

# **ENVIRONMENT CLEARANCE COMPLIANCE REPORT**

**(April 2024 - September 2024)**

*For*

***GRANITE BUILDING STONE QUARRY***

***Of***

**Shri. George Kochuparambil**

**Extent: 12.2987 Ha.**

Located at

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 General 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 April 2024 – September 2024 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.

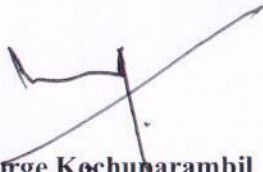
As per the conditions of above referred Environmental Clearance (EC), please find enclosed compliance report for the period from April-2024 to September-2024 for ‘Granite Building Stone Quarry of Shri. George Kochuparambil’. Also enclosed relevant Annexures in Support of the compliance report for your 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’



**Mr. George Kochuparambil**  
**(Managing Director)**

Encl: as above

Cc: The Member Secretary  
State Environment Impact Assessment Authority SEIAA)  
Directorate of Environment & Climate Change  
4th Floor, KSTRC 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	B2 & 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>

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 insitu or transplanted to a suitable site inside the lease area.	The noticed Endemic species are properly protected and transplanted to a suitable area.

**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 Buffer zone with uniform width of 7.5m is maintained all along the lease boundary and thick green belt was developed & maintained properly.
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 channel were maintained periodically by cleaning and desilting. Geo-tagged photographs are attached as <b>Annexure- 01</b> .
3	The impact of vibration due to blasting on the nearest houses and other built structures should monitored in terms of Peak Particle Velocity and amplitude for	Blast Induced Ground Vibration study was carried out to monitor the impact of the of vibration due to blasting on the nearest houses and other built

	a maximum charge per delay and included in the Half Yearly Compliance Report.	structures. Report on Blast Induced Ground Vibration study is attached as <b>Annexure -23.</b>
4	NONEL short delay detonator may be used for initiation.	Only NONEL short delay detonators was used for Initiation purpose in blasting operations.
5	Blasts should be conducted by a blasters or mining mate certificate holder	Blasting operations was conducted by only statutory certified persons.
6	To restrict fly rock within 10m, muffling arrangements should be made.	Muffling arrangements were made to restrict fly rocks within 10m.
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.	Only NONEL detonators were used for blasting purposes.
8	Blasting mats should be used during rock blasting to contain the blast, prevent fly rocks and suppress dust.	Blasting mats are used during rock blasting to prevent fly rocks and suppress dust during blasting operations. The photos of Blasting Mat & blasting shelter is attached as <b>Annexure – 02.</b>
9	The violation of EC condition may lead to cancellation of EC and action under The Environment (Protection) Act, 1986.	Agreed.

### General Conditions



Sl. No.	Condition	Status of Compliance
1	Rainwater harvesting facility should be installed as per prevailing provisions of KMBR/KPBR, unless otherwise specified.	Rainwater harvesting facility is installed. The photos of Rainwater harvesting Pond is attached as <b>Annexure- 03</b> .
2	Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.	Environment monitoring cell is formed & is made functional. The details of Environmental monitoring cell meeting minutes is attached as <b>Annexure-04</b> .
3	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.	Avenue trees were planted all along the either side of the approach roads & Internal roads. The Geo-tagged photos of the avenue plantation is attached as <b>Annexure – 05</b> .
4	Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.	Solar Energy generation and utilization is adopted. Photos of solar lights are attached as <b>Annexure- 06</b> .
5	Sprinklers shall be installed and used in the Project Site to contain dust emissions.	Water sprinklers were installed at prominent places to control dust emissions. In addition to that water tanker with sprinkler is used for dust suppression all along the haulage roads. The Photos of Water sprinklers & water tanker with sprinkler are attached as <b>Annexure-07</b> .
6	Eco-restoration, including the Mine Closure Plan shall be done at the own cost of the Project Proponent.	Agreed.
7	At least 10 per cent of total excavated Pit area should be retained as water storage area 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.	During Closure of the mine, 10 percent of total excavated pit will be retained as water storage area and the remaining area will be reclaimed with overburden excavated and indigenous plant species will be planted.
8	Corporate Social Responsibility (CSR) agreed upon by the Proponent should be implemented.	Several Corporate Social Responsibility (CSR) activities has been carried out by the project proponent and the list of CSR activities that has been carried out during this season with photos & receipts are attached as <b>Annexure – 22</b> .
9	The Lease area shall be fenced off with barbed wires to a minimum height of 4 ft around, before starting of Mining. All the	Barbed wire fencing was erected all along the lease boundary. Sign boards had been erected

	boundary indicators (boards, stores, markings, etc.) shall be protected at all times and shall be conspicuous.	at prominent places. Photos of fencing & sign boards 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.	Before & after blasting warning siren is blown for indication purpose. Boards mentioning blasting timings had been erected at prominent places. Photos of Warning siren & safety Board indicating 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 were implemented to control noise & vibrations <ul style="list-style-type: none"> <li>➤ Controlled Blasting techniques like use of NONELs.</li> <li>➤ Use of sharp drilling bits, delivery of compressed air at optimal pressure, Proper maintenance of compressor, Excavator, jackhammers and tipper trucks.</li> <li>➤ Regular monitoring of noise levels in the core zone and the buffer zone of the mining lease area.</li> </ul>
<b>12</b>	Quarrying activities should be limited to daytime as per KSPCB guidelines/specific conditions.	Quarrying activities are limited to daytime only as per KSPCB guidelines. Photo of sign board Indicating Quarry activities timings is attached as <b>Annexure- 10</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 techniques like Use of NONELs, use of Blast mats were implemented.
<b>14</b>	A licensed person should supervise/control the Blasting Operations	Supervision/control of Blasting operations is done by person holding 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.	Access road to the Quarry is tarred and tiled to control dust emission. 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 material excavated is stacked at a prominent place near to the quarry lease area and will be utilized for reclamation purpose in future as required.
<b>17</b>	Height of Benches should not exceed 5 M and width should not be less than 5 M, if	Benches are maintained in a safe way. Site photographs are attached as <b>Annexure – 19</b> .

	there is no mention in the Mining Plan/specific conditions	
<b>18</b>	Mats to reduce fly rock blast to a maximum of 10 PPV should be provided	Blast mats were used to reduce the fly rocks during blasting.
<b>19</b>	Maximum depth of mining and general ground level at site shall not exceed 10m	The Mining operations were carried out as per the approved mining plan. Maximum depth of mining and general ground level at site shall not exceed 10m.
<b>20</b>	No mining operation should be carried out at place having a slope greater than 45°	No mining operations will be carried out at place having a slope greater than 45°
<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 amplifications.
<b>22</b>	The workers on the site should be provided with the required protective equipment such as ear muffs helmet, etc.	All the workers employed in the quarry are provided with Personal Protective equipment (PPE's).
<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 are provided to channelize Storm water. 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 material transported in the trucks are covered by firmly tied tarpaulin.
<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.	Plantations of about 5 times the loss that has been occurred while clearing the land is being done. Photos of afforestation carried out is attached as <b>Annexure – 18</b> .
<b>26</b>	Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.	Spent oil is re-used as a lubricant for drilling purpose.
<b>27</b>	Explosives should be stored in magazines in isolated place specified and approved by the Explosive Department.	Explosives are stored in magazines specified and approved by the Explosive Department. Copy of Explosive license is attached as <b>Annexure-12</b> & Magazine Photos were attached as <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.	No dwelling unit or other structures are situated within 100m from the boundary of the quarry.

<b>29</b>	100 M buffer distance should be maintained from forest boundaries	Mining area is not located near to 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 KSPCB under Air and Water Act(s) is obtained & 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 proponents from the respective competitive authorities including that for blasting and storage of explosives.	All required statutory clearances like Panchayath license is obtained. 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.	There is no change in the scope of the project.
<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	Advertisements are given in two newspapers. 1. The Hindu Daily – English –



	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 Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at <a href="http://www.seiaakerala.org">www.seiaakerala.org</a> . 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	12/04/2018 2. Kerala Kaumady – Malayalam – 12/04/2018 Copies of advertisements published in the newspapers 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 is submitted to the concerned panchayath. 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 report including the results of monitored data is submitted as stipulated to State Environmental Impact Assessment Authority and the Regional Office of MoEF&CC, Bangalore. Monitoring photos were attached as <b>Annexure – 16</b> . The monitored data results for Air, Noise and Water 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	Details of Environmental Clearance is prominently displayed in a board as stipulated at the entrance to the Mine.

	board with extent of Lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public	
<b>39</b>	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.	Notarized affidavit regarding all the conditions stipulated in the EC shall be scrupulously followed is submitted and a copy is attached as <b>Annexure – 21.</b>
<b>40</b>	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.	Prior approval from the SEIAA will be sought in case of change of mining technology or scope of working.
<b>41</b>	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.	No natural water course or first order streams are originating from the mining lease.
<b>42</b>	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 & transfer point to reduce fugitive emissions.	Monitoring of Ambient Air Quality is carried out periodically. Monitoring photos were attached as <b>Annexure – 16.</b> Monitoring reports have been enclosed as <b>Annexure- 17.</b> Regular water sprinkling was carried out at prominent places to reduce fugitive dust emissions.
<b>43</b>	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	Generated topsoil is stacked at the designated area and will be utilized for Afforestation and Green belt development purposes. OB generated is stacked separately and is vegetated with locally available shrubs and grasses to prevent erosion and surface run off.

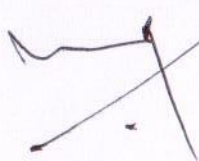
	be undertaken for stabilization of the dump. The entire excavated area should continue until the vegetation becomes self-sustaining	
<b>44</b>	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of 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 are made around the mining workings. the water from the drain is directed to the siltation ponds & then to the Rainwater Harvesting Pond. The water from RWHP is utilized for watering the mine area, roads, green belt development etc. The drains are regularly de silted particularly after monsoons and maintained properly. Photos of Garland drains & RWHP are attached as <b>Annexure – 01 &amp; 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.	Regular water sprinkling were carried out in critical areas prone to air pollution with water tankers and sprinklers.  Photos of Water sprinklers and water tanker with sprinkler is attached as <b>Annexure – 07.</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 were made on haul roads and were properly maintained.
<b>47</b>	Measures should be taken for control of noise levels below 85 dB (A) in the work environment.	Adequate measures for noise control like use of PPE's, Proper maintenance of Machineries etc., have been adopted.
<b>48</b>	A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior executive, who will report directly to the head of the Organization.	Environment monitoring cell is formed & is made functional. The details of 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	The funds earmarked for environment protection measures and CSR activities Shall be kept in a

	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.	separate account and will not be used for other purpose.
<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 on consent given by any other authority for the same project.	Agreed
<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 will be restricted above ground water level in that area and it will not intersect the Ground water table.



