

**SIX MONTHLY COMPLIANCE REPORT OF
ENVIRONMENTAL CLEARANCE
FOR THE PERIOD APRIL TO SEPTEMBER 2025
2 MTPA**



SUBMITTED BY

Lafarge Umiam Mining Pvt Ltd

**FOR
NONGTRAI LIMESTONE MINE
VILLAGE NONGTRAI,
DISTRICT EAST KHASI HILLS, MEGHALAYA**

NOV 2025



LafargeHolcim

November 25, 2025

**Ministry of Environment, Forest and Climate Change
Government of India
Integrated Regional Office,
Shillong – 793021, Meghalaya**

Subject: Implementation of conditions stipulated in the Ministry's environmental clearance letter No. J-11015/10/2000 IA. II (M) dated 09 August 2001 and modified letter No. J-11015/10/2000 IA. II (M) dated 19 April 2010 regarding limestone opencast mining project at Phlangkaruh, Nongtraï, Tehsil-Sohra, Dist. East Khasi Hills, Meghalaya of M/S Lafarge Umiam Mining Pvt. Ltd.

Madam,

With reference to the environmental clearance letter stated above, we are pleased to submit following reports as detailed below. This is as per EIA notification 14 September 2006.

Half yearly Environmental Monitoring Report for the month of April to September 2025 along with Compliance status as on 30th September 2025 and the Conditions of Environmental Clearance No. J-11015/10/2000 IA. II (M) dated 09 August 2001 and modified letter No. J-11015/10/2000 IA. II (M) dated 19 April 2010.

The above report is also displayed on our official website "<http://www.lumpli.com>"

We are fully committed to comply with environmental safeguards.

Thanking You,

George Chacko

Director Corporate Affairs

Enclosure: As stated above

- Cc: 1. The Member Secretary Meghalaya State Pollution Control Board, Arden Lumpyngad Shillong
2. Zonal Officer, Central Pollution Control Board Shillong Meghalaya "TUM-SIR", Lower Motinagar; Near Fire Brigade
3. Director (S), Impact Assessment Division Ministry of Environment, Forests and Climate Change Indira Paryavaran Bhavan Jorbagh Road New Delhi - 110 003 INDIA

Lafarge Umiam Mining Private Limited

A company of LafargeHolcim and MOLINS

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CONTENTS

1. Compliance Status of Conditions of Environmental Clearance J-11015/10/2000-IA. II. (M) dated 9 August 2001& J-11015/10/2000-IA. II. (M) dated 19 April 2010	: 3-28
2. Environmental Monitoring Conducted from 01 April to 30 September 2025	
2.1. Introduction	: 29`
2.2. Environmental Monitoring	: 30
2.3. Micrometeorology	: 30
2.4. Ambient Air Quality Monitoring Locations	: 30-32
2.5. Surface Water Quality Monitoring Locations	: 32-34
2.6. Surface Water Flow Measurement Locations	: 34-35
2.7. Noise Levels Monitoring	: 35-37
2.8. Vehicular emission`	: 37
2.9. Cave protection	: 37
3. Conclusion	: 38
4. Table, Exhibits & Plates	: 40-135

List of Annexure

Annexure I – Minimate Ground Vibration Report	: 136-138
Annexure II - Water Quality Results	: 139- 186
Annexure III- Pollution under Control Test	: 187
Annexure IV - Ground water level results for the period April to September 2025	: 188

Half Yearly Compliance Status for the period of April to September 2025 on the Conditions of Environmental Clearance No. J-11015/10/2000-IA. II. (M) dated 9 August 2001 and Transferred to LUMPL dated 30 July 2002

Conditions as per Environmental Clearance Letter dated 9 August 2001 as amended on 19 April 2010 with respect to Specific Condition A and General Conditions B

A: Specific Conditions

(i) Topsoil should be properly stacked at earmarked dump site(s) with adequate measures and should be used for reclamation and rehabilitation of mined out areas.

- Availability of top soil in the mining lease area is almost negligible as the area within the mine lease is devoid of any overburden. Any trapped soil, encountered from the crevices or fractured rocks (due to Karst topography) is being collected and properly stacked.
 - As the limestone is exposed on the surface and the mining area is practically devoid of any overburden or topsoil, no overburden waste dumping is involved.
- Records of topsoil recovered during the last three years is presented as following:

Status as on	Clay/ Top Soil Recovered in tonne	Clay/ Top Soil Used in Greenbelt/Plantation in tonne	Balance Clay Available in tonne	Remarks
December 2023	3.440	4.000	11.920	Use at Nursery, Safety Zone & Block A
December 2024	3.350	4.800	10.470	Use at Nursery and Safety Zone
September 2025	3.090	3.500	10.060	Use at Nursery & Safety Zone

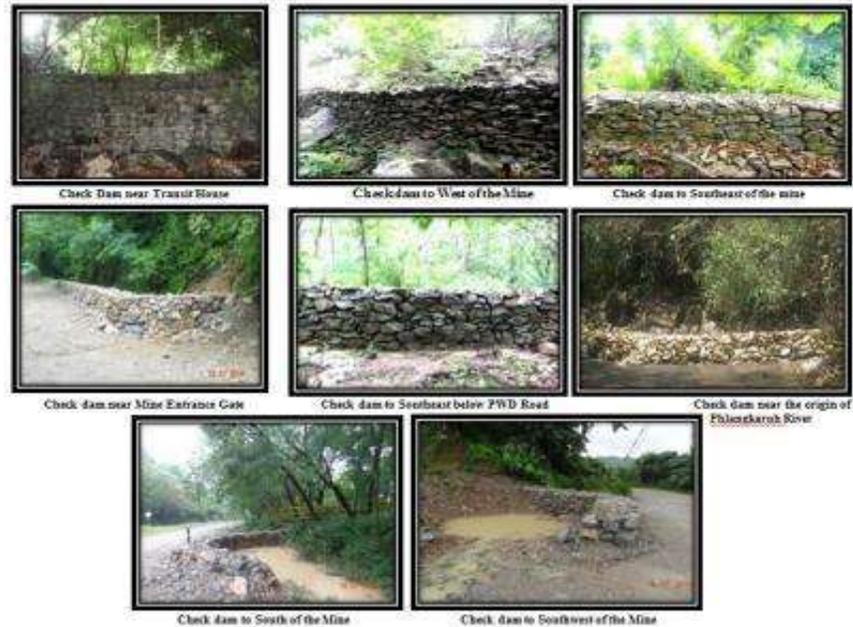
- Measures for rehabilitation of mined out areas will be done as per progressive mine closure plan and five years prior to decommissioning of mines as per prior approval of IBM and Mining and Geology Department Government of Meghalaya.

(ii)

Check dams and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained.

Garland drain (size, gradient & length) and sump capacity should be designed keeping 50 % safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.

- Eight check dams have been constructed in the gullies and area surrounding the mine.
- Drains have been constructed along the active mine benches linking it with siltation ponds. However most of the rain water gets percolated down from the mine surface (having crevices and fractured rocks due to Karst topography).
- The mine is yet to achieve the solid surface, once the fractured zone of the mine benches is exhausted, the garland drains are envisaged to be constructed on the lower benches to carry rainwater to the siltation pond (at lower benches) for its effective collection and use in watering the mine area, roads, green belt etc.



(iii)	<p>A thick green belt in an around the mine site, crushing, loading and unloading facilities, corridor of belt conveyor route, township should be developed.</p> <p>Width of greenbelt on the eastern and southern sites of lease area should be at least 50 m (7.5 m within ML area and 42.5 m outside ML area) and 100 m (7.5 m within ML area and 92.5 m outside ML area) respectively as per the plan submitted in EMP.</p>	<ul style="list-style-type: none"> • Being complied with • LUMPL has also been carrying out plantation by maintaining a green belt of 100 m width (including 7.5 m within ML area) as per the condition of EC no. J-11015/10/2000-IA. II. (M) dated 9 August 2001 and Transferred to LUMPL dated 30 July 2002 modified by MoEFCC on 19 April 2010 for 2.0 MTPA limestone mining. • Total plantations carried out in the greenbelt area, along the roads and safety zones are 46,389 as on 30th September 2025 with survival rate of approximately ~ 77.4%.
(iv)	<p>Adequate measures should be taken for treatment of the upper catchments of the lease area.</p>	<ul style="list-style-type: none"> • Report on Upper Catchment Area Treatment Plan as prepared by CIMFR, Nagpur and NEERI, Nagpur was submitted to MoEF, New Delhi and its Regional Office, Shillong through a covering letter dated 30th June 2010. • MoEF vide letter no. F.No.8-64/2007-FC dated 29 December 2011, advised LUMPL to deposit the funds required to implement the Catchment Area Treatment (CAT) Plan amounting to Rs.50,00,000/- (Rupees Fifty Lakh Only). The requisite amount was deposited by LUMPL in CAMPA Fund in account No. SB01025217 with Corporation Bank on 5th January, 2012 for implementation of CAT Plan. • As part of the recommendations of Catchment Area Treatment Plan, eight check dams have been constructed in the gullies and area surrounding the mine. Drains have been constructed along the active mine benches linking it with siltation ponds. However most of the rain water gets percolated down from the mine surface (having crevices and fractured rocks due to karst topography). Greenbelt of 100 m all along the mine is being maintained.

(v)	<p>Blasting operations should be carried out only during the daytime. To ensure slope stability and minimum damage to sub-surface caves and channels, controlled blasting should be adopted. The mitigative measures suggested in the EMP for control of ground vibrations and to arrest fly rocks and boulders should be implemented.</p>	<ul style="list-style-type: none"> • Blasting is being practiced only during daytime. • To control ground vibration, air overpressure and fly rocks, blasting is carried out by NONEL (Non-Electric Detonators) system as per the recommended parameters by CIMFR Nagpur. The peak particle velocity and air overpressure remained within the safe limits of prescribed standards as laid down in the Circular issued by the Directorate General of Mines Safety, Government of India. • Refer to Annexure- I the monitored ground vibrations along with other environmental parameters included in six monthly compliance report for the period April to September 2025 (as enclosed) have also been displayed at company's website "http://www.lumpl.com". ▪ Further LUMPL has engaged Central Institute of Mining and Fuel Research (CIMFR), Nagpur in the year 2017- 2018 to carry out Scientific Investigation in respect of "blast induce ground vibration, fly rock and air blast". Based on the recommendations of the study, LUMPL has further modified the blast design. The study report was submitted during the reporting period April to September 2018.
(vi)	<p>Sewage treatment plant for treating residential and waste from industrial area should be provided. ETP shall also be provided for the workshop and wastewater generated during the mining operation. (as amended through MoEF letter dated 19 April 2010)</p>	<ul style="list-style-type: none"> ▪ Being complied with. ▪ Six package STPs are operational for treatment of domestic wastewater. ▪ An ETP is operational for treatment of wastewater generated during washing of HEMMs at the workshop. ▪ LUMPL upgraded the existing STPs and ETP by changing the air lining, replace the old pipes, applied Fiber Reinforced Plastic coating in the reactor tank, changing the filters etc. and it is operational.
(vii)	<p>Scientific monitoring within 1 km radius around the lease area should be carried on monthly basis for the following:</p> <ul style="list-style-type: none"> • Out flow of all the springs, • Hills slope, and collapse of caves and cavities within and around the ML area and blockage of 	<ul style="list-style-type: none"> ▪ No caves have been observed inside the mining lease area. Within 1 km radius around the mine, there exist twin sink holes and cave located outside the mining lease area. Detailed mapping of the cave located along the south-western part outside the mine lease area have been carried out and these have been marked on the plan. Fencing around the twin sink holes at 100 m distance have been

sub-surface water channels.

carried out during June 2011 to restrict movement of people and or machine.

- Monthly monitoring within 1 km around the mine lease area is being carried out covering flows of Phlangkaruh springs located to the south of the mine across the road down the hill slopes.
- No mining operation in the area of the sink holes and area near cave are done as these are located outside the mine lease area.
- Monitoring of outflow of springs is included in Table 16 to 17 of the compliance report of April to September 2025 (as enclosed).
- LUMPL in partnerships with the Nongtrai Village Durbar has launched Geo and Bio Diversity Protection Programme in the year 2008, which is an initiative for protecting the cave located in the vicinity of Nongtrai Limestone Mine site. A protective enclosure was constructed around the entrance of about approximately 125 m long cave.



Fencing around Cave Area for its Protection.

(viii)	<p>Regular monitoring of water quality of Phlangkaruh springs and river including ground water for physico-chemical and biological parameters should be carried out. Monitoring should be continuous during initial mining operations. If required, a check dam should be constructed on the Phlangkaruh immediately below the springs with the approval of concerned authorities, if any, to arrest silt & screen escape from the mine.</p>	<ul style="list-style-type: none"> ▪ Monitoring of water quality of Phlangkaruh springs (upstream and downstream), and Umiam River (upstream and down streams) is being carried out by ABNS SCIENTIFIC SERVICES PRIVATE LIMITED recognized by Meghalaya State Pollution Control Board (MSPCB) on monthly basis in their laboratory in Guwahati. ▪ The water quality results is included in the Annexure –II of the compliance report of April to September 2025 (as enclosed). ▪ A check dam is operative across the Phlangkaruh River.
(ix)	<p>After the mine becomes operational, ground vibrations due to blasting and its impact on various mine structures should be studied in detail and report submitted to MoEF.</p>	<ul style="list-style-type: none"> ▪ LUMPL has been implementing recommendations of the scientific investigations conducted by Central Institute of Mining and Fuel Research (CIMFR), Government of India in 2015 to control blast induced ground vibration, fly rock and air overpressure. ▪ Monitoring of ground vibrations during every blast is done in two different directions using two seismographs of “MINIMATE“model DS-567 imported from INSTANTEL, Canada. Based on the results from these machines further modification in blasting is done from time to time. The monitoring of peak particle velocity during the period 1st April to 30th September 2025 remained well below 5 mm/sec at the distance of 200 to 300 m, which is well within the Indian Standard limits as prescribed by Directorate General of Mines Safety – DGMS (Tech.) Circular No.7 dated 29th September 1997). ▪ Further LUMPL has engaged Central Institute of Mining and Fuel Research (CIMFR), Nagpur in the year 2017- 2018 to carry out Scientific Investigation in respect of “blast induce ground vibration, fly rock and air blast”. Based on the recommendations of the study, LUMPL has further modified the blast design. The study report submitted during the reporting period April to September 2018.

(x) Crusher should be operated with high efficiency bag filters. Water sprinkling system should be provided to check fugitive emissions from crushing operations.

- Being complied with.
- Mitigation measures to control dust emission including provision of water sprinkling, bag filters, fogging system and rain-gun are in place on crushing operations done through two stages crushers and transfer points. Belt conveyor is covered to avoid air borne dust.



Bag Filter units attached to Crushers

- Effective water sprinkling, water fogger in crusher hopper and rain gun system at crushers charging platform to check any fugitive dust emissions.



Rain Water Gun at Crushers Charging Platform

<p>(xi)</p>	<p>Vehicular emissions should be kept under control and regularly monitored.</p>	<ul style="list-style-type: none"> ▪ All the HEMM (diesel driven vehicles) are being serviced as per periodical maintenance. Vehicle emission test of all HEMMs deployed in the mining operations monitored by Meghalaya State Pollution Control Board on half yearly basis. PUC certificate obtained from MSPCB is valid up to January 2026. A sample of the report is enclosed as Annexure- III of the six monthly compliance report of April to September 2025. ▪ LUMPL introduced two electric dumpers as part of its initiative to achieve a 100% green fleet, with an investment of ₹4.05 crore. This initiative supports zero-emission operations and contributes significantly to reducing the company's carbon footprint. <div data-bbox="1024 634 1843 1057" data-label="Image"> </div> <p style="text-align: center;">Electric Vehicle (Dumpers)</p>
<p>(xii)</p>	<p>The twin sinkholes and the surrounding vegetation should be left undisturbed during the entire mine life and protected as a reserve of site biodiversity.</p>	<ul style="list-style-type: none"> ▪ Being complied with. ▪ No mining will be carried out near the twin sink holes and the surrounding vegetation is being protected against any degradation. ▪ Fencing around the twin sink holes at 100 m distance has been maintained since June 2011 to restrict movement of people and or machine. ▪ An area of around 1.785 ha from the mining lease have been left out for the protection of twin sink hole

(xiii)	Digital processing of the entire lease area using remote sensing technique should be carried out regularly once in three years for monitoring land use pattern and physiography of the area and report submitted to the Ministry and its Regional Office at Shillong.	<ul style="list-style-type: none"> ▪ The digital processing of the entire lease area using remote sensing technique was carried out for the period of 2020-2022 and the study report was submitted during the reporting period April to September 2023. ▪ We are initiating the study for the period 2023-2025.
(xiv)	A detailed mine decommissioning plan should be submitted to the Ministry of Environment & Forests 5 years in advance for approval.	<ul style="list-style-type: none"> ▪ Noted and will be complied 5 years in advance for approval.
(xv)	Other project specific environmental protection measures suggested in the Environmental Management Plan should also be implemented.	<ul style="list-style-type: none"> ▪ Being complied with
B: General conditions		
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	<ul style="list-style-type: none"> ▪ Noted.
(ii)	No change in the calendar plan including excavation, quantum of limestone, waste/ OB dumps should be made.	<ul style="list-style-type: none"> ▪ Noted.
(iii)	Five ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e., PM 10), SO ₂ and NO _x monitoring. Location of the ambient air quality stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board." (as amended through MoEF letter dated 19 April 2010)	<ul style="list-style-type: none"> ▪ Ambient Air Quality (AAQ) is being monitored with respect to PM₁₀, PM_{2.5}, SO₂ and NO_x at five locations within and surrounding areas (covering core and buffer zones) as selected by MSPCB through their letter dated 24 February 2012. The locations are; <ol style="list-style-type: none"> 1) HEMM Workshop 2) Near Magazine 3) Near Phlangkaruh Village 4) Pyrkan Village; and 5) Shella Bazar. ▪ The observed results of ambient air quality parameters (as monitored

		from (April to September 2025) remained within the prescribed limits and are being reported as in Tables 2 to 11 of the six monthly compliance report of April to September 2025 (as enclosed).
(iv)	Data on ambient air quality RSPM (particulate matter with size less than 10micron i.e., PM 10) SO2 and NOx should be regularly submitted to the Ministry including its Regional Office located at Shillong and the State Pollution Control Board/Central Pollution Control Board once in six months. (as amended through MoEF letter dated 19 April 2010)	<ul style="list-style-type: none"> ▪ Being done regularly. ▪ Observations have been included in the compliance report.
(v)	Adequate measures for control of fugitive emissions should be taken during drilling and blasting operations, loading and transportation of minerals etc.	<p>Steps that have been taken as on date to control fugitive emissions include the following:</p> <p>Effective safeguard measures to control dust and PM₁₀ & PM_{2.5} generation include the following:</p> <ul style="list-style-type: none"> ▪ Provision of dry drilling with dust extraction system in place or wet drilling of holes; ▪ Use of good quality explosives, implementing CIMFR recommended measures during blasting i.e. provision of proper stemming after charging of explosives and use of delay detonators minimizing dust throw and its spread in ambient air; ▪ Ensuring blasting is done only in the daytime when no strong winds are blowing or there is no overcast or lightening event. ▪ Loading /unloading of limestone from an optimum height and use of sharp teeth for shovel to reduce dust blow; ▪ Avoiding overloading of haul trucks to eliminate spillage during transit on haul road; ▪ Water sprinkling on unpaved areas and haul road during dry wind periods through fixed sprinklers supplemented with water tankers in active mine pit area;

- Ensuring speed controls as already practiced to the limit of 20 km/hour on vehicle movements on haul roads;
- Preventive maintenance of mine machinery and regular fine-tuning of engines of HEMMs in use to ensure that the emission levels remain within the stipulated norms and maintaining Pollution Under Control (PUC) Certificates;
- Introduced two electric dumpers to support zero-emission initiatives, significantly contributing to the reduction of the carbon footprint.
- Provision of water sprinkling, rain gun and fogger system to minimize dust generation while unloading of dumper into the crusher hopper;
- Provision of dust extraction system with bag filters in crushing and transfer operations. High efficiency dust collection system will continue to operate to achieve particulate emission to less than 50 mg/Nm³ through crushers, TB-1 and TB-2 stacks;
- Provision of water sprinkling for transfer of crushed limestone through hoods/chutes before unloading on long belt conveyor to prevent dust emissions;
- Provision of close type long belt conveyor provided with water sprinkling for transportation of crushed limestone;
- Personnel working in dusty area are mandated to use protective gears such as dust masks.



Water Sprinklers fixed along the median of Haul Road

		 <p data-bbox="961 532 1902 581">Water Sprinklers in Dump Hopper and Rain water Gun for water sprinkling in the surrounding area</p>
(vi)	<p data-bbox="191 602 932 672">Adequate measures should be taken for control of noise levels below 75 dB (A) in the work environment.</p>	<ul data-bbox="961 594 1911 805" style="list-style-type: none"> Measures have been adopted to minimize noise levels in the work environment. Mitigations measures are in place to minimize noise levels. All working areas are being maintained within the prescribed noise levels. Workers engaged in operations of HEMM have been provided with ear plugs/muffs.
(vii)	<p data-bbox="191 826 932 971">Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.</p> <p data-bbox="191 992 932 1135">Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.</p>	<ul data-bbox="961 818 1911 1284" style="list-style-type: none"> Personal protective equipment including dust masks, ear plugs, safety shoes, illuminating jacket, hard hat are compulsory for all workers working in the mine. Life Saving (Tool Box) talk is held daily. Refresher training on safety and health is imparted on regular basis to all the workers. Qualified doctors based at the site have been providing medical support to the employees and community in the surrounding villages. Qualified Occupational Health Specialist available at site for regular and periodic medical examination of the workers engaged in the project. Records of periodical medical examinations done in the recent past are being maintained for all employees (including contractor workers) as per the requirement of Mines Rules, 1955.

(viii)	The funds earmarked for Environmental Protection measures should be kept in separate account and not diverted for other purpose. Year-wise expenditure should be reported to the Ministry of Environment & Forests.	<ul style="list-style-type: none"> ▪ Separate account for environmental expenses is being maintained. ▪ Funds earmarked for environment protection are being maintained in the separate bank account. ▪ Expenditure incurred for the period 1st April to 30th September was INR 51.20 Lakhs.
(ix)	The Regional Office of this Ministry located at Shillong shall monitor compliance of the stipulated environmental safeguards. The project authorities should send one set of EIA/EMP report and mining plan to them and extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	<ul style="list-style-type: none"> ▪ Complied with.
(x)	The project authority should inform to the Regional Office located at Shillong as well as to the Ministry of Environment & Forests regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	<ul style="list-style-type: none"> ▪ Complied with
(xi)	A copy of the clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	<ul style="list-style-type: none"> ▪ Complied with
(xii)	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's office/Tehsildar Office for 30 days.	<ul style="list-style-type: none"> ▪ Complied with
(xiii)	The project authorities should advertise at least in two local newspapers widely circulated around the project,	<ul style="list-style-type: none"> ▪ Complied with

<p>one of which shall be in the vernacular language of the locality concerned within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in and a copy of the same should be forwarded to Regional Office of the Ministry located at Shillong.</p>	
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Half Yearly Compliance Status for the period of 01 April to September 30, 2025 on the Conditions of Environmental Clearance No. J-11015/10/2000-IA.II.(M) partial modification by MoEF dated 19 April 2010

S. No.	Conditions	Status of Compliance
1. Additional Conditions as per Partial Modification of Environmental Clearance Letter dated 19 April 2010		
A -Specific conditions		
A (i)	The project proponent shall prepare a detailed Catchment Area Treatment Plan and implement the same in consultation with the Competent Authority in the State Government. A copy of the plan shall be submitted to the Ministry and its Regional Office at Shillong.	<ul style="list-style-type: none"> ▪ Report on Upper Catchment Area Treatment Plan as prepared by CIMFR, Nagpur and NEERI, Nagpur was submitted to MoEF, New Delhi and its Regional Office, Shillong through a covering letter dated 30th June 2010. ▪ MoEF vide letter no. F.No.8-64/2007-FC dated 29th December 2011, advised LUMPL to deposit the funds required to implement the Catchment Area Treatment (CAT) Plan amounting to Rs.50,00,000/- (Rupees Fifty Lakh Only). The requisite amount was deposited by LUMPL in CAMPA Fund in account No. SB01025217 with Corporation Bank on 5th January, 2012 for implementation of CAT Plan. ▪ As part of the recommendations of Catchment Area Treatment Plan, eight check dams have been constructed in the gullies and area surrounding the mine. Drains have been constructed along the active mine benches linking it with siltation ponds. However, most of the rainwater gets percolated down from the mine surface (having crevices and fractured rocks due to karst topography). Greenbelt of 100 m all along the mine is being maintained.
A (ii)	The project proponent shall explore the use of Surface Miner technology and submit its report to the Ministry within three months.	<ul style="list-style-type: none"> ▪ Central Institute of Mining and Fuel Research (CIMFR) conducted a study in 2010 on Applicability of Surface Miner in Nongtra Limestone Mine of Lafarge Umiam Mining Private Limited in Meghalaya. As per the study, the application of surface miner for mining limestone in Nongtra mine is not a technically viable proposition and should not be tried at

		<p>present. The rock is too strong to be mechanically excavated for the purpose of mining yielding bulk production.</p> <ul style="list-style-type: none"> ▪ The Expert Appraisal Committee of MoEF during its meeting on 29th June 2010, as recorded in the minutes under paragraph 2.19, states that “as regards adoption of ‘Surface Miners’, the Committee agreed with the recommendations of CIMFR that it is not technically viable to use surface miners in Nongtraï. The rocks in the ore body are too strong and undulating to lend themselves for excavation by using ‘Surface Miners’, which are suitable for softer mineral bodies in flatter terrain.”
A (iii)	The project proponent shall discontinue agreement, if any, for procuring limestone on the basis of disorganized and unscientific and ecologically unsustainable mining in the area.	<ul style="list-style-type: none"> ▪ An Amendment Agreement between Nongtraï Durbar and LUMPL was executed on 6th July 2010 whereby clause related to procurement of Limestone by Nongtraï Durbar for LUMPL was deleted. ▪ A copy of the amendment was submitted to the State Government on 7th July 2010.
A (iv)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora and fauna spotted in the study area. Action plan for conservation of flora and fauna shall be prepared in consultation with the State Forest and Wildlife Department. All the safeguard measures brought out in the Wildlife Conservation Plan prepared specific to this project site shall be effectively implemented. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. A copy of action plan shall be submitted to the Regional Office of the Ministry of Environment and Forests, Shillong.	<p>Following reports amongst other were appraised by EAC of MoEF during its meeting held on 21st July 2010:</p> <ul style="list-style-type: none"> a) Assessment of Floral and Faunal Diversity in Core and Buffer Zones of Nongtraï Limestone Mine of Lafarge Umiam Mining Pvt. Ltd. and its Surrounding Areas by Professor S.K. Barik, Project Coordinator, North-Eastern Hill University (NEHU), Shillong – 793022, June 2010, and; b) Biodiversity Conservation Plan for Nongtraï Limestone Mine of Lafarge Umiam Mining Pvt. Ltd. and its Surrounding Areas by Government of Meghalaya, Shillong, June 2010. Four season baseline report for the study area was submitted on 7th May 2013.

		<ul style="list-style-type: none"> ▪ Action Plan for the conservation measures prepared by the State Government along with a budget of INR 439 lakhs to be spent over in next 10 years for biodiversity conservation. The total amount for the implementation of the Biodiversity Conservation Plan (BCP) amounting to INR 439 lakhs has been deposited in the CAMPA account of Meghalaya No. SB010 25217 on 5th January 2012. ▪ The status of the implementation of the Biodiversity Conservation Plan for the financial year 2024-25 shared in the previous reporting period.
A (v)	The project proponent shall maintain a strip of at least 100 meter of forest area on the boundary of mining area as a green belt.	<ul style="list-style-type: none"> ▪ Being complied with. ▪ After the EC modification letter dated 19th April 2010, a survey of the area completed and rope fencing has been provided to demarcate 100-meter strips as greenbelt surrounding the forest land of the mining lease. The rope fencing is also periodically surveyed for its presence. ▪ Green belt of 100 m width is being maintained. LUMPL has entered into agreements dated 6th July 2010 with Nongtraï Village Durbar. ▪ LUMPL has carried out plantations of 46,389 as on 30th September 2025 with survival rate of approximately ~ 77.4 %. LUMPL will ensure plantation of only the Forest Department specified plant species during monsoon seasons.
A (vi)	The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the first order and the second order streams, if any emanating/passing through the mine lease area during the course of mining operation.	<ul style="list-style-type: none"> ▪ LUMPL will continue to ensure that measures shall be in place so that no natural water course and /or water resources shall be obstructed due to mining activities. ▪ Mitigation measures will be implemented in due course of time when stable ground is encountered in the mine thus to ensure that the flow is not obstructed and water stream is conserved and protected of any

		contamination due to the mining operations.
A (vii)	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as haul road, loading and unloading point and all transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	<p>Effective safeguard measures to control dust and PM₁₀ & PM_{2.5} generation include the following:</p> <ul style="list-style-type: none"> ▪ Provision of dry drilling with dust extraction system in place or wet drilling of holes; ▪ Use of good quality explosives, implementing CIMFR recommended measures during blasting i.e. provision of proper stemming after charging of explosives and use of delay detonators minimizing dust throw and its spread in ambient air; ▪ Ensuring blasting is done only in the daytime when no strong winds are blowing or there is no overcast or lightening event. ▪ Loading /unloading of limestone from an optimum height and use of sharp teeth for shovel to reduce dust blow; ▪ Avoiding overloading of haul trucks to eliminate spillage during transit on haul road; ▪ Water sprinkling on unpaved areas and haul road during dry wind periods through fixed sprinklers supplemented with water tankers in active mine pit area; ▪ Ensuring speed controls as already practiced to the limit of 20 km/hour on vehicle movements on haul roads; ▪ Preventive maintenance of mine machinery and regular fine-tuning of engines of HEMMs in use to ensure that the emission levels remain within the stipulated norms and maintaining Pollution Under Control (PUC) Certificates; ▪ Provision of water sprinkling, rain gun and fogger system to minimize dust generation while unloading of dumper into the crusher hopper; ▪ Provision of dust extraction system with bag filters in crushing and transfer operations. High efficiency dust collection system will continue to operate to achieve particulate emission to less than 50 mg/Nm³ through crushers, TB-1 and TB-2 stacks;

- Provision of water sprinkling at transfer points of crushed limestone through chutes before unloading on long belt conveyor to prevent dust emissions;
- Provision of close conduit type long belt conveyor provided with water sprinkling for transportation of crushed limestone;
- Personnel working in dusty area to be provided protective gears such as dust masks.



Automatic Water Sprinklers fixed along the median of Haul Road.



Water Rain Gun



Water Fogger at Dump Hopper

A (viii)	<p>Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Shillong, the Central Ground Water Authority and the Regional Director, Central Ground Water Board (CGWB). If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.</p>	<ul style="list-style-type: none"> ▪ Three Piezometers installed outside at <ul style="list-style-type: none"> (i) PWD Road (to the Southwest of the mine), (ii) Near Mine Entry Gate (to the South of the mine); and (iii) Near Transit House (to the Southeast of the mine). • The groundwater levels and ground water quality are being monitored covering all the four seasons. The month wise Piezometers monitored ground water levels and ground water quality are included in Annexure-V of the six monthly Compliance Report for the period October to March. The monitored results are being submitted to CGWA/CGWB on six monthly basis. ▪ It is being ensured that no natural water course and water resources are obstructed due to mining operations.
A (ix)	<p>Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.</p>	<ul style="list-style-type: none"> ▪ LUMPL has established rainwater harvesting system at two locations by collecting rainwater from roof top of Transit House (residential accommodation) and mine office buildings (each provided with a tank of 20m³ capacity). Water harvesting system has been installed at two locations i.e. the roof top of the transit camp area and roof top of the office area. Requisite information was submitted to Regional Director, Central Ground Water Board Guwahati for necessary guidance. ▪ Water being recharged in to recharge pit also being stored in a separate tank for domestic use. ▪ Replacement of old PVC pipes by UPVC pipes on the Transit House buildings and Office buildings completed in the year 2020.

		 <p style="text-align: center;">Rain Water Harvesting</p>
A (x)	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly	<ul style="list-style-type: none"> ▪ Qualified doctors based at the site have been providing medical support to the employees and community in the surrounding villages. ▪ Qualified Occupational Health Specialist available at site for regular and periodic medical examination of the workers engaged in the project ▪ Records of periodical medical examinations done in the recent past are being maintained for all employees (including contractor workers) as per the requirement of Mines Rules, 1955.
A (xi)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	<ul style="list-style-type: none"> ▪ LUMPL is committed to ensure that for any construction labour deployment, necessary infrastructure will be provided within the existing project footprint and facilities including cooking, toilets, package STP, safe drinking water, health care facility etc.
A (xii)	The critical parameters such as RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx in the ambient air within the impact zone. Peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically.	<ul style="list-style-type: none"> ▪ The ambient air quality (AAQ) is being monitored with respect to <i>PM10</i>, <i>PM2.5</i>, <i>SO2</i> and <i>NOx</i> at five locations within the core and buffer zones as recommended by Meghalaya State Pollution Control Board. All parameters that were monitored during the period 1st October to 30th September 2025 remained within the permissible limits. ▪ Peak particle velocity (i.e. ground vibrations) is being measured with

	<p>Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)].</p> <p>The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain.</p> <p>The Circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in, shall also be referred in this regard for its compliance.</p>	<p>every blast. All the measured values remained less than 5 mm/sec at the distance of 200 m to 300 m, which is well within the standard of 10 mm/sec (for dominant frequency range of 8 to 25 Hz) as prescribed by Directorate General of Mines Safety – DGMS (Tech.) Circular No.7 dated 29 September 1997).</p> <ul style="list-style-type: none"> ▪ Discharged water quality for TDS, DO, TSS and pH are being monitored by ABNS SCIENTIFIC SERVICES PRIVATE LIMITED Recognized by Meghalaya State Pollution Control Board on monthly basis in their laboratory. The monitored values remained within the prescribed limits. The monthly monitored results are being displayed (on public domain) as per the requirement of MoEF Circular dated 27 May 2009 through: <ul style="list-style-type: none"> ➤ LED screen for digital display of critical pollutants near the main gate entry to the Nongtraï Limestone Mine; and ➤ Six monthly compliance reports are available on Company’s website “www.lumpl.com”.
A (xiii)	<p>A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.</p>	<ul style="list-style-type: none"> ▪ Noted. ▪ Final Mine Closure Plan with Corpus Fund as approved by IBM shall be submitted to MoEFCC five years in advance of final mine closure for approval.
B - General Conditions		
B (i)	<p>The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Shillong, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental</p>	<ul style="list-style-type: none"> ▪ Being complied with ▪ LUMPL is submitting six monthly reports to MoEFCC, Regional Office at Shillong, MSPCB and Zonal office of Central Pollution Control Board, Shillong on regular basis and the same will be continued. ▪ Status of compliance including monitoring results is also being uploaded periodically on the company website “www.lumpl.com”.

	clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Shillong, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.	
B (ii)	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, Shillong by e-mail.	<ul style="list-style-type: none"> ▪ Being complied with ▪ LUMPL has been submitting annual Environmental Statement as per Form-V under the Rule 14 of the EPA Rules, 1986 to MSPCB. ▪ Environmental Statement for the year ending 31st March 2025 has been submitted to MSPCB with a copy to MoEFCC RO on 27th September 2025.

. In addition, Ministry has decided the following changes to be incorporated in the Environmental clearance letter of even number dated

09.08.2001.

