
Fuel	:	DIESEL
PUC Code	:	JH0060011
GSTIN	:	
Fees	:	Rs.120.00
MIL observation	:	No

Vehicle Photo with Registration plate
60 mm x 3O 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	0.24

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 0perator
60mm x 20 mm

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date	:	**15/10/2024**
Time	:	**17:48:55 PM**
Validity upto	:	**14/04/2025**

JH05AF6406

Certificate SL. No.	:	JH00600110004235
Registration No.	:	JH05AF6406
Date of Registration	:	25/Dec/2010
Month & Year of Manufacturing	:	December-2010
Valid Mobile Number	:	******8748
Emission Norms	:	BHARAT STAGE III
Fuel	:	DIESEL
PUC Code	:	JH0060011
GSTIN	:	
Fees	:	Rs.200.00
MIL observation	:	No

Vehicle Photo with Registration plate
60 mm x 3O 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	0.86

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 0perator
60mm x 20 mm

Safety Zone Plantation

TATA

The Divisional Forest Officer,
Chaibasa forest Division,
Chaibasa
West Singhbhum

GM/LO/ 1117 /441-B/24
Date: 20.06.2024

Sub: Annual Progress Report of compliance for 2023-24 of Site- Specific Wildlife Conservation Plan of Noamundi Iron Mine.

Dear Sir,

The Site- Specific Wildlife Conservation Plan for Noamundi Iron Mine was approved by the Principal Chief Conservator of Forest, Wildlife and Chief Wildlife Warden, Jharkhand, Ranchi vide memo no. 1251 dated 28.08.2020.

We are herewith submitting Annual Progress Report of compliance for 2023-24 of SSWLCP. This is for kind information and to note our compliance against approved Site- Specific Wildlife Conservation Plan.

Thanking you,

Yours sincerely,
For Tata Steel Limited

Chief (Mine Planning & Projects), OMQ

Encl: as above

TATA STEEL LIMITED
Mines Division Noamundi 833 217 India
Tel 91 9262699402
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

Annual Progress Report 2023-24

Point wise compliance of the conditions of Site-specific Wildlife Conservation Plan approval vide letter no. 1251 dated 28.08.2020 in favour of Tata Steel Limited of Noamundi Iron mine in West Singhbhum District of Jharkhand.

CHAPTER- IV

To be implemented by Project Authorities.

Sl. No.	Conditions	Compliance
(A)	**Wild Animal Rescue and Release**	
1	(a) Payment towards cost of establishing wild animal Rescue team including services of One Veterinary Doctor@60000/-, One paramedics/Paravet@15000/- and three daily wages 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)	We have established wild animal rescue team under the guidance of Veterinary Doctor (Dr. Faisal Niaz), Paramedics Sri Shyam Kishor and daily wage worker Sriram Hembrom, Boyer Laguri.
	(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.	We are in the process of procuring Dart Gun and other accessories. Letter issued for import of the Tranquilizing equipment humane treatment of animals as per the requirement of SSWLCP vide letter no. 2155 Dt. 23.12.2022 and GM/LO/263/441-B/22 Dt. 25.08.2022. We have submitted undertaking vide letter no. GM/LO/149/441-B/2021 Dt. 19.07.2021. PCCF, Wildlife CWW, Jharkhand, Ranchi has issued NOC for import Tranquilizing Gun vide memo 44 dated 17.01.2022, 289 dated 04.03.23. MoEFCC Wildlife Division has issued NOC to M/s Hi Tech Advance Products, P-27, Sukhlia near Bapat Hospital, Indore, MP-452010 (Through M/s Raj Enterprises) vide memo 743 dated 20.04.2023.

		Double Barrel Dart Gun (Dan Inject), 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. GM/LO/784/441-B/23 Dated 04.09.2023. This Tranquilizing Gun will be used by Chaibasa Forest Division, Chaibasa. Portable cage will provide. 03 (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. 02(two) Animal Stretcher and 04(four) sets of first aid kit has been provided to RFO' office, Noamundi vide letter no. GM/LO/264/441-B/22 Dt. 29.08.2022
	(c) One vehicle for housing cage, dart gun etc. as per direction received from the DFO, Chaibasa.	For Animal rescue, one vehicle -Tata 407 Gold bearing Registration no. JH 06P 1274 stationed at Noamundi has been deployed at the disposal of animal rescue team, Driver – Bhimsen Laguri. Painted the vehicle as "Wildlife Rescue Vehicle, Chaibasa Forest Division, Chaibasa, Courtesy by Tata Steel". 
	(d) Operational cost Rs.1.00 lakh per year	Incidental operational cost is being borne by us.
(B)	**Forest Conservation, fire protection and GIS Cell**	
2	a) Establishment of a GIS Cell at Division headquarters. (Including software and other accessories)	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 Conferencing system. Cordless Mic, camera etc. Blinds, Signage board at GIS Cell vide letter no. GM/LO/ 220/441-B/22 Dt. 12.07.2022. 01 (one) HP Desktop Computer and 01 (one) HP Printer have been handed over to DFO's office vide letter no. GM/LO/181/441-B/21 Dt. 11.08.2021.

		Workstation for GIS, PC and ARCGIS software Dongle with Licence Key: EFL438019559 have been handed over to DFO's office vide letter no. GM/LO/40/441-B/22 Dt. 07.02.2022. 01 (one) Plotter cum Scanner of HP have been handed over vide letter no. GM/LO/131/441-B/22 Dt. 12.05.2022. 04 (Four) Air Conditions have been installed vide letter no. GM/LO/131/441-B/22 Dt. 12.05.2022. Broadband connectivity installed at GIS cell. RFO Noamundi has issued a demand note vide 397 dated 16.10.23 and wifi router, dual band network cable and net connection provided. Payment has made to beneficiary Net Onair Networks Pvt. Ltd. 01(one) LG 32" LED Monitor, Battery, Invertor, LT changeover, Generator wiring, MCB fittings etc. have been installed vide RFO letter no. 361 Dt. 20.11.2022. RFO, Noamundi has issued a demand note vide letter no. 25 dated 05.01.2023 for procurement of cartridges for plotter/printer. Payment have 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.	We have hired Computer Operator (Ms. Aseema Dungdung) and GIS expert (Mr. Harsh Mishra) for GIS Cell.
	(c) Office furniture and accessory to house GIS Cell and forest fire management centre as per specification from respective office.	Office furniture such as 32 (Thirty-two) office Chairs, conference table, 05(five) Executive chairs and tables for GIS Cell / forest fire management centre have been delivered to DFO's office vide letter no. GM/LO/286/441-B/21 dt. 03.11.2021, GM/LO/05/441-B/22 dt. 05.01.2022 and GM/LO/131/441-B/22 Dt. 12.05.2022.