58	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 hauling purpose have 'PUC' Certificate issued by an authorized Pollution checking center. All the vehicles are washed inside the lease area.
59	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 will be drawn for dust suppression, other miscellaneous activities. The rainwater Harvesting Pond present in the mining lease area will act as the primary source of water. Photos of Rainwater harvesting pond is attached as <b>Annexure- 03</b> .
60	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.
61	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.	Periodical Medical Examination was conducted for 16 employees during this period and are declared "FIT" by Medical Officer and Fitness certificate issued in Form "O" of Mines Rules 1955 29F(2) and 29L. The copy of Health Insurance for employees is attached as <b>Annexure - 24</b> .

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



**Sri. George Kochuparambil.**  
**Managing Director**  
 Date: 07-11-2024.

**Annexure-1**  
**Garland Drain**





Unnamed Road, Manakkad, Kerala 685583, India

Lat 9° 53' 46.4095" N Long 76° 38' 27.06328" E

Local 01:00:00 PM

Altitude 55 meters

GMT 07:30:00 AM

Date Wed, 18 Sep 2024

**Annexure-2**

**BLASTING MATS & BLASTING  
SHELTER**





GPS Map  
Camera Lite

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

Latitude	Longitude
9.89518358°	76.6397122°
Local 01:37:07 PM	Altitude 77 meters
GMT 08:07:07 AM	Wednesday, 18.09.2024



GPS Map  
Camera Lite

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

Latitude	Longitude
9.89519352°	76.6396782°
Local 01:37:20 PM	Altitude 77 meters
GMT 08:07:20 AM	Wednesday, 18.09.2024





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

Latitude

9.89400231°

Longitude

76.64025261°

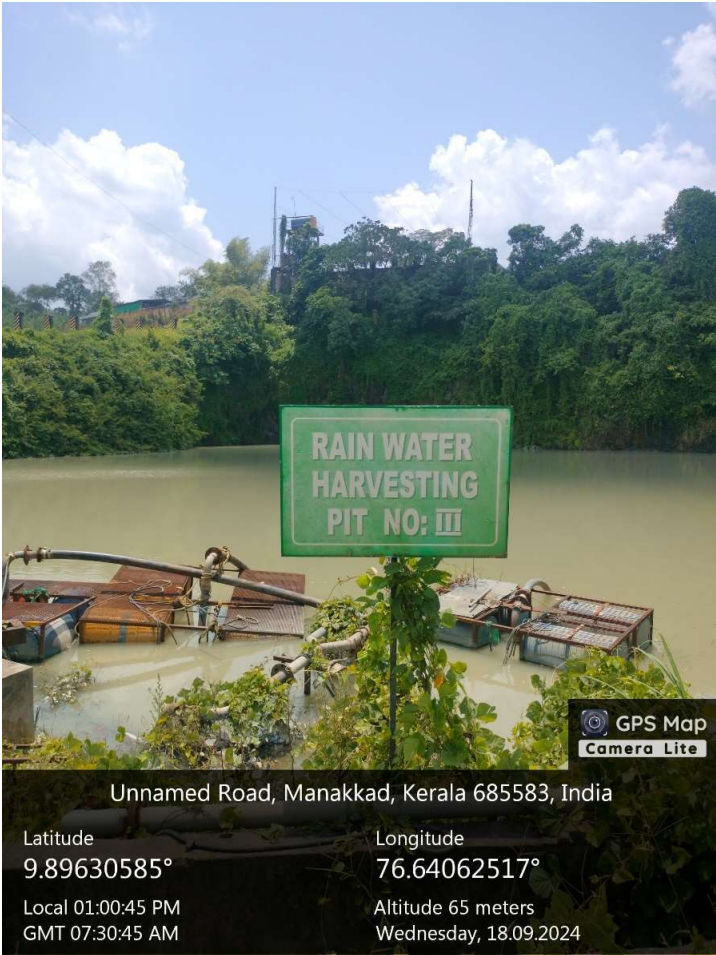
Local 01:31:25 PM

GMT 08:01:25 AM

Altitude 107 meters

Wednesday, 18.09.2024

**Annexure-3**  
**RAINWATER HARVESTING POND**



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



Minutes of the 35<sup>th</sup> Meeting of Environment Monitoring Committee held on 24/07/24 at 3.30

Minutes of the 27<sup>th</sup> meeting is reviewed.

1. Explosive Magazine.

We obtained licence for Explosive magazine, ANFO Storage and Mixing shed. One licence for magazine is cancelled as requested by us with HES. The magazine is dismantled and the place levelled.

2. Protecting new proposed lease area.

Entry from public road at western side to the newly proposed lease has to be fenced near public road. This is to prevent strangers entering our area.

New Points

① Monsoon started. We had diverted all storm water outside working area. earland drains were cleaned. Some drains were newly made. Now only the storm water inside working area collects at bottom of the pit. This is pumped to Silt settling Tank 1. We had also made a Rain water harvesting pond behind the Silt settling tank 1. Overflow from this RWHP goes directly outside our lease to nearby maala.

Water from SST1 gets filtered to SST2 and from SST2 to SST3. The water is clean in SST3. This clean water is pumped out to the nearby maala whenever required.

③ Earland drain near HEMM Workshop has to be extended. Concrete 'U' sections are fabricated. This has to be placed and the drain to be extended.

- Could -

③ As per recommendations of the 12<sup>th</sup> National conference on Safety in Mines we have reduced usage of mobile phones in Mines. operators and drivers are provided with Walkie Talkie. They interact with officials who are also provided with Walkie Talkie.

④ Company has constructed 3 changes for needy public around our lease premises. One house roof was in dilapidated stage. This was replaced.

⑤ One new Tractor Mounted compactor ~~was~~ is purchased. This gives more comfort and convenience for drilling.

⑥ Three women workers are engaged for sweeping the roads. Leaves fall from trees planted.

⑦ Medical Examination of balance employees are to be arranged soon.

1. Mr. Balu. P. Penlose

2. Mr. Joseph K. Y.

3. Mr. Prasanth P. P.

4. Mr. Tony Joy

5. Mr. John. Peter.

(Sonu Jose)  
Head of committee



### Extra Ordinary Meeting

Minutes of the Extra Ordinary Meeting  
(No 20th Environment Monitoring Committee)  
held on 05/08/2024 at 11:00 AM.

Main agenda is the heavy rains during the previous days. Is there any damage to environment, any dangers coming due to rain etc.

There was heavy rain from 30.07.24 to 02-08-24. Quarry operations are stopped. On 03-08-24 crusher started and loading and transport of rubble from quarry started. Drilling & blasting is not done. Mining Staff in the committee inspected important places and gave their report in the committee.

The storm water outside mining area is diverted through gashland drains and collected in the Rain Water Harvesting pond (RWHP) newly constructed behind Silt Settling Tank (SST). The overflow is diverted directly to the nearby Naala outside mining lease area. The water is clean.

The storm water inside working area is collected at bottom bench and is pumped to silt settling tank tank No. 2. The clear water at top overflows through a trap door and mixes with the overflow water from RWHP and flows to nearby Naala. Pump attendants are engaged to watch the condition of water flowing out.

Quarry benches are inspected. There is no damage. Grass & shrubs to be planted

at top bench where soil is exposed. Immediate action to be taken to prevent soil erosion.

No water is stagnated in any other place than designated.

Other members of office inspected the trees. They are found to be safe. One tree broke & fell down in the compensatory plantation due to wind. This was removed.

The topsoil dump behind the office was found in tact. No water is stagnating on surface of this dump.

All members agreed to be extra alert during rainy season.

1. Mr. Balraj. P. Panlose
2. Mr. Joseph K.V
3. Mr. Prasanth P.P
4. Mr. Tommy Joy
5. Mr. Pdm Peter.

*[Signature]*

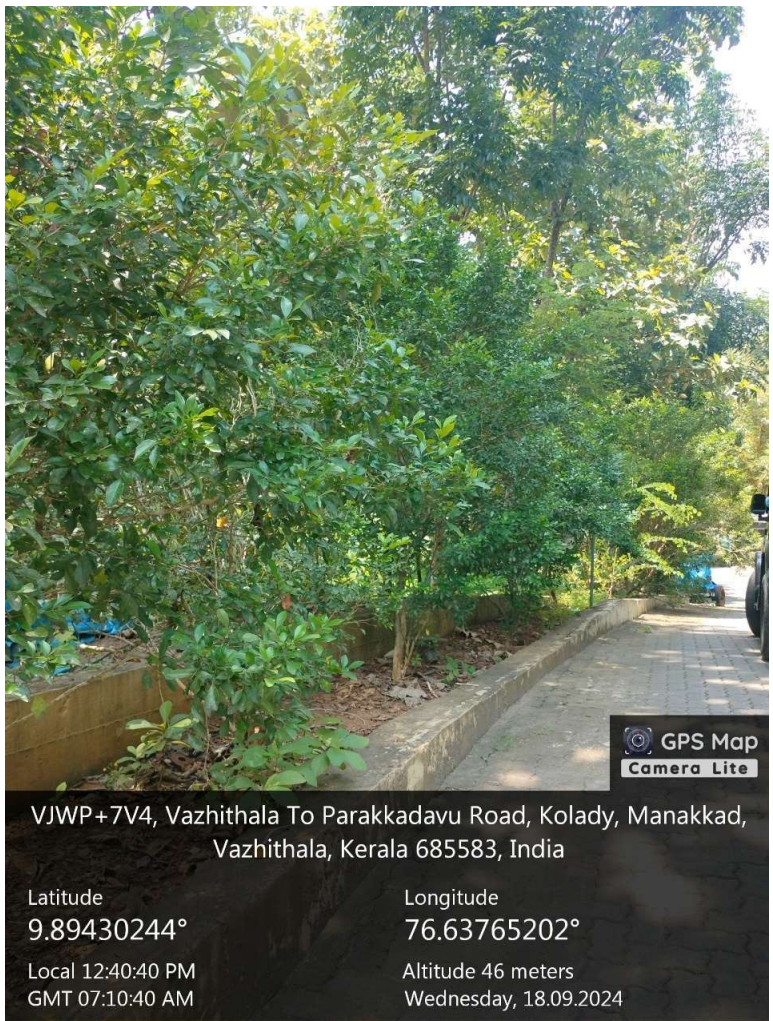
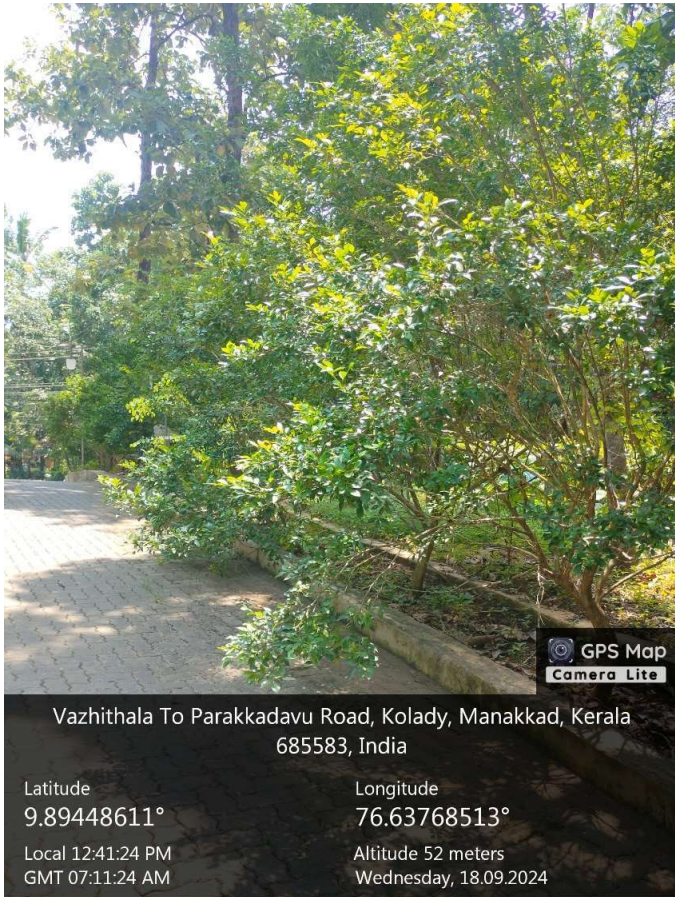
*[Signature]*