1.	FOR	READ	
	<p>“A. Specific Conditions (vi) Sewage treatment plant for treating residential and waste from industrial area should be provided.”</p>	<p>“A. Specific Conditions (vi) Sewage treatment plant for treating residential and waste from industrial area should be provided. ETP shall also be provided for the workshop and wastewater generated during the mining operation.”</p>	<ul style="list-style-type: none"> • Complied with. • 6 nos. of Package Sewage Treatment Plants (STPs) and 1 no. of Effluent Treatment Plant (ETP) are operational.
2.	<p>“B. General Conditions (iii) Five ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO₂, NO_x and CO monitoring. Location of the ambient air quality stations should be decided based on the meteorological data, topographical</p>	<p>“B. General Conditions (iii) Five ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e., PM 10), SO₂ and NO_x monitoring. Location of the stations should be</p>	<ul style="list-style-type: none"> ▪ Being complied with. ▪ Ambient Air Quality (AAQ) is being monitored with respect to PM₁₀, PM_{2.5}, SO₂ and NO_x at five locations within and surrounding areas as selected by MSPCB through their letter dated 24th February 2012. The locations are <ul style="list-style-type: none"> (i) HEMM Workshop (ii) Near Magazine (iii) Near Phlangkaruh Village (iv) Pyrkan Village and (v) Shella Bazar. ▪ The observed results of ambient air quality parameters remained within the prescribed limits and are being reported to MoEFCC RO, Shillong with a copy to MSPCB as part of the six-monthly compliance reporting.

	features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board."	decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board."	
3.	"B. General Conditions (iv) Data on ambient air quality should be regularly submitted to the Ministry including its Regional Office located at Shillong and the State Pollution Control Board/Central Pollution Control Board once in six months."	"B. General Conditions (iv) Data on ambient air quality RSPM (particulate matter with size less than 10micron i.e., PM 10) SO2 and NOx should be regularly submitted to the Ministry including its Regional Office located at Shillong and the State Pollution Control Board/Central Pollution Control Board once in six	<ul style="list-style-type: none"> ▪ Being done regularly. ▪ Observations have been included in the compliance report.

		months.”	
3.	All other conditions of the above referred environmental clearance letter shall remain unchanged.	▪ Noted	
4.	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	▪ Noted	
5.	Failure to comply with any of the conditions given above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act 1986.	▪ Noted	
6.	The above conditions will be enforced inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act 1974 the Air Prevention & Control of Pollution) Act 1981 the Environment (Protection) Act 1986 and the Public Liability Insurance Act 1991 along with their amendments and rules made thereunder.	▪ Noted	

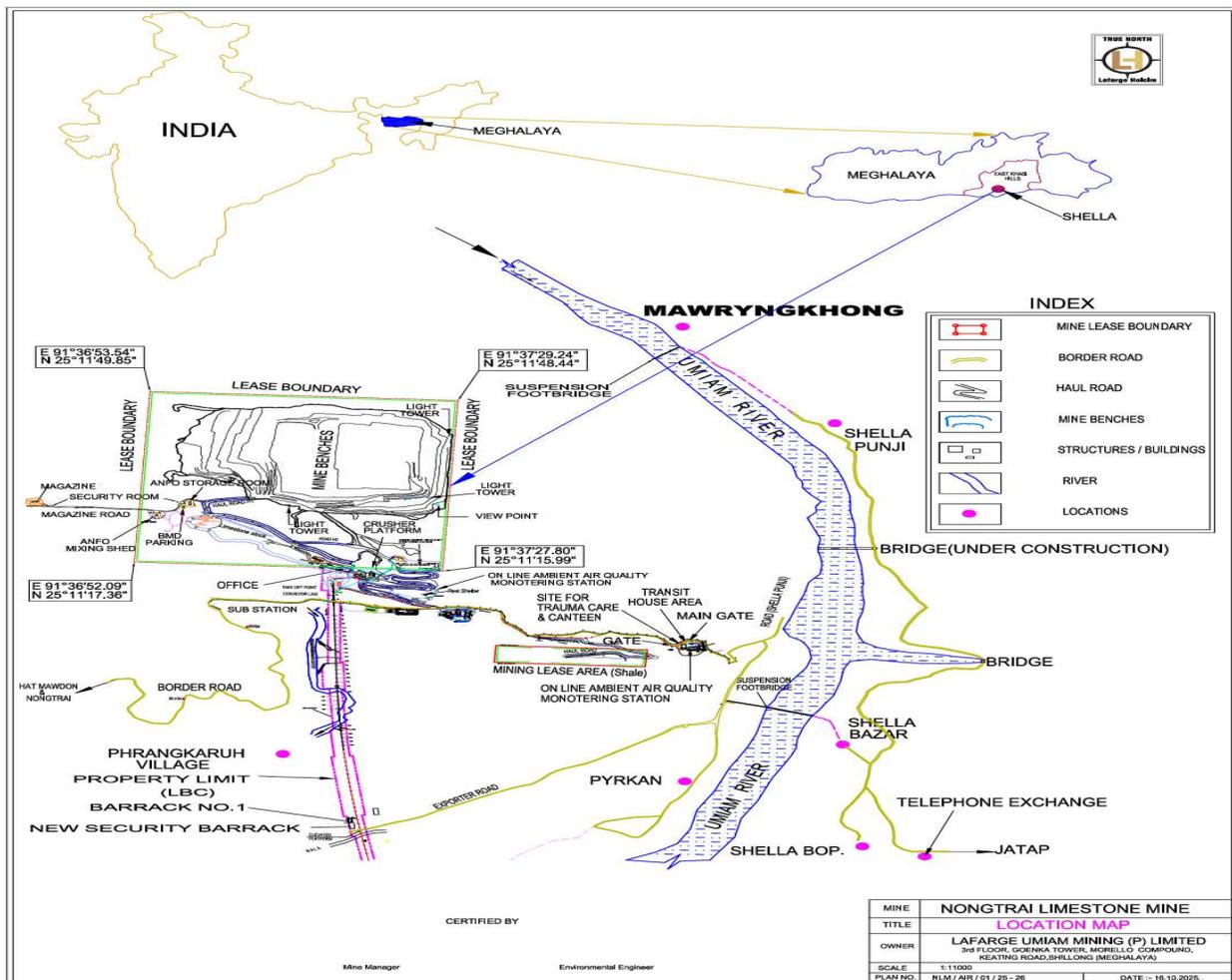
2 ENVIRONMENTAL MONITORING CONDUCTED FROM 1 APRIL TO 30 SEPTEMBER 2025

2.1 INTRODUCTION

Lafarge Umiam Mining Pvt. Ltd. (LUMPL), a company incorporated in India as a 100% subsidiary of LafargeHolcim Bangladesh Ltd., (formerly Lafarge Surma Cement Ltd.) has been operating Nongtrai Limestone Mine located at village Nongtrai, District East Khasi Hills in Meghalaya, India for the purpose of extraction and export of limestone via long belt conveyor to its parent company in Bangladesh for the manufacture of clinker and cement. This report on environmental monitoring for the period from 01 April to 30 September 2025 covers compliance status of conditions of Environmental Clearances J-11015/10/2000-IA. II. (M) dated 9 August 2001 & J-11015/10/2000-IA. II(M) dated 19 April 2010.

The location of Nongtrai Limestone Mine is shown in **Figure 2.1**.

Figure 2.1: Location of Nongtrai Limestone Mine



2.2 ENVIRONMENTAL MONITORING

This six-monthly report covers the environmental monitoring done for the period from 1 April to 30 September 2025 covering the following environmental monitoring results:

- i) Micrometeorology
- ii) Ambient Air Quality
- iii) Water Quality
- iv) Water Flow
- v) Noise level
- vi) Cave Protection

2.3 Micrometeorology

A weather monitoring station has been installed on rooftop of the mine office building of Nongtrai Limestone Mine for recording of hourly temperature, humidity, wind speed, wind direction and rainfall data. The observed meteorology is described in the following subsections.

a) Wind speed and wind direction

The predominant wind direction recorded was N-NE with wind speed varying from 0.0 to 11.6 km per hour during Apr to Jun 2025 and 0.0 to 12.1 km per hour during Jul to Sep 2025. The details wind direction is given in Table 1.

b) Temperature

The maximum and minimum temperature recorded during Apr - Jun 2025 was 44.2°C and 17.0°C respectively while during Jul to Sep 2025 the maximum and minimum temperature recorded was 44.1°C and 22.2°C respectively (Table No.1). The diurnal variation of temperature is shown in Exhibit No.1 for the month of Apr to Jun 2025 and Exhibit No.2 for the month of Jul to Sep 2025.

c) Humidity:

The maximum and minimum Humidity during Apr to Jun 2025 was 97.6% and 27.1% respectively while during Jul to Sep 2025 the maximum and minimum humidity recorded was 97.4% and 19.0% respectively (Table No.1) The diurnal variation of humidity is shown in Exhibit No.3 for the month of Apr to Jun 2025 and Exhibit No.4 for the month of Jul to Sep 2025.

d) Rainfall:

The total rainfall observed during the period 1 April to 30 September 2025 was 4210.0 mm.

2.4 Ambient Air Quality Monitoring Locations

Ambient air quality monitoring is carried out twice a week at five stations selected as per recommendation of Meghalaya State Pollution Control Board as per their letter no. MPCB/TB-CON-227(Pt-II)/2011-2012/19 24 February 2012. Two monitoring stations are located in the core zone and three in the buffer zone for monitoring of Particulate Matter of size less than 10 micron (PM10), Particulate Matter of size less than 2.5 micron (PM2.5),

Sulphur Dioxide (SO₂) and Nitrogen Oxide (NO_x) for the study period using Respirable Dust Sampler of Envirotech make. The distance and direction of the ambient air quality monitoring stations are summarized in Table 2.1:

Table 2.1: AAQ Monitoring Locations

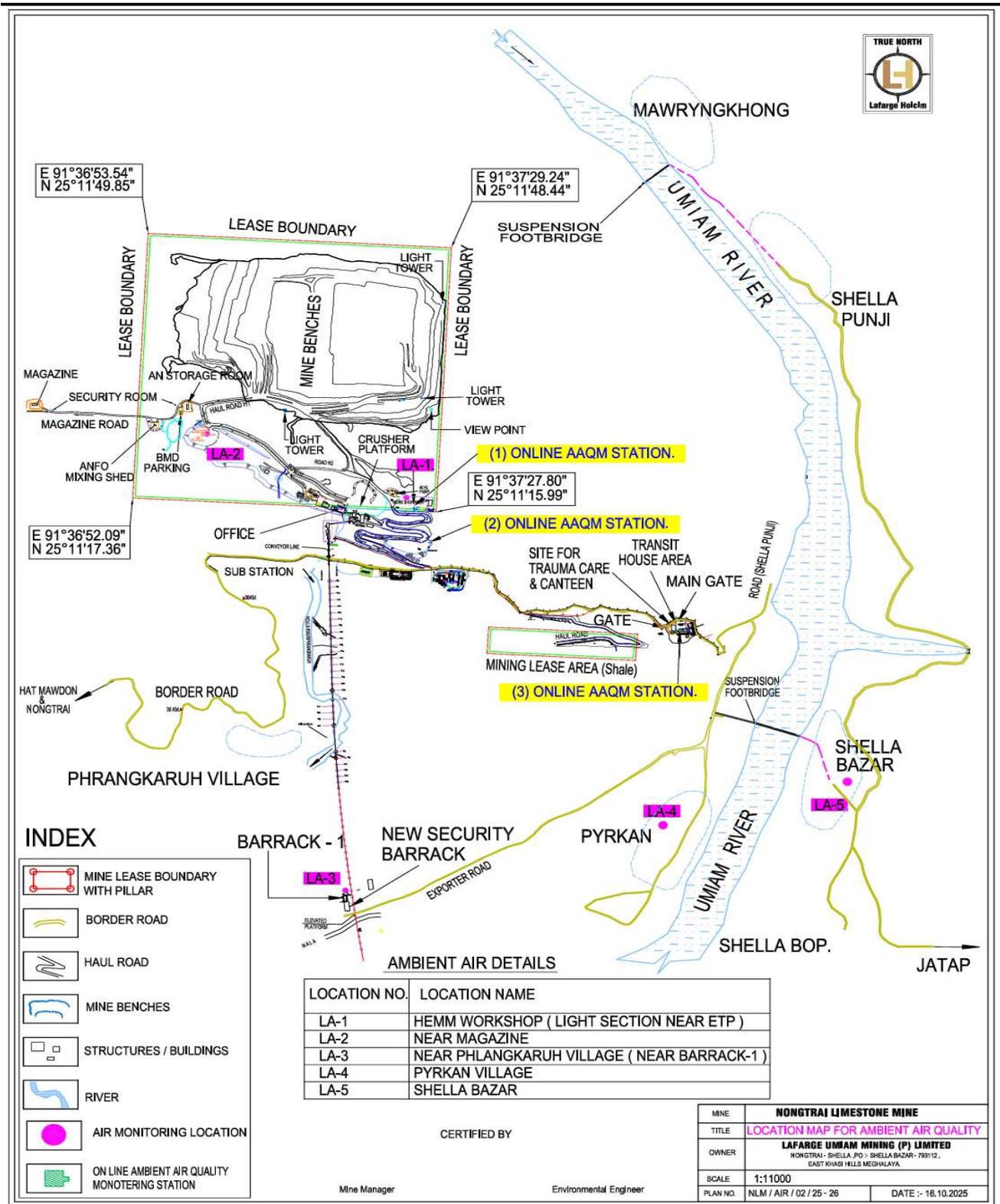
AAQ Monitoring Station Code	Distance and Bearing from Centre of the Mine	AAQ Description
LA-1: HEMM Workshop (Light section near ETP)	0.7 km to Southeast	Respirable Dust Sampler was placed near HEMM Workshop (Light section near ETP) in the quarry to assess the present pollution level in the core zone.
LA -2: Magazine Area	0.40 km to West	Respirable Dust Sampler was placed near Magazine area in the core zone.
LA-3: Phlangkaruh Village (near Security Barrack-I)	1.40 km to South	Respirable Dust Sampler was placed near Phlangkaruh Village (near Security Barrack-I) in the buffer zone.
LA - 4: Pyrkan Village	2.60 km to South Southeast	Respirable Dust Sampler was placed near Pyrkan Village in the buffer zone.
LA -5: Shella Bazaar	3.40 km to Southeast	Respirable Dust Sampler was placed near Shella Bazaar in the buffer zone on the roof top of a House.

The location of five ambient air quality stations is shown in **Figure 2.2**.

Concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x recorded at all the five locations are described in **Tables 2 to 11**. All the observed values were found to be below the prescribed NAAQS.

Graphical representation of Ambient Air Quality is shown in **Exhibit Nos. 5 & 6** on the Industrial and mixed areas for the months of Apr to Jun 2025 and Jul to Sep 2025 and **Exhibit Nos. 7 & 8** on the Residential areas for the months Apr to Jun 2025 and Jul to Sep 2025 respectively.

Figure 2.2: Locations of Ambient Air Quality Stations



2.5 Surface Water Quality Monitoring Locations

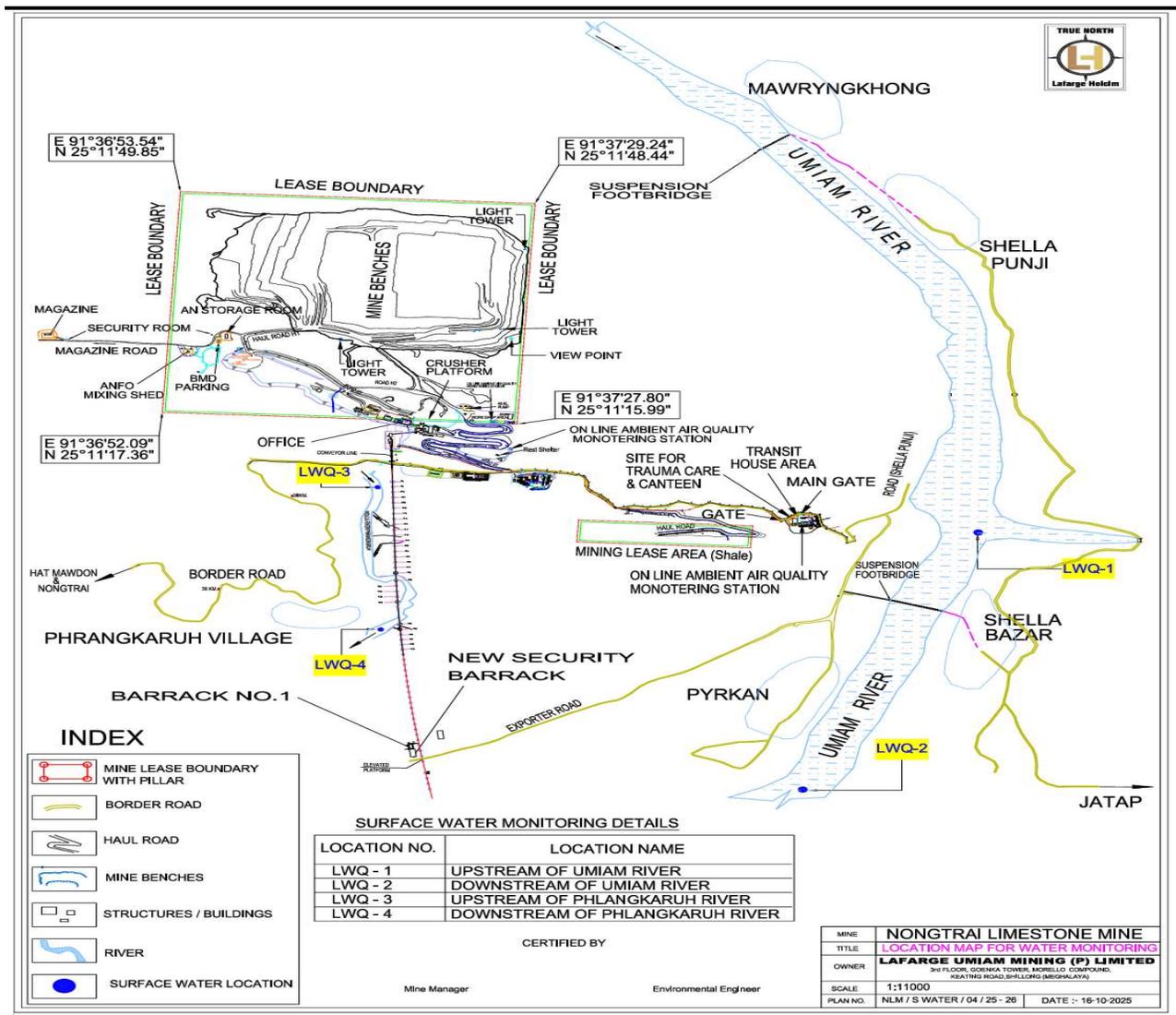
Surface water quality was assessed by collecting once a month water samples from four locations as per the recommendations of Meghalaya State Pollution Control Board vide letter no. MPCB/TB-CON-227(Pt-II)/2011-2012/19. The locations of surface water sampling are described as following:

Table 2.2: Surface Water Quality Monitoring Locations

Surface Water Sampling Location Code	Surface Water Sampling Description
LWQ - 1:	Upstream of Umiam River
LWQ - 2:	Downstream of Umiam River
LWQ - 3:	Upstream of Phlangkaruh River
LWQ - 4:	Downstream of Phlangkaruh River

The surface water quality sampling locations are shown in **Figure 2.3**

Figure 2.3: Surface Water Quality and Flow Measurement Locations



The observed surface water quality is described as following:

LWQ-1 Upstream of Umiam River:

The sample represents the quality of surface water Upstream of Umiam River. The results of samples collected during April to September 2025 are shown in **Table No. 12**.

The water quality parameters were pH 6.7 - 7.6; Sulphates 12.4 – 32.5 mg/l; Total hardness 35.7 – 70.6 mg/l; Fluorides 0.02 – 2.25 mg/l; TDS 106.0 – 196.0 mg/l; Chlorides 10.2 - 18.6mg/l; Nitrates 1.4 – 6.80 mg/l; and Total Coliform were 30.0 – 108.0 MPN/100ml. Heavy metals (As, Cu, Pb, Cd, Ni, & Mn) remained below detectable limits.

LWQ-2 Downstream of Umiam River:

The results of samples collected during April to September 2025 are shown in **Table No. 13**. The concentrations were within the prescribed limit.

The analyzed water quality parameters were pH 6.8 – 7.6; Chlorides 6.2 – 35.6 mg/l; Sulphates 15.2 – 36.2 mg/l; Nitrates 0.8 – 4.2 mg/l; Total hardness 46.2 – 162.4 mg/l; TDS 144.0 - 196.0mg/l and Fluorides were 0.04 - 0.10 mg/l and total coliform were 62.0 - 80.0 MPN/100ml. Heavy metals (As, Cu, Pb, Cd, Ni, & Mn) remained below detectable limits.

LWQ-3 Upstream of Phlangkaruh River:

This sample represents the quality of surface water. The results of samples collected during April to September 2025 are shown in **Table No. 14**.

The analyzed water quality parameters were pH 6.9 - 7.9; Chlorides 6.2 - 38.0 mg/l; Sulphates 16.4 - 40.4 mg/l; Nitrates 0.5 – 2.8 mg/l; Total hardness 40.6- 74.0 mg/l; Fluorides 0.02 - 0.54 mg/l; TDS were 132.0-180.0 mg/l and total coliform were 70.0 – 70.0 MPN/100ml. Heavy metals (As, Cu, Pb, Cd, Ni, & Mn) remained below detectable limits.

LWQ-4 Downstream of Phlangkaruh River:

This sample represents the quality of surface water. The results of April to September 2025 are shown in **Table No. 15**.

The analyzed water quality parameters were pH 6.7 – 7.3; Chlorides 10.0 - 18.4 mg/l; Sulphates 10.6 - 47.0 mg/l; Nitrates 1.0 – 36.0 mg/l; Total hardness 38.2 - 140.0 mg/l; Fluorides 0.04 - 1.24 mg/l; TDS 88.0 – 168.0 mg/l; and Total coliform were 30.0 – 90.0 MPN/100 ml. Heavy metals (As, Cu, Pb, Cd, Ni, & Mn) remained below detectable limits.

2.6 Surface Water Flow Measurement Locations

Surface water flow measurements were carried out once a month at two locations to assess the surface water quantity of the nearby water bodies. The sampling locations are described in Table 2.3 and shown in Figure 2.3.

Table 2.3: Surface Water Flow Measurement Locations

Surface Sampling Code	Water Location	Surface Water Sampling Description
LWF - 1:		Downstream of Umiam River (near Shella Bazar)
LWF - 2:		Downstream of Phlangkaruh River near Phlangkaruh Village

Water Flow Measurements were carried out at two locations using water current meter using Bureau of Indian Standards method IS: 1192 (1959). The results and cross section of the water flow measurements are given in **Tables 16-17 e**. From the table, it can be seen that the water flow downstream of Umiam River near the bridge (during fair weather) (LWF-1) was highest followed by Downstream of Phlangkaruh River (LWF2). The results are given below:

SL.NO	Location	Discharge in m ³ /hour					
		Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25
1	LWF-1 UMIAM RIVER	22748.04	31993.92	66066.8	69778.8	93630.6	79117.2
2	LWF-2 PHLANGKARUH RIVER	3069.0	4590.0	5274.0	7462.8	18109.8	13698.0

2.7 Noise Levels Monitoring

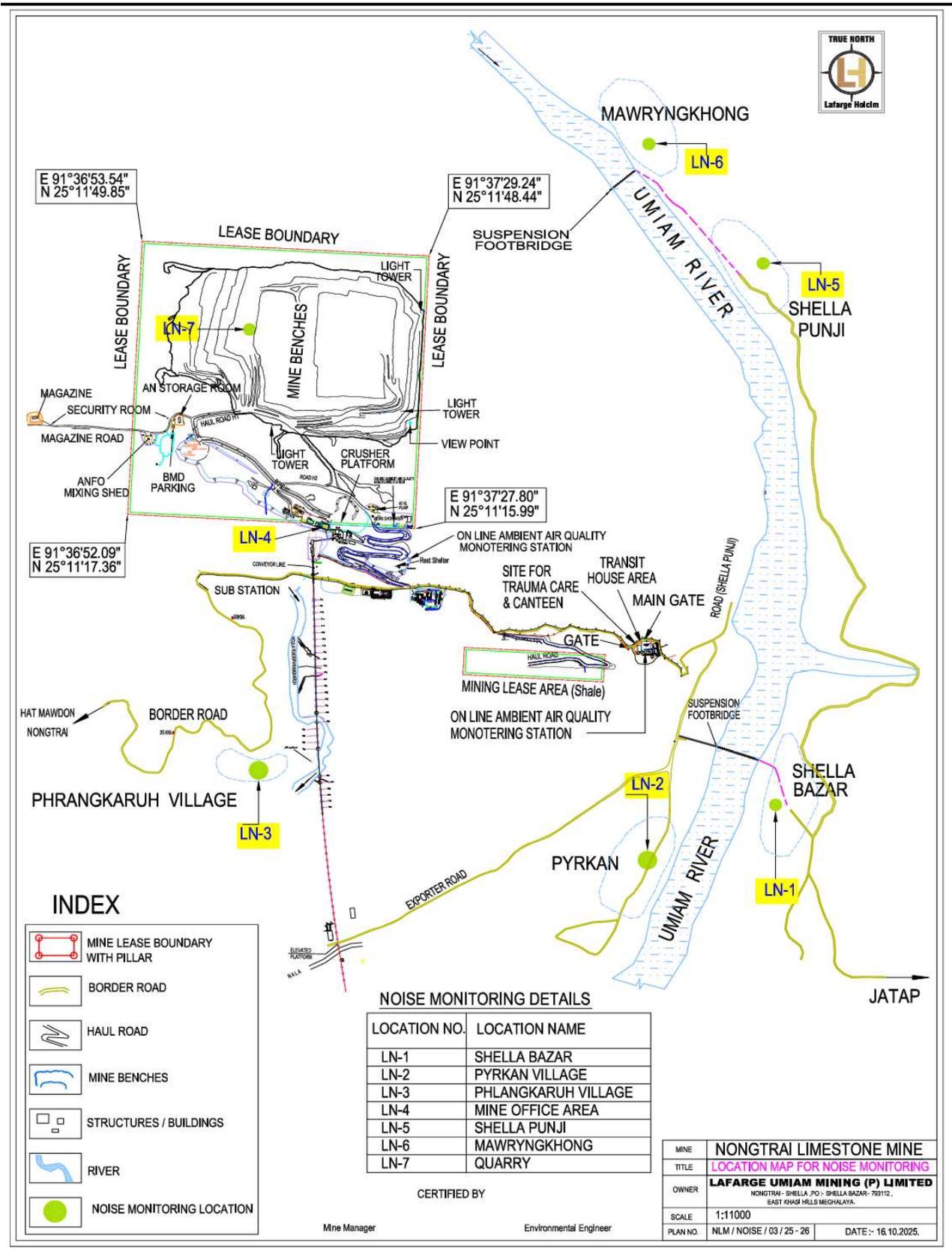
Monitoring of Noise levels was done at six locations during the period April to September 2025 by using an integrating sound level meter (Type II Envirotech). Out-door noise level measurements were made at a height of 1.5 meter above the ground, and away from the sound reflecting sources like walls, buildings. Noise levels were measured at six locations once per month as per description given in **Table 2.4**.

Table 2.4: Noise Levels Monitoring Locations

Noise Levels Monitoring Location Code	Noise Monitoring Location Description
LN-1: Shella Bazar (non-market day)	Noise monitoring was done at Shella Bazaar on non-market day in front of PWD guest house
LN - 2: Pyrkan Village	Noise monitoring was done in Pyrkan Village near Ram Krishna Mission School
LN-3: Phlangkaruh Village	Noise monitoring was done at Phlangkaruh Village
LN- 4: Mine lease area (office area)	Noise monitoring was done to assess the noise levels within the core zone.
LN-5: Shellapunji Village	Noise monitoring was done at Shellapunji village to assess the noise levels.
LN-6: Mawryngkhong Village	Noise monitoring was done at Mawryngkhong Village

The noise levels monitoring locations are shown in **Figure 2.4**.

Figure 2.4: Noise Levels Monitoring Locations



Noise monitoring was carried out at 6 locations during the period April to September 2025. The Leq (day and night), Lmax and Lmin were analyzed from the recorded sound level meter (SLM). Refer to Tables 18 - 29.

APRIL TO JUNE 2025					
NOISE LEVEL AT THE VILLAGES					
Location	Range in dB(A)	Leq.Value in dB(A) Day time	Leq.Value in dB(A) Night time	Permissible limit Day time	Permissible limit Night
LN 1	42.2-60.2	55.2-56.7	47.1-47.7	65	55
LN 2	41.2-57.6	52.9-54.0	44.2-44.5	55	45
LN 3	41.2-57.8	53.0-54.1	44.3-44.5	55	45
LN 5	41.2-57.4	53.1-53.8	44.2-44.9	55	45
LN 6	41.2-57.4	53.0-54.0	44.2-44.6	55	45
AMBIENT NOISE INSIDE THE QUARRY					
LN 4	45.8-69.8	58.4-63.2	48.6-49.2	75	70
LN 7	48.7-67.8	62.5-63.1	52.1-53.1	75	70
JULY TO SEPTEMBER 2025					
NOISE LEVEL AT THE VILLAGES					
Location	Range in dB(A)	Leq.Value in dB(A) Day time	Leq.Value in dB(A) Night time	Permissible limit Day time	Permissible limit Night
LN 1	43.6-58.4	54.3-55.6	45.8-46.4	65	55
LN 2	41.3-57.8	53.5-54.1	44.0-44.6	55	45
LN 3	41.7-56.3	53.6-53.8	44.3-44.9	55	45
LN 5	40.5-57.5	53.7-54.1	43.9-44.8	55	45
LN 6	41.2-56.4	53.1-53.9	44.1-44.5	55	45
AMBIENT NOISE INSIDE THE QUARRY					
LN 4	46.5-67.4	56.8-61.8	49.7-50.5	75	70
LN 7	48.4-67.5	60.8-61.9	51.7-53.1	75	70

2.8 Vehicular emission:

Vehicular emission monitored was done once during the study period of April to September 2025 for all the Heavy Earth Moving Machines (HEMM) operating in the mine by Meghalaya State Pollution Control Board using Smoke Density Meter.

2.9 Cave Protection

Monitoring of cave was conducted by physical inspection. The entry to the cave has been protected by providing fencing and gate which is locked to prevent unauthorized entry as shown in figure (Refer Plate No.1). Photographs of twin sink holes during the study period also shown in plate No.1 of page No.86.

CONCLUSION**AIR ENVIRONMENT:**

The ambient air quality monitored at the five locations in the core and buffer zones from 1 April to 30 September 2025 remained well within the permissible limits.

WATER QUALITY:

The surface water quality results indicate that all parameters were well within the permissible limits as prescribed for surface water (IS-2296 Class C).

NOISE ENVIRONMENT:

Noise monitoring results show that noise levels remained well within the prescribed limits.

CAVE PROTECTION:

Based on visual observation, no change in physical appearance was observed on twin sink holes and cave. Cave openings have been protected as shown in (Plate No.1).

4. Tables, Exhibits and Plates

Table No.1

Sl.No	Parameters	Apr to Jun 2025	Jul to Sep 2025
1	Predominant Wind with direction from	N-NE	N-NNW
2	Temperature ° C		
	I)Minimum	17.0 ° C	22.2 ° C
	ii)Maximum	44.2 ° C	44.1 ° C
	Average Temperature	28.4 ° C	29.2 ° C
3	Humidity %		
	I)Minimum	27.1 %	19.0 %
	ii)Maximum	97.6 %	97.4 %
	Average humidity	72.0 %	78.8 %
4	Rainfall (mm)	1884.5 mm	2325.5 mm

LAFARGE UMIAM MINING PVT. LTD.

AMBIENT AIR QUALITY DATA

HEMM Workshop (Light Section Near ETP)

STATION : LA-1

Table :2

DATE	24 HOURLY				Permissible Limit ($\mu\text{g}/\text{m}^3$)
	PM ₁₀	PM _{2.5}	SO ₂	NO _x	
1-Apr-2025	57.9	23.8	6.8	10.2	PM 10 100 $\mu\text{g}/\text{m}^3$
4-Apr-2025	56.8	23.5	6.8	10.7	PM 2.5 60 $\mu\text{g}/\text{m}^3$
8-Apr-2025	57.2	23.4	6.5	9.8	Sox 80 $\mu\text{g}/\text{m}^3$
12-Apr-2025	56.5	22.8	6.7	8.6	Nox 80 $\mu\text{g}/\text{m}^3$
16-Apr-2025	57.4	24.2	7.2	10.8	
19-Apr-2025	58.2	25.2	6.5	10.5	
23-Apr-2025	55.8	23.8	6.2	9.5	
27-Apr-2025	54.6	23.2	6.2	9.4	
30-Apr-2025	58.2	24.6	6.7	10.2	
1-May-2025	57.5	25.6	6.4	11.2	
4-May-2025	58.2	26.2	6.2	12.4	
8-May-2025	57.2	24.6	5.2	9.5	
12-May-2025	56.5	22.8	6.7	8.6	
16-May-2025	55.6	22.5	7.2	9.5	
19-May-2025	56.8	23.2	7.6	10.2	
23-May-2025	57.8	24.5	6.7	9.2	
27-May-2025	55.4	22.5	6.4	8.9	
30-May-2025	52.6	22.2	5.6	7.8	
1-Jun-2025	55.8	23.5	7.4	10.2	
4-Jun-2025	56.2	22.8	6.2	9.8	
8-Jun-2025	57.2	24.2	6.5	8.5	
12-Jun-2025	57.5	22.8	6.5	10.6	
16-Jun-2025	53.6	23.5	6.5	9.2	
19-Jun-2025	52.5	23.6	6.8	10.5	
23-Jun-2025	54.7	23.2	6.8	10.4	
27-Jun-2025	55.4	22.2	6.1	8.5	
30-Jun-2025	55.6	22.5	7.2	9.5	
	PM ₁₀	PM _{2.5}	SO ₂	NO _x	
Number of observation	27	27	27	27	
Arithmetic Mean	56.2	23.6	6.6	9.8	
Geometric Mean	56.2	23.6	6.6	9.7	
STD. GEO. Devn. (24 hrs)	1.6	1.0	0.5	1.0	
Max. Concentration	58.2	26.2	7.6	12.4	
Min. Concentration	52.5	22.2	5.2	7.8	
98 Percentile values	58.2	25.9	7.5	11.8	
Detection Limit ($\mu\text{g}/\text{m}^3$)					
NOTE:	ALL VALUES ARE IN $\mu\text{g}/\text{m}^3$				

LAFARGE UMIAM MINING PVT. LTD.
AMBIENT AIR QUALITY DATA
Near Magazine
STATION : LA-2

Table:3

DATE	24 HOURLY				Permissible Limit (µg/m ³)		
	PM ₁₀	PM _{2.5}	SO ₂	NO _x	PM 10	100 µg/m ³	
1-Oct-2024	51.7	20.4	5.5	8.2	PM 2.5	60 µg/m ³	
5-Oct-2024	53.6	22.6	5.6	8.2	Sox	80 µg/m ³	
8-Oct-2024	54.7	23.1	5.9	8.8	Nox	80 µg/m ³	
11-Oct-2024	55.8	23.6	6.2	7.8			
14-Oct-2024	55.7	23.8	5.4	6.7			
18-Oct-2024	56.4	22.8	6.2	7.4			
22-Oct-2024	57.5	25.2	6.0	7.6			
25-Oct-2024	55.7	22.6	5.7	8.2			
29-Oct-2024	55.6	23.5	5.8	7.4			
1-Nov-2024	54.7	22.5	4.9	5.8			
5-Nov-2024	56.8	24.2	6.6	10.4			
8-Nov-2024	57.4	23.5	6.4	7.5			
11-Nov-2024	56.2	23.2	6.5	7.2			
14-Nov-2024	56.4	22.8	6.2	7.4			
18-Nov-2024	57.5	25.2	6.0	7.6			
22-Nov-2024	58.9	26.2	6.5	7.8			
25-Nov-2024	57.8	25.8	6.4	7.4			
29-Nov-2024	56.4	24.0	6.2	10.2			
1-Dec-2024	57.5	25.2	6.0	7.6			
5-Dec-2024	57.9	24.2	5.8	6.9			
8-Dec-2024	57.4	23.5	6.2	7.5			
11-Dec-2024	56.2	24.5	5.8	7.6			
14-Dec-2024	56.4	24.6	5.7	7.4			
18-Dec-2024	56.4	22.8	6.2	7.4			
22-Dec-2024	55.6	22.6	6.2	6.9			
27-Dec-2024	55.8	22.4	5.8	6.6			
31-Dec-2024	56.4	24.0	5.8	8.2			
	PM ₁₀	PM _{2.5}	SO ₂	NO _x			
Number of observations	27	27	27	27			
Arithmetic Mean	56.2	23.7	6.0	7.7			
Geometric Mean	56.2	23.6	6.0	7.6			
STD. GEO. Devn. (24 hrs)	1.4	1.2	0.4	1.0			
Max. Concentration	58.9	26.2	6.6	10.4			
Min. Concentration	51.7	20.4	4.9	5.8			
98 Percentile values	58.4	26.0	6.5	10.3			
Detection Limit (µg/m ³)							
NOTE:	ALL VALUES ARE IN µg/m ³						

LAFARGE UMIAM MINING PVT. LTD.
 AMBIENT AIR QUALITY DATA
 Near Magazine
 STATION : LA-2

Table:3

DATE	24 HOURLY				Permissible Limit ($\mu\text{g}/\text{m}^3$)	
	PM ₁₀	PM _{2.5}	SO ₂	NOx		
1-Apr-2025	55.7	22.4	5.6	9.8	PM 10	100 $\mu\text{g}/\text{m}^3$
4-Apr-2025	53.7	21.8	5.4	8.7	PM 2.5	60 $\mu\text{g}/\text{m}^3$
8-Apr-2025	55.4	22.4	6.8	9.2	Sox	80 $\mu\text{g}/\text{m}^3$
12-Apr-2025	54.6	22.2	5.6	8.2	Nox	80 $\mu\text{g}/\text{m}^3$
16-Apr-2025	55.8	21.4	5.6	8.4		
19-Apr-2025	54.6	22.8	5.6	9.4		
23-Apr-2025	53.8	22.9	5.4	7.2		
27-Apr-2025	52.5	22.8	5.4	7.8		
30-Apr-2025	56.5	23.4	5.6	8.6		
1-May-2025	55.6	23.5	5.8	7.4		
4-May-2025	56.8	24.2	6.0	10.2		
8-May-2025	54.7	22.5	4.9	5.8		
12-May-2025	54.6	22.2	5.6	8.2		
16-May-2025	53.5	20.2	6.2	7.8		
19-May-2025	54.9	22.6	5.7	8.2		
23-May-2025	55.4	23.2	5.6	8.4		
27-May-2025	53.4	21.2	4.9	6.5		
30-May-2025	50.5	21.0	5.2	6.2		
1-Jun-2025	53.6	21.4	5.2	7.8		
4-Jun-2025	54.6	22.6	5.4	8.0		
8-Jun-2025	55.8	23.5	5.5	8.2		
12-Jun-2025	55.4	23.2	5.6	8.5		
16-Jun-2025	51.2	21.3	5.5	8.1		
19-Jun-2025	50.2	21.8	5.8	8.7		
23-Jun-2025	52.8	21.5	5.7	8.5		
27-Jun-2025	53.5	20.2	5.2	6.1		
30-Jun-2025	53.5	20.2	6.2	7.8		
	PM ₁₀	PM _{2.5}	SO ₂	NOx		
Number of observations	27	27	27	27		
Arithmetic Mean	54.2	22.2	5.6	8.1		
Geometric Mean	54.1	22.1	5.6	8.0		
STD. GEO. Devn. (24 hrs)	1.7	1.1	0.4	1.1		
Max. Concentration	56.8	24.2	6.8	10.2		
Min. Concentration	50.2	20.2	4.9	5.8		
98 Percentile values	56.6	23.8	6.5	10.0		
Detection Limit ($\mu\text{g}/\text{m}^3$)						
NOTE:	ALL VALUES ARE IN $\mu\text{g}/\text{m}^3$					

LAFARGE UMIAM MINING PVT. LTD.
 AMBIENT AIR QUALITY DATA
Near Magazine
 STATION : LA-2

Table:8

DATE	24 HOURLY				Permissible Limit ($\mu\text{g}/\text{m}^3$)	
	PM ₁₀	PM _{2.5}	SO ₂	NOx		
1-Jul-2025	49.6	21.4	5.4	7.2	PM 10	100 $\mu\text{g}/\text{m}^3$
4-Jul-2025	51.7	20.4	5.5	8.2	PM 2.5	60 $\mu\text{g}/\text{m}^3$
8-Jul-2025	52.5	22.8	5.4	7.8	Sox	80 $\mu\text{g}/\text{m}^3$
12-Jul-2025	54.5	23.8	5.8	8.7	Nox	80 $\mu\text{g}/\text{m}^3$
16-Jul-2025	53.5	20.2	6.2	7.8		
19-Jul-2025	54.7	22.5	4.9	5.8		
23-Jul-2025	55.6	23.4	5.8	7.9		
27-Jul-2025	54.7	23.1	5.9	8.8		
30-Jul-2025	53.6	22.6	5.6	8.2		
1-Aug-2025	50.7	20.2	5.6	7.5		
4-Aug-2025	45.8	17.2	4.5	5.8		
8-Aug-2025	48.7	19.8	4.8	6.5		
12-Aug-2025	50.2	21.8	5.8	8.7		
16-Aug-2025	49.6	21.4	5.2	7.4		
19-Aug-2025	43.6	16.2	4.3	5.5		
23-Aug-2025	45.7	18.2	5.0	7.2		
27-Aug-2025	47.8	19.8	4.8	5.6		
30-Aug-2025	44.5	17.5	4.8	6.2		
1-Sep-2025	47.5	18.2	5.2	7.5		
4-Sep-2025	50.2	21.8	5.8	8.7		
8-Sep-2025	52.6	21.5	5.8	8.5		
12-Sep-2025	54.5	22.2	5.6	8.2		
16-Sep-2025	44.9	19.7	4.8	5.6		
19-Sep-2025	49.6	21.4	5.2	6.8		
23-Sep-2025	51.7	20.4	5.5	8.2		
27-Sep-2025	53.6	22.6	5.6	8.2		
30-Sep-2025	54.7	22.5	4.9	5.8		
	PM ₁₀	PM _{2.5}	SO ₂	NOx		
Number of observations	27	27	27	27		
Arithmetic Mean	50.6	20.8	5.3	7.3		
Geometric Mean	50.5	20.7	5.3	7.3		
STD. GEO. Devn. (24 hrs)	3.6	2.0	0.5	1.1		
Max. Concentration	55.6	23.8	6.2	8.8		
Min. Concentration	43.6	16.2	4.3	5.5		
98 Percentile values	55.1	23.6	6.0	8.7		
Detection Limit ($\mu\text{g}/\text{m}^3$)						
NOTE:	ALL VALUES ARE IN $\mu\text{g}/\text{m}^3$					

