

**ENVIRONMENT CLEARANCE  
COMPLIANCE REPORT  
(October 2025 - March 2026)**

*For*

***GRANITE BUILDING STONE QUARRY  
Of***

**Shri. George Kochuparambil**

**Extent: 12.2987 Ha.**

Located at

Re Sy Nos. : 354/4, 354/5, 355/1pt,  
                  : 351/1pt, 350, 352/1pt  
Village : Manakkad  
Taluk : Thodupuzha  
District : Idukki  
State : Kerala

**EC No. 1137/EC/SEIAA/KL/2017 Dated: 17/03/2018  
EC Revalidated on 02/03/2023.**

**To,**

**The Deputy Director of Forests (c)**

MoEF, Inetgrated Regional office Kedriya Sadan,  
4th Floor, E&F Wings, 17th Main Road,  
Koramangala II Block, Bangalore - 560034

**Sub: Environmental Clearance Compliance Report for the period October 2025 – March 2026 pertaining to ‘Granite Building Stone Quarry of ‘Shri. George Kochuparambil’**

**Ref: Environmental Clearance No: 1137/EC/SEIAA/KL/2017, Dated 17/03/2018,  
EC Revalidated on 02/03/2023.**

Respected Sir,

For Granite Building Stone Quarry of ‘Shri. George Kochuparambil EC was obtained vide No. 1137/EC/SEIAA/KL/2017, dated 17.03.2018 and the same was renewed on 02.03.2023 under same file No. with some additional specific conditions.

As per the conditions of above referred Environmental Clearance (EC), please find enclosed compliance report for the period from October-2025 to March-2026 for ‘Granite Building Stone Quarry of Shri. George Kochuparambil’. Also enclosed relevant Annexures in Support of the compliance report for your perusal and record please. A soft copy of the same is sent by email for your record and perusal.

We hope you will find the attached Status Report in Order.

Thanking you,

Yours truly,

For ‘Granite Building Stone Quarry of Shri. George Kochuparambil’



**George Kochuparambil  
(Managing Director)**

Encl: as above

Cc: The Member Secretary  
State Environment Impact Assessment Authority SEIAA)  
Directorate of Environment & Climate Change  
4th Floor, KSRTC Bus Terminal, Thampanoor,  
Kerala-01

## **Introduction**

Sri. George Kochuparambil, Kochuparambil house, Vazhithala Post, Thodupuzha Taluk, Idukki District, Kerala-685583 has been granted for a mining lease to quarry Granite Building Stone over an area of 12.2987 Ha. in Re-Sy Block No.11, Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt of Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala State vide order No: 451/2018-19/890/M3/2017/DMG dated 01.10.2018 for a period of 12 years from 04.10.2018 to 03.10.2030.

The Environmental clearance is also obtained for this mining lease vide letter no 1137/EC/SEIAA/KL/2017, Dated: 17/03/2018, for 05years with a maximum production of 4,00,000 MTPA. Then, the validity of EC is extended for the project life of 16 years from the date of original EC (i.e.17.03.2018) Vide letter no. 1137/EC/SEIAA/KL/2017 dated 02.03.2023.

The lease is located on the slope of the area gently dipping towards NE. The highest elevation in this area is 145m above MSL and the lowest elevation is 35m above MSL. This granite building stone quarry is located at 6.0 Kms from Manakkad Village in Thodupuzha Taluk. It is at a distance of 10.6 Kms by road from Thodupuzha town. It can be reached from Vazhithala - Parakkadavu Road.

**Description of the project**

File No.	1137/EC/SEIAA/KL/2017
Name of the project	Granite Building Stone Quarry (Minor Mineral) of Mr. George Kochuparambil
District and state	: Idukki, Kerala
Taluk / Mandal	: Thodupuzha
Village	: Manakkad
Category & Schedule	B1 & Schedule 1(a)
Khasara No. / Plot No. / Block / Gate No. etc.,	: Re-Sy Block No.11, Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt.
Extent of Area	12.2987 Ha
Ownership / Occupancy	: Private Land
Existence of public road/railway line, if any, nearby and approximate distance Nearest Port / Airport	: The nearest railhead – Piravam Road (30 Kms) and Nearest airport – Cochin International Airport (48 Kms) from the mine.
Latitude & Longitude	: N - 09°53'32.72" to N - 09°53'48.09" E - 76°38'21.51" to E - 76°38'36.07"
Address of Registered office	Sri. George Kochuparambil, Kochuparambil house, Vazhithala-Post, Thodupuzha Taluk, Idukki District Pincode: 685 583. E-mail: - <a href="mailto:unitedgranitesandmetals@gmail.com">unitedgranitesandmetals@gmail.com</a> Website: - <a href="http://www.unitedgranitesandmetals.in">www.unitedgranitesandmetals.in</a>

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Compliance Status of the Specific & General Conditions for this Project Laid down by the State Level Environment Impact Assessment Authority, Kerala vide Environment Clearance No.56/2018, Dated:17/03/2018 & EC Revalidation Order No. 1137/EC/SEIAA/KL/2017, dated on. 02-03-2023.

**Specific Condition as per letter No. 1137/EC/SEIAA/KL/2017, Dated:17.03.2018**

Sl. No.	Condition	Status of Compliance
1	If any rare, endemic and threatened plant species are noticed, they shall be properly protected in-situ or transplanted to a suitable site inside the lease area.	The identified endemic species have been safeguarded and relocated to a designated area selected for their continued growth and protection.

**Additional Specific Conditions as per letter No. 1137/EC/SEIAA/KL/2017, Dated: 02.03.2023**

Sl. No.	Condition	Status of Compliance
1	The buffer zone should be maintained with a uniform width of 7.5m and it should be used for developing and maintaining thick green belt.	A uniform 7.5 m buffer zone is being maintained around the quarry and developed with a thick green belt.
2	The garland canal, silt traps and overflow channel should be maintained periodically by cleaning and desilting and geo-tagged photographs of the process should be included in the half yearly compliance report.	The garland canal, silt traps and overflow channels are well maintained and cleaned regularly. Geo-tagged photographs are attached as <b>Annexure-01</b> .

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3	The impact of vibration due to blasting on the nearest houses and other built structures should be monitored in terms of Peak Particle Velocity and amplitude for a maximum charge per delay and included in the Half Yearly Compliance Report.	Ground vibration due to blasting on the nearest houses and other structures is regularly monitored and the record of the peak particle velocity are within the permissible limit of DGMS guidelines. The Blast Induced Ground Vibration Study report is enclosed as <b>Annexure – 25</b> .
4	NONEL short delay detonator may be used for initiation.	NONEL short delay detonator are used for blasting.
5	Blasts should be conducted by a blasters or mining mate certificate holder	Blasting operations are supervised and controlled by personnel holding a statutory certificate issued by DGMS.
6	To restrict fly rock within 10m, muffling arrangements should be made.	Muffling arrangements are made to contain fly rock.
7	In wake of occurrence of large-scale landslides in the state, as per the information provided by the Department of Mining and Geology, it is directed to use only NONEL for blasting to reduce the vibration of the ground, which is one of the causative factors that triggers landslides, formation of cracks in the surrounding buildings and disturbance to human and wild life.	NONEL are used to minimize ground vibrations and thereby reduce the risk of landslides, structural damage, and disturbance to human life and wildlife.
8	Blasting mats should be used during rock blasting to contain the blast, prevent fly rocks and suppress dust.	Blasting mats are being used during rock blasting operations to contain the blast fly rock, and suppress dust generation.  The photograph of the blasting mat is attached as <b>Annexure – 02</b> .

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9	The violation of EC condition may lead to cancellation of EC and action under The Environment (Protection) Act, 1986.	Noted.
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**General Conditions**

<b>Sl. No.</b>	<b>Condition</b>	<b>Status of Compliance</b>
<b>1</b>	Rainwater harvesting facility should be installed as per prevailing provisions of KMBR/KPBR, unless otherwise specified.	The rainwater harvesting facility has been installed. Photographs of the rainwater harvesting ponds are provided in <b>Annexure-03</b> .
<b>2</b>	Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.	The Environment Monitoring Cell has been formed and functioning. Recent Meeting minutes are enclosed as <b>Annexure-04</b> .
<b>3</b>	Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including approach roads and internal roads.	Suitable avenue trees have been planted along both sides of the tarred road, including approach and internal roads, as well as in open parking areas. Geo-tagged photographs of the avenue plantation are enclosed as <b>Annexure – 05</b> .
<b>4</b>	Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.	The project has adopted solar energy generation and utilization to the maximum extent possible. Photographs of installed solar lights are provided in <b>Annexure – 06</b> .
<b>5</b>	Sprinklers shall be installed and used in the Project Site to contain dust emissions.	Water sprinkling arrangements are made and are in regular use to contain the dust emission at the project site. Photos of the water sprinklers and water tanker with sprinkler are attached as <b>Annexure-07</b> .
<b>6</b>	Eco-restoration, including the Mine Closure Plan shall be done at the own cost of the Project Proponent.	Agreed.
<b>7</b>	At least 10 per cent of total excavated Pit area should be retained as water storage area	During the closure of the mine, a minimum of 10% of the total excavated pit area will

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	and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco- friendly, if no other specific condition on reclamation of the Pit is stipulated in the EC.	be preserved as a water storage area, and rest will be reclaimed with indigenous, eco-friendly plant species.
<b>8</b>	Corporate Social Responsibility (CSR) agreed upon by the Proponent should be implemented.	Various Corporate Social Responsibility (CSR) activities have been undertaken, and the list of these activities carried out during this period is attached as <b>Annexure – 22</b> .
<b>9</b>	The Lease area shall be fenced off with barbed wires to a minimum height of 4 ft around, before starting of Mining. All the boundary indicators (boards, stores, markings, etc.) shall be protected at all times and shall be conspicuous.	The entire lease area has been fenced and pillars are erected to indicate the boundaries and sign boards are installed at the prominent location. Photographs are attached as <b>Annexure-08</b> .
<b>10</b>	Warning alarms indicating the time of Blasting(to be done at specific timings) has to be arranged as per stipulations of the Explosives department.	Warning siren is installed and blown before and after blasting to indicate the blasting and Sign boards indicating blast timing have been installed at prominent location. Photographs of the warning siren and safety board displaying blasting timings are attached as <b>Annexure - 09</b> .
<b>11</b>	Control measures on noise and vibrations prescribed by KSPCB should be implemented.	The following control measures have been implemented to reduce noise and vibrations as prescribed by KSPCB: <ul style="list-style-type: none"> <li>• Controlled blasting techniques are used, including NONEL detonators.</li> <li>• Sharp drilling bits are used, along with proper compressed air supply and regular maintenance of equipment such as compressors, excavators, jackhammers, and tipper trucks.</li> <li>• Noise levels are regularly monitored in both the core zone and buffer zone of the mining lease area. Recent Monitoring reports are attached as <b>Annexure 17</b>.</li> </ul>

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<b>12</b>	Quarrying activities should be limited to daytime as per KSPCB guidelines/specific conditions.	The quarrying activities are carried only in day light as per KSPCB guidelines. Signboard photographs are attached as <b>Annexure 8.</b>
<b>13</b>	Blasting should be done in a controlled manner as specified by the regulations of the Explosives department or any other concerned agency.	Controlled blasting is being carried out by using NONELs to reduce the ground vibration, as specified by the regulations of the Explosives department
<b>14</b>	A licensed person should supervise/control the Blasting Operations	Blasting operations are supervised and controlled by personnel holding a statutory certificate issued by DGMS.
<b>15</b>	Access roads to the quarry shall be tarred to contain dust emission that may arise during the transportation of material.	The access roads to the quarry are tarred (blacktop) so that dust does not spread during transportation of materials. Photos of access road is attached as <b>Annexure- 11.</b>
<b>16</b>	Overburden materials should be managed within the site and used for reclamation of Mine Pit as per Mine closure Plan/specific conditions	Overburden is dumped at a designated location and will be utilized for mine pit reclamation as per the Mine Closure Plan, as required. Photographs are attached as <b>Annexure 24.</b>
<b>17</b>	Height of Benches should not exceed 5 M and width should not be less than 5 M, if there is no mention in the Mining Plan/specific conditions	Bench height and width are maintained as per approved mining plan. Photographs of the site are attached as <b>Annexure – 19.</b>
<b>18</b>	Mats to reduce fly rock blast to a maximum of 10 PPV should be provided	Mats are used during blasting to reduce fly rocks. Photographs are attached as <b>Annexure 2.</b>
<b>19</b>	Maximum depth of mining and general ground level at site shall not exceed 10m	Mining operations are carried out as per the approved mining plan. The maximum depth of mining and the general ground level at the site is restricted to 10m.
<b>20</b>	No mining operation should be carried out at place having a slope greater than 45 <sup>0</sup>	No mining operations are carried out in the area where slope is greater than 45 <sup>0</sup>
<b>21</b>	Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow bricks envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.	Acoustic enclosures have been provided to reduce sound amplification, with the development of green belt and use of hollow brick enclosures for crushers.

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<b>22</b>	The workers on the site should be provided with the required protective equipment such as ear muffs helmet, etc.	Personal Protective Equipment (PPE), like ear muffs, helmets, and other necessary safety gear, has been provided to all workers on the site.
<b>23</b>	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	Garland drains with clarifiers have been installed to channelize stormwater. Photograph of the garland drain is attached as <b>Annexure-01</b> .
<b>24</b>	The transportation of minerals should be done in covered trucks to contain dust emissions.	The trucks are covered with tarpaulin during mineral transportation to contain dust emission.
<b>25</b>	The proponent should plant trees at least 5 times the loss that has been occurred while clearing the land for the project.	Plantation is being carried out by the project proponent in compliance with the EC condition. Photographs of the plantation activities are attached as <b>Annexure – 18</b> .
<b>26</b>	Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.	Used oil from the diesel engines is utilized as a lubricant for drilling equipment, while the remaining oil is stored in the designated area and will be sold to authorized dealers.
<b>27</b>	Explosives should be stored in magazines in isolated place specified and approved by the Explosive Department.	Explosives are being stored in magazine approved by the Explosives Department, in strict compliance with statutory safety requirements. The Magazine license is attached as <b>Annexure-12</b> , and photos of the magazines are provided in <b>Annexure-20</b> .
<b>28</b>	A minimum buffer distance of 100 M from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.	There are no dwelling units or other structures situated within 100m of the quarry boundary.
<b>29</b>	100 M buffer distance should be maintained from forest boundaries	The mining area is not located near any forest boundaries.
<b>30</b>	Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.	Consent from the Kerala State Pollution Control Board under the Water and Air Act(s) has been obtained prior to the initiation of mining activities. A copy of the KSPCB consent is attached as <b>Annexure-13</b> .
<b>31</b>	All other statutory clearances should be obtained, as applicable, by project	All other statutory clearances, including the Panchayat license, have been obtained

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	proponents from the respective competitive authorities including that for blasting and storage of explosives.	as required for the project. Copy of the Panchayath License is attached as <b>Annexure – 14.</b>
<b>32</b>	In the case of any change(s) in the scope of the Project, extent, quantity, process of mining technology involved or in any way affecting the environment parameters/impacts as assessed, based on which only the EC is issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority.	Agreed.
<b>33</b>	The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the Environmental Clearance under provisions of the Environment (Protection) Act,1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Agreed
<b>34</b>	The stipulations by the Statutory Authorities under different Acts and Notifications should be complied with including the provisions of the Water (Prevention and control of Pollution) Act,1974, the Air (Prevention and control of Pollution) Act1981, the Environment (Protection) Act,1986, the Public Liability (Insurance) Act,1991 and EIA Notification,2006	Agreed
<b>35</b>	The project proponent should advertise in at least 2 newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the Project has been accorded Environment Clearance and the copies of the Clearance letters are available with the State	Advertisements were published in two newspapers: <ol style="list-style-type: none"> <li>1. The Hindu Daily (English) on 12/04/2018</li> <li>2. Kerala Kaumudy (Malayalam) on 12/04/2018</li> </ol> Copies of the published advertisements

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	Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at www.seiaakerala.org. The advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same signed in all the pages should be forwarded to the Office of this Authority as confirmation	are attached as <b>Annexure-15.</b>
<b>36</b>	A copy of the clearance letter shall be sent by the proponent to the concerned Gram Panchayat/District Panchayat/Municipality/Corporation/Urban local Body and also to the Local NGO, if any from whom suggestions/representations, if any were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.	A copy of the Environmental Clearance letter has been provided to the Manakkad Panchayat. Copy of Panchayat license attached as <b>Annexure-14.</b>
<b>37</b>	The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective regional office of the MOEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office	Half-yearly compliance reports are being submitting on the status of EC conditions, including monitored data, in hard copy and by email, and uploaded the same on the project website with periodic updates, while simultaneously submitting it to the Regional Office of MoEFCC, Government of India, and the SEIAA. Monitoring reports are attached as <b>Annexure-17.</b>
<b>38</b>	The details of Environment Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times Roman font of size not less than 40. Sign board with extent of Lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public	The details of the Environmental Clearance are prominently displayed on a board as stipulated. Photo of the board displaying EC details are provided in <b>Annexure-10</b>

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<p><b>39</b></p>	<p>The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.</p>	<p>Notarized affidavit confirming adherence to all EC conditions has been submitted copy attached as <b>Annexure – 21</b>.</p>
<p><b>40</b></p>	<p>No change in mining technology and scope of working should be made without prior approval of the SEIAA. No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.</p>	<p>Prior approval from the SEIAA will be sought in case of change of mining technology or scope of working.</p>
<p><b>41</b></p>	<p>The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.</p>	<p>There are no natural water courses or first order streams within the mining lease area thus, no obstruction has occurred due to mining operations.</p>
<p><b>42</b></p>	<p>Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points &amp; transfer point to reduce fugitive emissions.</p>	<p>Monitoring of Ambient Air Quality is carried out periodically as per CPCB norms. Monitoring photos are attached as <b>Annexure – 16</b> and monitoring reports are enclosed as <b>Annexure – 17</b>. Regular water sprinkling is undertaken at key locations to control fugitive dust emissions.</p>
<p><b>43</b></p>	<p>The top soil, if any, shall be temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The Over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8 m and the width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo-textiles shall be undertaken for stabilization of the dump. The entire excavated area should continue</p>	<p>The topsoil generated during mining operations is stored in designated area and being used for afforestation, greenbelt development. and planting locally available shrubs and grasses to prevent erosion and surface runoff. The overburden generated during mining operation are being dumped in the designated area as per the approved mine plan and the dump parameters are maintained. Photographs are attached as <b>Annexure 24</b>.</p>

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	until the vegetation becomes self-sustaining	
<b>44</b>	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development, etc. The drains shall be regularly de silted particularly after monsoons and maintained properly	Catch drains have been constructed around the mining workings, and the runoff water is directed to siltation ponds and subsequently to the Rainwater Harvesting Ponds. Water from the RWHP is utilized for dust suppression, road maintenance, and green belt development. Drains are regularly de-silted, especially post-monsoon, and are properly maintained. Photos of Garland Drains and RWHP are attached as <b>Annexure – 01</b> and <b>Annexure – 03</b> .
<b>45</b>	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading points and transfer points-it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Water sprinkling arrangements have been provided in critical areas prone to air pollution, such as haul roads, loading and unloading points, and transfer points, using mobile water sprinklers and mist sprinklers. Photographs are attached as <b>Annexure – 07</b> . Ambient air quality is monitored regularly to ensure conformity with the norms prescribed by the Central Pollution Control Board. Ambient air quality Monitoring photos are attached as <b>Annexure – 16</b> and monitoring reports are enclosed as <b>Annexure – 17</b> .
<b>46</b>	Fugitive dust emissions from all sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and transfer points should be provided and properly maintained.	Water sprinkling arrangements have been made on haul roads, loading and unloading and transfers points to control dust during vehicle movement and are being properly maintained to control fugitive dust emissions.
<b>47</b>	Measures should be taken for control of noise levels below 85 dB (A) in the work environment.	Proper measures are taken for noise control by using PPEs and proper maintenance of machineries to ensure noise levels remains well within the permissible limits.
<b>48</b>	A separate environmental management cell with suitable qualified personnel should be	An Environmental Management Cell has been established and is fully functional.

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	set up under the control of a senior executive, who will report directly to the head of the Organization.	The details of the Environmental Monitoring Cell and meeting minutes are attached as <b>Annexure – 4.</b>
<b>49</b>	The funds earmarked for environment protection measures and CSR activities should be kept in a separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.	Agreed. Details of CSR activities are attached as <b>Annexure 22.</b>
<b>50</b>	The Regional Office of MOEF and CC located in Bangalore shall monitor compliance of the stipulated conditions. The Project authorities should extend full cooperation to the Officer(s) if the Regional Office by furnishing the requisite data/information/monitoring reports	Agreed
<b>51</b>	Any appeal against the Environment Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Agreed
<b>52</b>	Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under provisions of the Environment (Protection) Act, 1986.	Agreed
<b>53</b>	The Regional Office of MOEF and CC located in Bangalore shall monitor compliance of the stipulated conditions. The Project authorities should extend full cooperation to the Officer(s) if the Regional Office by furnishing the requisite data/information/monitoring reports	Agreed
<b>54</b>	The above conditions shall prevail notwithstanding anything to the contrary, inconsistent or simplified, contained in any other permit, license or consent given by any other authority for the same project.	Agreed

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<b>55</b>	The order is valid for a period of 5 years of the expiry date of Mine lease period issued by the Government of Kerala, whichever is earlier	Noted
<b>56</b>	The Environment Clearance will be subject to the final order of the courts in any pending litigation related to the land or the project, in any court of law.	Agreed
<b>57</b>	The Mining operations shall be restricted to above ground water table and it should not intersect ground water table.	Mining operations are being carried out above the ground water table and will not intersect the Ground water table.
<b>58</b>	All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution checking center. Washing of all vehicles shall be inside the Lease area	It is ensured that all vehicles used for transportation within the mine and for other operations have valid PUC certificates from authorized pollution checking centers. Vehicle washing is carried out within the lease area.
<b>59</b>	Project proponent should obtain necessary prior permission of the competent authorities for drawl of necessary quantity of surface and ground water for the project.	No surface or ground water are extracted for dust suppression or any other activities. The primary water source for the project is from Rainwater Harvesting Ponds located within the mining lease area. Photos of the Rainwater Harvesting Ponds are attached as <b>Annexure – 03</b> .
<b>60</b>	Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six-monthly reports to SEIAA	No perennial nallah flows through the lease or exist around the Mine Lease.
<b>61</b>	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	All employees are covered under health insurance. Copy attached as <b>Annexure 23</b> .

**For Granite Building Stone Quarry of Sri. George Kochuparambil**



**George Kochuparambil.**

**Managing Director**

Date: 23-05-2026.

**Annexure-1**  
**GARLAND DRAINS & SILT SETTLING  
TANKS**



Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89617661°

Local 11:41:19 AM  
GMT 06:11:19 AM

Longitude  
76.64081346°

Altitude 65 meters  
Thursday, 05.03.2026

GPS Map  
Camera Lite







**Annexure-2**  
**BLASTING MATS**



**Annexure-3**  
**RAINWATER HARVESTING PONDS**



**Annexure-4**  
**EMC MEETING MINUTES**

Minutes of the 35<sup>th</sup> meeting of the Environment  
Monitoring Committee held on 18 Nov, <sup>2025</sup> at 11 AM.

Minutes of the 34<sup>th</sup> meeting reviewed.

The haulage road at Eastern side of  
lease is widened wherever there are no trees.  
This will facilitate passing of vehicles.

Drainage at North side has to be diverted  
'U' sections are to be placed.

Bench identification boards are to be  
made and placed.

#### New Points

Mr. Sunesh Kumar Adapa, Scientist 'E' from  
MoEF Bengaluru inspected our quarry on  
14.10.2025. He has given a Certified Compliance  
Report (CCR) dated 29.10.2025 which is elaborate  
and reflects his appreciation on our workings.

As per directive of MoEF, Bengaluru  
we our employees sang 'Vande Mataram' and  
the video is sent to MoEF.

Also tree plantation <sup>photos</sup> ~~photos~~ are  
also submitted. Tree plantation is our regular  
activity during rainy season.

A trap door is constructed in the  
outflow side of the Rain Water Harvesting Pond  
No. 1 to contain the water for settling. Once  
the water is clear, we open the trap door and  
allow excess water if any to flow out.






Under the CSR Scheme, we propose  
to construct a 'Buds School' for differently  
abled children of the Panchayat. Estimated  
cost is about 85 Lakhs. Manakkhad Panchayat  
has demarcated 25 cents of land for this.


A Bus Shelter (waiting shed) is constructed at Arikuzha junction on Ramamangalam - Thathupuzha Road. Also two mirrors (convex) are fixed for drivers safety.

We presented a computer to Kolady LP school and also laptop to Arikuzha LP school.

Water mist arrangement is done at South side of the quarry erecting of new towers, new pipelines, sprinklers etc.

#### Members

1. Mr. Bandy D. Banose 
2. Mr. Joseph K.V 
3. Mr. Prasanth P.P 
4. Mr. Tommy George 
5. Mr. John Peter 

  
(Sam Jose)  
Head of Committee.

Minutes of the 36<sup>th</sup> meeting of the Environment

Monitoring Committee held on 18 Feb 2026 at 3:30 PM

Minutes of the 35<sup>th</sup> meeting is reviewed.

Garland drain at north side of lease is diverted. concrete pipes and 'U' sections are used and is properly graduated. Concrete slabs are spread <sup>over</sup> where the vehicles and equipments have to pass.

#### New Points

Public hearing for new lease is conducted at Vazhithala (Wall of Kananip Church) on 31-12-2025 at 11:00 AM

Garland drains are to be made around the proposed extension (new) lease. We are discussing with some consultants on this matter.

Grass to be planted at slopes of the top soil dump.

Due to summer heat lot of trees are shedding leaves. So sweeping/cleaning has to be intensified.

It is proposed to plant flowering plants near to the crusher.

Haulage road from our premises to the public road is full of trees. The small branches obstructing vehicle movement are to be cut in an arch shape to beautify the road.

A new water tank is being fabricated at top of lease. This will increase the water supply to the water mist system around lease.

It is decided to operate a 2<sup>nd</sup> water sprinkler from 10:00 AM to suppress dust.

The roof of the house of Mr. John Chamamankummal is replaced with steel structures and sheets. The floor also is tiled. The house is in Kolady close to our premises.

Direction of storm water in rainy season has to be planned now and overland drains are to be prepared at the earliest.

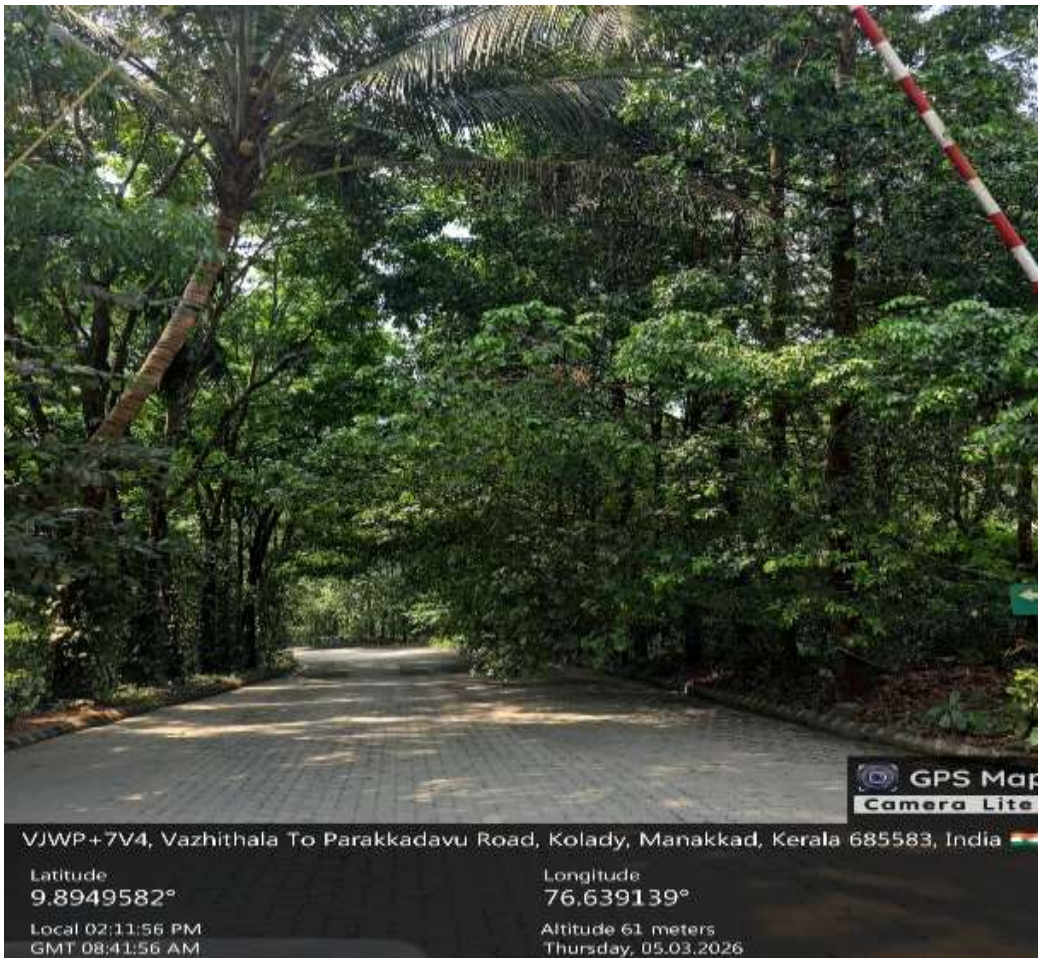
#### Members

1. Mr. Baly. P. Parlose
2. Mr. Joseph K.Y
3. Mr. Prasanth P.P.
4. Mr. John Peter

*[Signature]*  
*[Signature]*  
*[Signature]*

*[Signature]*  
 (Somu Jose)  
 Head of Committee.

**Annexure-5**  
**AVENUE PLANTATION**



**Annexure-06**  
**SOLAR LIGHTS**



**Annexure-07**  
**WATER SPRINKLERS**



Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89588434°

Local 12:15:56 PM  
GMT 06:45:56 AM

Longitude  
76.64163169°

Altitude 55 meters  
Thursday, 05.03.2026

GPS Map  
Camera Lite







**Annexure-08**

**FENCING, BOUNDARY PILLARS &  
SIGN BOARDS**



GPS Map  
Camera Lite

VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.893561°  
Local 11:55:33 AM  
GMT 06:25:33 AM

Longitude  
76.64201577°  
Altitude 104 meters  
Thursday, 05.03.2026



GPS Map  
Camera Lite

VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89391894°  
Local 11:56:44 AM  
GMT 06:26:44 AM

Longitude  
76.6422068°  
Altitude 101 meters  
Thursday, 05.03.2026



VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India 🇮🇳

Latitude	Longitude
9.89358083°	76.64205001°
Local 11:55:53 AM	Altitude 104 meters
GMT 06:25:53 AM	Thursday, 05.03.2026



VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India 🇮🇳

Latitude	Longitude
9.89351778°	76.64195963°
Local 11:55:04 AM	Altitude 104 meters
GMT 06:25:04 AM	Thursday, 05.03.2026









GPS Map  
Camera Lite

VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89567535°

Longitude  
76.63963074°

Local 12:25:35 PM  
GMT 06:55:35 AM

Altitude 77 meters  
Thursday, 05.03.2026



GPS Map  
Camera Lite

VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.895315°

Longitude  
76.6395283°

Local 12:25:17 PM  
GMT 06:55:17 AM

Altitude 77 meters  
Thursday, 05.03.2026



GPS Map  
Camera Lite

Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89572029°

Longitude  
76.64176758°

Local 11:44:11 AM  
GMT 06:14:11 AM

Altitude 57 meters  
Thursday, 05.03.2026



GPS Map  
Camera Lite

Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89615931°

Longitude  
76.64087156°

Local 11:42:19 AM  
GMT 06:12:19 AM

Altitude 55 meters  
Thursday, 05.03.2026

**Annexure-09**

**WARNING SIREN, BOARD  
INDICATING BLASTING TIMINGS AND  
BLASTING SHELTER**





VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583,  
India

Latitude

9.893641666666667°

Longitude

76.641835°

Local 11:57:40 AM

GMT 06:27:40 AM

Altitude 104 meters

Thursday, 05.03.2026

**Annexure-10**  
**BOARD INDICATING EC DETAILS**



**Annexure-11**  
**ACCESS ROAD**



GPS Map  
Camera Lite

VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.8948116°

Longitude  
76.63815214°

Local 02:12:40 PM  
GMT 08:42:40 AM

Altitude 46 meters  
Thursday, 05.03.2026



GPS Map  
Camera Lite

VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89551377°

Longitude  
76.63931687°

Local 02:07:18 PM  
GMT 08:37:18 AM

Altitude 77 meters  
Thursday, 05.03.2026



**Annexure-12**  
**MAGAZINE LICENSE**



भारत सरकार | Government of India  
वाणिज्य और उद्योग विभाग | Ministry of Commerce & Industry  
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो) | Petroleum & Explosives Safety Organisation (PESO)  
पूर्व नाम: विस्फोटक विभाग | Formerly: Department of Explosives  
A और D - विंग, ब्लॉक 1-8, दूसरा तल, शास्त्री भवन | A & D - Wing, Block 1-8, 2nd Floor, Shastri Bhawan  
26 हाड्डेराग रोड, नुंगम्बळ्कम चेन्नई 600006  
फोन (Phone): 28285023 | फैक्स (Fax): 28284848

संख्या (No.): E/SC/KL/22/1730(E72220)

दिनांक (Date): 11/06/2024

सेवा में | To,

Shri GEORGE KOCHUPARAMBIL,  
KOCHUPARAMBIL HOUSE, VAZHITHALA P.O, THODUPUZHA, IDUKKI DISTRICT, TamilNadu - VAZHITHALA,  
District-Idukki, State-Kerala, Pincode - 685563

विषय: Survey No.359, Block No. 11, ग्राम Manakkadu (v), Thodupuzha Taluk, जिला IDUKKI, राज्य Kerala में मैगर्स Shri GEORGE KOCHUPARAMBIL द्वारा विस्फोटक के मैगज़ीन में उपयोग के लिए कक्षा हेतु विस्फोटक विधम, 2008 के अंतर्गत LE-3 में जारी अनुमति सं E/SC/KL/22/1730(E72220) के संशोधन संदर्भ में।  
(प्रधिकृत अधिकारी / अतिथता में परिवर्तन)

Subject: Possession for Use of Explosives from magazine situated at Survey No.-359, Block No. 11, Manakkadu (v), Thodupuzha Taluk, Dist. IDUKKI, Kerala -Licence No.- E/SC/KL/22/1730(E72220) granted in Form LE-3 of Explosives Rules, 2008 -  
(Change in Authorized Signatory/Occupier).

संदर्भ: सं,।

आपका उल्लेख निम्न पर संख्या 123213 दिनांक 11/06/2024 का संदर्भ प्रदान करें।  
Please refer to your letter no. 123213 dated 11/06/2024.