*[Signature]*

(Sonu Jose)  
Head of Committee.

**Annexure-5**  
**Avenue Plantation**





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



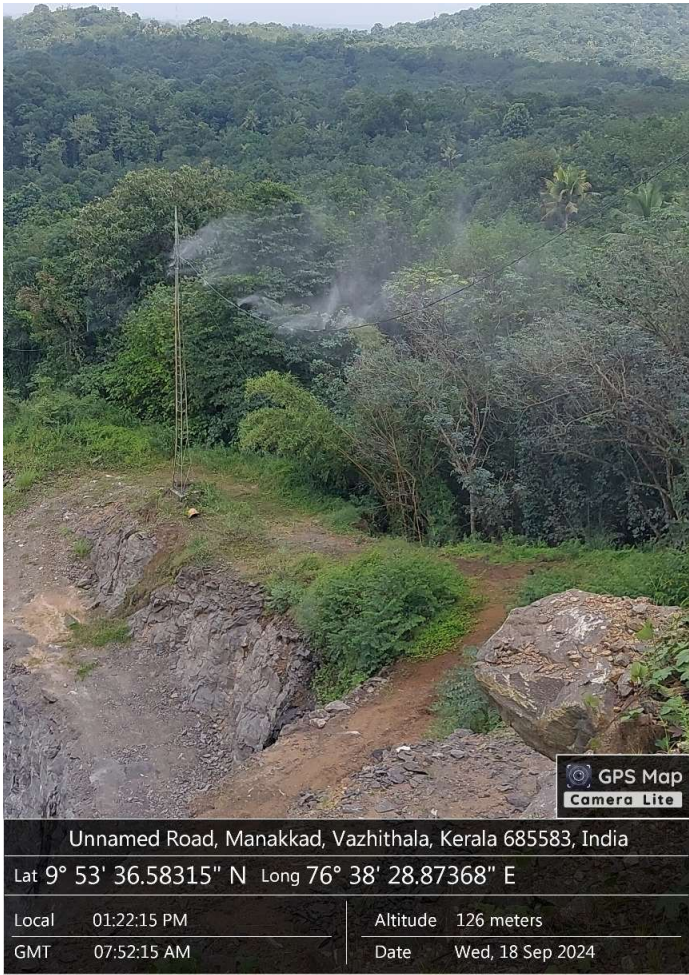




**Annexure-07**

**WATER SPRINKLERS & WATER  
TANKERS**







VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India			
Lat 9° 53' 40.04995" N Long 76° 38' 20.42138" E			
Local	12:34:49 PM	Altitude	61 meters
GMT	07:04:49 AM	Date	Wed, 18 Sep 2024



VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India			
Lat 9° 53' 39.89584" N Long 76° 38' 20.49367" E			
Local	12:33:55 PM	Altitude	61 meters
GMT	07:03:55 AM	Date	Wed, 18 Sep 2024





GPS Map  
Camera Lite

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

Lat 9° 53' 43.69513" N Long 76° 38' 22.92392" E

Local	12:52:41 PM	Altitude	77 meters
GMT	07:22:41 AM	Date	Wed, 18 Sep 2024



GPS Map  
Camera Lite

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

Latitude	Longitude
9.89533053°	76.63968837°
Local 12:52:29 PM	Altitude 77 meters
GMT 07:22:29 AM	Wednesday, 18.09.2024