SURFACE WATER QUALITY DATA

Project	: Lafarage Umiam Mining Pvt. Ltd.	State	: Meghalaya
Code	: LWQ-1	Sampling Location	: Up Stream of Umiam River

Table:12

Sl. No.	Parameter	Results						Standard IS - 2296 Class C
		Date of Collection						
		17-Apr-25	19-May-25	14-Jun-25	25-Jul-25	25-Aug-25	6-Sep-25	
1	Temperature (0°C) Air-Water	-	-	-	-	-	-	
2	Colour (Hazen Units)	-	-	-	-	-	-	300.00
3	pH	6.9	6.9	6.7	6.9	6.7	7.6	6.5-8.5
4	Electrical Conductivity (µmhos/cm)	176.2	174.2	226.8	172.0	286.0	302.0	
5	Turbidity (NTU)	8.6	6.6	6.8	6.0	5.8	5.2	
6	Dissolve Oxygen(mg/l)	4.1	3.1	2.7	5.0	4.2	8.2	4.00
7	Biochemical Oxygen Demand(mg/l)	3.00	4.00	4.00	4.60	4.80	6.20	3.00
8	Chemical Oxygen Demand (mg/l)	12.50	10.50	9.60	10.20	6.50	12.20	
9	Total Dissolve Solids (mg/l)	124.00	132.00	146.00	106.00	172.00	196.00	1500.00
10	Total Suspended Solids	12.40	10.40	16.40	1.40	14.60	28.60	100.00
11	Total hardness (mg/l)	66.40	62.40	46.50	35.70	62.40	70.60	
12	Chlorides as Cl (mg/l)	10.20	11.20	14.70	14.20	18.60	14.20	600.00
13	Alkalinity (mg/l)	47.00	37.00	30.60	20.40	50.80	62.40	
14	Calcium as Ca (mg/l)	23.80	21.80	20.00	20.60	15.20	26.50	
15	Sulphates SO4(mg/l)	20.40	18.40	18.50	32.50	18.60	12.40	400.00
16	Sulphides (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
17	Nitrate (mg/l)	4.05	5.05	6.80	1.40	3.60	1.80	50.00
18	Nitrite (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
19	Nickel (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
20	Ammonia Nitrogen (mg/l)	0.20	0.20	0.22	0.20	0.12	0.66	
21	Arsenic as As (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.20
22	Chromium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.05
23	Iron as Fe (mg/l)	0.20	0.10	0.22	0.12	0.12	0.16	0.50
24	Fluoride as F (mg/l)	0.06	0.04	0.02	BDL	2.25	0.28	1.50
25	Lead as Pb (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.10
26	Copper as Cu (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	1.50
27	Zinc as Zn (mg/l)	0.240	0.240	0.20	BDL	0.50	0.500	15.00
28	Cadmium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.01
29	Sodium (mg/l)	5.40	5.40	5.00	11.60	4.80	8.60	
30	Magnesium (mg/l)	5.20	6.20	9.20	6.80	5.40	10.40	
31	Manganese (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
32	Phosphate (mg/l)	1.870	1.870	1.54	1.000	1.200	0.700	
33	Potassium (mg/l)	1.50	1.50	1.20	1.54	1.00	7.10	
Microbiological Parameters								
1	Total Coliform (MPN/100 ml)	108.00	108.00	102.00	30.00	60.00	50.00	5000.00

Remarks:- Analysis is done by ABNS Scientific Services Private Limited.
 Recognized by Meghalaya State Pollution Control Board, refer to Annexure II
 BDL :- Below Detection Limit

SURFACE WATER QUALITY DATA								
Project : Lafarge Umiam Mining Pvt. Ltd.			State : Meghalaya					
Code : LWQ-2			Sampling Location :Down Stream of Umiam River					
								Table:13
Sl. No.	Parameter	Results						Standard IS - 2296 Class C
		Date of Collection	Date of Collection	Date of Collection	Date of Collection	Date of Collection	Date of Collection	
		17-Apr-25	19-May-25	14-Jun-25	25-Jul-25	25-Aug-25	6-Sep-25	
1	Temperature (0°C) Air-Water	-	-	-	-	-	-	
2	Colour (Hazen Units)	-	-	-	-	-	-	300.00
3	pH	7.0	6.8	7.0	7.6	7.3	7.2	6.5-8.5
4	Electrical Conductivity (µmhos/cm)	208.0	198.0	251.5	237.2	308.0	285.0	
5	Turbidity (NTU)	4.6	3.60	5.4	6.8	6.5	6.5	
6	Dissolve Oxygen(mg/l)	4.20	4.20	5.80	7.40	5.80	7.20	4.00
7	Biochemical Oxygen Demand(mg/l)	2.50	2.50	1.40	3.00	3.60	5.80	3.00
8	Chemical Oxygen Demand (mg/l)	4.50	4.50	4.00	5.20	4.20	10.40	
9	Total Dissolve Solids (mg/l)	168.00	174.00	165.00	144.00	196.00	168.00	1500.00
10	Total Suspended Solids	12.00	11.00	20.40	22.70	20.80	20.80	100.00
11	Total hardness (mg/l)	158.40	162.40	48.50	46.20	70.60	62.40	
12	Chlorides as Cl (mg/l)	6.20	7.20	8.40	35.60	15.20	12.50	600.00
13	Alkalinity (mg/l)	82.60	80.60	36.20	32.40	64.70	55.50	
14	Calcium as Ca (mg/l)	38.60	36.60	26.80	11.60	24.80	25.60	
15	Sulphate as SO4(mg/l)	36.20	34.20	22.60	15.20	20.50	18.80	400.00
16	Sulphides (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
17	Nitrate (mg/l)	2.00	2.00	2.00	0.80	4.20	1.20	50.00
18	Nitrite (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
19	Nickel (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
20	Ammonia Nitrogen (mg/l)	0.02	0.02	0.50	0.12	0.11	0.48	
21	Arsenic as As (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.20
22	Chromium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.05
23	Iron as Fe (mg/l)	0.10	0.10	0.12	0.20	0.28	0.14	0.50
24	Fluoride as F (mg/l)	0.04	0.04	BDL	0.10	BDL	BDL	1.50
25	Lead as Pb (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.10
26	Copper as Cu (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	1.50
27	Zinc as Zn (mg/l)	0.250	0.25	1.500	0.200	1.000	0.800	15.00
28	Cadmium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.01
29	Sodium (mg/l)	4.50	4.50	6.50	6.20	6.50	7.40	
30	Magnesium (mg/l)	6.40	5.40	11.20	5.00	10.40	8.50	
31	Manganese (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
32	Phosphate (mg/l)	0.120	0.12	0.140	1.000	0.080	0.600	
33	Potassium (mg/l)	1.20	1.20	1.00	0.50	1.80	6.40	
Microbiological Parameters								
1	Total Coliform (MPN/100 ml)	62.0	62.00	75.0	ND	80.0	70.0	5000.0
Remarks:- Analysis is done by ABNS Scientific Services Private Limited.								
Recognized by Meghalaya State Pollution Control Board, refer to Annexure II								
BDL :- Below Detection Limit								

SURFACE WATER QUALITY DATA

Project : Lafarage Umiam Mining

State : Meghalaya

Pvt. Ltd.

Code : LWQ-3

Sampling Location :Up Stream of Phlangkaruh River

Table:14

Sl. No.	Parameter	Results						Standard IS - 2296 Class C
		Date of Collection						
		17-Apr-25	19-May-25	14-Jun-25	25-Jul-25	25-Aug-25	6-Sep-25	
1	Temperature (0°C) Air-Water	-	-	-	-	-	-	
2	Colour (Hazen Units)	-	-	-	-	-	-	300.00
3	pH	7.1	6.9	7.9	7.1	7.5	7.3	6.5-8.5
4	Electrical Conductivity (µmhos/cm)	186.00	182.00	215.20	282.00	237.20	248.00	
5	Turbidity (NTU)	6.40	5.40	7.20	6.20	5.00	5.00	
6	Dissolve Oxygen(mg/l)	4.50	4.50	6.00	6.00	5.00	8.40	4.00
7	Biochemical Oxygen Demand(mg/l)	2.00	2.00	3.20	2.00	3.20	2.40	3.00
8	Chemical Oxygen Demand (mg/l)	4.80	4.80	5.70	4.80	4.80	20.00	
9	Total Dissolve Solids (mg/l)	138.00	144.00	132.00	180.00	156.00	150.00	1500.00
10	Total Suspended Solids	10.20	10.20	28.60	22.40	18.70	32.00	100.00
11	Total hardness (mg/l)	46.50	48.50	40.60	50.60	68.50	74.00	
12	Chlorides as Cl (mg/l)	36.00	38.00	37.20	10.20	12.50	6.20	600.00
13	Alkalinity (mg/l)	65.60	67.60	26.70	42.40	46.20	50.00	
14	Calcium as Ca (mg/l)	18.20	18.20	13.20	28.70	12.30	40.00	
15	Sulphate as SO4(mg/l)	40.40	40.40	18.40	20.50	16.40	33.00	400.00
16	Sulphides (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
17	Nitrate (mg/l)	0.80	0.80	0.50	2.80	1.20	0.80	50.00
18	Nitrite (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
19	Nickel (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
20	Ammonia Nitrogen (mg/l)	0.30	0.30	0.22	0.80	0.18	0.62	
21	Arsenic as As (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.20
22	Chromium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.05
23	Iron as Fe (mg/l)	0.10	0.10	0.28	0.22	0.22	0.18	0.50
24	Fluoride as F (mg/l)	0.02	0.02	0.18	BDL	0.54	0.26	1.50
25	Lead as Pb (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.10
26	Copper as Cu (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	1.50
27	Zinc as Zn (mg/l)	0.30	0.30	0.30	1.20	0.40	0.40	15.00
28	Cadmium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.01
29	Sodium (mg/l)	6.50	6.50	7.80	5.40	6.00	15.20	
30	Magnesium (mg/l)	5.40	5.40	4.80	15.60	5.20	34.00	
31	Manganese (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
32	Phosphate (mg/l)	1.600	1.60	1.400	0.100	1.500	0.620	
33	Potassium (mg/l)	0.14	0.14	0.56	1.00	0.80	7.40	
Microbiological Parameters								
1	Total Coliform (MPN/100 ml)	ND	ND	ND	70.00	ND	N.D	5000.00

Remarks:- Analysis is done by ABNS Scientific Services Private Limited.

Recognized by Meghalaya State Pollution Control Board, refer to Annexure II

BDL :- Below Detection Limit

ND:-Not Detected

SURFACE WATER QUALITY DATA								
Project	: Lafarage Umiam Mining Pvt. Ltd.			State	: Meghalaya			
Code	: LWQ-4			Sampling Location :Down Stream of Phlangkaruh River				
								Table:15
Sl. No.	Parameter	Results						Standard IS - 2296 Class C
		Date of Collection	Date of Collection	Date of Collection	Date of Collection	Date of Collection	Date of Collection	
		17-Apr-25	19-May-25	14-Jun-25	25-Jul-25	23-Aug-25	6-Sep-25	
1	Temperature (0°C) Air-Water	-	-	-	-	-	-	
2	Colour (Hazen Units)	-	-	-	-	-	-	300.00
3	pH	6.9	7.1	6.7	6.8	6.8	7.3	6.5-8.5
4	Electrical Conductivity (µmhos/cm)	148.0	142.0	178.2	236.0	182.0	402.0	
5	Turbidity (NTU)	4.5	5.5	6.8	6.4	4.6	6.0	
6	Dissolve Oxygen(mg/l)	5.20	5.20	5.80	2.00	4.60	7.70	4.00
7	Biochemical Oxygen Demand(mg/l)	5.00	5.00	1.40	5.20	3.80	2.60	3.00
8	Chemical Oxygen Demand (mg/l)	15.00	14.00	4.00	8.70	4.00	12.60	
9	Total Dissolve Solids (mg/l)	89.00	88.00	122.00	168.00	125.00	125.00	1500.00
10	Total Suspended Solids	18.20	16.20	16.20	18.50	24.60	36.00	100.00
11	Total hardness (mg/l)	49.20	49.20	38.20	48.50	50.60	140.00	
12	Chlorides as Cl (mg/l)	18.40	18.40	16.50	15.20	11.60	10.00	600.00
13	Alkalinity (mg/l)	56.40	56.40	22.60	36.20	35.80	90.00	
14	Calcium as Ca (mg/l)	20.60	18.60	22.80	18.40	8.60	84.00	
15	Sulphate as SO4(mg/l)	46.40	42.40	35.20	20.60	10.60	47.60	400.00
16	Sulphides (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
17	Nitrate (mg/l)	1.00	1.00	1.20	5.20	2.20	36.00	50.00
18	Nitrite (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
19	Nickel (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
20	Ammonia Nitrogen (mg/l)	0.50	0.50	0.50	0.20	0.05	0.68	
21	Arsenic as As (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.20
22	Chromium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.05
23	Iron as Fe (mg/l)	0.20	0.20	0.18	0.18	0.11	0.22	0.50
24	Fluoride as F (mg/l)	0.04	0.04	BDL	1.24	BDL	0.22	1.50
25	Lead as Pb (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.10
26	Copper as Cu (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	1.50
27	Zinc as Zn (mg/l)	BDL	BDL	1.50	0.20	BDL	BDL	15.00
28	Cadmium (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	0.01
29	Sodium (mg/l)	10.50	10.50	6.50	4.60	5.40	28.60	
30	Magnesium (mg/l)	37.40	35.40	7.10	7.30	4.20	56.00	
31	Manganese (mg/l)	BDL	BDL	BDL	BDL	BDL	BDL	
32	Phosphate (mg/l)	1.55	1.55	0.14	1.460	1.200	0.680	
33	Potassium (mg/l)	2.10	2.10	1.00	1.80	1.22	18.00	
Microbiological Parameters								
1	Total Coliform (MPN/100 ml)	30.00	30.00	75.0	90.0	50.0	60.0	5000.00
Remarks:- Analysis is done by ABNS Scientific Services Private Limited.								
Recognized by Meghalaya State Pollution Control Board, refer to Annexure II								
BDL :- Below Detection Limit								

WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. Ltd State : Meghalaya

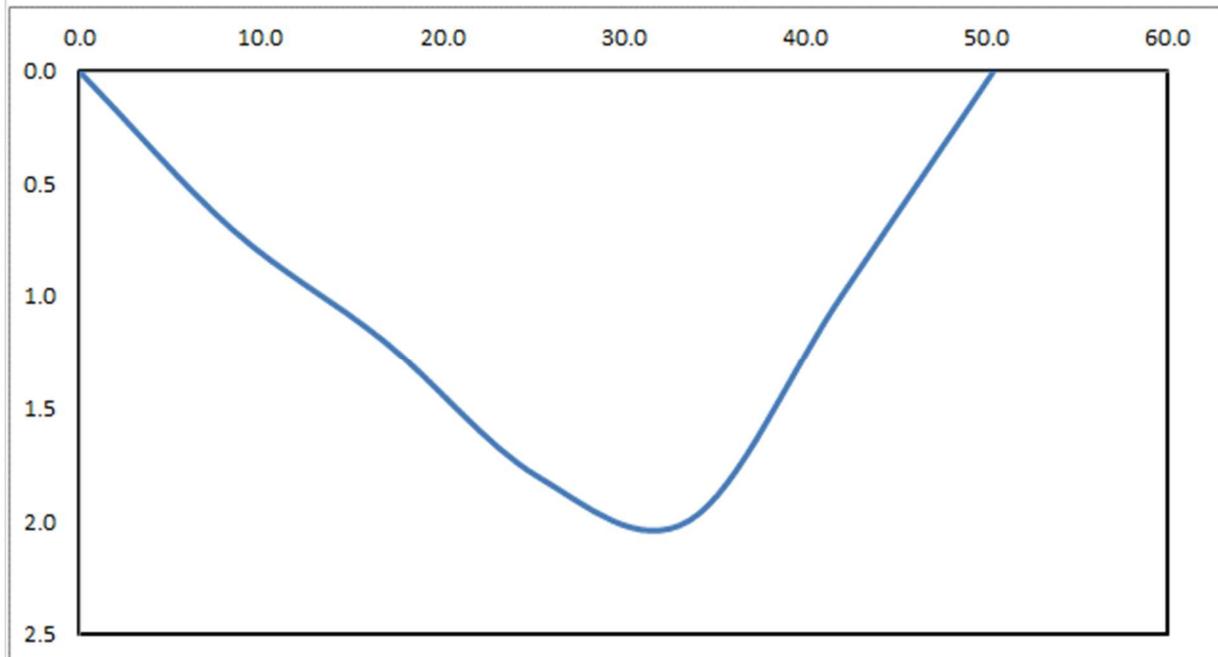
Code : LWF-1 Sampling Loc: Down stream of Umiam River
near Temporary Bridge

Date of Measurement :15.04.2025 (during fair weather)

Table:No. 16

Sl. No.	Distance from Initial Point	Width interval (m)	Depth of nalla (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0.0	0.0	0.0	0.0	0.0	0.0
2	8.40	8.40	0.70	0.09	2.94	0.13
3	16.80	8.40	1.20	0.11	7.98	0.80
4	25.20	8.40	1.80	0.14	12.60	1.58
5	33.60	8.40	2.00	0.13	15.96	2.15
6	42.00	8.40	1.00	0.10	12.60	1.45
7	50.40	8.40	0.00	0.00	4.20	0.21
Total						6.32
Discharge m³/hr =22748.04						

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM UMIAM RIVER TOP OF THE BRIDGE (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. Ltd State : Meghalaya

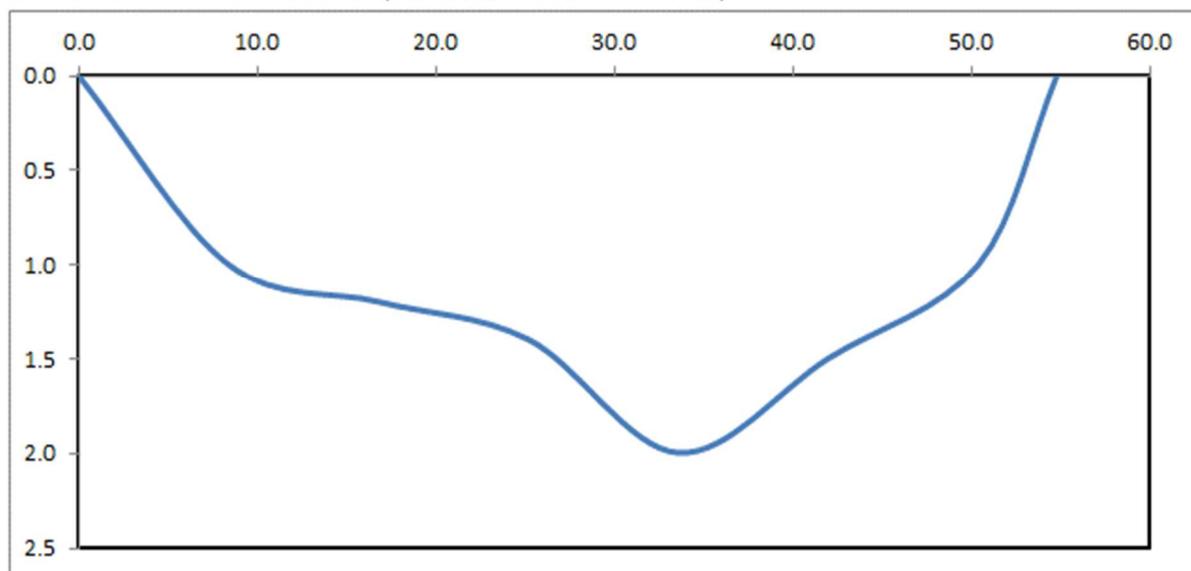
Code : LWF-1 Sampling Loc: Down stream of Umiam River
Top of the bridge

Date of Measurement :22.05.2025 (during fair weather)

Table No: 16 a

Sl. No.	Distance from Initial Point	Width interval (m)	Depth of nalla (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0.0	0.0	0.0	0.0	0.0	0.0
2	8.40	8.40	1.00	0.11	4.20	0.23
3	16.80	8.40	1.20	0.15	9.24	1.20
4	25.20	8.40	1.40	0.22	10.92	2.02
5	33.60	8.40	2.00	0.10	14.28	2.28
6	42.00	8.40	1.50	0.15	14.70	1.84
7	50.40	8.40	1.00	0.10	10.50	1.31
8	54.80	4.40	0.00	0.00	3.10	0.16
Total						8.89
Discharge m³/hr =31993.92						

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM UMIAM RIVER TOP OF THE BRIDGE (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. Ltd State : Meghalaya

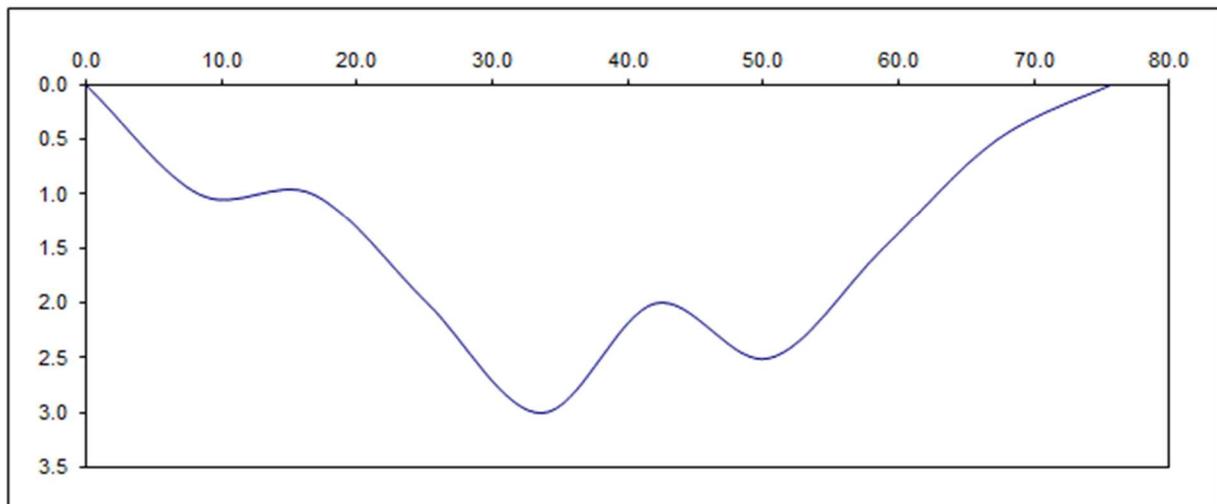
Code : LWF-1 Sampling Location: Down stream of Umiam River
Top of the bridge

Date of Measurement : 22.08.2025 (during fair weather)

Table No: 16 d

Sl. No.	Distance from Initial Point	Width interval (m)	Depth of nalla (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0.0	0.00	0.0	0.0	0.0	0.0
2	8.4	8.40	1.00	0.11	4.20	0.23
3	16.8	8.40	1.00	0.10	8.40	0.88
4	25.2	8.40	2.00	0.20	12.60	1.89
5	33.6	8.40	3.00	0.35	21.00	5.78
6	42.0	8.40	2.00	0.33	21.00	7.14
7	50.4	8.40	2.50	0.25	18.90	5.48
8	58.8	8.40	1.50	0.15	16.80	3.36
9	67.2	8.40	0.50	0.11	8.40	1.09
10	75.6	8.40	0.00	0.04	2.10	0.16
Total						26.01
Discharge m³/hr = 93630.6						

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM UMIAM RIVER TOP OF THE BRIDGE (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. Ltd State : Meghalaya

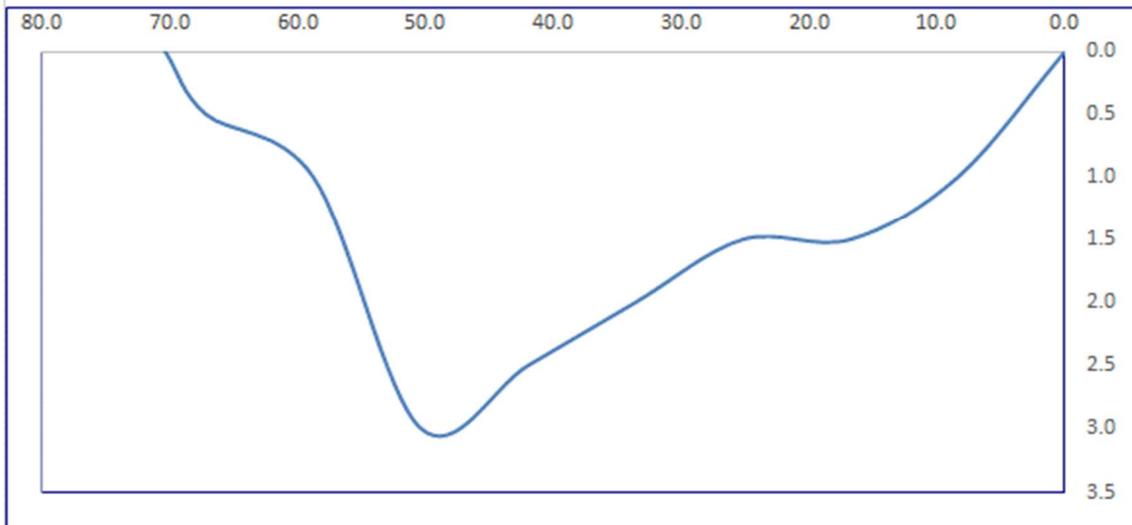
Code : LWF-1 Sampling Location: Down stream of Umiam River
Top of the bridge

Date of Measurement : 26.09.2025 (during fair weather)

Table No: 16 e

Sl. No.	Distance from Initial Point	Width interval (m)	Depth of nalla (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0.0	0.00	0.0	0.0	0.0	0.0
2	8.4	8.40	1.00	0.05	4.20	0.11
3	16.8	8.40	1.50	0.12	10.50	0.89
4	25.2	8.40	1.50	0.20	12.60	2.02
5	33.6	8.40	2.00	0.25	14.70	3.31
6	42.0	8.40	2.50	0.30	18.90	5.20
7	50.4	8.40	3.00	0.22	23.10	6.01
8	58.8	8.40	1.00	0.20	16.80	3.53
9	67.2	8.40	0.50	0.08	6.30	0.88
10	70.4	3.40	0.00	0.02	0.85	0.04
Total						21.98
Discharge m³/hr = 79117.2						

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM UMIAM RIVER TOP OF THE BRIDGE (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. State : Meghalaya

Code : LWF-2 Sampling Location Down stream of Phlangkaruh River

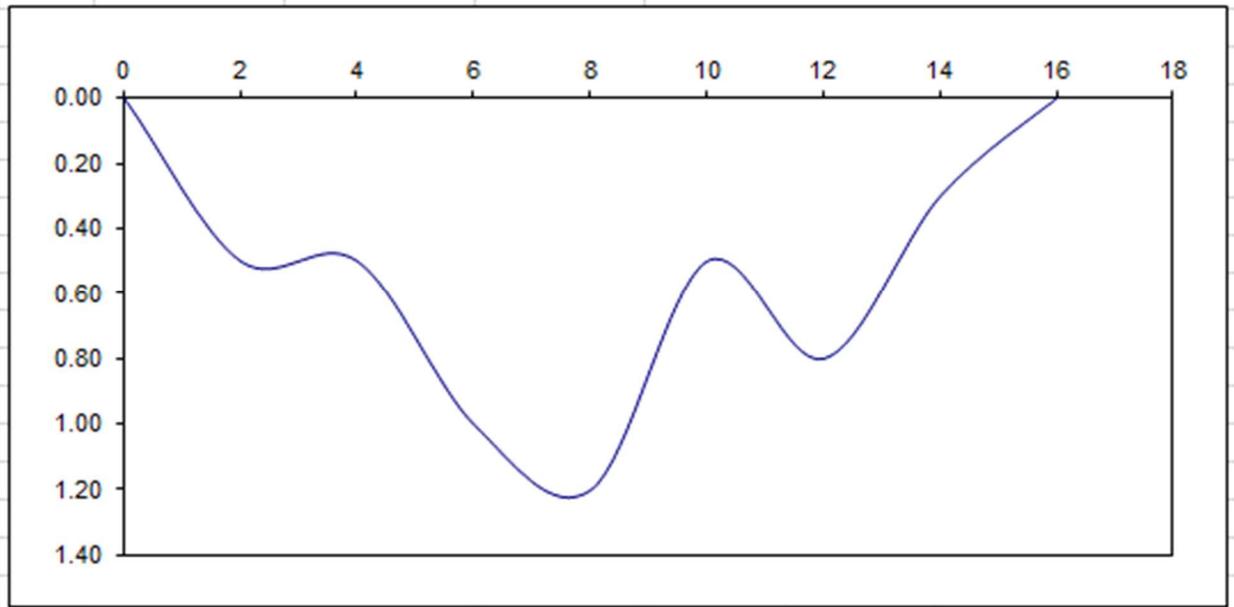
Date of Measurement : 15.04.2025

Table No: 17

Sl. No.	Distance from Initial point (m)	Width interval (m)	Depth of stream (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0	0.0	0.00	0.00	0.0	0.000
2	2	2.00	0.50	0.05	0.50	0.013
3	4	2.00	0.50	0.10	1.00	0.075
4	6	2.00	1.00	0.08	1.50	0.135
5	8	2.00	1.20	0.18	2.20	0.286
6	10	2.00	0.50	0.11	1.70	0.247
7	12	2.00	0.80	0.04	1.30	0.098
8	14	2.00	0.30	0.05	1.10	0.050
10	16	2.00	0.00	0.02	0.30	0.011
					Total	0.85250

Discharge m³/hr = 3069

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM OF PHLANGKARUH RIVER (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. State : Meghalaya

Code : LWF-2 Sampling L Down stream of Phlangkaruh River

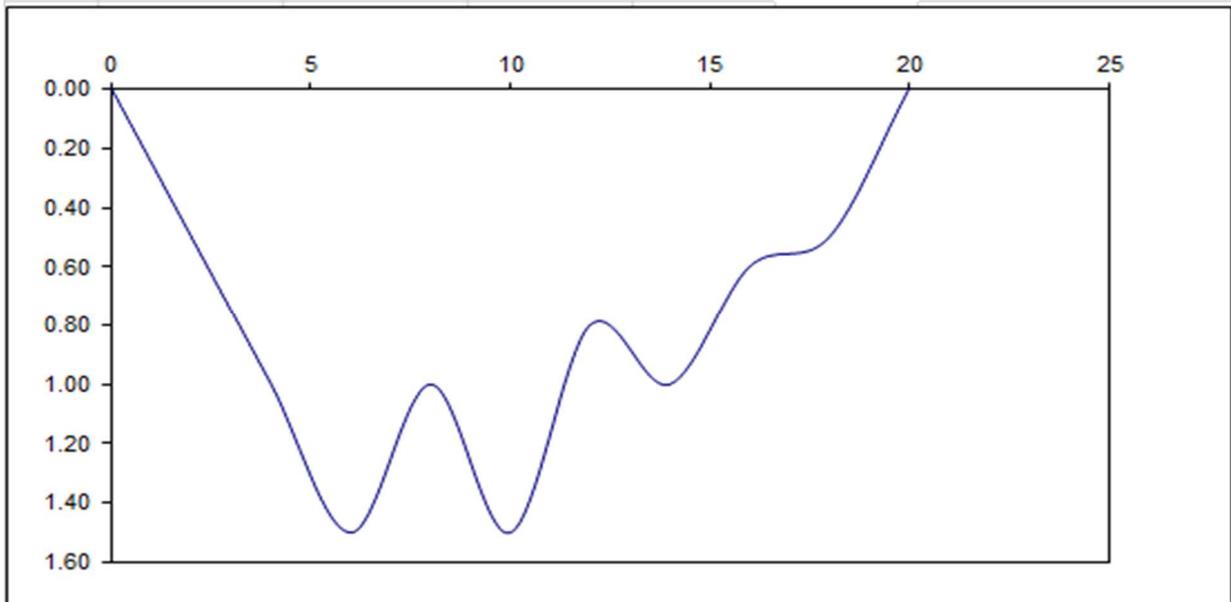
Date of Measurement : 22.05.2024

Table No: 17 a

Sl. No.	Distance from Initial point (m)	Width interval (m)	Depth of stream (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0	0.0	0.00	0.00	0.0	0.000
2	2	2.00	0.50	0.04	0.50	0.010
3	4	2.00	1.00	0.06	1.50	0.075
4	6	2.00	1.50	0.10	2.50	0.200
5	8	2.00	1.00	0.11	2.50	0.263
6	10	2.00	1.50	0.15	2.50	0.325
7	12	2.00	0.80	0.20	2.30	0.403
8	14	2.00	1.00	0.13	1.80	0.297
9	16	2.00	0.60	0.11	1.60	0.192
10	18	2.00	0.50	0.05	1.10	0.088
11	20	2.00	0.00	0.00	0.50	0.013
					Total	1.27500

Discharge m³/hr =4590

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM OF PHLANGKARUH RIVER (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. State : Meghalaya

Code : LWF-2 Sampling L, Down stream of Phlangkaruh River

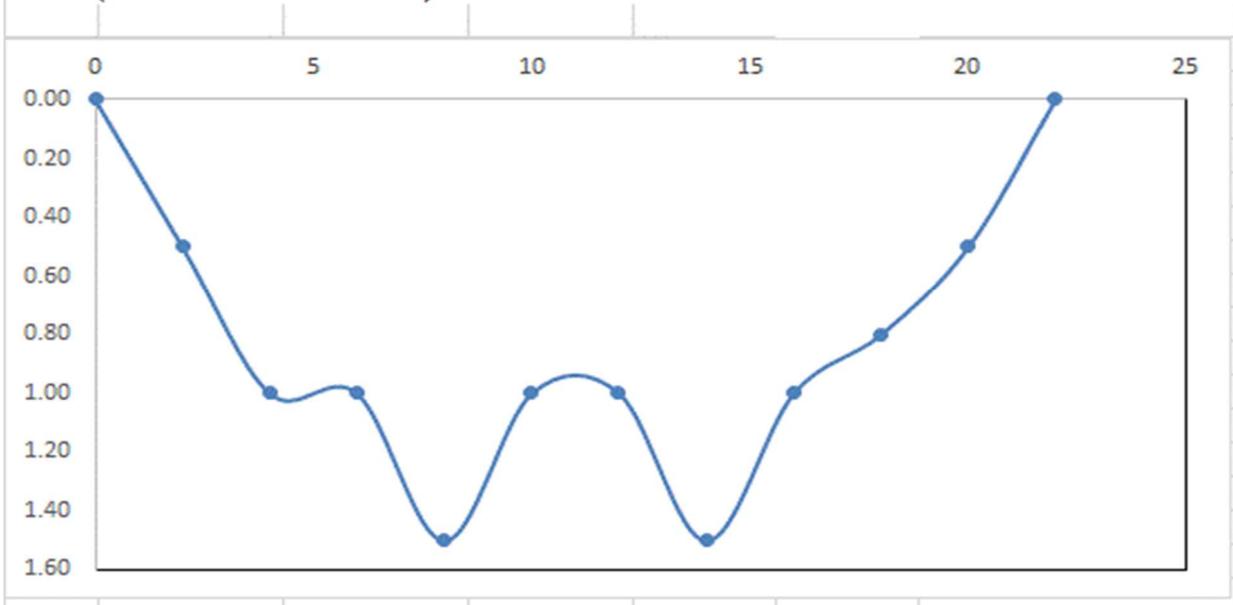
Date of Measurement : 26.06.2025

Table No: 17 b

Sl. No.	Distance from Initial point (m)	Width interval (m)	Depth of stream (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0	0.0	0.00	0.00	0.0	0.000
2	2	2.00	0.50	0.04	0.50	0.010
3	4	2.00	1.00	0.07	1.50	0.083
4	6	2.00	1.00	0.11	2.00	0.180
5	8	2.00	1.50	0.15	2.50	0.325
6	10	2.00	1.00	0.20	2.50	0.438
7	12	2.00	1.00	0.23	2.00	0.430
8	14	2.00	1.50	0.20	2.50	0.538
9	16	2.00	1.00	0.18	2.50	0.475
10	18	2.00	0.80	0.14	1.80	0.288
11	20	2.00	0.50	0.11	1.30	0.163
12	22	2.00	0.00	0.00	0.50	0.028
					Total	1.46500

Discharge m³/hr =5274

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM OF PHLANGKARUH RIVER (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. State : Meghalaya