<table>
<tr>
<td></td>
<td>(d) Ten (10) motorcycles to be procured by UA for RFO Office @ 125000x10 nos. as per specification from respective office for patrolling.</td>
<td>10 (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.
 
<table>
<tr><th>Sl. No.</th><th>Make of Model</th><th>Registration No.</th></tr>
<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>
</table>
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<tr>
<td></td>
<td>e) One fire protection squad stationed at Range Forest Office, Noamundi with 10 members with hired vehicle for 5 five 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</td>
<td>10 (Ten) manpower with a hired vehicle are provided to Range Office Noamundi from February for 5 months. Payment made towards engaging vehicle for firefighting squad stationed at Range Forest office as per demand note to beneficiary.</td>
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<td></td>
<td>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.</td>
<td>10(ten) no. Fire blowers and
10(ten) nos. Bush cutters have been handed over to Range Forest office, Noamundi vide letter no. GM/LO/1018/441/21 Dt. 23.02.2021.

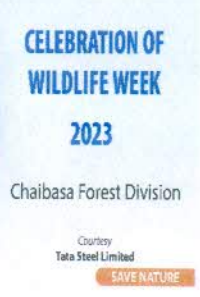
10 (ten) no. sets of Firefighting suits consisting of Jacket& trouser, hood, helmet, gloves, and boots have been handed over to Range Forest office, Noamundi, vide letter no. GM/LO/190/441-B/21 Dt. 18.08.2021.</td>
</tr>
</table>

	(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.	Anti-depredation squad with 5(five) members have been deployed and stationed at Range Forest Office, Noamundi they are – Parmeshwar Sinku, Sursingh Bobonga, Chokro Champia, Ravindra Gope and Mohan Gope.
	(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.	Crackers have been delivered to RFO, Noamundi vide demand note 434 dated 07.11.2023 and payment made to the beneficiary Saw and Sons, Chaibasa through RTGS. 10 (ten) no. Torches (LED Search light) have been handed over to DFO's office vide letter no. GM/LO/182/441-B/21 Dt. 11.08.2021. 20 (Twenty) no. Torches (LED Search light) have been handed over to DFO's office vide letter no. GM/LO/341/441-B/22 Dt. 02.11.2022. 
	(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	We are in the process of procuring Drone.
	(j) Procurement of night vision binoculars - 03 pieces, Handheld GPS -03 pcs., Digital camera-01 piece. As per the specification from DFO, Chaibasa.	03 (three) nos. Handheld GPS (GARMIN Montana 680) have been handed over to DFO's office vide letter no. GM/LO/182/441-B/21 Dt.11.08.2021. 01 (one)Night vision binocular have been handed over to DFO's office vide letter no. GM/LO/170/441-B/21 Dt.03.05.2022 and 02(two) night vision binocular vide letter no. GM/LO/219/441-B/22 Dt. 12.07.2022. 01(one) Digital Camera have been handed over to DFO's office vide letter no. GM/LO/341/441-B/22 Dt. 02.11.2022.

		 
	(k) Providing one DG set, Computer, printer to Division office and Range office. As per the specification from DFO, Chaibasa.	01 (one) DG set (Kirloskar koel green) have been handed over to DFO's office vide letter no. GM/LO/103/441-B/21 Dt. 18.06.2021. 02 (Two) nos. All in one Desktop computer, 02 (two) nos. A4 size colour Printer cum scanner/copier have been handed over to DFO's office vide letter no. GM/LO/265/441-B/22 Dt. 29.08.2022. 
	(l) Operational cost for maintaining motorcycle and firefighting equipment. Expenditure will be incurred based on demand note and direction received from the DFO, Chaibasa.	Will be complied upon receiving direction from DFO. RFO have issued demand note vide letter no. 249 dated 24.07.23 towards maintenance of ten Motorcycles. Payment has been made to beneficiary Royal Automobiles, Chaibasa.

C	**Monitoring and supervision of site-specific plan**	
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 Dt. 06.10.2020 ref. no. 1483 dated 15.09.2020 and bearing Registration No. JH06N-2331, Scorpio S7 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	One driver (Turi Laguri) deployed at RFO, Noamundi and one driver (Bhimsen Laguri) appointed and deployed with Animal rescue vehicle as per directive received by DFO.
	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 are provided as and when demanded by office of DFO Chaibasa and RFO Noamundi respectively.
	(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 are paid by User agency as and when required. RFO Noamundi have issued demand note vide no. 398 dated 16.10.23 for vehicle maintenance. Payment has been made to beneficiary Global Enterprises, Chaibasa.
	(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 paid to beneficiary Aranyak Creations, Palta, North 24 Pargana, West Bengal towards making of video, documentary on CAMPA scheme vide demand note 769 dated 26.04.2023 for an amount of Rs. 1,41,600.00.
D	**Public Awareness and education**	
4	(a) Construction of Nature interpretation centre at Chaibasa with bore bell with pump.	MOA has been signed with CEE, Ahmedabad, and TATA STEEL regarding the development of NIC. Site drawings and detailed engineering are being developed by CEE. Architectural drawings for the Nature Interpretation Centre at Chaibasa have prepared by CEE. Foundation stone had laid on 30.01.2022. Construction is in progress.
	(b) Mini library, visual display multimedia system (LED TV to runs wildlife/nature documentary.	

	(c) Live hedge fencing with entrance gate.	 
	(d) Aesthetic plantation/Medicinal Garden/lotus pond etc.	
	(e)2 Unskilled @6689.6x2=13379.20/- and one computer operator@9589/- per month	
	(f) Running expenditure like electricity bill etc. as per the actual bill received.	 
	(g) D.G. set @ 5.00 lakh as per demand note from respective office.	
	(h) Installation of 8 KW Solar Panels	 

		 
5	(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.	Wildlife week was celebrated in the month of October'23. A mass awareness and mobilization amongst people on the various themes, programme was organised for wildlife week at Chaibasa Run for wildlife, painting/ banner and essay competition in school/ college, wall paintings on wildlife theme at school, Chaibasa. Birds watching and listing at Bidri, Photography competition, debate at Kolhan University/ Tata College. T shirts, caps, High tea/ lunch were served. RFO, Noamundi have issued demand note vide letter no. 410 dated 29.10.23 and 411 dated 29.10.23 towards printing of card, certificates, lunch, banner, procurements of T shirts, caps etc. Payments have made to beneficiaries through RTGS.   