**Annexure-08**  
**FENCING & SIGN BOARDS**







## UNITED GRANITES & METALS

Kochuparambil, Vazhithala, Thodupuzha

Proprietor : George Kochuparambil

Address : Kochuparambil House, Vazhithala P. O., Thodupuzha

PIN : 685 583 Ph : 0486 2274694, Mob : 8281885888

### LEASE ORDER No.

Pro. Order No. 451/18-19/890/M3/2017/DMG

Dated : 01.10. 2018

### DISTRICT

IDUKKI

### TALUK

THODUPUZHA

### VILLAGE

MANAKKAD

### Sy. No.

354/4, 354/5, 355/1Pt, 351/1Pt, 350, 352/1Pt

### BLOCK No.

11

### LEASE Area

12. 2987 HECTARES



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

Latitude

9.8943909°

Longitude

76.63887722°

Local 12:33:02 PM

GMT 07:03:02 AM

Altitude 61 meters

Wednesday, 18.09.2024

## UNITED GRANITES & METALS

Kochuparambil, Vazhithala, Thodupuzha  
PIN : 685 583 Ph : 0486 2274694

### NAME AND ADDRESS OF LICENSEE

GEORGE KOCHUPARAMBIL  
PROPRIETOR, UNITED  
GRANITES AND METALS,  
VAZHITHALA Pin: 685 583  
THODUPUZHA

### EXPLOSIVE LICENSE

1. E/SC/ KL/22/ 811 (E 38112)  
2. E/SC/ KL/22/ 1730 (E 72220)

### MINING AND GEOLOGY DEPARTMENT RMCU REGISTRATION

No. 56/ 2018/ - 19/ RMCU/ IDKY/  
3576/ m3/ 2018 Dtd. 11/10/2018

### ENVIRONMENTAL CLEARANCE

No. 1137/ EC/ SEIAA/ KC/ 2017

### D & O LICENSE GRAMA PANCHAYAT MANAKKAD

1. MGP/ A4/ 2/ 2018 - 2019  
2. A4/ 107/ 2018 - 2019  
3. MGP/ A4/ 3/ 2018 - 2019

### KERALA STATE POLLUTION CONTROL BOARD

1. R 15 1DU - R4 - 7450321  
2. O18 1DK CTOA 7515269  
3. R15 1DUCTO - 750390

### GSTIN

32AFJPK9650E1ZH

### DEPARTMENT OF INDUSTRIES GOVERNMENT OF KERALA

32 - 009 - 1 - 3 - 2095 - PART II

### FACTORIES AND BOILERS GOVERNMENT OF KERALA

1DK / 04/ 140/ 2000

### FIRE & RESCUE SERVICES IDUKKI

No. A1 - 1057/18  
No. A1 - 1090/18

### DISTRICT MEDICAL OFFICE

No. C3 (K. DIS) - 12656/ 14



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

Latitude

9.89437817°

Longitude

76.63885908°

Local 12:33:40 PM

GMT 07:03:40 AM

Altitude 61 meters

Wednesday, 18.09.2024





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

Latitude  
9.89567666°

Longitude  
76.63961031°

Local 11:47:30 AM  
GMT 06:17:30 AM

Altitude 77 meters  
Wednesday, 18.09.2024



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

Latitude  
9.89447511°

Longitude  
76.64281729°

Local 01:14:36 PM  
GMT 07:44:36 AM

Altitude 76 meters  
Wednesday, 18.09.2024



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

Latitude  
9.89424106°

Longitude  
76.63841107°

Local 12:47:21 PM  
GMT 07:17:21 AM

Altitude 61 meters  
Wednesday, 18.09.2024





## **Annexure-09**

# **WARNING SIREN & BOARD INDICATING BLASTING TIMINGS**





**Annexure-10**  
**BOARD INDICATING QUARRY**  
**TIMINGS**

**QUARRY ACTIVITIES  
TIMINGS  
6.00 AM - 6.00 PM  
NO ENTRY**



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

Latitude  
9.89555581°

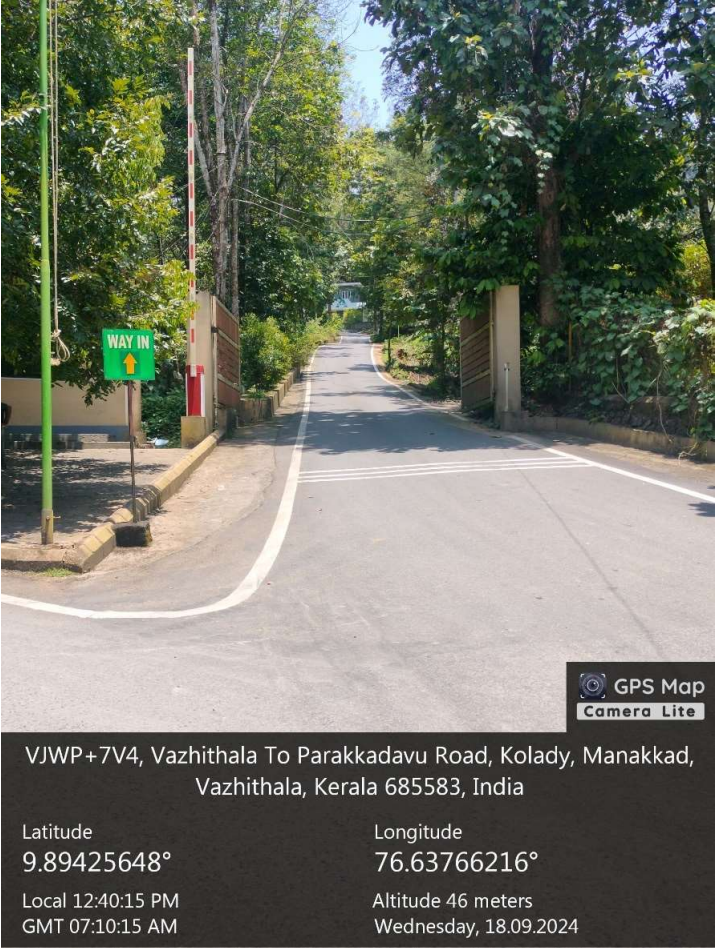
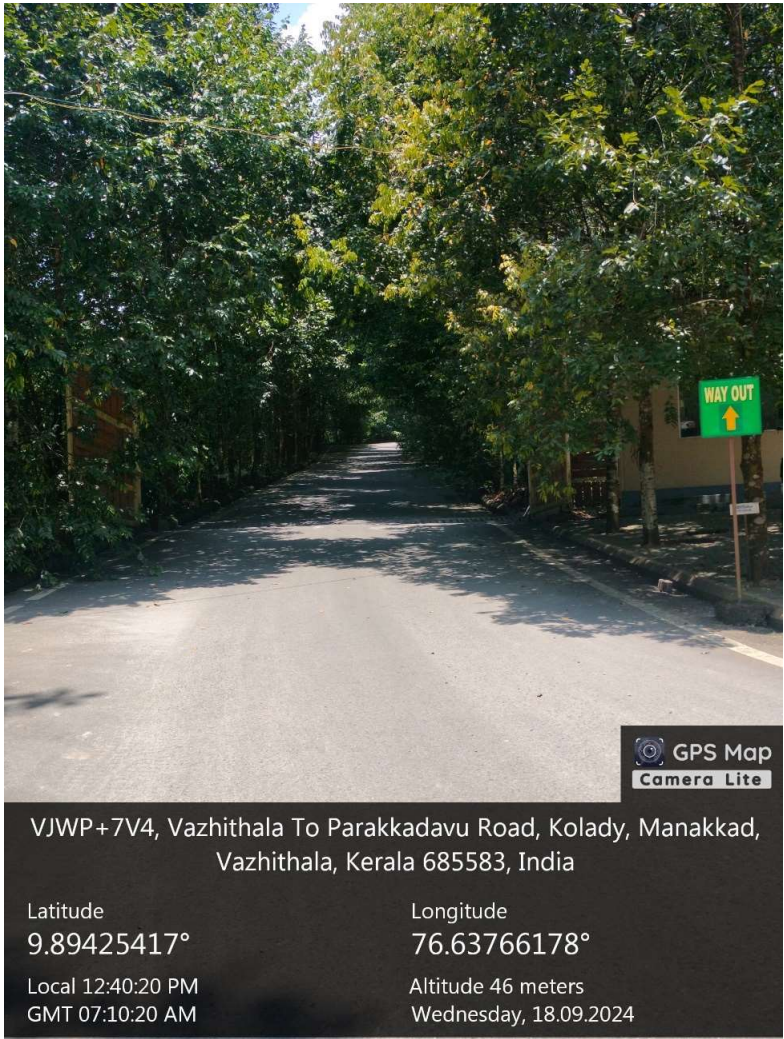
Longitude  
76.63960071°

Local 11:45:29 AM  
GMT 06:15:29 AM

Altitude 77 meters  
Wednesday, 18.09.2024



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

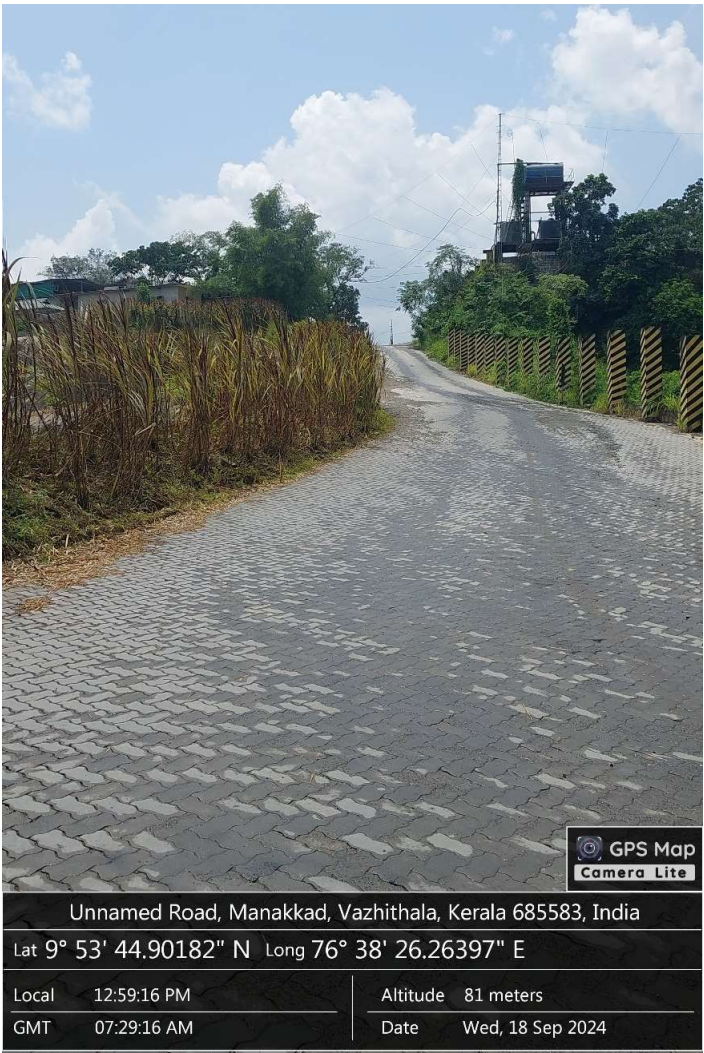






VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India

Latitude	Longitude
9.89550706°	76.63931995°
Local 11:48:35 AM	Altitude 77 meters
GMT 06:18:35 AM	Wednesday, 18.09.2024



Unnamed Road, Manakkad, Vazhithala, Kerala 685583, India

Lat 9° 53' 44.90182" N Long 76° 38' 26.26397" E

Local	12:59:16 PM	Altitude	81 meters
GMT	07:29:16 AM	Date	Wed, 18 Sep 2024

**Annexure-12**  
**EXPLOSIVE LICENSE**





भारत सरकार | Government of India  
वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry  
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो) | 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 Bhavan  
26 हनुमान रोड, नंगनबक्कम चेन्नई 600006  
फोन (Phone): 28281023 | फैक्स (Fax): 28284848

संख्या (No.): E/SC/KL/22/1730(E72220)

दिनांक (Date): 11/06/2024

सेवा में | To,

Sri GEORGE KOCHUPARAMBIL,  
KOCHUPARAMBIL HOUSE, VAZHITHALA P.O, THODUPUZHA TALUK, DISTRICT, Town/Village - VAZHITHALA  
District-IDUKKI, State-Kerala, Pincode - 685583

विषय: Survey No.359, Block No. 11, ग्राम Manakkadu (v), Thodupuzha Taluk, जिला IDUKKI, राज्य Kerala में मेसर्स Sri GEORGE KOCHUPARAMBIL द्वारा विस्फोटक के मैगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुमति सं E/SC/KL/22/1730(E72220) के संशोधन संदर्भ में।  
(प्रधिकृत अभिकर्ता / अधिष्ठाता 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).

महोदय | Sir,

आपका उक्त विषय पर पर संख्या 125213 दिनांक 11/06/2024 का संदर्भ प्रेषण करें।  
Please refer to your letter no. 125213 dated 11/06/2024.

अनुमति संख्या E/SC/KL/22/1730(E72220) प्रधिकृत अभिकर्ता / अधिष्ठाता 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

खाली रिक्त स्थानों में प्रधिकृत अभिकर्ता / अधिष्ठाता के नाम इस प्रकार हैं।

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

क्र   No	नाम   Name
1)	Sri GEORGE KOCHUPARAMBIL (Authorized Signatory)
2)	Sri GEORGE KOCHUPARAMBIL (Occupier)

किसी भी एक समय में सावधान्य 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 Mixture	2	0	0	400	Kg.

किसी एक कलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा (अनुबन्ध 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 अगामी नवीकरण हेतु कृपया विस्फोटक नियम, 2008 के नियम 112 के अंतर्गत प्रक्रिया का पालन करें। कृपया पावती 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 मुख्या विस्फोटक नियंत्रक | Joint Chief Controller of Explosives

दक्षिणार्ध, चेन्नई | South Circle, Chennai

प्रतिलिपि प्रेषित | Copy Forwarded to:

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

संयुक्त मुख्या विस्फोटक नियंत्रक | Joint Chief Controller of Explosives

दक्षिणार्ध, चेन्नई | South Circle, Chennai

(अधिक जानकारी के लिए आवेदन की स्थिति, 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.

# अनुज्ञापि प्रारूप एच. 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 प्रारूप (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 licensee : Proprietorship Firm

3. अनुज्ञापि निम्नलिखित प्रयोजनों के लिए विधिमार्ग है।

Licence is valid only for the following purpose.

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

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

क्र. सं.	नाम और विवरण	वर्ग और प्रभाग	उप-प्रभाग	मात्रा किसी एक समय में
Sl. No.	Name and Description	Class & Division	Sub-division	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 कैलेंडर 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)) :

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञापि परिसर की पृष्ठ 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 परिसर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address:

Survey No. 359, Block No. II, ग्राम (Town/Village) : Manakkad, Thodupuzha Taluk

जिला (District) : IDUKKI राज्य (State) : Kerala पिनकोड (Pincode) : 685588  
दूरभाष (Phone) : ई.मेल (E-Mail) : केस (Fax)

7. अनुज्ञापि परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।

The licensed premises consist of following facilities.

Two portable magazines "A Type" bearing SI No:044 and "A Type" bearing SI No:045 fabricated by M/s.Everest Granites Ernakulam

8. अनुज्ञापि समय - समय पर पदांशोचित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपबंधों 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 पदांशोचित 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 प्रारूप DE-2 | Distance Form DE-2.