Code : LWF-2 Sampling Location Down stream of Phlangkaruh River

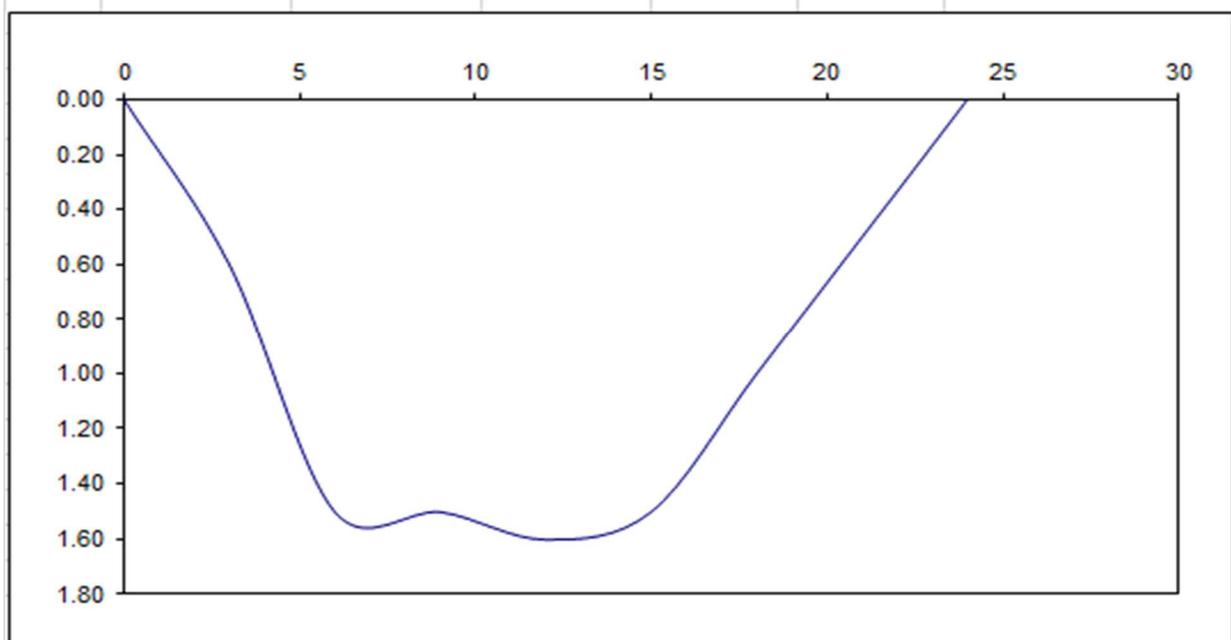
Date of Measurement : 18 .07.2024

Table No: 17 c

Sl. No.	Distance from Initial point (m)	Width interval (m)	Depth of stream (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0	0.0	0.00	0.00	0.0	0.000
2	3	3.00	0.60	0.05	0.90	0.023
3	6	3.00	1.50	0.08	3.15	0.205
4	9	3.00	1.50	0.11	4.50	0.428
5	12	3.00	1.60	0.15	4.65	0.605
6	15	3.00	1.50	0.20	4.65	0.814
7	18	3.00	1.00	0.12	3.75	0.600
8	21	3.00	0.50	0.05	2.25	0.191
9	24	3.00	0.00	0.00	0.75	0.019
					Total	2.07300

Discharge m³/hr =7462.8

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM OF PHLANGKARUH RIVER (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. State : Meghalaya

Code : LWF-2 Sampling L Down stream of Phlangkaruh River

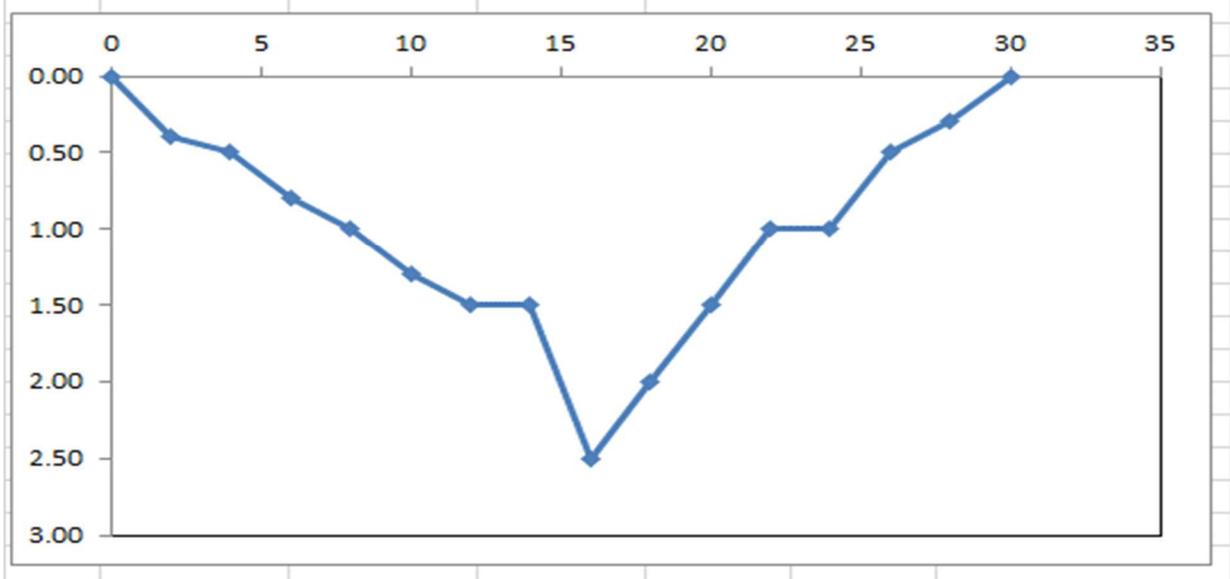
Date of Measurement : 22.08.2025

Table No: 17 d

Sl. No.	Distance from Initial point (m)	Width interval (m)	Depth of stream (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0	0.0	0.00	0.00	0.0	0.000
2	2	2.00	0.40	0.05	0.40	0.010
3	4	2.00	0.50	0.08	0.90	0.059
4	6	2.00	0.80	0.15	1.30	0.150
5	8	2.00	1.00	0.16	1.80	0.279
6	10	2.00	1.30	0.22	2.30	0.437
7	12	2.00	1.50	0.22	2.80	0.616
8	14	2.00	1.50	0.25	3.00	0.705
9	16	2.00	2.50	0.22	4.00	0.940
10	18	2.00	2.00	0.12	4.50	0.765
11	20	2.00	1.50	0.11	3.50	0.403
12	22	2.00	1.00	0.12	2.50	0.288
13	24	2.00	1.00	0.10	2.00	0.220
14	26	2.00	0.50	0.06	1.50	0.120
15	28	2.00	0.30	0.03	0.80	0.036
16	30	2.00	0.00	0.00	0.30	0.005
					Total	5.03050

Discharge m³/hr =18109.8

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM OF PHLANGKARUH RIVER (DURING FAIR WEATHER)



WATER FLOW MEASUREMENT

Project : Lafarage Umiam Mining Pvt. State : Meghalaya

Code : LWF-2 Sampling Loc Down stream of Phlangkaruh River

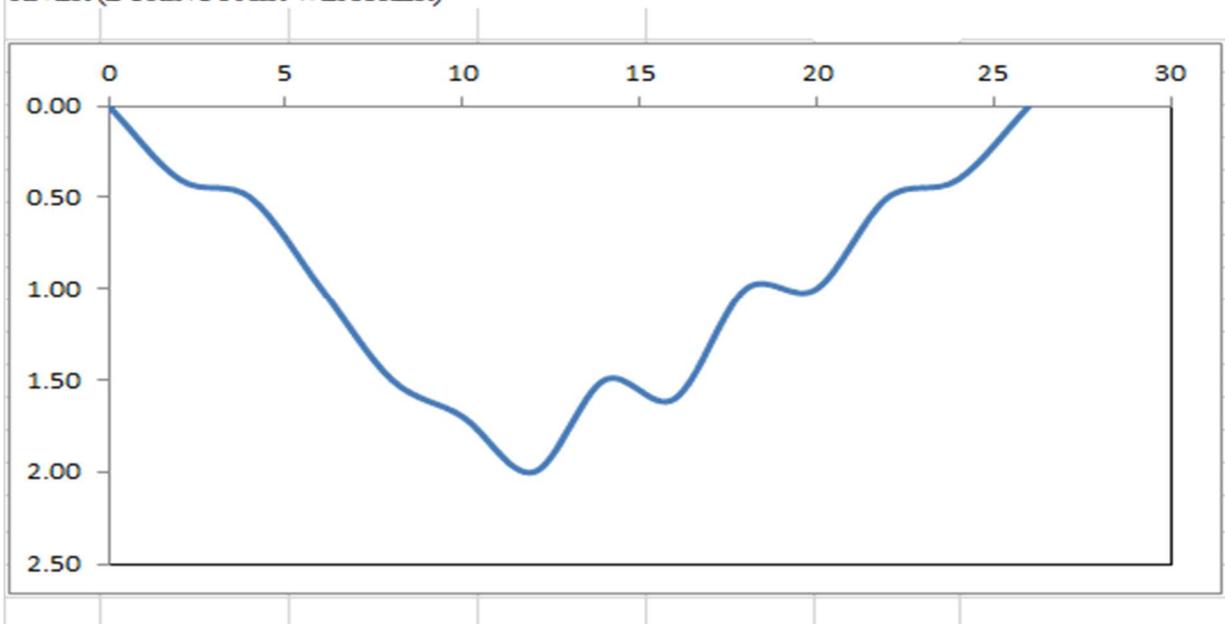
Date of Measurement : 26.09.2025

Table No: 17 e

Sl. No.	Distance from Initial point (m)	Width interval (m)	Depth of stream (m)	Velocity M/S	Area (m ²)	Discharge (m ³ /sec)
1	0	0.0	0.00	0.00	0.0	0.000
2	2	2.00	0.40	0.03	0.40	0.006
3	4	2.00	0.50	0.06	0.90	0.041
4	6	2.00	1.00	0.12	1.50	0.135
5	8	2.00	1.50	0.18	2.50	0.375
6	10	2.00	1.70	0.22	3.20	0.640
7	12	2.00	2.00	0.20	3.70	0.777
8	14	2.00	1.50	0.22	3.50	0.735
9	16	2.00	1.60	0.12	3.10	0.527
10	18	2.00	1.00	0.11	2.60	0.299
11	20	2.00	1.00	0.05	2.00	0.160
12	22	2.00	0.50	0.05	1.50	0.075
13	24	2.00	0.40	0.02	0.90	0.032
14	26	2.00	0.00	0.00	0.40	0.004
					Total	3.80500

Discharge m³/hr =13698

CROSS SECTION OF WATER FLOW MEASUREMENT AT DOWNSTREAM OF PHLANGKARUH RIVER (DURING FAIR WEATHER)



PROJECT : LAFARGE UMIAM MINING PVT.LTD		STATE : MEGHALAYA			
SAMPLING LOCATION : SHELLA BAZAR (NON MARKET DAY)		CODE : LN - 1			
MONTH: APRIL - JUNE, 2025					
LOCATION CATEGORY : COMMERCIAL AREA		Table No. 18			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	65	55.2 - 56.7	42.2	60.2	
Night Time (10.00 PM to 6.00 AM)	55	47.1 - 47.7			

PROJECT: LAFARGE UMIAM MINING PVT.LTD		STATE : MEGHALAYA			
SAMPLING LOCATION: PYRKAN VILLAGE		CODE : LN - 2			
MONTH: APRIL - JUNE, 2025					
LOCATION CATEGORY: RESIDENTIAL AREA		Table No. 19			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	52.9 - 54.0	41.2	57.6	
Night Time (10.00 PM to 6.00 AM)	45	44.2 - 44.5			

PROJECT : LAFARGE UMIAM MINING PVT.LTD		STATE : MEGHALAYA			
SAMPLING LOCATION : PHALANGKARUH VILLAGE		CODE : LN - 3			
MONTH: APRIL - JUNE, 2025					
LOCATION CATEGORY : RESIDENTIAL AREA		Table No. 20			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	53.0 - 54.1	41.2	57.8	
Night Time (10.00 PM to 6.00 AM)	45	44.3 - 44.5			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION : OFFICE AREA		CODE : LN - 4			
MONTH: APRIL - JUNE, 2025					
LOCATION CATEGORY : INDUSTRIAL AREA		Table No. 21			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	75	58.4 - 63.2	45.8	69.8	
Night Time (10.00 PM to 6.00 AM)	70	48.6 - 49.2			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION : SHELLA PUNJEE		CODE : LN - 5			
MONTH: APRIL - JUNE, 2025					
LOCATION CATEGORY :RESIDENTIAL AREA		Table No. 22			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	53.1 - 53.8	41.2	57.4	
Night Time (10.00 PM to 6.00 AM)	45	44.2 - 44.9			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION :MAWRYNGKHONG		CODE : LN - 6			
MONTH: APRIL - JUNE, 2025					
LOCATION CATEGORY :RESIDENTIAL AREA		Table No. 23			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	53.0 - 54.0	41.2	57.4	
Night Time (10.00 PM to 6.00 AM)	45	44.2 - 44.6			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION :QUARRY		CODE : LN - 7			
MONTH: APRIL - JUNE, 2025					
LOCATION CATEGORY : INDUSTRIAL AREA		Table No. 24			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	75	62.5 - 63.1	48.7	67.8	
Night Time (10.00 PM to 6.00 AM)	70	52.1 - 53.1			

PROJECT : LAFARGE UMIAM MINING PVT.LTD		STATE : MEGHALAYA			
SAMPLING LOCATION : SHELLA BAZAR (NON MARKET DAY)		CODE : LN - 1			
MONTH: JULY - SEPTEMBER, 2025					
LOCATION CATEGORY : COMMERCIAL AREA		Table No. 25			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	65	54.3 - 55.6	43.6	58.4	
Night Time (10.00 PM to 6.00 AM)	55	45.8 - 46.4			

PROJECT: LAFARGE UMIAM MINING PVT.LTD		STATE : MEGHALAYA			
SAMPLING LOCATION: PYRKAN VILLAGE		CODE : LN - 2			
MONTH: JULY - SEPTEMBER, 2025					
LOCATION CATEGORY: RESIDENTIAL AREA		Table No. 26			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	53.5 - 54.1	41.3	57.8	
Night Time (10.00 PM to 6.00 AM)	45	44.0 - 44.6			

PROJECT : LAFARGE UMIAM MINING PVT.LTD		STATE : MEGHALAYA			
SAMPLING LOCATION : PHALANGKARUH VILLAGE		CODE : LN - 3			
MONTH: JULY - SEPTEMBER, 2025					
LOCATION CATEGORY : RESIDENTIAL AREA		Table No. 27			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	53.6 - 53.8	41.7	56.3	
Night Time (10.00 PM to 6.00 AM)	45	44.3 - 44.9			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION : OFFICE AREA		CODE : LN - 4			
MONTH: JULY - SEPTEMBER, 2025					
LOCATION CATEGORY : INDUSTRIAL AREA		Table No. 28			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	75	56.8 - 61.8	46.5	67.4	
Night Time (10.00 PM to 6.00 AM)	70	49.7 - 50.5			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION : SHELLA PUNJEE		CODE : LN - 5			
MONTH: JULY - SEPTEMBER, 2025					
LOCATION CATEGORY :RESIDENTIAL AREA		Table No. 29			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	53.7 - 54.1	40.5	57.5	
Night Time (10.00 PM to 6.00 AM)	45	43.9- 44.8			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION :MAWRYNGKHONG		CODE : LN - 6			
MONTH: JULY - SEPTEMBER, 2025					
LOCATION CATEGORY :RESIDENTIAL AREA		Table No. 30			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	55	53.1 - 53.9	41.2	56.4	
Night Time (10.00 PM to 6.00 AM)	45	44.1 - 44.5			

PROJECT : LAFARGE UMIAM MINING PVT.LTD.		STATE: MEGHALAYA			
SAMPLING LOCATION : QUARRY		CODE : LN - 7			
MONTH: JANUARY - MARCH, 2025					
LOCATION CATEGORY : QUARRY		Table No. 31			
Time of Monitoring	Permissible Limit dB(A)	in dB(A)			Remarks
		Leq	Lmin	Lmax	
Day Time (6.00 AM to 10.00 PM)	75	60.8 - 61.9	48.4	67.5	
Night Time (10.00 PM to 6.00 AM)	70	51.7 - 53.1			

Diurnal Variation of Temperature (Apr - Jun 2025)

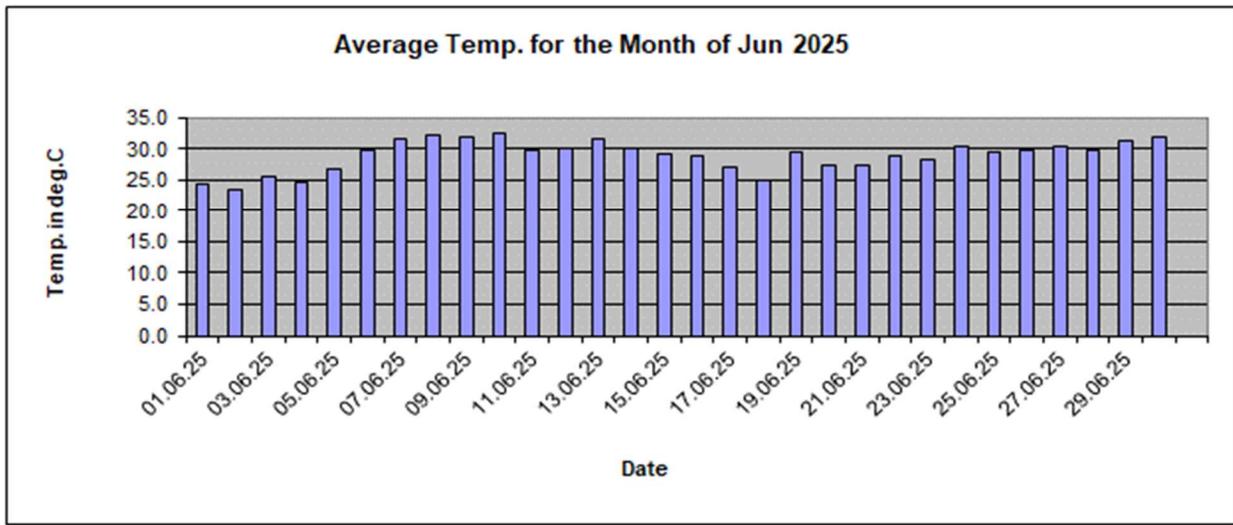
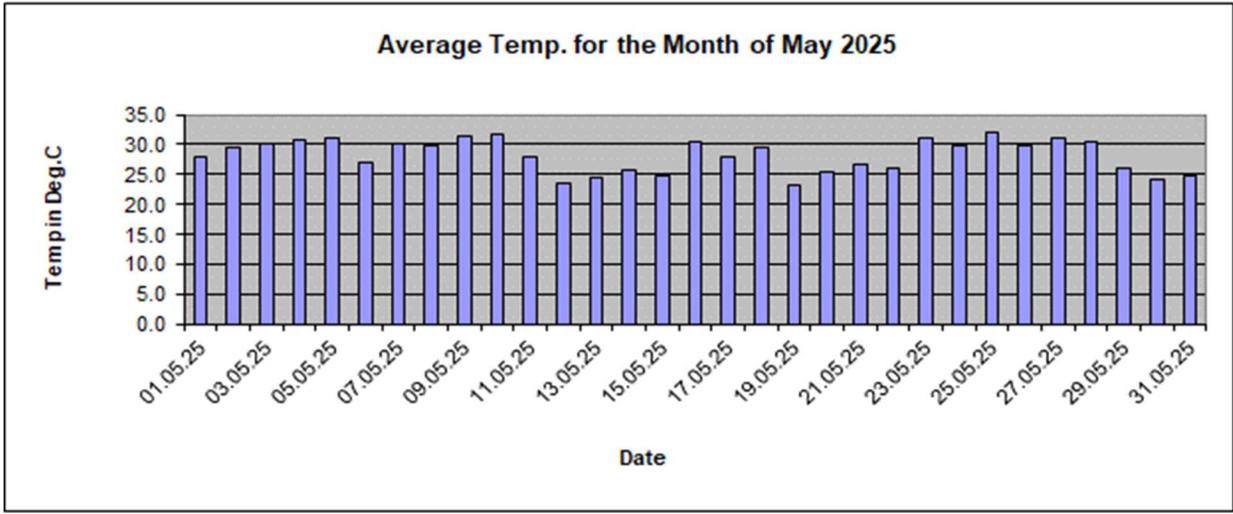
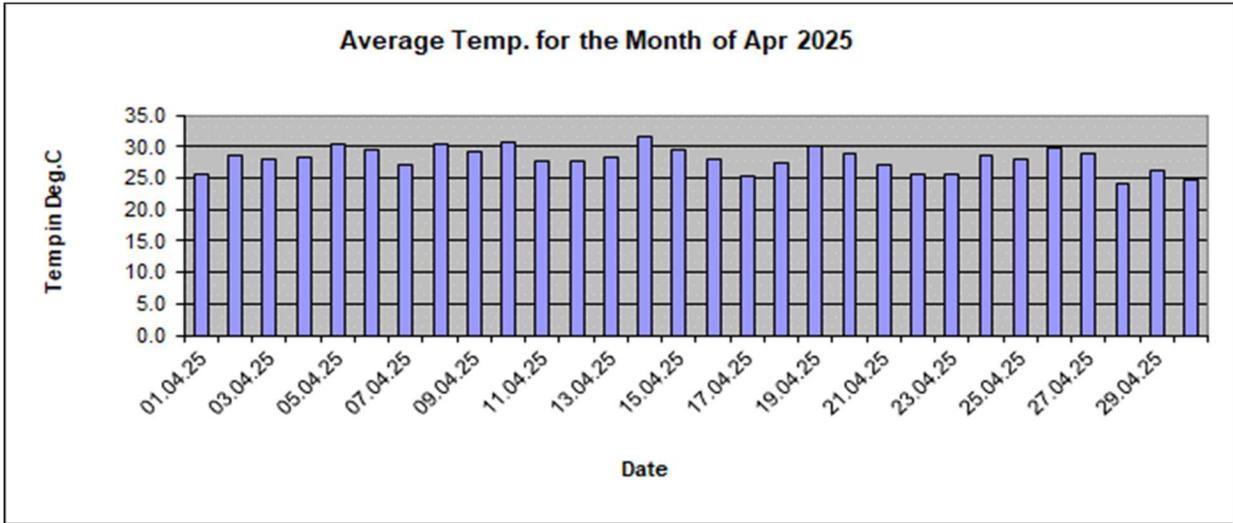


Exhibit-1

Diurnal Variation of Temperature (Jul - Sep 2025)

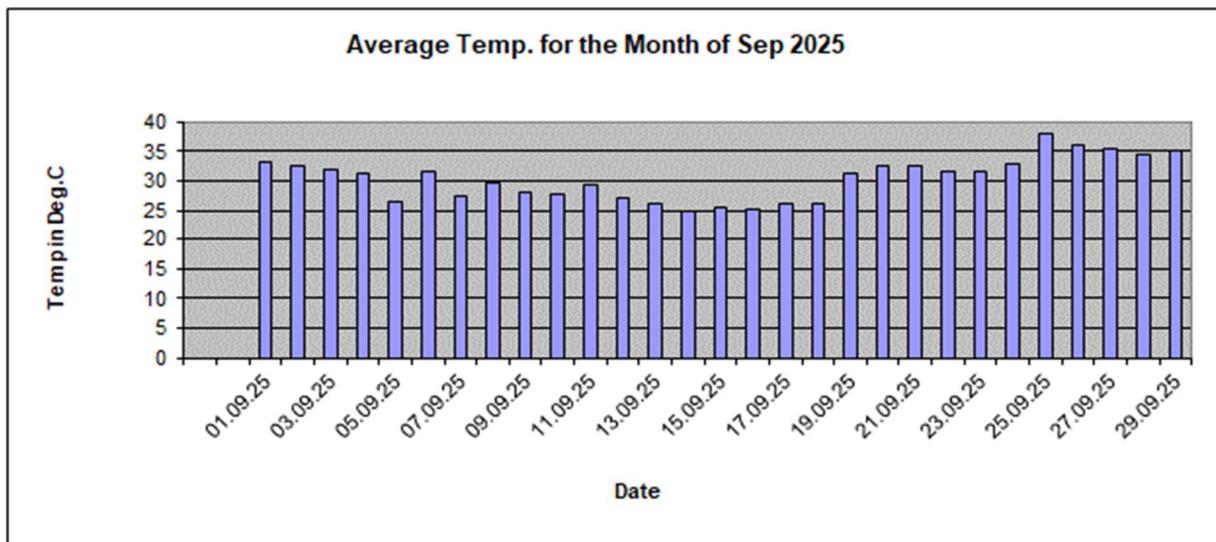
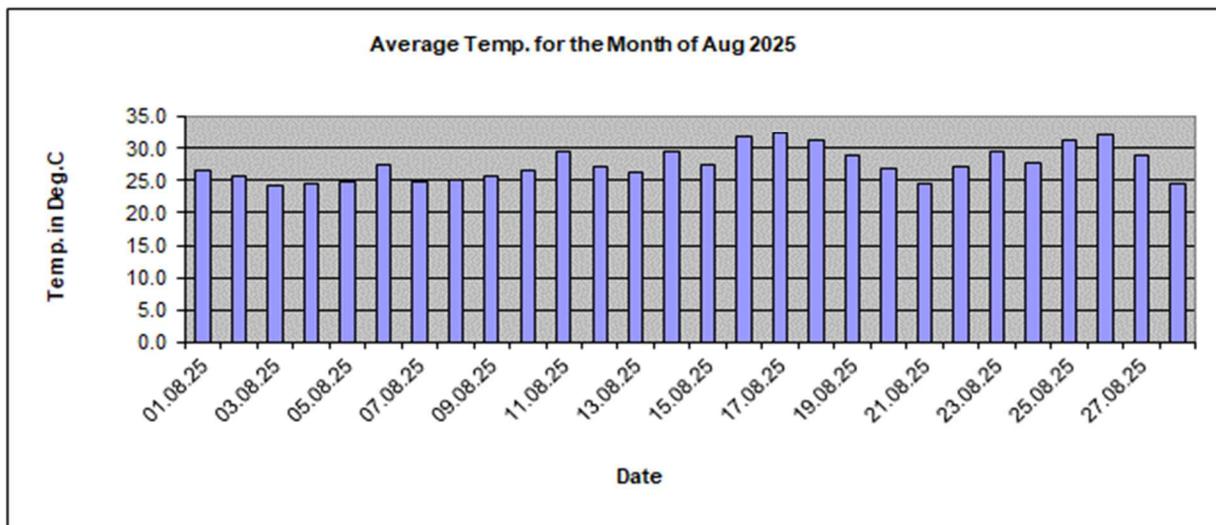
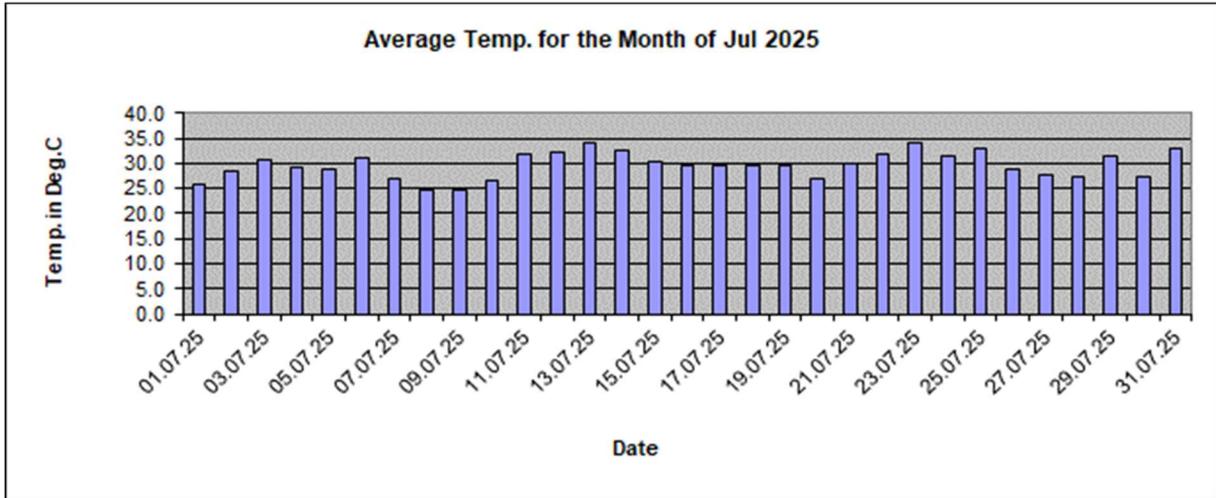


Exhibit-2

Diurnal Variation of Humidity (Apr - Jun 2025)

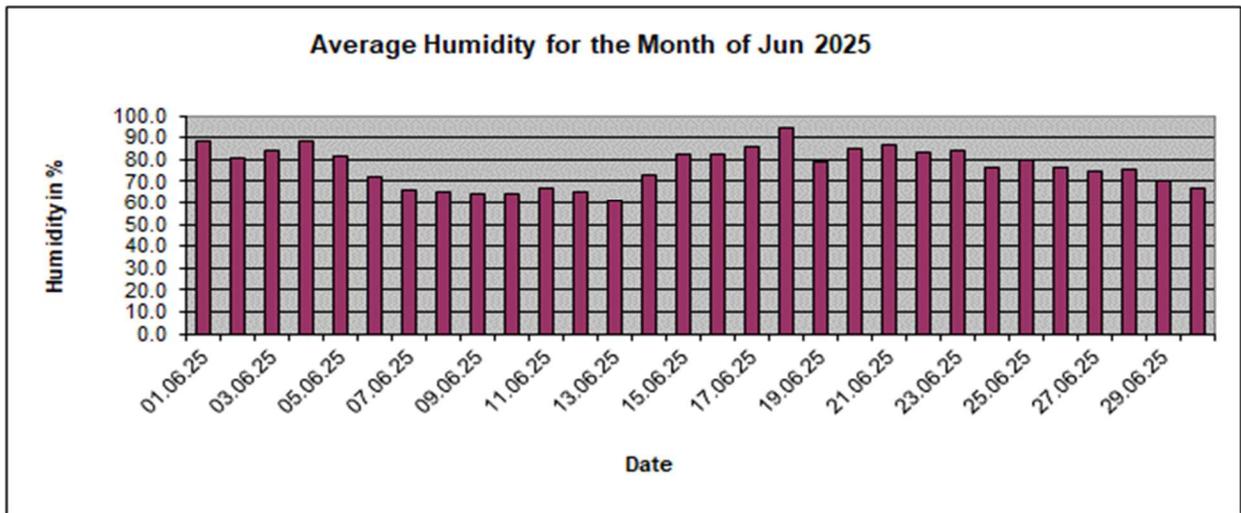
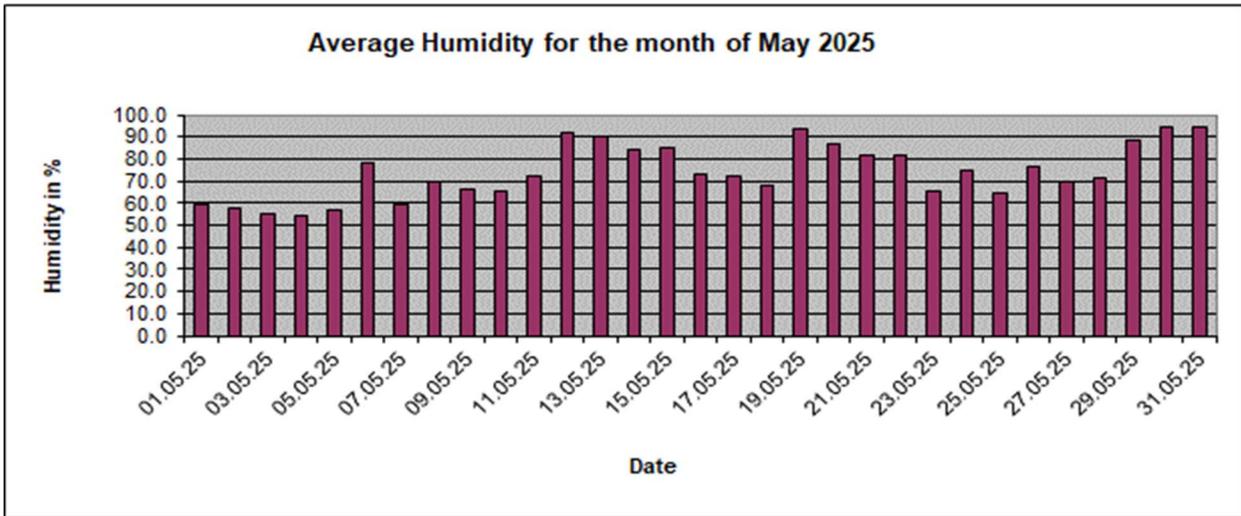
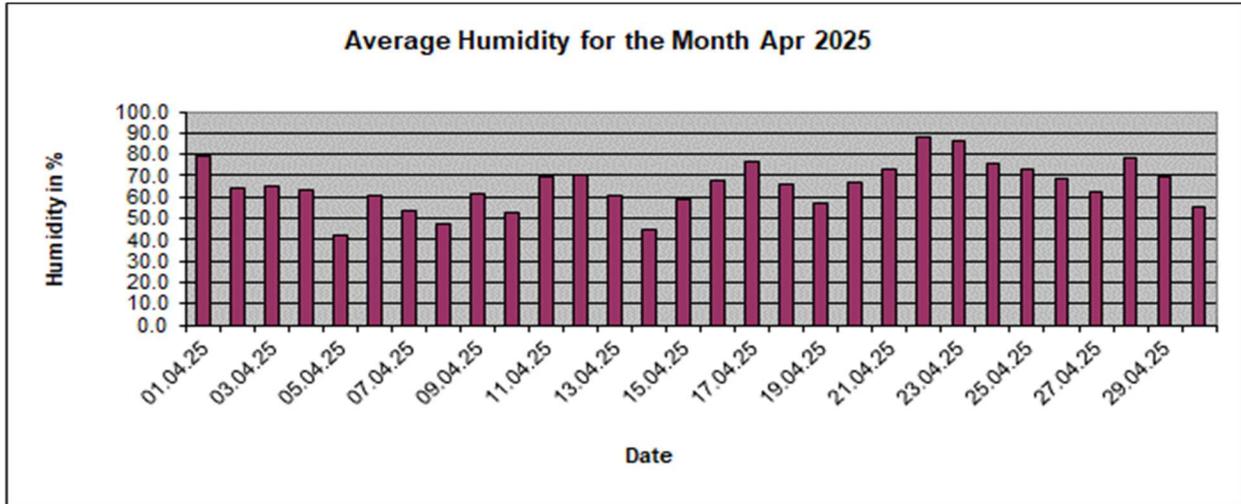


Exhibit-3

Diurnal Variation of Humidity (Jul – Sep 2025)

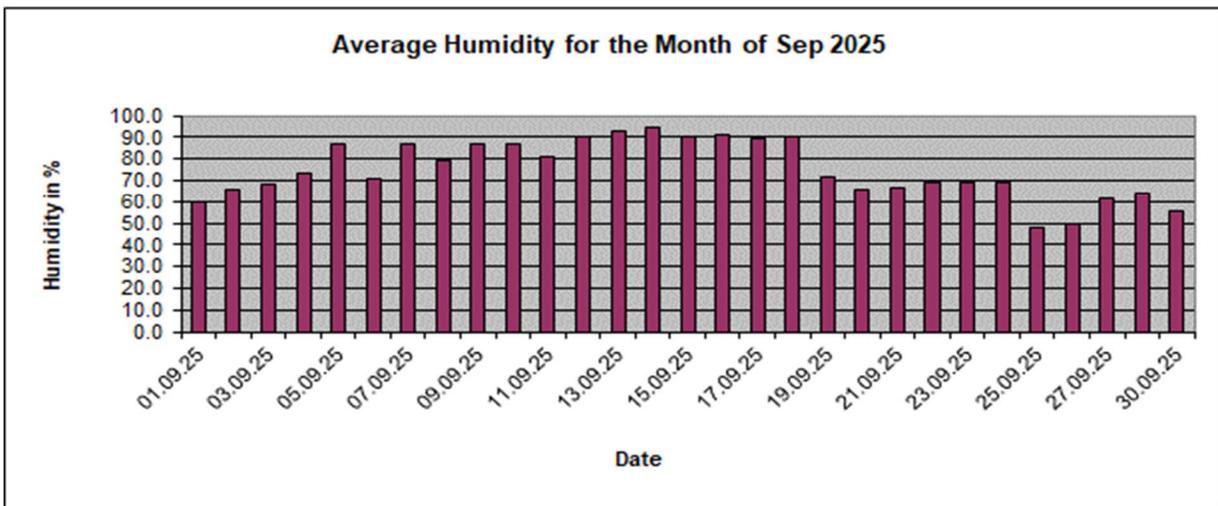
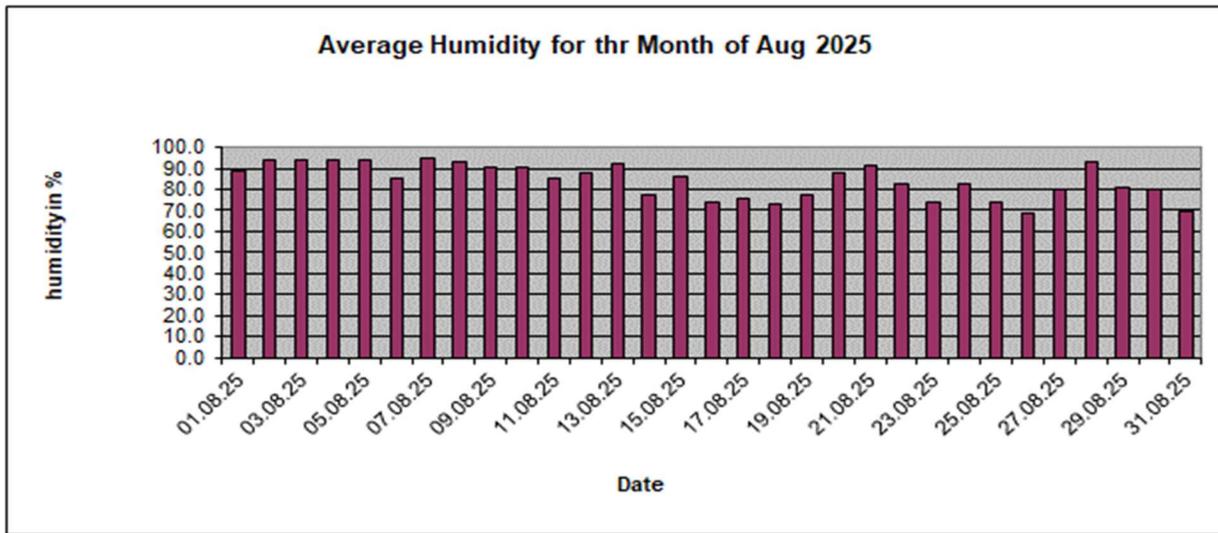
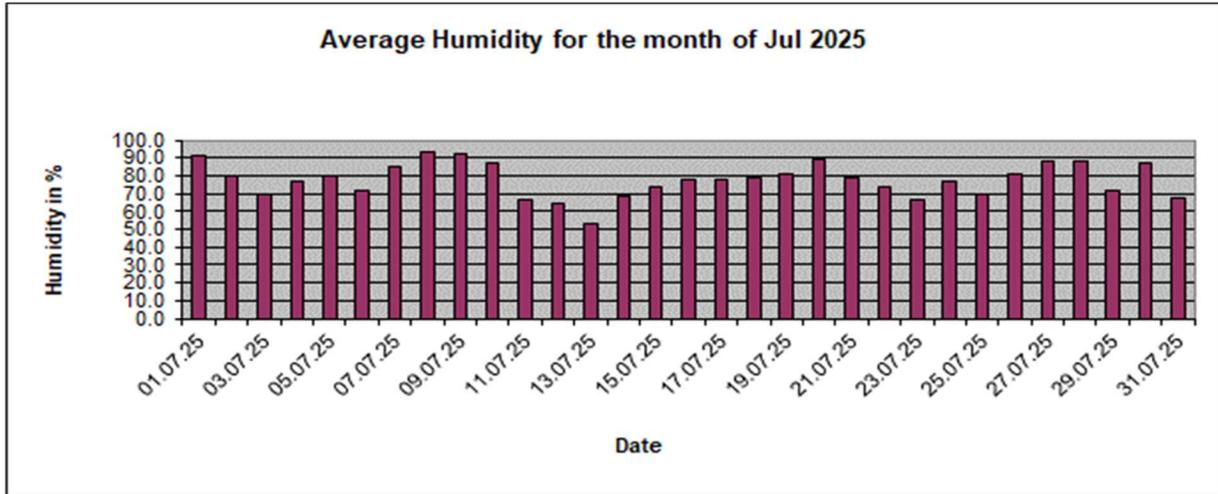