अनुमति संख्या E/SC/KL/22/1730(E72220) प्रधिकृत अधिकारी / अतिथता में परिवर्तन के संदर्भ में यथा संशोधित कर भेजी जा रही है।  
The Licence No.- E/SC/KL/22/1730(E72220) is forwarded herewith duly amended in respect of followings :

Change in Authorized Signatory/Occupier

साइंस रिकॉर्ड में प्रधिकृत अधिकारी / अतिथता के नाम इस प्रकार हैं।

The following are the names of the Authorized Signatory/Occupier in the licence records.

क्र. सं.   No.	नाम   Name
1)	Shri.GEORGE KOCHUPARAMBIL, (Authorized Signatory)
2)	Shri.GEORGE KOCHUPARAMBIL, (Occupier)

किसी भी एक समय में साइंस क्षमता निम्नलिखित वर्ग तथा मात्रा से अधिक नहीं होगी।

The licence capacity at any one time shall not exceed the kinds and quantities mentioned below :

संख्या No.	विस्फोटक Explosive(s)	वर्ग Class	प्रभाग Div.	उप-प्रभाग Sub Div.	क्षमता Capacity	इकाई Unit
1	Ordinary/Electric/Non Electric Detonators	6	3	0	10000	Nos.
2	Safety Fuse	6	1	0	3000	Mtrs
3	Nitrate Mixtures	2	0	0	400	Kg.

किसी एक कैलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा (अनुच्छेद 3 (ख) और (ग) के अधीन अनुमति के लिए लागू) : 20 गुना  
Quantity of explosives to be purchased in a calendar month (applicable for licence under article 3(b) and (c)) : 20 times as above.

यह अनुमति दिनांक 31 मार्च 2027 तक प्रवृत्त रहेगी।

This Licence shall remain valid till 31st day of March 2027.

अनुमति के आगामी नवीकरण हेतु कृपया विस्फोटक विधम, 2008 के नियम 112 के अंतर्गत प्रक्रिया का पालन करें। कृपया धन्यते दें।

For further revalidation (if required), please follow the procedure under Rule 112 of Explosives Rules, 2008. Receipt of this letter may please be acknowledged.

भवदीय | Your's faithfully

(डा. टी. एल. थानुलिंगम) | Dr. T. L. THANULINGAM

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives

दक्षिणवर्ग, चेन्नई | South Circle, Chennai

प्रतिलिपि प्रेषित | Copy Forwarded to:

- उप मुख्य विस्फोटक नियंत्रक कोचि  
The Dy. Chief Controller of Explosives, Kochi
- District Magistrate, IDUKKI, Kerala with reference to his No: E2-50676/12/K.Dia Dated: 30/11/2013
- Superintendent of Police, IDUKKI, Kerala.

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives  
दक्षिणवर्ग, चेन्नई | South Circle, Chennai

(अधिक जानकारी के लिए आवेदन को मिली, मुद्रक आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)  
(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

Note :- This is system generated document does not require physical signature. Applicant may take printout for their

records.

अनुज्ञापि प्ररूप एल. ई.-3 | LICENCE FORM LE-3  
(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) से (घ) देखिए।)  
(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)

(ग) उपयोग के लिए एक समय पर वर्ग 1, 2, 3, 4, 5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखने के लिए अनुज्ञापि  
Licence to possess : (c) for use/explosives of class 1, 2,3,4,5,6 or 7 in a magazine

अनुज्ञापि सं. (Licence No.) : E/SC/KL/22/1730(E72220)

वार्षिक फीस रुपए (Annual Fee Rs): 2400/-

1. Licence is hereby granted to

Shri GEORGE KOCHUPARAMBIL (अधिभोगी / Occupier : Sri GEORGE KOCHUPARAMBIL), KOCHUPARAMBIL HOUSE, VAZHITHALA P.O, THODUPUZHA, IDUKKI DISTRICT, Town/Village - VAZHITHALA, District-IDUKKI, State-Kerala, Pincode - 685583



को अनुज्ञापि अनुदत्त की जाती है।

2. अनुज्ञापिधारी की प्राप्ति (Status of licence) : Proprietorship Firm

3. अनुज्ञापि निम्नलिखित प्रयोजनों के लिए विधिमाम्य है।

Licence is valid only for the following purpose.

possess for use of Ordinary/Electric/Non Electric Detonators, Safety Fuse, Nitrate Mixture, - के उपयोग के लिए

4. अनुज्ञापि विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमाम्य है।

Licence is valid for the following kinds and quantity of explosives: - (क) (a)

क्र. सं. (Sr. No.)	नाम और विवरण (Name and Description)	वर्ग और प्रभाग (Class & Division)	उप-प्रभाग (Sub-division)	मात्रा किसी एक समय में (Quantity at any one time)
1.	Nitrate Mixture	2.0	0	400 Kg.
2.	Ordinary/Electric/Non Electric Detonators	6.3	0	10000 Nos.
3.	Safety Fuse	6.1	0	3000 Mtrs

(ख) किसी एक कलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा (अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञापि के लिए)

(b) Quantity of explosives to be purchased in a calendar month (applicable for licence under article 3(b) and (c)) :

20 times as above.

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञापि परिषर की पृष्टि होती है।

The licensed premises shall conform to the following drawing(s) :

रेखाचित्र क्र. (Drawing No.) E/SC/KL/22/1730(E72220)

दिनांक (Dated) 01/04/2015

6. अनुज्ञापि परिषर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address:

Survey No. 359, Block No. 11, ग्राम (Town/Village) : Manakkada(V), Thodupuzha Taluk

पुलिस थाना (Police Station) : Thodupuzha

जिला (District)

IDUKKI

राज्य (State)

Kerala

पिनकोड (Pincode)

685588

दूरभाष (Phone)

ई.मेल (E-Mail)

फैक्स (Fax)

7. अनुज्ञापि परिषर में निम्नलिखित सुविधाएं अंतर्भूत हैं।

The licensed premises consist of following facilities.

Two portable magazines "A Type" bearing SI No:944 and "A Type" bearing SI No:945 fabricated by M/s.Everest Granites Ernakulam

8. अनुज्ञापि समय - समय पर द्वासांचोचित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपायचर्तों के अधीन रहते हुए अनुदत्त की जाती है।

The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2004 framed there under and the conditions, additional conditions and the following Annexures.

1. उपर्युक्त क्रम सं. 5 में पथा कथित रेखाचित्र (स्थान, सन्निर्माण संबंधी और अन्य विवरण दर्शित करते हुए)।

Drawings (showing site, constructional and other details) as stated in serial No. 5 above.

2. अनुज्ञापि प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञापि की शर्तों और अतिरिक्त शर्तों।

Conditions and Additional Conditions of this licence signed by the licensing authority.

3. दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञापि तारीख 31 मार्च 2019 तक विधिमाम्य रहेगी। This licence shall remain valid till 31st day of March 2019.

यह अनुज्ञापि, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट-VII के अधीन तथा उपर्युक्त इस अनुज्ञापि की शर्तों का अधिकार्यन करने या यदि

अनुज्ञापि परिषर योजना या उसके संबंधित उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निरस्त या प्रतिरुद्ध की जा सकती है, जहां यह लागू हो।

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII,

wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख | The Date - 01/04/2015

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives  
South Circle, Chennai

Amendments :

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 29/06/2018
- Change in Postal Address dated : 10/06/2024
- Amendment in Drawings/Facilities/Premises dated : 10/06/2024
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 10/06/2024
- Change in Authorized Signatory/Occupier/Partners/Directors dated : 11/06/2024

Transfers :

- Change in Licensee Name/Address/Status dated : 10/06/2024
- Change in Licensee Name/Address/Status dated : 10/06/2024

नवीनीकरण के पृष्ठांकन के लिए स्थान  
Space for Endorsement of Renewal

नवीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प Signature of licensing authority and stamp
31/01/2022	31/03/2027	Sd/- Dy. Chief Controller of Explosives, Emakulam

सावधानी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरुपयोग विधि के अधीन गंभीर दंडित अपराध होगा।  
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

**Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.**

Digitally signed by Dr T L THANULINGAM  
Reason: Licence No : E/SCKL/22/1730  
Location: Chennai TE72201

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(सेट VIII | Set VIII)

मैगजीन में वर्ग 1,2,3,4,5,6, और 7 के विस्फोटकों को बिक्री या प्रयोग हेतु रखने के लिए प्ररूप एल.ई. 3 (अनुच्छेद 3 (ख) से (ग)) में मुख्य विस्फोटक नियंत्रक या विस्फोटक नियंत्रक द्वारा प्रदान किए जाने वाले अनुज्ञप्ति सं. E/SC/KL/22/1730(E72220) की शर्त निम्नलिखित हैं।  
The following are the conditions of licence number E/SC/KL/22/1730(E72220) to possess for sale or use, explosives of Class 1,2,3, 4, 5, 6 and 7 in a magazine in Form LE-3 (articles 3(b) to (c)) granted by Chief controller of Explosives or Controller of Explosives.

- परिसर में किसी भी समय विस्फोटकों की मात्रा अनुज्ञापन योग्य सामर्थ्य से अधिक नहीं होगी।  
The quantity of explosives on the premises at any one time shall not exceed the licensable capacity.
- विस्फोटकों के भंडारण के लिए प्रयुक्त होने वाली मैगजीन अनुसूची III और अनुज्ञप्ति के उपाबंध में विनिर्दिष्ट सुरक्षा दूरी बनाए रखना होगा।  
The magazine used for storage of explosives shall maintain safety distance specified in Schedule III and annexure to the licence.
- मैगजीन का प्रयोग उन सभी विस्फोटकों के, जो इस अनुज्ञप्ति में विनिर्दिष्ट हैं, रखे जाने के लिए और ऐसे रखे जाने से संबद्ध आधान या औजार या उपकरणों के रखे जाने के लिए ही किया जाएगा; अन्यथा नहीं।  
The magazine shall be used only for keeping all explosives specified in this licence and of receptacles for, or tools or implements for work connected with the keeping of such explosives.
- पैकजों को खोलने का कार्य और विस्फोटकों को तोलने तथा पैक करने का कार्य मैगजीन में नहीं किया जाएगा।  
The opening of packages and the weighing and packing of explosives shall not be carried on in the magazine.
- दो या दो से अधिक वर्णन के विस्फोटकों को, जिन्हें मैगजीन में रखे जाने की अनुज्ञा दी जा सकती है, मैगजीन में तभी रखे जाएंगे जब उनमें से प्रत्येक को, ऐसे पदार्थ या स्वरूप का कोई मध्यवर्ती विभाजक लगाकर या उनके बीच ऐसा मध्यवर्ती स्थान छोड़कर, परस्पर पृथक कर दिया जाए कि किसी वजह से विस्फोटक में लगने वाली आग या होने वाला विस्फोट किसी अन्य वर्णन के विस्फोटक तक न पहुंच सके : परंतु -  
(घ) 2 (नाइट्रेट मिश्रण), वर्ग 3 (नाइट्रो यौगिक) के विभिन्न विस्फोटक, वर्ग 6 प्रथम प्रभाग के अंतर्गत आने वाले सुरक्षा पत्तीते और वर्ग 6 प्रभाग 2 के अंतर्गत आनेवाले विस्फोटक प्रेरक पत्तीते, जिनमें कोई खुला तोहा या इस्पात नहीं है, एक दूसरे के साथ बिना किसी मध्यवर्ती विभाजक या स्थायन के रखे जा सकते हैं।  
(ङ) वर्ग 6 प्रभाग 3 के अंतर्गत आनेवाले विस्फोटक प्रेरक अलग रखे जाएंगे।  
(च) वर्ग 1 के अंतर्गत आने वाले बारूद को अलग रखा जाएगा।  
Two or more description or explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening space, as will effectually prevent explosion or fire in the one communicating with the other; Provided that—  
(d) the various explosives of Class 2 (nitrate-mixture), Class 3 (nitro-compound), safety fuses belonging to Class 6 Division 1 and detonating fuses belonging to Class 6 Division 2 as do not contain any exposed iron or steel, may be kept with each other without any intervening partition or space ;  
(e) Detonators belonging to Class 6 Division 3 shall be kept separately.  
(f) Gun powder belonging to Class 1 shall be kept separately.
- वर्ग 3 (नाइट्रो यौगिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के पश्चात सिवाप अनुज्ञापन प्राधिकारी की विशेष मंजूरी के मैगजीन में नहीं रखा जाएगा।  
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of licensing authority.
- वर्ग 3 (नाइट्रो यौगिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के पश्चात मैगजीन में तभी रखा जाएगा जब कि किसी विस्फोटक नियंत्रक ने इसके लिए विशेष मंजूरी दे दी हो।  
(i) जब ऐसी मंजूरी दे दी गई हो तो प्रत्येक निरीक्षण पर किसी विस्फोटक नियंत्रक से ऐसा लिखित प्रमाणपत्र अभिप्राप्त कर लिया जाए जिसमें दी गई मंजूरी के अंतर्गत आनेवाली अवधि दर्शित की गई हो और ऐसे प्रमाणपत्र के अनुज्ञप्तिधारी अपने पास रखेगा और मांग की जाने पर प्रस्तुत करेगा।  
(ii) जब कोई विस्फोटक मानक शुद्धता का न रह जाने के कारण या द्रवणीकरण या नाइट्रो ग्लाइसरीन या द्रव नाइट्रो यौगिक के निकल जाने के विन्द प्रकट होने के कारण मैगजीन में भण्डारित किए जाने के उपयुक्त नहीं रह जाता है तो अनुज्ञप्तिधारी अपने ही व्यय पर ऐसे विस्फोटक के निपटारे के लिए ऐसे निदेशों का अनुपालन करेगा जो मुख्य नियंत्रक या विस्फोटक नियंत्रक जारी करें।  
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of the Controller of Explosives.  
(i) When such sanction has been given, a written certificate showing the period covered by the sanction shall be obtained from the Controller of Explosives at each inspection, and shall be kept by the licensee and produced on demand.  
(ii) When an explosive owing to its being no longer of standard purity or owing to signs of liquefaction or of exuded nitro-glycerin or liquid nitro-glycerin or liquid nitrocompound is no longer fit for storage in the magazine or store house the licensee shall comply, at his own expense, with such directions as to its disposal as the Chief Controller or Controller of Explosives may issue.
- मैगजीन के भीतरी भाग या उसमें लगी बेंचो, शेल्फो और उसकी फिटिंग का इस प्रकार सन्निर्माण किया जाएगा या उन्हें इस प्रकार अंतरित या अवतरित किया जाएगा कि विस्फोटक का किसी लोहे या इस्पात के साथ संपर्क रोका जा सके। भीतरी भाग में लगी बेंचो, शेल्फो और फिटिंग यथासाध्य गिट से मुक्त एवं साफ रखे जाएंगे तथा ऐसे विस्फोटक, जो जल से खतरनाक रूप में प्रभावित हो सकते हैं, इस बाबत सम्यक सावधानी बरती जाएगी कि वहां कोई जल मौजूद न रहे; परंतु किसी लोहे या इस्पात के खुले होने के विरुद्ध सावधानी से संबंधित इस शर्त का वह भाग ऐसे किसी भवन में बाधेकर नहीं होगा जिसमें वर्ग 6 (गोला बारूद) के प्रथम के विस्फोटक से भिन्न कोई विस्फोटक रखा गया है।  
The interior of the magazine and the benches, shelves and fittings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel contact with the explosives. Such interior, benches, shelves and fittings shall so far as is reasonably practicable, be kept free from grit and shall otherwise be clean; and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water there from;  
Provided that so much of this condition as relates to precautions against the exposure of any iron or steel shall not be obligatory in a building in which no explosive other than explosive of the 1st Division 6th (Ammunition) Class is kept.
- यदि तडित चालक का परीक्षण विस्फोटक नियंत्रक करता है तो अनुज्ञप्तिधारी ऐसे परीक्षण के लिए विहित फीस का संचाय करेगा यदि परीक्षण असमाधानकारी साबित होता है तो उतनी ही फीस अनुज्ञप्तिधारी द्वारा पश्चात्कर्त्त प्रत्येक परीक्षण के लिए तब तक दी जाती रहेगी जब तक कि परीक्षण अधिकारी तडित चालक को समाधानप्रद घोषित नहीं कर देता :  
परंतु किसी एक परीक्षण के लिए देय फीस किसी एक दिन के दौरान किसी चालक के लिए गए सभी परीक्षणों के लिए प्रभाप्य होगा :  
परंतु यह और कि यदि दो या अधिक तडित चालक एक ही मैगजीन से संबद्ध हैं तो ऐसे सभी चालकों के परीक्षण के लिए फीस ऐसी किसी फीस से अधिक नहीं होगी जो किसी एक तडित चालक के परीक्षण के लिए हर स्थिति में विहित की गई है।  
If the lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for test in the event of the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lighting conductor is

passed by the testing officer as satisfactory:

Provided that the fees payable for a single test shall be charged for all tests made on a conductor during any one day :

Provided further that where two or more lighting conductors are attached to one and the same magazine, the fee for the testing of all such conductors shall not exceed the fee prescribed in this condition for testing a single lighting conductor.


10. उपयुक्त तथा जब रहित कार्यकरण वस्तु, उपयुक्त जूतों के प्रयोग द्वारा तथा तलाबी लेकर या अन्यथा अथवा ऐसे किन्हीं साधनों द्वारा इस बात सम्यक उपबंध किया जाएगा कि फैक्ट्री परिसर में अग्नि, दियासलाई अथवा ऐसी कोई वस्तुएँ या पदार्थ, जिससे विस्फोट हो सकता है या आग लग सकती हो, किन्तु इस शर्त के कारण ऐसी संरचना, स्थिति या स्वरूप में किसी कृत्रिम बत्ती का प्रवेश वर्जित नहीं है जिससे आग लगने या विस्फोट होने का खतरा न हो :  
परंतु इस शर्त का वह भाग, जो लोहे या इस्पात के अपवर्जन को लागू होता है, ऐसे किसी भवन के संबंध में बाध्य कर नहीं होगा जिससे भिन्न कोई विस्फोटक नहीं रखा गया है।  
Due provisions shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of fire, Lucifer matches or any substance or article likely to cause explosion or fire, but this condition shall not prevent the introduction of an artificial light of such construction, position or character as not to cause any danger of fire or explosion:  
Provided that so much of this condition as applies to the exclusion of iron or steel, shall not be obligatory in a building in which no explosive other than an explosive of the 1st Division of the 6th (Ammunition) Class is kept.
11. अनुज्ञापिधारी प्ररूप अर.ई.-3 और अर.ई.-4 या अर.ई.-5, जैसी स्थिति हो, में सभी विस्फोटकों का अभिलेख और लेखा रखेगा और विस्फोटक नियम, 2008 के अधीन प्राधिकृत किसी भी अधिकारी के समक्ष उसके द्वारा ऐसा करने की मांग की जाने पर स्टॉक पुस्तक और अभिलेख प्रस्तुत करेगा। स्टॉक पुस्तक विहित प्रोफार्मा में पृष्ठ संख्यांकित होगी।  
The licensee shall keep records and accounts of all explosives in Forms RE-3 and RE-4 or RE-5, as the case may be, and exhibit the stock books and records to any of the officers authorised under the Explosives Rules, 2008 whenever such officer may call upon him to do so. The stock books in the prescribed proforma shall be page numbered.
12. परिसरों में कोई परिवर्तन या तबदीली अनुज्ञापन प्राधिकारी के पूर्वानुमोदन बिना नहीं की जाएगी और अनुज्ञापिधारी ऐसी किसी शर्त का अनुपालन करेगा जो इस निमित्त अनुज्ञापन प्राधिकारी विनिर्दिष्ट करे।  
No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf.
13. मैगजीन सभी समयों पर अच्छी मरम्मत की स्थिति में बनाई रखी जाएगी (या अच्छी हालत में बनाई रखी जाएगी) यदि किसी कारणवश किसी विस्फोटक के भण्डारण के लिए मैगजीन अनुपयुक्त हो जाती है तो अनुज्ञापिधारी इस बात की सूचना अनुज्ञापन प्राधिकारी को तुरंत देगा।  
Magazine shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority forthwith, if the magazine becomes unfit for storage of any explosives for any reason whatsoever.  
मैगजीन का अनुज्ञापिधारी इन नियमों के नियम 24 के उप-नियम 3 के अनुसार त्रैमासिक विवरणी प्रस्तुत करेगा।  
The licensee of the magazine shall submit quarterly return as per sub-rules (3) and (4) of rule 24 of these rules.
14. यदि सुरक्षा दूरी का कोई अधिक्रमण होता है तो उसकी सूचना अनुज्ञापन प्राधिकारी को आवश्यक सलाह और कार्यवाही के लिए तुरंत दी जाएगी।  
Any encroachment of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.
15. यदि कोई विस्फोटक विनष्ट हुआ अथवा अनुपयोगी जाया जाता है तो उसकी सूचना अनुज्ञापन प्राधिकारी को, सलाह प्राप्त करने के लिए, तुरंत दी जाएगी।  
The licensing authority shall be immediately informed for advice if any explosive is found deteriorated or unserviceable.
16. विस्फोटकों के पैकेटों के चूटे इस प्रकार लगाए जाएंगे कि कम से कम एक व्यक्ति भण्डार किए गए सभी पैकेजों की हालत की जांच करने और प्रत्येक पैकेज की विनिर्माण विशेषियों को पढ़ने के लिए उनके बीच से होकर आ जा सके।  
The explosive packages shall be stocked in such a way so as to allow movement of at least one person to check the condition of all packages stored and to read the manufacture particulars of each package.  
उचित चालकों की भूमि के लिए प्रतिरोध यथासंभव न्यूनतम होगा और किसी भी दशा में 10 ओहम से अधिक नहीं होगा।  
The resistance of the lightning conductor to earth shall be as low as possible and in no case be more than 10 ohms.
17. मैगजीन के चारों ओर 15 मीटर की दूरी के अंतर्गत कोई झुंक घास या झाड़ी या ज्वलनशील सामग्री नहीं रहने दी जाएगी।  
A distance of 15 meters surrounding the magazine or store house shall be kept clear of dried grass or bush or flammable materials.
18. विस्फोटकों के प्रत्येक पैकेट की, जब उसे मैगजीन के भीतर लिया जा रहा हो, ठीक दशा जानने के लिए परीक्षा की जाएगी।  
Every package of explosive at the time of bringing inside the magazine shall be examined for its sound condition.
19. किसी मैगजीन / भण्डारगृह में किसी एक समय में चार व्यक्तियों से अधिक को नहीं रहने दिया जाएगा।  
Not more than 4 persons shall be allowed inside the magazine or store house at any one time.
20. विस्फोटकों के खाली पैकेजों को शीघ्रतयीय यहाँ से हटा दिया जाएगा और नष्ट कर दिया जाएगा।  
Empty packages of the explosives shall be removed at the earliest and destroyed.
21. अनुज्ञापिधारी और कर्मचारीयों को परिसर के भीतर आपातकाल के दौरान की जाने वाली प्रक्रियाओं से अवगत होना चाहिए।  
The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
22. निरीक्षण या नमूना अधिकारी को सभी युक्तियुक्त समयों पर अनुज्ञापन परिसर में अबाध रूप से पहुंचने दिया जाएगा और यह सुनिश्चित करने के लिए कि अधिनियम और इन नियमों के उपबंधों और सुरक्षा स्थितियों को सम्यक्तः अनुपालन किया जा रहा है, अधिकारी को प्रत्येक सुविधा प्रदान की जाएगी।  
Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
23. यदि अनुज्ञापन प्राधिकारी या विस्फोटक निबंधक अनुज्ञापिधारी को अनुज्ञापन परिसरों या मशीनरी, टूल या उपकरण में ऐसी कोई मरम्मत या परिवर्धन या परिवर्तन करने या सिफारिशों को लागू करने को लिखित रूप में सूचित करता है जो परिसर के अंदर या बाहर या व्यक्तियों की सुरक्षा के लिए आवश्यक है, अनुज्ञापिधारी को निष्पादित करेगा और विनिर्दिष्ट अवधि के भीतर अनुपालन रिपोर्ट ऐसे प्राधिकारी को देगा।  
If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the licence shall execute the recommendations and report compliance within the period specified by such authority.
24. अनुज्ञापिधारी मैगजीन में रखने और बिक्री के लिए प्राधिकृत विस्फोटक सूची में उल्लिखित अनुज्ञापन फैक्टरी या कंपनी से प्राधिकृत विस्फोटक आतिशबाजी या सुरक्षा पसीते खरीदेगा।

The licensee shall purchase authorised explosives/ fireworks or safety fuse as mentioned in the list authorised explosives from a licensed factory or company for possession and sale from the magazine.

25. निम्न से अधिक ध्वनि स्तर उत्पादित करने वाले आतिशबाजियों पटाखों की बिक्री और रखने के लिए –  
(क) जो फटने की जगह से चार मीटर की दूरी पर है, 125 डी.बी.(ए1) या 145 डी.बी.(सी)पी.के. प्रतिबंधित होंगे;  
(ख) श्रृंखला (जुड़े हुए पटाख) को गठन करने वाले व्यक्तिगत पटाखों के लिए उपर्युक्त उल्लिखित सीमा 5 लॉग<sub>10</sub>(एन) डी.बी. (सी) पी.के. प्रतिबंधित होंगे;  
The possession and sale of fire-crackers generating noise level exceeding:  
a) 125 dB(A) or 145 dB(C)pk at 4 meters distance from the point of bursting shall be prohibited;  
b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by 5 log<sub>10</sub> (N) dB, where N = number of crackers joined together.
26. आग या विस्फोट द्वारा दुर्घटना या नुकसान पटाखों की कमी या चोरी, तुरंत पास के पुलिस थाने और अनुज्ञापन प्राधिकारी और अनुज्ञापन प्राधिकारी के स्थानीय कार्यालय को रिपोर्ट की जाएगी।  
Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

**अतिरिक्त शर्तें / Additional Conditions :**

1. अनुज्ञाप्यकारी विदेशी मूल के आतिशबाजी को न प्रदर्शित करेगा, न रखेगा और न ही उसकी बिक्री करेगा। The licensee shall not exhibit, possess and sell fireworks of foreign origin.

  
कुंते संयुक्त मुख्य विस्फोटक नियंत्रक  
For Joint Chief Controller of Explosives  
दक्षिणवर्त, क्षेत्र | South Circle, Chennai

**Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.**

कुंते उप मुख्य विस्फोटक नियंत्रक  
For Deputy Chief Controller of Explosives  
एरनाकुलम Ernakulam

**Form DE-2**  
(See rule 113 of the Explosives Rules, 2008)  
(Distance Form to be attached to the licence)

Safety distances required to be kept clear around magazine for high explosives or fire works or factory licence number E/SC/KL/22/1730(K/72220) in form LE-3 granted to George Kolhaparambù, Proprietor, M/a. United Granites & Metals, Vazhithala P.O., Thodupuzha,, Kerala-685588 .

Type of Structure(s)		Safety distances meters	
<b>Inside Safety Distances(ISD)</b>			
1	Room or Workshop used in Connection with the Magazine	M	UM
2	Any other Explosives Magazine or store House or Factory of the Applicant	16	24
3	Magazine Office		
<b>Middle Safety Distances(MSD)</b>			
4	Magazine Keeper's or Chowkidar's Dwelling house		
5	Railway including Minerals and Private Railways		
6	Canal (in active use) or other navigable water		
7	Dock or Pier or Jetty		
8	Public Highway or Public Road		45
9	Private Road which is PRINCIPAL means of access to a Temple, Mosque, Church, Gurudwara or other places of worships, Hospital, College, School or Factory		
10	River Embankment or Sea Embankment or Public Well		
11	Reservoir or Bounded tank/rape way		
12	Windmillor or Solar panel for Power Generation		
<b>Outside Safety Distances(OSD)</b>			
13	Dwelling House		
14	Govt. and Public Building		
15	Temple, Mosque, Church or Gurudwara or other Places of Worships		
16	Shops, Market place, Public recreation and Sports Ground, College, School, Hospital, Theater, Cinema or other Building where the public are accustomed to assemble		
17	Factory		
18	Buildings or Works used for the Storage in Bulk of Petroleum, Sprit, gas, or other inflammable or hazardous substances		
19	Building or Works used for Storage and Manufacture of Explosives or of articles which contains Explosives		68
20	Aerodrome		
21	Furnace, Kils or Chimney		
22	Quarry or mine pit head		
23	Power House or Electric Substation		
24	Wireless Station		
25	Warehouse or other Storage Building		
26	Any other Protected works		
<b>Overhead Electric lines</b>			
27	Electric Power over head Transmission Lines above 440V		68
28	Electric Power over head Transmission Lines upto 440V		15

The Date : 01/04/2015

**Amendments :**

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 25/09/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 09/11/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 20/03/2018
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 23/03/2018
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 29/06/2018

**Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.**

  
For Joint Chief Controller of Explosives  
South Circle, Chennai

കൂടെ രാമ മുഖ്യ വിസ്ഫോറേറ്റ് നിയന്ത്രകൻ  
For Deputy Chief Controller of Explosives  
കണ്ണൂർ Ernakulam



भारत सरकार | Government of India  
 खाद्य और उद्योग विभाग | Ministry of Consumer & Industry  
 विस्फोटक सुरक्षा विभाग (पीएसओ) | Petroleum & Explosives Safety Organisation (PESO)  
 सुरक्षा विभाग | Security Department of Explosives  
 1 और 2 - 14, प्रथम मंजूर मार्ग, 2 व 2 - 14, प्रथम मंजूर मार्ग  
 25 अग्नि सुरक्षा विभाग (पीएसओ), 25 अग्नि सुरक्षा विभाग, कोच्चि, केरल  
 कोच्चि (Phone) - 2821013 | फैक्स (Fax) - 2821018

अनुमति संख्या | Licence No. A/SCKL/P3/14A2264

दिनांक | Date: 08/04/2024

श्री जी. एम. कृष्णमूर्ति  
 श्री जी. एम. कृष्णमूर्ति, कोच्चि, केरल  
 कोच्चि, केरल

विषय | Subject: अनुमति संख्या 2012 के अंतर्गत 7-2 में विस्फोटक सुरक्षा विभाग द्वारा (एनपीओ) से जुड़े गैर-सुरक्षा, अनुमति संख्या के अंतर्गत के लिए, करने हेतु अनुमति -  
 Assessment of Quantity of Ammunition Nitro  
 Change in Postal Address  
 Assessment in Drawings/Facilities/Provision  
 Licence to possess for use of Ammunition Nitro from a store issued attached to explosives manufacturing unit (ANFO) granted in Form 7-2 of Ammunition Nitro, 2012  
 Assessment of Quantity of Ammunition Nitro  
 Change in Postal Address  
 Assessment in Drawings/Facilities/Provision

संदर्भ | Ref:

कृपया इस अनुमति संख्या पर जारी दिनांक 14/04/2024 के पर संख्या: 123121 का संदर्भ रखें।  
 Please refer to para letter No. 123121 dated 14/04/2024 on the subject cited above.

अनुमति संख्या: A/SCKL/P3/14A2264 विषय संदर्भित की गई।  
 The Licence No. A/SCKL/P3/14A2264 is hereby amended in respect of:

जो इसके अंतर्गत है।  
 and herewith herewith:

Quantity of Ammunition Nitro  
 उर्वरक के अनुमति संख्या में परिवर्तन  
 Change in Postal Address in above  
 Drawings/Facilities/Provision

The Licence stands issued by the Department of Explosives, Govt. of Kerala, in compliance with the provisions of the following kinds and quantities of Ammunition Nitro:  
 The Licence stands issued by the Licensee to possess for use of Ammunition Nitro from a store issued attached to explosives manufacturing unit (ANFO) of the following kinds and quantities of Ammunition Nitro:

नाम / Description Name Explosives)	क्षमता प्रति माह Capacity Per Month	इकाई Unit
1. Ammunition Nitro (ANFO)	10000	Kg

यह अनुमति 01/03/2027 तक वैध रहेगी।  
 The Licence shall remain valid till 01st day of March 2027.

अनुमति के अंतर्गत में अनुमति संख्या 2012 के अंतर्गत में 2012 की प्रक्रिया का पालन करें।  
 For further details of licence, please follow the procedure under Rule 33(1) of Ammunition Nitro, 2012.

कृपया इस पर की प्रतिक्रिया को ध्यान दें।  
 Receipt of this letter may please be acknowledged.

संदर्भ | Enclosure:

सदस्य | Yours faithfully  
 श्री टी. एन. थानलिंगम | Dr. T. L. THANLINGAM  
 मुख्य सुरक्षा विभाग (पीएसओ) | Joint Chief Executive of Explosives  
 कोच्चि, केरल | South Circle Office, Chennai | South Circle, Chennai

प्रतिलिपि संख्या | Copy Forwarded to:

1. सुरक्षा विभाग के प्रमुख अधिकारी | The Dy. Chief Controller of Explosives, Kerala
2. सुरक्षा विभाग, कोच्चि, केरल को उपरोक्त अनुमति संख्या संख्या: E1/8074/13K/D1-विभाग, 2011/013 | Director Magistrate, DCKKL, Kerala with reference to his No.No. E1/8074/13K/D1-Date: 28/12/2023.
3. पुलिस अधीक्षक, कोच्चि, केरल | Superintendent of Police, DCKKL, Kerala

श्री टी. एन. थानलिंगम | Joint Chief Executive of Explosives  
 कोच्चि, केरल | South Circle, Chennai

जब तक कि हमें कोई भी त्रुटि, त्रुटि या अन्य त्रुटि के लिए कृपया हमें सूचित करें।  
 For more information regarding system, fees and other details, please visit our web site <http://peso.gov.in>

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

Digitally signed by Dr T L. THANLINGAM  
 Reason: Licence No. - A/SCKL/P3/14  
 Location: Chennai (A2264)

अनुज्ञप्ति प्रारूप P-3  
(अमोनियम नाइट्रेट नियम, 2012 की अनुसूची 1 की क्रम संख्या-3 और नियम 35 देखें)

LICENCE FORM P-3  
(See Sr.No.-3 of Schedule I and rule 35  
of Ammonium Nitrate Rules,2012)

विस्फोटक विनिर्माण इकाई (एनएफओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञप्ति  
Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO)

अनुज्ञप्ति संख्या | Licence No. : ASC/KL/P3/14(A2264)  
वार्षिक अनुज्ञप्ति शुल्क | Annual licence fee Rs: 1000/-



अनुज्ञप्ति एकाद्वारा जारी की जाती है :  
Licence is hereby granted to :  
Sri GEORGE KOCHUPARAMBIL (अधिष्ठाता : GEORGE KOCHUPARAMBIL )  
KOCHUPARAMBIL HOUSE,VAZHITHALA P.O,THODUPUZHAIDUKKI DISTRICT,  
शहर | गाँव - Thodupuzha  
जिला - IDUKKI , राज्य- Kerala , पिन कोड - 685583  
Phone - , Email- unitedgranitesandmetals@gmail.com , फैक्स-

- अनुज्ञप्तिधारी का स्वर: Proprietorship Firm  
Status of licence holder: Proprietorship Firm
- अनुज्ञप्ति केवल निम्नलिखित प्रयोजन हेतु वैध है : विस्फोटक विनिर्माण इकाई (एनएफओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञप्ति  
Licence is valid only for the following purpose : Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO)
- अनुज्ञप्ति अमोनियम नाइट्रेट की निम्नलिखित मात्रा के लिए वैध है :  
Licence is valid for the following quantity of Ammonium Nitrate:

नाम तथा विवरण Name and Description	किसी एक समय में मात्रा (कि.ग्रा.) Quantity at a time (Kg.)	किसी एक वित्तीय वर्ष में क्रय की जाने वाली अमोनियम नाइट्रेट की मात्रा(कि.ग्रा.) Quantity of Ammonium Nitrate to be purchased in a financial Year (Kg.)
Ammonium Nitrate (Solid)	30000	360000

- अनुज्ञप्त परिसर निम्नलिखित अरेडिंग,प्लॉ के अनुरूप होगा  
The licensed premises shall conform to the following drawing(s):  
अरेडिंग संख्या | Drawing No : ASC/KL/P3/14 (A2264) दिनांक | Dated : 10/06/2024
- अनुज्ञप्त परिसर निम्नलिखित पते पर स्थित है :  
The Licensed premises are situated at following address:  
Survey No. 359, Block No.11, शहर/गाँव | Town/Village : Manakkadu  
पुलिस स्टेशन | Police Station : Thodupuzha जिला | District : IDUKKI राज्य | State : Kerala  
पिन कोड | PinCode : 685588 फोन | Phone : ईमेल | E-Mail : फैक्स | Fax :
- अनुज्ञप्त परिसर में निम्नलिखित सुविधाएँ उपलब्ध हैं :  
The licensed premises consist of following facilities :  
Consist of one store house .
- अनुज्ञप्ति, समय-समय पर पाया संशोधित विस्फोटक अधिनियम 1884, एवं उसके अधीन बनाए गए अमोनियम नाइट्रेट नियम, 2012 की शर्तें, अतिरिक्त शर्तें तथा निम्नलिखित उपबन्धों के अधीन जारी की जाती है  
(i) उक्त क्रम संख्या 4 में तालिकाबद्ध अरेडिंग (जिसमें सार, विवरण एवं अन्य विवरण दर्शाए गए हैं)।  
(ii) अनुज्ञप्ति जारी करने वाले प्राधिकारी द्वारा हस्ताक्षरित अनुज्ञप्ति की शर्तें एवं अतिरिक्त शर्तें।  
The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Ammonium Nitrate Rules, 2012 framed there under and the conditions, additional conditions and Annexures.  
(i) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.  
(ii) Conditions and Additional Conditions of this licence signed by the license issuing authority.