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

यह अनुज्ञापि, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची 4 के भाग 4 के प्रति निर्दिष्ट सेट-VII के अधीन तथा उपर्युक्त इस अनुज्ञापि की शर्तों का अधिकतम करने या यदि अनुज्ञापि परिसर योजना या उसके संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिबंधित की जा सकती है, जहां वह 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/Owner/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, Ernakulam

कानूनी चेतावनी : विस्फोटकों को गलत ढंग से धताने 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/SC/KU/22/1730  
Location: Chennai (E722201)



(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 अनुज्ञापत्र सं. E/SC/KL/22/1730(E72220) की शर्तें 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 अनुज्ञापत्र 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 अनुज्ञापत्र में विनिर्दिष्ट हैं, रखे जाने के लिए और ऐसे रखे जाने से संबंध 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 पृथक् 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 आने वाले विस्फोटक प्रेरक पत्तीते, जिनमें कोई खुला तोहा या इस्पात नहीं है, एक दूसरे के साथ बिना किसी मध्यवर्ती विभाजक या स्थापन के रखे जा सकते हैं।  
(ङ) वर्ग 6 प्रभाग 3 के अंतर्गत आने वाले 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 सिवाय 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 किसी मंजूरी दे दी गई हो तो प्रत्येक निरीक्षण पर किसी विस्फोटक नियंत्रक से ऐसा लिखित प्रमाणपत्र अभिप्राय कर लिया जाए जिसमें दी गई मंजूरी के अंतर्गत आनेवाली अवधि दर्शित की गई हो और ऐसे प्रमाणपत्र के अनुज्ञापत्रधारी 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 स्लीअसरीन या द्रव नाइट्रो यौगिक के निकल जाने के चिह्न प्रकट होने के कारण मैगजीन में भण्डारित किए जाने के उपयुक्त नहीं रह जाते हैं तो अनुज्ञापत्रधारी 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 बेंचों, शेल्फों 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 बेंचें, शेल्फें 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 सम्यक् 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 तड़ित चालक का परीक्षण विस्फोटक नियंत्रक करता है तो अनुज्ञापत्रधारी ऐसे परीक्षण के लिए विहित फीस का संचाय करेगा यदि परीक्षण असमाधानकारी साबित होता है तो उसी ही फीस अनुज्ञापत्रधारी द्वारा पश्चात्कर्त प्रत्येक परीक्षण के लिए तब तक दी जाती रहेगी जब तक कि परीक्षण अधिकारी तड़ित चालक को समाधानप्रद घोषित नहीं कर देता;  
परंतु किसी एक परीक्षण के लिए देय फीस किसी एक दिन के दौरान किसी चालक के किए गए सभी परीक्षणों के लिए प्रभार्य होगा;  
परंतु यह और कि यदि दो या अधिक तड़ित चालक एक ही मैगजीन से संबंध हैं तो ऐसे सभी चालकों के परीक्षण के लिए फीस ऐसी किसी फीस से अधिक नहीं होगी जो किसी एक तड़ित चालक के परीक्षण के लिए हर स्थिति में विहित की गई है।  
If the lightning conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for testing the lightning conductor in the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lightning 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 जेब रहित कार्यकरण वस्त्रों, उपयुक्त जूतों के प्रयोग द्वारा तथा तलाशी लेकर या अन्यथा अथवा ऐसे किन्हीं साधनों द्वारा इस बाबत सम्मक उपबंध किया जाएगा कि फैक्ट्री परिसर में अग्नि, दियासलाई अथवा ऐसी कोई वस्तुएं 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 तोहरे या दर्यात के अपवर्जन को लागू होता है, ऐसे किसी भवन के संबंध में बाध्य 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 आर.ई.-3 और आर.ई.-4 या आर.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 स्टाक पुस्तक और अभिलेख प्रस्तुत करेगा। स्टाक 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 पूर्वनिर्धारित 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 अधिकमन 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 चट्टे इस प्रकार लगाए जाएंगे कि कम से कम एक व्यक्ति भण्डार किए गए सभी पैकेटों की हालत की जांच करने और प्रत्येक पैकेज की विनिर्माण विशेषताओं 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.  
तंडित 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 शुष्क घास या झाड़ी या जलनशील 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 पैकेटों को शीघ्रतः वहां 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 कर्मचारियों 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 निषेधक अनुज्ञापिधारी को अनुज्ञापन परिसरों या मशीनरी, टूल या उपकरण में ऐसी कोई मरम्मत या परिवर्तन या परिवर्तन करने या सिफारिशों को लागू करने को लिखित रूप में सूचित करता है जो परिसर के अंदर या बाहर या व्यक्तियों के लिए सुरक्षा के लिए आवश्यक है, अनुज्ञापिधारी सिफारिशों को निष्पादित करेगा और विनिर्दिष्ट अवधि के भीतर अनुपालन रिपोर्ट ऐसे अधिकारी 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 विक्री के लिए प्राधिकृत विस्फोटक सूची में उल्लिखित अनुज्ञापन फैक्ट्री या कंपनी से प्राधिकृत विस्फोटक / आतिशबाजी या सुरक्षा पत्तीते खरीदेगा।  
The licensee shall purchase explosives from the licensed factory or company in the list of explosives specified in the licence.

राज्य नियंत्रक विस्फोटक  
State Controller of Explosives

- 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 विक्री 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) धुंखला (जुड़े हुए पटाखे) को गठन करने वाले व्यक्तिगत पटाखों के लिए उपर्युक्त उल्लिखित सीमा 5 लॉग10(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 log10 (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. अनुज्ञापन धारिता 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.

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

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

कृते 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/22/1734(E72228) in form LE-3 granted to George Koluparamb, Proprietor, M/s. United Granites & Metals, Vazhithala P.O., Thodupuzha, Kerala-685588.

Type of Structure(s)		Safety distances meters	
<b>Inside Safety Distances(ISD)</b>		<b>M</b>	<b>UM</b>
1	Room or Workshop used in Connection with the Magazine	16	24
2	Any other Explosives Magazine or store House or Factory of the Applicant		
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 worship, Hospital, College, School or Factory		
10	River Embankment or Sea Embankment or Public Well		
11	Reservoir or Bounded tank/rope way		
12	Windmill 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 Worship		
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, Spirit, gas, or other inflammable or hazardous substances		
19	Building or Works used for Storage and Manufacture of Explosives or of articles which contain Explosives		68
20	Aerodrome		
21	Furnace, Kiln 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

For Joint Chief Controller of Explosives  
South Circle, Chennai

For Deputy Chief Controller of Explosives  
Ernakulam

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





दिनांक : Date : 10/06/2024

Page 1 Subject: अधिगमन नष्टीकरण विभाग के प्रमाण 3.3 में विस्तृत परिचय दवाई (एलएफएच) के पुर्न लोडिंग में, अधिगमन नष्टीकरण के उपकरणों के लिए, रवाना हुये अनुप्रति .

और दूसरे साथ अंतर्गत ।  
and interrelated functions

Digitally signed by Dr T L THANULINGAM  
Reason: Licence No. : A/SC/KL/P/3/14  
Location:Chennai (A2264)

अनुज्ञापि प्ररूप 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 (एनएनएओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञापि  
Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO)

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



अनुज्ञापि एकादश जारी की जाती है :  
Licence is hereby granted to :

Shri GEORGE KOCHUPARAMBIL (अभिज्ञाता : GEORGE KOCHUPARAMBIL)  
KOCHUPARAMBIL HOUSE, VAZHITHALA P.O., THODUPUZHA  
शहर : थोदुपुझा  
जिला : IDUKKI, राज्य : Kerala, पिन कोड : 685583  
Phone : , Email : unitedgranitesandmetals@gmail.com , फैक्स :

- अनुज्ञापिधारी का स्वरूप: Proprietorship Firm  
Status of licence holder: Proprietorship Firm
- अनुज्ञापि केवल निम्नलिखित प्रयोजन हेतु वैध है: विस्फोटक विनिर्माण इकाई (एनएनएओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञापि  
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)
- अनुज्ञापि 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

- अनुज्ञापि परिसर निम्नलिखित अंतर्लक्षणों के अनुरूप होगा  
The licensed premises shall conform to the following drawings:  
अंतर्लक्षण संख्या | Drawing No.: ASC/KL/P3/14 (A2264) दिनांक | Dated: 10/06/2024
- अनुज्ञापि परिसर निम्नलिखित पते पर स्थित है :  
The Licensed premises are situated at following address:  
Survey No. 359, Block No.11, शहर/ग्राम | Town/Village: Manakkadu  
पुलिस स्टेशन | Police Station: Thodupuzha जिला | District: IDUKKI राज्य | State: Kerala  
पिन कोड | Pin Code: 685588 फोन | Phone: फैक्स | E-Mail: फैक्स | Fax:
- अनुज्ञापि परिसर में निम्नलिखित सुविधाएँ उपलब्ध हैं :  
The licensed premises consist of following facilities:  
Consist of one store house.
- अनुज्ञापि, सामान्यतः पर राख संयोजित 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 5 में उल्लिखित अंतर्लक्षण (जिसमें स्तर, निर्माण एवं अन्य विवरण दर्शाए गए हैं)।  
(ii) अनुज्ञापि जारी करने वाले प्राधिकारी द्वारा हस्ताक्षरित अनुज्ञापि 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 licence issuing authority.

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

यह अनुज्ञापि विस्फोटक अधिनियम, 1884 या उसके अधीन बनाए गए अमोनियम नाइट्रेट नियम, 2012 या इस अनुज्ञापि की किसी शर्तों का उल्लंघन करने पर या यदि अनुज्ञापि परिसर, अंतर्लक्षण और उससे संलग्न उपबन्ध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलम्बित या प्रसिद्ध 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 निबंधक  
Joint Chief Controller of Explosives  
दक्षिण वृत्त, चेन्नई | 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

अनुज्ञापि नवीकरण के लिए पुष्टीकरण : 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, Ernakulam

सांविधिक चेतावनी: अमोनियम नाइट्रेट का गलत 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 THANULINGAM  
Reason: Licence No. : A/SCKL/P3/14  
Location Chennai (A2254)  
Date:10-06-2024 17:20:58 PM