Exhibit-4

LAFARGE UMIAM MINING PVT. LTD. (Meghalaya)
Graphical Presentation of Ambient Air Quality
for Industrial and Mixed used Areas (Apr - Jun 2025)

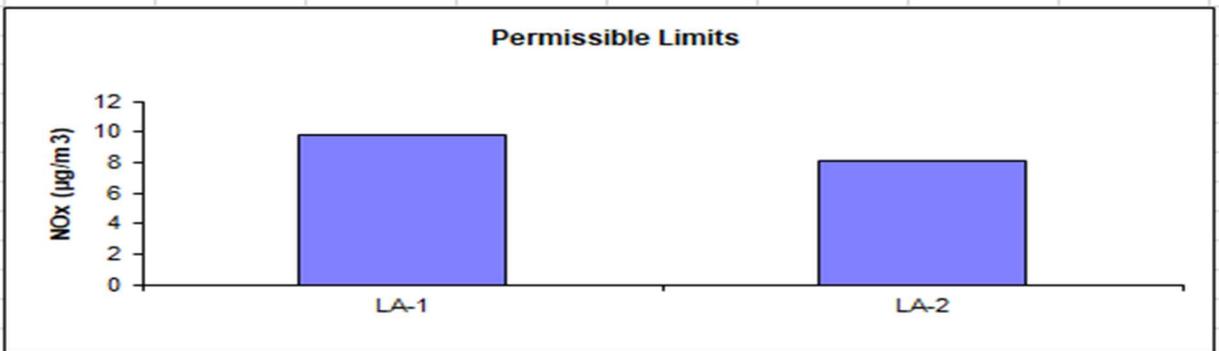
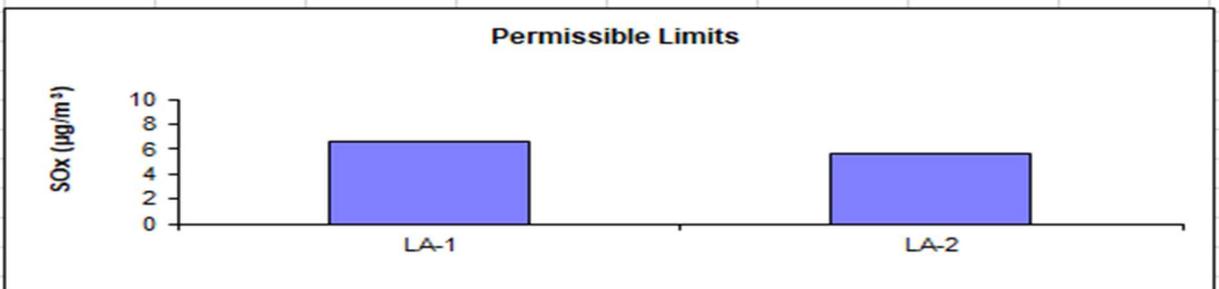
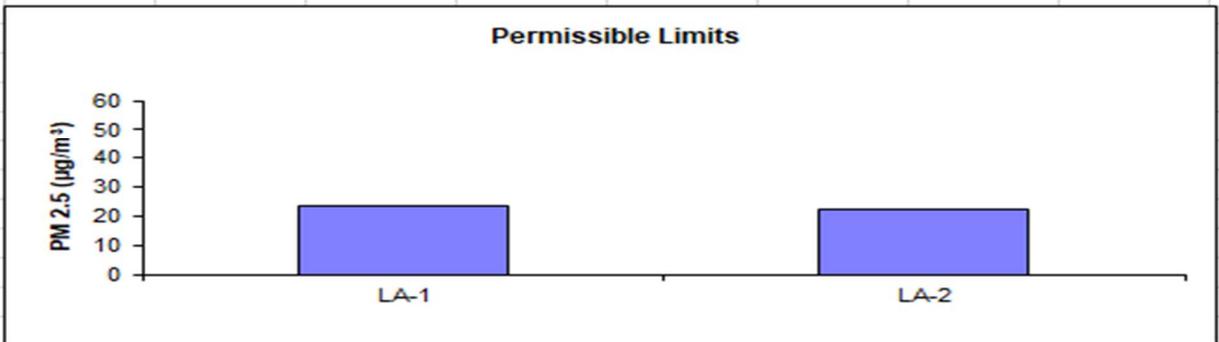
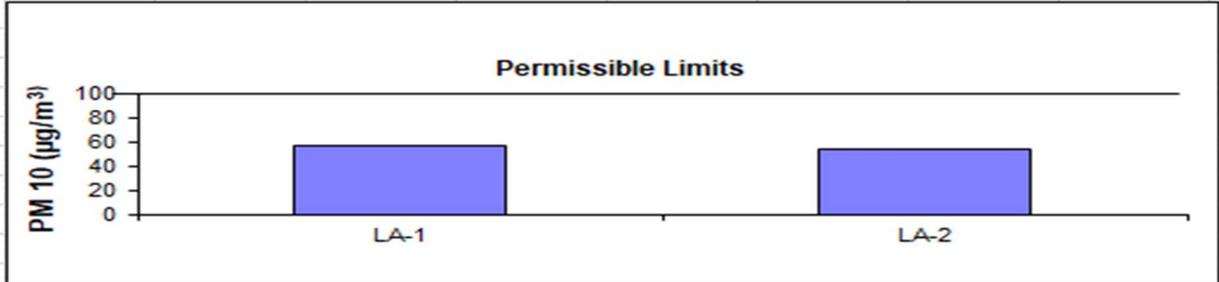


Exhibit No: 5

LAFARGE UMIAM MINING PVT. LTD. (Meghalaya)
Graphical Presentation of Ambient Air Quality
for Industrial and Mixed used Areas (Jul to Sep 2025)

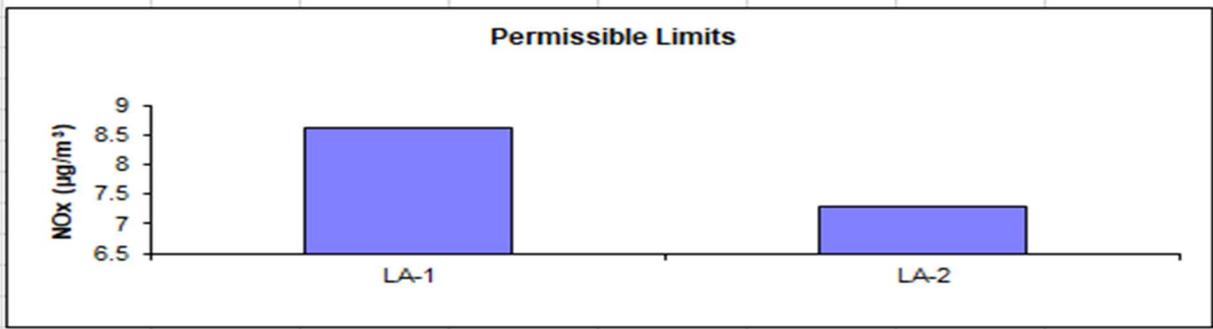
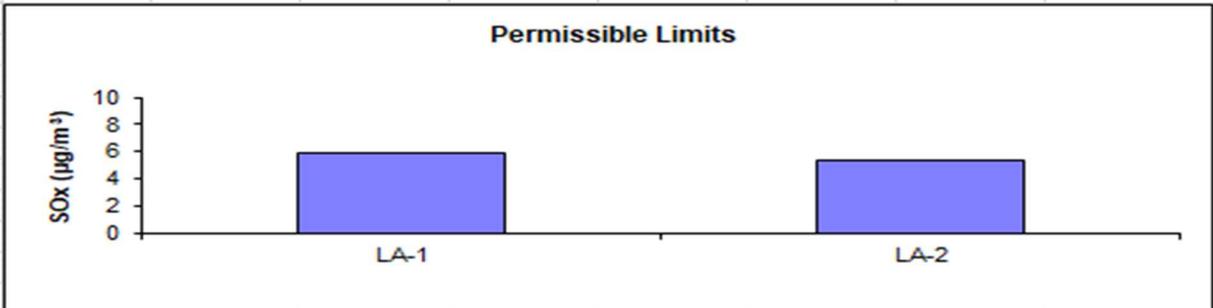
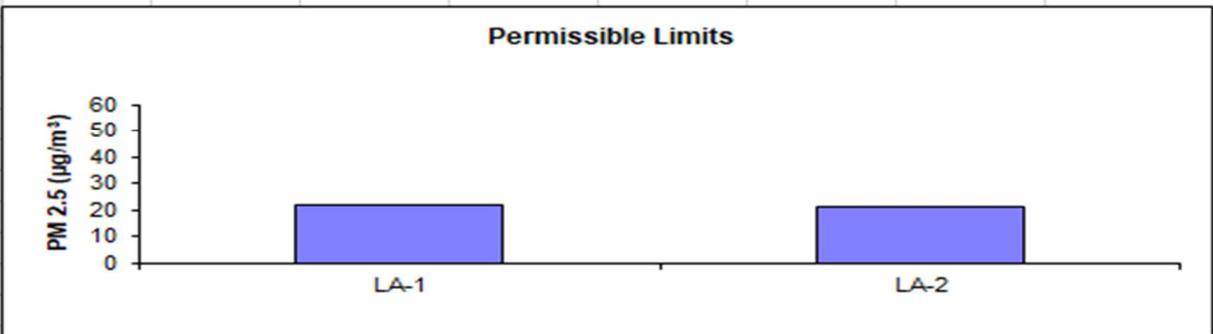
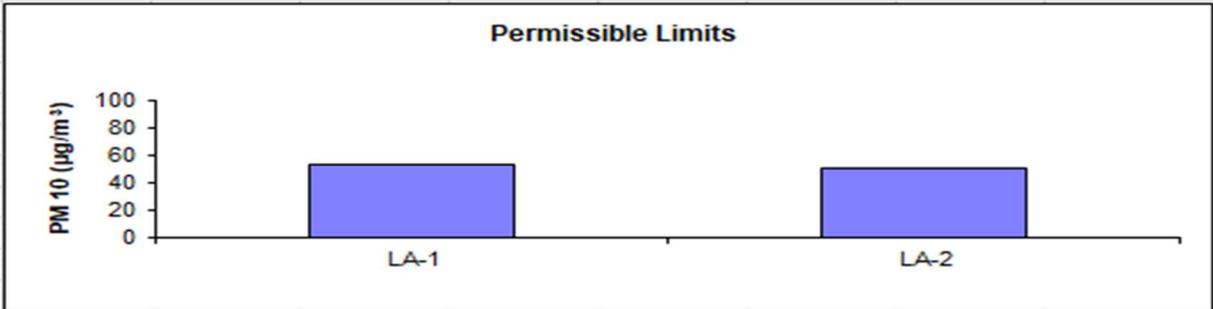


Exhibit No: 6

LAFARGE UMIAM MINING PVT. LTD. (Meghalaya)
Graphical Presentation of Ambient Air Quality
for Residential, Rural Areas (Apr to Jun 2025)

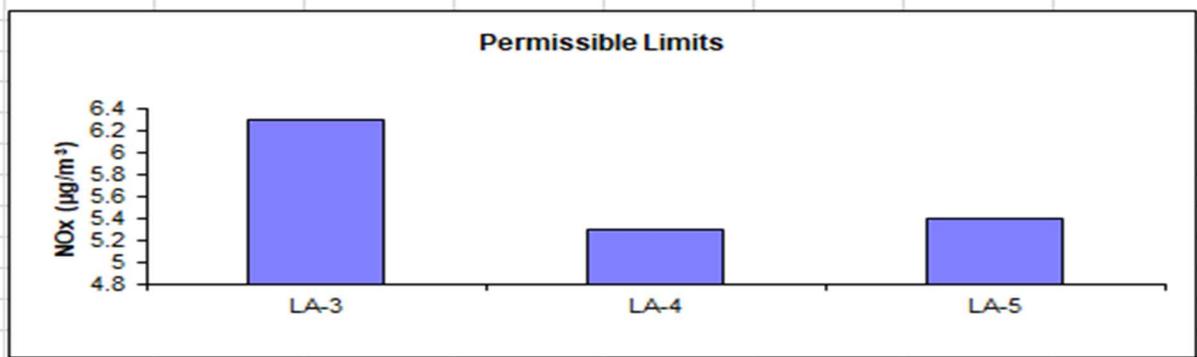
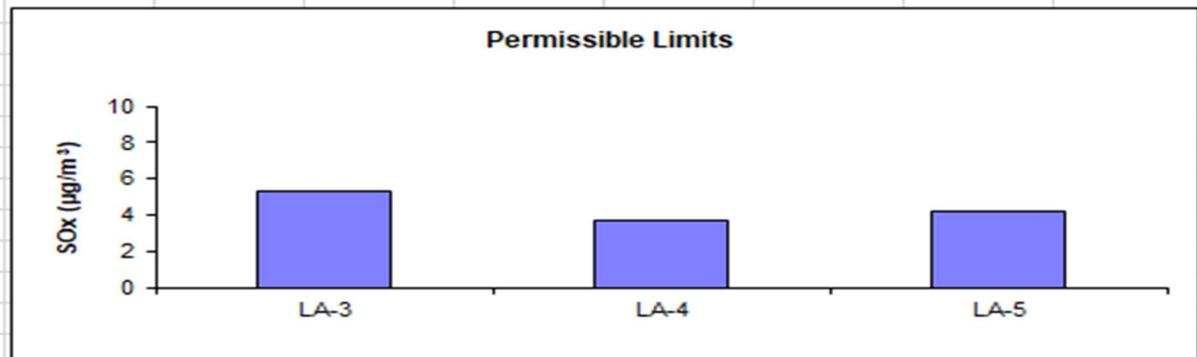
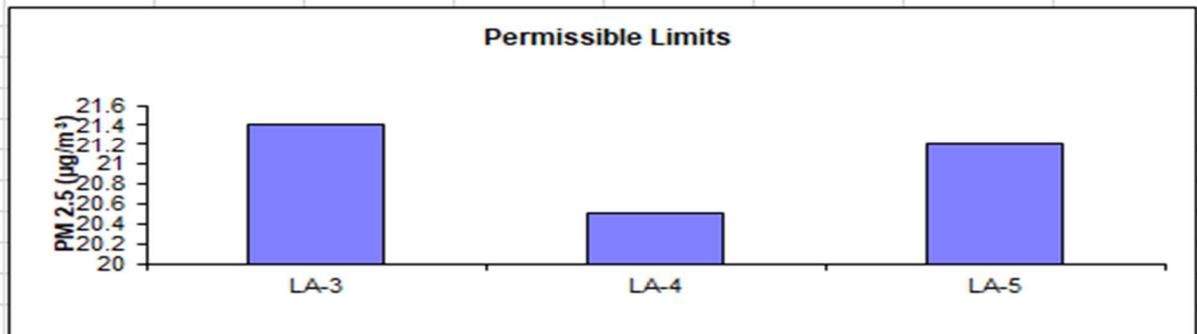
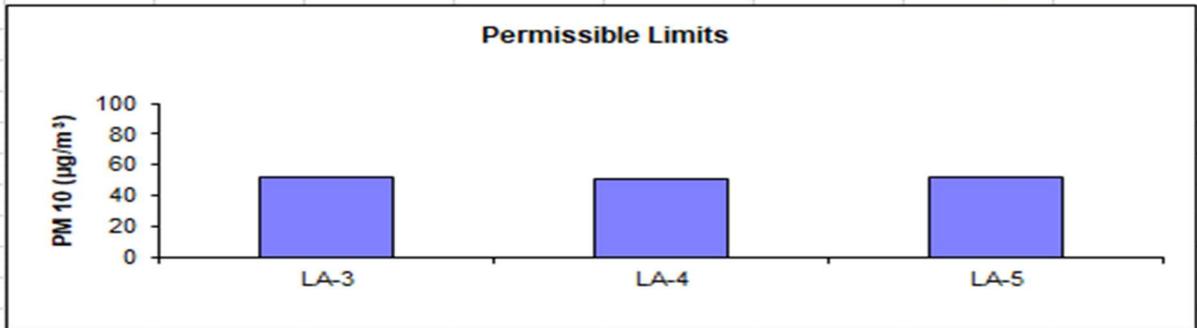


Exhibit No: 7

**LAFARGE UMIAM MINING PVT. LTD. (Meghalaya)
Graphical Presentation of Ambient Air Quality
for Residential, Rural Areas (Jul to Sep 2025)**

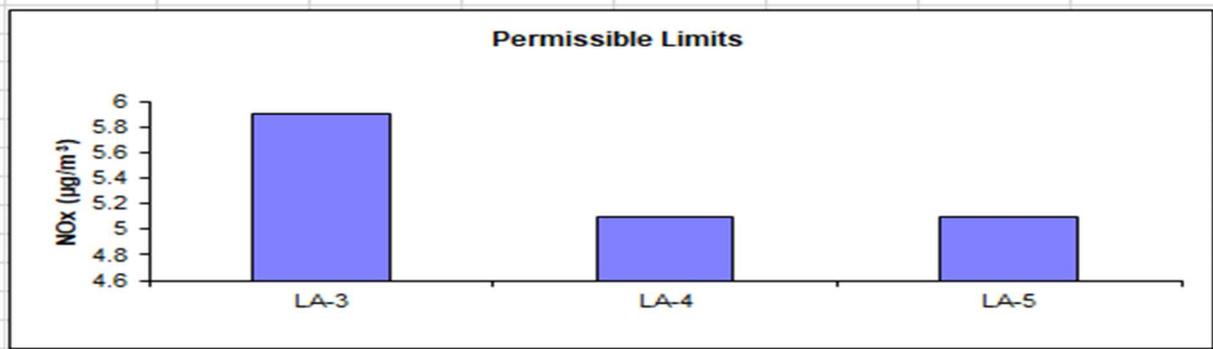
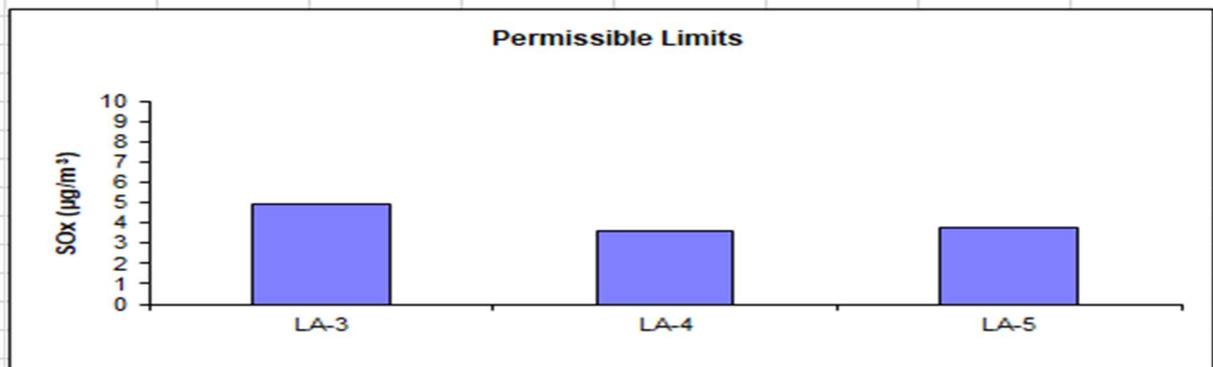
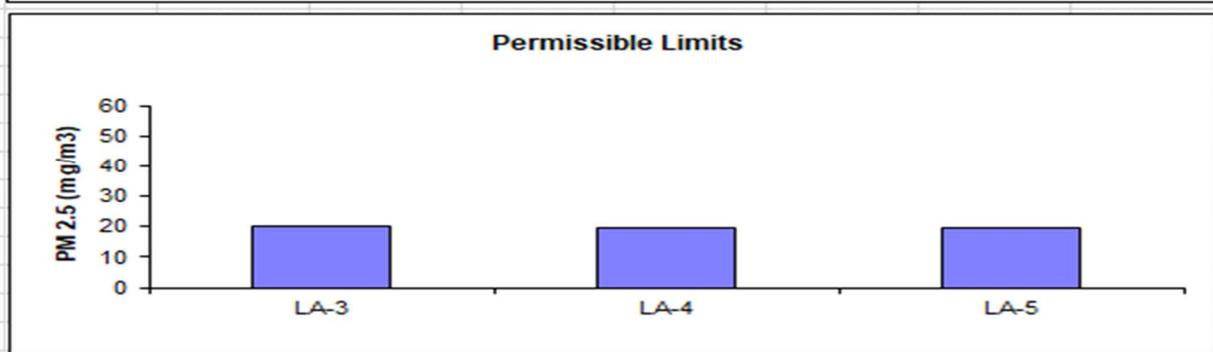
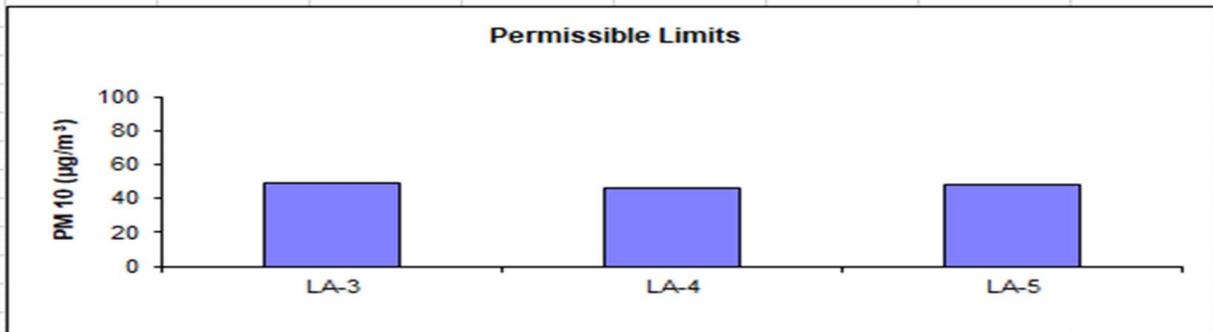


Exhibit No: 8

CAVE PROTECTION

Plate 1



DAILY WEATHER MONITORING DATA FOR THE PERIOD APRIL TO SEPTEMBER 2025

Lafarge Umiam Mining Pvt.Limited														
Daily Weather Monitoring Data For the Month of Apr 2025														
(Based on Hourly Readings from 00:00 Hrs. to 23:00 Hrs.)														
Date	Wind Speed km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm
	Min	Max	Avg.		Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	
01.04.25	0.0	1.2	0.18	NE	20.0	34.0	25.7	0.0	0.4	0.07	47.2	94.0	78.8	9.5
02.04.25	0.0	2.2	0.17	N	20.3	39.0	28.5	0.0	1.0	0.10	37.2	93.5	64.1	5.5
03.04.25	0.0	0.6	0.12	NW	20.1	37.5	27.9	0.0	0.5	0.08	43.2	94.1	64.9	3.0
04.04.25	0.0	0.4	0.03	NNE	24.4	34.3	28.4	0.0	0.4	0.07	47.3	89.2	63.4	4.5
05.04.25	0.0	0.9	0.12	N	24.4	40.4	30.4	0.0	0.5	0.07	27.2	61.5	41.9	1.5
06.04.25	0.0	2.4	0.10	N	19.5	40.3	29.5	0.0	0.5	0.07	33.3	93.5	60.4	6.5
07.04.25	0.0	9.4	0.87	NW	17.0	38.6	27.2	0.0	1.1	0.15	28.2	93.1	53.5	8.0
08.04.25	0.0	0.2	0.02	NNE	21.6	41.0	30.5	0.0	1.1	0.20	27.3	75.1	47.5	4.0
09.04.25	0.0	0.4	0.02	N	21.0	40.5	29.3	0.0	1.0	0.16	32.2	93.6	61.6	1.0
10.04.25	0.0	0.8	0.03	SW	23.4	40.6	30.6	0.0	1.1	0.18	30.4	90.1	52.4	0.0
11.04.25	0.0	0.4	0.02	N	21.0	40.3	27.6	0.0	1.1	0.20	29.0	93.5	69.2	2.0
12.04.25	0.0	1.1	0.07	NE	21.0	37.3	27.6	0.0	1.1	0.21	37.4	93.6	70.4	3.0
13.04.25	0.0	4.6	0.54	N	19.2	40.3	28.2	0.0	1.1	0.18	31.2	93.5	60.9	0.0
14.04.25	0.0	0.3	0.04	NNE	25.0	41.2	31.6	0.0	1.0	0.12	27.1	68.5	44.3	0.5
15.04.25	0.0	1.7	0.07	N	22.5	40.6	29.6	0.0	1.1	0.12	30.3	92.4	59.1	3.5
16.04.25	0.0	0.5	0.03	SSW	22.0	41.0	28.1	0.0	1.0	0.10	31.0	93.6	67.4	1.0
17.04.25	0.0	0.6	0.02	N	21.0	34.0	25.3	0.0	0.5	0.07	46.1	93.6	76.6	0.5
18.04.25	0.0	0.5	0.02	N	21.2	40.2	27.4	0.0	1.1	0.10	29.2	91.0	65.9	0.5
19.04.25	0.0	0.5	0.03	NW	23.1	41.0	30.2	0.0	1.0	0.18	29.1	93.1	57.2	0.0
20.04.25	0.0	0.4	0.01	N	21.0	38.3	28.9	0.0	0.5	0.08	38.1	93.6	67.1	0.0
21.04.25	0.0	1.1	0.05	NNW	24.0	33.2	27.0	0.0	0.6	0.07	52.6	85.1	72.6	4.5
22.04.25	0.0	0.3	0.01	N	23.1	31.0	25.7	0.0	0.3	0.03	70.0	94.2	88.1	81.0
23.04.25	0.0	5.4	0.35	N	20.0	34.1	25.5	0.0	0.3	0.04	56.5	96.0	86.5	48.0
24.04.25	0.0	11.6	1.24	NNE	19.0	41.1	28.6	0.0	1.1	0.13	36.4	93.6	76.0	52.0
25.04.25	0.0	2.2	0.17	N	20.1	41.0	28.1	0.0	1.1	0.13	37.3	93.5	73.0	37.0
26.04.25	0.0	0.5	0.02	NNW	21.1	40.2	29.8	0.0	1.1	0.14	38.0	93.6	68.6	85.0
27.04.25	0.0	8.6	0.49	N	18.4	39.0	28.8	0.0	1.0	0.14	33.2	93.1	62.8	0.0
28.04.25	0.0	1.7	0.24	NW	20.0	35.1	24.2	0.0	1.1	0.09	43.2	93.5	78.1	0.0
29.04.25	0.0	2.1	0.17	N	20.1	37.3	26.1	0.0	1.2	0.13	36.5	93.5	69.8	0.0
30.04.25	0.0	1.0	0.09	N	21.4	39.6	24.8	0.0	1.1	0.15	32.2	97.6	55.2	0.0
				N										
	0.0	11.6	0.2		17.0	41.2	28.0	0.0	1.2	0.1	27.1	97.6	65.2	362.0
	Min	Max	Avg		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total
	Wind Speed Km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Total Rainfall in mm

Lafarge Umiam Mining Pvt.Limited														
Daily Weather Monitoring Data For the Month of May 2025														
(Based on Hourly Readings from 00:00 Hrs. to 23:00 Hrs.)														
Date	Wind Speed km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm
	Min	Max	Avg.		Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	
01.05.25	0.0	1.2	0.10	NNW	21.1	42.0	28.1	0.0	1.2	0.21	29.0	93.3	59.6	0.5
02.05.25	0.0	0.8	0.06	NE	20.5	39.3	29.4	0.0	1.0	0.14	31.0	93.4	57.7	0.0
03.05.25	0.0	1.5	0.09	N	22.0	40.6	30.3	0.0	1.1	0.25	31.3	88.4	55.3	0.0
04.05.25	0.0	1.0	0.10	NW	24.0	41.0	30.9	0.0	1.1	0.22	31.1	74.2	54.2	0.0
05.05.25	0.0	1.2	0.07	N	23.1	42.0	31.2	0.0	1.2	0.17	29.0	92.6	57.1	0.0
06.05.25	0.0	1.0	0.10	NE	21.0	36.5	27.1	0.0	1.0	0.15	46.4	93.6	78.4	74.5
07.05.25	0.0	0.4	0.02	N	22.5	40.3	30.3	0.0	1.0	0.17	35.5	84.2	59.7	0.0
08.05.25	0.0	1.1	0.07	NW	22.1	40.5	29.7	0.0	1.2	0.20	36.5	94.1	69.7	18.0
09.05.25	0.0	1.8	0.10	N	23.6	42.3	31.5	0.0	1.2	0.21	36.0	94.1	66.3	0.5
10.05.25	0.0	0.6	0.05	NW	24.1	41.4	31.7	0.0	1.1	0.24	37.2	94.1	65.6	1.5
11.05.25	0.0	0.8	0.08	N	22.2	37.5	27.9	0.0	1.1	0.18	40.1	94.0	71.9	3.0
12.05.25	0.0	2.2	0.20	NW	22.0	31.3	23.5	0.0	0.0	0.00	83.0	96.3	91.9	29.5
13.05.25	0.0	1.1	0.10	N	21.2	32.2	24.6	0.0	0.5	0.04	67.3	94.2	90.0	63.5
14.05.25	0.0	0.7	0.07	NE	21.2	37.3	25.8	0.0	0.1	0.02	46.1	94.0	84.3	40.5
15.05.25	0.0	0.9	0.09	NW	20.0	35.5	24.9	0.0	0.5	0.04	51.1	97.5	85.1	65.5
16.05.25	0.0	1.4	0.10	NE	23.2	40.3	30.6	0.0	1.2	0.18	37.4	97.2	72.8	0.0
17.05.25	0.0	0.6	0.05	N	21.3	36.0	28.1	0.0	1.2	0.19	44.3	94.0	72.2	72.5
18.05.25	0.0	2.1	0.22	NE	20.3	40.5	29.4	0.0	1.3	0.22	34.4	93.6	68.1	16.0
19.05.25	0.0	1.2	0.13	SW	21.1	26.0	23.2	0.0	0.3	0.02	93.0	94.3	93.6	30.0
20.05.25	0.0	1.8	0.15	N	21.2	38.4	25.4	0.0	1.2	0.10	41.1	94.6	86.6	130.0
21.05.25	0.0	1.2	0.10	SW	21.1	40.5	26.6	0.0	0.5	0.05	34.4	95.3	81.2	32.0
22.05.25	0.0	0.5	0.03	SSW	22.1	35.1	26.2	0.0	0.5	0.07	29.8	94.1	81.8	52.5
23.05.25	0.0	1.1	0.10	NW	24.0	41.4	31.0	0.0	1.3	0.20	35.1	90.2	65.2	0.0
24.05.25	0.0	0.9	0.09	SW	23.1	38.6	29.7	0.0	0.6	0.10	46.5	94.4	74.7	3.0
25.05.25	0.0	0.8	0.08	N	24.2	42.2	32.0	0.0	1.3	0.23	31.3	94.1	64.3	25.0
26.05.25	0.0	1.5	0.14	SE	23.2	40.2	29.7	0.0	1.2	0.13	40.0	95.2	76.1	9.5
27.05.25	0.0	0.7	0.08	NW	22.1	42.1	31.1	0.0	1.3	0.26	33.0	97.4	69.8	44.0
28.05.25	0.0	0.8	0.08	SW	24.2	44.2	30.6	0.0	1.4	0.18	32.1	94.3	71.5	2.5
29.05.25	0.0	0.6	0.05	NW	24.0	31.2	26.0	0.0	0.3	0.03	67.5	94.3	88.5	17.0
30.05.25	0.0	1.1	0.10	NE	24.0	25.2	24.3	0.0	0.0	0.00	94.1	94.2	94.1	237.5
31.05.25	0.0	1.2	0.80	N	23.2	35.3	24.8	0.0	0.0	0.00	94.0	97.1	94.3	62.0
				N										
	0.0	2.2	0.1		20.0	44.2	28.2	0.0	1.4	0.1	29.0	97.5	74.2	1030.5
	Min	Max	Avg		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total
	Wind Speed Km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Total Rainfall in mm

Lafarge Umiam Mining Pvt.Limited														
Daily Weather Monitoring Data For the Month of Jun 2025														
(Based on Hourly Readings from 00:00 Hrs. to 23:00 Hrs.)														
Date	Wind Speed km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm
	Min	Max	Avg.		Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	
01.06.25	0.0	1.4	0.10	NW	21.2	35.3	24.4	0.0	0.3	0.03	47.4	97.0	88.5	27.5
02.06.25	0.0	0.9	0.05	N	18.0	29.4	23.4	0.0	0.3	0.03	47.1	94.3	80.4	25.0
03.06.25	0.0	1.5	0.14	NE	22.1	34.4	25.6	0.0	0.6	0.07	53.0	94.2	84.4	17.5
04.06.25	0.0	1.1	0.15	N	22.0	31.3	24.8	0.0	0.5	0.04	64.3	94.5	88.6	82.0
05.06.25	0.0	1.2	0.11	N	22.0	38.2	26.9	0.0	1.1	0.14	40.5	94.3	81.7	64.5
06.06.25	0.0	0.8	0.06	NW	24.2	38.5	29.8	0.0	1.2	0.24	41.0	92.4	72.0	0.0
07.06.25	0.0	1.4	0.11	SW	25.1	39.2	31.7	0.0	1.2	0.15	35.4	92.2	65.8	0.0
08.06.25	0.0	1.4	0.09	NNE	26.0	38.5	32.1	0.0	1.3	0.19	36.2	93.3	64.8	0.0
09.06.25	0.0	0.8	0.09	N	26.1	38.4	31.8	0.0	1.1	0.20	37.5	87.5	64.6	0.0
10.06.25	0.0	0.9	0.07	NW	27.0	38.5	32.4	0.0	1.2	0.25	36.1	87.0	64.0	0.0
11.06.25	0.0	1.6	0.13	N	24.1	33.5	29.7	0.0	1.3	0.30	37.0	94.3	67.0	0.0
12.06.25	0.0	1.2	0.12	NE	26.3	34.5	30.2	0.0	1.3	0.30	36.0	92.8	65.0	0.0
13.06.25	0.0	0.7	0.09	NE	27.1	34.5	31.7	0.0	1.3	0.27	34.0	84.2	61.1	0.0
14.06.25	0.0	1.8	0.14	N	24.2	36.5	30.2	0.0	1.3	0.30	37.4	94.5	73.1	3.0
15.06.25	0.0	1.2	0.14	NE	25.1	36.1	29.2	0.0	0.4	0.08	56.0	94.5	82.2	11.5
16.06.25	0.0	0.8	0.09	NNE	24.0	34.3	28.8	0.0	0.4	0.05	42.2	94.5	82.0	54.5
17.06.25	0.0	0.6	0.05	NE	23.2	33.4	27.1	0.0	0.3	0.04	56.3	94.5	85.4	7.0
18.06.25	0.0	1.1	0.10	N	24.0	26.5	25.0	0.0	0.1	0.00	90.5	94.5	94.1	31.5
19.06.25	0.0	1.2	0.11	NE	24.0	40.2	29.6	0.0	1.3	0.25	37.4	94.4	78.5	23.0
20.06.25	0.0	0.8	0.07	N	22.2	36.5	27.3	0.0	0.6	0.08	49.1	94.4	85.1	11.0
21.06.25	0.0	0.6	0.06	NW	24.1	39.3	27.5	0.0	0.3	0.05	46.2	94.5	87.0	50.0
22.06.25	0.0	1.5	0.13	N	24.0	40.1	28.8	0.0	1.2	0.11	46.1	94.6	82.9	56.0
23.06.25	0.0	0.6	0.05	NE	25.1	36.5	28.3	0.0	0.5	0.04	50.2	94.5	84.4	10.0
24.06.25	0.0	0.7	0.07	N	24.2	41.3	30.3	0.0	1.1	0.18	38.2	95.0	76.6	2.0
25.06.25	0.0	1.2	0.08	NE	23.2	38.6	29.4	0.0	0.6	0.08	47.4	94.5	80.0	3.5
26.06.25	0.0	0.9	0.09	NNW	24.1	40.2	29.8	0.0	0.3	0.05	37.3	94.6	76.6	12.0
27.06.25	0.0	1.4	0.12	NE	25.0	38.2	30.3	0.0	1.0	0.13	45.1	94.5	74.4	0.0
28.06.25	0.0	0.8	0.09	NE	25.0	39.3	29.9	0.0	1.2	0.13	41.0	94.4	75.2	0.0
29.06.25	0.0	0.4	0.03	NE	25.0	41.4	31.2	0.0	1.3	0.17	36.2	94.5	70.2	0.0
30.06.25	0.0	1.2	0.11	NE	24.2	41.8	31.9	0.0	1.3	0.16	33.3	94.5	66.4	0.5
				NE										
	0.0	1.8	0.1		18.0	41.8	29.0	0.0	1.3	0.1	33.3	97.0	76.7	492.0
	Min	Max	Avg		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total Rainfall in mm
	Wind Speed Km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Total Rainfall in mm