- यह अनुज्ञप्ति 31 मार्च 2022 तक वैध रहेगी।  
This licence shall remain valid till 31st day of March 2022

यह अनुज्ञप्ति विस्फोटक अधिनियम, 1884 या उसके अधीन बनाए गए अमोनियम नाइट्रेट नियम, 2012 या इस अनुज्ञप्ति की किसी शर्तों का उल्लंघन करने पर या यदि अनुज्ञप्त परिसर, अरेडिंग और उससे संलग्न उपबन्ध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रसिद्धित की जा सकती है।  
This licence is liable to be suspended or revoked for any violation of the Explosives Act 1884 or Ammonium Nitrate Rules, 2012 framed there under or the conditions of this licence, if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

दिनांक | Date: 09/11/2017

संयुक्त मुख्य विस्फोटक नियंत्रक  
Joint Chief Controller of Explosives  
दक्षिणवर्त, चेन्नै | South Circle, Chennai

- Amendments :
- Change in Postal Address dated : 10/06/2024
  - Amendment in Drawings/Facilities/Premises dated : 10/06/2024
  - Amendment of Quantity of Ammonium Nitrate dated : 10/06/2024
- Transfers :
- Change in Licensee Name/Address/Status dated : 10/06/2024
  - Change in Licensee Name/Address/Status dated : 10/06/2024
  - Change in Licensee Name/Address/Status dated : 10/06/2024

अनुज्ञप्ति नवीकरण के लिए पृष्ठांकन | Endorsement for renewal of licence:

नवीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर Signature of licensing authority
01/02/2022	31/03/2027	Sd/- Dy. Chief Controller of Explosives, Emakulam

सांविधिक चेतावनी: अमोनियम नाइट्रेट कानून का दुरुपयोग कानूनी तौर पर गंभीर दण्डनीय अपराध है।  
Statutory Warning : Misuse of Ammonium Nitrate shall constitute serious criminal offence under the law.

**Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.**

Digitally signed by Dr T L THANUNIGAM  
Reason: Licence No. : A/SCKL/P/14  
Location: Chennai (42264)  
Date: 10-06-2024 17:20:48 PM

Conditions

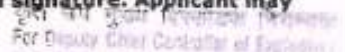
मुख्य विस्फोटक निचयक / वा विस्फोटक निचयक द्वारा प्रदत्त प्रारूप P-3 में विस्फोटक विनिर्माण इकाई (एनएफओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञापि, अनुज्ञापि संख्या A/SC/KL/P3/14(A1264) की शर्त निम्नलिखित हैं।

The following are the conditions of licence number A/SC/KL/P3/14(A1264) to Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO) in Form P-3 granted by the Chief Controller or Controller of Explosives.

1. अमोनियम नाइट्रेट का धप्यारण अनुज्ञापि के साथ संलग्न अनुमोदित अरेखण में दर्शाए गए अनुज्ञाप गोदाम या मेल भण्डारण टैंक में ही किया जाएगा।  
The Ammonium Nitrate shall be possessed only in the licensed storehouse or melt storage tank shown in the approved plan attached with the License.
2. अमोनियम नाइट्रेट की मात्रा परिसर, में या उसके किसी भी भाग में, अनुज्ञाप मात्रा, किसी एक समय में, से अधिक नहीं होनी चाहिए।  
The quantity of Ammonium Nitrate in the premises or any part thereof shall not exceed at any one time the quantity for which License has been issued.
3. उतका हुआ या अपशिष्ट अमोनियम नाइट्रेट को एकत्र कर अनुज्ञापिधारी द्वारा विनष्ट किया जाना चाहिए एवं विनष्ट किए गए अमोनियम नाइट्रेट की मात्रा का लेखाबोका रखा जाएगा।  
Spilled or sweepings of Ammonium Nitrate the waste Ammonium Nitrate collected from sweeping or spilled shall be destroyed by the License holder and account thereof shall be maintained indicating the quantity of the Ammonium Nitrate destroyed.
4. अनुज्ञापिधारी और विनिर्माण तथा संपरिवर्तन के लिए परिसर में नियुक्त प्रत्येक व्यक्ति को विनिर्माण तथा संपरिवर्तन के लिए अनुज्ञापि परिसर में अग्नि वा विस्फोट से होने वाली दुर्घटना से बचाव तथा विनिर्माण तथा संपरिवर्तन के लिए अनुज्ञाप परिसर में अशिक्षित व्यक्तियों के प्रवेश से बचाव के लिए पूर्ण सावधानी बरतनी होगी एवं ऐसे किसी भी कार्य से विरत करना होगा जो अग्नि वा विस्फोट का कारण बने एवं जो विनिर्माण तथा संपरिवर्तन परिसर में कार्य के उद्देश्य से आवश्यक न हो।  
The License holder and every person employed shall take all due precautions for prevention of accidents by fire or explosion in the licensed premises and for preventing unauthorized person from having access to licensed premises and shall abstain from any act from whatsoever which tends to cause or explosion and is not reasonably necessary for the purpose of works related thereto.
5. मुख्य विस्फोटक निचयक या अनुज्ञापन प्राधिकारी की पूर्व लिखित स्वीकृति के बिना अनुज्ञाप परिसर में किसी भी प्रकार का परिवर्तन एवं परिवर्तन नहीं किया जाएगा। स्वीकृत किए गए इस प्रकार के परिवर्तन एवं परिवर्तन अनुज्ञापि के साथ संलग्न संशोधित आरेखण में दर्शाए जायें।  
No additions and alterations shall be carried out in the licensed premises without a previous sanction in writing of the Licensing Authority. Such additions and alterations so sanctioned shall be shown in the amended plan attached to the License.
6. अनुज्ञापिधारक द्वारा विनिर्माण तथा संपरिवर्तन प्रक्रिया के पर्यवेक्षण एवं कार्य का संचालन इन नियमों के अनुरूप करने हेतु एक योग्य एवं सक्षम व्यक्ति नियुक्त किया जाएगा।  
The License holder shall appoint a competent person to supervise the operations shall be conducted under the supervision of the competent person.
7. किसी निरीक्षण अधिकारी या नमूना लेने वाले अधिकारी को अनुज्ञाप परिसर में उपयुक्त समय पर बराबर अनाथ पहुँच प्रदान की जाएगी और ऐसे अधिकारी को वे सभी सुविधाएँ उपलब्ध की जाएगी जिससे कि वह सुनिश्चित कर सके कि अमोनियम और इन नियमों के उपबंधों एवं सुरक्षा संबंधी शर्तों का सत्य रूप से पालन किया जा रहा है।  
Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and all facilities shall be offered to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
8. यदि जिला प्राधिकारी या निरीक्षण अधिकारी अनुज्ञापिधारी को लिखित में अधिकृत परिसर में कोई परिवर्तन या परिवर्तन या देखी विधियों को क्रियान्वित करने के लिए जो ऐसे अधिकारी की राय में अस्वीकार्य जोखिम उत्पन्न कर सकती है और इस प्रकार वह परिसर के बाहर वा भीतर वा व्यक्तियों की सुरक्षा के लिए आवश्यक है, सूचित करता है, तो अनुज्ञापिधारी उन विधियों को निष्पादित करेगा और ऐसे प्राधिकारी द्वारा विनिर्दिष्ट अशर्तों में अनुपालन की रिपोर्ट देगा।  
If the License issuing authority or the inspecting officer informs in writing, the holder of the License to execute any repairs or to make any additions or alterations to the licensed premises or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and therefore the same is necessary for the safety or security of the premises or persons, the holder of the License shall execute the recommendations and report compliance within the period specified by such authority.
9. अग्नि वा विस्फोट से होने वाली दुर्घटनाओं और अमोनियम नाइट्रेट की हानि, उल्लेख कमी वा चोरी की सूचना निकटतम पुलिस स्टेशन और जिला प्राधिकारी के स्थानीय कार्यालय को दूरत, दी जाएगी।  
Accidents by fire or explosion and losses, shortage or theft of Ammonium Nitrate shall be immediately reported to the nearest police station and the District Authority.
10. अनुज्ञापिधारी अनुसूची-II भाग 3 में विनिर्दिष्ट प्रारूप में इनका अभिलेख रखेंगे जिससे कि अमोनियम नाइट्रेट के लिए उत्तरदायित्व सुनिश्चित कर उनकी पहचान कर खोज की जा सके एवं नियम 50 में लिखित प्राधिकारी के मांगे जाने पर ऐसे अभिलेख प्रस्तुत किए जाएं।  
License holder shall maintain records in the prescribed forms specified in Schedule II Part 3 to ensure accountability, identification and traceability of Ammonium Nitrate and shall produce such records on demand to authority specified in rule 50.
11. अनुज्ञापिधारी, अनुसूची II भाग 3 में विनिर्दिष्ट प्रारूप 2-9 में जिला प्राधिकारी को मासिक विवरणी इस प्रकार प्रेषित करेगा कि वह प्रत्येक आगामी महीने की 10 तारीख तक अनुज्ञापन प्राधिकारी या जिला प्राधिकारी को प्राप्त हो जाए।  
The License holder shall submit monthly returns of AN received, sold /used/stolen or short received and destroyed in the form prescribed in Form E-9 of Part 3 of Schedule II so as to reach Licensing Authority and District Authority within 10th day of every succeeding month.

  
कुटी संयुक्त मुख्य विस्फोटक निचयक  
दक्षिणचक्र, चेन्नै  
For Joint Chief Controller of Explosives  
South Circle, Chennai

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

  
कुटी संयुक्त मुख्य विस्फोटक निचयक  
दक्षिणचक्र, चेन्नै  
For Deputy Chief Controller of Explosives  
South Circle, Chennai



भारत सरकार | Government of India  
वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry  
पेट्रोलेियम तथा विस्फोटक सुरक्षा संगठन (पैसो) | Petroleum & Explosives Safety Organisation (PESO)  
पूर्व नाम: विस्फोटक विभाग | Formerly: Department of Explosives  
A और D - विंग, ब्लॉक 1-8, दूसरा तह, शांती भवन | A & D - Wing, Block 1-8, 2nd Floor, Shanti Bhawan  
26 इंदिरा पुर, नूतनमहलम चेन्नई | 26 Indira Park, Nungambakkam Chennai 600009  
फोन (Phone): 28281023 - फैक्स (Fax): 28284448

संख्या (No.): E/SC/KL/38/21(E98818)

दिनांक (Date): 11/06/2024

सेवा में | To,

Shri GEORGE KOCHUPARAMBIL,  
KOCHUPARAMBIL HOUSE, VAZHITHALA P O THODUPUZHA IDUKKI DISTRICT, Town/Village - VAZHITHALA,  
District-IDUKKI, State-Kerala, Pincode - 685531

विषय: Survey No.359,BLOCK NO-II, ग्राम Manikkadu (v), Thodupuzha Taluk, जिला IDUKKI, राज्य Kerala में स्थित Shri GEORGE KOCHUPARAMBIL द्वारा दायरे विस्फोटक के एकलौटे स्रोत में विनिर्माण हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-1 में जारी अनुमति सं E/SC/KL/38/21(E98818) के संशोधन संदर्भ में।  
( विस्फोटक की मात्रा में परिवर्तन शून्य पर से परिवर्तन अंतराक्षण / सुविधाएं / परिवार में परिवर्तन )  
Subject: Manufacturing of ANFO situated at Survey No.:359,BLOCK NO-II, Manikkadu (v), Thodupuzha Taluk, Dist. IDUKKI, Kerala -Licence No.: E/SC/KL/38/21(E98818) granted in Form LE-1 of Explosives Rules, 2008 -  
(Amendment of Quantity of Explosives Change in Postal Address Amendment in Drawings/Facilities/Premises).

कृपया ध्यान दें | Note,

आपका उपर्युक्त विषय पर पत्र संख्या 123125 दिनांक 10/06/2024 को संदर्भ ग्रहण करें।  
Please refer to your letter no. 123125 dated 10/06/2024.

अनुमति संख्या E/SC/KL/38/21(E98818) विस्फोटक की मात्रा में परिवर्तन शून्य पर से परिवर्तन अंतराक्षण / सुविधाएं / परिवार में परिवर्तन के संदर्भ में यह संशोधित कर भेजी जा रही है।  
The Licence No.: E/SC/KL/38/21(E98818) is forwarded herewith duly amended in respect of followings:

Quantity of Explosives Change in Postal Address as above Drawings/Facilities/Premises

किसी भी एक समय में साइड में क्षमता निम्नलिखित वर्ग तथा मात्रा से अधिक नहीं होगी।

The licence capacity at any one time shall not exceed the kinds and quantities mentioned below:

संख्या No	विस्फोटक Explosive(s)	वर्ग Class	प्रभाग Div	उप-प्रभाग Sub Div	क्षमता Capacity	इकाई Unit
1	ANFO	1	B	B	100	Kg

यह अनुमति दिनांक 31 मार्च 2027 तक प्रवृत्त रहेगी।  
This License shall remain valid till 31st day of March 2027.

अनुमति के आगामी नवीकरण हेतु कृपया विस्फोटक नियम, 2008 के नियम 112 के अंतर्गत प्रक्रिया का पालन करें। कृपया वापसी दें।  
For further revalidation(if required), please follow the procedure under Rule 112 of Explosives Rules, 2008. Receipt of this letter may please be acknowledged.

भवदीय / Your's faithfully

(डा.टी.एल.थानुलिंगम) | Dr. T. L. THANULINGAM  
संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives  
दक्षिणवार्ड, चेन्नई | South Circle, Chennai

प्रतिलिपि प्रेषित | Copy Forwarded to:

- उप मुख्य विस्फोटक नियंत्रक कोची  
The Dy. Chief Controller of Explosives, Kochi
- District Magistrate, IDUKKI, Kerala with reference to his Noc No: 2012/50767/6 and 2013/98965/6 Dated: 30/11/2015.
- Superintendent of Police, IDUKKI, Kerala.

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives  
दक्षिणवार्ड, चेन्नई | South Circle, Chennai

(अधिक जानकारी के लिए आवेदन की तिथि, शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)  
(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

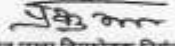
Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

Digitally signed by Dr T L THANULINGAM  
Reason: Licence No. : E/SC/KL/38/21  
Location Chennai (E98818)

(सेट III) Set III)

मुख्य विस्फोटक नियंत्रक या विस्फोटक नियंत्रक द्वारा अनुदत्त प्ररूप एल ई 1 (अनुच्छेद (घ)) में ए एन एफ.ओ. विस्फोटकों के विनिर्माण के लिए अनुज्ञापि सं. E/SC/KL/38/21(E98818) की शर्त निम्नलिखित है।  
The following are the conditions of licence number E/SC/KL/38/21(E98818) for manufacture of ANFO explosives in Form LE-1 (article 1(d)) granted by Controller or Controller of Explosives.

- परिसर या उसके किसी भाग में एनएफओ विस्फोटकों की मात्रा किसी एक समय में उस मात्रा से अधिक नहीं होगी, जिसके लिए अनुज्ञापि जारी की गई है।  
The quantity of ANFO explosives in the premises or any part thereof shall not exceed at any one time the quantity for which licence has been issued.
- एनएफओ विनिर्माण शेड को 15 मीटर की दूरी पर बाड़ लगा कर संरक्षित किया जाएगा और वह अनुसूची- VIII की सारणी 1 में पथविनिर्दिष्ट संरक्षित संकर्मों से सुरक्षा दूरी बनाए रखेगा।  
The ANFO manufacturing shed shall be protected by a fencing at a distance of 15 metres and it shall maintain safety distance from protected works as specified in table 1 of Schedule VIII.
- शेड में कार्य कड़ाई में अधिकपित सुरक्षाकार्य प्रक्रियाओं और अनुदेशों के अनुसार किया जाएगा।  
Work in the shed shall be carried out strictly in accordance with the laid down safe working procedures and instructions.
- एनएफओ विस्फोटकों को विनिर्माण अनुज्ञापिधारी द्वारा नियुक्त किसी अर्हित उत्तरदायी व्यक्ति के सीधे पर्यवेक्षणधीन किया जाएगा।  
The ANFO explosives shall be manufactured under the immediate supervision of a qualified responsible person appointed by the licensee.
- अनुज्ञापिधारी और प्रत्येक नियोजित व्यक्ति उस स्थान या उन स्थानों में जहाँ एनएफओ विस्फोटकों का विनिर्माण किया जात है या देखभाल की जाती है या उपयोग किया जाता है, अग्नि या विस्फोटक के कारण होने वाली दुर्घटनाओं को रोकने के लिए सभी सम्मक पूर्वाधानियाँ बरतेंगे।  
The licensee and every person employed shall take all due precautions for the prevention of accidents by fire or explosion, in the place or places where the ANFO explosives is manufactured, handled or used.
- एनएफओ विस्फोटकों के सभी अवशेषों को एकत्रित किया जाएगा और अनुभवी व्यक्ति के पर्यवेक्षण के अधीन अनुज्ञापित परिसर से दूर किसी सुरक्षित स्थान में नष्ट किया जाएगा।  
All spillage of ANFO explosive shall be collected and destroyed at a safe place away from the licensed premises under the supervision of experienced person.
- एनएफओ विस्फोटकों के विनिर्माण के लिए प्रयुक्त आधानों और मिश्रणों को प्रयोग के पश्चात उपयुक्त डिटरजेंट घोल से अच्छी तरह साफ किए जाएंगे और जल से धोया जाएगा।  
All containers and mixers used for manufacturing the ANFO explosive shall after use, be thoroughly cleaned with suitable detergent solution and washed with water.
- अनुज्ञापिधारी और कर्मचारी परिसरों के भीतर अघात के दौरान की जानेवाली प्रक्रिया से अवगत होंगे।  
The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- किसी निरीक्षण या नमूना लेने वाले अधिकारी को सभी युक्तियुक्त समयों पर अनुज्ञापित परिसर में अबाध पहुंच प्रदान की जाएगी और वह अधिनियमित करने के लिए कि अधिनियम और इन नियमों के उपबंधों या सुरक्षा संबंधी शर्तों का सम्मक रूप से पालन किया जाता है, उस अधिकारी को प्रत्येक सुविधा उपलब्ध करवाई जाएगी।  
Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- यदि अनुज्ञापन प्राधिकारी या विस्फोटक नियंत्रक लिखित में अनुज्ञापित धारक को अनुज्ञापित परिसर या मशीनरी, औजारों या साधनों में कोई मरम्मत या कोई परिवर्धन या परिवर्तन करने के लिए या ऐसी सिफारिशों को क्रियान्वित करने के लिए, जोखिम प्रदर्शित कर सकती है और परिसर या व्यक्तियों की स्थल पर या स्थल से बाहर सुरक्षा के लिए आवश्यक है, सूचित करता है जो अनुज्ञापित धारक उन सिफारिशों को निष्पादित करेगा और ऐसे प्राधिकारी व्दा रा विनिर्दिष्ट अवधि के भीतर अनुज्ञापन की रिपोर्ट देगा।  
If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the licence shall execute the recommendations and report compliance within the period specified by such authority.
- अग्नि या विस्फोट के कारण होनेवाली दुर्घटनाओं और विस्फोटकों की हानि, कमी या चोरी के बारे में निकटतम पुलिस स्टेशन और अनुज्ञापन प्राधिकारी तथा अनुज्ञापन प्राधिकारी के स्थानीय कार्यालय में तुरंत रिपोर्ट की जाएगी।  
Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

  
कुंते संयुक्त मुख् विस्फोटक नियंत्रक  
For Joint Chief Controller of Explosives  
दक्षिणवर्ल, चेन्नै। South Circle, Chennai

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

  
For Deputy Chief Controller of Explosives  
दक्षिणवर्ल, चेन्नै। South Circle, Chennai

**Annexure-13**  
**CONSENT TO OPERATE**



## KERALA STATE POLLUTION CONTROL BOARD

FILE NO. : KSPCB/ID/ICO/10068772/2024  
Date of issue : 12-07-2024

### INTEGRATED CONSENT TO OPERATE - RENEWAL

Consent No : KSPCB/ID/ICO/10068772/2024  
Valid up to : 15 / 07 / 2029

**Ref:**

1. Your online application no 10068772 dated 14.05.2024
2. Consent no R18IDUCTOR446677 dated 10.08.2021 valid up to 15.07.2024

The Integrated Consent to Operate issued as per reference above to **Sri.GEORGE KOCHUPARAMBIL, QUARRY OF UNITED GRANITES & METALS , VAZHITHALA P.O THODUPUZHA** is hereby renewed up to **15.07.2029** and issued to **Sri GEORGE KOCHUPARAMBIL , KOCHUPARAMBIL HOUSE VAZHITHALA P.O MANAKKAD.**

The consent(s)/ variation order(s) cited under reference are integral part of this renewal order and this order is subject to the conditions stipulated therein and the following modifications/ additions.

**1. GENERAL**

SL NO.	ITEM	DESCRIPTION
1	VALIDITY	01.03.2028
2	CATEGORY	RED
3	CAPITAL INVESTMENT	Rs.1200.00 Lakhs
4	ANNUAL FEE	Rs.81000/-
5	FEE REMITTED	Rs.405000/-

6	OCCUPIER	Sri George Kochuparambil Kochuparambil House Vazhithala P.O Manakkad
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**2.CONDITIONS AS PER The Water (Prevention and Control of Pollution) Act, 1974**

2.1 In case of generation of trade effluent from the industry, effluent treatment system consisting of treatment units having adequate capacity shall be made functional before commissioning. Additional facilities required, if any, to achieve the standards laid down by the Board u/s 17(1) (g) of the Water Act shall also be made alongwith.

**3.CONDITIONS AS PER The Air (Prevention and Control of Pollution) Act, 1981**

3.1 Adequate air pollution control measures shall be provided before commissioning of the industry. Additional facilities required, if any, to achieve the standards laid down by the Board shall also be made along with.

**4.CONDITIONS AS PER The Environment (Protection) Act, 1986.**

4.1 The operation of the industry shall be strictly in compliance with the provisions of the Noise Pollution (Regulation and Control) Rules 2000.

4.2 Used batteries shall be disposed of as per the Batteries Waste Management Rules, 2022

4.3 Hazardous waste generated, if any, shall be handled as per the Hazardous and Other Wastes(Management and Transboundary Movement) Rules, 2016

**5. SPECIFIC CONDITIONS**

5.1. This consent is granted subjected to the power of the Board to review and make variations in all or any of the conditions as per section 21 (6) of the Air Act 1981 and Section 27 of Water Act 1974.

5.2 This consent is a renewal of Consent No.: R18IDUCTOR446677 dated 10.08.2021 and is granted on the basis of the particulars, affidavit and other documents furnished by the applicant. If the statement furnished in the affidavit/document is found false or in the case of noncompliance of integrated consent to operate conditions the consent issued will be withdrawn/cancelled

5.3 For renewal of the consent in case of continuance of discharge/operation of the industry, application in the prescribed form shall be submitted through the web portal of the Board 2 months prior to the date of expiry. Late application will be accepted only with fine.

5.4 No change or alteration of the unit is to be made without the prior permission of the Board. Any change in the particulars furnished in the references or in the identity of the occupier / authorised agent is to be intimated to the Board forthwith.

5.5 The applicant shall comply with the instructions that the Board may issue from time to time regarding prevention and control of air, water and sound pollution.

5.6. This consent is granted based on the Environmental clearance issued from SEIAA vide No.1137/EC/SEIAA/KL/2017 Dated 02.03.2023 for 12. 2987 Ha in survey no 354/4,354/5,355/1pt, 351/1 pt,350,352/1 pt .The quarrying shall be done after obtaining all statutory/necessary clearances from concerned authorities and is valid only when all other clearances from other concerned

authorities are valid

5.7 The consent issued from the board is only with respect to the powers vested under the Water (Prevention & Control of Pollution) Act 1974, Air (Prevention & Control of Pollution) Act 1981 and Environment Protection Act, 1986 and The Rules there under. The operation of the quarry shall be commenced only after obtaining clearances from all concerned Authorities.

5.8. There shall not be any quarrying activity between 6 pm to 6 am.

5.9. Mining activities shall be done only in the area marked by Mining & Geology.

5.10. There shall be a minimum distance of 50 m from boundary of quarry operating area to residential building, place of worship, public buildings, public road having vehicular traffic, river or lake, railway line, bridges etc.

5.11. The PM10 in ambient air at the boundary shall not exceed 100 microgram/m<sup>3</sup>.

5.12. The PM 2.5 in ambient air at the boundary shall not exceed 60 microgram/m<sup>3</sup>.

5.13. The sound level (Leq) at 1 m outside the boundary of the site should not exceed the ambient noise Standard applicable to the adjoining areas.

5.10. Conditions given in the Environmental clearance shall be strictly complied with.

5.11. Mining shall be only done as per the mining plan attached with EC

5.12 This Consent is issued based on the Judgement dated 25-10-21 of the Honourable Supreme Court of India in CA no. 6273 of 2021 and connected matters, order dated 14-12-2021 of the Honourable Supreme Court in MA no. 1904 of 2021, Judgement dated 10-11-2021 of the Honourable High Court of Kerala in WP(C) 2773 of 2021 and Judgement dated 10-12-2021 of the Honourable High Court of Kerala in WP(C) 27178 of 2021.

5.13 This Consent is issued subject to any order passed by the Honourable Supreme Court, Honourable National Green Tribunal, Honourable High Court of Kerala in connected matters.

5.14 The consent unless withdrawn earlier and subject to condition no. 1 & 2 shall be valid up to 01/03/2028. For renewal of consent, application may be submitted via online 2 months in advance of expiry of validity date.

5.15. Quarrying shall be done only within the area marked in the approved location plan attached. No change, deviation or alteration that may affect the environment, extent and location of quarry shall be made. Any change in particulars furnished in the application/the identity of the occupier/ authorized agent is to be intimated to the Board forthwith.

5.16 The applicant shall put up sign boards near the main entrance of the plant to display consent number & validity.

5.17. Suitable species of trees and certain plants shall be planted and maintained within and along the periphery of the premises, forming a green belt to improve the environment.

5.18 Fencing shall be provided around the boundary of quarry and shall be maintained properly.

5.19 After completion of excavation at any site, the abandoned quarry shall be utilized for rain water harvesting with protective barriers/ any other suitable approved purpose or may be reclaimed as per specification.

5.20 The consent issued from the Board shall be valid only for a period when all other statutory or necessary clearances from other concerned authorities are valid

5.21. The applicant shall comply with the instructions that the Board may issue from time to time regarding the prevention and control of Air, Water, Land and Sound Pollution.

5.22. Regular wetting of the roads in the premises of the quarry and approach roads near the quarry shall be done for avoiding excessive dust emission within and outside the boundary of the unit.

5.23. Products shall be transported with proper cover and/or after wetting to prevent spreading of dust.

5.24. Garland drain, silt trap etc shall be provided so that there shall not be discharge of silt containing water from the premises of the unit.

5.25 All other conditions of the Integrated Consent to Operate issued as per reference above remain unchanged

Digitally signed by MABURAJAN P K  
Date: 2024.07.12 14:11:44 IST

SIGNATURE OF ISSUING AUTHORITY

CHIEF ENVIRONMENTAL ENGINEER

**To**

M/s SRI.GEORGE KOCHUPARAMBIL, QUARRY OF UNITED GRANITES & METALS  
VAZHITHALA P.O THODUPUZHA  
E-Mail : unitedgranitesandmetals@gmail.com  
Contact Number :9961748278,

1.This digitally signed document is legally valid as per the Information Technology Act 2000

2. For verifying this document please go to [www.keralapcbonline.com](http://www.keralapcbonline.com) and search using Certificate Number/Name of the unit/Application Number in "Certificate Verification" link in the home page of the Board's Phoenix website.