	(b) Signages at strategic places.	Visual signages have been procured and installed at sites. Some shall more be installed.  
(E)	**Capacity building**	
6	Training and capacity building of front-line staff and daily wages engage in wildlife rescue Expenditure will be incurred as per the demand note of DFO, Chaibasa.	Arrangement will be made as receiving direction from DFO. Organised Mission LiFE at Chaibasa under the direction of State Forest Dept in the month of May'23 to Jun'23. Street Play were organised at different places, Kolhan University, Post office chowk, Bus Stand, Tata College, Saheed Park. Cloth bags, caps were distributed, Payment made to beneficiary AKP Enterprises, Goilkera, Jharkhand.  

		   
(F)	**Mitigative measures to protect Sambhar Deer, Elephant, Wild Boar, Hare and other wildlife to avoid Human- Wildlife Conflict**	
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	ANIDERS have been Installed at village Angardiha and has been communicated to DFO's office vide letter no. GM/LO/978/21 Dt. 25.01.2021. More such ANIDERS will be installed after selection of appropriate place for installation.

		 
	(b) Maintenance for above system	
(G)	**Strengthening of infrastructure for forest and wildlife protection: Upgradation of forest check post @Bada Jamda**	
8	(a) Automated Barrier, Wheel mounted barrier	Solar Panel set with UPS, 04 nos. CCTV, 01 no. PoE NVR, 01 no. 32" LED, 01 no. 9U Rack, 02 nos. Automated barrier set, and 04 nos. wheel mounted barrier have been installed at Bada Jamda Check Post on 26.10 2021.
	(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 vide ref.no. HDFCR52020122865852467 dated 28.12.2020 into State CAMPA fund, Jharkhand, Account no. 150725810480176, IFSC CORP0000371 vide letter no. GM/LO/965/441-B/21 Dt. 12.01.2021 and ref. no. 1694 dated 12.10.2020.

This is for kind information and to note our compliance against the approved Site-Specific Wildlife Conservation Plan.

Workers Using PPEs

ANNEXURE-XXXII

Environment Expenditure at Noamundi Iron Mine
FY 2024-25

Sl No.	Details	Expenditure (Lakhs)
1	General housekeeping at HEMM shed & upkeeping of recycling pit at mega center	5.20
2	Air pollution control measures such as closed conveyors and DFDS in C&S plant	11.34
3	Operation & maintenance of STPs, ETPs & WTP	277.00
4	Development of Nursery, gardens, saplings plantation & maintenance in and around Noamundi	233.75
5	Operation and maintenance of Wet drilling system	14.53
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	640.20
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	895.42
12	Housekeeping & Maintenance of Rapid Loading System, stackers, bins over laying conveyors at Railway siding areas.	113.14
13	Operation & Maintenance of dry-fog, mist cannon system & mobile water tanker at railway sidings	39.86
14	Operation & maintenance of municipal solid waste (Collection, segregation, development of compost) in colony & Other area	288.00
15	Construction & maintenance of Retaining Wall	26.19
	Top soil preservation	1.38
16	Backfilling of mined out area	12.48
17	Construction & maintenance of Surface Run-off management measures (Construction of settling pond, Check dams, garland drains, gully plugs etc.)	5.68
18	Operation & Maintenance of Road Sweeping machine	54.00
	Total Expenditure	**2720.79**

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

September 2024

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 SINGHBHUM
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 and 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 Singhbum – 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 Singhbum 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 Singhbum – Bonai – Keonjhargarh 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 190MTPA 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 it 's steel plant at Jamshedpur and Kalinganagar along with sister concern company like Tata Metalliks Limited, Tata Sponge Iron Limited, TAYO Rolls.