Lafarge Umiam Mining Pvt.Limited														
Daily Weather Monitoring Data For the Month of Jul 2025														
(Based on Hourly Readings from 00:00 Hrs. to 23:00 Hrs.)														
Date	Wind Speed km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm
	Min	Max	Avg.		Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	
01.07.25	0.0	1.1	0.08	NE	23.1	29.2	25.7	0.0	0.2	0.01	74.3	94.5	91.0	56.5
02.07.25	0.0	1.1	0.10	N	24.0	38.6	28.4	0.0	0.4	0.07	43.0	94.4	79.8	28.0
03.07.25	0.0	1.2	0.12	NW	24.2	41.2	30.8	0.0	1.1	0.16	34.1	94.4	69.6	12.0
04.07.25	0.0	1.4	0.15	N	24.0	39.5	29.1	0.0	1.0	0.14	40.4	94.5	77.2	8.5
05.07.25	0.0	0.8	0.07	N	24.4	39.3	28.9	0.0	0.5	0.08	42.1	94.5	79.9	4.0
06.07.25	0.0	1.1	0.11	NNE	24.0	42.5	31.0	0.0	1.1	0.15	36.2	94.4	71.9	3.5
07.07.25	0.0	1.2	0.08	NW	23.0	37.4	27.0	0.0	0.5	0.08	53.2	94.4	85.2	36.0
08.07.25	0.0	0.8	0.09	N	23.3	26.5	24.6	0.0	0.2	0.03	89.2	94.5	93.8	12.0
09.07.25	0.0	1.2	0.14	N	23.0	30.3	24.5	0.0	0.5	0.04	75.3	94.2	92.5	15.5
10.07.25	0.0	1.2	0.11	NE	23.0	32.2	26.4	0.0	1.0	0.06	63.5	94.4	87.5	6.5
11.07.25	0.0	0.7	0.07	N	23.0	41.3	31.9	0.0	1.3	0.31	37.0	94.3	66.9	0.0
12.07.25	0.0	0.8	0.07	SW	26.1	42.1	32.2	0.0	1.3	0.26	38.1	84.1	64.2	0.0
13.07.25	0.0	1.4	0.11	SSE	28.0	39.2	33.9	0.0	1.2	0.16	32.3	77.3	52.8	0.0
14.07.25	0.0	1.8	0.13	N	26.1	40.6	32.5	0.0	0.6	0.19	42.2	94.6	68.4	0.0
15.07.25	0.0	0.6	0.06	N	24.1	42.0	30.4	0.0	1.0	0.12	36.1	94.5	74.0	1.0
16.07.25	0.0	1.1	0.11	SE	24.1	39.3	29.6	0.0	0.6	0.13	43.1	94.4	78.3	5.5
17.07.25	0.0	1.5	0.10	N	24.0	40.4	29.5	0.0	1.3	0.15	42.3	94.4	77.5	4.5
18.07.25	0.0	1.1	0.11	N	23.1	39.3	29.6	0.0	0.4	0.09	43.5	94.6	78.6	0.5
19.07.25	0.0	1.5	0.18	SE	26.0	36.1	29.4	0.0	0.5	0.10	50.1	94.5	80.8	0.5
20.07.25	0.0	1.1	0.11	N	23.1	35.2	27.1	0.0	0.4	0.08	59.1	94.6	89.0	4.0
21.07.25	0.0	2.1	0.16	N	24.2	40.2	30.1	0.0	1.2	0.19	43.4	94.5	78.9	1.0
22.07.25	0.0	1.5	0.18	SE	26.0	42.2	31.7	0.0	0.6	0.09	38.1	94.5	73.7	0.0
23.07.25	0.0	1.8	0.13	N	26.1	42.5	34.1	0.0	0.6	0.12	39.2	94.6	66.0	0.0
24.07.25	0.0	1.1	0.11	SW	27.2	41.4	31.4	0.0	1.2	0.14	44.0	94.1	76.5	0.5
25.07.25	0.0	0.8	0.07	N	25.0	44.1	33.0	0.0	1.3	0.30	33.3	94.5	69.2	5.0
26.07.25	0.0	0.6	0.04	N	25.0	38.2	28.7	0.0	0.4	0.07	42.0	94.5	80.6	8.0
27.07.25	0.0	0.7	0.05	SSW	25.0	38.0	27.7	0.0	1.1	0.12	49.2	95.1	88.1	29.5
28.07.25	0.0	1.2	0.10	N	25.0	32.1	27.2	0.0	0.3	0.05	67.0	94.6	88.3	13.5
29.07.25	0.0	1.5	0.10	N	24.1	42.2	31.3	0.0	1.1	0.22	38.0	94.5	71.4	19.5
30.07.25	0.0	1.2	0.13	SW	24.8	37.2	27.5	0.0	0.4	0.07	47.1	94.5	86.6	63.5
31.07.25	0.0	0.6	0.10	N	24.4	42.1	32.9	0.0	0.6	0.12	41.0	94.5	67.1	31.0
				N										
	0.0	2.1	0.1		23.0	44.1	29.6	0.0	1.3	0.1	32.3	95.1	77.6	370.0
	Min	Max	Avg		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total Rainfall in mm
	Wind Speed Km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Total Rainfall in mm

Lafarge Umiam Mining Pvt.Limited														
Daily Weather Monitoring Data For the Month of Aug 2025														
(Based on Hourly Readings from 00:00 Hrs. to 23:00 Hrs.)														
Date	Wind Speed km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm
	Min	Max	Avg.		Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	
01.08.25	0.0	1.1	0.11	NNE	24.1	37.4	26.6	0.0	0.5	0.05	51.2	94.5	88.9	34.5
02.08.25	0.0	0.9	0.09	NW	24.2	27.5	25.6	0.0	0.1	0.00	92.3	94.5	94.2	83.5
03.08.25	0.0	0.8	0.08	N	22.2	26.3	24.3	0.0	0.0	0.00	91.2	94.5	93.9	56.5
04.08.25	0.0	1.1	0.10	N	23.2	26.1	24.4	0.0	0.0	0.00	94.2	94.4	94.2	111.5
05.08.25	0.0	0.9	0.11	NW	24.0	28.2	24.8	0.0	0.5	0.02	94.0	94.4	94.2	45.0
06.08.25	0.0	1.4	0.15	SSE	24.0	34.1	27.5	0.0	0.5	0.09	59.0	94.6	85.6	0.0
07.08.25	0.0	2.1	0.45	SE	24.0	27.0	24.8	0.0	0.0	0.00	41.2	94.2	94.6	29.5
08.08.25	0.0	0.6	0.07	SW	24.0	29.4	25.2	0.0	0.3	0.03	81.6	94.6	93.2	34.5
09.08.25	0.0	1.5	0.12	SSW	23.0	33.3	25.7	0.0	0.3	0.03	60.4	94.6	90.6	29.0
10.08.25	0.0	0.8	0.08	NE	24.0	35.0	26.5	0.0	0.5	0.04	56.4	94.6	90.6	203.5
11.08.25	0.0	0.7	0.08	NNW	24.1	35.5	29.4	0.0	0.3	0.03	45.5	97.4	85.1	83.5
12.08.25	0.0	1.2	0.08	N	24.2	34.3	27.2	0.0	0.2	0.02	60.5	94.6	87.6	3.5
13.08.25	0.0	1.1	0.10	NW	24.1	32.4	26.2	0.0	0.3	0.05	68.0	94.5	92.2	17.5
14.08.25	0.0	0.8	0.07	NNW	34.0	39.4	29.5	0.0	0.6	0.12	43.1	94.5	77.4	27.0
15.08.25	0.0	0.7	0.05	NE	24.1	36.6	27.4	0.0	0.5	0.04	52.2	94.4	86.4	33.5
16.08.25	0.0	1.5	0.11	N	24.1	41.4	31.7	0.0	0.6	0.12	41.6	94.6	74.1	41.5
17.08.25	0.0	0.9	0.10	SW	23.2	40.2	32.4	0.0	1.1	0.17	35.3	94.5	75.9	34.0
18.08.25	0.0	1.8	0.17	S	24.3	41.4	31.3	0.0	1.1	0.18	38.2	94.5	72.7	17.0
19.08.25	0.0	1.4	0.11	SW	23.0	39.6	28.9	0.0	0.6	0.12	40.1	94.5	77.0	150.5
20.08.25	0.0	1.1	0.08	N	23.2	36.1	26.9	0.0	0.6	0.10	50.4	94.5	88.3	16.5
21.08.25	0.0	1.7	0.12	NE	23.0	26.2	24.5	0.0	0.4	0.05	50.4	94.6	91.1	108.0
22.08.25	0.0	0.9	0.11	N	23.1	38.2	27.1	0.0	0.6	0.10	43.0	94.5	83.0	13.0
23.08.25	0.0	0.5	0.02	NNW	24.1	40.2	29.5	0.0	0.6	0.09	39.3	94.4	74.3	3.0
24.08.25	0.0	1.4	0.07	NE	24.0	34.4	27.8	0.0	0.5	0.07	57.2	94.4	83.0	1.5
25.08.25	0.0	0.8	0.06	NW	24.0	40.2	31.2	0.0	1.2	0.24	35.2	94.6	73.6	49.0
26.08.25	0.0	1.1	0.07	N	25.2	43.2	32.2	0.0	1.2	0.22	35.2	94.5	69.0	0.5
27.08.25	0.0	0.6	0.05	N	23.1	39.4	28.8	0.0	0.5	0.06	43.2	94.5	80.1	47.0
28.08.25	0.0	0.6	0.02	SW	23.0	27.6	24.4	0.0	0.2	0.01	83.1	94.5	93.5	45.5
29.08.25	0.0	0.9	0.06	SE	23.1	36.1	28.0	0.0	0.4	0.05	49.0	94.5	80.5	13.0
30.08.25	0.0	0.8	0.08	N	23.0	38.0	28.6	0.0	0.2	0.03	45.0	94.6	80.3	102.0
31.08.25	0.0	1.2	0.12	N	23.0	41.2	30.5	0.0	1.0	0.08	39.0	94.3	69.8	54.0
				N										
	0.0	2.1	0.1		22.2	43.2	27.7	0.0	1.2	0.1	35.2	97.4	84.4	1488.5
	Min	Max	Avg		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total
	Wind Speed Km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm

Lafarge Umiam Mining Pvt.Limited														
Daily Weather Monitoring Data For the Month of Sep 2025														
(Based on Hourly Readings from 00:00 Hrs. to 23:00 Hrs.)														
Date	Wind Speed km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm
	Min	Max	Avg.		Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	
01.09.25	0.0	1.6	0.10	NNW	25.0	42.1	33.1	0.0	1.2	0.19	30.1	94.4	59.8	3.5
02.09.25	0.0	0.8	0.07	N	24.2	41.5	32.7	0.0	1.2	0.27	33.2	94.5	65.8	4.5
03.09.25	0.0	0.9	0.07	NE	25.0	42.1	31.8	0.0	1.2	0.24	33.5	94.4	68.2	5.5
04.09.25	0.0	8.2	0.59	NNW	24.2	42.2	31.2	0.0	1.3	0.20	38.0	95.0	73.0	19.5
05.09.25	0.0	12.1	1.40	N	24.1	39.2	26.5	0.0	1.0	0.05	43.0	94.5	87.0	77.0
06.09.25	0.0	0.7	0.06	NNW	25.0	42.5	31.6	0.0	1.3	0.18	39.1	94.3	70.4	0.0
07.09.25	0.0	1.4	0.11	SW	24.0	37.5	27.6	0.0	0.6	0.05	50.4	94.6	86.5	5.5
08.09.25	0.0	0.6	0.05	S	24.2	42.1	29.7	0.0	0.5	0.08	39.2	94.6	79.0	0.5
09.09.25	0.0	5.5	0.35	NE	25.1	38.2	28.1	0.0	0.4	0.04	48.5	94.6	86.8	15.0
10.09.25	0.0	2.4	0.14	NNW	24.2	38.2	27.8	0.0	0.6	0.04	50.5	94.6	87.0	38.5
11.09.25	0.0	1.5	0.06	S	24.1	41.4	29.5	0.0	1.1	0.14	40.1	94.6	81.1	11.5
12.09.25	0.0	0.8	0.07	SE	24.2	33.6	27.2	0.0	0.2	0.03	65.0	94.5	89.9	1.0
13.09.25	0.0	1.2	0.08	NW	24.3	31.0	26.2	0.0	0.3	0.03	75.0	94.6	92.7	66.5
14.09.25	0.0	0.5	0.04	NNW	24.0	26.5	24.9	0.0	0.0	0.00	94.2	94.5	94.2	29.5
15.09.25	0.0	1.6	0.14	S	23.1	33.2	25.5	0.0	0.4	0.03	64.1	94.5	90.0	30.5
16.09.25	0.0	1.1	0.09	N	23.1	31.2	25.2	0.0	0.2	0.02	65.4	94.5	91.5	71.5
17.09.25	0.0	1.4	0.09	NNE	23.0	36.3	26.1	0.0	0.6	0.06	51.0	94.5	89.6	52.5
18.09.25	0.0	1.8	0.12	NNW	23.1	33.1	26.0	0.0	0.3	0.02	61.2	94.5	90.4	11.0
19.09.25	0.0	2.1	0.14	N	24.4	38.2	31.3	0.0	1.1	0.21	35.1	94.4	71.2	0.0
20.09.25	0.0	1.8	0.11	NW	26.0	37.3	32.7	0.0	1.1	0.24	33.1	93.1	66.1	0.0
21.09.25	0.0	1.5	0.10	NNW	26.0	34.4	32.6	0.0	1.1	0.15	33.3	90.3	66.8	0.0
22.09.25	0.0	0.9	0.09	S	26.0	37.1	31.5	0.0	1.0	0.13	35.5	90.4	69.4	0.0
23.09.25	0.0	1.1	0.10	NE	24.0	43.0	31.6	0.0	1.3	0.14	35.0	94.4	69.0	0.0
24.09.25	0.0	1.2	0.07	NNW	26.0	41.2	33.0	0.0	1.0	0.12	36.0	94.3	69.3	0.0
25.09.25	0.0	1.4	0.13	SE	28.2	40.2	38.0	0.0	1.0	0.14	22.0	79.1	47.6	0.0
26.09.25	0.0	2.2	0.23	SW	29.1	41.5	36.0	0.0	1.1	0.23	19.0	85.0	50.0	5.5
27.09.25	0.0	0.8	0.06	NNE	30.2	39.8	35.4	0.0	1.2	0.19	21.1	94.3	61.8	0.0
28.09.25	0.0	1.1	0.10	NNW	31.4	38.5	34.6	0.0	1.1	0.17	21.1	86.4	64.1	0.0
29.09.25	0.0	1.2	0.11	NNW	32.4	37.5	35.2	0.0	1.0	0.11	23.3	84.5	60.3	0.0
30.09.25	0.0	0.8	0.09	NE	31.5	34.8	32.6	0.0	1.1	0.22	22.0	94.0	55.2	18.0
				NNW										
	0.0	12.1	0.2		23.0	43.0	30.5	0.0	1.3	0.1	19.0	95.0	74.5	467.0
	Min	Max	Avg		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total
	Wind Speed Km/hr			Wind Dir.*	Ambient Temp.°C			Solar CCM			R. Humidity %			Rainfall in mm

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE : 02 - 04 - 2025					
STATION : SHELLA BAZAR (INFRONT OF PWD GUEST HOUSE) (NON MARKET DAY)					
STATION CODE : LN-1					
				Time (in hour)	
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	2-Apr-25	6:00	7:00	51.4
2			7:00	8:00	52.6
3			8:00	9:00	53.5
4			9:00	10:00	54.8
5			10:00	11:00	55.8
6			11:00	12:00	56.7
7			12:00	13:00	58.7
8			13:00	14:00	59.4
9			14:00	15:00	60.2
10			15:00	16:00	58.7
11			16:00	17:00	56.8
12			17:00	18:00	57.6
13			18:00	19:00	56.8
14			19:00	20:00	55.4
15			20:00	21:00	54.3
16			21:00	22:00	52.5
Leq day in dB(A)					56.7
17	Night	02 & 03-Apr-25	22:00	23:00	50.2
18			23:00	0:00	49.5
19			0:00	1:00	47.6
20			1:00	2:00	45.6
21			2:00	3:00	44.2
22			3:00	4:00	45.3
23			4:00	5:00	46.5
24			5:00	6:00	48.9
Leq Night in dB(A)					47.7

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE: 07-04 - 2025					
STATION : PYRKAN VILLAGE (INFRONT OF RAMKRISHNA SCHOOL)					
STATION CODE : LN-2					
			Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	7-Apr-24	6:00	7:00	49.2
2			7:00	8:00	50.1
3			8:00	9:00	51.2
4			9:00	10:00	53.6
5			10:00	11:00	54.6
6			11:00	12:00	55.8
7			12:00	13:00	56.4
8			13:00	14:00	57.6
9			14:00	15:00	56.8
10			15:00	16:00	55.4
11			16:00	17:00	54.6
12			17:00	18:00	53.2
13			18:00	19:00	52.5
14			19:00	20:00	51.6
15			20:00	21:00	50.5
16			21:00	22:00	48.5
			Leq day in dB(A)		54.0
17	Night	7 & 8-Apr-25	22:00	23:00	46.4
18			23:00	0:00	44.3
19			0:00	1:00	43.5
20			1:00	2:00	42.6
21			2:00	3:00	41.5
22			3:00	4:00	42.7
23			4:00	5:00	44.6
24			5:00	6:00	45.8
			Leq Night in dB(A)		44.2

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE : 11-04-2025					
STATION : PHALANG KA RUH VILLAGE					
STATION CODE : LN-3					
				Time (in hour)	
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	11-Apr-25	6:00	7:00	48.7
2			7:00	8:00	49.5
3			8:00	9:00	50.2
4			9:00	10:00	51.6
5			10:00	11:00	52.3
6			11:00	12:00	53.5
7			12:00	13:00	54.8
8			13:00	14:00	55.6
9			14:00	15:00	56.8
10			15:00	16:00	57.2
11			16:00	17:00	56.3
12			17:00	18:00	55.4
13			18:00	19:00	54.3
14			19:00	20:00	53.2
15			20:00	21:00	51.8
16			21:00	22:00	49.5
				Leq day in dB(A)	53.9
17	Night	11 & 12-Apr-25	22:00	23:00	46.2
18			23:00	0:00	45.4
19			0:00	1:00	43.2
20			1:00	2:00	42.6
21			2:00	3:00	41.2
22			3:00	4:00	43.5
23			4:00	5:00	44.6
24			5:00	6:00	45.9
				Leq Night in dB(A)	44.4

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 14 - 04 - 2025

STATION: OFFICE AREA

STATION CODE : LN-4

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	14-Apr-25	6:00	7:00	53.5
2			7:00	8:00	56.8
3			8:00	9:00	58.4
4			9:00	10:00	59.6
5			10:00	11:00	60.2
6			11:00	12:00	62.5
7			12:00	13:00	64.8
8			13:00	14:00	67.5
9			14:00	15:00	69.8
10			15:00	16:00	66.5
11			16:00	17:00	64.3
12			17:00	18:00	61.2
13			18:00	19:00	58.7
14			19:00	20:00	56.4
15			20:00	21:00	54.2
16			21:00	22:00	52.6
			Leq day in dB(A)		63.2
17	Night	14 & 15-Apr-25	22:00	23:00	50.5
18			23:00	0:00	48.6
19			0:00	1:00	47.5
20			1:00	2:00	46.2
21			2:00	3:00	45.8
22			3:00	4:00	46.9
23			4:00	5:00	48.5
24			5:00	6:00	51.6
			Leq Night in dB(A)		48.6

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : -18 -04 - 2025

STATION : SHELLA PUNJEE

STATION CODE : LN-5

				Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)	
1	Day	18-Apr-25	6:00	7:00	48.5	
2			7:00	8:00	49.7	
3			8:00	9:00	50.2	
4			9:00	10:00	51.6	
5			10:00	11:00	53.2	
6			11:00	12:00	54.8	
7			12:00	13:00	55.7	
8			13:00	14:00	56.8	
9			14:00	15:00	55.4	
10			15:00	16:00	54.6	
11			16:00	17:00	53.2	
12			17:00	18:00	52.7	
13			18:00	19:00	51.8	
14			19:00	20:00	51.5	
15			20:00	21:00	49.5	
16			21:00	22:00	48.7	
			Leq day in dB(A)		53.1	
17	Night	18 & 19-Apr-25	22:00	23:00	46.2	
18			23:00	0:00	45.4	
19			0:00	1:00	43.2	
20			1:00	2:00	41.2	
21			2:00	3:00	42.8	
22			3:00	4:00	43.5	
23			4:00	5:00	44.7	
24			5:00	6:00	45.4	
			Leq Night in dB(A)		44.3	

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 21-04-2025

STATION : MAWRYNGKHONG

STATION CODE : LN-6

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 21-Apr-25	6:00	7:00	49.5
2		7:00	8:00	50.1
3		8:00	9:00	52.6
4		9:00	10:00	53.5
5		10:00	11:00	54.8
6		11:00	12:00	55.6
7		12:00	13:00	56.3
8		13:00	14:00	57.4
9		14:00	15:00	56.8
10		15:00	16:00	55.4
11		16:00	17:00	54.3
12		17:00	18:00	53.4
13		18:00	19:00	52.1
14		19:00	20:00	51.7
15		20:00	21:00	49.6
16		21:00	22:00	48.4
Leq day in dB(A)				54.0
17	Night 21 & 22-Apr-25	22:00	23:00	45.7
18		23:00	0:00	44.3
19		0:00	1:00	43.2
20		1:00	2:00	41.2
21		2:00	3:00	42.6
22		3:00	4:00	43.8
23		4:00	5:00	44.7
24		5:00	6:00	45.9
Leq Night in dB(A)				44.2

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 25-04-2025

STATION : QUARRY

STATION CODE : LN-7

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	25-Apr-25	6:00	7:00	54.6
2			7:00	8:00	55.8
3			8:00	9:00	56.7
4			9:00	10:00	57.9
5			10:00	11:00	60.2
6			11:00	12:00	63.5
7			12:00	13:00	65.4
8			13:00	14:00	65.9
9			14:00	15:00	67.8
10			15:00	16:00	66.4
11			16:00	17:00	65.2
12			17:00	18:00	63.4
13			18:00	19:00	62.1
14			19:00	20:00	60.5
15			20:00	21:00	58.7
16			21:00	22:00	57.6
			Leq day in dB(A)		63.1
17	Night	25 & 26-Apr-25	22:00	23:00	55.4
18			23:00	0:00	54.6
19			0:00	1:00	52.1
20			1:00	2:00	50.4
21			2:00	3:00	48.7
22			3:00	4:00	49.8
23			4:00	5:00	50.5
24			5:00	6:00	52.6
			Leq Night in dB(A)		52.3

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE : 02 - 05 - 2025					
STATION : SHELLA BAZAR (INFRONT OF PWD GUEST HOUSE) (NON MARKET DAY)					
STATION CODE : LN-1					
			Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	2-May-25	6:00	7:00	50.5
2			7:00	8:00	51.7
3			8:00	9:00	52.6
4			9:00	10:00	53.4
5			10:00	11:00	54.8
6			11:00	12:00	55.6
7			12:00	13:00	56.8
8			13:00	14:00	57.9
9			14:00	15:00	58.4
10			15:00	16:00	57.5
11			16:00	17:00	56.4
12			17:00	18:00	55.2
13			18:00	19:00	54.6
14			19:00	20:00	53.4
15			20:00	21:00	52.7
16			21:00	22:00	51.8
Leq day in dB(A)					55.2
17	Night	02 & 03-May-25	22:00	23:00	49.8
18			23:00	0:00	47.2
19			0:00	1:00	46.5
20			1:00	2:00	46.2
21			2:00	3:00	44.2
22			3:00	4:00	45.8
23			4:00	5:00	46.7
24			5:00	6:00	48.2
Leq Night in dB(A)					47.1

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE: 05- 05 - 2025					
STATION : PYRKAN VILLAGE (INFRONT OF RAMKRISHNA SCHOOL)					
STATION CODE : LN-2					
			Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	5-May-25	6:00	7:00	48.5
2			7:00	8:00	49.7
3			8:00	9:00	50.1
4			9:00	10:00	51.2
5			10:00	11:00	52.6
6			11:00	12:00	53.5
7			12:00	13:00	54.5
8			13:00	14:00	55.6
9			14:00	15:00	56.2
10			15:00	16:00	55.4
11			16:00	17:00	54.3
12			17:00	18:00	53.2
13			18:00	19:00	51.6
14			19:00	20:00	50.7
15			20:00	21:00	49.2
16			21:00	22:00	48.6
			Leq day in dB(A)		52.9
17	Night	5 & 6-May-25	22:00	23:00	46.5
18			23:00	0:00	45.4
19			0:00	1:00	43.2
20			1:00	2:00	41.5
21			2:00	3:00	42.6
22			3:00	4:00	43.8
23			4:00	5:00	44.7
24			5:00	6:00	45.9
			Leq Night in dB(A)		44.5

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE : 09-05-2025					
STATION : PHALANG KA RUH VILLAGE					
STATION CODE : LN-3					
			Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	9-May-25	6:00	7:00	50.2
2			7:00	8:00	51.6
3			8:00	9:00	52.3
4			9:00	10:00	53.4
5			10:00	11:00	54.5
6			11:00	12:00	55.8
7			12:00	13:00	56.7
8			13:00	14:00	57.8
9			14:00	15:00	56.4
10			15:00	16:00	55.4
11			16:00	17:00	54.3
12			17:00	18:00	53.1
13			18:00	19:00	52.4
14			19:00	20:00	51.7
15			20:00	21:00	50.5
16			21:00	22:00	48.2
			Leq day in dB(A)		54.1
17	Night	9 & 10-May-25	22:00	23:00	46.5
18			23:00	0:00	45.6
19			0:00	1:00	44.3
20			1:00	2:00	42.1
21			2:00	3:00	41.5
22			3:00	4:00	43.6
23			4:00	5:00	44.5
24			5:00	6:00	45.7
			Leq Night in dB(A)		44.5

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 12 - 05- 2025

STATION: OFFICE AREA

STATION CODE : LN-4

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	12-May-25	6:00	7:00	52.7
2			7:00	8:00	53.8
3			8:00	9:00	54.6
4			9:00	10:00	55.7
5			10:00	11:00	59.4
6			11:00	12:00	61.2
7			12:00	13:00	60.5
8			13:00	14:00	63.4
9			14:00	15:00	64.7
10			15:00	16:00	63.2
11			16:00	17:00	61.8
12			17:00	18:00	59.7
13			18:00	19:00	58.4
14			19:00	20:00	57.6
15			20:00	21:00	56.4
16			21:00	22:00	53.2
			Leq day in dB(A)		60.0
17	Night	12 & 13-May-25	22:00	23:00	51.4
18			23:00	0:00	49.8
19			0:00	1:00	48.4
20			1:00	2:00	46.5
21			2:00	3:00	47.2
22			3:00	4:00	48.5
23			4:00	5:00	49.7
24			5:00	6:00	50.1
			Leq Night in dB(A)		49.2

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : -16 -05 - 2025

STATION : SHELLA PUNJEE

STATION CODE : LN-5

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 16-May-25	6:00	7:00	48.5
2		7:00	8:00	49.2
3		8:00	9:00	50.2
4		9:00	10:00	51.6
5		10:00	11:00	53.5
6		11:00	12:00	54.8
7		12:00	13:00	55.7
8		13:00	14:00	56.2
9		14:00	15:00	57.4
10		15:00	16:00	56.3
11		16:00	17:00	55.4
12		17:00	18:00	54.2
13		18:00	19:00	53.6
14		19:00	20:00	51.4
15		20:00	21:00	50.2
16		21:00	22:00	49.6
Leq day in dB(A)				53.8
17	Night 16 & 17-May-25	22:00	23:00	46.8
18		23:00	0:00	45.4
19		0:00	1:00	43.2
20		1:00	2:00	41.5
21		2:00	3:00	43.6
22		3:00	4:00	44.8
23		4:00	5:00	45.7
24		5:00	6:00	46.2
Leq Night in dB(A)				44.9

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 19-05-2025

STATION : MAWRYNGKHONG

STATION CODE : LN-6

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 19-May-25	6:00	7:00	49.2
2		7:00	8:00	50.1
3		8:00	9:00	51.6
4		9:00	10:00	53.4
5		10:00	11:00	54.6
6		11:00	12:00	55.8
7		12:00	13:00	56.2
8		13:00	14:00	55.4
9		14:00	15:00	54.3
10		15:00	16:00	53.2
11		16:00	17:00	52.4
12		17:00	18:00	52.6
13		18:00	19:00	51.5
14		19:00	20:00	50.2
15		20:00	21:00	49.7
16		21:00	22:00	48.6
Leq day in dB(A)				53.0
17	Night 19 & 20-May-25	22:00	23:00	46.4
18		23:00	0:00	45.3
19		0:00	1:00	44.1
20		1:00	2:00	43.2
21		2:00	3:00	41.6
22		3:00	4:00	43.5
23		4:00	5:00	44.8
24		5:00	6:00	45.7
Leq Night in dB(A)				44.6

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 23-05-2025

STATION : QUARRY

STATION CODE : LN-7

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	23-May-25	6:00	7:00	56.4
2			7:00	8:00	58.5
3			8:00	9:00	60.2
4			9:00	10:00	62.4
5			10:00	11:00	63.5
6			11:00	12:00	64.8
7			12:00	13:00	66.5
8			13:00	14:00	67.2
9			14:00	15:00	65.4
10			15:00	16:00	63.2
11			16:00	17:00	61.7
12			17:00	18:00	59.8
13			18:00	19:00	57.5
14			19:00	20:00	57.8
15			20:00	21:00	55.4
16			21:00	22:00	54.6
			Leq day in dB(A)		62.5
17	Night	23 & 24-May-25	22:00	23:00	53.6
18			23:00	0:00	52.5
19			0:00	1:00	51.4
20			1:00	2:00	49.7
21			2:00	3:00	51.6
22			3:00	4:00	53.4
23			4:00	5:00	54.3
24			5:00	6:00	55.4
			Leq Night in dB(A)		53.1

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : 02 -06- 2025

STATION : SHELLA BAZAR (INFRONT OF PWD GUEST HOUSE) (NON MARKET DAY)

STATION CODE : LN-1

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 2-Jun-25	6:00	7:00	49.8
2		7:00	8:00	51.5
3		8:00	9:00	52.6
4		9:00	10:00	53.4
5		10:00	11:00	55.8
6		11:00	12:00	57.8
7		12:00	13:00	56.8
8		13:00	14:00	58.7
9		14:00	15:00	59.4
10		15:00	16:00	57.6
11		16:00	17:00	56.4
12		17:00	18:00	55.7
13		18:00	19:00	56.8
14		19:00	20:00	54.8
15		20:00	21:00	53.4
16		21:00	22:00	52.1
Leq day in dB(A)				55.9
17	Night 02 & 03-Jun-25	22:00	23:00	50.2
18		23:00	0:00	48.6
19		0:00	1:00	46.5
20		1:00	2:00	44.8
21		2:00	3:00	45.8
22		3:00	4:00	46.2
23		4:00	5:00	46.8
24		5:00	6:00	47.5
Leq Night in dB(A)				47.4

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE: 06- 06 - 2025

STATION : PYRKAN VILLAGE (INFRONT OF RAMKRISHNA SCHOOL)

STATION CODE : LN-2

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 6-Jun-25	6:00	7:00	50.4
2		7:00	8:00	51.2
3		8:00	9:00	52.3
4		9:00	10:00	53.6
5		10:00	11:00	54.8
6		11:00	12:00	55.7
7		12:00	13:00	56.8
8		13:00	14:00	55.4
9		14:00	15:00	54.6
10		15:00	16:00	54.2
11		16:00	17:00	53.5
12		17:00	18:00	52.4
13		18:00	19:00	51.7
14		19:00	20:00	50.2
15		20:00	21:00	48.5
16		21:00	22:00	47.6
Leq day in dB(A)				53.4
17	Night 6 & 7-Jun-25	22:00	23:00	46.5
18		23:00	0:00	44.3
19		0:00	1:00	43.2
20		1:00	2:00	42.1
21		2:00	3:00	41.2
22		3:00	4:00	43.5
23		4:00	5:00	44.6
24		5:00	6:00	45.8
Leq Night in dB(A)				44.2

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE : 09-06-2025					
STATION : PHALANG KA RUH VILLAGE					
STATION CODE : LN-3					
				Time (in hour)	
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	9-Jun-25	6:00	7:00	48.7
2			7:00	8:00	49.5
3			8:00	9:00	50.2
4			9:00	10:00	51.6
5			10:00	11:00	52.4
6			11:00	12:00	53.5
7			12:00	13:00	54.8
8			13:00	14:00	55.7
9			14:00	15:00	56.2
10			15:00	16:00	55.4
11			16:00	17:00	54.2
12			17:00	18:00	53.4
13			18:00	19:00	52.1
14			19:00	20:00	51.7
15			20:00	21:00	50.2
16			21:00	22:00	48.2
Leq day in dB(A)					53.0
17	Night	9 & 10-Jun-25	22:00	23:00	46.5
18			23:00	0:00	45.4
19			0:00	1:00	43.2
20			1:00	2:00	42.1
21			2:00	3:00	41.2
22			3:00	4:00	43.4
23			4:00	5:00	44.5
24			5:00	6:00	45.4
Leq Night in dB(A)					44.3

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 13- 06- 2025

STATION: OFFICE AREA

STATION CODE : LN-4

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	13-Jun-25	6:00	7:00	50.2
2			7:00	8:00	52.5
3			8:00	9:00	53.6
4			9:00	10:00	54.8
5			10:00	11:00	55.7
6			11:00	12:00	56.8
7			12:00	13:00	57.9
8			13:00	14:00	60.2
9			14:00	15:00	62.4
10			15:00	16:00	63.5
11			16:00	17:00	61.2
12			17:00	18:00	59.8
13			18:00	19:00	57.6
14			19:00	20:00	56.4
15			20:00	21:00	55.4
16			21:00	22:00	53.2
Leq day in dB(A)					58.4
17	Night	13 & 14-Jun-25	22:00	23:00	51.7
18			23:00	0:00	50.2
19			0:00	1:00	49.6
20			1:00	2:00	48.5
21			2:00	3:00	47.4
22			3:00	4:00	46.2
23			4:00	5:00	47.8
24			5:00	6:00	49.2
Leq Night in dB(A)					49.1

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : -16 -06- 2025

STATION : SHELLA PUNJEE

STATION CODE : LN-5

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 16-Jun-25	6:00	7:00	49.2
2		7:00	8:00	50.1
3		8:00	9:00	51.2
4		9:00	10:00	52.6
5		10:00	11:00	53.4
6		11:00	12:00	55.4
7		12:00	13:00	56.8
8		13:00	14:00	55.4
9		14:00	15:00	54.6
10		15:00	16:00	54.2
11		16:00	17:00	53.6
12		17:00	18:00	52.4
13		18:00	19:00	51.7
14		19:00	20:00	50.1
15		20:00	21:00	49.5
16		21:00	22:00	48.6
Leq day in dB(A)				53.1
17	Night 16 & 17-Jun-25	22:00	23:00	46.2
18		23:00	0:00	44.3
19		0:00	1:00	43.1
20		1:00	2:00	41.2
21		2:00	3:00	42.6
22		3:00	4:00	43.5
23		4:00	5:00	44.8
24		5:00	6:00	45.7
Leq Night in dB(A)				44.2

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 20-06-2025

STATION : MAWRYNGKHONG

STATION CODE : LN-6

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 20-Jun-25	6:00	7:00	49.6
2		7:00	8:00	50.1
3		8:00	9:00	51.3
4		9:00	10:00	52.6
5		10:00	11:00	53.4
6		11:00	12:00	54.6
7		12:00	13:00	55.8
8		13:00	14:00	56.4
9		14:00	15:00	55.3
10		15:00	16:00	54.6
11		16:00	17:00	53.2
12		17:00	18:00	52.1
13		18:00	19:00	51.4
14		19:00	20:00	50.6
15		20:00	21:00	49.7
16		21:00	22:00	48.4
Leq day in dB(A)				53.1
17	Night 20 & 21-Jun-25	22:00	23:00	46.5
18		23:00	0:00	44.3
19		0:00	1:00	43.1
20		1:00	2:00	41.8
21		2:00	3:00	42.7
22		3:00	4:00	43.4
23		4:00	5:00	44.6
24		5:00	6:00	45.9
Leq Night in dB(A)				44.3

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 24-06-2025

STATION : QUARRY

STATION CODE : LN-7

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 24-Jun-25	6:00	7:00	56.5
2		7:00	8:00	58.7
3		8:00	9:00	60.2
4		9:00	10:00	61.8
5		10:00	11:00	63.4
6		11:00	12:00	64.5
7		12:00	13:00	65.8
8		13:00	14:00	66.9
9		14:00	15:00	67.5
10		15:00	16:00	65.4
11		16:00	17:00	63.2
12		17:00	18:00	61.8
13		18:00	19:00	59.7
14		19:00	20:00	58.7
15		20:00	21:00	57.6
16		21:00	22:00	55.3
Leq day in dB(A)				63.1
17	Night 24 & 25-Jun-25	22:00	23:00	53.6
18		23:00	0:00	52.4
19		0:00	1:00	51.7
20		1:00	2:00	49.8
21		2:00	3:00	48.7
22		3:00	4:00	50.2
23		4:00	5:00	52.4
24		5:00	6:00	54.6
Leq Night in dB(A)				52.1

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : 02 -07- 2025

STATION : SHELLA BAZAR (INFRONT OF PWD GUEST HOUSE) (NON MARKET DAY)

STATION CODE : LN-1

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	2-Jul-25	6:00	7:00	49.5
2			7:00	8:00	50.2
3			8:00	9:00	51.8
4			9:00	10:00	52.7
5			10:00	11:00	53.4
6			11:00	12:00	54.6
7			12:00	13:00	55.8
8			13:00	14:00	56.9
9			14:00	15:00	57.4
10			15:00	16:00	56.5
11			16:00	17:00	55.8
12			17:00	18:00	54.7
13			18:00	19:00	54.3
14			19:00	20:00	52.8
15			20:00	21:00	51.7
16			21:00	22:00	50.4
Leq day in dB(A)					54.3
17	Night	02 & 03-Jul-25	22:00	23:00	48.8
18			23:00	0:00	47.6
19			0:00	1:00	46.2
20			1:00	2:00	45.4
21			2:00	3:00	43.6
22			3:00	4:00	44.1
23			4:00	5:00	45.2
24			5:00	6:00	46.7
Leq Night in dB(A)					46.3

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE: 06- 07 - 2025					
STATION : PYRKAN VILLAGE (INFRONT OF RAMKRISHNA SCHOOL)					
STATION CODE : LN-2					
			Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	6-Jul-25	6:00	7:00	48.5
2			7:00	8:00	49.7
3			8:00	9:00	51.2
4			9:00	10:00	52.6
5			10:00	11:00	53.4
6			11:00	12:00	54.6
7			12:00	13:00	55.8
8			13:00	14:00	55.7
9			14:00	15:00	56.4
10			15:00	16:00	56.2
11			16:00	17:00	54.5
12			17:00	18:00	53.8
13			18:00	19:00	52.7
14			19:00	20:00	51.8
15			20:00	21:00	49.7
16			21:00	22:00	48.5
Leq day in dB(A)					53.5
17	Night	6 & 7-Jul-25	22:00	23:00	46.2
18			23:00	0:00	44.6
19			0:00	1:00	43.1
20			1:00	2:00	42.5
21			2:00	3:00	41.3
22			3:00	4:00	42.5
23			4:00	5:00	43.8
24			5:00	6:00	45.7
24	Leq Night in dB(A)				44.0