**Annexure-14**  
**PANCHAYATH LICENSE**



നമ്പർ: 7/2022-2023/JC3/1445/2023

തീയതി: 01/04/2023

**മണക്കാട് ഗ്രാമപഞ്ചായത്ത്**

പുതുപ്പരിയാരം പി.ഒ., ഇടുക്കി (ജില്ല)

ഫീസ്: 685608, ഫോൺ: 04862-202248, ഇ-മെയിൽ: manakkadgp@gmail.com

**വ്യവസായം, വാണിജ്യം, സംരക്ഷകത്വം, മറ്റ് സേവനങ്ങൾക്കുള്ള ലൈസൻസ്**

**(കെ.പി.ആർ ആക്ട് സെക്ഷൻ 232, FTE & OS ലൈസൻസ് ചട്ടങ്ങൾ 1996)**

ലൈസൻസിയുടെപേര്	ജോർജ്ജ് കൊച്ചുപറമ്പിൽ		
ലൈസൻസിയുടെ മേൽവിലാസം	കൊച്ചുപറമ്പിൽ, വഴിത്തല പി.ഒ.		
സ്ഥാപനത്തിന്റെ പേരും, സ്ഥലനാമവും	യുണൈറ്റഡ് ഗ്രാനൈറ്റ്സ്&മെറ്റൽസ്, വഴിത്തല		
ലൈസൻസ് നൽകിയിട്ടുള്ള പ്രവർത്തനങ്ങൾ	കരിങ്കൽ ക്വാറി നടത്തി സ്റ്റോൺ അഗ്രിഗേറ്റ്സ് ഉൽപ്പാദിപ്പിക്കുന്നതിന്		
വാർഡ് നമ്പർ/കെട്ടിട നമ്പർ	XII/-		
ലൈസൻസ് കാലാവധി	01/04/2023	മുതൽ	31/03/2028 വരെ
ലൈസൻസ് ഫീസ്	മുക	രസീത് നമ്പർ	തീയതി
	75000/- രൂപ	1220303816, 3817, 4430	15/03/2023, 31/03/2023
	മോട്ടോർ ഫീസ്	22200/- രൂപ	1220303816, 3817, 4430
തൊഴിൽ നികുതി	12500/- രൂപ	1220303816, 4430	15/03/2023, 31/03/2023

ലൈസൻസ് അനുവദിക്കുന്നതിന് ഹാജരാക്കിയ നിരാക്ഷേപ പത്രങ്ങളുടെ വിശദാംശങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽകിയ അധികാര സ്ഥാപനം)



1. Integrated Consent to operate-Renewal from PCB No. PCB/RO-EKM/IDK/R181DU446677/2021 Dated 10/08/2021 Valid upto 15/07/2024 (15/07/2024-നു ശേഷം ലൈസൻസ് പുതുക്കി ഹാജരാക്കേണ്ടതാണ്)
2. Environment Clearance from SEIAA No. 1137/EC/SEIAA/KL/2017 Dated 02/03/2023 (Certificate യഥാസമയം പുതുക്കേണ്ടതാണ്)
3. License from PESO No. E/SC/KL/22/811 (E38112) Dated 06/02/2020 Valid upto 31/03/2025,(31/03/2025-നു ശേഷം ലൈസൻസ് പുതുക്കി ഹാജരാക്കേണ്ടതാണ്), BLASTMANS CERTIFICATE

സെക്രട്ടറി  
മണക്കാട് ഗ്രാമപഞ്ചായത്ത്

മുഖ്യമന്ത്രിയുടെ ഓഫീസ്, തൃശ്ശൂർ ജില്ല - 685 608  
ഫോൺ: 04862 202248, ഫാക്സ്: 0486045103

**ലൈസൻസി താഴെ പറയുന്ന വ്യവസ്ഥകൾ അനുസരിക്കേണ്ടതാകുന്നു.**

- 1 കേരള പഞ്ചായത്ത് രാജ് ആകട്ടെ അതേ തുടർന്നുള്ള ചട്ടങ്ങളും മൈലകളും അനുസരിച്ചു പ്രവർത്തിക്കേണ്ടതാകുന്നു.
- 2 തൊഴിൽ സ്ഥലവും അതിലുള്ള സാധനസാമഗ്രികളും പഞ്ചായത്തധികാരികൾക്കോ/സെക്രട്ടറി അധികാരപ്പെടുത്തുന്ന മറ്റ് ഉദ്യോഗസ്ഥർക്കോ പരിശോധിക്കുന്നതിന് ലൈസൻസി വേണ്ട സൈകര്യം നൽകേണ്ടതും അവർ ആവശ്യപ്പെട്ടാൽ ഈ ലൈസൻസ് കാണിക്കേണ്ടതുമാണ്.
- 3 എൽ സ്ഥലത്തിന്റെ കാര്യത്തിൽ ലൈസൻസ് നൽകിയിരിക്കുന്നവോ ആ സ്ഥലത്ത് എല്ലാവരും കാണത്തക്ക വിധത്തിലുള്ള ഒരു ഭാഗത്ത് ലൈസൻസി തന്റെ പേരും, ലൈസൻസിന്റെ നമ്പരും ഉദ്ദേശവും കാണിക്കുന്ന ഒരു അടയാളപ്പലക വച്ചിരിക്കേണ്ടതാണ്.
- 4 പഞ്ചായത്തിൽ നിന്നും അനുവാദം ലഭിച്ചശേഷമല്ലാതെ തൊഴിൽ സ്ഥലം മാറ്റാൻ പാടില്ലാത്തതും തൊഴിൽ നിർത്തുന്ന പക്ഷം വിവരം മുൻകൂട്ടി പഞ്ചായത്തിൽ അറിയിക്കേണ്ടതുമാകുന്നു.
- 5 തൊഴിൽ സ്ഥലവും പരിസരങ്ങളും വൃത്തിയായും സാക്രമികരോഗാണുക്കൾ ഉണ്ടാകാത്ത വിധത്തിലും പോതുജനോപദ്രവമാകാത്ത വിധത്തിലും വ്യപാരത്തിനു വച്ചിട്ടുള്ള ഭക്ഷണപദാർത്ഥങ്ങൾ ഈച്ച അണുക്കൾ, പൊടി മുതലായവയുടെ ശല്യം ഉണ്ടാകാത്ത വിധത്തിലും സൂക്ഷിക്കേണ്ടതാണ്.
- 6 ദൈ പ്രവർത്തിച്ചിട്ടില്ലാത്തതിന്റെയും ഒടുവിൽ സ്ഥലം വൃത്തിയാക്കേണ്ടതാണ്.
- 7 ആ സ്ഥലത്തിന്റെയോ പരിസരത്തിന്റെയോ, എന്തെങ്കിലും ഭാഗത്ത് വീഴുകയോ നിക്ഷേപിക്കുകയോ ചെയ്യുന്ന ചുറ്റുമുഖം, മൃഗങ്ങളുടെ അവശിഷ്ടങ്ങളോ മറ്റ് പദാർത്ഥമോ ശേഖരിച്ച്, സെക്രട്ടറിക്ക് തൃപ്തികരമായ രീതിയിൽ നീക്കം ചെയ്യിക്കേണ്ടതാണ്.
- 8 ലൈസൻസി എന്തൊരു കെട്ടിടത്തിന്റെയും ചുവരുകളുടെ അകവശത്തിന്റെ എന്തൊരു ഭാഗവും മേൽപറഞ്ഞ പരിസരത്തിലുള്ള തറയും നടപ്പാതയും അവിടെ തെറിച്ചുവീഴാനിടയുള്ള എന്തെങ്കിലും ഭാഗങ്ങളോ, മാലിന്യമോ, ചുറ്റുമുഖമോ, അസഹ്യവും, ഉപദ്രവകരവുമായ എന്തെങ്കിലും പദാർത്ഥമോ അവിടെ ലയിക്കുന്നത് തടയത്തക്കവിധം എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് നിലനിർത്തേണ്ടതാണ്.
- 9 ലൈസൻസി മേൽപറഞ്ഞ സ്ഥലത്തോ, പരിസരത്തോ അതോടു ചേർന്നോ ഉള്ള എന്തൊരു ഓവുചാലും, അടുക്കൂലും കളയുന്നതിനുള്ള ഉപകരണവും എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് വയ്പിക്കേണ്ടതാണ്.
- 10 അധിതം ആചരിക്കുന്ന കടകളുടെ ലൈസൻസ് റദ്ദ്ചെയ്യുന്നതാണ്.
- 11 എന്തെങ്കിലും തരത്തിലുള്ള തപാൽ രോഗമോ കൃഷി രോഗമോ (വൃണമോ പകർച്ച വ്യാധികളോ ഉള്ള യാതൊരാളും കച്ചവടം നടത്തുന്നതിന് ഉപയോഗിക്കുന്ന സ്ഥലത്തും പരിസരത്തും പ്രവർത്തിക്കുവാൻ പാടില്ലാത്തതാകുന്നു.
- 12 17/02/2019 ലെ സ.ഉ. (വൈ) നം.7/2019 പരിസ്ഥിതി ഉത്തരവ് പ്രകാരം ഏതതവണ്ണ ഉപയോഗിക്കുന്ന നിരോധിത വസ്തുക്കൾ ഉൽപ്പാദിപ്പിക്കുകയോ ശേഖരിക്കുകയോ വിൽക്കുകയോ കൈകാര്യം ചെയ്യുകയോ വിതരണം ചെയ്യുകയോ ചെയ്യാൻ പാടില്ല.
- 13 സ്ഥാപനത്തിന്റെ ബോർഡിൽ സ്ഥലനാമം മലയാളത്തിലും ഇംഗ്ലീഷിലും രേഖപ്പെടുത്തേണ്ടതാണ്.
- 14 20 സീറ്റിൽ കൂടുതലുള്ള എല്ലാ ഹോട്ടലുകളും റെസ്റ്റോറന്റുകളും ടോയ്ലറ്റ് സൗകര്യം ഏർപ്പെടുത്തേണ്ടതാണ്.
- 15 നിരോധിത ഉൽപ്പന്നങ്ങളായ പാൽമസാല, ഗുഡ്ബ തുടങ്ങിയവ സംഭരിച്ചുവയ്ക്കുവാനോ വിൽക്കുവാനോ പാടില്ല.
- 16 ബാലവേല അനുവദിക്കാൻ പാടില്ല.
- 17 തുടർന്ന് കാണിച്ചിരിക്കുന്ന വ്യവസ്ഥകളുടെ ലംഘനം ഈ ലൈസൻസ് റദ്ദ് ചെയ്യപ്പെടുന്നതിന് കാരണമാകാവുന്നതാണ്.

N.B:- ഈ ലൈസൻസ് അവസാനിക്കുന്ന തീയതിക്ക് 30 ദിവസം മുൻ ലൈസൻസ് റദ്ദ് ചെയ്യപ്പെടുന്നതിനുള്ള ശിക്ഷിക്കാവുന്നതാണ്.



*[Handwritten Signature]*

സെക്രട്ടറി  
തൃശ്ശി ഐ. എൻ.  
മണക്കാട് ഗ്രാമപഞ്ചായത്ത്  
കോട്ടയം ജില്ല  
ഫോൺ: 04862 202248 ഫാക്സ്: 04862 45103

**Annexure-15**  
**NEWSPAPER ADVERTISEMENT**

### ബോട്ടിംഗ്

പൊതുജനശ്രദ്ധയ്ക്കായി, കോള സംസ്ഥാനം, ഇടുക്കി ജില്ല, തൊടുപുഴ താലൂക്ക്, മണക്കാട് ഗ്രാമപഞ്ചായത്ത്, മണക്കാട് വില്ലേജിലുൾപ്പെട്ട റിസർവ്വേഷൻ നമ്പർ 354/4, 354/5, 355/1pt, 351/1pt, 350, 352/1pt-ൽ ഹനരണവും ചെയ്യുന്നതിനുള്ള പരിസഥിതി അനുമതി ശ്രീ. ജോർജ്ജ് കൊച്ചുപറമ്പിൽ-ന് കോള സംസ്ഥാന പരിസഥിതി ഇംപാക്ട് അസ്യൂസ്മെന്റ് അതോറിറ്റിയിൽനിന്നും ഓർഡർ നമ്പർ 1137/EC/SEIA/VKL/2017 തീയതി 17-03-2018 ഓർഡർ പ്രകാരം ലഭിച്ചിരിക്കുന്നു. ഈ ഓർഡറിന്റെ പകർപ്പ് കോള സംസ്ഥാന പരിസഥിതി ഇംപാക്ട് അസ്യൂസ്മെന്റ് അതോറിറ്റിയിൽ ലഭ്യമാണ്. [www.seiaakerala.org](http://www.seiaakerala.org) എന്ന വെബ്സൈറ്റിൽകൂടിയും പകർപ്പ് കാണാവുന്നതാണ്.

### PUBLIC NOTICE

#### NOTICE

This is to inform to the General Public that, the proposed quarry project in Re-Survey Nos. 354/4, 354/5, 355/1pt., 351/1pt., 350, 352/1pt. of Shri George Kochuparambil at Manakkad Village, Manakkad Grama Panchayat, Thodupuzha Taluk, Idukki District, Kerala is accorded with ENVIRONMENTAL CLEARANCE by State Environment Impact Assessment Authority, Kerala vide Order No. 1137/EC/SEIA/VKL/2017 dt. 17-03-2018 and the copy of the Environmental Clearance is available with the office of State Environment Impact Assessment Authority and may also be seen on the website of the Authority at [www.seiaakerala.org](http://www.seiaakerala.org)

**Annexure-16**  
**MONITORING PHOTOS**





**Annexure-17**  
**MONITORING REPORTS**



### GLOBAL ENVIRONMENT & MINING SERVICES LLP

(Consulting Engineers, Mine designers, Geologist & Surveyors)

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Website : www.globalmining.in

GEMS-LD/TF/11/01

Report Issue Date: 10.12.2025

### ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry : Granite Building Stone Quarry of  
**Shri. George Kochuparambil**  
Extent: 12.2987Ha  
Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt,  
Manakkad Village, Thodupuzha Taluk,  
Idukki District, Kerala.

Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler & CO Analyzer  
Month : **December- 2025**  
Location : **Core zone area**  
Monitoring station code : **A1**  
Duration of Monitoring : 24 Hour  
Report Number : ULR-TC161802500001305F

### RESULTS

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]		CO (1 Hour) (mg/ m <sup>3</sup> )	
Reference method			IS: 5182:2006 (Part 23) (RF- 2017)		IS: 5182 (Part 24): 2019		IS: 5182: 2001 (Part 2) (RF 2017)		IS: 5182: (Part 6) 2006 (RF 2017)		IS: 5182: (Part 10) 1999 (RF 2006)	
Date of Sampling	Date of sample received	Sample code	Result	STD	Result	STD	Result	STD	Result	STD	Result	STD
05.12.2025	08.09.2025	573	43.5	100	18.9	60	4.4	80	7.0	80	ND	4.0

Note:

CO - GEMS/SOP/86/as per CO analyzer Manual (1 hour)

ND - Not Detected (<0.001)

INFERENCE:	As per NAAQMS Standards 2009, Report Status: - Measured Values for the above parameters are within the limit.
------------	--

Analyzed By  
Anusha M  
Chemist

Authorized Signatory  
K. Ramakrishna Reddy  
Technical Manager



Note:

1. The result listed herein only to the tested samples & applicable parameters. Exceedment of standards is neither advised nor implied.
2. Water Samples will be preserved after 10 Days, Minerals 3 Months, Filter papers & Slurries, other analysis Discard.
3. This report is not to be reproduced, copied or in part, cannot be used as evidence at the Court of Law & should not use any information unless advised special permission is writing.
4. Total liability of our Laboratory is limited to the fee cost incurred. Any dispute arising out of this report is subject to Dispute resolution only.
5. Recognized by Ministry of Environment, Forest and Climate Change for Laboratory.
6. Recognized by Government of Karnataka, Maharashtra, Goa for DGPS server.

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Website : www.globalmining.in

GEMS-ED/TF/11/01

Report Issue Date: 10.12.2025.

**ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA**

Name of the Industry : Granite Building Stone Quarry of  
**Shri. George Kochuparambil**  
Extent: 12.2987Ha  
Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt,  
Manakkad Village, Thodupuzha Taluk,  
Idukki District, Kerala.

Sample Type : Ambient Air Quality Monitoring  
Particulars of Sample Collected : Respirable Dust Sampler, FPS Sampler & CO Analyzer  
Month : **December - 2025**  
Location : **Kolady.**  
Monitoring station code : **A2**  
Duration of Monitoring : 24 Hour  
Report Number : ULR-TC161802500001306F

**RESULTS**

Parameters			PM <sub>10</sub> [µg/m <sup>3</sup> ]		PM <sub>2.5</sub> [µg/m <sup>3</sup> ]		SO <sub>2</sub> [µg/m <sup>3</sup> ]		NO <sub>2</sub> [µg/m <sup>3</sup> ]		CO (1 Hour) (mg/m <sup>3</sup> )	
Reference method			IS: 5182:2006 (Part 23) (RI- 2017)		IS: 5182 (Part 24): 2019		IS: 5182: 2001 (Part 2) (RI 2017)		IS: 5182: (Part 6) 2006 (RI 2017)		IS: 5182: (Part 10) 1999 (RI 2006)	
Date of Sampling	Date of sample received	Sample code	Result	STD	Result	STD	Result	STD	Result	STD	Result	STD
06.12.2025	08.12.2025	574	44.8	100	17.1	60	4.1	80	9.2	80	ND	4.0

**Note:**

CO - GEMS/SOP/86/us per CO analyzer Manual (1 hour)

ND - Not Detected (&lt;0.001)

**INFERENCE**

As per NAAQMS Standards 2009,

Report Status: - Measured Values for the above parameters are within the limit.

Analyzed By  
Anusha M  
ChemistAuthorized Signatory  
K. Ramakrishna Reddy  
Technical Manager**Note:**

- The result listed refers only to the listed samples & applicable parameters. Extrapolation of results to other reference points is not applicable.
- Wetted Samples will be analysed after 48hrs. Maximum 5 Weeks. Filter papers & Tins should also be used as Discard.
- This report is not to be reproduced without the consent of the analyst. Any dispute arising out of this report is subject to the terms and conditions.
- Total liability of our laboratory is limited to the fee received. Any dispute arising out of this report is subject to the terms and conditions.
- Recognized by Ministry of Environment, Forest and Climate Change for Laboratory.
- Recognized by Government of Karnataka, Government of India for DCRP status.



## GLOBAL ENVIRONMENT & MINING SERVICES LLP

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Website : www.globalmining.in

GEMS-LD/TF/08/01

Report Issue Date: 10.12.2025

### TEST REPORT OF AMBIENT NOISE LEVEL DATA

- 1 Name of the Industry : Granite Building Stone Quarry of Shri. George Kochuparambil  
Extent: 12.2987Ha  
Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt, Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala.
- 2 Sample Description : Ambient Noise Level monitoring
- 3 Sample Collected By : GLOBAL Environment & Mining Services LLP.
- 4 Particulars of Sample Collected : Noise Level Meter (Lutron SL-4023SD)
- 5 Month : December - 2025
- 6 Duration of the Monitoring : 24 Hours Sampling
- 7 Report Number : ULR-TC 161802500001307F

#### Result

Date	05.12.2025	06.12.2025
Area	Industrial	Residential
Name of the Location	Core zone	Kolady
Sample code	542	543
Time (hrs)	N1	N2
6.00	42.4	43.1
7.00	54.6	50.3
8.00	60.3	55.7
9.00	61.6	54.9
10.00	62.8	57.4
11.00	62.2	56.1
12.00	57.1	50.1
13.00	58.5	49.8
14.00	56.8	52.4
15.00	58.0	52.0
16.00	59.4	51.5
17.00	55.9	58.0
18.00	58.8	59.8
19.00	50.5	54.1
20.00	47.2	48.9
21.00	46.6	49.3
22.00	41.8	43.4
23.00	39.8	41.0
00.00	36.5	42.1
01.00	35.6	39.8
02.00	36.6	38.7
03.00	36.1	38.8
04.00	36.0	39.6
05.00	39.8	40.3

#### Note:

- The result listed refers only to the tested samples & applicable parameters. Displacement of products is not to be inferred unless specified.
- Water Samples will be analysed within 14 Days, Minerals 3 Months, Fats, greases & Detergents after analysis Duration.
- This report is not to be reproduced, copied, or to put it common for public reference in the Case of loss it should not be used for any other purpose without special permission.
- Total liability of our laboratory is limited to the fees received. Any dispute arising out of this report is subject to Hospete jurisdiction only.
- Recognized by Ministry of Environment, Forest and Climate Change by Laboratory.
- Recognized by Government of Karnataka, Maharashtra, Goa for DQMS services.





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Name of the location	Core zone	Kolady
L max	62.8	59.8
L min	35.6	30.7
L 10	36.2	39.6
L 50	52.5	49.9
L 90	61.2	57.0
Ld	58.6	54.6
Ln	39.0	41.0
Ldn	56.9	53.7
Leq	56.6	52.7

All Measured Values are in Db(A)

#### NOISE: (AMBIENT STANDARDS)

Area Code	Category of Area	Limit in dB(A) Leq	
		Day Time	Nighttime
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Area	50	40

Note	Day time shall mean from 6:00 am and 10:00 pm.
	Night time shall mean from in between 10:00 pm and 6:00 am
	Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
	Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
	*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which relatable to human being
	A "decibel" is a unit in which noise is measured
	"A" in dB(A) Leq denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
Leq: It is energy mean of the noise level over a specified period.	

Authorized Signatory  
K. Ramakrishna Reddy  
Technical Manager



#### Note:

- The usual listed values apply to the listed category & applicable parameters. Under no circumstances shall the values of products in any other category be applied.
- Water supply shall be measured after 100m, Noise at 10m, 15m, 20m, 25m, 30m, 35m, 40m, 45m, 50m, 55m, 60m, 65m, 70m, 75m, 80m, 85m, 90m, 95m, 100m.
- The impact is not to be significant unless it is found to exceed the limit of 100m, 150m, 200m, 250m, 300m, 350m, 400m, 450m, 500m, 550m, 600m, 650m, 700m, 750m, 800m, 850m, 900m, 950m, 1000m.
- Total liability of any institution is limited to the best available. Any dispute arising out of this report is subject to Hospete jurisdiction only.
- Recognized by Ministry of Environment, Forest and Climate Change (India)
- Recognized by Government of Karnataka, Mysore District, Geo for DGP services.



### GLOBAL ENVIRONMENT & MINING SERVICES LLP

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GEMS-LD/TF/2301

Report Issue Date: 10.12.2025

### Analysis Report of Water Quality Data

- 1 Name of the Industry : Granite Building Stone Quarry of **Shri. George Kochuparambil**  
Extent: 12.2987Ha  
Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt,  
Marakkad Village, Thodupuzha Taluk,  
Idukki District, Kerala.
- 2 Customer Reference : -
- 3 Sample Collected by : GLOBAL Environment & Mining Services LLP
- 4 Particulars of sample collected : Grab Sampling
- 5 Sampling procedure : GEMS-LD/SOP/32
- 6 Sample Type : **Water Sample (Ground Water)**
- 7 Date of sampling : 05.12.2025
- 8 Sample Received : 08.12.2025
- 9 Date of Analysis : 09.12.2025
- 10 Report Number : LILR-TC161802500001308F

#### Results

Sl. No.	Parameters	Protocol	Unit	Results		Standard as per IS : 10500 : 2012	
				Sample Code	Desirable limits	Permissible limits	
							823
1.	Temperature	Thermometer	°C	24.9	-	-	
2.	pH	APHA 23 <sup>rd</sup> Edition 2017 4300 11-B (Pg No. 4-95 to 4-99)	-	6.8	6.5-8.5	NR	
3.	Conductivity	APHA 23 <sup>rd</sup> Edition 2017 2510 A (Pg No. 2-36 to 2-58)	µS/cm	294	-	-	
4.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg No. 2-49 to 2-70)	mg/L	145	500	2000	
5.	Turbidity (NTU)	APHA 23 <sup>rd</sup> Edition 2017 2130 B (Pg No. 2-13 to 2-15)	NTU	1.0	1	5	
6.	Phosphorus P	APHA 23 <sup>rd</sup> Edition 2017 1500 D (Pg No. 4-143 to 4-164)	mg/L	<0.01	-	-	
7.	Sodium as Na	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg No. 3-99 to 3-101)	mg/L	21.8	-	-	
8.	Potassium as K	APHA 23 <sup>rd</sup> Edition 2017 K 3500 D (Pg No. 3-89 to 3-90)	mg/L	0.8	-	-	
9.	Calcium as Ca	APHA 23 <sup>rd</sup> Edition 2017 3500 Ca B (Pg No. 3-89 to 3-90)	mg/L	44.8	75	200	
10.	Magnesium as Mg	APHA 23 <sup>rd</sup> Edition 2017 3500 B Mg by calculation (Pg No. 3-86)	mg/L	9.5	30	100	
11.	Total Hardness as CaCl <sub>2</sub>	APHA 23 <sup>rd</sup> Edition 2017 2540 C (Pg No. 2-48 to 2-50)	mg/L	108	200	600	
12.	Chloride as Cl	APHA 23 <sup>rd</sup> Edition 2017 4300 Cl (Pg No. 4-73 to 4-76)	mg/L	25.7	250	1000	
13.	Sulphate as SO <sub>4</sub>	APHA 23 <sup>rd</sup> Edition 2017 4300 SO <sub>4</sub> (Pg No. 4-109 to 4-200)	mg/L	<1.0	200	400	
14.	Fluoride as F	APHA 23 <sup>rd</sup> Edition 2017 4300 F (Pg No. 4-93 to 4-94)	mg/L	0.5	1.0	1.5	
15.	Ammony Nitrogen as NH <sub>4</sub>	APHA 23 <sup>rd</sup> Edition - 4300 NH <sub>4</sub> - T (Pg No. 4-131 to 4-132)	mg/L	<1.0	45	NR	
16.	Total Alkalinity as CaCl <sub>2</sub>	APHA 23 <sup>rd</sup> Edition 2017 2320 B (Pg No. 3-37 to 3-39)	mg/L	57.5	200	600	

#### Note:

1. The result is valid only for the tested sample & applicable parameters. Evaluation of products is under reference only.
2. Major sampling site has distance of 100m, Minor 50m, 100m, 200m & 300m from the source.
3. This report is not to be reproduced, stored in a retrieval system or used in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the author.
4. Total liability of any laboratory is limited to the fees received. Any dispute arising out of this report is subject to HOSPETE jurisdiction only.
5. Recognized by Ministry of Environment, Forest and Climate Change for Laboratory.
6. Registered by Government of Karnataka, Mysore, for OGP services.



**GLOBAL ENVIRONMENT & MINING SERVICES LLP**

(Consulting Engineers, Mine designers, Geologist &amp; Surveyors)

3<sup>rd</sup> Main Road, Basaveswara Badavane,**HOSPETE – 583201**, Dist., Vijayanagara (Karnataka)

Ph : +918394 355369

e-mail : gems\_hpt@yahoo.com

Website : www.globalmining.in

ULR-TC161802500001308F						
17	Total Iron as Fe	APHA 23 <sup>rd</sup> Edition 2017 3900-B Fe B (Pg No. 5-80 to 382)	mg/L	0.24	0.30	NR
18	Nickel as Ni	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame method	mg/L	<0.01	0.02	NR
19	Manganese as Mn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame method	mg/L	<0.1	0.10	0.30
20	Copper as Cu	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame method	mg/L	<0.05	0.05	1.50
21	Zinc as Zn	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame method	mg/L	<0.1	5	15
22	Lead as Pb	APHA 23 <sup>rd</sup> Edition 3111 B. Direct Air Acetylene Flame method	mg/L	<0.01	0.01	NR
23	Total Coliforms	IS 15193:2016	MPN/100ml	Ab	Shall not be detectable in any 100ml sample	-
24	E-Coli	IS 15193:2016	MPN/100ml	Ab	Shall not be detectable in any 100ml sample	-

Note: GW: Kolady.

NR: No Relaxation. Ab: Absent

INFERENCE	As per Standards IS: 10500:2012 Report Status: - Measured Values for the above parameters are within the limit.
-----------	--

Analyzed By  
Anusha M  
ChemistAuthorized Signatory  
K. Ramakrishna Reddy  
Technical Manager**Note:**

- The result listed refers only to the tested samples & applicable parameters. Containment of products is on the responsibility of client.
- Water Samples will be preserved upto 10 Days. Maximum 3 Months. Blank papers & Drawings after analysis Discard.
- This report is not to be reproduced wholly or in part & cannot be used for claims on the basis of law & should not use any advertising media without special permission of writing.
- Total liability of our laboratory is limited to the fees amount. Any dispute arising out of this report is subject to HOSPETE jurisdiction only.
- Recognized by Ministry of Environment, Forest and Climate Change for Laboratories.
- Recognized by Government of Karnataka, Mysore. One for OGP survey.

**Annexure-18**  
**AFFORESTATION**





**Annexure-19**  
**SITE PHOTOGRAPHS**



VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.89532618°

Longitude  
76.6397966°

Local 11:33:19 AM  
GMT 06:03:19 AM

Altitude 77 meters  
Thursday, 05.03.2026

**Annexure-20**  
**MAGAZINE PHOTOGRAPHS**



VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 

Latitude	Longitude
9.89792276°	76.63872247°
Local 12:04:01 PM	Altitude 77 meters
GMT 06:34:01 AM	Thursday, 05.03.2026



VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Kerala 685583, India 

Latitude	Longitude
9.89789241°	76.63868576°
Local 12:03:47 PM	Altitude 77 meters
GMT 06:33:47 AM	Thursday, 05.03.2026

**Annexure-21**  
**NOTARIZED AFFIDAVIT**



കേരളം കേരल KERALA

547173

**AFFIDAVIT**

George Kochuparambil, S/o Emmanuel K George, residing at Kochumarambil House, Vengaloor Kara, Vazhithala P.O., Pin 685583, Manakkadu Village, Thodupuzha Taluk, Idukki District, do hereby affirm and confirm as follows:-

1. That, I, proposes to develop a Quarry Project in Re-Survey Nos. 354/4, 354/5, 355/1pt., 351/1pt., 350, 352/1pt, at Manakkad Village, Manakkad Grama Panchayat, Thodupuzha Taluk, Idukki District, Kerala.
2. That, the Environment Clearance proceedings number and date are Order No. 1137/EC/SEIAA/KL/2017 dt. 17-03-2018.
3. That, all the conditions stipulated in the Environment Clearance would be scrupulously followed.

DEPONENT: GEORGE KOCHUPARAMBIL

**Verification :**

Verified that my above statements are true to the best of my knowledge and belief and nothing material has been concealed therein.

DEPONENT: GEORGE KOCHUPARAMBIL

Place : Idukki  
Date : 13-04-2018

Solemnly affirmed and signed before me by the deponent known to me on this the 13<sup>th</sup> day of April 2018 at my office at Thodupuzha



Signature of the deponent: George Kochuparambil  
Date: 13/4/2018  
Signature of the witness: M. K. MURALI

Signature of the official: Justice J. Putha  
mananthottay



**Annexure-22**

**LIST OF CSR ACTIVITIES WITH  
PHOTOS AND RECEIPTS**

**ST.SEBASTIAN'S HIGH SCHOOL, MEMADANGU**

MEMADANGU P. O., ARIKUZHA, memadangusshs@gmail.com

To,

Anish Kochuparambil  
United Granites and Metals.  
Kolady.

Sir,

ഞങ്ങളുടെ സ്കൂളിൽ സാമ്പത്തികമായി പിന്നോക്കം നിൽക്കുന്ന കുട്ടികളാണ് പഠിക്കുന്നത്. കുട്ടികൾ പഠനം വ്യക്തമാക്കാൻ ഉപയോഗിക്കുന്ന കമ്പ്യൂട്ടറുകൾ കാലചക്രം കൊണ്ട് ഉപയോഗശൂന്യമായി കിടന്നിരിക്കുകയാണ്. പഠന കമ്പ്യൂട്ടർ വാങ്ങാൻ നിലവിലെ സാമ്പത്തികഘിതി അനുവദിക്കാത്തതിനാൽ കുട്ടികളുടെ പഠനം വ്യക്തമാക്കാൻ ഒരു ലാപ്ടോപ്പ് വാങ്ങിത്തരണമെന്ന് അഭ്യർത്ഥിക്കുന്നു.

വിജ്ഞാപനങ്ങൾ

JOMI GEORGE K  
PEN: 485408  
Headmistress  
St. Sebastian's High School  
Memadangu - 686 672

16/10/2025  
Memadangu.



**Tax Invoice**



**INFONIX SOLUTIONS**

First Floor, 39/186 B9, St. Michael's Arcade, Erakkumpuzha - Thenamkundu Bypass Road, Thodupuzha, Idukki, Kerala, 685608  
 Phone no.: 9048852444, 9496340934 Email: infonixsolutionstdpa@gmail.com  
 GSTIN: 32AVMPN6614Q1ZZ, State: 32-Kerala

Bill To		Ship To		Invoice Details
<b>United Granites and Metals</b> 0 255 UNITED GRANITES KOLADY MANAKKAD Contact No.: 9947909518 GSTIN Number: 32AFJPK9650E1ZH State: 32-Kerala		Headmistress St. Sebastian's High School Memadangu P.O Arikuzha		Invoice No.: 135 Date: 24-10-2025 Time: 06:23 PM Place of Supply: 32-Kerala

#	Item name	HSN/ SAC	Quantity	Price/ Unit	Tax	Amount
1	LAPTOP ACER AL15-41(R3-7330U/16GB/512 SSD/15.6 FHD IPS/WIN11/STEEL GRAY)UN.31ZSL045 Serial No.: UN31ZS00455250810A0700	84713010	1	₹ 26186.44	₹ 4713.56 (18.0%)	₹ 30900.00
<b>Total</b>			<b>1</b>		<b>₹ 4713.56</b>	<b>₹ 30900.00</b>

Tax type	Taxable amount	Rate	Tax amount	Amounts
SGST	₹ 26186.44	9.0%	₹ 2356.78	Sub Total ₹ 30900.00
CGST	₹ 26186.44	9.0%	₹ 2356.78	<b>Total</b> ₹ 30900.00
				Received ₹ 30900.00
				Balance ₹ 0.00

Invoice Amount in Words  
 Thirty Thousand Nine Hundred Rupees only

Bank Details	Terms and conditions	For: INFONIX SOLUTIONS
Name: STATE BANK OF INDIA, VENGALLOOR Account No.: 42159791985 IFSC code: SBIN0071085 Account Holder's Name: INFONIX SOLUTIONS	Thanks for doing business with us!	 Authorized Signatory

ഷൈനി ഷാജി  
വൈസ് പ്രസിഡന്റ്  
മണക്കാട് ഗ്രാമപഞ്ചായത്ത്  
ഫോൺ : 04862 202248



ആർപ്പിത്താനത്ത്  
അരിക്കുഴ പി.ഒ.  
മൊബൈൽ : 8606401650

തീയതി.....5/11/2025.....

To,  
Mr. Anish Kochuparambil  
A Sand Eranites  
Vazhithala.

Sir,

മണക്കാട് ഗ്രാമപഞ്ചായത്തിൽ 13-ാം വാർഡിൽ  
സ്ഥിതി ചെയ്യുന്ന ടി.നോസ് P.S. കോളി, തിരുച്ചു  
പാവപ്പെട്ട കുറ്റങ്ങൾക്കെതിരെ കർമ്മ പരിഭവന  
കൾ വിദ്യാലയമാണ്. ഉദ്യോഗസ്ഥർ കർമ്മങ്ങൾ  
സംഭരിക്കുവാനു നൽകുന്നതിനു തിരുവല്ലയിലേക്ക്  
കർമ്മങ്ങൾ ഒരു കൂട്ടം തിരുവല്ലയിലേക്ക്  
കൊണ്ടുവരിക. ഈ തിരുവല്ല പരിഗണിച്ച് തിരുവല്ല  
തിരുവല്ലയിലെ സഹായം ചെയ്യാനാണെന്നു തിരുവല്ല.

എൻ,

Shiny  
SHINY SHAJI  
Vice President  
Manakkad  
Grama Panchayat

**ST. THOMAS L.P. SCHOOL**  
**KOLADY, VAZHITHALA P.O.**

PIN 685583, Mob No. 6235744645  
School Code:- 29347, UDISE Code:- 32090700705  
Email-hmstfipskolady@gmail.com

No:-31/2025

Date:- 11.2025

From,

**THE HEADMASTER**

To,

**Mr.Anish Kochuparambil**

**United Granites Vazhithala**

**Thodupuzha**

Sub: ന്യൂജിലേക്ക് കമ്പ്യൂട്ടറും പ്രിന്ററും ലഭ്യമാക്കുന്നതുമായി ബന്ധപ്പെട്ട്.

Sir,

സാമ്പത്തികവും സാമൂഹ്യവും വിദ്യാഭ്യാസപരവും ആയി പിന്നോക്കാവസ്ഥ നേരിടുന്ന കുടുംബങ്ങളിൽ നിന്നുമുള്ള കുട്ടികളാണ് നമ്മുടെ വിദ്യാർത്ഥികൾ. സാങ്കേതിക വിദ്യാഭ്യാസം സാധാരണക്കാരുടെ മക്കൾക്കും ലഭ്യമാക്കുന്നതിനായി ഏതാനും കമ്പ്യൂട്ടറുകളും പ്രിന്ററും അടിയന്തരമായി ഒരുക്കേണ്ടതുണ്ട്. ഈ ഉദ്യമത്തിലേക്ക് ആയി 3 ലാപ്ടോപ്പ് കമ്പ്യൂട്ടറുകളും ഒരു പ്രിന്ററും നൽകി സഹായിക്കണം എന്ന് അപേക്ഷിക്കുന്നു.

നന്ദിപൂർവ്വം,

ഹെഡ്മാസ്റ്റർ



  
**LIONOS GEORGE**  
PEN 209458  
Teacher in-charge  
St. Thomas LPS Kolady  
School Code : 29347  
Mukai Dist. - 685 583

Tax Invoice

Bill To		Invoice Details				
 <b>United Granites and Metals</b> 0 255 UNITED GRANITES KOLADY MANAKKAD Contact No. : 9947909518 GSTIN : S2A/PK3650E1Z4 State: 32-Kerala		<b>INFONIX SOLUTIONS</b> First Floor, 39/186 B3, St.Michael's Arcade, Erakkumpuzha - Themburamu Bypass Road, Thodupuzha, 1844K, Kerala, 685609 Phone no.: 9068853444, 9496342934 Email: infonixsolutionsindia@gmail.com GSTIN: S26WMPN6614Q1Z2, State: 32-Kerala				
KOLADY 1P SCHOOL		Invoice No. : 144 Date : 07-11-2025 Time : 09:25 AM Place of supply: 32-Kerala				
#	Item name	HSN/ SAC	Quantity	Price/ Unit	SST	Amount
1	LAPTOP ACER AL15-31(INTEL CORE I3 N100/BGR/512 SSD/15.6 FHD/WIN11/2YRQUN.3465006 Serial No.: 1N048500K1408230790		1	₹ 22796.61	₹ 4103.39 (18%)	₹ 26900.00
2	PRINTER EPSON L3250 Serial No. 3XHT794603	84433100	1	₹ 12245.76	₹ 2204.24 (18%)	₹ 14450.00
<b>Total</b>			<b>2</b>		<b>₹ 6307.63</b>	<b>₹ 41350.00</b>
Tax Type	Taxable amount	Rate	Tax amount	Amount		
SGST	₹ 35042.37	9%	₹ 3153.81	Sub Total	₹ 41350.00	
CGST	₹ 35042.37	9%	₹ 3153.81	<b>Total</b>	<b>₹ 41350.00</b>	
				Received	₹ 0.00	
				Balance	₹ 41350.00	
Invoice Amount in Words						
Forty One Thousand Three Hundred Fifty Rupees only						
Bank Details		Terms and Conditions			For: INFONIX SOLUTIONS	
 Name : STATE BANK OF INDIA, VENGALLOOR Account No. : 42159791985 IFSC code : SBIN0011085 Account holder's name : INFONIX SOLUTIONS		Thanks for doing business with us 			 Authorized Signatory	

School Code - 29363  
udise Code - 32090700904

Mob: 7907427798  
Phone : 04862 - 274474  
e-mail: salpsvengaloor@gmail.com

**ST. ANTONY'S L.P. SCHOOL, VENGALLOOR**  
VAZHITHALA P.O., PIN - 685583

From,  
The Headmaster

Date - 21/02/2026

To,  
Mr. George Kechuparambil,  
United Granites and Metals,  
Vazhithala.