2. OJECTIVE

- 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

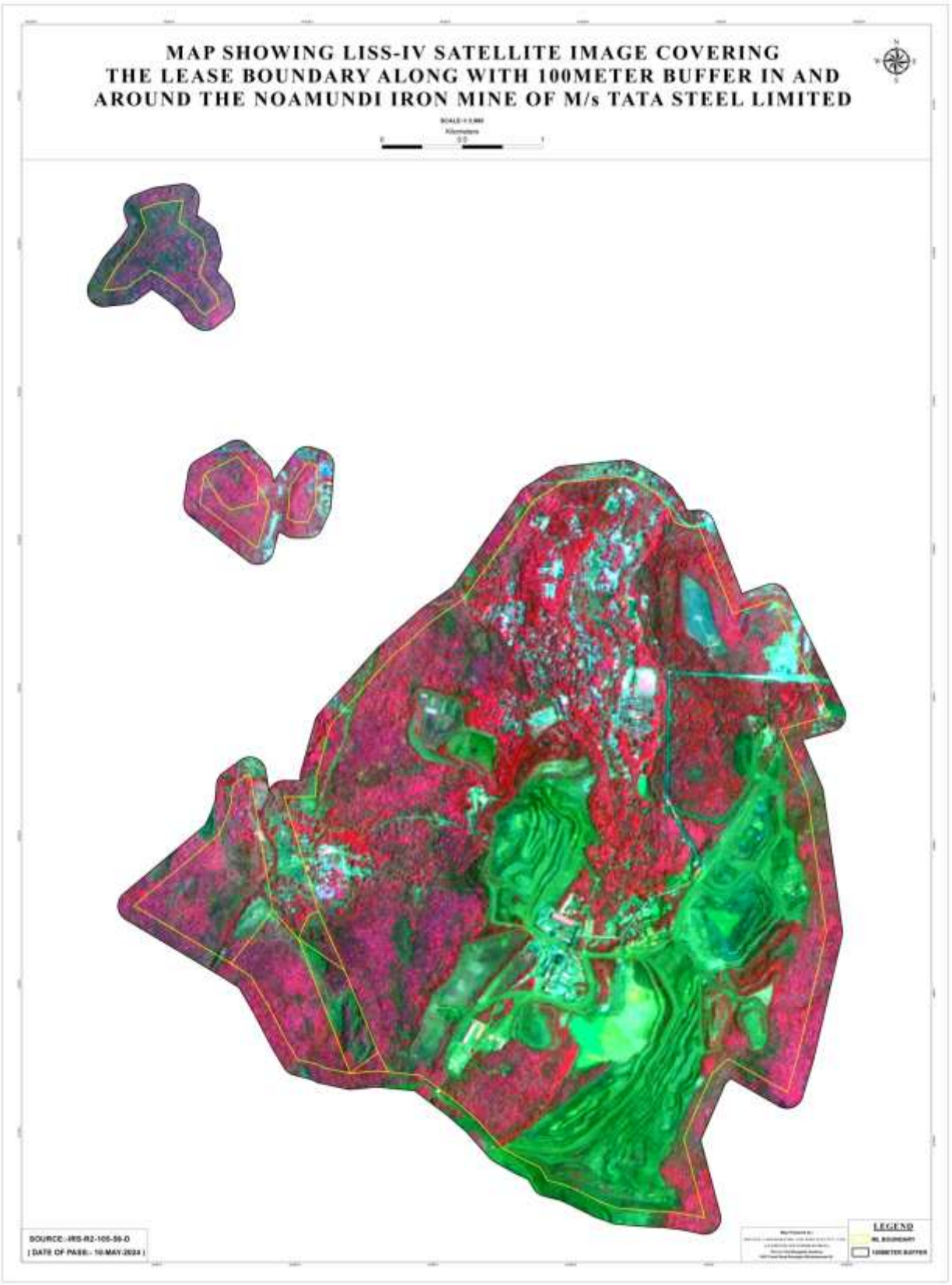


Fig-1: LISS- IV Satellite Image of Noamundi Iron Ore Mines

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

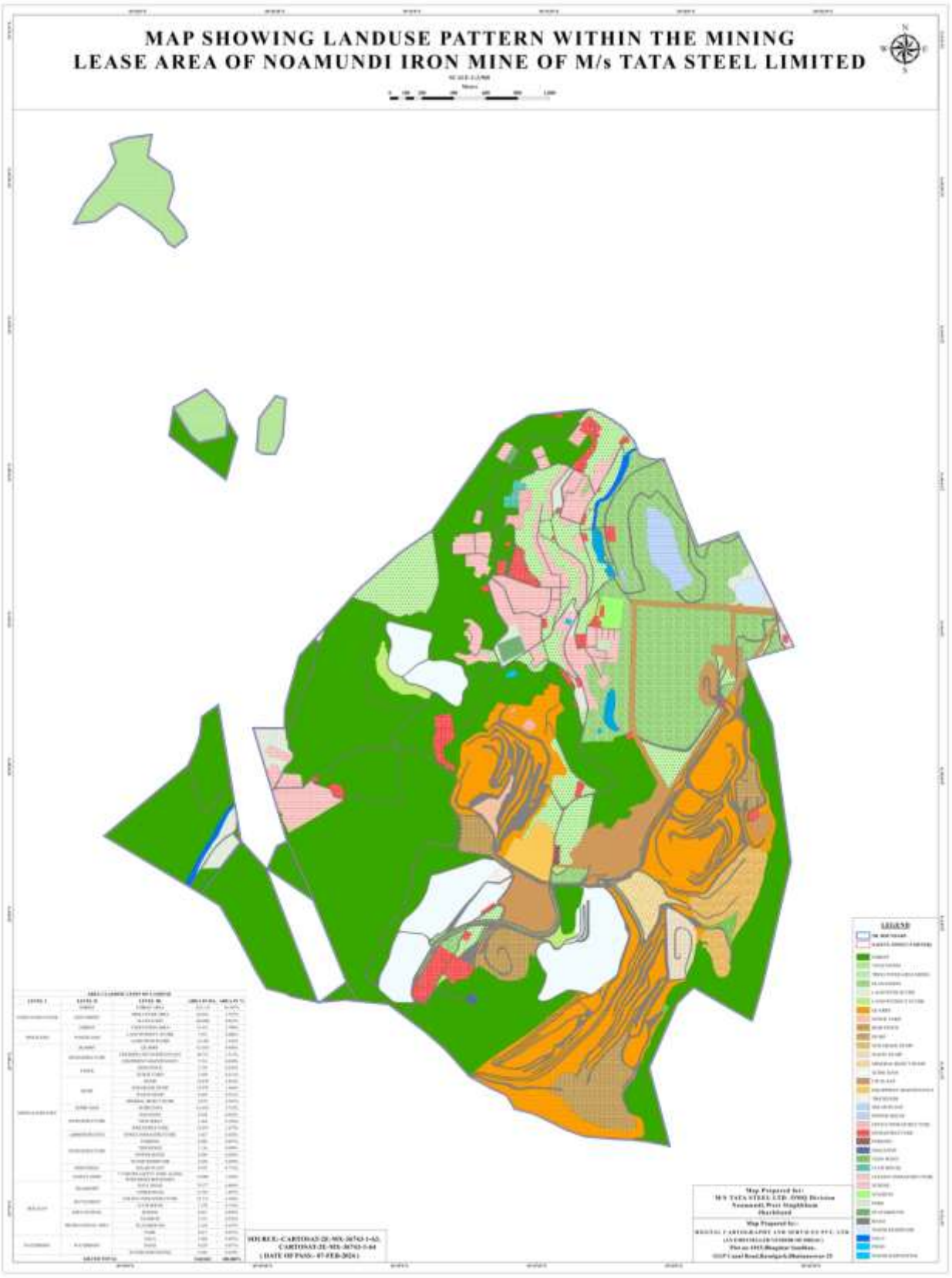
The results obtained in the ground truth exercise were applied to the pre-field maps for carrying out the required modifications. The modified thematic data layers were used to generate the base maps as well as the land use map. The final interpreted and classified maps were subjected to cartography 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:

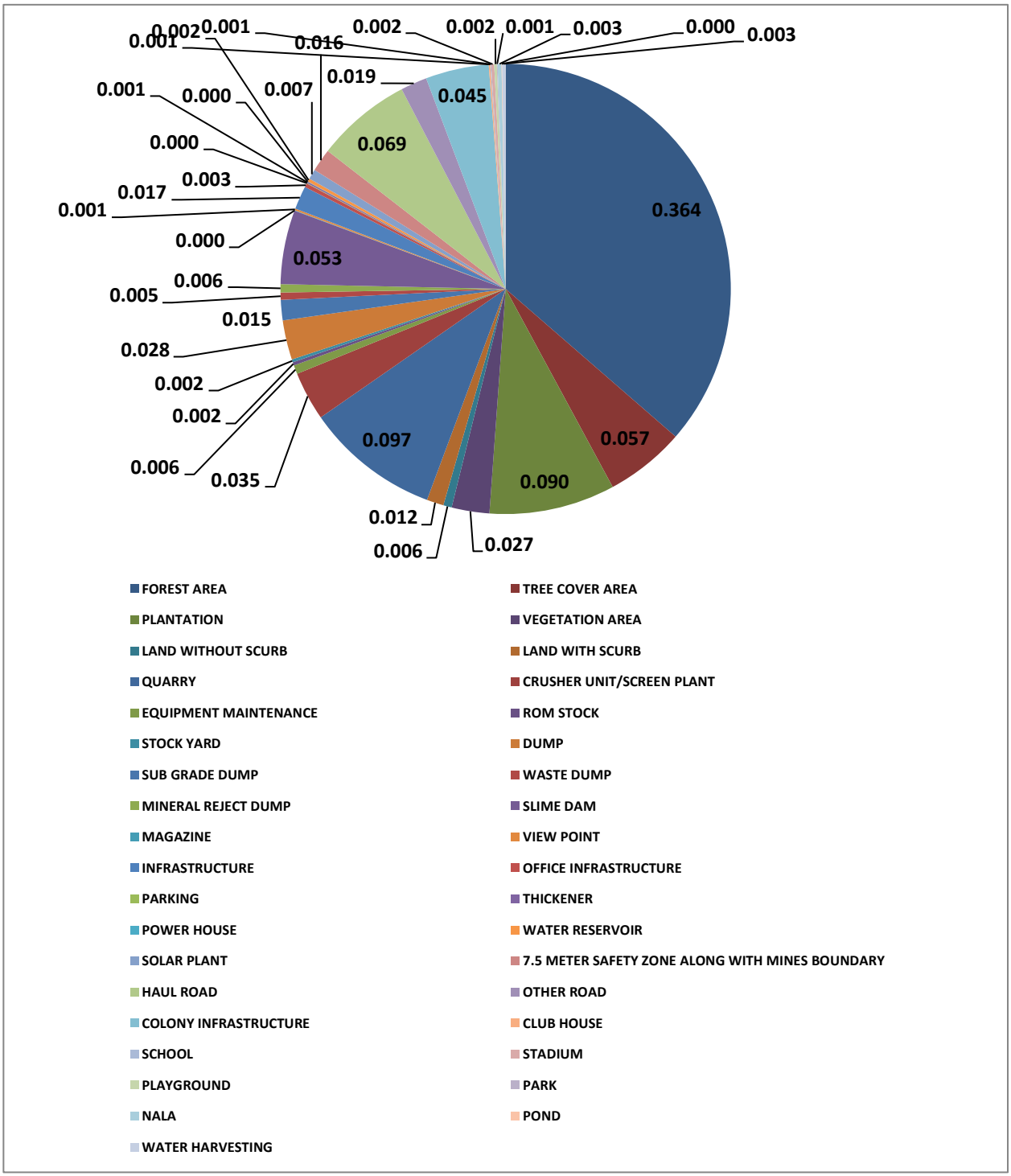
Fig3:Landuse/Land Cover map of Mine Area



AREA CLASSIFICATION OF LANDUSE				
LEVEL I	**LEVEL II**	**LEVEL III**	**AREA IN HA.**	**AREA IN %**
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%
GRAND TOTAL			**1160.062**	**100.000%**

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

Fig-4: Distribution of Land Use/Land Cover in Mine Area



Buffer area:

The land use statistics for the 5 km buffer area from the periphery 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/ land cover of the buffer area is depicted below:-

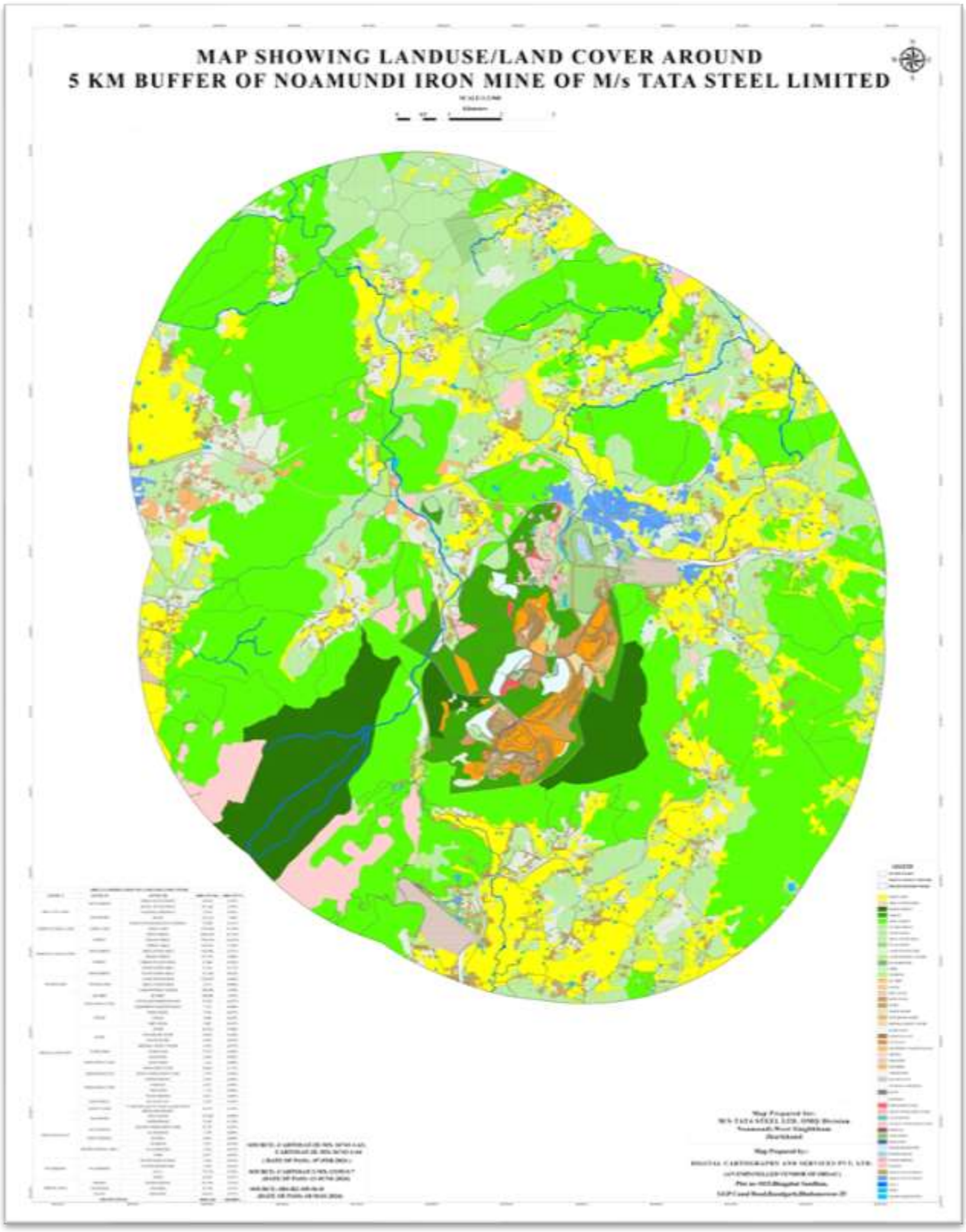


Fig-5: Landuse/LandCover Map of Buffer Area

AREA CLASSIFICATION OF LAND USE/LAND COVER				
LEVEL I	**LEVEL II**	**LEVEL III**	**AREA IN HA.**	**AREA IN %**
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%
		VEGETATION AREA	31.431	0.171%
	NON FOREST	PLANTATION AREA	151.366	0.823%
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%
		INFRASTRUCTURE	20.849	0.113%
	ADMINISTRATIVE	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%
GRAND TOTAL			**18401.184**	**100.000%**