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE : 11-07-2025					
STATION : PHALANG KA RUH VILLAGE					
STATION CODE : LN-3					
			Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	11-Jul-25	6:00	7:00	49.7
2			7:00	8:00	51.2
3			8:00	9:00	52.5
4			9:00	10:00	53.7
5			10:00	11:00	54.8
6			11:00	12:00	54.9
7			12:00	13:00	55.4
8			13:00	14:00	56.2
9			14:00	15:00	55.8
10			15:00	16:00	55.4
11			16:00	17:00	54.3
12			17:00	18:00	53.1
13			18:00	19:00	52.7
14			19:00	20:00	51.9
15			20:00	21:00	49.6
16			21:00	22:00	48.1
Leq day in dB(A)					53.7
17	Night	11 & 12-Jul-25	22:00	23:00	46.9
18			23:00	0:00	45.8
19			0:00	1:00	44.6
20			1:00	2:00	43.1
21			2:00	3:00	42.4
22			3:00	4:00	43.5
23			4:00	5:00	44.8
24			5:00	6:00	46.2
Leq Night in dB(A)					44.9

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 15- 07- 2025

STATION: OFFICE AREA

STATION CODE : LN-4

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	15-Jul-25	6:00	7:00	52.8
2			7:00	8:00	53.6
3			8:00	9:00	54.8
4			9:00	10:00	55.7
5			10:00	11:00	58.6
6			11:00	12:00	59.4
7			12:00	13:00	61.2
8			13:00	14:00	63.5
9			14:00	15:00	64.8
10			15:00	16:00	67.4
11			16:00	17:00	65.7
12			17:00	18:00	63.2
13			18:00	19:00	61.9
14			19:00	20:00	59.8
15			20:00	21:00	57.4
16			21:00	22:00	55.8
			Leq day in dB(A)		61.8
17	Night	15 & 16-Jul-25	22:00	23:00	52.6
18			23:00	0:00	50.5
19			0:00	1:00	51.2
20			1:00	2:00	49.7
21			2:00	3:00	48.5
22			3:00	4:00	48.2
23			4:00	5:00	50.2
24			5:00	6:00	51.6
24			Leq Night in dB(A)		50.5

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : -18 -07- 2025

STATION : SHELLA PUNJEE

STATION CODE : LN-5

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	18-Jul-25	6:00	7:00	49.7
2			7:00	8:00	51.4
3			8:00	9:00	52.6
4			9:00	10:00	53.9
5			10:00	11:00	54.7
6			11:00	12:00	54.8
7			12:00	13:00	55.4
8			13:00	14:00	55.9
9			14:00	15:00	56.8
10			15:00	16:00	56.7
11			16:00	17:00	55.4
12			17:00	18:00	53.6
13			18:00	19:00	52.7
14			19:00	20:00	51.9
15			20:00	21:00	49.8
16			21:00	22:00	48.6
			Leq day in dB(A)		54.0
17	Night	18 & 19-Jul-25	22:00	23:00	46.4
18			23:00	0:00	45.2
19			0:00	1:00	43.8
20			1:00	2:00	43.2
21			2:00	3:00	42.7
22			3:00	4:00	43.6
23			4:00	5:00	44.2
24			5:00	6:00	45.6
			Leq Night in dB(A)		44.5

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 21-07-2025

STATION : MAWRYNGKHONG

STATION CODE : LN-6

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 21-Jul-25	6:00	7:00	49.6
2		7:00	8:00	50.2
3		8:00	9:00	51.8
4		9:00	10:00	52.6
5		10:00	11:00	53.5
6		11:00	12:00	54.8
7		12:00	13:00	55.2
8		13:00	14:00	55.8
9		14:00	15:00	56.4
10		15:00	16:00	55.2
11		16:00	17:00	54.3
12		17:00	18:00	53.7
13		18:00	19:00	52.8
14		19:00	20:00	51.6
15		20:00	21:00	49.4
16		21:00	22:00	48.2
Leq day in dB(A)				53.4
17	Night 21 & 22-Jul-25	22:00	23:00	46.1
18		23:00	0:00	44.6
19		0:00	1:00	43.2
20		1:00	2:00	41.7
21		2:00	3:00	42.5
22		3:00	4:00	43.2
23		4:00	5:00	44.1
24		5:00	6:00	45.8
Leq Night in dB(A)				44.1

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 25-07-2025

STATION : QUARRY

STATION CODE : LN-7

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 25-Jul-25	6:00	7:00	53.8
2		7:00	8:00	54.6
3		8:00	9:00	55.8
4		9:00	10:00	56.7
5		10:00	11:00	58.9
6		11:00	12:00	60.2
7		12:00	13:00	62.5
8		13:00	14:00	64.5
9		14:00	15:00	63.2
10		15:00	16:00	66.5
11		16:00	17:00	65.4
12		17:00	18:00	63.2
13		18:00	19:00	62.8
14		19:00	20:00	61.9
15		20:00	21:00	59.7
16		21:00	22:00	57.5
Leq day in dB(A)				61.9
17	Night 25 & 26-Jul-25	22:00	23:00	56.4
18		23:00	0:00	55.8
19		0:00	1:00	53.2
20		1:00	2:00	51.4
21		2:00	3:00	49.7
22		3:00	4:00	48.5
23		4:00	5:00	50.4
24		5:00	6:00	52.7
Leq Night in dB(A)				53.1

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : 01 -08- 2025

STATION : SHELLA BAZAR (INFRONT OF PWD GUEST HOUSE) (NON MARKET DAY)

STATION CODE : LN-1

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	1-Aug-25	6:00	7:00	51.7
2			7:00	8:00	52.4
3			8:00	9:00	53.6
4			9:00	10:00	54.8
5			10:00	11:00	55.7
6			11:00	12:00	56.8
7			12:00	13:00	57.9
8			13:00	14:00	58.4
9			14:00	15:00	57.6
10			15:00	16:00	57.4
11			16:00	17:00	56.5
12			17:00	18:00	55.9
13			18:00	19:00	54.7
14			19:00	20:00	53.5
15			20:00	21:00	52.8
16			21:00	22:00	51.2
			Leq day in dB(A)		55.6
17	Night	01 & 02-Aug-25	22:00	23:00	49.5
18			23:00	0:00	47.2
19			0:00	1:00	45.9
20			1:00	2:00	44.6
21			2:00	3:00	43.8
22			3:00	4:00	44.7
23			4:00	5:00	45.8
24			5:00	6:00	46.9
			Leq Night in dB(A)		46.4

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE: 04- 08 - 2025

STATION : PYRKAN VILLAGE (INFRONT OF RAMKRISHNA SCHOOL)

STATION CODE : LN-2

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	4-Aug-25	6:00	7:00	50.1
2			7:00	8:00	51.7
3			8:00	9:00	52.4
4			9:00	10:00	53.8
5			10:00	11:00	54.6
6			11:00	12:00	54.9
7			12:00	13:00	55.8
8			13:00	14:00	56.4
9			14:00	15:00	56.2
10			15:00	16:00	55.4
11			16:00	17:00	54.7
12			17:00	18:00	54.3
13			18:00	19:00	53.5
14			19:00	20:00	52.4
15			20:00	21:00	51.7
16			21:00	22:00	49.8
			Leq day in dB(A)		54.0
17	Night	4 & 5-Aug-25	22:00	23:00	46.2
18			23:00	0:00	45.5
19			0:00	1:00	44.1
20			1:00	2:00	42.6
21			2:00	3:00	41.7
22			3:00	4:00	43.8
23			4:00	5:00	44.7
24			5:00	6:00	45.9
24			Leq Night in dB(A)		44.6

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : 08-08-2025

STATION : PHALANG KA RUH VILLAGE

STATION CODE : LN-3

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	8-Aug-25	6:00	7:00	48.9
2			7:00	8:00	49.7
3			8:00	9:00	50.2
4			9:00	10:00	51.4
5			10:00	11:00	53.6
6			11:00	12:00	54.8
7			12:00	13:00	54.5
8			13:00	14:00	55.9
9			14:00	15:00	55.4
10			15:00	16:00	56.3
11			16:00	17:00	55.8
12			17:00	18:00	54.2
13			18:00	19:00	53.4
14			19:00	20:00	52.7
15			20:00	21:00	51.2
16			21:00	22:00	49.6
			Leq day in dB(A)		53.6
17	Night	8 & 9-Aug-25	22:00	23:00	46.8
18			23:00	0:00	45.5
19			0:00	1:00	43.6
20			1:00	2:00	42.4
21			2:00	3:00	41.7
22			3:00	4:00	42.9
23			4:00	5:00	43.6
24			5:00	6:00	45.6
			Leq Night in dB(A)		44.3

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 11- 08- 2025

STATION: OFFICE AREA

STATION CODE : LN-4

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	11-Aug-25	6:00	7:00	53.7
2			7:00	8:00	54.8
3			8:00	9:00	56.2
4			9:00	10:00	58.4
5			10:00	11:00	59.6
6			11:00	12:00	58.7
7			12:00	13:00	57.6
8			13:00	14:00	57.8
9			14:00	15:00	58.2
10			15:00	16:00	57.4
11			16:00	17:00	56.8
12			17:00	18:00	56.2
13			18:00	19:00	55.7
14			19:00	20:00	54.9
15			20:00	21:00	54.3
16			21:00	22:00	52.8
			Leq day in dB(A)		56.8
17	Night	11 & 12-Aug-25	22:00	23:00	51.7
18			23:00	0:00	50.9
19			0:00	1:00	49.8
20			1:00	2:00	49.6
21			2:00	3:00	48.5
22			3:00	4:00	47.4
23			4:00	5:00	49.5
24			5:00	6:00	51.2
24			Leq Night in dB(A)		50.0

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : -18 -08- 2025

STATION : SHELLA PUNJEE

STATION CODE : LN-5

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 18-Aug-25	6:00	7:00	49.8
2		7:00	8:00	50.2
3		8:00	9:00	51.7
4		9:00	10:00	52.4
5		10:00	11:00	53.5
6		11:00	12:00	54.6
7		12:00	13:00	55.4
8		13:00	14:00	56.2
9		14:00	15:00	57.5
10		15:00	16:00	56.4
11		16:00	17:00	55.8
12		17:00	18:00	54.5
13		18:00	19:00	53.2
14		19:00	20:00	52.8
15		20:00	21:00	51.7
16		21:00	22:00	49.8
Leq day in dB(A)				54.1
17	Night 18 & 19-Aug-25	22:00	23:00	46.8
18		23:00	0:00	45.7
19		0:00	1:00	44.2
20		1:00	2:00	43.5
21		2:00	3:00	41.8
22		3:00	4:00	43.6
23		4:00	5:00	44.7
24		5:00	6:00	45.9
Leq Night in dB(A)				44.8

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 22-08-2025

STATION : MAWRYNGKHONG

STATION CODE : LN-6

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 22-Aug-25	6:00	7:00	49.2
2		7:00	8:00	50.7
3		8:00	9:00	51.4
4		9:00	10:00	52.6
5		10:00	11:00	53.8
6		11:00	12:00	54.7
7		12:00	13:00	55.9
8		13:00	14:00	55.6
9		14:00	15:00	56.4
10		15:00	16:00	55.8
11		16:00	17:00	55.2
12		17:00	18:00	54.7
13		18:00	19:00	53.6
14		19:00	20:00	52.4
15		20:00	21:00	51.9
16		21:00	22:00	49.2
Leq day in dB(A)				53.9
17	Night 22 & 23-Aug-25	22:00	23:00	46.5
18		23:00	0:00	45.2
19		0:00	1:00	43.7
20		1:00	2:00	41.5
21		2:00	3:00	42.6
22		3:00	4:00	43.9
23		4:00	5:00	44.2
24		5:00	6:00	45.8
Leq Night in dB(A)				44.4

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 25-08-2025

STATION : QUARRY

STATION CODE : LN-7

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	25-Aug-25	6:00	7:00	55.2
2			7:00	8:00	56.4
3			8:00	9:00	58.9
4			9:00	10:00	57.5
5			10:00	11:00	59.8
6			11:00	12:00	60.2
7			12:00	13:00	61.3
8			13:00	14:00	63.5
9			14:00	15:00	64.8
10			15:00	16:00	65.9
11			16:00	17:00	62.3
12			17:00	18:00	63.4
13			18:00	19:00	61.2
14			19:00	20:00	59.8
15			20:00	21:00	58.7
16			21:00	22:00	56.5
			Leq day in dB(A)		61.4
17	Night	25 & 26-Aug-25	22:00	23:00	54.3
18			23:00	0:00	52.6
19			0:00	1:00	51.4
20			1:00	2:00	49.2
21			2:00	3:00	47.9
22			3:00	4:00	49.8
23			4:00	5:00	51.2
24			5:00	6:00	53.4
			Leq Night in dB(A)		51.7

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : 01 -09- 2025

STATION : SHELLA BAZAR (INFRONT OF PWD GUEST HOUSE) (NON MARKET DAY)

STATION CODE : LN-1

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	1-Sep-25	6:00	7:00	50.7
2			7:00	8:00	51.8
3			8:00	9:00	52.7
4			9:00	10:00	53.5
5			10:00	11:00	54.8
6			11:00	12:00	55.6
7			12:00	13:00	56.7
8			13:00	14:00	57.8
9			14:00	15:00	58.2
10			15:00	16:00	57.5
11			16:00	17:00	56.4
12			17:00	18:00	55.3
13			18:00	19:00	53.4
14			19:00	20:00	52.8
15			20:00	21:00	51.7
16			21:00	22:00	50.4
Leq day in dB(A)					55.0
17	Night	01 & 02-Sep-25	22:00	23:00	47.9
18			23:00	0:00	46.5
19			0:00	1:00	45.4
20			1:00	2:00	44.2
21			2:00	3:00	43.7
22			3:00	4:00	44.6
23			4:00	5:00	45.9
24			5:00	6:00	46.8
Leq Night in dB(A)					45.8

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE: 05- 09 - 2025

STATION : PYRKAN VILLAGE (INFRONT OF RAMKRISHNA SCHOOL)

STATION CODE : LN-2

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	5-Sep-25	6:00	7:00	49.8
2			7:00	8:00	50.1
3			8:00	9:00	51.7
4			9:00	10:00	52.5
5			10:00	11:00	53.8
6			11:00	12:00	54.7
7			12:00	13:00	55.9
8			13:00	14:00	56.4
9			14:00	15:00	57.8
10			15:00	16:00	56.2
11			16:00	17:00	55.3
12			17:00	18:00	54.2
13			18:00	19:00	53.4
14			19:00	20:00	52.8
15			20:00	21:00	51.7
16			21:00	22:00	49.5
			Leq day in dB(A)		54.1
17	Night	5 & 6-Sep-25	22:00	23:00	46.2
18			23:00	0:00	45.7
19			0:00	1:00	43.2
20			1:00	2:00	42.8
21			2:00	3:00	41.6
22			3:00	4:00	42.5
23			4:00	5:00	44.2
24			5:00	6:00	45.9
24				Leq Night in dB(A)	44.3

LAFARGE UMIAM MINING PVT. LTD.					
NOISE LEVEL DATA					
DATE : 08-09-2025					
STATION : PHALANG KA RUH VILLAGE					
STATION CODE : LN-3					
			Time (in hour)		
Sl. No.		Date	From	To	Hourly Leq dB(A)
1	Day	8-Sep-25	6:00	7:00	50.8
2			7:00	8:00	51.2
3			8:00	9:00	52.7
4			9:00	10:00	53.6
5			10:00	11:00	54.7
6			11:00	12:00	55.6
7			12:00	13:00	55.2
8			13:00	14:00	54.8
9			14:00	15:00	55.7
10			15:00	16:00	55.9
11			16:00	17:00	54.3
12			17:00	18:00	53.8
13			18:00	19:00	53.2
14			19:00	20:00	52.6
15			20:00	21:00	51.7
16			21:00	22:00	49.2
			Leq day in dB(A)		53.8
17	Night	8 & 9-Sep-25	22:00	23:00	46.5
18			23:00	0:00	45.7
19			0:00	1:00	44.1
20			1:00	2:00	42.3
21			2:00	3:00	41.8
22			3:00	4:00	43.7
23			4:00	5:00	44.5
24			5:00	6:00	45.9
			Leq Night in dB(A)		44.6

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 12- 09- 2025

STATION: OFFICE AREA

STATION CODE : LN-4

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)	
			From	To		
1	Day	12-Sep-25	6:00	7:00	55.7	
2			7:00	8:00	56.8	
3			8:00	9:00	57.9	
4			9:00	10:00	58.6	
5			10:00	11:00	59.4	
6			11:00	12:00	61.8	
7			12:00	13:00	63.2	
8			13:00	14:00	65.7	
9			14:00	15:00	63.2	
10			15:00	16:00	61.9	
11			16:00	17:00	59.8	
12			17:00	18:00	57.6	
13			18:00	19:00	55.4	
14			19:00	20:00	54.8	
15			20:00	21:00	54.2	
16			21:00	22:00	53.7	
Leq day in dB(A)					60.2	
17	Night	12 & 13-Sep-25	22:00	23:00	51.9	
18			23:00	0:00	50.4	
19			0:00	1:00	49.8	
20			1:00	2:00	48.7	
21			2:00	3:00	46.5	
22			3:00	4:00	47.9	
23			4:00	5:00	48.2	
24			5:00	6:00	51.4	
24	Leq Night in dB(A)					49.7

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : -15 -09- 2025

STATION : SHELLA PUNJEE

STATION CODE : LN-5

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 15-Sep-25	6:00	7:00	49.5
2		7:00	8:00	50.7
3		8:00	9:00	51.2
4		9:00	10:00	52.5
5		10:00	11:00	53.6
6		11:00	12:00	54.8
7		12:00	13:00	55.7
8		13:00	14:00	56.4
9		14:00	15:00	56.2
10		15:00	16:00	55.8
11		16:00	17:00	55.4
12		17:00	18:00	53.7
13		18:00	19:00	52.4
14		19:00	20:00	51.8
15		20:00	21:00	50.7
16		21:00	22:00	48.6
Leq day in dB(A)				53.7
17	Night 15 & 16-Sep-25	22:00	23:00	46.2
18		23:00	0:00	45.4
19		0:00	1:00	42.5
20		1:00	2:00	41.2
21		2:00	3:00	40.5
22		3:00	4:00	42.6
23		4:00	5:00	43.7
24		5:00	6:00	45.8
Leq Night in dB(A)				43.9

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 19-09-2025

STATION : MAWRYNGKHONG

STATION CODE : LN-6

Sl. No.	Date	Time (in hour)		Hourly Leq dB(A)
		From	To	
1	Day 19-Sep-25	6:00	7:00	48.7
2		7:00	8:00	49.9
3		8:00	9:00	51.4
4		9:00	10:00	52.7
5		10:00	11:00	53.6
6		11:00	12:00	54.8
7		12:00	13:00	55.7
8		13:00	14:00	56.1
9		14:00	15:00	55.4
10		15:00	16:00	54.6
11		16:00	17:00	53.2
12		17:00	18:00	52.8
13		18:00	19:00	51.7
14		19:00	20:00	50.9
15		20:00	21:00	49.6
16		21:00	22:00	48.4
Leq day in dB(A)				53.1
17	Night 19 & 20-Sep-25	22:00	23:00	46.7
18		23:00	0:00	45.4
19		0:00	1:00	43.8
20		1:00	2:00	41.2
21		2:00	3:00	42.4
22		3:00	4:00	43.6
23		4:00	5:00	44.2
24		5:00	6:00	45.9
Leq Night in dB(A)				44.5

LAFARGE UMIAM MINING PVT. LTD.

NOISE LEVEL DATA

DATE : - 22-09-2025

STATION : QUARRY

STATION CODE : LN-7

Sl. No.		Date	Time (in hour)		Hourly Leq dB(A)
			From	To	
1	Day	22-Sep-25	6:00	7:00	54.6
2			7:00	8:00	55.8
3			8:00	9:00	56.9
4			9:00	10:00	57.9
5			10:00	11:00	59.4
6			11:00	12:00	61.2
7			12:00	13:00	63.5
8			13:00	14:00	62.5
9			14:00	15:00	64.8
10			15:00	16:00	61.3
11			16:00	17:00	59.7
12			17:00	18:00	61.2
13			18:00	19:00	63.7
14			19:00	20:00	60.2
15			20:00	21:00	58.7
16			21:00	22:00	56.2
			Leq day in dB(A)		60.8
17	Night	22 & 23-Sep-25	22:00	23:00	54.1
18			23:00	0:00	52.8
19			0:00	1:00	51.9
20			1:00	2:00	49.7
21			2:00	3:00	48.4
22			3:00	4:00	50.2
23			4:00	5:00	51.4
24			5:00	6:00	53.2
			Leq Night in dB(A)		51.8

Minimate Ground Vibration Report April to September 2025

Ground Vibration Report (April - 2025)										
Type	Serial No.	Date/Time	No. Chan	Trigger	Tran Peak (mm/s)	Vert Peak (mm/s)	Long Peak (mm/s)	Mic Peak (dB)	PV51 (mm/s)	Description
W	5390	Apr 2 /25 14:05:31	4	Vert	1.143	0.445	0.762	135.0L	1.349	NongtraI Lime stone Mines
W	UM6171	Apr 3 /25 14:07:13	4	Long	0.370	0.347	0.465	120.6L	0.617	NongtraI Lime Stone Mines
W	UM6171	Apr 5 /25 14:01:57	4	Tran	0.418	0.284	0.394	113.9L	0.443	NongtraI Lime Stone Mines
W	UM6171	Apr 7 /25 14:06:49	4	Long	0.701	0.402	1.316	113.4L	1.485	NongtraI Lime Stone Mines
W	5390	Apr 7 /25 14:06:51	4	Long	1.016	0.381	1.080	122.3L	1.127	NongtraI Lime stone Mines
W	5390	Apr 9 /25 14:21:57	4	Vert	0.445	0.317	0.635	127.6L	0.651	NongtraI Lime stone Mines
W	UM6171	Apr 9 /25 14:21:59	4	MicL	0.071	0.055	0.039	117.0L	0.078	NongtraI Lime Stone Mines
W	5390	Apr 11 /25 14:10:59	4	Long	0.635	0.635	1.207	122.3L	1.238	NongtraI Lime stone Mines
W	UM6171	Apr 11 /25 14:11:00	4	Long	0.292	0.158	0.292	112.0L	0.313	NongtraI Lime Stone Mines
W	UM6171	Apr 14 /25 13:59:22	4	Long	0.859	0.615	1.293	104.8L	1.491	NongtraI Lime Stone Mines
W	5390	Apr 14 /25 13:59:24	4	Vert	1.270	1.080	1.715	109.5L	1.953	NongtraI Lime stone Mines
W	5390	Apr 16 /25 13:59:30	4	Long	1.270	0.953	1.651	125.6L	1.953	NongtraI Lime stone Mines
W	UM6171	Apr 16 /25 13:59:30	4	Long	0.307	0.181	0.300	110.9L	0.330	NongtraI Lime Stone Mines
W	UM6171	Apr 17 /25 14:11:03	4	Long	0.520	0.875	0.867	115.0L	0.954	NongtraI Lime Stone Mines
W	5390	Apr 21 /25 14:05:39	4	Vert	0.572	0.445	0.699	119.1L	0.921	NongtraI Lime stone Mines
W	UM6171	Apr 21 /25 14:05:39	4	Long	0.268	0.457	0.504	115.0L	0.606	NongtraI Lime Stone Mines
W	UM6171	Apr 23 /25 13:58:01	4	Long	0.347	0.150	0.315	106.9L	0.376	NongtraI Lime Stone Mines
W	5390	Apr 23 /25 13:58:03	4	Vert	1.207	0.826	1.207	115.6L	1.476	NongtraI Lime stone Mines
W	5390	Apr 24 /25 14:03:53	4	Long	1.715	1.143	1.207	133.3L	1.746	NongtraI Lime stone Mines
W	UM6171	Apr 24 /25 14:03:54	4	MicL	0.071	0.067	0.110	121.6L	0.143	NongtraI Lime Stone Mines
W	5390	Apr 26 /25 13:51:41	4	Vert	0.572	0.445	0.445	119.1L	0.635	NongtraI Lime stone Mines
W	UM6171	Apr 26 /25 13:52:34	4	Vert	0.166	0.315	0.142	110.9L	0.337	NongtraI Lime Stone Mines
W	5390	Apr 28 /25 13:58:16	4	Long	1.080	0.889	1.270	114.0L	1.556	NongtraI Lime stone Mines
W	UM6171	Apr 28 /25 13:58:17	4	Tran	0.331	0.181	0.205	107.6L	0.354	NongtraI Lime Stone Mines
W	5390	Apr 29 /25 14:07:40	4	Vert	0.762	0.635	0.699	121.6L	0.810	NongtraI Lime stone Mines
W	UM6171	Apr 29 /25 14:07:44	4	MicL	0.071	0.039	0.055	111.1L	0.079	NongtraI Lime Stone Mines

Ground Vibration Report (May - 2025)										
Type	Serial No.	Date/Time	No. Chan	Trigger	Tran Peak (mm/s)	Vert Peak (mm/s)	Long Peak (mm/s)	Mic Peak (dB)	PV51 (mm/s)	Description
W	UM6171	May 1 /25 13:57:27	4	MicL	0.063	0.055	0.039	106.8L	0.065	NongtraI Lime Stone Mines
W	UM6171	May 3 /25 14:10:48	4	Long	0.370	0.899	0.985	114.2L	1.046	NongtraI Lime Stone Mines
W	5390	May 5 /25 13:59:37	4	Long	1.715	1.143	1.080	114.0L	2.000	NongtraI Lime stone Mines
W	UM6171	May 5 /25 14:00:33	4	Long	0.426	0.977	1.096	97.07L	1.384	NongtraI Lime Stone Mines
W	UM6171	May 6 /25 13:58:18	4	Long	0.504	0.300	0.694	110.4L	0.757	NongtraI Lime Stone Mines
W	5390	May 6 /25 13:58:19	4	Long	1.461	0.572	0.953	118.1L	1.492	NongtraI Lime stone Mines
W	5390	May 8 /25 13:59:33	4	Long	0.826	1.270	1.080	123.5L	1.397	NongtraI Lime stone Mines
W	UM6171	May 8 /25 13:59:34	4	MicL	0.079	0.047	0.055	114.5L	0.084	NongtraI Lime Stone Mines
W	5390	May 9 /25 14:00:29	4	Long	0.635	0.445	0.508	131.6L	0.667	NongtraI Lime stone Mines
W	UM6171	May 9 /25 14:00:31	4	MicL	0.071	0.039	0.055	109.6L	0.075	NongtraI Lime Stone Mines
W	UM6171	May 12 /25 14:37:02	4	Long	0.307	0.560	0.891	111.9L	0.891	NongtraI Lime Stone Mines
W	5390	May 12 /25 14:37:03	4	Long	0.508	0.445	0.699	120.8L	0.857	NongtraI Lime stone Mines
W	UM6171	May 13 /25 14:06:22	4	Long	0.804	0.709	1.206	113.5L	1.294	NongtraI Lime Stone Mines
W	5390	May 13 /25 14:06:24	4	Long	1.842	1.016	1.207	119.1L	2.096	NongtraI Lime stone Mines
W	UM6171	May 15 /25 14:01:21	4	Tran	0.276	0.102	0.142	107.0L	0.283	NongtraI Lime Stone Mines
W	5390	May 15 /25 14:01:23	4	Vert	0.572	0.572	0.826	119.1L	0.937	NongtraI Lime stone Mines
W	UM6171	May 16 /25 13:55:18	4	Long	0.623	0.402	0.615	116.5L	0.699	NongtraI Lime Stone Mines
W	5390	May 19 /25 14:07:28	4	Long	1.207	0.445	0.762	112.0L	1.286	NongtraI Lime stone Mines
W	UM6171	May 19 /25 14:07:28	4	Long	0.906	0.441	1.293	109.9L	1.385	NongtraI Lime Stone Mines
W	UM6171	May 21 /25 14:02:26	4	Long	0.355	0.181	0.528	111.2L	0.537	NongtraI Lime Stone Mines
W	5390	May 21 /25 14:02:27	4	Long	1.397	0.953	1.461	120.0L	1.540	NongtraI Lime stone Mines
W	UM6171	May 23 /25 14:02:37	4	Long	1.568	1.040	1.576	112.8L	1.694	NongtraI Lime Stone Mines
W	5390	May 23 /25 14:02:38	4	Long	2.350	1.524	2.921	120.8L	3.032	NongtraI Lime stone Mines
W	5390	May 26 /25 14:06:12	4	Long	0.889	0.635	1.080	118.1L	1.207	NongtraI Lime stone Mines
W	UM6171	May 27 /25 14:04:12	4	Long	0.355	0.386	0.701	105.9L	0.736	NongtraI Lime Stone Mines
W	5390	May 27 /25 14:04:13	4	Long	0.953	0.635	0.889	114.0L	1.270	NongtraI Lime stone Mines
W	5390	May 29 /25 14:06:17	4	Long	1.207	0.826	1.270	119.1L	1.381	NongtraI Lime stone Mines

**Ground Vibration Report
(June - 2025)**

Type	Serial No.	Date/Time	No. Chan	Trigger	Tran Peak (mm/s)	Vert Peak (mm/s)	Long Peak (mm/s)	Mic Peak (dB)	PVS1 (mm/s)	Description
W	5390	Jun 3 /25 14:05:46	4	Tran	1.334	0.381	1.080	114.0L	1.603	Nongtrai Lime stone Mines
W	UM6171	Jun 3 /25 14:05:46	4	Long	0.575	0.504	0.891	105.0L	0.906	Nongtrai Lime Stone Mines
W	UM6171	Jun 4 /25 14:18:06	4	Long	0.709	0.497	0.954	<88L	1.016	Nongtrai Lime Stone Mines
W	5390	Jun 4 /25 14:18:08	4	Long	2.413	1.334	1.588	114.0L	2.556	Nongtrai Lime stone Mines
W	5390	Jun 9 /25 14:08:54	4	Long	0.635	0.317	0.699	112.0L	0.889	Nongtrai Lime stone Mines
W	UM6171	Jun 9 /25 14:09:12	4	Long	0.323	0.300	0.536	<88L	0.542	Nongtrai Lime Stone Mines
W	UM6171	Jun 11 /25 14:08:12	4	Long	0.441	0.276	0.426	116.4L	0.442	Nongtrai Lime Stone Mines
W	5390	Jun 11 /25 14:08:13	4	Vert	1.461	1.397	1.842	126.0L	1.921	Nongtrai Lime stone Mines
W	UM6171	Jun 13 /25 14:08:32	4	Long	0.284	0.276	0.528	105.5L	0.529	Nongtrai Lime Stone Mines
W	5390	Jun 13 /25 14:08:33	4	Long	0.953	0.445	0.762	109.5L	1.159	Nongtrai Lime stone Mines
W	5390	Jun 16 /25 14:08:54	4	Long	1.588	1.207	1.778	116.9L	1.953	Nongtrai Lime stone Mines
W	UM6171	Jun 16 /25 14:08:54	4	Long	0.678	1.009	1.513	112.8L	1.515	Nongtrai Lime Stone Mines
W	5390	Jun 18 /25 14:04:49	4	Tran	1.016	0.064	1.207	124.6L	1.492	Nongtrai Lime stone Mines
W	UM6171	Jun 18 /25 14:04:52	4	Long	1.710	1.088	1.592	112.9L	1.884	Nongtrai Lime Stone Mines
W	UM6171	Jun 19 /25 13:54:34	4	MicL	0.158	0.126	0.166	119.0L	0.178	Nongtrai Lime Stone Mines
W	UM6171	Jun 20 /25 13:56:45	4	Tran	0.300	0.158	0.292	112.2L	0.305	Nongtrai Lime Stone Mines
W	UM6171	Jun 24 /25 14:06:55	4	Long	0.410	0.441	0.670	111.7L	0.695	Nongtrai Lime Stone Mines
W	UM6171	Jun 26 /25 14:14:42	4	Long	0.166	0.339	0.544	109.2L	0.547	Nongtrai Lime Stone Mines
W	5390	Jun 26 /25 14:14:44	4	Vert	1.334	0.445	0.762	112.0L	1.492	Nongtrai Lime stone Mines
W	5390	Jun 27 /25 14:02:38	4	Long	1.905	1.524	1.334	119.1L	2.159	Nongtrai Lime stone Mines
W	UM6171	Jun 27 /25 14:02:39	4	Long	0.504	0.300	0.528	106.8L	0.589	Nongtrai Lime Stone Mines

**Ground Vibration Report
(July - 2025)**

Type	Serial No.	Date/Time	No. Chan	Trigger	Tran Peak (mm/s)	Vert Peak (mm/s)	Long Peak (mm/s)	Mic Peak (dB)	PVS1 (mm/s)	Description
W	5390	Jul 1 /25 14:01:16	4	Long	0.254	0.064	0.317	116.9L	0.349	Nongtrai Lime stone Mines
W	UM6171	Jul 1 /25 14:01:17	4	Long	0.158	0.260	0.292	107.4L	0.294	Nongtrai Lime Stone Mines
W	5390	Jul 2 /25 13:56:04	4	Vert	0.254	0.317	0.254	120.0L	0.349	Nongtrai Lime stone Mines
W	UM6171	Jul 2 /25 13:56:06	4	Tran	0.284	0.150	0.244	114.4L	0.349	Nongtrai Lime Stone Mines
W	5390	Jul 5 /25 14:04:25	4	Long	1.842	0.572	1.651	125.6L	2.016	Nongtrai Lime stone Mines
W	UM6171	Jul 5 /25 14:04:25	4	Long	0.426	0.355	0.859	115.9L	0.864	Nongtrai Lime Stone Mines
W	UM6171	Jul 8 /25 13:58:07	4	Long	0.260	0.244	0.370	104.9L	0.426	Nongtrai Lime Stone Mines
W	5390	Jul 8 /25 13:58:09	4	Long	0.572	0.508	0.572	116.9L	0.714	Nongtrai Lime stone Mines
W	5390	Jul 10 /25 14:16:02	4	Long	2.032	0.064	1.397	120.8L	2.318	Nongtrai Lime stone Mines
W	UM6171	Jul 10 /25 14:16:03	4	Long	1.624	1.167	2.278	117.9L	2.403	Nongtrai Lime Stone Mines
W	5390	Jul 11 /25 13:59:48	4	Tran	0.317	0.064	0.191	125.6L	0.381	Nongtrai Lime stone Mines
W	UM6171	Jul 11 /25 13:59:52	4	MicL	0.071	0.047	0.055	120.8L	0.082	Nongtrai Lime Stone Mines
W	5390	Jul 15 /25 14:06:54	4	Long	2.286	1.524	2.540	120.0L	3.191	Nongtrai Lime stone Mines
W	UM6171	Jul 15 /25 14:06:54	4	Long	0.717	0.780	0.938	112.0L	1.082	Nongtrai Lime Stone Mines
W	5390	Jul 16 /25 13:58:42	4	Long	0.699	0.572	0.826	124.1L	0.953	Nongtrai Lime stone Mines
W	5390	Jul 19 /25 13:56:13	4	Long	0.699	0.889	1.334	114.0L	1.413	Nongtrai Lime stone Mines
W	5390	Jul 21 /25 14:02:58	4	Long	0.699	0.381	0.508	119.1L	0.889	Nongtrai Lime stone Mines
W	UM6171	Jul 21 /25 14:02:59	4	Long	0.236	0.126	0.355	109.8L	0.360	Nongtrai Lime Stone Mines
W	5390	Jul 23 /25 14:01:13	4	Long	0.699	0.635	0.445	124.1L	0.714	Nongtrai Lime stone Mines
W	UM6171	Jul 23 /25 14:01:14	4	Long	0.347	0.244	0.607	117.8L	0.713	Nongtrai Lime Stone Mines
W	5390	Jul 24 /25 14:06:22	4	Long	0.953	1.016	1.080	122.3L	1.302	Nongtrai Lime stone Mines
W	UM6171	Jul 24 /25 14:06:24	4	Long	0.575	0.544	0.733	111.2L	0.901	Nongtrai Lime Stone Mines
W	5390	Jul 28 /25 14:04:51	4	Long	1.905	0.064	2.095	124.1L	2.111	Nongtrai Lime stone Mines
W	UM6171	Jul 28 /25 14:04:54	4	Tran	0.300	0.118	0.158	105.3L	0.314	Nongtrai Lime Stone Mines
W	UM6171	Jul 29 /25 14:01:11	4	Long	0.465	0.441	0.654	104.4L	0.691	Nongtrai Lime Stone Mines
W	UM6171	Jul 31 /25 13:57:28	4	Long	0.394	0.772	0.930	108.5L	0.977	Nongtrai Lime Stone Mines
W	5390	Jul 31 /25 13:57:29	4	Tran	0.572	0.381	0.826	118.1L	0.984	Nongtrai Lime stone Mines

Ground Vibration Report (Aug - 2025)

Type	Serial No.	Date/Time	No. Chan	Trigger	Tran Peak (mm/s)	Vert Peak (mm/s)	Long Peak (mm/s)	Mic Peak (dB)	PVS1 (mm/s)	Description
W	UM6171	Aug 1 /25 14:06:37	4	Vert	1.561	0.977	1.963	114.3L	2.081	Nongtrai Lime Stone Mines
W	5390	Aug 5 /25 13:57:36	4	MicL	0.127	0.064	0.064	123.5L	0.143	Nongtrai Lime stone Mines
W	UM6171	Aug 5 /25 13:57:36	4	MicL	0.071	0.039	0.071	115.2L	0.086	Nongtrai Lime Stone Mines
W	UM6171	Aug 6 /25 14:12:40	4	Long	1.923	1.230	2.893	118.8L	3.212	Nongtrai Lime Stone Mines
W	5390	Aug 6 /25 14:12:42	4	Long	1.651	1.397	2.286	131.4L	2.381	Nongtrai Lime stone Mines
W	UM6171	Aug 8 /25 14:04:54	4	Long	0.229	0.481	0.757	116.4L	0.774	Nongtrai Lime Stone Mines
W	5390	Aug 8 /25 14:04:55	4	MicL	0.127	0.064	0.127	124.6L	0.143	Nongtrai Lime stone Mines
W	5390	Aug 11 /25 14:14:21	4	Vert	1.016	1.016	1.270	109.5L	1.508	Nongtrai Lime stone Mines
W	5390	Aug 13 /25 13:56:57	4	Long	1.207	0.064	1.270	114.0L	1.302	Nongtrai Lime stone Mines
W	UM6171	Aug 13 /25 13:56:57	4	Long	0.370	0.331	0.638	108.8L	0.640	Nongtrai Lime Stone Mines
W	UM6171	Aug 16 /25 14:09:41	4	Long	1.364	1.214	3.421	114.4L	3.475	Nongtrai Lime Stone Mines
W	UM6171	Aug 19 /25 14:03:08	4	Long	0.331	0.355	0.544	109.0L	0.635	Nongtrai Lime Stone Mines
W	5390	Aug 19 /25 14:03:09	4	Long	0.317	0.381	0.953	116.9L	1.048	Nongtrai Lime stone Mines
W	UM6171	Aug 20 /25 14:03:55	4	Tran	1.048	0.378	0.071	127.5L	1.112	Nongtrai Lime Stone Mines
W	5390	Aug 21 /25 13:56:04	4	Tran	0.762	0.508	0.445	120.0L	0.826	Nongtrai Lime stone Mines
W	UM6171	Aug 25 /25 14:04:34	4	Long	0.701	0.394	0.985	105.0L	1.037	Nongtrai Lime Stone Mines
W	5390	Aug 25 /25 14:04:35	4	Long	2.921	2.095	1.588	118.1L	3.397	Nongtrai Lime stone Mines
W	5390	Aug 26 /25 14:08:38	4	Long	1.207	0.064	1.270	119.1L	1.540	Nongtrai Lime stone Mines
W	UM6171	Aug 26 /25 14:08:38	4	Long	1.237	0.859	1.387	111.6L	1.418	Nongtrai Lime Stone Mines
W	5390	Aug 27 /25 13:52:48	4	Long	0.381	0.191	0.381	120.8L	0.508	Nongtrai Lime stone Mines
W	UM6171	Aug 27 /25 13:52:52	4	MicL	0.063	0.047	0.055	115.1L	0.079	Nongtrai Lime Stone Mines