Sub: ഒരുമൽ ലഭിക്കൽ സംബന്ധിച്ച്.

Ref :

Sr.

പ്രൊഫി കൃഷ്ണ വള്ളത്തോളിനും ബുദ്ധി  
മൂല്യം സഹിച്ചായിരുന്നു ഞങ്ങളുടെ ഈ  
സർട്ടിഫിക്കറ്റ് പ്രവർത്തനങ്ങൾ നടന്നിരുന്നത്.  
എന്നാൽ സാനിറ്റേഷൻ ഞങ്ങളുടെ ഈ  
ബുദ്ധിമൂല്യം അവതരിപ്പിച്ചപ്പോൾ സർക്കാർ  
തോളെ ഇതേ തിരയ്ക്കം 35150/- പ്രോപ്പർട്ടി  
ട്രാൻസാക്ഷൻ ടാക്സ് നൽകി അവർ വാതുക്കൽ  
നിലവാരം 5 ലേവ് ഒരുമൽ സർട്ടിഫിക്കറ്റ്  
നൽകിയില്ലാതെ നൽകിയില്ലാതെ സർട്ടിഫിക്കറ്റ്  
നൽകി സാനിറ്റേഷൻ അറിയിപ്പും. ഇതിനുമുമ്പ്  
സാൻ്റെ സർട്ടിഫിക്കറ്റ് നിരവധി സഹായങ്ങൾ  
നൽകിയിട്ടുണ്ട്. എല്ലാ നൽകിയിട്ടുണ്ടാകാൻ കർമ്മങ്ങൾ.



*Signature*  
ANTHONY PHILIP  
HEADMASTER  
PEN 496382  
St. Antony's L.P. School  
Vengaloor  
Vazhithala - 685 583

# UNITED GRANITES AND METALS

VAZHETHALA P.O 685583, THOOPUZHA, PIN: 6281885688

TRN: 32AF,PK9650E1ZH

Application for Electronic Reference Number of an Invoice

Invoice No : B134548  
 Invoice Date : 21/02/2026

Vehicle : KJ34E955  
 Place of Supply : VAZHETHALA

Details of Receiver (Billed to)						Details of consignee (Shipped to)					
Name and Address						Name and Address					
ST ANTONES L.F SCHOOL VAZHETHALA											
GSTIN											

Sl. No	Description Good and HSN Code	Qty	Rate	Total Amount	Discount	Taxable Value	CGST		SGST		IGST	
							Rate	Amt	Rate	Amt	Rate	Amt
1	12MM 26171016	5.83	1150.00	6704.50	0	6704.50	2.50	167.61	2.50	167.61		
2												
	Total					6704.50		167.61		167.61		

Invoice Value (In words): Rupee Seven Thousand Forty Only.  
 Invoice Value (In Figure): 7040.00

Bank Details	
Bank	Federal Bank, Vazhithala
Acc No	1055500004370
IFSC	FDR10001055



Authorized Signatory

E & O E

# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8261885888

STIN: 32AFJPK9650E1ZH

Application for Electronic Reference Number of an Invoice

Invoice No : DU4549  
 Invoice Date : 21/02/2026

Vehicle : KL34E956  
 Place of Supply : VAZHITHALA

Details of Receiver (Billed to)				Details of consignee (Shipped to)			
Name and Address : ST ANTONIES L.P SCHOOL, VAZHITHALA				Name and Address :			
				GSTIN :			

Sl. No.	Description Good and HSN Code	Qty	Rate	Total Amount	Discount	Taxable Value	CGST		SGST		IGST	
							Rate	Amt	Rate	Amt	Rate	Amt
1	12MM 25111010	5.76	1130.00	6624.00	0	6624.00	2.50	165.6	2.50	165.6		
2												
Total						6624.00		165.6		165.6		

Invoice Value (In words) : Rupee Six Thousand Nine Hundred Fifty Five Only.  
 Invoice Value (In Figure) : 6955.00

**Bank Details**

Bank : Federal Bank, Vazhithala  
 Acc No : 10555500004370  
 IFSC : FDRL0001055



Authorized Signatory

F & O E

# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8281885888

STIN: 32AFJPK9650E12H

Application for Electronic Reference Number of an Invoice

Invoice No : BU4552  
 Invoice Date : 21/02/2025

Vehicle : KL34E956  
 Place of Supply : VAZHITHALA

Details of Receiver (Billed to)				Details of consignee (Shipped to)			
Name and Address				Name and Address			
ST ANTONIES L.P SCHOOL VAZHITHALA				GSTIN			

S. No.	Description Good and HSN Code	Qty	Rate	Total Amount	Discount	Taxable Value	CGST		SGST		IGST	
							Rate	Amt.	Rate	Amt.	Rate	Amt.
1	12MM 28171010	5.81	1150.00	6681.50	0	6681.50	2.50	167.04	2.50	167.04		
2												
Total						6681.50	167.04	167.04				

Invoice Value (In words)      Rupee Seven Thousand Sixteen Only.  
 Invoice Value (In Figure)      7016.00

Bank Details	
Bank	Federal Bank, Vazhithala
Acc No	10555500004370
IFSC	FDRL0001055



Authorized Signatory

E & O E

# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8281885888

ETN: 32AFJPK6550E12H

Application for Electronic Reference Number of an Invoice

Invoice No :BU14554

Invoice Date : 21/02/2026

Vehicle : KL34E956

Place of Supply : VAZHITHALA

Details of Receiver (Billed to)		Details of consignee (Shipped to)	
Name and Address	ST ANTONIES LP SCHOOL, VAZHITHALA	Name and Address	
		GSTRN	

Sl No	Description Good and HSN Code	Qty	Rate	Total Amount	Discount	Taxable Value	CGST		SGST		IGST	
							Rate	Amnt	Rate	Amnt	Rate	Amnt
1	12MM 28171010	5.93	1150.00	6819.50	0	6819.50	2.50	170.49	2.50	170.49		
2												
Total						6819.50	170.49	170.49				

Invoice Value (In words) Rupee Seven Thousand One Hundred Sixty Only.

Invoice Value (In Figure) 7160.00

#### Bank Details

Bank Federal Bank, Vazhithala  
Acc No 1055500004370  
IFSC FDR10001055

E & O E



Authorised Signatory

# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8281885888

ITIN: 32AFJPK9650E12H

Application for Electronic Reference Number of an Invoice

Invoice No : BU14550  
Invoice Date : 21/02/2025

Vehicle : KL34EG56  
Place of Supply : VAZHITHALA

Details of Receiver (Billed to)				Details of consignee (Shipped to)			
Name and Address				Name and Address			
ST ANTONIES L.P SCHOOL VAZHITHALA				GSTIN			

S. No.	Description Good and HSN Code	Qty	Rate	Total Amount	Discount	Taxable Value	CGST		SGST		IGST	
							Rate	Amnt	Rate	Amnt	Rate	Amnt
1	12MM 25171915	5.78	1150.00	6647.00	0	6647.00	2.50	166.18	2.50	166.18		
2												
Total						6647.00		166.18		166.18		

Invoice Value (In words) Rupee Six Thousand Nine Hundred Seventy Nine Only.  
Invoice Value (In Figure) 6979.00

Bank Details	
Bank	Federal Bank, Vazhithala
Acc No	1055550004370
IFSC	FDRL0001055



Authorized Signatory

E & OE

**CSR OCTOBER 2025 TO MARCH 2026**

<b>DATE</b>	<b>NAME</b>	<b>PURPOSE</b>	<b>AMOUNT</b>
05.10.2025	MARY THOMAS	MEDICAL AID	5,000.00
10.10.2025	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	7,840.00
10.10.2025	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	66,600.00
16.10.2025	KANIV	PALIATIVE CARE	50,000.00
16.10.2025	WAITING SHED CONSTRUCTION MEMADANGU	WARD-1 MANAKKAD	2,25,380.00
23.10.2025	ST ANTONY'S LP SCHOOL VENGALLOOR	MATERIAL SUPPLY	5,794.00
24.10.2025	ST SEBASTIANS HIGH SCHOOL MEMADANGU	LAPTOP	30,900.00
31.10.2025	GRAMAPANCHAYATH MANAKKAD	HARITHAKARMASENA	9,103.00
02.11.2025	AJI K T	MEDICAL HELP	5,000.00
05.11.2025	MARY THOMAS	MEDICAL AID	5,000.00
07.11.2025	ST THOMAS LP SCHOOL KOLADY	LAPTOP	41,350.00
10.11.2025	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	9,310.00
10.11.2025	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	85,850.00
24.11.2025	KANIV	PALIATIVE CARE	49,000.00
29.11.2025	PRIYA BS		25,000.00
05.12.2025	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	9,800.00
05.12.2025	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	82,000.00
05.12.2025	MARY THOMAS	MEDICAL AID	5,000.00
05.01.2026	MARY THOMAS	MEDICAL AID	5,000.00
07.01.2026	ST THOMAS LP SCHOOL KOLADY	SCHOOL RENOVATION	1,01,136.00
09.01.2026	KANIV	PALIATIVE CARE	51,000.00
15.01.2026	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	7,350.00
02.02.2026	KANIV	PALIATIVE CARE	51,000.00
04.02.2026	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	7,840.00
05.02.2026	MARY THOMAS	MEDICAL AID	5,000.00
07.02.2026	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	78,150.00
13.02.2026	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	66,600.00
16.02.2026	KIDNEY PATIENTS THODUPUZHA	MEDICAL AID	5,000.00
19.02.2026	KENDRIYA VIDYALAYA THODUPUZHA	E TOILET	50,000.00
21.02.2026	ST ANTONY'S LP SCHOOL VENGALLOOR	MATERIAL SUPPLY	35,150.00
05.03.2026	MARY THOMAS	MEDICAL AID	5,000.00
10.03.2026	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	78,150.00
10.03.2026	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	9,310.00
18.03.2026	KANIV	PALIATIVE CARE	51,000.00
18.03.2026	KANIV	PALIATIVE CARE	51,000.00
19.03.2026	SURESH MS	MEDICAL HELP	1,500.00
27.03.2026	PRIYA BS	EDUCATIONAL HELP	25,000.00
	<b>Total</b>		<b>14,02,113.00</b>

**Annexure-23**

**COPY OF HEALTH INSURANCE FOR  
EMPLOYEES**

Date: 29/10/2025  
Policy Number: 50979900202501  
Customer ID: 9998010652  
Dony  
HR Manager  
0 255 United Granites Kolady Manakkad  
Mukki IDUKKIKERALA  
685583



Dear Dony,

I am delighted to welcome you to the Niva Bupa family. At Niva Bupa, we are deeply committed to help our customers lead healthier, more successful lives. We would like to thank you for choosing us as your preferred health insurance partner of your esteemed organization.

For us, fulfilling the health and health insurance needs of our customers like you is our utmost priority. We are dedicated to help you manage the health and well-being of your employees by protecting them through our comprehensive health insurance plans, backed by the highest standards of service.

We deeply value our relationship with you and are pleased to offer the following benefits to the members of your organization:

- Our bespoke product offering has been designed to offer comprehensive health insurance coverage to the employees of your organization, in keeping with their health needs and profile.
- What has helped us establish ourselves as one of the most trusted health insurers in India is our strong thrust on service excellence. The testimony to this is the fact is that we are amongst the first health insurers in the country to process majority of our cashless claims within 30 minutes.
- We provide effective, accurate and seamless claim management using best in class systems and processes aligned for customer satisfaction
- You have a period of 30 Days days from the date of receipt of the policy documents to review the terms and conditions of the policy and apply for cancellation of policy in case of any objection.

Your Customer booklet contains the following documents that will help you in understanding your policy:

- Employee & Dependent Personalized Health card (if opted)
- Policy Schedule
- Premium Receipt
- Terms & conditions of the policy
- Employee & dependent list covered under the policy

As a partner it is our responsibility to inform you about the details of your policy. We urge you to carefully read all policy documents carrying benefits, inclusions and exclusions.

Should you need any further clarifications, please contact us within 15 days on our customer helpline number **1860-500-8888** or by e-mail at [Group.Endorsements@nivabupa.com](mailto:Group.Endorsements@nivabupa.com)

We hope you find this information useful. We request you to inform all your employees about the policy terms and conditions including exclusions.

We are committed to serve your organization and fulfilling the health insurance needs of your people. We look forward to building a long term enduring partnership with your organization in the years to come.

Here's wishing to a healthy and happy life ahead.

A handwritten signature in black ink that reads "J. Vanjan".

**Director - Operations & Customer Service**  
**For and on behalf of Niva Bupa Health Insurance Co. Ltd.**  
*(Formerly known as Niva Bupa Health Insurance Co. Ltd.)*

Important - Please read this document and keep in a safe place.

## Policy Schedule

Issuing office	Niva Bupa Health Insurance Company Limited (formerly known as Max Bupa Health Insurance Co. Ltd.)
Policyholder's name	United Granites And Metals
Policyholder's address	0 255 United Granites Kolady Manakkad Idukki IDUKKI KERALA
Policy number	50979900202501
Date and time of Policy commencement	27/10/2025 12:00 AM
Date and time of Policy expiry	26/10/2025 11:59 PM
Aggregate Sum Insured	20800000.00
Premium Payment Frequency	Annual
Free look Period	30 Days
Intermediary name	The Federal Bank Ltd.
Intermediary code	BNK0040001
Intermediary contact number	4842385604
Claims Administrator	In-House
Total no of lives (104)	Self 104 + Dependents 0
Initial no of lives (104)	Self 104 + Dependents 0
Rate Type	Per member

<b>Benefits Opted</b>		
Inpatient Care – Sum Insured	INR 200000	
Listed Day Care Treatment	Covered upto Sum Insured	
Hospital Accommodation – Room rent/day & ICU/day	Room Rent	1% of SI
	ICU	2% of SI
	If the Insured Person is admitted in the Hospital in a room category or in a room where the Room Rent is higher than the eligibility as specified above, then Niva Bupa shall be liable to pay only a pro-rated proportion of the total Associated Medical Expenses (including surcharge or taxes thereon) in the proportion of the difference between the Room Rent actually incurred and the entitled room category/eligible Room Rent.	
Pre Hospitalization Medical Expenses	Covered upto Sum Insured for 30 days	
Post Hospitalization Medical Expenses	Covered upto Sum Insured for 60 days	
Emergency Ambulance	INR 1000 per hospitalization	
Air Ambulance	Not Covered per hospitalization	
Maternity Expenses	Normal	Not Covered
	C-Section	Not Covered
	1. Maternity Expenses Benefit is available for Employees or Spouse only if both are covered in insured members data received from Policyholder. 2. The Maternity Benefit may be claimed under the Policy in respect of eligible Insured Person(s) only twice during the lifetime of the Policy including any Renewal thereafter for the delivery of a child or Medically Necessary Treatment and in vivo termination of pregnancy up to maximum of 2 pregnancies or terminations.	
New Born Baby Coverage	Not Covered	
Pre & Post Natal Expenses	NA	
Corporate Floater	Not Covered	
Corporate Floater Limit	Not Covered	
Corporate Floater utilization/family	Not Covered	
OPD (including Consultancy and Diagnostics except for Pharmacy & Procedures)	Not Covered	
Health Checkup Benefit	Not Covered	
<b>Not Applicable</b>		
Disease wise capping	Not applicable	
Domiciliary	Not Covered	
Ayush Treatment	Not Covered	
<b>Waiting Periods</b>		
Pre-Existing Disease (PED)	Not Applicable	
2 yr exclusions (Disease Specific Exclusions)	Not Applicable	
Initial Waiting Period	Not Applicable	
Specific Illness Waiting Period	Not Applicable	
Waiting period for Maternity benefit	Not Applicable	

Special Conditions
Lasik Surgery for power above +/- 7.5
Inclusion of Cyberknife/ Robotic surgery with 50% co-pay
Bio-absorbable stent with 50% co-payment
FAMETO Lasik surgery with 50% co-payment
Toric lenses with 50% co-payment
KT laser Prostate with 50% co-payment
Stem cell transplant covered with 50% co-payment
Cochlear Implant Treatment - Restricted to 50% of the Sum Insured
Lucentis(Avastin) to be Covered on day care up to 50k per family
Psychiatric Ailments/Functional Endoscopic Sinus Surgery/Mental illness covered
External congenital disease coverage in life threatening situation only
TPA Name Selected-In-House
Existing Employees who had enrolled their dependent parents in last year coverage, will only be allowed to cover their dependent parents. This term is applicable only if parental cover is opted under the policy

**Annexure-24**  
**OVER BURDEN DUMPING SITE**



VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India 🇮🇳

Latitude  
9.8944682°

Local 11:53:13 AM  
GMT 06:23:13 AM

Longitude  
76.64280323°

Altitude 76 meters  
Thursday, 05.03.2026

**Annexure-25**

**BLAST INDUCED GROUND  
VIBRATION STUDY REPORT**

**TECHNICAL REPORT ON BLAST INDUCED GROUND VIBRATION STUDIES  
AND ASSESSMENT OF EFFECT OF BLASTING OPERATIONS IN  
GRANITE BUILDING STONE QUARRY OF  
Shri. GEORGE KOCHUPARBIL,  
MANAKKAD VILLAGE, THODUPUZZHA (TK), IDUKKI DISTRICT, KERALA**



**GLOBAL ENVIRONMENT & MINING SERVICES**

#212, Celestic Towers, Palm Avenue,  
Green Glen Layout, Bellandur,  
Bangalore – 560103  
Ph : +91 6361550211  
e-mail : [www.gems.blr@globalmining.com](mailto:www.gems.blr@globalmining.com)  
website : <http://www.globalmining.in/>



**BLAST INDUCED GROUND VIBRATION STUDIES AND  
ASSESSMENT OF BLASTING EFFECTS IN  
GRANITE BUILDING STONE QUARRY OF  
Shri. GEORGE KOCHUPARAMBIL**

**Cyriac Joseph** BE (Mining), FCC.

**Sankar. S** BE (Mining), FCC.

**Jaikaran H. J.** BE (Mining), SCC.



**GEMS**

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Green Glen Layout, Bellandur,  
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Ph : +91 6361550211

e-mail : [www.gems.blr@globalmining.com](mailto:www.gems.blr@globalmining.com)

website : <http://www.globalmining.in/>



## ABSTRACT

Shri. George Kochuparambil, is operating granite building stone quarry in Re-Sy Block No.11, Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt in Manakkad Village, over an extent of 12.2987 Ha in Thodupuzha Taluk, Idukki District, Kerala. The Granite building Stone is very hard and has to be excavated in this stone quarry with Drilling and Blasting methodology. As a Part of Statutory requirement for DGMS & Complying the EC condition this scientific study has been taken up to ensure the ground vibration level. A field visit was made to the quarry site by a team of following mining engineers & Drilling & Blasting experts.

- 1) Mr. Cyriac Joseph, BE (Mining), FCC.
- 2) Mr. Sankar S., BE (Mining), FCC.
- 3) Mr. Jaikaran H.J., BE (Mining), SCC.

A reconnaissance survey was made in the 5th of March 2026. The quarry area is surrounded by good vegetation and there are few houses outside the lease boundary of South West & South-East direction which is not visible from blasting area due to undulations. Since all the observed Dominant frequencies were above 8 Hz, as per DGMS guidelines, the permissible limit for Peak particle velocity (PPV) can be considered as 10 mm/sec.

Blasting is very important process for mining operation and lot of explosives is used for this purpose. Various studies indicate that fragmentation accounts for only 20 – 30% of total amount of explosive energy used. Rest of the energy is lost in the form of ground vibration, fly rock, air overpressure and noise. The specific problem associated with ground vibrations represents the human response to them.

Uncontrolled Blasting vibrations may also cause significant damage to nearby houses or various structures.

Scientific study was carried out to assess the intensity of ground vibration generated due to and their impacts on the surrounding structures. In total, 08 blast were conducted at two different locations in the quarry blasting operations were monitored through geophone at the distance of 52.1m, 344.8m, 206.1m, 131.0m, 485.5m, 214.3m and 189.7m. The data obtained from the InstanTel micromate instrument were analyzed and graphical output was obtained from the instrument. The Peak Particle Velocity (PPV), Maximum charge per delay, air over pressure was recorded for each blast. After that the various observations were compared with standards to determine the Conclusion.

From the analysis of Blast induced ground vibration at the Granite building stone quarry of Shri. George Kochuparambil, it was determined that the vibration level was less than 4 mm/sec for the blasts (for Building & Structures not belonging to Owner). The results determined from the study indicates that the peak particle velocity, air over pressure generated due to blasting were within the limits.

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### **ABBREVIATIONS:**

1. DGMS – *Directorate General of Mines Safety*
2. NABET – *National Accreditation Board for Education & Training*
3. NABL – *National Accreditation Board for Testing and Calibration Laboratories*
4. PPV – *Peak Particle Velocity*
5. dB – *Decibel*

## **EXECUTIVE SUMMARY**

This report relates to the scientific study conducted by Global Environmental and Mining Services, Bangalore at Stone Quarry of Shri. George Kochuparambil. The main objective of the study was to check the blast induced ground vibration and air overpressure/noise generated during blasting. Fly rocks generated during the trial blasts were also observed and studied.

Eight blasts were conducted at different locations of the mine. Blast induced vibration and air overpressure/noise were monitored at different locations.

The investigational work, observations, result of the blasts conducted, analysis of the data and conclusions are summarized below.

1. In total, eight blasts were conducted and monitoring were done in nearest house of Mr. Tomy Kurian (towards South West of Mine lease boundary – M2 & M3), house of Mr. Krishnan Krishnan (towards North East of Mine lease boundary - M6), M1 (South west side of mine lease, inside the Mine), M4 (North west side of mine lease, inside the mine near to the crusher), M5 (western side of mine lease area, inside mine) & M 7 & M 8 (western side of mine lease area, inside mine).-All the eight blasts, were conducted with bench blasting pattern.
2. All the blasts were conducted using 33 mm dia blast hole. Small diameter cartridge explosive of 25 mm diameter, 0.125 Kg weight per cartridge, ANFO and Nonel initiation system with DTH- 250 ms & 25 ms at surface, & STLD – 42 ms were used in all blasts.
3. Depth of holes used are 1.8m and 2.4m. The total number of holes varied from 22 to 26. All the blasts were done in hard rock. So staggered pattern of drilling was used.

4. The burden and spacing for the bench blast was 1.0 m and 1.2 m respectively. The 1.8m holes were charged with one cartridge of slurry explosive and 200 gm of ANFO and 2.4m holes were charged with two cartridges of slurry explosives and 200gm of ANFO. The explosive-quantity per hole was 0.450 Kg for 2.4m holes and 0.325 Kg for 1.8m holes.
5. Blast induced ground vibrations and air overpressure/noise generated during-the blasts were monitored on compacted ground surface using Micromate of InstanTEL, Canada. Distances of monitoring points from the blast site varied from 52.1m to 485.5m.
6. The Peak Particle Velocity was not detected near the house of Mr. Tomy Kurian (M3). Distance of house from blast location was 344.8 m.
7. The Peak Particle Velocity detected at Monitoring Point M- 6 was 0.053 mm/s, near the house of Mr. Krishnan. Distance of house from blast location was 485.5m.
8. The Peak Particle Velocity recorded at Monitoring Point M1 was 2.452 mm/s, at a distance of 52.1m from blast location.
9. The Peak Particle Velocity recorded at Monitoring Point M4 was 0.553mm/s at a distance of 206.1m from blast location.
10. The Peak Particle Velocity recorded at Monitoring Point M5 was 1.215mm/s at a distance of 131.0 mts from blast location.
11. The Peak Particle Velocity recorded at Monitoring Point M7 was 0.497 mm/s at a distance of 214.3m from blast location.
12. The Peak Particle Velocity recorded at Monitoring Point M8 was 0.701mm/s at a distance of 189.7.0 mts from blast location.
13. The highest value of vibration recorded was at monitoring point M1 which was at a distance of 52.1 m from blast site. PPV recorded was 2.452 mm/s.-This was

recorded in blast no: 1 where maximum charge per delay was 0.325 Kg and total explosive charge in the blasting round was 8.125 Kg.

14. Fly rocks up to 28 m was observed in blasting without muffling mats and up to 5 m in muffled blasting. The control of fly rock was achieved through proper blast design, Nonel initiation system and proper implementation and supervision of blasting operation.
15. Details of all the blasts studied are given in the table - 2. Summary of the blast are given in Table - 3. All the blasts layouts are given in Appendix - I. Blast events are given in Appendix - II.
16. The readings recorded were within the DGMS permissible limit.

## **INTRODUCTION:**

Shri. George Kochuparambil is operating a granite building stone quarry since 1998. This company is more committed towards environment. Their registered office is in, Kochuparambil house, Vazhithala Post, Thodupuzha Taluk, Idukki District, Kerala-685 583. They have been granted a mining lease to quarry Granite Building Stone over an area of 12.2987 Ha. in Re-Sy Block No.11, Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt of Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala State ([www.unitedgranitesandmetals.in](http://www.unitedgranitesandmetals.in)). Vide order No: 451/2018/-19/890/M3/2017/DMG, dated: 01.10.2018 for a period of 12 years from 04.10.2018 to 03.10.2030.



*Fig 1: Overview of Mines*

The Environmental clearance is also obtained for this mining lease vide letter no. 1137/EC/SEIAA/KL/2017, Dated: 17/03/2018, for a maximum production of 4,00,000 MTA for a period of five years. Further the validity of EC was extended for the project life of 16 years from the date of original EC (i.e. 17.03.2018) on 02.03.2023.

This granite building stone quarry is located at 6.0 Kms from Manakkad Village in Thodupuzha Taluk. It is at a distance of 10.6 Kms by road from Thodupuzha town. It can be reached from Vazhithala - Parakkadavu Road.

### **DETAILS OF STRUCTURES NOT BELONGING TO THE OWNER:**

The house of Mr. Tomy Kurian, is located at South West side of the Mine Lease at a distance of 153 m from the Boundary Pillar No. 48. Coordinates of the House is  $9^{\circ}53'35.30''\text{N}$  &  $76^{\circ}38'18.13''\text{E}$ . This is the nearest house in South west Direction of the Lease Area. The mentioned House/Structure not belonging to the Owner is situated near the Current year production Face of the Mine Lease.



*Fig 2: House of Mr. Tomy Kurian*

The house of Mr. Krishnan Krishnan, is located at North East side of the Mine Lease at a distance of 187 m from the Boundary Pillar No.12. Coordinates of the House is 9°53'48.51"N & 76°38'41.40"E. This the nearest house located in the North East direction of the Lease Area.



*Fig 3: House of Mr. Krishnan Krishnan*

## TOPOGRAPHY & LOCAL GEOLOGY OF THE AREA:

The lease is located on the slope of the area gently dipping towards NE. The highest elevation in this area is 142.0 m above MSL and the lowest elevation is 37 m above MSL.

The granite building stones are well exposed in the working pit, whereas the part of area with lower elevation is covered with topsoil/waste of about 0 to 2.2m thickness.

## BLAST VIBRATION STUDY:

On 05.03.2026, 08 Rounds of Blasts were conducted. The locations of Blasting & Monitoring stations are plotted in the Google Earth and shown below.



Fig 4: Google Earth Image of the Mine showing Blasting Locations & Monitoring Points

## DRILLING & BLASTING:

Drilling and blasting combination are still an economical and viable method for rock excavation and displacement in mining as well as in civil construction works. The ill effects of blasting, i.e., ground vibrations, air blasts, fly rocks, back breaks, noises, etc. are unavoidable and cannot be completely eliminated but certainly minimize up to permissible level to avoid damage to the surrounding environment with the existing structures. Among all the ill effects, ground vibration is major concern to the planners, designers and environmentalists. A number of researchers have suggested various methods to minimize the ground vibration level during the blasting. Ground vibration is directly related to the quantity of explosive used and distance between blasting face to monitoring point as well as geological and geotechnical conditions of the rock units in excavation area. Blast induced ground vibration is an impact from the use of explosives that has historically been an extremely difficult problem to effectively mitigate. There are many variables and site constants involved in the equation that when combined, result in the formation of a complex vibration waveform generated by the confined detonation of an explosive charge.

The application of proper field controls during all steps of the drilling and blasting operation will help to minimize the adverse impacts of ground vibrations, providing a well-designed blast plan. This design would consider the proper hole diameter and pattern that would reflect the efficient utilization and distribution the explosives energy loaded into the blast hole. It would also provide for the appropriate amount of time between adjacent holes in a blast to provide the explosive. The optimum level of energy confinement. After the blast has been properly designed, the

parameters that have the greatest effect on the composition of the ground vibration waveform are:

- Geology between the blast site and the monitoring location
- Accurate delay timing between blast holes in a detonation sequence

Geological and geotechnical conditions and distance between blasting face to monitoring point cannot be altered but the only factor, i.e. quantity of explosive can be estimated based on certain empirical formulae proposed by the different researchers to make ground vibrations in a permissible limit. An appropriate and rock friendly blasting can be only alternative for smooth progress of the rock removal process.

## OBJECTIVES

To study the blast vibrations caused due to the mine blasting, and prediction of safe explosive charge for protection of surface structures.

- To conduct the reconnaissance survey at the mine to identify the nearest villages
- To monitor ground vibration produced from blasting at different distances by consultation with mine authorities
- To analyze the monitored ground vibration data to arrive at the site-specific predictor equations.
- To recommend the safe maximum charge per delay to keep the vibration level within the safe limits as per DGMS standards.

## METHODOLOGY

- A preliminary reconnaissance survey was done to understand the quarrying operations, location of surrounding structures or houses

- Eight blasts were conducted at two locations in the quarry with the different blast configurations
- Ground vibrations generated from the blasting operation were monitored with Instantel Micromate instrument.
- Data generated was analyzed systematically and conclusions were drawn. Suitable recommendations are made to conduct the blasting operations in the quarry in a safe manner.

## GROUND VIBRATIONS

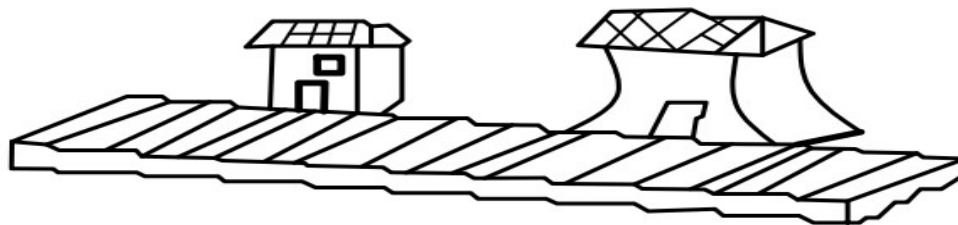
The movement of any particle in the ground can be described in three ways; displacement, velocity and acceleration. Velocity transducers (Geophones) produce the voltage which is proportional to the velocity of movement, and can be easily measured and recorded. They are robust and relatively inexpensive and so are most frequently used for monitoring. It has been shown in many studies, most notably by USBM that it is velocity which is most closely related to the onset of damage, and so it is velocity which is almost always measured. If necessary, the velocity recording can be converted to obtain displacement or acceleration. Each trace has a point where the velocity is a maximum (+ve or -ve) and this is known as peak particle velocity (or PPV) which has a unit of mm/s. Geophones are only able to respond to vibrations.

Ground vibration radiates outwards from the blast site and gradually reduces in magnitude. When an explosive charge is detonated in a blast hole, strain waves are generated in the surrounding rock mass carrying huge quantity of energy. This energy generates cracks and fractures in the strata due to various breakage mechanisms such as crushing, radial cracking, reflection breakage etc. Combined, the crushed and fractured zones encompass a certain volume of permanently

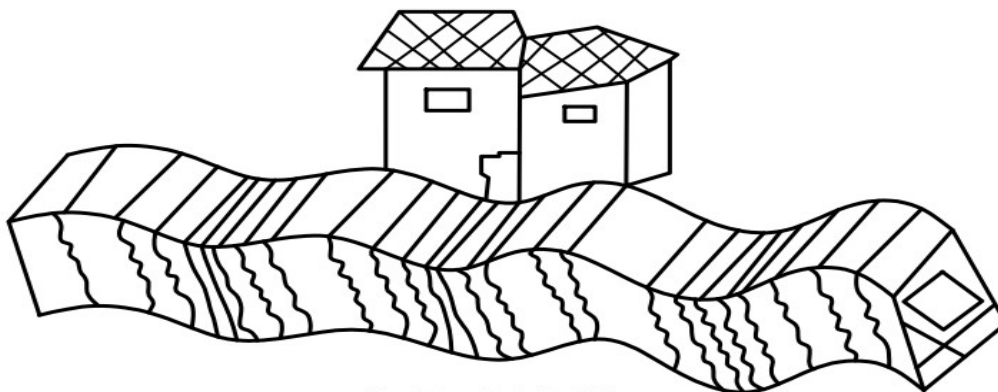
deformed rock. When the intensity of strain waves diminishes to the level where no permanent deformation occurs in the rock mass, i.e., beyond the fragmentation zone, strain waves propagate through the strata in the form of elastic waves. These waves in the elastic zone are known as ground vibrations.