# Conditions

मुख्य विस्फोटक निपटकार / या विस्फोटक निपटकार द्वारा प्रदत्त प्रारूप P-3 में विस्फोटक विनिर्माण इकाई (एनएफओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञापिका, अनुज्ञापिका संख्या A/SC/KLP/3/14(A2264) की शर्त निम्नलिखित हैं।  
The following are the conditions of licence number A/SC/KLP/3/14(A2264) 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 भण्डारण अनुज्ञापिका के साथ संलग्न अनुमोदित आरेखण में दर्शाए गए अनुज्ञापक गोदाम या मोल्ट 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, मे या उसके किसी भी भाग में, अनुज्ञापक 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. छतका हुआ या अपशिष्ट अमोनियम नाइट्रेट को एकत्र कर अनुज्ञापिका द्वारा नियंत्रित किया जाना चाहिए एवं विनष्ट किए गए अमोनियम नाइट्रेट की मात्रा का लेखाबोधा 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. अनुज्ञापिका और विनिर्माण तथा संपरिवर्तन के लिए परिसर में नियुक्त प्रत्येक व्यक्ति को विनिर्माण तथा संपरिवर्तन के लिए अनुज्ञापिका परिसर में अग्नि या विस्फोट से होने वाली दुर्घटना से बचाव तथा विनिर्माण तथा संपरिवर्तन के लिए अनुज्ञापक परिसर में अनुज्ञापक व्यक्तियों के प्रवेश से बचाव के लिए पूर्ण सावधानी बरतनी होगी एवं ऐसे किसी भी कार्य से बचाव करना होगा जो अग्नि या 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 निपटकार या अनुज्ञापन प्राधिकारी की पूर्ण लिखित स्वीकृति के बिना अनुज्ञापक परिसर में किसी भी प्रकार का परिवर्तन एवं परिवर्तन नहीं किया जाएगा। स्वीकृत किए गए इस प्रकार के परिवर्तन एवं परिवर्तन अनुज्ञापिका के साथ संलग्न संशोधित आरेखण में दर्शाए जाएंगे।  
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. अनुज्ञापिका द्वारा विनिर्माण तथा संपरिवर्तन प्रक्रिया के पर्यवेक्षण एवं कार्यों 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 अनुज्ञापक परिसर में युक्तिपूर्वक समय पर बराबर अक्षाध पूर्ण प्रदान की जाएगी और ऐसे अधिकारी को वे सभी सुविधाएं उपलब्ध की जाएगी जिससे कि वह सुनिश्चित कर सके कि अधिनियम और इन नियमों के उक्तों एवं सुरक्षा संबंधी शर्तों का सम्यक 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 fully observed.
8. यदि जिला प्राधिकारी या निरीक्षण अधिकारी अनुज्ञापिका को लिखित में अतिरिक्त परिसर में कोई मरम्मत या कोई परिवर्तन या ऐसी शिकायतों को किया जाता है कि वह जो ऐसे अधिकारी की राय में अस्वीकार्य जोखिम उत्पन्न कर सकती है और इस प्रकार वह परिसर के बाहर या भीतर या व्यक्तियों की सुरक्षा के लिए आवश्यक है, सूचित करता है, तो अनुज्ञापिका उन शिकायतों को निष्पादित करेगा और ऐसे प्राधिकारी द्वारा विनिर्दिष्ट अतिरिक्त अनुपातन 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 या विस्फोट से होने वाली दुर्घटनाओं और अमोनियम नाइट्रेट की हानि, उसमें कमी या चोरी की सूचना निकटतम पुलिस स्टेशन और जिला प्राधिकारी के स्थायी कार्यालय को दूरतः, 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. अनुज्ञापिका अनुसूची-II भाग 3 में विनिर्दिष्ट प्रारूप में इनका अभिलेख रखेगी जिससे कि अमोनियम नाइट्रेट के लिए उत्तरदायित्व सुनिश्चित कर उनकी पहचान कर सके और इनकी वापस 50 में विहित प्राधिकारी के मांगे जाने पर ऐसे अभिलेख प्रस्तुत किए जाएंगे।  
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. अनुज्ञापिका, अनुसूची II भाग 3 में विनिर्दिष्ट प्रारूप द-9 में जिला प्राधिकारी को मासिक विवरणी इस प्रकार प्रेषित करेगी कि वह प्रत्येक अगामी 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 R-9 of Part 3 of Schedule II so as to reach Licensing Authority and District Authority within 10th day of every succeeding month.

कृपया संयुक्त मुख्य विस्फोटक निपटकार  
दुर्घटना, 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.

द्वारा का मुख्य विस्फोटक निपटकार  
For District Chief Controller of Explosives  
एरनाकुलम, Ernakulam



भारत सरकार | Government of India  
 वणिज्य और उद्योग मंत्रालय | 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 मंज, शास्त्री भवन | A & D - Wing, Block 1-8, 2nd Floor, Shastri Bhawan  
 26 हड्डोरु रोड, नंगम्बुडकम चेन्नई 600006  
 फ़ोन (Phone):- 28281023 | फ़ैक्स (Fax):- 28284848

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 - 685583

विषय: Survey No.359,BLOCK NO:11, ग्राम Mannakkadu (v), Thodupuzha Taluk, जिला IDUKKI, राज्य Kerala में स्थित Shri GEORGE KOCHUPARAMBIL द्वारा एनफो विस्फोटक के एनफो शेड में विनिर्माण हेतु विस्फोटक नियम, 2008 के अर्गन LE-1 में जारी अनुमति सं E/SC/KL/38/21(E98818) के संशोधन संदर्भ में।  
 ( विस्फोटक की मात्रा में परिवर्तन डाक पोस्ट में परिवर्तन अर्पण / सुविधाएं / परिवार में परिवर्तन )

Subject: Manufacturing of ANFO situated at Survey No.:359,BLOCK NO:11, Mannakkadu (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).

महोदय | Sir,

अपका उपर्युक्त विषय पर पत्र संख्या 123125 दिनांक 10/06/2024 का 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 डाक पोस्ट में परिवर्तन अर्पण / 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 in above Drawings/Facilities/Premises

किन्हीं भी एक समय में सादृश्य 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	2	0	0	100	Kg

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

अनुमति के आगामी नवीकरण हेतु कृपया विस्फोटक नियम, 2008 के नियम 112 के अर्गन प्रक्रिया का पालन करें। कृपया जाबतरी 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.

भददीय | Your's faithfully

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

प्रतिनिधि प्रेषित | Copy Forwarded to:

- उप मुख्या विस्फोटक नियंत्रक कोची  
 The Dy. Chief Controller of Explosives, Kochi
- District Magistrate, IDUKKI, Kerala with reference to his Noc No: 2012/50763/6 and 2013/88865/6 Dated: 30/11/2013.
- Superintendent of Police, IDUKKI, Kerala.

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

(अधिक जानकारी जैसे आदेश की सिद्धि, 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 RE988181

(सेट III) Set III

मुख्य विस्फोटक नियंत्रक या विस्फोटक नियंत्रक द्वारा अनुदत्त प्रारूप एन ई 1 (अनुच्छेद (घ)) में ए.एन.एफ.ओ. विस्फोटकों के विनिर्माण के लिए अनुज्ञापन 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 I.E-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 अनुज्ञापन 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 वर्णित निर्दिष्ट 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 अधिकृत सुरक्षा कार्य 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 नियुक्त व्यक्ति उस स्थान या उन स्थानों में जहां 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 सम्यक पूर्वाधानियां 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 अनुज्ञापन 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 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 अपात 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 पुंकेतपुक्त समयां पर अनुज्ञापन परिसर में अबाध पहुंच प्रदान की जाएगी और यह अभिनिश्चित करने के लिए कि अधिनियम और इन नियमों के उपबंधों या सुरक्षा संबंधी शर्तों का सम्यक 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 अनुज्ञापन धारक को अनुज्ञापन परिसर या मशीनरी, औजारों या साधनों में कोई मरम्मत या कोई परिवर्तन या परिवर्तन करने के लिए या ऐसी सिफारिशों को क्रियान्वित करने के लिए जोखिम प्रदर्शित कर सकती है और परिसर या व्यक्तिगतों की स्थल पर या स्थल से बाहर सुरक्षा के लिए आवश्यक है, सूचित करता है जो अनुज्ञापन धारक उन सिफारिशों को निष्पादित करेगा और ऐसे प्राधिकारी या विनिर्दिष्ट अधिकारी 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 स्थायी 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.

कृते संयुक्त मुख्य विस्फोटक नियंत्रक  
For Joint Chief Controller of Explosives  
दक्षिणवर्त, 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  
एम्माकुलम Emakulam



**Annexure-13**  
**KSPCB LICENSE**  
**(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 THODUPUZZHA** 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
---	----------	--

## **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 PM<sub>10</sub> in ambient air at the boundary shall not exceed 100 microgram/m<sup>3</sup>.

5.12. The PM<sub>2.5</sub> 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 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 curtain 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 ABURAJAN 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)

ലൈസൻസിയുടെ പേര്	ജോർജ്ജ് കൊച്ചുപറമ്പിൽ		
ലൈസൻസിയുടെ മേൽവിലാസം	കൊച്ചുപറമ്പിൽ, വഴിത്തല പി.ഒ.		
സ്ഥാപനത്തിന്റെ പേരും, സ്ഥലനാമവും	യൂണൈറ്റഡ് ഗ്രാനൈറ്റ്സ് & മെർച്ച്ന്റ്സ്, 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	തുക	രസീത് നമ്പർ	തീയതി
മോട്ടോർ ഫീസ്	75000 /- രൂപ	1220303816, 3817, 4430	15/03/2023, 31/03/2023
തൊഴിൽ നികുതി	22200 /- രൂപ	1220303816, 3817, 4430	15/03/2023, 31/03/2023
	12500 /- രൂപ	1220303816, 4430	15/03/2023, 31/03/2023

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



ഓഫീസ് മുദ്ര

- 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)
- Environment Clearance from SEIAA No. 1137/EC/SEIAA/KL/2017 Dated 02/03/2023 (Certificate യഥാസമയം പുതുക്കേണ്ടതാണ്)
- 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  
പുതുപ്പരിയാരം പി.ഒ., ഇടുക്കി ജില്ല - 685 608  
ഫോൺ: 04862 202248, ഫോൺ: 0486045103