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

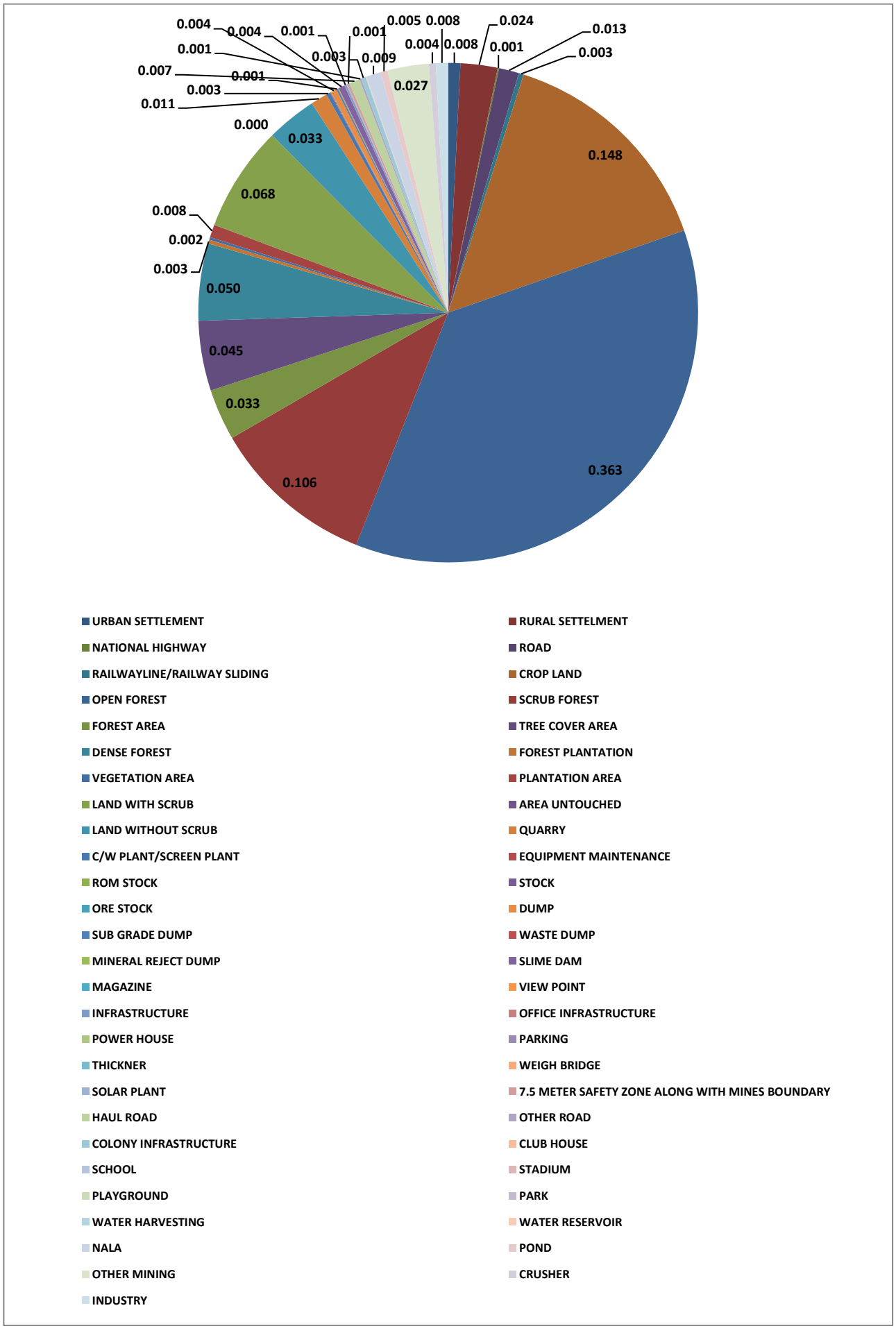


Fig-6: Distrbution of Land use/ Land cover in Buffer Area

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 atGandhalpada, 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:

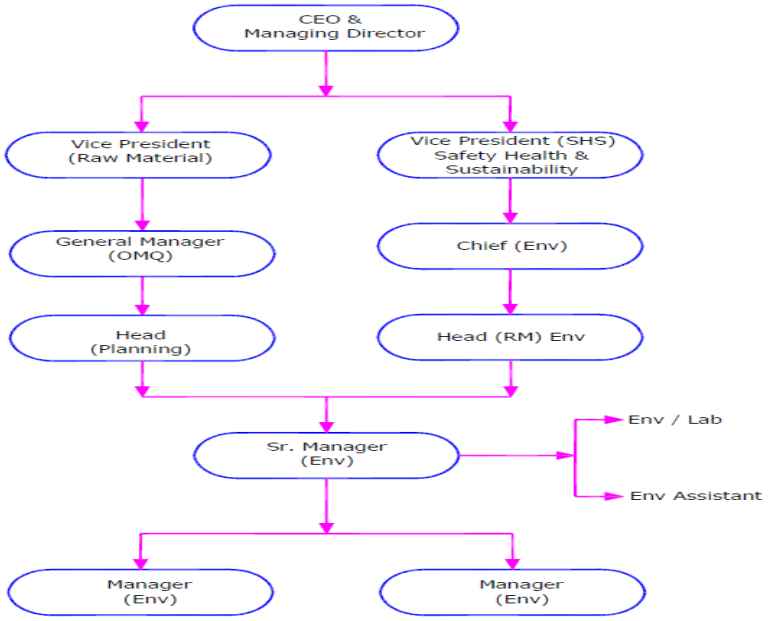
1. The Environment (Protection) Act, 1986.
2. Environmental Impact Assessment Notification, 14th Sep-2006.
3. Wildlife Protection Act 1972
4. Air (Prevention and Control of Pollution) Act, 1981
5. Water (Prevention and Control of Pollution) Act1974
6. Noise Pollution (Regulation and Control Act) 1990
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)

Date: 29/01/2025

TATA STEEL LIMITED
BOMBAY HOUSE, 24, HOMI MODY STREET, FORT,
MUMBAI - 400001
MUMBAI
MAHARASHTRA
INDIA
27AAACT2803M2ZA(GSTIN Number)

Policy No : 0304009684
Renewal : 02
Endorsement : 00

Dear Sir / Madam,

We thank you for choosing **Tata AIG General Insurance Company Ltd**. as your preferred insurer. Your Policy No. Is 0304009684 02 00.