The Ground vibration wave motion consists of different kinds of waves:

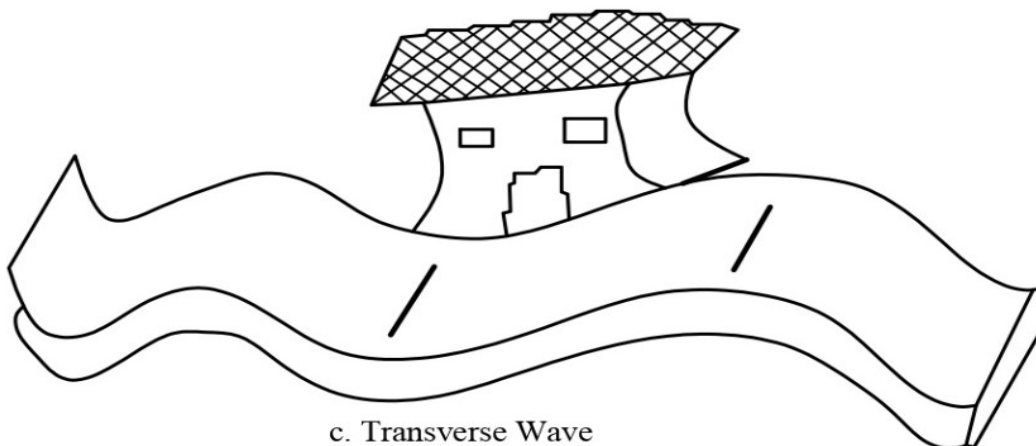
- a. *Longitudinal (or L) waves.*
- b. *Rayleigh (or R) waves.*
- c. *Transverse (or T) waves.*



a. Longitudinal Wave



b. Rayleigh Wave



c. Transverse Wave

*Fig 5: Different kind of waveforms*

## PARAMETERS AND PROPOGATIONS

The parameters, which exhibit control on the amplitude, Dominant frequency and duration of the ground vibrations, are divided in two groups as follow:

- a) Non-controllable parameters
- b) Controllable parameters

The non-controllable parameters are those, over which the blasting engineer does not have any control. The local geology, rock characteristics and distance of the structures from the blast site is non-controllable parameters. However, the control on the ground vibrations can be established with the help of controllable parameters. The same have been reproduced below:

1. Charge weight
2. Delay interval
3. Type of explosives
4. Direction of blast propagation
5. Burden, spacing and specific charge
6. Coupling
7. Stemming amount
8. Type of stemming
9. Charge depth
10. Angle of borehole

## DAMAGE LEVEL

In India the Directorate General of Mines safety (Government of India) suggest safe limit of ground vibration for different categories of structures with frequencies of <8 Hz, 8 to 25Hz and >25Hz Respectively. Details of the permissible ground vibration standards given by DGMS (Technical Circular no: 7/1997) is given below:

Type of Structure	Dominant Excitation Frequency, Hz		
	<8 Hz	8-25 Hz	>25 Hz
<b>(A) Buildings/Structures not belong to the Owner</b>			
(i) Domestic Houses/Structures (Kuchha Brick & Cement)	5	10	15
(ii) Industrial Buildings (RCC & Framed Structures)	10	20	25
(iii) Objects of Historical importance & Sensitive Structures	2	5	10
<b>(B) Buildings belonging to Owner with limited span of life</b>			
(i) Domestic Houses/Structures (Kuchha Brick & Cement)	10	15	25
(ii) Industrial Buildings (RCC & Framed Structures)	15	25	50

*Table 1: Permissible PPV Levels recommended by DGMS*

## HUMAN RESPONSE TO GROUND VIBRATION

Human beings are more sensitive to ground vibration and noise. People inside buildings will respond differently than people outside. One of the most important factors is the presence of secondary sounds, such as rattling windows and doors. Complaints resulting from blast vibration to a large extent mainly due to rattling effect and fear of damage, rather than damage. The human body is very sensitive to low vibration levels, but unfortunately it is not a reliable damage indicator. Blasting nowadays is highly technological and precisely planned. In spite of this there are complaints because humans are very sensitive to vibrations and can detect levels as low as 0.5mm/s. people tend to complain about ground vibrations even below the accepted damage level because of many reasons. How they notice and respond to vibration varies greatly from person to person. For the same intensity different persons may react differently with age, health, state of mind and attitude. Blast vibrations effects became intolerable to humans at levels appreciably lower than levels at which structural damage takes place. The result is that often complaints can be received due to human response and not due to situation producing damage.

## FIELD INVESTIGATION

Quarrying starts with drilling of 33mm small diameter blasthole of 1.80m and 1.50m depth, using hand held jackhammer drills (Fig. 6). The Burden is about 1.0 m & the Spacing is about 1.2 m. Once the blast holes are ready, these holes are charged with small diameter (25mm) explosive cartridges, weighing 125g (fig. 8) & ANFO. Fig 9 shows the charging of holes. NONEL detonators (DTH-250ms and surface-25ms) are used for initiating the blast holes and also Surface Trunk Line Delay (STLD of 42ms) for achieving required delay in the blast round (Fig. 7). Fig. 11 shows the charged holes after placing required quantity of explosive into the

blast holes. The remaining length of the hole is stemmed using the 3 mm material and Drill cuttings (Fig. 10). Fig. 12 shows the muffling arrangement of blasting area/charged holes with blasting mats to control the fly rocks. Prior to blasting, the area to be blasted is wetted with the water sprayer attached to the water tanker. Fig. 13 shows the water tanker mounted spraying system. Blasting holes are initiated with the help of Electronic Detonator, NEO EDET (80mm, 2.5mtr). These Electronic detonators are initiated by Smart chip Single Initiator, M100 instrument (Fig. 9). Water misting system is installed to arrest the propagation of dust generated by mining activities. Fig. 14 shows the misting system. Fig. 15 shows the blasting shelter for safety of blasting personals. Fig.16 shows the fragmented material from the blasting operations.



*Fig 6: Drilling of blast holes using jack hammer*



*Fig 7: Non-Electric Detonator & Surface Trunk Line Delay used in the Quarry*



Fig 8: Explosive Cartridges used in the Quarry



Fig 9: Initiator used to fire Electronic Detonator



*Fig 10: Charging of Blast holes*



*Fig 11: Stemming of Blast holes*



*Fig 12: Charged Holes*



*Fig 13: Muffling arrangements to control the Fly rocks*



*Fig 14: Water spray system and water sprinkled face*



*Fig 15: Water mist system*



*Fig 16: Blasting shelter for Safety of Blasting Personals*



*Fig 17: Fragmented Rock after Blasting*



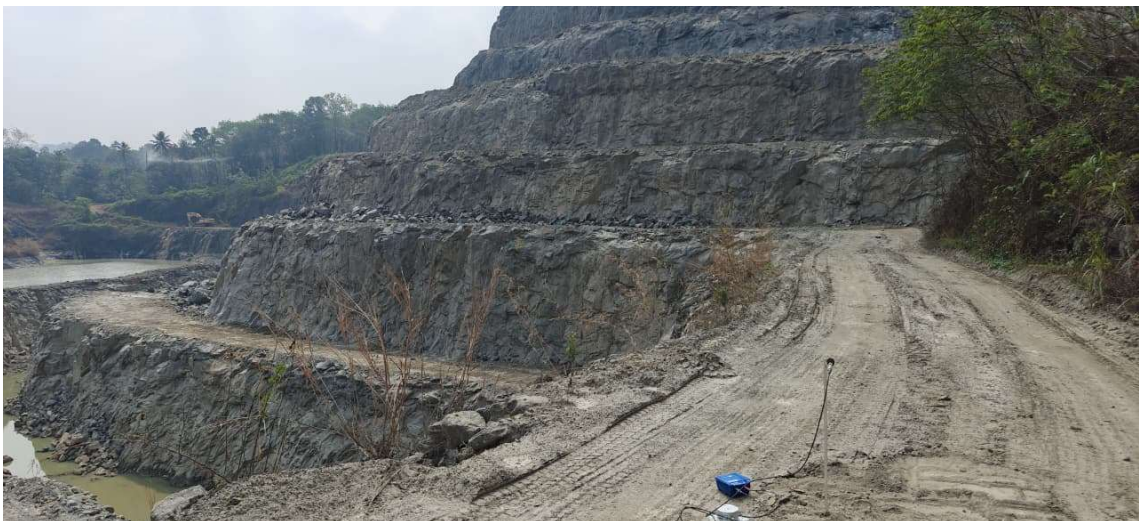
*Monitoring Station-1*



*Monitoring Station-2 & 3*



*Monitoring Station - 4*



*Monitoring Station - 5*



*Monitoring Station - 6*



*Monitoring Station - 7*



*Monitoring Station - 8*

*Fig 18: Blast Vibration Monitoring*

## **GROUND VIBRATION MONITORING**

Scientific study was carried out to assess the intensity of ground vibrations generated due to blasting operations and their impact on the surrounding structures. In total, 08 blasts were conducted at 2 different locations in the quarry. Blastholes of 2.4 m depth were charged with the 200 gms of ANFO & 250gms of Slurry explosive and 1.8 m depth were charged with the 200gms of ANFO & 125gms of Slurry explosive. NONEL based shock tube detonator & Surface Trunk Line Delays (STLD) are used for achieving required delay timing. The blast round was initiated after getting safety clearance from all directions. Ground vibration generated from different blast were monitored using InstanTel Micromate, Canada and geophone of these blast vibration monitors records the ground vibration. Trigger level of geophone was set to a minimum PPV of 0.127 mm/sec. This indicate that the instrument will start monitoring the ground vibration. Geophone of the

instrument is glued to the ground effectively using Plaster of Paris. Monitoring was done at different distances from blasting site to know the propagation of ground vibration from the quarry site. Fig.17 shows the study carried out to monitor the ground vibration towards the nearby houses & inside the Mine. Details of all the blasts studied are given in the table-2 & the summary of the blast are given in Table-3. All the blasts layouts are given in Appendix- I. Blast events are given in Appendix- II.

Table 2: Monitored Blast details

Sl. No	Description	Blast No. 1	Blast No. 2	Blast No. 3	Blast No. 4
	Date of Blast	05.03.2026	05.03.2026	05.03.2026	05.03.2026
	Time of Blasts (Hours)	10:13:37	10:17:26	10:18:29	10:28:22
	Location of blasts	9°53.6411'N, 76°38.4849'E	9°53.6411'N, 76°38.4849'E	9°53.6411'N, 76°38.4849'E	9°53.6705'N, 76°38.4718'E
	Diameter of blast hole (mm)	33	33	33	33
	Burden (m)	1.0	1.0	1.0	1.0
	Spacing (m)	1.2	1.2	1.2	1.2
	Depth of blast hole (m)	1.8	1.8	2.4	2.4
	No of blast holes	25	25	22	26
	Explosive charge/ Hole (kg)	0.325	0.325	0.450	0.450
	Maximum Charge per delay (kg)	0.325	0.325	0.450	0.450
	Total Charge / Blast (kg)	8.125	8.125	9.9	11.7
	Initiation System	Nonel	Nonel	Nonel	Nonel
	Initiation Pattern	Row to Row	Row to Row	Row to Row	Row to Row
	Location of instrument	9°53.6219'N, 76°38.4646'E	9°53.5840'N, 76°38.3058'E	9°53.5840'N, 76°38.3058'E	9°53.7420'N, 76°38.3854'E
	Distance (m)	52.1	344.8	334.8	206.1
	PPV (mm/s)	2.452	NR	NR	0.553
	AOP/ Noise (dB)	94.70	NR	NR	101.4
	Dominant Frequency (Hz)	107.5	NR	NR	31.50

Table 2: Monitored Blast details

Sl. No	Description	Blast No. 5	Blast No. 6	Blast No. 7	Blast No. 8
	Date of Blast	05.03.2026	05.03.2026	05.03.2026	05.03.2026
	Time of Blasts (Hours)	10:35:42	13:02:08	13:14:08	13:22:02
	Location of blasts	9°53.6705'N, 76°38.4718'E	9°53.6705'N, 76°38.4718'E	9°53.6705'N, 76°38.4718'E	9°53.6705'N, 76°38.4718'E
	Diameter of blast hole (mm)	33	33	33	33
	Burden (m)	1.0	1.0	1.0	1.0
	Spacing (m)	1.2	1.2	1.2	1.2
	Depth of blast hole (m)	2.4	1.8	1.8	1.8
	No of blast holes	26	25	25	25
	Explosive charge/ Hole (kg)	0.450	0.325	0.325	0.325
	Maximum Charge per delay (kg)	0.450	0.325	0.325	0.325
	Total Charge / Blast (kg)	11.70	8.125	8.125	8.125
	Initiation System	Nonel	Nonel	Nonel	Nonel
	Initiation Pattern	Row to Row	Row to Row	Row to Row	Row to Row
	Location of instrument	9°53.6987'N, 76°38.4053'E	9°53.8095'N, 76°38.6900'E	9°53.7560'N, 76°38.4980'E	9°53.7375'N, 76°38.4492'E
	Distance (m)	131.0	485.5	214.3	189.7
	PPV (mm/s)	1.215	0.053	0.497	0.701
	AOP/ Noise (dB)	104.0	101.4	113.2	105.9
	Dominant Frequency (Hz)	73.00	41.50	62.75	62.75

## Summary of the Blast Monitoring:

Monitoring Station	Blast Points	Distance (m)	Max Charge Per Delay (Kg)	PPV (mm/s)	AOP/ Noise (dB)	Dominant Frequency (Hz)
M1	Blast No 1	52.1	0.325	2.452	94.70	107.5
M2	Blast No 2	344.8	0.325	Not detected		
M3	Blast No 3	344.8	0.450	Not detected		
M4	Blast No 4	206.1	0.450	0.553	101.4	31.50
M5	Blast No 5	131.0	0.450	1.215	104.0	73.00
M6	Blast No 6	485.5	0.325	0.053	101.4	41.50
M7	Blast No 7	214.3	0.325	0.497	113.2	57.0
M8	Blast No 8	189.7	0.325	0.701	105.9	62.75

*Table 3: Summary of the Blast monitoring*

From the Table 3, it can be observed that the highest peak Particle velocity (PPV) recorded was 2.452 mm/sec at the distance of 52.10 m in Blast No 1 and the next highest PPV was 1.215 mm/sec at the distance of 131.0 m in Blast No 5.

The ground vibrations could not be detected by the instrument near the Buildings/Structure not belonging to Owner (house of Mr. Tomy Kurian) as the values were below the detectable limit. Thus, the Ground Vibration values were within the Permissible limits standards as mentioned by DGMS [Technical Circular: 7/1997].

Use of Nonel detonating system provided required delay time to reduce the maximum charge per delay, which helped in controlling ground vibrations within permissible limits. The highest noise level of 113.2 dB was recorded at the distance of 214.3 m from blast location in blast No. 7 and the next highest noise level was 105.9 dB at the distance of 189.7 m from blast location in Blast No 8. The noise levels were not detected while monitoring at the nearby house.

Fly rocks another serious problem associated with blasting operations. It was observed to a distance of 28 m from blast site without muffling arrangement and with muffling the fly rocks was within 5m. This is also due to free face available in all the blasts and also the proper delay timing followed using shock tube detonators.

**Remarks:** *It may therefore, be concluded that the intensity of ground vibrations, Noise and fly rock caused due to blasting operations carried out in Granite Building Stone quarry of Shri. George Kochuparambil in Re-survey Block no 11 & Re-survey no. 354/4, 354/5, 355/1pt, 351/1pt, 350, 352/1pt of Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala., are within Permissible limit as per the standards prescribed by DGMS (Technical Circular No: 7/1997).*

## RECOMMENDATIONS

Blasting operations may be conducted in the Granite Building stone quarry of Shri. George Kochuparambil in Re-Survey Block No 11 and Re-survey No. 354/1, 354/5, 355/1pt, 350, 352/1pt over an extent of 12.2987Ha in Manakkad Village, Thodupuzha taluk, Idukki District, Kerala. With the following recommendations:

1. Blasts may be conducted with a maximum of 26 holes in a blast round using 33 mm diameter blast holes drilled with hand held jackhammer drills to a maximum depth of 8 feet (2.4 m), each hole charged with maximum of 625 gm of explosive.
2. NONEL detonator & Surface Trunk Line Delay (STLD) may be used for initiation.
3. Blasts to be conducted by a Competent Blaster or Mining Mate certificate holder only, following all the rules and regulations stipulated by Director General of Mines Safety (DGMS) and other regulating agencies.
4. If fly rock to be restricted to within 10m, muffling arrangement to be made.
5. Blasting methodology suggested in Table-4 may be followed
6. Blast layouts suggested in Fig No.18 may be used with the available initiation system.

All other rules and regulations imposed by various agencies like DGMS/ Dept. of Mining and Geology/ any other relevant organization to be followed from time to time.

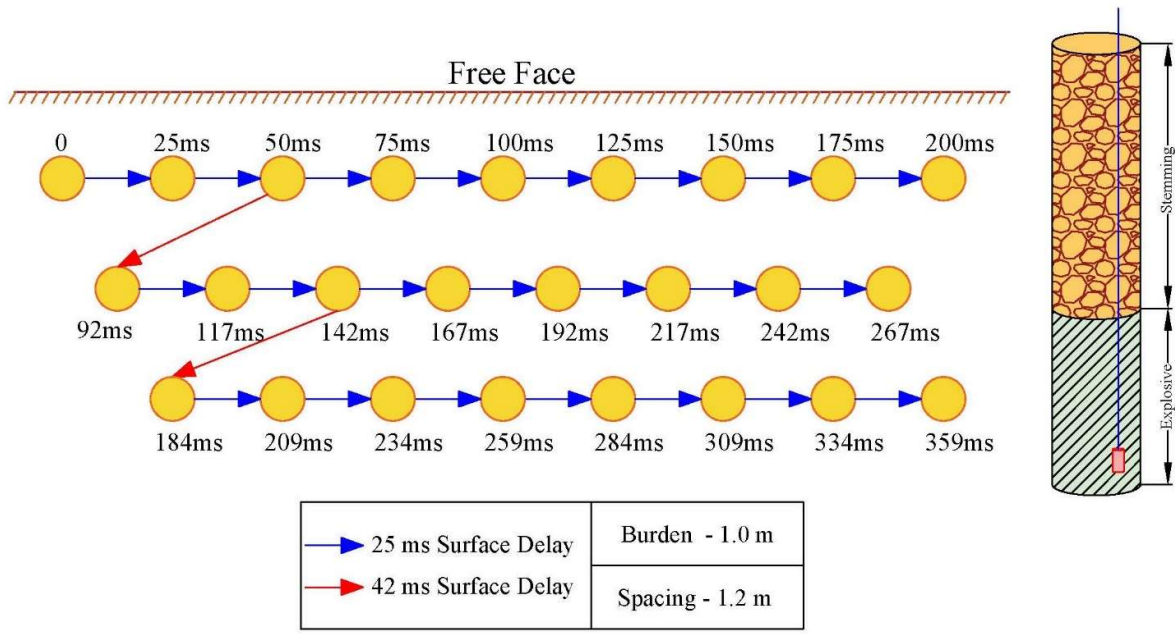


Fig 19: Recommended Blasthole pattern

<b>Sl No</b>	<b>Parameters</b>	<b>Suggestion- I</b>	<b>Suggestion- II</b>
1	Diameter of the Blast hole (mm)	33	33
2	Burden (m)	1.0	1.0
3	Spacing (m)	1.2	1.2
4	Depth of Blast hole (m)	1.80	2.40
5	No of Blast Holes	Maximum of 26	Maximum of 26
6	Explosive charge/ Hole (gm)	420	625
7	Maximum charge/ Delay (gm)	420	625
8	Total charge/ Blast (kg)	10.50	15.625
9	Initiation system	Short delay detonators	Short delay detonators
10	Initiation Pattern	Row by row	Row by row
11	Delay timing between any two blast holes	At least 25ms	At least 25ms
12	Delay timing between any two blast holes	At least 42ms	At least 42ms
13	No. of rows	Maximum of 3	Maximum of 3

*Table 4: Blasting recommendations*

**Cyriac Joseph,**

Managing Partner & EIA Coordinator,  
Global Environment & Mining Services.

## **BIBLIOGRAPHY**

**ISEE**, Blaster's Hand Book (1998)

**Anon**, (1997), "Damage of structures due to blast induced ground vibrations in the mining areas", DGMS (Tech) (S&T) Circular No.7 of 1997 dated 29.08.1997

**Siskind, D.E.**, et al, (1980), "Structure response and damage produced by air blast from surface mining", USBM RI 8485.

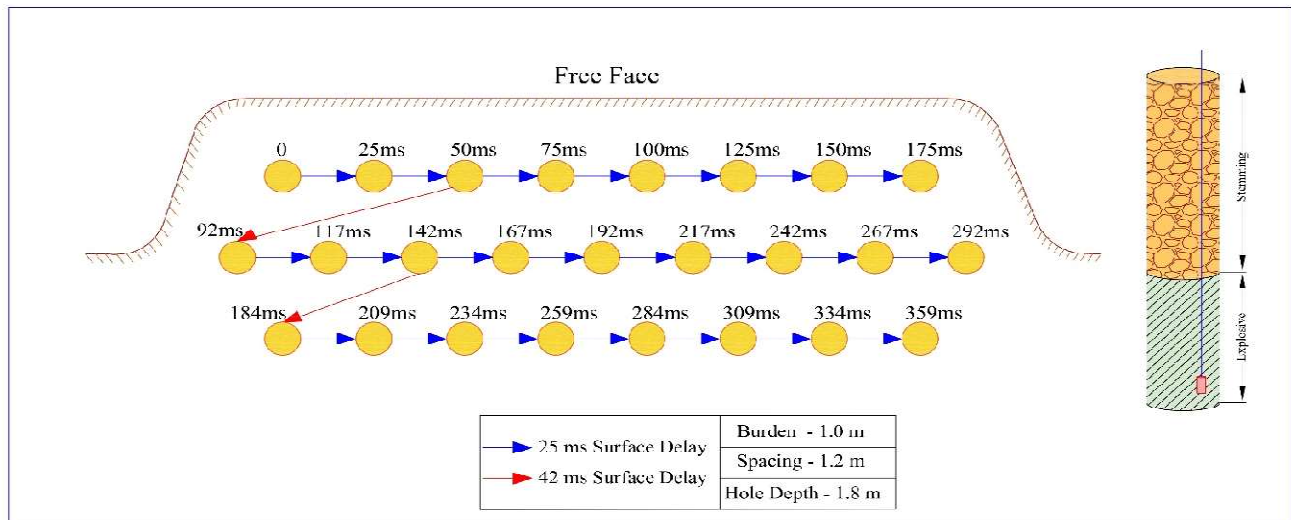
**Indian Standard (2001)**, "Method for blast vibration monitoring. Int J Rock Mech MinSciGeomechAbstr;29(2):145-6

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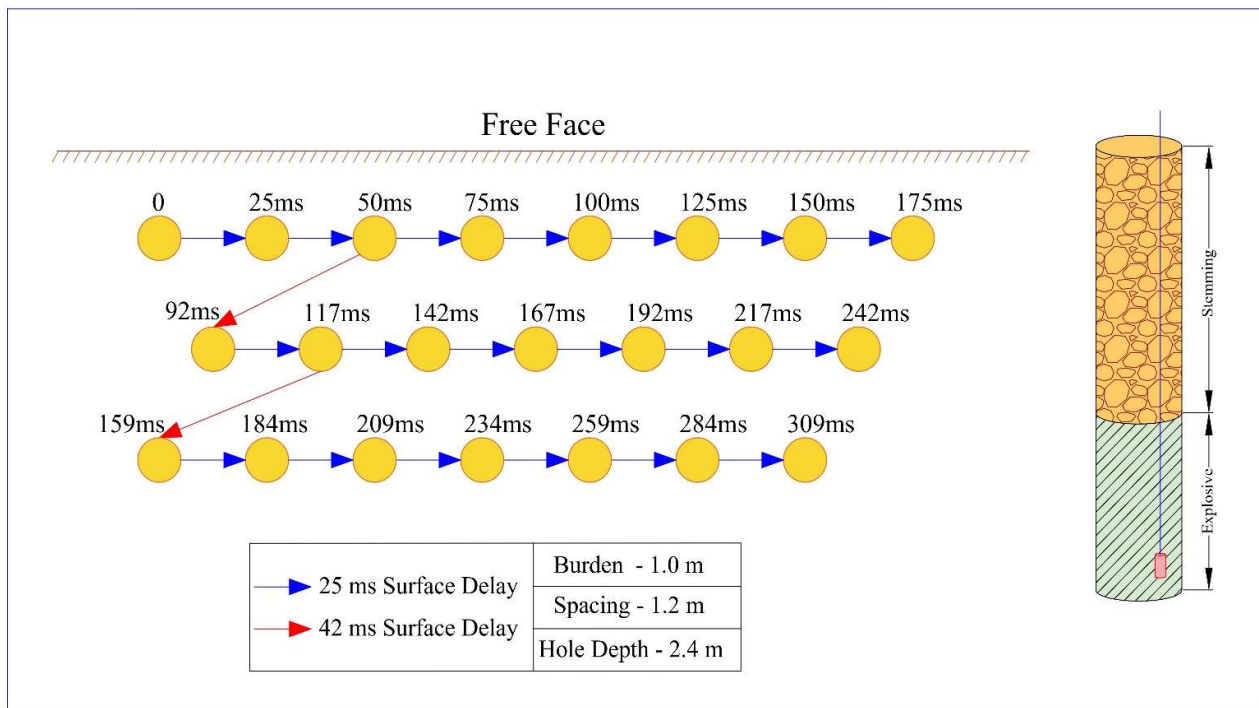
<http://terrock.com.au/vibration/blasting.html>

# APPENDIX – I

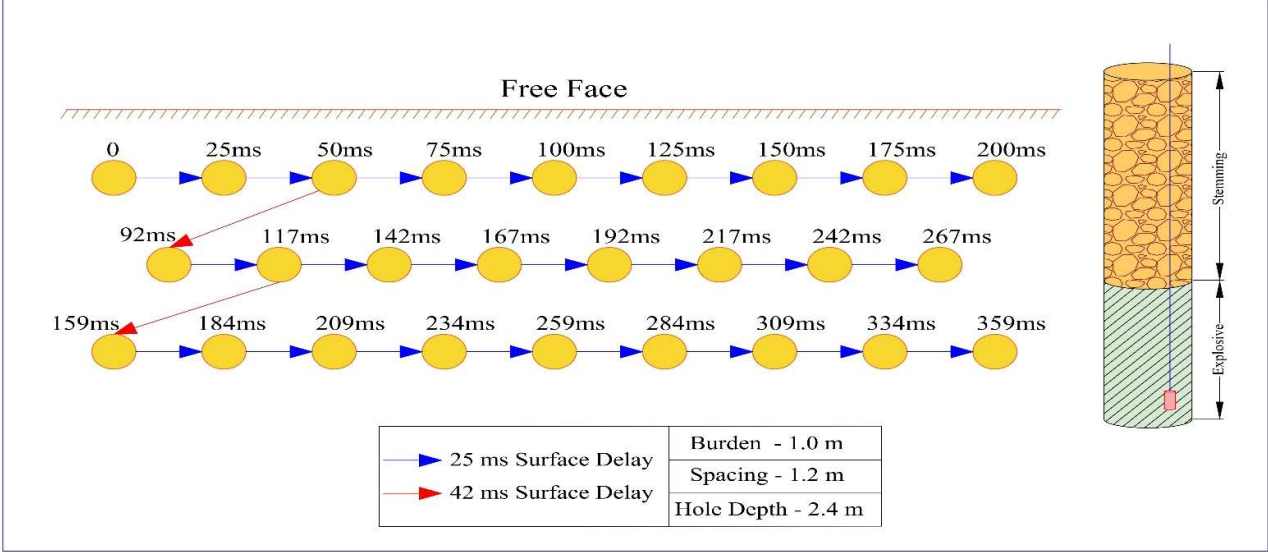
## (LAYOUTS OF BLASTS STUDIED)



*Layout of Blast No: 1,2,6,7& 8*



*Layout of Blast No: 3*



*Layout of Blast No: 4 & 5*

# APPENDIX – II (BLAST EVENT REPORTS)

**Date/Time** Vert at 10:13:37 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 4096 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

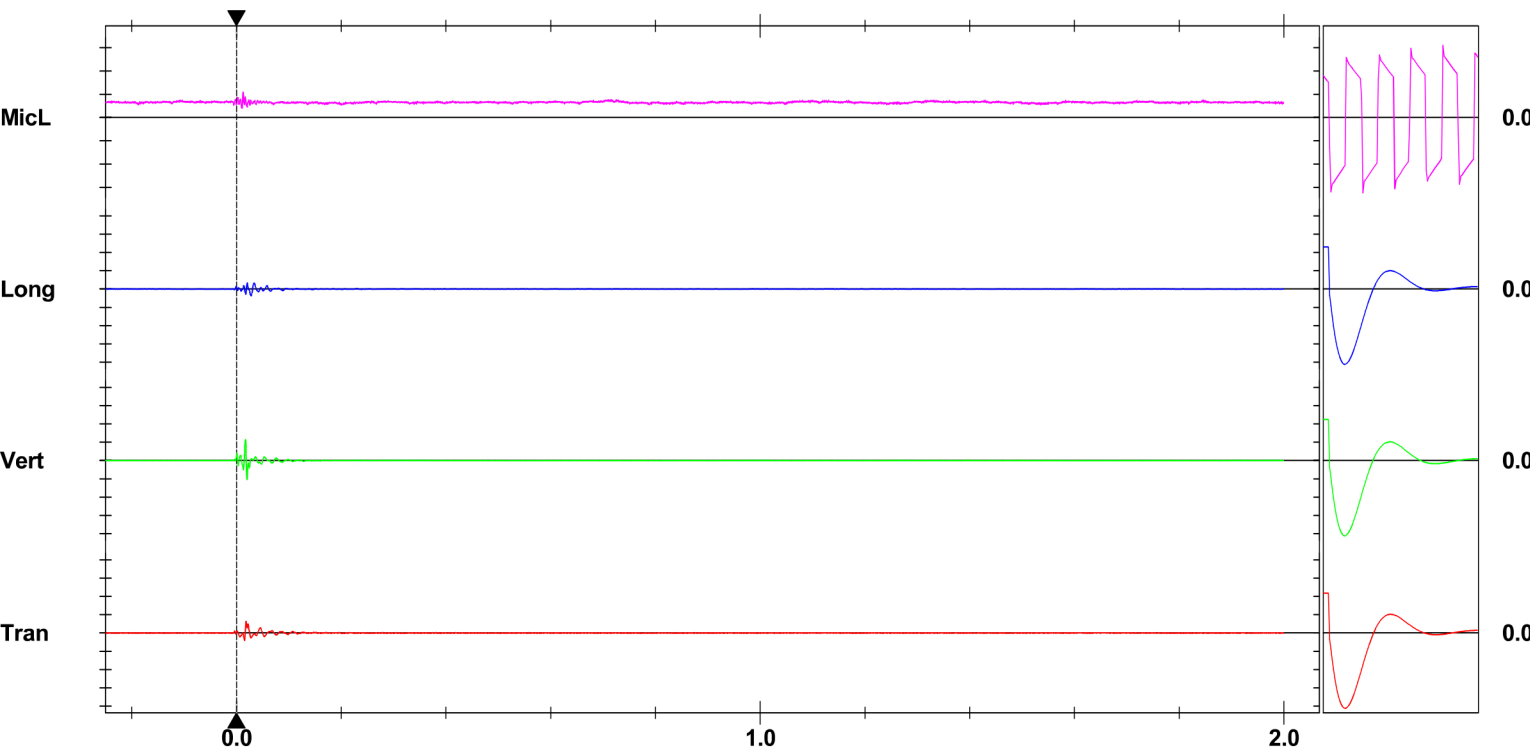
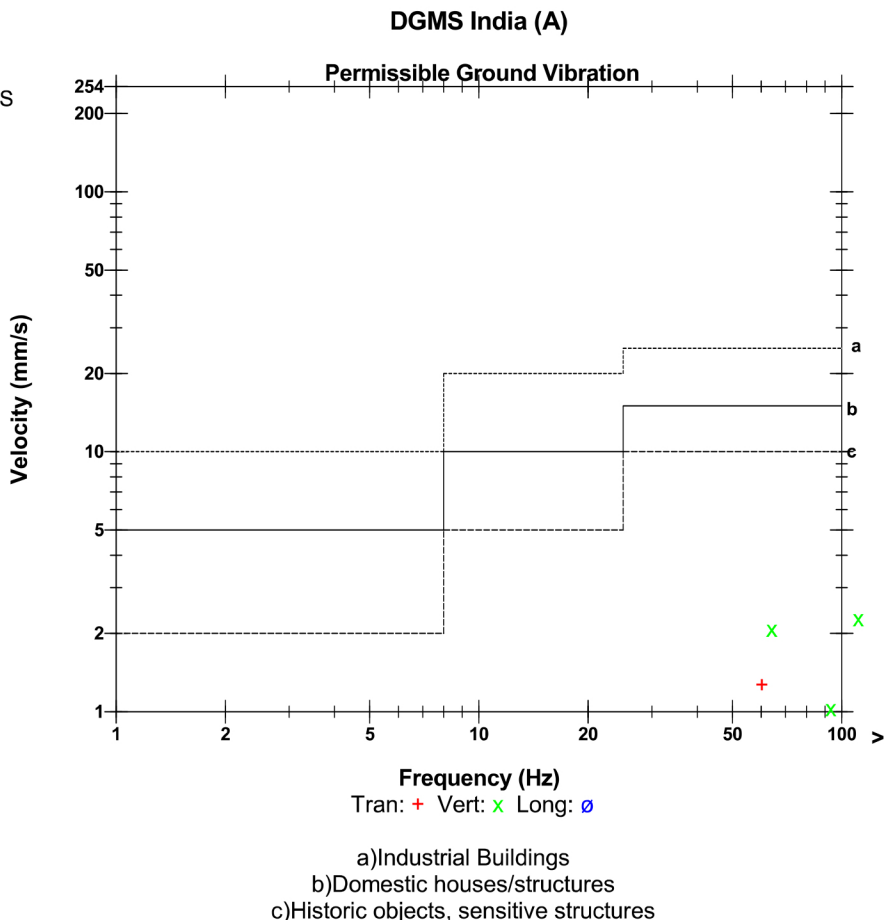
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305101337.IDFW  
**Scaled Distance** 82.37 (52.10 m, 0.4 kg)

**Notes**  
 Location: STATION - 1  
 Client: GEORGE KOCHUPARAMBIL  
 User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
 General:

**Microphone** Linear Weighting  
**PSPL** 94.70 dB(L) at 0.013 sec  
**ZC Freq** N/A  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1197 mv )

	Tran	Vert	Long	
PPV	1.269	2.286	0.733	mm/s
ZC Freq	60	128	64	Hz
Time (Rel. to Trig)	0.019	0.017	0.028	sec
Peak Acceleration	0.110	0.250	0.077	g
Peak Displacement	0.003	0.003	0.002	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.5	7.3	Hz
Overswing Ratio	4.1	4.1	4.1	