Ground Vibration Report (Sept - 2025)

Type	Serial No.	Date/Time	No. Chan	Trigger	Tran Peak (mm/s)	Vert Peak (mm/s)	Long Peak (mm/s)	Mic Peak (dB)	PVS1 (mm/s)	Description
W	5390	Sep 2 /25 13:53:52	4	Long	0.953	0.635	0.635	114.0L	1.080	Nongtrai Lime stone Mines
W	UM6171	Sep 3 /25 13:58:46	4	Long	0.307	0.418	0.575	111.1L	0.580	Nongtrai Lime Stone Mines
W	5390	Sep 3 /25 13:58:47	4	Tran	0.572	0.508	0.762	119.1L	0.809	Nongtrai Lime stone Mines
W	UM6171	Sep 6 /25 14:02:00	4	Long	0.812	0.575	0.985	114.4L	1.107	Nongtrai Lime Stone Mines
W	5390	Sep 6 /25 14:02:15	4	Vert	0.127	0.953	0.064	<100L	0.968	Nongtrai Lime stone Mines
W	5390	Sep 9 /25 14:07:10	4	Long	1.334	1.143	1.207	120.0L	1.572	Nongtrai Lime stone Mines
W	UM6171	Sep 9 /25 14:07:13	4	Long	0.528	0.331	0.646	107.0L	0.647	Nongtrai Lime Stone Mines
W	5390	Sep 10 /25 14:03:21	4	Vert	2.159	2.858	2.604	120.8L	3.556	Nongtrai Lime stone Mines
W	UM6171	Sep 10 /25 14:03:25	4	Long	0.426	0.276	0.363	110.1L	0.435	Nongtrai Lime Stone Mines
W	5390	Sep 12 /25 14:02:22	4	Long	1.461	1.270	3.302	119.1L	3.715	Nongtrai Lime stone Mines
W	UM6171	Sep 12 /25 14:02:22	4	MicL	0.071	0.047	0.063	111.9L	0.084	Nongtrai Lime Stone Mines
W	UM6171	Sep 13 /25 14:06:08	4	Long	0.591	0.418	0.646	109.3L	0.770	Nongtrai Lime Stone Mines
W	5390	Sep 13 /25 14:06:10	4	Long	1.842	0.762	1.715	120.8L	2.032	Nongtrai Lime stone Mines
W	UM6171	Sep 16 /25 14:32:42	4	Long	1.411	1.293	2.057	115.9L	2.071	Nongtrai Lime Stone Mines
W	5390	Sep 16 /25 14:32:43	4	Vert	1.778	1.207	2.667	125.1L	2.778	Nongtrai Lime stone Mines
W	5390	Sep 19 /25 14:03:03	4	Vert	0.826	0.699	0.953	115.6L	1.143	Nongtrai Lime stone Mines
W	UM6171	Sep 19 /25 14:03:04	4	Long	0.292	0.623	0.686	109.9L	0.697	Nongtrai Lime Stone Mines
W	UM6171	Sep 20 /25 14:16:00	4	MicL	0.063	0.039	0.055	111.9L	0.069	Nongtrai Lime Stone Mines
W	5390	Sep 20 /25 14:16:03	4	MicL	0.127	0.064	0.064	124.6L	0.143	Nongtrai Lime stone Mines
W	UM6171	Sep 23 /25 14:06:09	4	Long	0.276	0.449	0.552	108.7L	0.605	Nongtrai Lime Stone Mines
W	5390	Sep 23 /25 14:06:11	4	Long	0.635	0.826	1.397	115.6L	1.651	Nongtrai Lime stone Mines
W	UM6171	Sep 24 /25 13:57:18	4	Long	0.717	0.875	1.702	108.3L	1.721	Nongtrai Lime Stone Mines
W	5390	Sep 27 /25 14:01:29	4	Vert	1.651	1.397	2.159	122.3L	2.191	Nongtrai Lime stone Mines
W	UM6171	Sep 27 /25 14:01:32	4	MicL	0.071	0.063	0.055	114.3L	0.087	Nongtrai Lime Stone Mines
W	5390	Sep 29 /25 13:56:48	4	Tran	2.159	1.270	2.604	116.9L	2.873	Nongtrai Lime stone Mines
W	UM6171	Sep 29 /25 13:56:49	4	MicL	0.055	0.055	0.055	106.2L	0.076	Nongtrai Lime Stone Mines



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএন্সএছ চাইন্টিফিক চাৰ্ভিচেচ প্ৰাইভেট লিমিটেড

एबीएन्एस साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

H-152, Keteki Path, Padumbari, Jalukbari, Guwahati 781011, Assam

এইচ-১৫২, কেতেকী পথ, পদুমবাৰী, জালুকবাৰী, গুৱাহাটী ৭৮১০১১, অসম

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TEST REPORT

Report No:ABNS/EM/042525/08	Date:25/04/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/041725/SW01 Sample Type: Grab Sample Source: LWQ-1 Up Stream Umiam River
Location:Umiam River Shella	Sample Collected by: Mr Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 17/04/2025 Analysis Start Date18/04/2025 Analysis End Date24/04/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity:65.5%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.9	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	176.2	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	8.6	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	124	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	10.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.06	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	66.4	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	47.0	IS 3025 Part 23, 2023
9	Iron	mg/L	0.20	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	20.4	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	23.8	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	5.2	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	12.4	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	4.05	IS 3025 Part 34, (reaf 2019)



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एबीएन्एस साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	4.1	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	12.5	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	3.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.5	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	5.4	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.20	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.87	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.24	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	108	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.*** BDL: Below Detection Limit

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



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TEST REPORT

Report No:ABNS/EM/042525/09	Date:25/04/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/041725/SW02 Sample Type: Grab Sample Source: LWQ-2 Down Stream Stream Umiam River
Location:Umiam River Shella	Sample Collected by: Mr Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 17/04/2025 Analysis Start Date18/04/2025 Analysis End Date24/04/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity:65.5%	

ANALYSIS RESULTS

SI No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.0	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	208	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	4.6	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	168	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	6.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.04	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	158.4	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	82.6	IS 3025 Part 23, 2023
9	Iron	mg/L	0.10	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	36.2	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	38.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	6.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	12.0	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	2.0	IS 3025 Part 34, (reaf 2019)



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15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	4.2	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.5	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	2.5	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.2	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	4.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.02	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	0.12	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.25	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	62	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.*** BDL- Below Detection Level.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


Authorized Signatory
ABNS Scientific Services



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TEST REPORT

Report No:ABNS/EM/042525/10	Date:25/04/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/041725/SW03 Sample Type: Grab Sample Source: LWQ-3Up Stream Phlangkarue River
Location:Phlangkarue River Nongtraï	Sample Collected by: Mr Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 17/04/2025 Analysis Start Date18/04/2025 Analysis End Date24/04/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity:65.5%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.1	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	186	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.4	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	138	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	36	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.02	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	46.5	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	65.6	IS 3025 Part 23, 2023
9	Iron	mg/L	0.10	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	40.4	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	18.2	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	5.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	10.2	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	0.80	IS 3025 Part 34, (reaf 2019)



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15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	4.5	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.8	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	2.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	0.14	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	6.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.30	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.60	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.30	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	Not Detected	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.*** BDL- Below Detection Level.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



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TEST REPORT

Report No:ABNS/EM/042525/11	Date:25/04/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/041725/SW04 Sample Type: Grab Sample Source: LWQ-4 Down Stream Phlangkarue River
Location:Phlangkarue River Nongtraï	Sample Collected by: Mr Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 17/04/2025 Analysis Start Date18/04/2025 Analysis End Date24/04/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity:65.5%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.9	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	148	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	4.5	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	89	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	18.4	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.04	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	49.2	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	56.4	IS 3025 Part 23, 2023
9	Iron	mg/L	0.20	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	46.4	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	20.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	37.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	18.2	IS 3025 Part 17, 2022



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14	Nitrate- Nitrogen	mg/L	1.0	IS 3025 Part 34, (reaf 2019)
15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.2	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	15.0	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	5.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	2.10	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	10.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.50	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.55	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	BDL	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	30	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.*** BDL- Below Detection Level.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


Authorized Signatory
ABNS Scientific Services,



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TEST REPORT

Report No:ABNS/EM/052425/15	Date: 24/05/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/052025/SW01 Sample Type: Grab Sample Source: LWQ-1 Up Stream Umiam River
Location:Umiam River	Sample Collected by: Mr Pankaj Rajbonshi (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 19/05/2025 Analysis Start Date: 20/05/2025 Analysis End Date: 24/05/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity:65.5%	

ANALYSIS RESULTS

SI No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.94	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	174.2	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.6	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	132	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	11.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.04	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	62.4	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	37.0	IS 3025 Part 23, 2023
9	Iron	mg/L	0.10	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	18.4	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	21.8	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	6.2	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	10.4	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	5.05	IS 3025 Part 34, (reaf 2019)



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15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	3.1	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	10.5	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	4.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.5	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	5.4	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.20	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.87	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.24	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	108	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only. BDL: Below Detection Limit

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services


Kenneth
24.05.25



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(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No:ABNS/EM/052425/16	Date: 24/05/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/052025/SW02 Sample Type: Grab Sample Source: LWQ-2 Down Stream Umiã River
Location:Umiã River	Sample Collected by: Mr Pankaj Rajbonshi (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 19/05/2025 Analysis Start Date: 20/05/2025 Analysis End Date: 24/05/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity:65.5%	

ANALYSIS RESULTS

SI No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.82	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	198	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	3.6	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	174	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	7.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.04	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	162.4	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	80.6	IS 3025 Part 23, 2023
9	Iron	mg/L	0.10	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	34.2	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	36.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	5.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	11.0	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	2.0	IS 3025 Part 34, (reaf 2019)



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15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	4.2	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.5	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	2.5	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.2	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	4.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.02	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	0.12	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.25	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	62	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


24.05.25
Authorized Signatory
ABNS Scientific Services



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TEST REPORT

Report No: ABNS/EM/052425/18	Date: 24/05/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/052025/SW04 Sample Type: Grab Sample Source: LWQ-3Up Stream Phlangkarue River
Location:Phlangkarue River	Sample Collected by: Mr Pankaj Rajbonshi (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 19/05/2025 Analysis Start Date: 20/05/2025 Analysis End Date: 24/05/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity:65.5%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.12	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	142	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	5.5	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	88	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	18.4	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.04	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	49.2	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	56.4	IS 3025 Part 23, 2023
9	Iron	mg/L	0.20	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	42.4	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	18.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	35.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	16.2	IS 3025 Part 17, 2022



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14	Nitrate- Nitrogen	mg/L	1.0	IS 3025 Part 34, (reaf 2019)
15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.2	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	14.0	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	5.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	2.10	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	10.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.50	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.55	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	BDL	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	30	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


24.05.25
Authorized Signatory
ABNS Scientific Services



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TEST REPORT

Report No: ABNS/EM/052425/18	Date: 24/05/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/052025/SW04 Sample Type: Grab Sample Source: LWQ-4 Down Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr Pankaj Rajbonshi (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 19/05/2025 Analysis Start Date: 20/05/2025 Analysis End Date: 24/05/2025
Environmental Condition: Temperature: 24.5°C Relative Humidity: 65.5%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.12	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	142	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	5.5	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	88	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	18.4	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.04	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	49.2	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	56.4	IS 3025 Part 23, 2023
9	Iron	mg/L	0.20	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	42.4	IS 3025 : Part 24 : Sec 1 : 2022
11	Calcium as CaCO ₃	mg/L	18.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	35.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	16.2	IS 3025 Part 17, 2022



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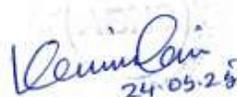
14	Nitrate- Nitrogen	mg/L	1.0	IS 3025 Part 34, (reaf 2019)
15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.2	IS 3025 Part 38, rof 2019
17	Chemical Oxygen Demand	mg/L	14.0	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	5.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	2.10	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	10.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.50	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.55	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	BDL	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	30	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


24.05.23
Authorized Signatory
ABNS Scientific Services



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TEST REPORT

Report No: ABNS/EM/062625/13	Date: 26/06/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/061425/SW01 Sample Type: Grab Sample Source: LWQ-1 Up Stream Umiyam River
Location: Umiyam River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 14/06/2025 Analysis Start Date: 16/06/2025 Analysis End Date: 23/06/2025
Environmental Condition: Temperature: 24.6°C Relative Humidity:66%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.74	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	226.8	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.8	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	146	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	14.7	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.02	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	46.5	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	30.6	IS 3025 Part 23, 2023
9	Iron	mg/L	0.22	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	18.5	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	20.0	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	9.2	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	16.4	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	6.8	IS 3025 Part 34, (reaf 2019)

15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	2.7	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	9.6	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	4.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.2	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	5.0	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.22	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.54	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.2	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	102	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only. BDL: Below Detection Limit

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

For **ABNS Scientific Services**,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


 26.06.25
Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

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TEST REPORT

Report No: ABNS/EM/062625/14	Date: 26/06/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/061425/SW02 Sample Type: Grab Sample Source: LWQ-2 Down Stream Umiam River
Location: Umiam River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021
Environmental Condition: Temperature: 24.6°C Relative Humidity: 66%	Sampling Date: 14/06/2025 Analysis Start Date: 16/06/2025 Analysis End Date: 23/06/2025

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.08	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	251.5	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	5.4	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	165	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	8.4	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	BDL	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	48.5	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	36.2	IS 3025 Part 23, 2023
9	Iron	mg/L	0.12	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	22.6	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	26.8	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	11.2	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	20.4	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	2.0	IS 3025 Part 34, (reaf 2019)

15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.8	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.0	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	1.4	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.0	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	6.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.5	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	0.14	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	1.5	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	75	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


 26.06.25
 Authorized Signatory
 ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএস্ চাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড

एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

H-152, Keteki Path, Padumbari, Jalukbari, Guwahati 781011, Assam

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TEST REPORT

Report No: ABNS/EM/062625/15	Date: 26/06/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/061425/SW03 Sample Type: Grab Sample Source: LWQ-3 Up Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 14/06/2025 Analysis Start Date: 16/06/2025 Analysis End Date: 23/06/2025
Environmental Condition: Temperature: 24.6°C Relative Humidity: 66%	

ANALYSIS RESULTS

SI No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.92	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	215.2	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	7.2	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	132	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	37.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.18	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	40.6	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	26.7	IS 3025 Part 23, 2023
9	Iron	mg/L	0.28	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	18.4	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	13.2	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	4.8	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	28.6	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	0.5	IS 3025 Part 34, (reaf 2019)

15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	6.0	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	5.7	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	3.2	IS 3025 Part 44, 2023
19	Potassium	mg/L	0.56	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	7.8	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.22	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.4	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.3	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	Not Detected	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ চাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড

एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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Phone: 98640 68513, 98640 89951

TEST REPORT

Report No: ABNS/EM/062625/16	Date: 26/06/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/061425/SW04 Sample Type: Grab Sample Source: LWQ-4 Down Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 14/06/2025 Analysis Start Date: 16/06/2025 Analysis End Date: 23/06/2025
Environmental Condition: Temperature: 24.6°C Relative Humidity: 66%	

ANALYSIS RESULTS

SI No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.77	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	178.2	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.8	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	122	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	16.5	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	BDL	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	38.2	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	22.6	IS 3025 Part 23, 2023
9	Iron	mg/L	0.18	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	35.2	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	22.8	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	7.1	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	16.2	IS 3025 Part 17, 2022

14	Nitrate- Nitrogen	mg/L	1.0	IS 3025 Part 34, (reaf 2019)
15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.6	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	12.0	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	5.4	IS 3025 Part 44, 2023
19	Potassium	mg/L	2.10	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	12.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.28	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.4	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	BDL	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	25	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)



Authorized Signatory

ABNS Scientific Services,



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ চাইন্টিফিক চার্ভিচেস প্রাইভেট লিমিটেড

एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

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TEST REPORT

Report No: ABNS/EM/080125/08	Date: 01/08/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/072525/SW01 Sample Type: Grab Sample Source: LWQ-1 Up Stream Umiam River
Location: Umiam River	Sample Collected by: Mr. Chinmay Kalita (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 25/07/2025 Analysis Start Date: 26/07/2025 Analysis End Date: 01/08/2025
Environmental Condition: Temperature: 24.3°C Relative Humidity:64%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.85	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	236.0	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.4	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	168.0	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	15.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	1.24	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	48.5	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	36.2	IS 3025 Part 23, 2023
9	Iron	mg/L	0.18	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	20.6	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	18.4	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	7.3	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	18.5	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	5.2	IS 3025 Part 34, (reaf 2019)

15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (ref 2019)
16	Dissolved Oxygen	mg/L	2.0	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	8.7	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	5.2	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.8	IS 3025 Part 45, (ref 2019)
20	Sodium	mg/L	4.6	IS 3025 Part 45, (ref 2019)
21	Ammoniacal Nitrogen	mg/L	0.20	IS 3025 Part 34, (ref 2019)
22	Phosphate as P	mg/L	1.46	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), ref 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), ref 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.2	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	90	IS 1622: 1981 (ref: 2019)

Note: The results relate to the parameter tested only. BDL: Below Detection Limit

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)



Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ চাইন্টিফিক চার্ভিচেচ প্রাইভেট লিমিটেড

एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No: ABNS/EM/080125/09	Date: 01/08/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/072525/SW02 Sample Type: Grab Sample Source: LWQ-2 Down Stream Umiam River
Location: Umiam River	Sample Collected by: Mr. Chinmay Kalita (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 25/07/2025 Analysis Start Date: 26/07/2025 Analysis End Date: 01/08/2025
Environmental Condition: Temperature: 24.3°C Relative Humidity:64%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.18	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	282.0	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.2	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	180.0	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	10.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	BDL	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	50.6	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	42.4	IS 3025 Part 23, 2023
9	Iron	mg/L	0.22	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	20.5	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	28.7	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	15.6	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	22.4	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	2.8	IS 3025 Part 34, (reaf 2019)

15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	6.0	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.8	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	2.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.0	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	5.4	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.8	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	0.10	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	1.2	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	70	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ চাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড

एबीएनएस साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No: ABNS/EM/080125/10	Date: 01/08/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/072525/SW03 Sample Type: Grab Sample Source: LWQ-3 Up Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Chinmay Kalita (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 25/07/2025 Analysis Start Date: 26/07/2025 Analysis End Date: 01/08/2025
Environmental Condition: Temperature: 24.3°C Relative Humidity: 64%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.66	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	237.2	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.8	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	144.0	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	35.6	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.10	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	46.2	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	32.4	IS 3025 Part 23, 2023
9	Iron	mg/L	0.20	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	15.2	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	11.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	5.0	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	22.7	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	0.8	IS 3025 Part 34, (reaf 2019)

15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	7.4	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	5.2	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	3.0	IS 3025 Part 44, 2023
19	Potassium	mg/L	0.50	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	6.2	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.12	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.0	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.2	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	Not Detected	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)


Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএস চাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড

एबीएनएस साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No: ABNS/EM/080125/11	Date: 01/08/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/072525/SW04 Sample Type: Grab Sample Source: LWQ-4 Down Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Chinmay Kalita (Sampler) Sampling Protocol: IS 17614 (Part 1): 2021 Sampling Date: 25/07/2025 Analysis Start Date: 26/07/2025 Analysis End Date: 01/08/2025
Environmental Condition: Temperature: 24.3°C Relative Humidity: 64%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.92	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	172.0	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.0	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	106.0	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	14.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	BDL	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	35.7	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	20.4	IS 3025 Part 23, 2023
9	Iron	mg/L	0.12	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	32.5	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	20.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	6.8	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	1.4	IS 3025 Part 17, 2022

14	Nitrate- Nitrogen	mg/L	1.4	IS 3025 Part 34, (reaf 2019)
15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.0	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	10.2	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	4.6	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.54	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	11.6	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.20	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.0	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	BDL	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	30	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For **ABNS Scientific Services,**

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

ABNS Scientific Services
Kamlesh
01.08.25

Authorized Signatory
ABNS Scientific Services,



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ চাইন্টিফিক চাৰ্ভিচেচ প্ৰাইভেট লিমিটেড

एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No: ABNS/EM/090125/11	Date: 01/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/082325/SW01 Sample Type: Grab Sample Source: LWQ-1 Up Stream Umiam River
Location: Umiam River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 23/08/2025 Analysis Start Date: 25/08/2025 Analysis End Date: 30/08/2025
Environmental Condition: Temperature: 25.7°C Relative Humidity: 65%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.74	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	286.0	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	5.8	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	172.0	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	18.6	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	2.25	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	62.4	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	50.8	IS 3025 Part 23, 2023
9	Iron	mg/L	0.12	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	18.6	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	15.2	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	5.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	14.6	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	3.6	IS 3025 Part 34, (reaf 2019)



15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	4.2	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	6.5	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	4.8	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.0	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	4.8	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.12	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.2	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.5	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	60	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only. BDL: Below Detection Limit

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

For ABNS Scientific Services,



Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ চাইন্টিফিক চার্ভিচেস প্রাইভেট লিমিটেড

एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

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Phone: 98640 68513, 98640 89951

TEST REPORT

Report No: ABNS/EM/090125/12	Date: 01/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/082325/SW02 Sample Type: Grab Sample Source: LWQ-2 Down Stream Umiam River
Location: Umiam River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 23/08/2025 Analysis Start Date: 25/08/2025 Analysis End Date: 30/08/2025
Environmental Condition: Temperature: 25.7°C Relative Humidity: 65%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.34	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	308.0	IS 3025 Part 14, (reaf2019)
3	Turbidity	NTU	6.5	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	196.0	IS 3025 Part 16, raf2023
5	Chloride	mg/L	15.2	IS 3025 Part 32, (reaf2019)
6	Fluoride	mg/L	BDL	IS 3025 Part 60, (reaf2019)
7	Total Hardness as CaCO ₃	mg/L	70.6	IS 3025 Part 21, (reaf2019)
8	Total Alkalinity as CaCO ₃	mg/L	64.7	IS 3025 Part 23, 2023
9	Iron	mg/L	0.28	IS 3025 Part 53, (reaf2019)
10	Sulphate	mg/L	20.5	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	24.8	IS 3025 Part 40, (reaf2019)
12	Magnesium as Mg	mg/L	10.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	20.8	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	4.2	IS 3025 Part 34, (reaf2019)



15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.8	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.2	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	3.6	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.8	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	6.5	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.11	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	0.08	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	1.0	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	80	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,



Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএস্‌ চাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড

एबीएनएस्‌ साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No: ABNS/EM/090125/13	Date: 01/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/082325/SW03 Sample Type: Grab Sample Source: LWQ-3 Up Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 23/08/2025 Analysis Start Date: 25/08/2025 Analysis End Date: 30/08/2025
Environmental Condition: Temperature: 25.7°C Relative Humidity: 65%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.58	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	237.2	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	5.0	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	156.0	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	12.5	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.54	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	68.5	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	46.2	IS 3025 Part 23, 2023
9	Iron	mg/L	0.22	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	16.4	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	12.3	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	5.2	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	18.7	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	1.2	IS 3025 Part 34, (reaf 2019)



15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	5.0	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.8	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	3.2	IS 3025 Part 44, 2023
19	Potassium	mg/L	0.8	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	6.0	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.18	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.5	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.4	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	Not Detected	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)



Authorized Signatory
ABNS Scientific Services



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এবীএনএছ চাইন্টিফিক চার্ভিচেস প্রাইভেট লিমিটেড

एबीएनएस साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No: ABNS/EM/090125/14	Date: 01/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/082325/SW04 Sample Type: Grab Sample Source: LWQ-4 Down Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 23/08/2025 Analysis Start Date: 25/08/2025 Analysis End Date: 30/08/2025
Environmental Condition: Temperature: 25.7°C Relative Humidity: 65%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	6.8	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	182.0	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	4.6	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	125.0	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	11.6	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	BDL	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	50.6	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	35.8	IS 3025 Part 23, 2023
9	Iron	mg/L	0.11	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	10.6	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	8.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	4.2	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	24.6	IS 3025 Part 17, 2022



14	Nitrate- Nitrogen	mg/L	2.2	IS 3025 Part 34, (reaf 2019)
15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	4.6	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	4.0	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	3.8	IS 3025 Part 44, 2023
19	Potassium	mg/L	1.22	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	5.4	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.05	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	1.2	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	BDL	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	50	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)



Authorized Signatory
ABNS Scientific Services,



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ চাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড
एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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TEST REPORT

Report No: ABNS/EM/091525/08	Date: 15/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/090625/SW01 Sample Type: Grab Sample Source: LWQ-1 Up Stream Umiyam River
Location: Umiyam River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 06/09/2025 Analysis Start Date: 08/09/2025 Analysis End Date: 13/09/2025
Environmental Condition: Temperature: 26.2°C Relative Humidity:67%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.61	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	302	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	5.2	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	196	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	14.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.28	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	70.6	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	62.4	IS 3025 Part 23, 2023
9	Iron	mg/L	0.16	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	12.4	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	26.5	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	10.4	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	28.6	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	1.8	IS 3025 Part 34, (reaf 2019)



15	Nitrite- Nitrogen	mg/L	BDL	<i>IS 3025 Part 34, (reaf 2019)</i>
16	Dissolved Oxygen	mg/L	8.2	<i>IS 3025 Part 38, raf 2019</i>
17	Chemical Oxygen Demand	mg/L	12.2	<i>IS 3025 Part 58, 2023</i>
18	Biochemical Oxygen Demand	mg/L	6.2	<i>IS 3025 Part 44, 2023</i>
19	Potassium	mg/L	7.1	<i>IS 3025 Part 45, (reaf 2019)</i>
20	Sodium	mg/L	8.6	<i>IS 3025 Part 45, (reaf 2019)</i>
21	Ammoniacal Nitrogen	mg/L	0.66	<i>IS 3025 Part 34, (reaf 2019)</i>
22	Phosphate as P	mg/L	0.7	<i>IS 3025 Part 31 Sec 1, 2022</i>
23	Sulphide	mg/L	BDL	<i>IS 3025 Part 29, 2022</i>
24	Arsenic	mg/L	BDL	<i>IS 3025 (Part 37), 2022</i>
25	Copper	mg/L	BDL	<i>IS 3025 (Part 42), reaf 2019</i>
26	Lead	mg/L	BDL	<i>IS 3025 (Part 47), reaf 2019</i>
27	Chromium	mg/L	BDL	<i>IS 3025 (Part 52), raf 2019</i>
28	Zinc	mg/L	0.5	<i>IS 3025 (Part 49), raf 2019</i>
29	Cadmium	mg/L	BDL	<i>IS 3025 (Part 41), 2023</i>
30	Nickel	mg/L	BDL	<i>IS 3025 (Part 45), raf 2019</i>
31	Manganese	mg/L	BDL	<i>IS 3025 (Part 59), 2023</i>
32	Total Coliform	/100ml	50	<i>IS 1622: 1981 (reaf: 2019)</i>

Note: The results relate to the parameter tested only. BDL: Below Detection Limit

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

For **ABNS Scientific Services**,



Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএছ সাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড

एबीएनएस् साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

H-152, Keteki Path, Padumbari, Jalukbari, Guwahati 781011, Assam

এইচ-১৫২, কেতেকী পথ, পদুমবারী, জালুকবারী, গুৱাহাটী ৬৮১০১১, অসম

Email: info@abnsscientific.com, abnsscientific@gmail.com

Phone: 98640 68513, 98640 89951

TEST REPORT

Report No: ABNS/EM/091525/09	Date: 15/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/090625/SW02 Sample Type: Grab Sample Source: LWQ-2 Down Stream Umiam River
Location: Umiam River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 06/09/2025 Analysis Start Date: 08/09/2025 Analysis End Date: 13/09/2025
Environmental Condition: Temperature: 26.2°C Relative Humidity: 67%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.22	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	285	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6.5	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	168	IS 3025 Part 16, raf2023
5	Chloride	mg/L	12.5	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	BDL	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	62.4	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	55.5	IS 3025 Part 23, 2023
9	Iron	mg/L	0.14	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	18.8	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	25.6	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	8.5	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	20.8	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	1.2	IS 3025 Part 34, (reaf 2019)



15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	7.2	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	10.4	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	5.8	IS 3025 Part 44, 2023
19	Potassium	mg/L	6.4	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	7.4	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.48	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	0.6	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	0.8	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	70	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,



ABNS
15.09.25

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএনএস্‌ চাইন্টিফিক সার্ভিসেস প্রাইভেট লিমিটেড

एबीएनएस्‌ साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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एइच्‌-१५२, केतेकी पथ, पदुमबारी, जालुकबारी, गुवाहाटी ७८१०११, असम

Email: info@abnsscscientific.com, abnsscscientific@gmail.com

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TEST REPORT

Report No: ABNS/EM/091525/10	Date: 15/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtraï Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/090625/SW03 Sample Type: Grab Sample Source: LWQ-3 Up Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 06/09/2025 Analysis Start Date: 08/09/2025 Analysis End Date: 13/09/2025
Environmental Condition: Temperature: 26.2°C Relative Humidity: 67%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.36	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	248	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	5	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	150	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	6.2	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.26	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	74	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	50	IS 3025 Part 23, 2023
9	Iron	mg/L	0.18	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	33	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	40	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	34	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	32	IS 3025 Part 17, 2022
14	Nitrate- Nitrogen	mg/L	0.8	IS 3025 Part 34, (reaf 2019)



15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf2019)
16	Dissolved Oxygen	mg/L	8.4	IS 3025 Part 38, raf2019
17	Chemical Oxygen Demand	mg/L	20	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	2.4	IS 3025 Part 44, 2023
19	Potassium	mg/L	7.4	IS 3025 Part 45, (reaf2019)
20	Sodium	mg/L	15.2	IS 3025 Part 45, (reaf2019)
21	Ammoniacal Nitrogen	mg/L	0.62	IS 3025 Part 34, (reaf2019)
22	Phosphate as P	mg/L	0.62	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf2019
28	Zinc	mg/L	0.4	IS 3025 (Part 49), raf2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	Not Detected	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For ABNS Scientific Services,



Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)

Authorized Signatory
ABNS Scientific Services



ABNS SCIENTIFIC SERVICES PRIVATE LIMITED

এবীএন্স চাইটিফিক চার্জিটেড প্রাইভেট লিমিটেড

एबीएन्एस साइंटिफिक सर्विसेस प्राइवेट लिमिटेड

(Meghalaya State Pollution Control Board recognised laboratory)

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Phone: 98640 68513, 98640 89951

TEST REPORT

Report No: ABNS/EM/091525/11	Date: 15/09/2025
Name & Address of the Customer: LAFARGE UMIAM MINING PVT LTD Nongtra Limestone Mines, Phalangharuh, Shella Confederacy, East Khasi Hills, Shella Meghalaya 793112, INDIA	Ref.: PO: 3960022674 Sample Description: Surface Water Sample ID: ABNS/GHY/090625/SW04 Sample Type: Grab Sample Source: LWQ-4 Down Stream Phlangkarue River
Location: Phlangkarue River	Sample Collected by: Mr. Nabajit Pathak (Sampler) Sampling Protocol: IS 17614 (Part 1): 2025 Sampling Date: 06/09/2025 Analysis Start Date: 08/09/2025 Analysis End Date: 13/09/2025
Environmental Condition: Temperature: 26.2°C Relative Humidity: 67%	

ANALYSIS RESULTS

Sl No	Parameters	Units	Results	Reference Methods
1	pH at 25°C	-	7.3	IS 3025 Part 11, 2022
2	Conductivity	µS/cm	402	IS 3025 Part 14, (reaf 2019)
3	Turbidity	NTU	6	IS 3025 Part 10, 2023
4	Total Dissolved Solids	mg/L	125	IS 3025 Part 16, raf 2023
5	Chloride	mg/L	10	IS 3025 Part 32, (reaf 2019)
6	Fluoride	mg/L	0.22	IS 3025 Part 60, (reaf 2019)
7	Total Hardness as CaCO ₃	mg/L	140	IS 3025 Part 21, (reaf 2019)
8	Total Alkalinity as CaCO ₃	mg/L	90	IS 3025 Part 23, 2023
9	Iron	mg/L	0.22	IS 3025 Part 53, (reaf 2019)
10	Sulphate	mg/L	47.6	IS 3025: Part 24: Sec 1: 2022
11	Calcium as CaCO ₃	mg/L	84	IS 3025 Part 40, (reaf 2019)
12	Magnesium as Mg	mg/L	56	IS 3025 Part 46, 2023
13	Total Suspended Solids	mg/L	36	IS 3025 Part 17, 2022



14	Nitrate- Nitrogen	mg/L	1.6	IS 3025 Part 34, (reaf 2019)
15	Nitrite- Nitrogen	mg/L	BDL	IS 3025 Part 34, (reaf 2019)
16	Dissolved Oxygen	mg/L	7.7	IS 3025 Part 38, raf 2019
17	Chemical Oxygen Demand	mg/L	12.6	IS 3025 Part 58, 2023
18	Biochemical Oxygen Demand	mg/L	2.6	IS 3025 Part 44, 2023
19	Potassium	mg/L	18	IS 3025 Part 45, (reaf 2019)
20	Sodium	mg/L	28.6	IS 3025 Part 45, (reaf 2019)
21	Ammoniacal Nitrogen	mg/L	0.68	IS 3025 Part 34, (reaf 2019)
22	Phosphate as P	mg/L	0.68	IS 3025 Part 31 Sec 1, 2022
23	Sulphide	mg/L	BDL	IS 3025 Part 29, 2022
24	Arsenic	mg/L	BDL	IS 3025 (Part 37), 2022
25	Copper	mg/L	BDL	IS 3025 (Part 42), reaf 2019
26	Lead	mg/L	BDL	IS 3025 (Part 47), reaf 2019
27	Chromium	mg/L	BDL	IS 3025 (Part 52), raf 2019
28	Zinc	mg/L	BDL	IS 3025 (Part 49), raf 2019
29	Cadmium	mg/L	BDL	IS 3025 (Part 41), 2023
30	Nickel	mg/L	BDL	IS 3025 (Part 45), raf 2019
31	Manganese	mg/L	BDL	IS 3025 (Part 59), 2023
32	Total Coliform	/100ml	60	IS 1622: 1981 (reaf: 2019)

Note: The results relate to the parameter tested only.

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

For **ABNS Scientific Services**,

Report reviewed by: Dr. Bidyut Jyoti Sarmah (TM)



Authorized Signatory
ABNS Scientific Services,

MEGHALAYA STATE POLLUTION CONTROL BOARD



mspcb

Book No. **108**.....

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Phone : 0364-2521533, 2521514, 2522726

10743

Sl. No.

**VEHICLE EMISSION TEST REPORT
 (DIESEL DRIVEN)**

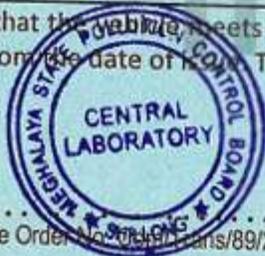
Date of testing : **11/07/25**.....

Certified that the exhaust emission of Vehicle No. **M 105 W 0620**.....

has been tested and the result is as under :-

Method of Test	Maximum Smoke Density			Result (Hartridge Smoke Unit)
	Light Absorption Co-efficient (l/m)	Bosch Units	Hartridge Unit	
a) For vehicles other than agricultural tractors : Full load at 60 to 70% of maximum engine rated rpm declared by the manufacturer. or	3.25	5.2	75	
Free acceleration for turbo charged engine or Free acceleration for naturally aspirated engine	2.45	--	65	45.2
b) For agricultural tractors 80% load corresponding to maximum power developed in PTO performance tests.	3.25	5.2	75	

Certified that the vehicle meets the emission standard and this certificate is valid for 6 (six) months from the date of issue. This Certificate is valid upto **11/01/2026**



JUNIOR SCIENTIFIC ASSISTANT
 Issuing Official
 Meghalaya State Pollution Control Board
 Shillong, Govt. of Meghalaya.

Authority vide Order No. 149/Trans/89/216/52 dt. 03/02/1990 of the Minister of Transport, Govt. of Meghalaya.

Ground water level results for the period Apr – Jun 2025 and Jul – Sep 2025

(Vibrating Wire Piezometer)

Location	Apr			May			Jun		
	Reading in Unit meter			Reading in Unit meter			Reading in Unit meter		
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
PWD Road (To the south west of the Mine)	47.72	50.20	49.19	50.04	52.42	51.04	52.38	55.08	54.01
Near Mine entry gate (To the South of the Mine)	49.64	52.68	51.02	52.56	54.64	52.95	54.58	55.34	55.30
Near Transit House (To the South East of the Mine)	47.40	51.08	49.01	50.92	52.86	51.32	52.78	54.06	53.65
Location	Jul			Aug			Sep		
	Reading in Unit meter			Reading in Unit meter			Reading in Unit meter		
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
PWD Road (To the south west of the Mine)	54.58	54.92	54.75	54.28	54.96	54.66	54.16	54.48	54.31
Near Mine entry gate (To the South of the Mine)	54.48	55.16	54.79	54.16	54.74	54.46	54.04	54.36	54.20
Near Transit House (To the South East of the Mine)	53.44	53.86	53.67	53.12	53.72	53.43	53.02	53.32	53.17