We are glad that you have chosen our product **PUBLIC LIABILITY ACT** and given us an opportunity to be your risk carrier for this Product.

'Casualty Line' caters to most of the Enterprises / Industries in India, whether Large, Medium or Small. As one of the India's most established insurance companies, we understand these unique needs of coverage. At Tata AIG we care for you and would strive to offer convenience coupled with a range of products that cater continously to your ever increasing needs.

Enclosed please find your policy docket based on the information furnished by you in the Proposal.

We look forward to a long and mutually beneficial relationship and providing you wider range of benefits in the years to come.

Yours Sincerely,
For Tata AIG General Insurance Company Limited

Authorized Signatory

PUBLIC LIABILITY ACT POLICY
POLICY SCHEDULE

Agent/Broker Name -DIRECT
Agent/Broker License Code - NA:Agent/Broker :Contact No - 24*7 Tollfree Helpline 1800-266-7780

Attaching to and forming part of Policy No.	0304009684 02 00
Name of Insured Owner:	TATA STEEL LIMITED
Business:	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. Please also refer to https://www.tatasteel.com/ and the business activities as per MOA and respective subsidiaries website.
Address:	BOMBAY HOUSE, 24, HOMI MODY STREET, FORT, MUMBAI - 400001 MUMBAI MAHARASHTRA INDIA 27AAACT2803M2ZA(GSTIN Number) Place of supply -MAHARASHTRA State code -27
Territorial limits:	Anywhere in India

Policy Period: **From:** 01/01/2025 12:00 AM/ PM
To Midnight of: 31/12/2025 12:00 AM/ PM

Indemnity limit:Rs 50,000,000.00 in respect of any one accident and not exceeding 3 times thereof in the aggregate during the policy period.

Service Tax Registration No:

Premium	₹ 12,000.00
UGST/SGST @9 %	₹ 1,080.00
CGST @9 %	₹ 1,080.00

Contribution to the Environment Relief Fund:₹ 12,000.00

Date of Proposal and declaration:29/01/2025

In witness whereof the undersigned being duly authorized by the company and on behalf of the company has hereto set his hand at MUMBAI on 29/01/2025

The stamp duty of 0.25 paid in cash or demand draft or by pay order,vide Receipt/Challan no: LOA/ENF1/CSD/55/2024/4453 dated the 14/09/2024

For Tata AIG General Insurance Company Limited

Authorized Signatory

Date :29/01/2025
Place :MUMBAI

Policy Servicing Office
Tata AIG General Insurance Company Limited
BUILDING NO. 28,GROUND AND MEZZANINE FLOOR, DR. ERNEST BORGES ROAD, PAREL EAST, OPP. SHIRODKAR HIGH,MUMBAI,MAHARASHTRA,MUMBAI-400012
Tel No:22-22-62606600

RECEIPT

Receipt No. : 102001097252978

Receipt Date : 01/01/2025

Policy No : 0304009684 02 00

Received with thanks from TATA STEEL LTD a sum of ₹ **26,160.00** (Rupees Twenty Six Thousand One Hundred Sixty And Paise Zero Only)

Sr. No.	Policy Number	Total Premium (₹)	Utilized from the receipt for policy (₹)	Balance (₹)
1	0304009684 02 00	26,160.00	26,160.00	0.00

Note:

1. This is a computer generated receipt and does not require a signature.
2. Upon issuance of this Receipt, all previously issued temporary receipts, if any, related to this Policy shall be considered null and void.
3. Amounts received by cheque shall be subject to realisation.
4. Any amount received in excess of the Premium is being/shall be refunded by the Company.

GSTIN : 27AABCT3518Q1ZW - MAHARASHTRA Service Accounting Code : 997139

Insurance is the subject matter of the solicitation. For more details on risk factors, terms and conditions, please read sales brochure carefully before concluding a sale.
TATA AIG General Insurance Company Ltd. Regd. Office: 15th floor, Tower A, Peninsula Business Park,Ganpatrao Kadam Marg, Off Senapati Bapat Marg, Lower Parel, Mumbai- 400 013.
IRDA Registration No.108, CIN No : U85110MH2000PLC128425, PAN : AABCT3518Q, UIN No : IRDAN108CP0058V01201819
Website: www.tataaig.com 24X7 Tollfree Helpline 1800-266-7780 E-mail: customersupport@tataaig.com

LIABILITY INSURANCE POLICY
(UNDER PUBLIC LIABILITY INSURANCE ACT 1991)

1.OPERATIVE CLAUSE

Whereas the Insured Owner named in the schedule hereto and carrying on business described in the said schedule has applied to the Tata AIG 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 per the provisions of the Public Liability Insurance Act and the rules framed thereunder.

NOW THIS POLICY WITNESSETH that subject to the terms, exceptions and conditions contained herein or endorsed hereon, the company will indemnify the insured owner against the statutory liability arising out of accidents occurring during the currency of the policy due to handling hazardous substances as provided for in the said Act and the Rules framed thereunder.

2.DEFINITIONS:

a)"ACT" unless otherwise specifically mentioned shall mean the Public Liability Insurance Act 1991 as amended from time to time;

b) "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;

c) "Handling" in relation to any harzardous 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;

d) "Hazardous Substance" means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986, and exceeding such quantity as may be specified, by notification, by the Central Government;

e)"Owner" means a person who owns, or has control over handling any hazardous substance at the time of accident and includes:
i) in the case of a firm any of its partners;
ii) in the case of an association, any of its members, and
iii) 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;

f) "Turnover" shall mean
i) Manufacturing units-Annual Gross Sales of all goods including all levies and taxes
ii) Godowns/ warehouse owners-Total Annual rental receipts.
iii)Transport Operators-Total Annual freight receipts.
iv)Others-Total Annual gross receipts.

3. EXCLUSIONS:

(1) arising out of wilful or intentional non-compliance of any Statutory provisions.

(2) in respect of fines, penalties, punitive and/or exemplary damages.

(3) arising under any other legislation except in so far as provided for in Section 8 Sub Section (1) and (2) of the Act.

(4) 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 Owner's control, care or custody.

(5) 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;

(6) 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.