**Peak Vector Sum** 2.452 mm/s at 0.018 sec  
**N/A: Not Applicable**



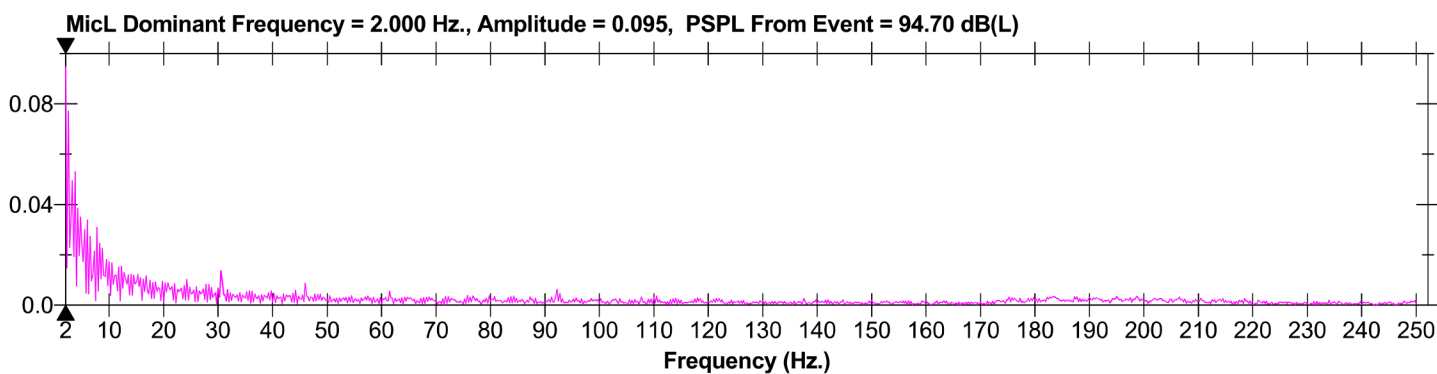
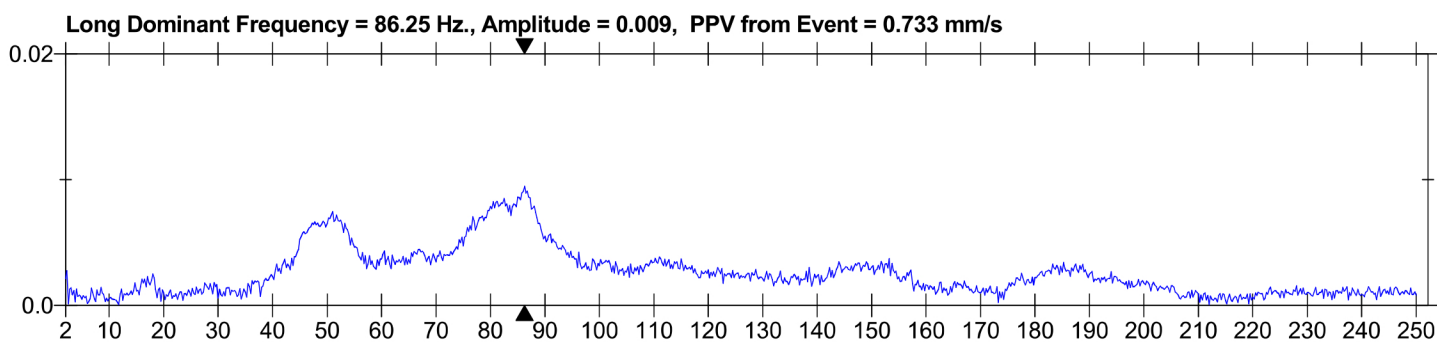
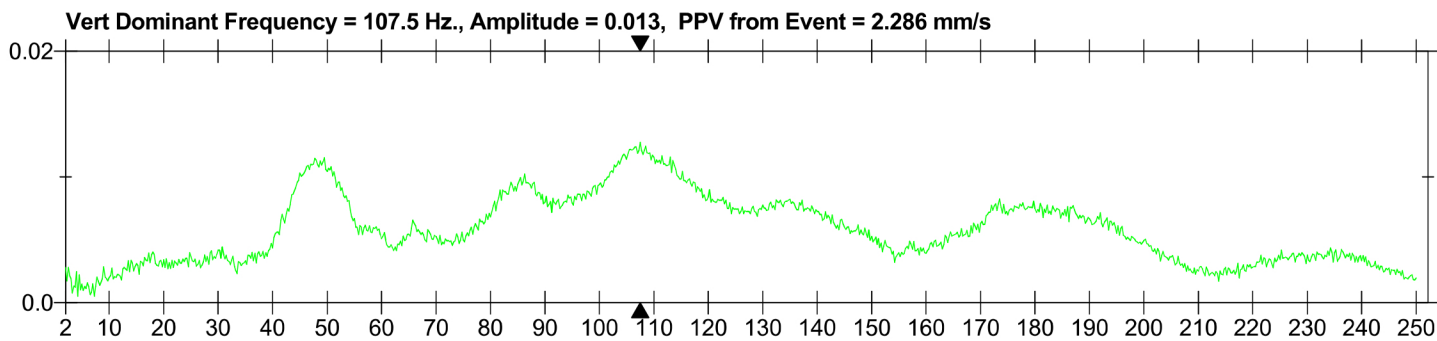
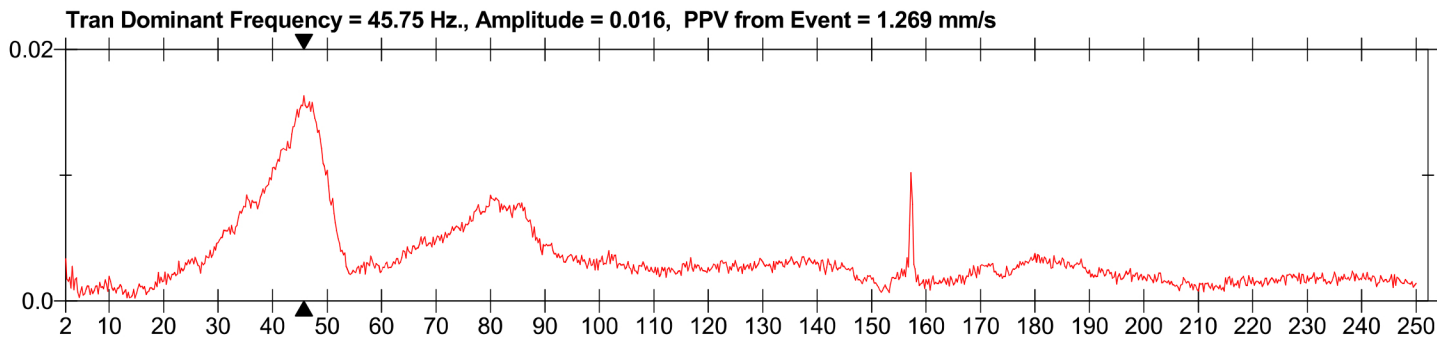
**Time Scale:** 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div  
**Trigger =**

Sensor Check

**Date/Time** Vert at 10:13:37 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 4096 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305101337.IDFW  
**Scaled Distance** 82.37 (52.10 m, 0.4 kg)

**Notes**  
Location: STATION - 1  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:



**Date/Time** MicL at 10:28:22 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

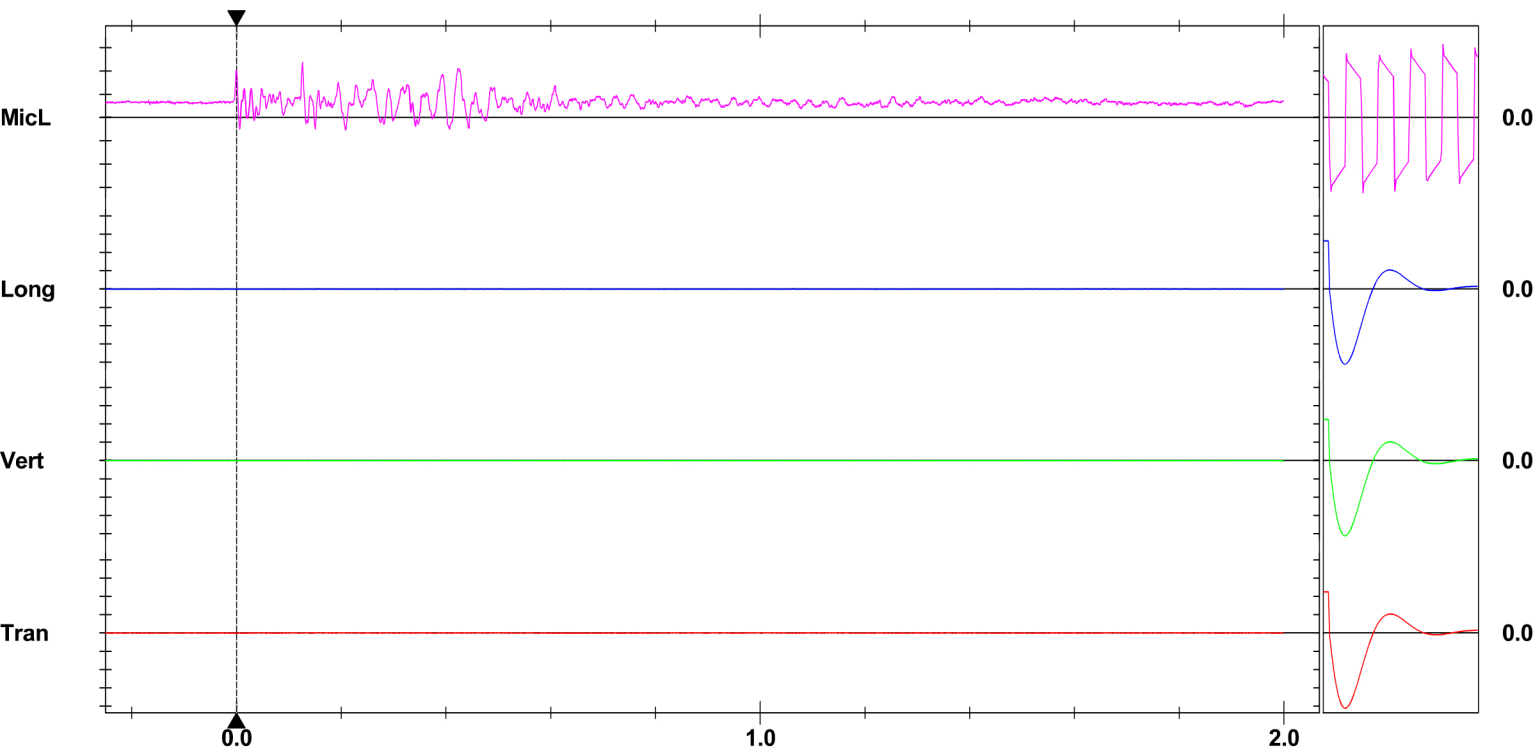
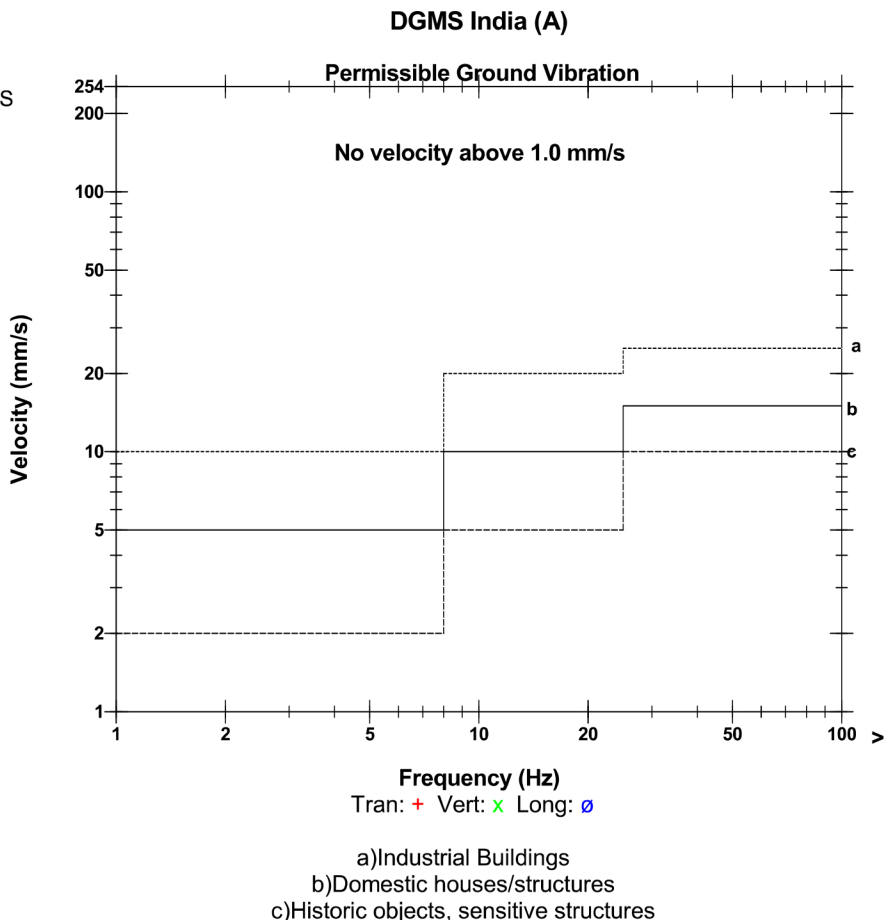
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**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305130208.IDFW  
**Scaled Distance** 325.8 (206.1 m, 0.4 kg)

**Notes**  
 Location: STATION - 4  
 Client: GEORGE KOCHUPARAMBIL  
 User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
 General:

**Microphone** Linear Weighting  
**PSPL** 101.4 dB(L) at 0.126 sec  
**ZC Freq** 5.2 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1144 mv)

	Tran	Vert	Long	
PPV	0.039	0.047	0.047	mm/s
ZC Freq	>100	27	85	Hz
Time (Rel. to Trig)	1.103	0.002	0.839	sec
Peak Acceleration	0.006	0.006	0.005	g
Peak Displacement	0.000	0.000	0.000	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.5	Hz
Overswing Ratio	4.0	4.1	4.0	

Peak Vector Sum 0.553 mm/s at 0.002 sec



**Time Scale:** 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div  
**Trigger =**

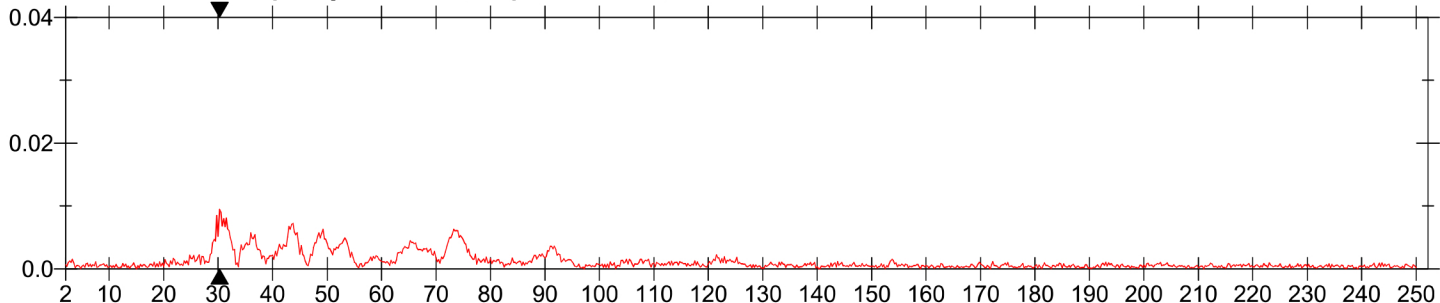
Sensor Check

**Date/Time** MicL at 10:28:22 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

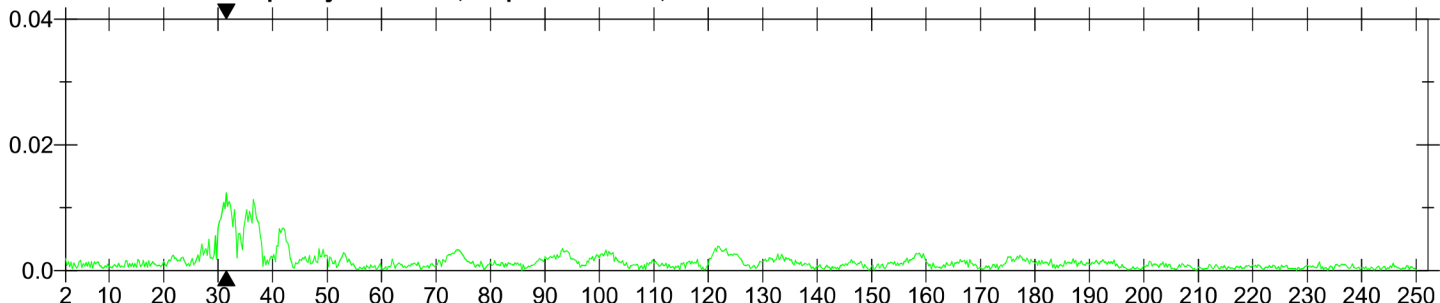
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305102822.IDFW  
**Scaled Distance** 325.8 (206.1 m, 0.4 kg)

**Notes**  
Location: STATION - 4  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

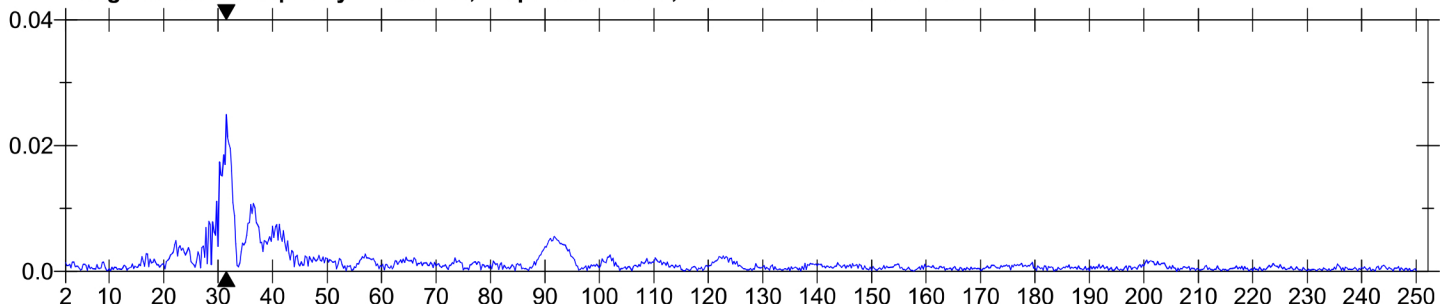
**Tran Dominant Frequency = 30.25 Hz., Amplitude = 0.009, PPV from Event = 0.181 mm/s**



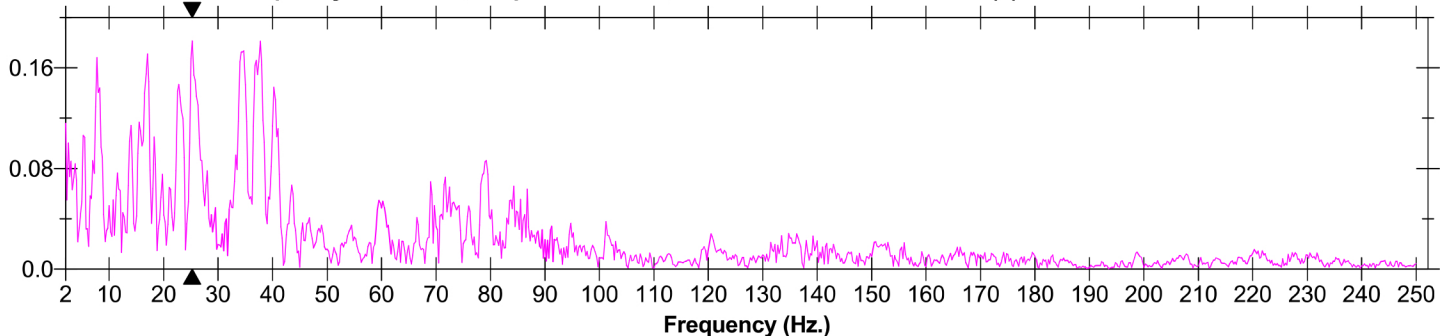
**Vert Dominant Frequency = 31.50 Hz., Amplitude = 0.012, PPV from Event = 0.229 mm/s**



**Long Dominant Frequency = 31.50 Hz., Amplitude = 0.025, PPV from Event = 0.244 mm/s**



**MicL Dominant Frequency = 25.25 Hz., Amplitude = 0.181, PSPL From Event = 101.4 dB(L)**



**Date/Time** Vert at 10:35:42 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

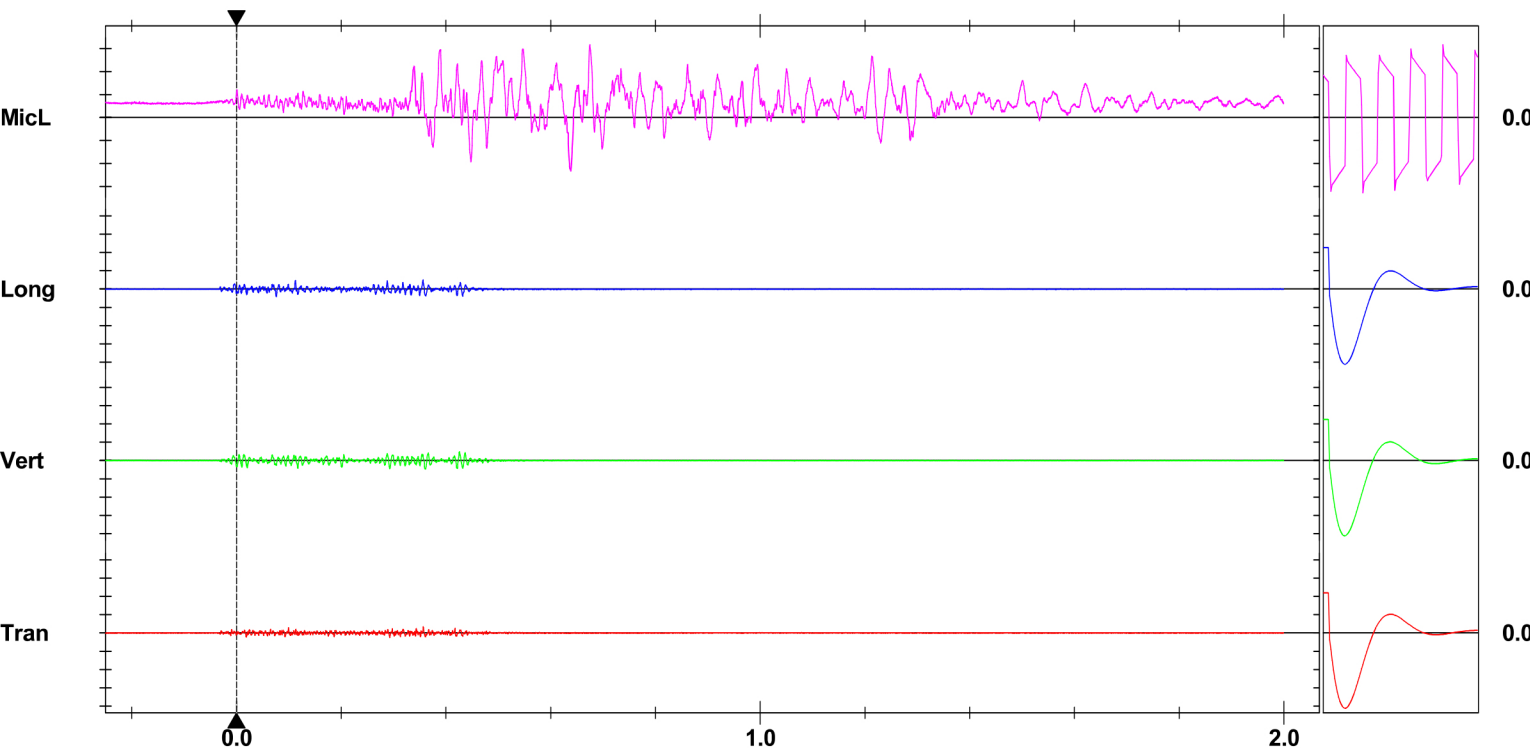
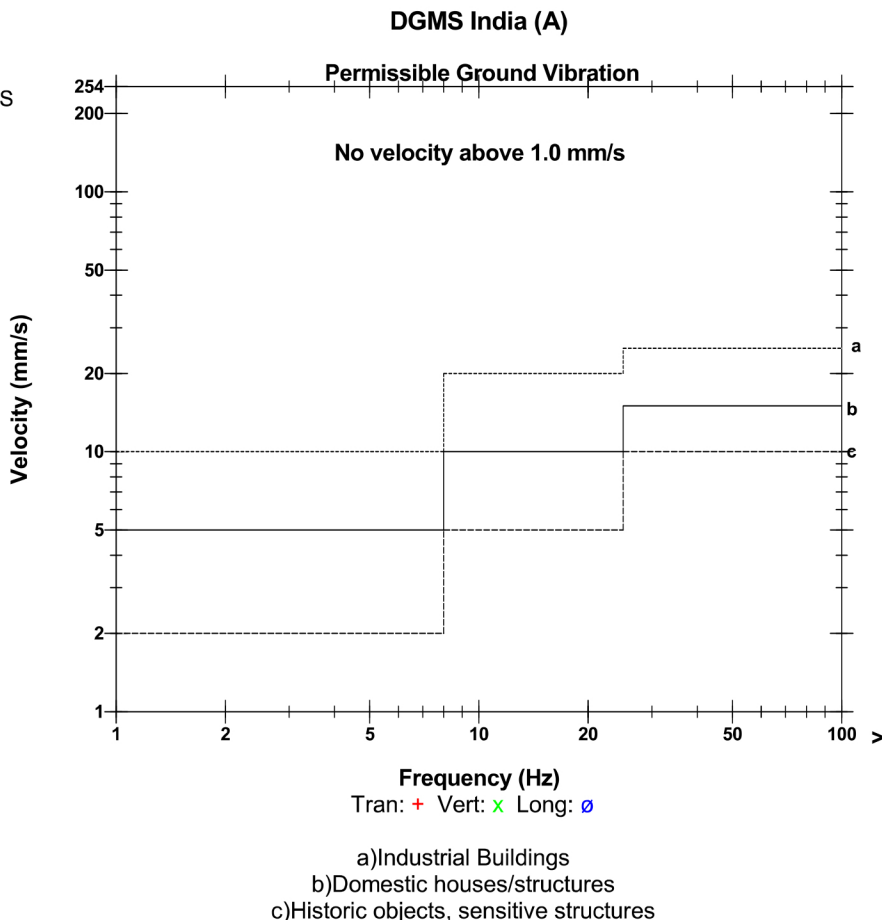
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305103542.IDFW  
**Scaled Distance** 207.1 (131.0 m, 0.4 kg)

**Notes**  
 Location: STATION - 5  
 Client: GEORGE KOCHUPARAMBIL  
 User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
 General:

**Microphone** Linear Weighting  
**PSPL** 104.0 dB(L) at 0.675 sec  
**ZC Freq** 24 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1165 mv )

	Tran	Vert	Long	
<b>PPV</b>	0.670	0.962	0.985	mm/s
<b>ZC Freq</b>	128	93	85	Hz
<b>Time (Rel. to Trig)</b>	0.357	0.426	0.356	sec
<b>Peak Acceleration</b>	0.087	0.081	0.094	g
<b>Peak Displacement</b>	0.001	0.002	0.001	mm
<b>Sensor Check</b>	Passed	Passed	Passed	
<b>Frequency</b>	7.3	7.5	7.3	Hz
<b>Overswing Ratio</b>	4.1	4.1	4.2	

**Peak Vector Sum** 1.215 mm/s at 0.356 sec



**Time Scale:** 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div  
**Trigger =**

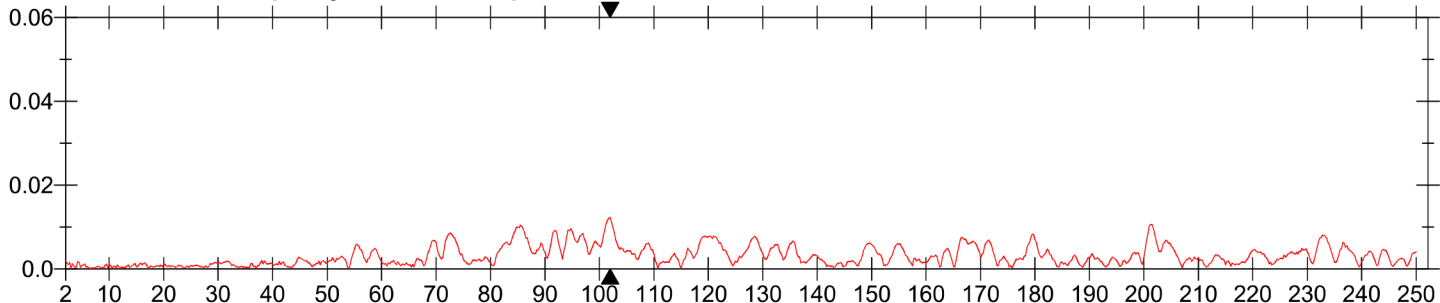
Sensor Check

**Date/Time** Vert at 10:35:42 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

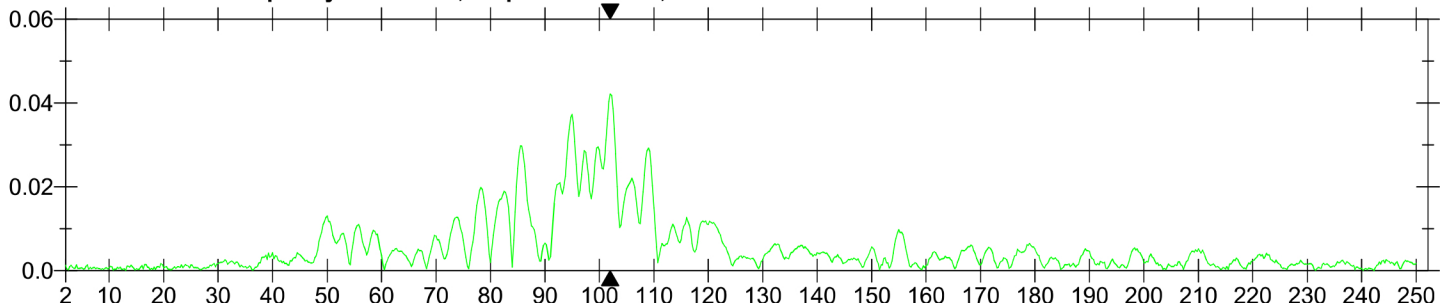
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305103542.IDFW  
**Scaled Distance** 207.1 (131.0 m, 0.4 kg)

**Notes**  
Location: STATION - 5  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

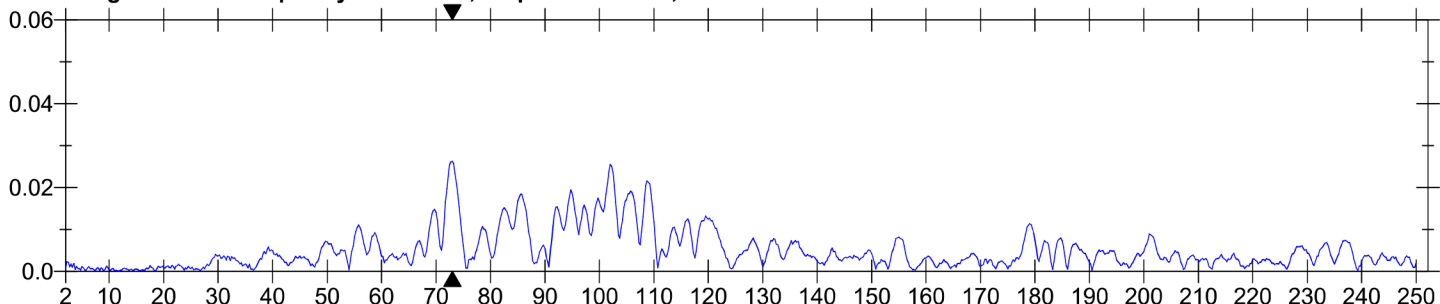
**Tran Dominant Frequency = 102.0 Hz., Amplitude = 0.012, PPV from Event = 0.670 mm/s**



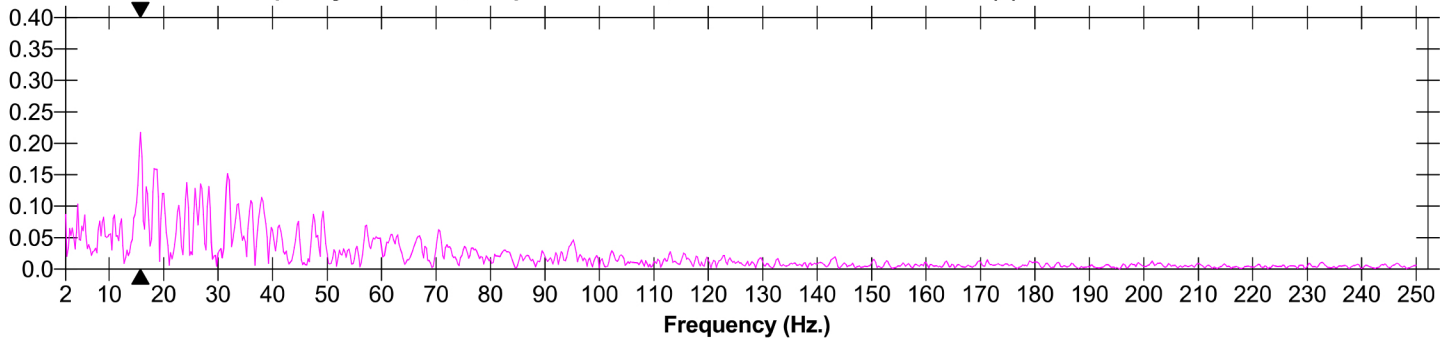
**Vert Dominant Frequency = 102.0 Hz., Amplitude = 0.042, PPV from Event = 0.962 mm/s**



**Long Dominant Frequency = 73.00 Hz., Amplitude = 0.026, PPV from Event = 0.985 mm/s**



**MicL Dominant Frequency = 15.75 Hz., Amplitude = 0.217, PSPL From Event = 104.0 dB(L)**



**Date/Time** MicL at 13:02:08 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 1024 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

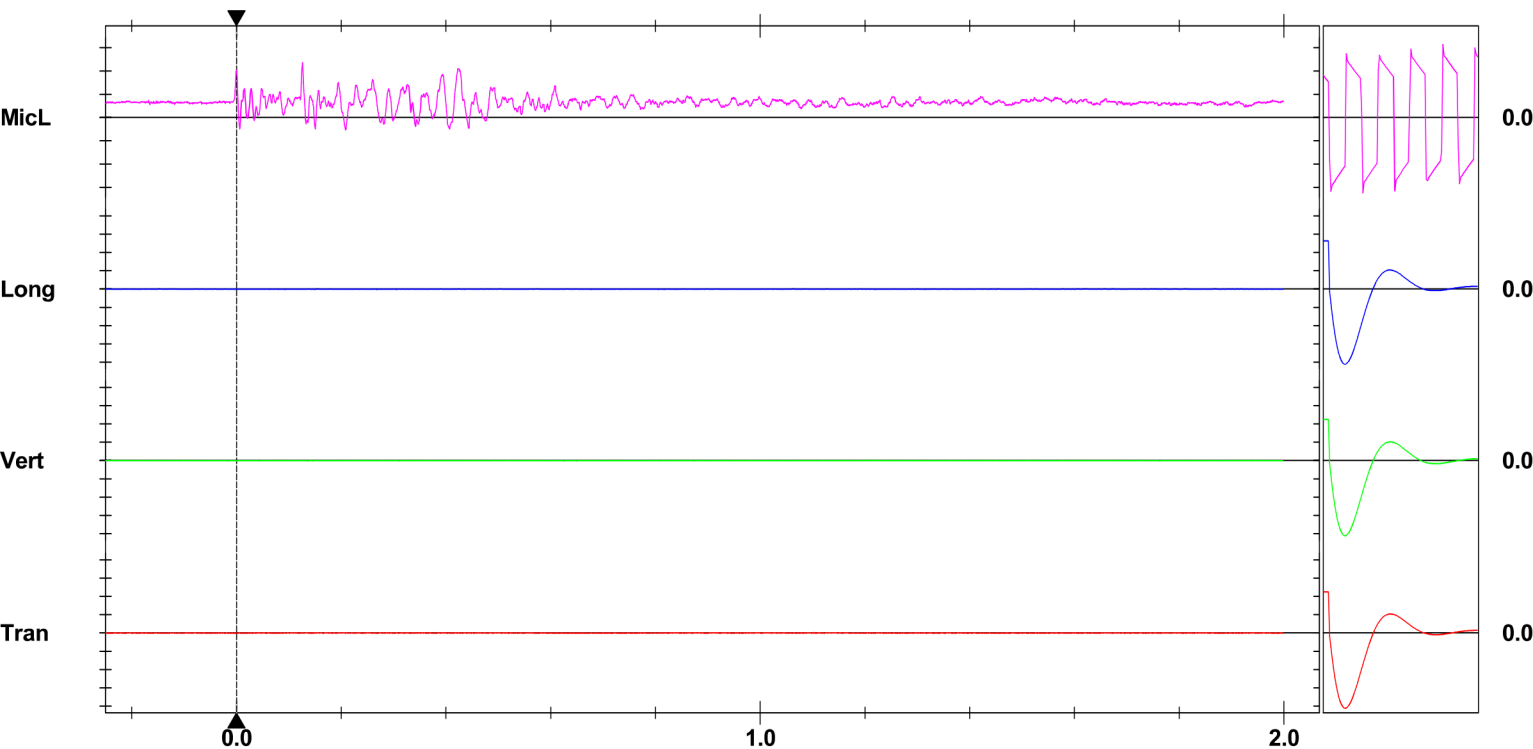
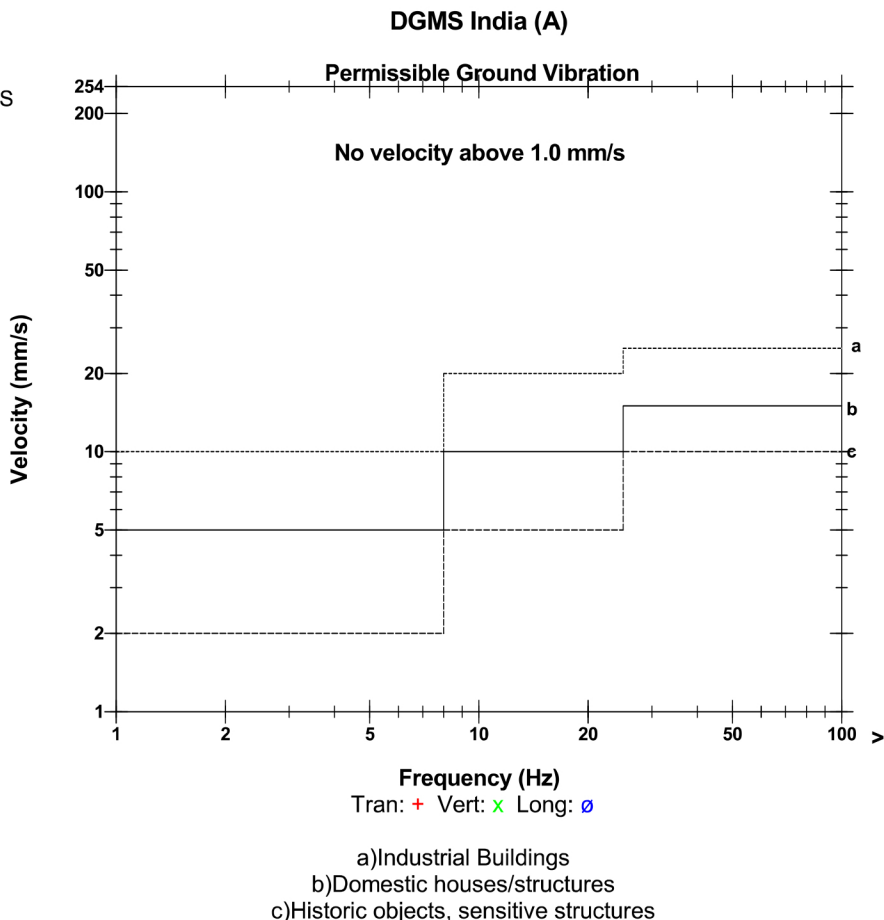
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305130208.IDFW  
**Scaled Distance** 767.6 (485.5 m, 0.4 kg)

**Notes**  
 Location: STATION - 6  
 Client: GEORGE KOCHUPARAMBIL  
 User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
 General:

**Microphone** Linear Weighting  
**PSPL** 101.4 dB(L) at 0.126 sec  
**ZC Freq** 5.2 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1144 mv)

	Tran	Vert	Long	
PPV	0.039	0.047	0.047	mm/s
ZC Freq	>100	27	85	Hz
Time (Rel. to Trig)	1.103	0.002	0.839	sec
Peak Acceleration	0.006	0.006	0.005	g
Peak Displacement	0.000	0.000	0.000	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.5	Hz
Overswing Ratio	4.0	4.1	4.0	

Peak Vector Sum 0.053 mm/s at 0.002 sec



**Time Scale:** 0.20 sec/div    **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div  
**Trigger =**

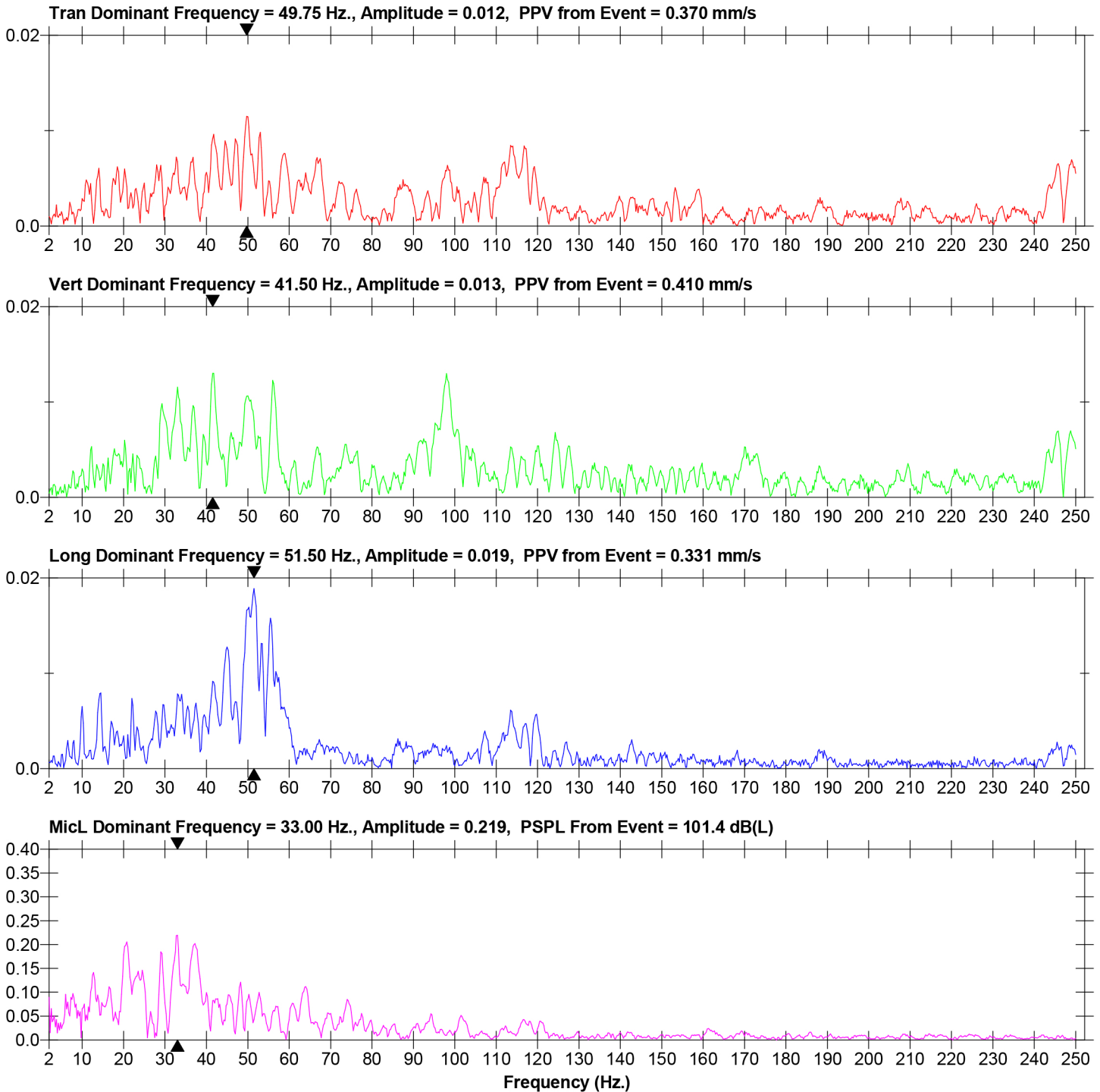
Sensor Check

**Date/Time** MicL at 13:02:08 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 1024 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305130208.IDFW  
**Scaled Distance** 767.6 (485.5 m, 0.4 kg)

### Notes

**Location:** STATION - 6  
**Client:** GEORGE KOCHUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**



**Date/Time** MicL at 13:14:08 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

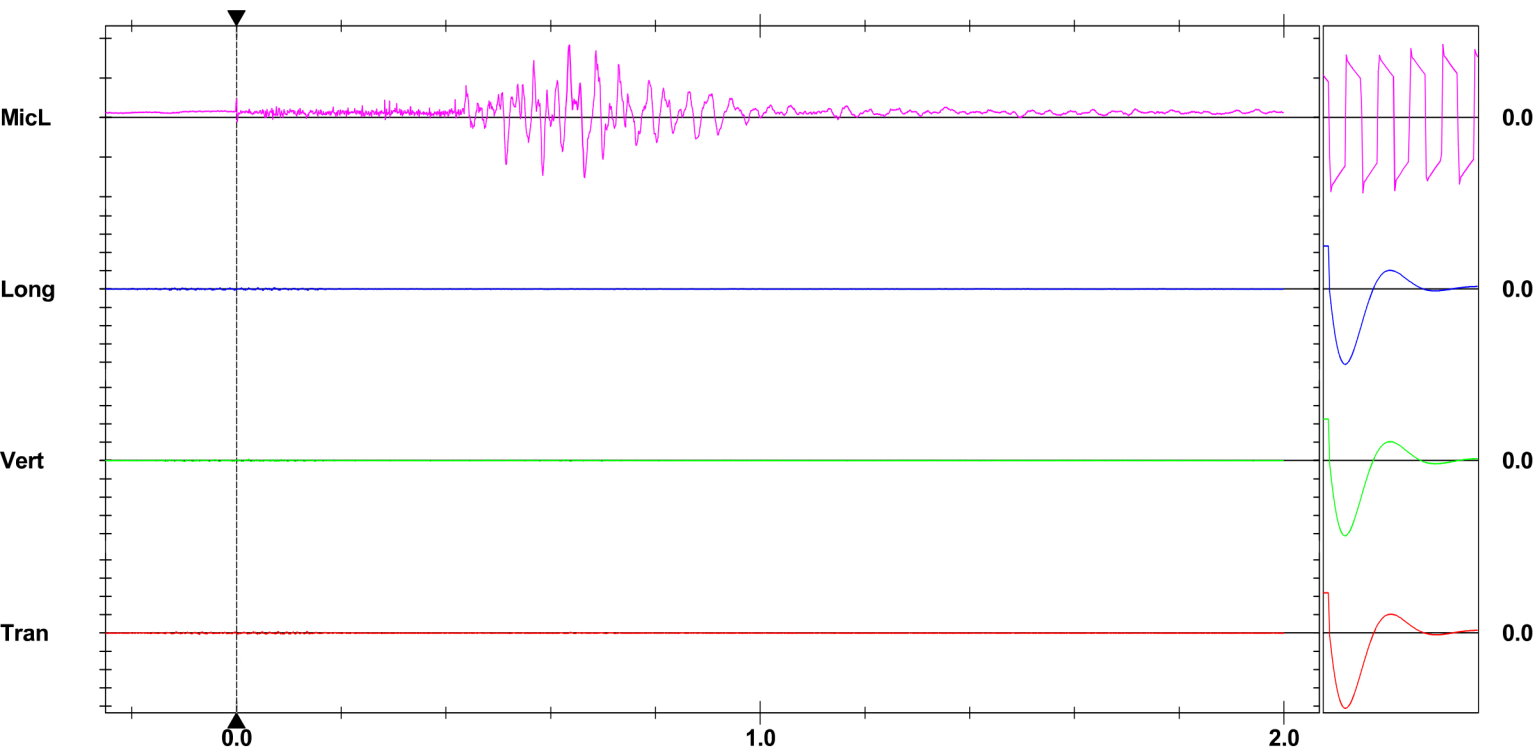
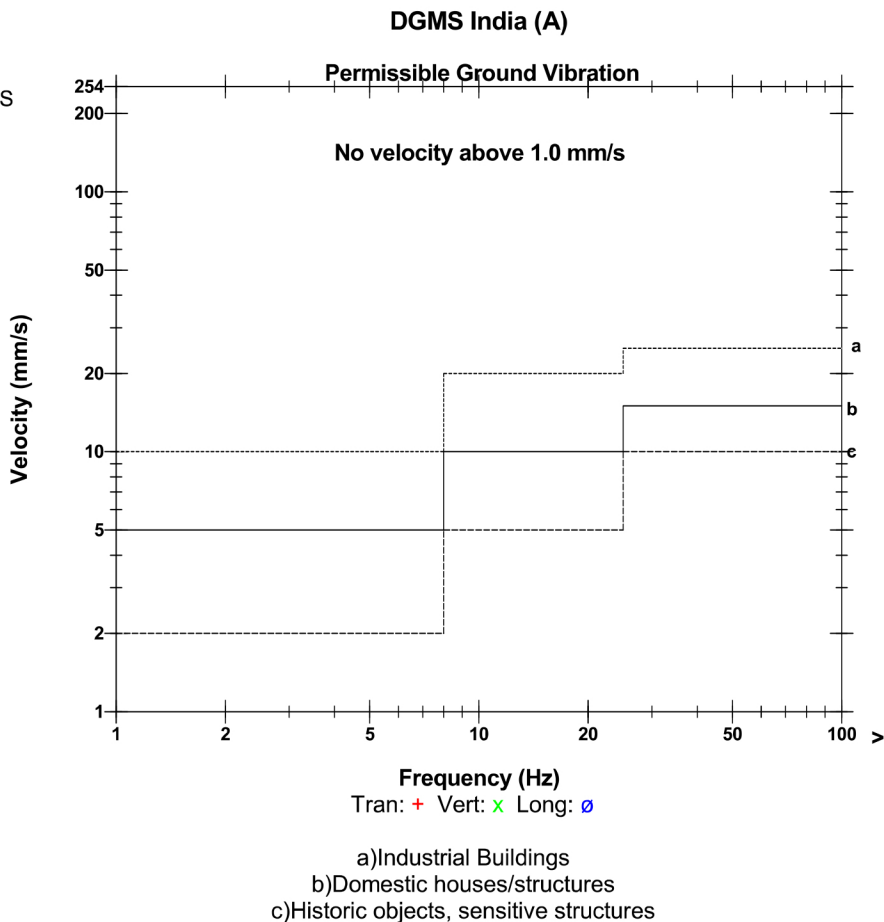
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305131408.IDFW  
**Scaled Distance** 338.8 (214.3 m, 0.4 kg)

**Notes**  
 Location: STATION - 7  
 Client: GEORGE KOCHUPARAMBIL  
 User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
 General:

**Microphone** Linear Weighting  
**PSPL** 113.2 dB(L) at 0.636 sec  
**ZC Freq** 16 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1138 mv)

	Tran	Vert	Long	
PPV	0.173	0.110	0.173	mm/s
ZC Freq	>100	85	85	Hz
Time (Rel. to Trig)	0.079	0.022	0.072	sec
Peak Acceleration	0.017	0.012	0.015	g
Peak Displacement	0.000	0.000	0.000	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.0	4.0	4.1	

Peak Vector Sum 0.497 mm/s at 0.051 sec



**Time Scale:** 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div  
**Trigger =**

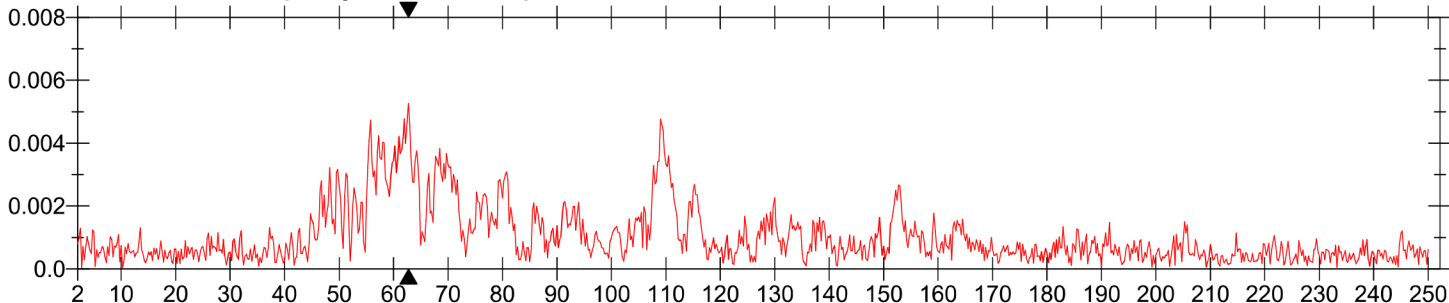
Sensor Check

**Date/Time** MicL at 13:14:08 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

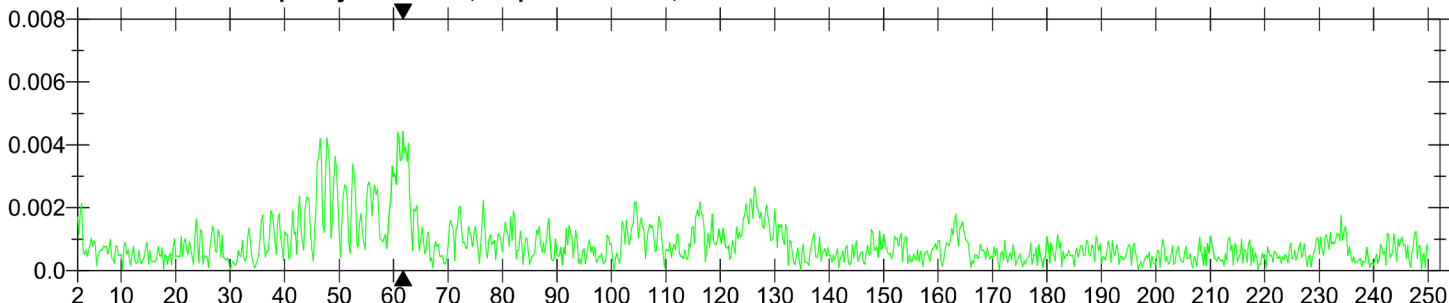
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305131408.IDFW  
**Scaled Distance** 338.8 (214.3 m, 0.4 kg)

**Notes**  
Location: STATION - 7  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

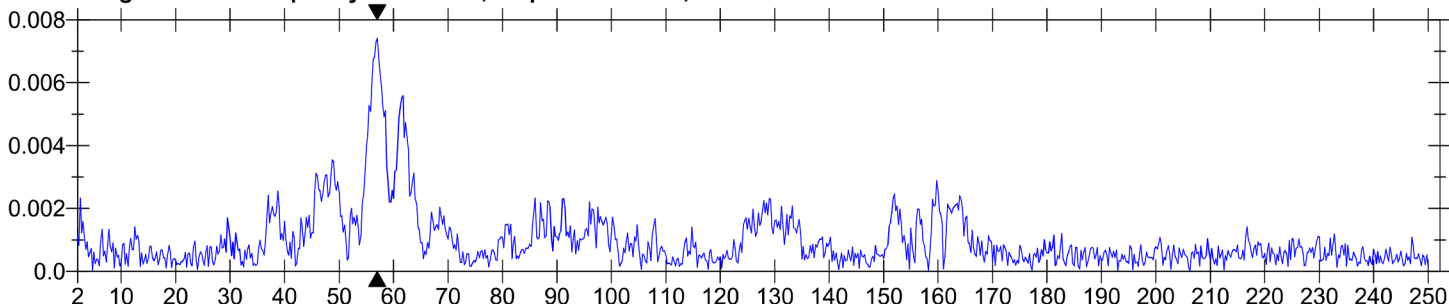
**Tran Dominant Frequency = 62.75 Hz., Amplitude = 0.005, PPV from Event = 0.173 mm/s**



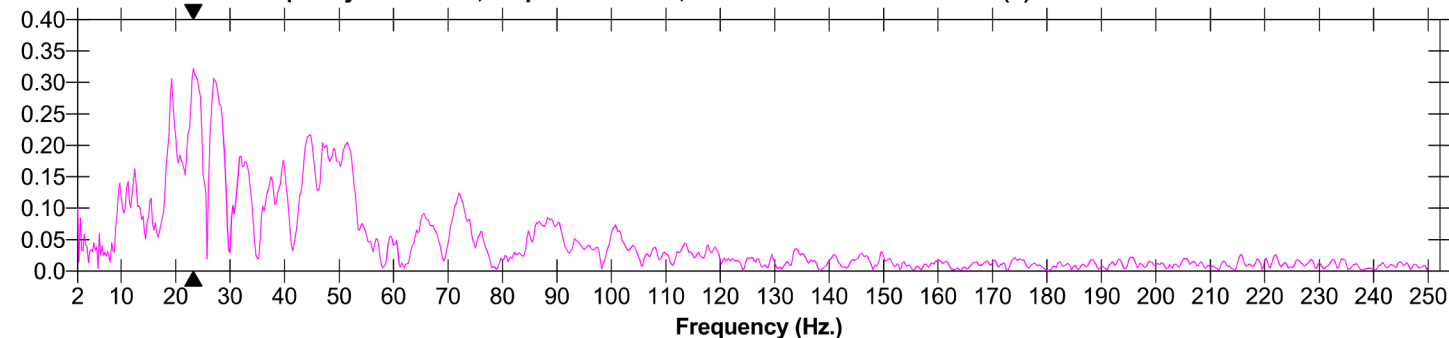
**Vert Dominant Frequency = 61.75 Hz., Amplitude = 0.004, PPV from Event = 0.110 mm/s**



**Long Dominant Frequency = 57.00 Hz., Amplitude = 0.007, PPV from Event = 0.173 mm/s**



**MicL Dominant Frequency = 23.25 Hz., Amplitude = 0.322, PSPL From Event = 113.2 dB(L)**



**Date/Time** MicL at 13:22:02 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

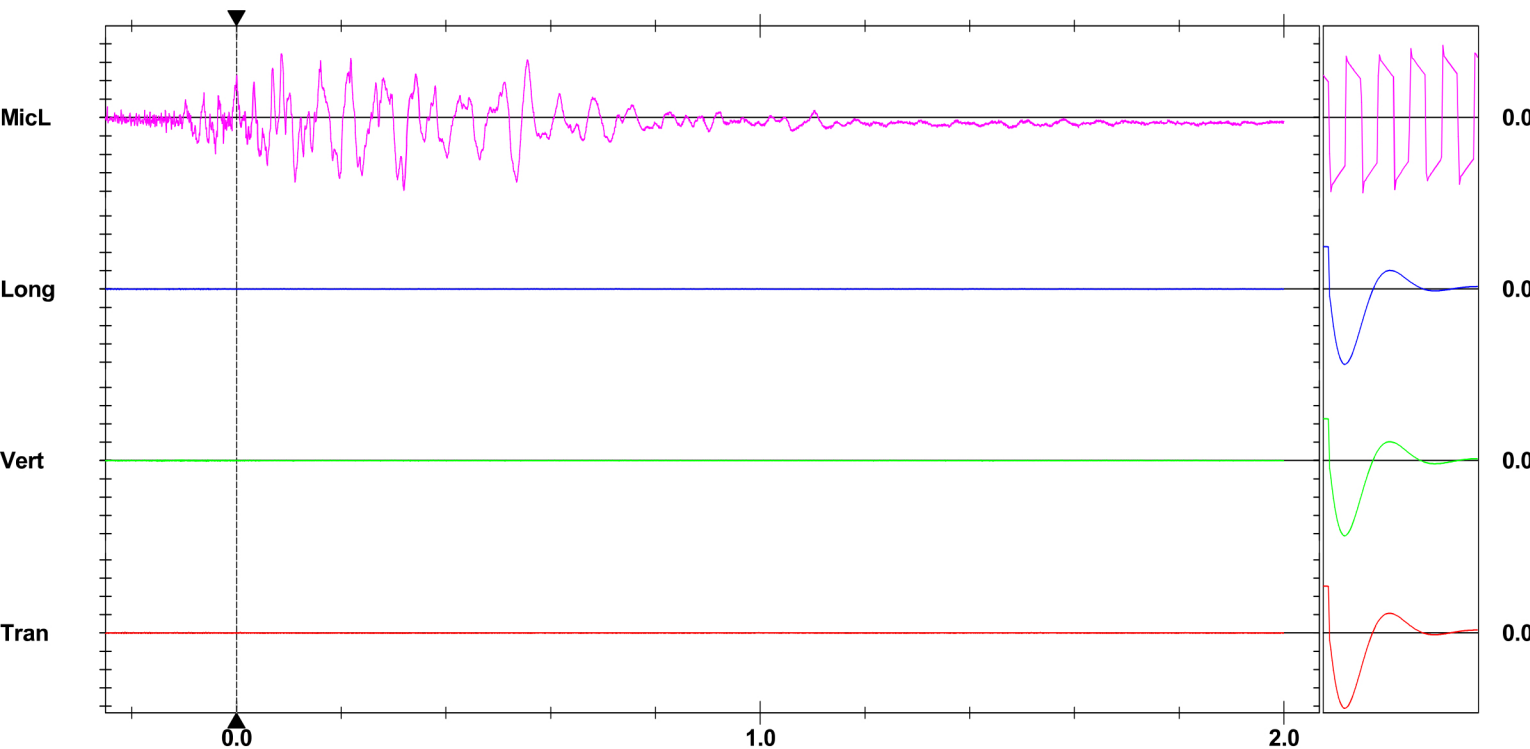
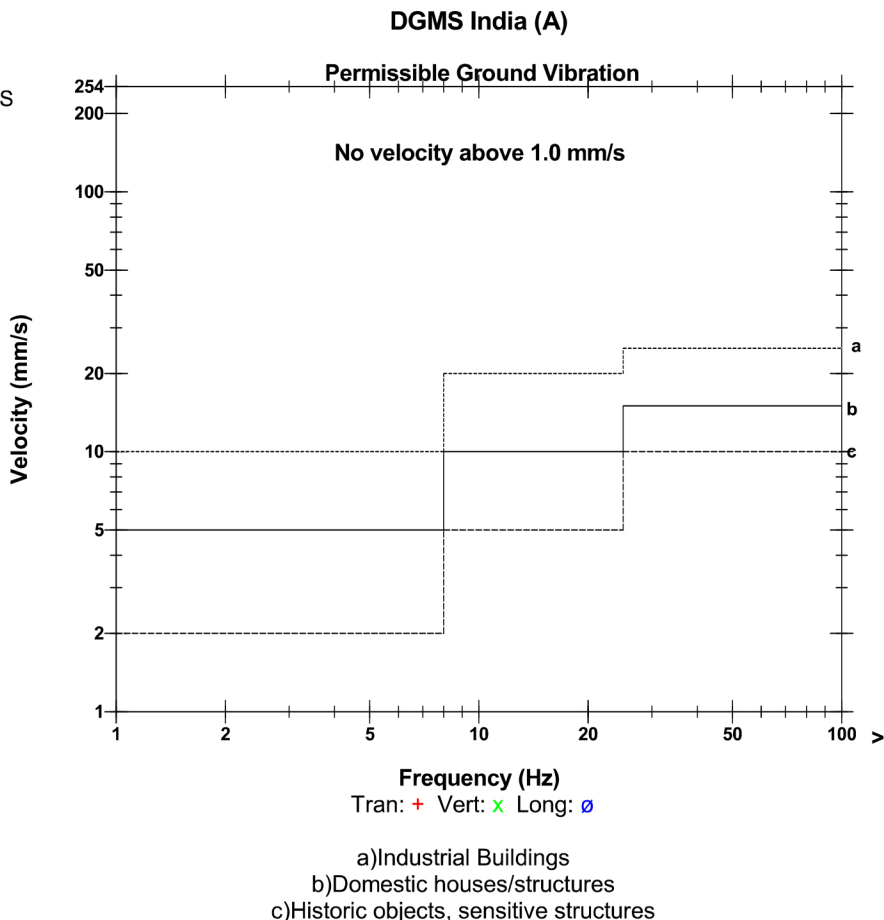
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305132202.IDFW  
**Scaled Distance** 299.9 (189.7 m, 0.4 kg)

**Notes**  
 Location: STATION -8  
 Client: GEORGE KOCHUPARAMBIL  
 User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
 General:

**Microphone** Linear Weighting  
**PSPL** 105.9 dB(L) at 0.319 sec  
**ZC Freq** 18.0 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1095 mv )

	Tran	Vert	Long	
PPV	0.079	0.079	0.071	mm/s
ZC Freq	>200	>200	>200	Hz
Time (Rel. to Trig)	-0.215	-0.150	-0.128	sec
Peak Acceleration	0.012	0.018	0.013	g
Peak Displacement	0.000	0.000	0.000	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.5	7.3	Hz
Overswing Ratio	3.8	4.0	4.1	

Peak Vector Sum 0.701 mm/s at -0.107 sec



**Time Scale:** 0.20 sec/div    **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div  
**Trigger =**

Sensor Check

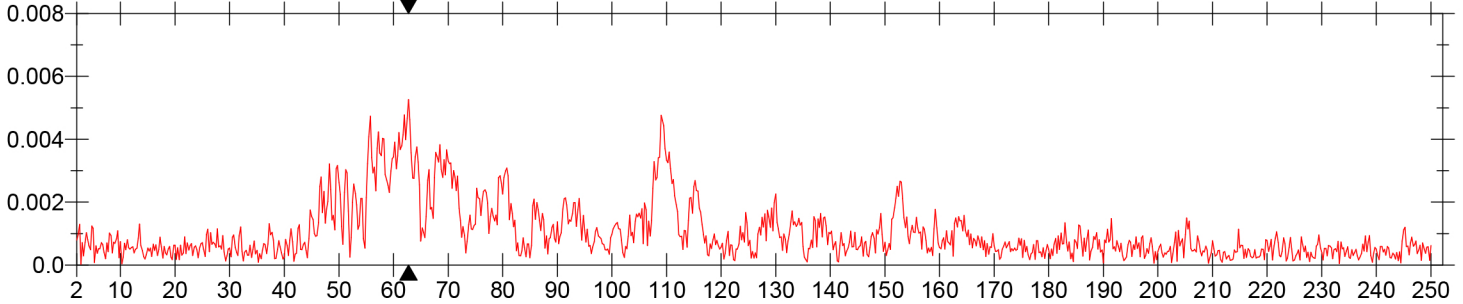
**Date/Time** MicL at 13:22:02 March 5, 2026  
**Trigger Source** Geo: 0.600 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 2.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**File Name** UM18455\_20260305132202.IDFW  
**Scaled Distance** 299.9 (189.7 m, 0.4 kg)

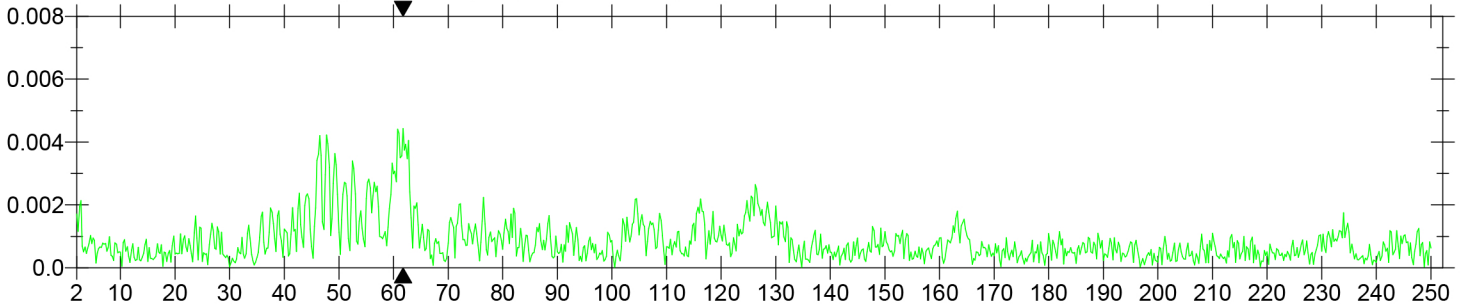
### Notes

**Location:** STATION - 8  
**Client:** GEORGE KOCHUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**

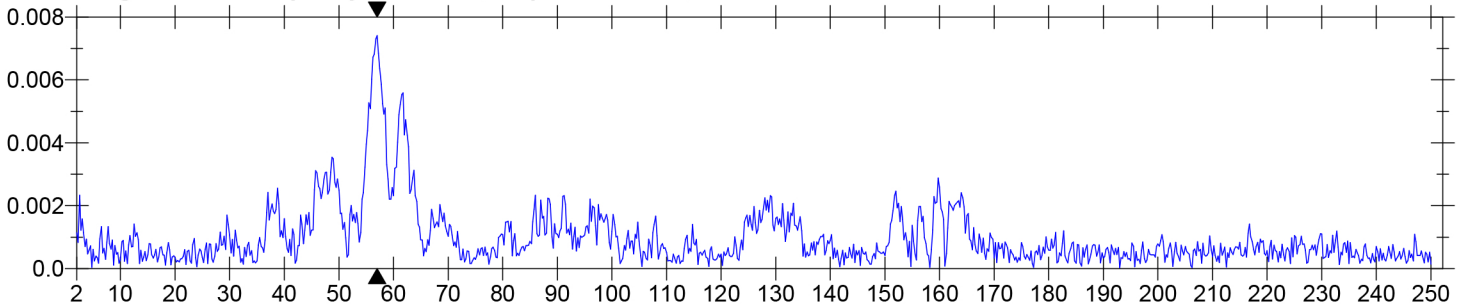
**Tran Dominant Frequency = 62.75 Hz., Amplitude = 0.005, PPV from Event = 0.173 mm/s**



**Vert Dominant Frequency = 61.75 Hz., Amplitude = 0.004, PPV from Event = 0.110 mm/s**



**Long Dominant Frequency = 57.00 Hz., Amplitude = 0.007, PPV from Event = 0.173 mm/s**



**MicL Dominant Frequency = 23.25 Hz., Amplitude = 0.322, PSPL From Event = 105.9 dB(L)**