4. CONDITIONS:

(1) The Insured owner shall give written notice to the Company as soon as reasonably 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 applications forwarded by the Collector and all

such additional information and or assistance that the company may require.

(2) No admission, offer, promise or payments 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 this policy there be any other insurance covering the same liability, then the Company shall not be liable to pay or contribute more than its ratable proportion of such liability.

(6) This policy may be cancelled by the Insured Owner by giving 30 days notice in writing to the company in which event the Company will retain premium at short period scale subject to there not having occurred an accident during the policy period which may give rise to a claims(s), failing which no refund of premium shall be allowable.

(7) This Policy may also be cancelled by the Insurer by giving 30 days notice in writing to the Insured Owner in which event the Company shall be liable to repay on demand a ratable proportion of the premium for the unexpired term from the date of cancellation.

(8) If the Company shall disclaim liability to 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 the practical purposes shall be deemed to have been abandoned and shall not thereafter be recoverable hereunder or be made the subject matter of any suit.

(9) The Company shall not be liable to make any payment in respect of any claim if such claim shall be in any manner fraudulent or supported, 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.

(10) 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 thereunder or in this Policy shall bear such specific meaning.

(11) Any dispute regarding interpretation of the terms, conditions and exclusions of this Policy shall be determined in accordance with the law and practice of a court of competent jurisdiction within India.

GRIEVANCE REDRESSAL POLICY

Grievance Lodgment Stage

The Company is committed to extend the best possible services to its customers. However, if you are not satisfied with our services and wish to lodge a complaint, please feel free to contact us through below channels:

Call us 24X7 toll free helpline 1800 266 7780
Email us at customersupport@tataaig.com

Write to us at : Customer Support, Tata AIG General Insurance Company Limited
A-501 Building No.4 IT Infinity Park, Dindoshi, Malad (E), Mumbai - 400097
Visit the Servicing Branch mentioned in the policy document

Nodal Officer

Please visit our website at www.tataaig.com to know the contact details of the Nodal Officer for your servicing branch.
After investigating the grievance internally and subsequent closure, we will send our response within a period of 10 days from the date of receipt of the complaint by the Company or its office in Mumbai. In case the resolution is likely to take longer time, we will inform you of the same through an interim reply.

Escalation Level 1

For lack of a response or if the resolution still does not meet your expectations, you can write to manager.customersupport@tataaig.com. After investigating the matter internally and subsequent closure, we will send our response within a period of 8 days from the date of receipt of your complaint.

Escalation Level 2

For lack of a response or if the resolution still does not meet your expectations, you can write to the Head-Customer Services at head.customerservices@tataaig.com. After examining the matter, we will send you our response within a period of 7 days from the date of receipt of your complaint. Within 30 days of lodging a complaint with us, if you do not get a satisfactory response from us and you wish to pursue other avenues for redressal of grievances, you may approach Insurance Ombudsman appointed by IRDA under the Insurance Ombudsman Scheme. Given below are details of the Insurance Ombudsman located at various centers.

List of Insurance Ombudsman Offices

Office of the Ombudsman	Address & Contact details	Jurisdiction of Office Union Territory, District
AHMEDABAD	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	Gujarat, Dadra & Nagar Haveli, Daman and Diu.
BENGALURU	Office of the Insurance Ombudsman, Jeevan Soudha Building, PID No. 57-27-N-19 Ground Floor, 19/19, 24th Main Road, JP Nagar, Ist Phase, Bengaluru – 560 078. Tel.: 080 - 26652048 / 26652049 Email: bimalokpal.bengaluru@ecoi.co.in	Karnataka
BHOPAL	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	Madhya Pradesh Chattisgarh
BHUBANESHWAR	Office of the Insurance Ombudsman, 62, Forest park, Bhubneshwar - 751 009. Tel.: 0674 - 2596461 /2596455 Fax: 0674 - 2596429 Email: bimalokpal.bhubaneswar@ecoi.co.in	Orissa
CHANDIGARH	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	Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Chandigarh
CHENNAI	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	Tamil Nadu, Pondicherry Town and Karaikal (which are part of Pondicherry).
DELHI	Office of the Insurance Ombudsman, 2/2 A, Universal Insurance Building, Asaf Ali Road, New Delhi – 110 002. Tel.: 011 - 23239633 / 23237532 Fax: 011 - 23230858 Email: bimalokpal.delhi@ecoi.co.in	Delhi
GUWAHATI	Office of the Insurance Ombudsman, Jeevan Nivesh, 5th Floor, Nr. Panbazar over bridge, S.S. Road, Guwahati – 781001(ASSAM). Tel.: 0361 - 2132204 / 2132205 Fax: 0361 - 2732937 Email : bimalokpal.guwahati@ecoi.co.in	Assam, Meghalaya, Manipur, Mizoram, Arunachal Pradesh, Nagaland and Tripura
HYDERABAD	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 - 65504123 / 23312122 Fax: 040 - 23376599 Email : bimalokpal.hyderabad@ecoi.co.in	Andhra Pradesh, Telangana, Yanam and part of Territory of Pondicherry.
JAIPUR	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	Rajasthan
ERNAKULAM	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	Kerala, Lakshadweep, Mahe-a part of Pondicherry
KOLKATA	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	West Bengal, Sikkim, Andaman & Nicobar Islands
LUCKNOW	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	Districts of Uttar Pradesh : Laitpur, Jhasi, Mahoba, Hamirpur, Banda, Chitrakoot, Allahabad, Mirzapur, Sonbhabdra, 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

MUMBAI	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	Goa, Mumbai Metropolitan Region excluding Navi Mumbai & Thane
NOIDA	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	State of Uttaranchal and the following Districts of Uttar Pradesh : Agra, Aligarh, Bagpat, Bareilly, Bijnor, Budaun, Bulandshehar, Etah, Kanooj, Mainpuri, Mathura, Meerut,Moradabad, Muzaffarnagar, Oraiyya, Pilibhit, Etawah, Farrukhabad, Firozbad, Gautambodhanagar, Ghazaibad, Hardoi, Shahjahanpur, Hapur, Shamli, Rampur, Kashganj, Sambhal, Amroha, Hathras, Kanshiramnagar, Saharanpur
PATNA	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	Bihar, Jharkhand
PUNE	Bhagwan Sahai Palace , 4th Floor, Main Road, Naya Bans, Sector 15, G.B. Nagar, Noida. NOIDA – 201301 Tel: 0120-2514250/51/53 Email: bimalokpal.noida@gbic.co.in	Maharashtra, Area of Navi Mumbai and Thane excluding Mumbai Metropolitan Region