**ലൈസൻസി താഴെ പറയുന്ന വ്യവസ്ഥകൾ അനുസരിക്കേണ്ടതാകുന്നു.**

- 1 കേരള പഞ്ചായത്ത് രാജ് ആകട്ടെ അതേ തുടർന്നുള്ള ചട്ടങ്ങളും ബൈലകളും അനുസരിച്ചു പ്രവർത്തിക്കേണ്ടതാകുന്നു.
- 2 തൊഴിൽ സ്ഥലവും അതിലുള്ള സാധനസാമഗ്രികളും പഞ്ചായത്തധികാരികൾക്കോ/സെക്രട്ടറി അധികാരിയോടുമുള്ള മറ്റ് ഉദ്യോഗസ്ഥർക്കോ പരിശോധിക്കുന്നതിന് ലൈസൻസി വേണ്ട സൈകര്യം നൽകേണ്ടതും അവർ ആവശ്യപ്പെട്ടാൽ ഈ ലൈസൻസ് കാണിക്കേണ്ടതുമാണ്.
- 3 ഏത് സ്ഥലത്തിന്റെ കാര്യത്തിൽ ലൈസൻസ് നൽകിയിരിക്കുന്നുവോ ആ സ്ഥലത്ത് എല്ലാവരും കാണത്തക്ക വിധത്തിലുള്ള ഒരു ഭാഗത്ത് ലൈസൻസി തന്റെ പേരും, ലൈസൻസിന്റെ തമ്പരും ഉദ്ദേശവും കാണിക്കുന്ന ഒരു അടയാളപ്പെലക വച്ചിരിക്കേണ്ടതാണ്.
- 4 പഞ്ചായത്തിൽ നിന്നും അനുവാദം ലഭിച്ചശേഷമല്ലാതെ തൊഴിൽ സ്ഥലം മാറ്റാൻ പാടില്ലാത്തതും തൊഴിൽ നിർത്തുന്ന പക്ഷം വിവരം മുൻകൂട്ടി പഞ്ചായത്തിൽ അറിയിക്കേണ്ടതുമാകുന്നു.
- 5 തൊഴിൽ സ്ഥലവും പരിസരങ്ങളും വൃത്തിയായും സാംക്രമികരോഗാണുക്കൾ ഉണ്ടാക്കാത്ത വിധത്തിലും പൊതുജനോപദ്രവമാക്കാത്ത വിധത്തിലും വ്യപാരത്തിനു വച്ചിട്ടുള്ള ഭക്ഷണപദാർത്ഥങ്ങൾ ഈച്ച, അണുക്കൾ, പൊടി മുതലായവയുടെ ശല്യം ഉണ്ടാക്കാത്ത വിധത്തിലും സൂക്ഷിക്കേണ്ടതാണ്.
- 6 ഒരോ പ്രവർത്തിദിവസത്തിന്റെയും ഒടുവിൽ സ്ഥലം വൃത്തിയാക്കേണ്ടതാണ്.
- 7 ആ സ്ഥലത്തിന്റേയോ പരിസരത്തിന്റേയോ, ഏതെങ്കിലും ഭാഗത്ത് വിഴുക്യോ നിക്ഷേപിക്കുകയോ ചെയ്യുന്ന ചപ്പുചവറോ, മൃഗങ്ങളുടെ അവശിഷ്ടങ്ങളോ മറ്റ് പദാർത്ഥമോ ശേഖരിച്ച്, സെക്രട്ടറിക്ക് തൃപ്തികരമായ രീതിയിൽ നീക്കം ചെയ്യിക്കേണ്ടതാണ്.
- 8 ലൈസൻസി ഏതൊരു കെട്ടിടത്തിന്റെയും ചുവരുകളുടെ അകവശത്തിന്റെ ഏതൊരു ഭാഗവും മേൽപറഞ്ഞ പരിസരത്തിലുള്ള തറയും നടപ്പാതയും അവിടെ തെറിച്ചുവിഴാനിയുള്ള ഏതെങ്കിലും ദ്രാവകമോ, മാലിന്യമോ, ചപ്പുചവറോ, അസഹ്യവും, ഉപദ്രവകരവുമായ ഏതെങ്കിലും പദാർത്ഥമോ അവിടെ ലയിക്കുന്നത് തടയത്തക്കവിധം എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് നിലനിർത്തേണ്ടതാണ്.
- 9 ലൈസൻസി മേൽപറഞ്ഞ സ്ഥലത്തോ, പരിസരത്തോ അതോടു ചേർന്നോ ഉള്ള ഏതൊരു ഓവുചാലും, അടുക്കുജലം കളയുന്നതിനുള്ള ഉപകരണവും എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് വയ്പിക്കേണ്ടതാണ്.
- 10 അധിതം ആചരിക്കുന്ന കടകളുടെ ലൈസൻസ് റജുചെയ്യുന്നതാണ്.
- 11 ഏതെങ്കിലും തരത്തിലുള്ള തപക്ക് രോഗമോ കൂഷ് രോഗമോ വ്രണമോ പകർച്ച വ്യാധികളോ ഉള്ള യാതൊരാളും കച്ചവടം നടത്തുന്നതിന് ഉപയോഗിക്കുന്ന സ്ഥലത്തും പരിസരത്തും പ്രവർത്തിക്കുവാൻ പാടില്ലാത്തതാകുന്നു.
- 12 17/02/2019 ലെ സ.ഉ. (കെ) നം.7/2019 പരിസ്ഥിതി ഉത്തരവ് പ്രകാരം ഒറ്റത്തവണ ഉപയോഗിക്കുന്ന നിരോധിത വസ്തുക്കൾ ഉൽപ്പാദിപ്പിക്കുകയോ ശേഖരിക്കുകയോ വിൽക്കുകയോ കൈകാര്യം ചെയ്യുകയോ വിതരണം ചെയ്യുകയോ ചെയ്യാൻ പാടില്ല.
- 13 സ്ഥാപനത്തിന്റെ ബോർഡിൽ സ്ഥലനാമം മലയാളത്തിലും ഇംഗ്ലീഷിലും രേഖപ്പെടുത്തേണ്ടതാണ്.
- 14 20 സീറ്റിൽ കൂടുതലുള്ള എല്ലാ ഹോട്ടലുകൾക്കും റെസ്റ്റോറന്റുകൾക്കും ടോയ്റ്റ് സൗകര്യം ഏർപ്പെടുത്തേണ്ടതാണ്.
- 15 നിരോധിത ഉൽപ്പന്നങ്ങളായ പാൻമസാല, ഗുഡ്ബ തുടങ്ങിയവ സംഭരിച്ചുവയ്ക്കുവാനോ വിൽക്കുവാനോ പാടില്ല.
- 16 ബാലവേല അനുവദിക്കാൻ പാടില്ല.
- 17 മുകളിൽ കാണിച്ചിരിക്കുന്ന വ്യവസ്ഥകളുടെ ലംഘനം ഈ ലൈസൻസ് റദ്ദ് ചെയ്യപ്പെടുന്നതിന് കാരണമാകാവുന്നതാണ്.

N.B:- ഈ ലൈസൻസ് അവസാനിക്കുന്ന തീയതിക്ക് 30 ദിവസം മുമ്പ് ലൈസൻസ് പുതുക്കുന്നതിനുള്ള ഫീസ് ഒടുക്കുവരുത്തേണ്ടതാണ്.



സെക്രട്ടറി

മുഹമ്മദ് കെ. ഏൽ

മണക്കാട് ഗ്രാമപഞ്ചായത്ത്

പഞ്ചായത്ത് പ്രസിഡന്റ്

ഫോൺ: 04862 202248, 09946000000 ഫാക്സ്: 2406045103

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



### നോട്ടീസ്

പൊതുജനപ്രശസ്തരായി, കേരള സംസ്ഥാനം, ഇടുക്കി ജില്ല, തൊടുപുഴ താലൂക്ക്, മണക്കാട് ഗ്രാമപഞ്ചായത്ത്, മണക്കാട് വില്ലേജിലും പെട്ട റിസർവ്വേഷൻ നമ്പർ 354/4, 354/5, 355/1pt, 351/1pt, 350, 352/1pt-ൽ പാറഖനം ചെയ്യുന്നതിനുള്ള പരിസ്ഥിതി അനുമതി ശ്രീ. ജോർജ്ജ് കൊച്ചുപറമ്പിൽ-ന് കേരള സംസ്ഥാന പരിസ്ഥിതി ഇംപാക്ട് അസ്യൂസ്മെന്റ് അതോറിറ്റിയിൽനിന്നും ഓർഡർ നമ്പർ 1137/EC/SEIAA/KL/2017 തീയതി 17-03-2018 ഓർഡർ പ്രകാരം ലഭിച്ചിരിക്കുന്നു. ഈ ഓർഡറിന്റെ പകർപ്പ് കേരള സംസ്ഥാന പരിസ്ഥിതി 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/SEIAA/KL/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**

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

NABL &amp; MOEFCC RECOGNIZED LABORATORY

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

Ph : +918394 229433, 295018

e-mail : gems\_hpt@yahoo.com,

Website : www.globalmining.in

GEMS-LD/TF/11/01  
Date: 14.06.2024**Analysis Report of Ambient Air Quality Monitoring**


- Granite Building Stone Quarry of  
**Shri. George Kochuparambil**  
Extent: 12.2987Ha
- 1 Name of the Customer/Address : 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 Air Quality Monitoring**
- 3 Sample Collected By : GLOBAL Environment & Mining Services
- 4 Particulars of Sample Collected : Combined Sampler (GTI-241)
- 5 Duration of the Monitoring : 24 Hour of Sampling
- 6 Location of Monitoring : **Core zone area (A1)**
- 11 Report Number : ULR-TC532324000001977F

**Results**

Date of Monitoring	PM10 [µg/m <sup>3</sup> ]	PM2.5 [µg/m <sup>3</sup> ]	SO <sub>2</sub> [µg/m <sup>3</sup> ]	NO <sub>2</sub> [µg/m <sup>3</sup> ]
	IS : 5182: (Part 23) 2006 (RA 2012)	USEPA 2001	IS : 5182: (Part 2) 2001 (RF 2014)	IS : 5182: (Part 6) 2006 (RF 2014)
07.06.2024	55.4	20.1	11.8	12.6
<b>Standard</b>	<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>

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

\*\*End of Report\*\*

  
**Analyzed By**  
J.M. Thippeswamy  
Chemist



  
**Authorized Signatory**  
K. Ramakrishna Reddy  
Technical Manager

- Approved by NABL & Recognized by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Hospete jurisdiction only.



## GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

NABL & MOEFCC RECOGNIZED LABORATORY

3<sup>rd</sup> Main Road, Basaveswara Badavane,

HOSPETE - 583201, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems\_hpt@yahoo.com,

Website : www.globalmining.in

GEMS-LD/TF/11/01  
Date: 14.06.2024

### Analysis Report of Ambient Air Quality Monitoring


- Granite Building Stone Quarry of  
**Shri. George Kochuparambil**  
Extent: 12.2987Ha
- 1 Name of the Customer/Address : 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 Air Quality Monitoring**
  - 3 Sample Collected By : GLOBAL Environment & Mining Services
  - 4 Particulars of Sample Collected : Combined Sampler (GTI-241)
  - 5 Duration of the Monitoring : 24 Hour of Sampling
  - 6 Name of the Station : **Kolady (A2)**
  - 7 Report Number : ULR-TC532324000001978F

### Results


Date of Monitoring	PM10 [µg/m <sup>3</sup> ]	PM2.5 [µg/m <sup>3</sup> ]	SO <sub>2</sub> [µg/m <sup>3</sup> ]	NO <sub>2</sub> [µg/m <sup>3</sup> ]
	IS: 5182: (Part 23) 2006 (RA 2012)	USEPA 2001	IS: 5182: (Part 2) 2001 (RF 2014)	IS: 5182: (Part 6) 2006 (RF 2014)
08.06.2024	48.5	18.1	11.4	12.3
<b>Standard</b>	<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>

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

**\*\*End of Report\*\***

  
**Analysed By**  
J.M. Thippeswamy  
Chemist



  
**Authorized Signatory**  
K. Ramakrishna Reddy  
Technical Manager

- Approved by NABL & Recognized by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

### **Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.



GEMS

**GLOBAL ENVIRONMENT & MINING SERVICES**

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

NABL &amp; MOEFCC RECOGNIZED LABORATORY

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

Ph : +918394 229433, 295018

e-mail : gems\_hpt@yahoo.com,

Website : www.globalmining.in

GEMS-LD/TF/11/01

Date: 14.06.2024

**TEST REPORT OF AMBIENT NOISE LEVEL MONITORING**

- Granite Building Stone Quarry of  
**Shri. George Kochuparambil**  
Extent: 12.2987Ha
- 1 Name of the Customer/Address : 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
- 4 Particulars of Sample Collected : Noise Level Meter (Equinox-107)
- 5 Duration of the Monitoring : 24 Hours Sampling
- 6 Date of Analysis Completion : 08.06.2024.
- 7 Report No : ULR-TC532324000001979F

**Results**

Date	07.06.2024	08.06.2024
Name of the Location	Core Zone	Kolady
Time (hrs)	N1	N2
6.00	38.7	36.1
7.00	44.2	38.5
8.00	47.1	42.7
9.00	52.0	48.0
10.00	55.4	47.6
11.00	54.6	48.2
12.00	56.2	49.6
13.00	54.8	47.6
14.00	56.4	45.8
15.00	50.3	46.7
16.00	51.1	48.6
17.00	49.5	45.7
18.00	44.6	46.2
19.00	43.9	47.0
20.00	40.8	45.9
21.00	38.4	42.4
22.00	37.1	39.5
23.00	36.5	38.7
00.00	36.3	36.3
01.00	35.4	37.2
02.00	36.0	35.4
03.00	36.3	35.0
04.00	35.9	35.4
05.00	37.4	35.8



- Approved by NABL & Recognized by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hospete jurisdiction only.



**GLOBAL ENVIRONMENT & MINING SERVICES**(Consulting Engineers, Mine designers, Geologist & Surveyors)  
NABL & MOEFCC RECOGNIZED LABORATORY3<sup>rd</sup> Main Road, Basaveswara Badavane,**HOSPETE – 583201**, Dist., Vijayanagara (Karnataka)

Ph : +918394 229433, 295018

e-mail : gems\_hpt@yahoo.com,

Website : www.globalmining.in

ULR-TC532324000001979F

<b>L max</b>	56.4	49.6
<b>L min</b>	35.4	35.0
<b>Ld</b>	52.08	46.71
<b>Ln</b>	36.73	36.87
<b>Leq</b>	50.12	44.93

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 5:00 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.	



*RRR*  
Authorized Signatory  
Technical Manager

- Approved by NABL & Recognized by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 Days, Minerals 3 Months, Filter papers & Thinblies 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.

**GLOBAL ENVIRONMENT & MINING SERVICES**

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

NABL &amp; MOEFCC RECOGNIZED LABORATORY

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

Ph : +918394 229433, 295018

e-mail : gems\_hpt@yahoo.com,

Website : www.globalmining.in

GEMS-ID/TF/11/01

Date: 14.06.2024

**ANALYSIS REPORT OF WATER QUALITY DATA**

Granite Building Stone Quarry of

**Shri. George Kochuparambil**

Extent: 12.2987Ha

- 1 Name of the Customer/Address : Re-Sy.Nos: 354/4, 354/5, 355/1pt, 351/1pt,  
350 & 352/1pt,  
Manakkad Village, Thodupuzha Taluk,  
Idukki District, Kerala.
- 2 Sample Collected By : GLOBAL Environment & Mining Services
- 5 Date of sample collection : 07.06.2024
- 6 Date of sample Received : 11.06.2024
- 7 Date of sample Analyzed : 13.06.2024
- 8 Report Number : ULR-TC532324000001980F

Sl. No.	Parameters	Unit	Result	Test Protocol	Requirement/Limit IS : 10500 : 2012	
					Acceptable	Permissible
1.	pH	-	7.02	APHA 22 <sup>nd</sup> Edition 2012 4500 B (Pg No. 4-92 to 4-96)	6.5	8.5
2.	Colour*	Hazen	<5	IS: 3025 (PART 14)- 1984, RA- 2012 Platinum cobalt Method	5	15
3.	Taste*	-	Ag	IS 3025 Part 8 1984	Ag	Ag
4.	Odour*	-	Ag	IS: 3025 (Part 5) – 1983, Ra-2012, True Odour	Ag	Ag
5.	Turbidity	NTU	0.64	APHA 22 <sup>nd</sup> Edition 2012 2130 B (Pg No. 2-14)	1	5
6.	Conductivity	µS/cm	177	APHA 22 <sup>nd</sup> Edition 2012 2510 B (Pg No. 2-54)	-	-
7.	Total Dissolved Solids	mg/L	205	APHA 22 <sup>nd</sup> Edition 2012 2540 B (Pg No. 2-65)	500	2000
8.	Total Alkalinity as CaCO <sub>3</sub>	mg/L	61	APHA 22 <sup>nd</sup> Edition 2320 B (Pg No. 2-35)	200	600
9.	Total Hardness as CaCO <sub>3</sub>	mg/L	146	APHA 22 <sup>nd</sup> Edition 2012 2340 C (Pg No. 2-46)	200	600
10.	Calcium as Ca	mg/L	51	APHA 22 <sup>nd</sup> Edition 2012 3500 Ca B (Pg No. 3-84)	75	200
11.	Magnesium as Mg	mg/L	8.0	APHA 22 <sup>nd</sup> Edition 2012 3500 B-Mg By Calculation	30	100
12.	Chloride as Cl	mg/L	24.3	APHA 22 <sup>nd</sup> Edition 2012 4500 Cl (Pg No. 4-72)	250	1000
13.	Sulphate as SO <sub>4</sub>	mg/L	41	APHA 22 <sup>nd</sup> Edition 2012 4500 SO42 – E (Pg No. 4-190)	200	400
14.	Nitrates as NO <sub>3</sub>	mg/L	7.6	APHA 22 <sup>nd</sup> Edition - 4500 NO <sub>3</sub> – E (Pg No. 4-131 to 4-132)	45	NR
14.	Nitrate Nitrogen as NO <sub>3</sub>	mg/L	8.4	APHA 22 <sup>nd</sup> Edition 2012 4500 NO3 E (Pg No. 4-125 to 4-127)	45	No restriction



- Approved by NABL & Recognized by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hospete jurisdiction only.



GEMS



NABL

**GLOBAL ENVIRONMENT & MINING SERVICES**

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

NABL &amp; MOEFCC RECOGNIZED LABORATORY

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

Ph : +918394 229433, 295018

e-mail : gems\_hpt@yahoo.com,

Website : www.globalmining.in

ULR-TC532323000001778F

15.	Fluoride as F	mg/L	0.47	APHA 23 <sup>rd</sup> Edition 2017 4500 F-D (Pg No. 4-90 to 4-91)	1.0	1.5
16.	Iron as Fe	mg/L	0.21	APHA 23 <sup>rd</sup> Edition – 3500 Fe-B (Pg No. 3-80 to 3-82)	0.3	NR
17.	Sodium as Na	mg/L	7.0	APHA 23 <sup>rd</sup> Edition 2017 Na 3500 B (Pg No. 3-99 to 3-100)	-	-
18.	Potassium as K	mg/L	0.53	APHA 23 <sup>rd</sup> Edition 3500 K B (Pg No. 3-89 to 3-90)	-	-
19.	BOD 3 days at 27° C	mg/L	NIL	IS:3025 (P.44) – 1993, RA-2014,	-	-
20.	COD as O <sub>2</sub>	mg/L	NIL	APHA 23 <sup>rd</sup> Edition 5220 C (Pg No. 5-18 to 5-19)	-	-
21.	Oil & Grease	mg/L	NIL	APHA 23 <sup>rd</sup> Edition 5520 B (Pg No. 5-41 to 5-42)	0.5	NR
22.	Cadmium as Cd*	mg/L	<0.001	APHA 23 <sup>rd</sup> Edition-3111 -B (Pg No.3-20 to 3-21)	0.003	NR
23.	Copper as Cu	mg/L	<0.001	APHA-23 <sup>rd</sup> Edition 3111-B (Pg No.3-20 to 3-21)	0.02	1.5
24.	Nickel as Ni	mg/L	<0.001	APHA-23 <sup>rd</sup> Edition-3111 -B (Pg No. 3-20 to 3-21)	0.02	NR
25.	Zinc as Zn	mg/L	<0.1	APHA-23 <sup>rd</sup> Edition-3111-B (Pg No. 3-20 to 3-21)	5	15
26.	Salinity*	PPT	NIL	APHA-23 <sup>rd</sup> Edition-3111-B (Pg No. 3-20 to 3-21)	-	-
27.	Total Phosphorous	mg/L	<0.01	APHA-23 <sup>rd</sup> Edition 4500-D (Pg No. 4-154)	-	-
28.	Total Coliforms*	MPN/ 100ml	Ab	APHA 22 <sup>nd</sup> Edition 9222 B (Pg No.9-78)	-	-
29.	Faecal Coliforms	MPN/ 100ml	Ab	APHA 22 <sup>nd</sup> Edition 9222 D (Pg No.9-85)	-	-
30.	Phyto Plankton*	Unit/L	Ab	APHA 23 <sup>rd</sup> Edition 10200 F (Pg No.10-17)	-	-

Note: BDL Below Detectable Limit

Ag: Agreeable  
NR: No Relaxation  
RA: reaffirmed  
Ab: Absent

Location: Kolady

**\*\*End of report\*\***Analyzed By  
ChemistAuthorized Signatory  
Technical Manager

- Approved by NABL & Recognized by Ministry of Environment, Forest and Climate Change for Laboratory
- Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.

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









VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad,  
Vazhithala, Kerala 685583, India  
Lat 9° 53' 41.60706" N Long 76° 38' 16.86592" E

Local	12:42:02 PM	Altitude	46 meters
GMT	07:12:02 AM	Date	Wed, 18 Sep 2024



VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad,  
Vazhithala, Kerala 685583, India  
Lat 9° 53' 42.64901" N Long 76° 38' 16.71634" E

Local	12:42:55 PM	Altitude	52 meters
GMT	07:12:55 AM	Date	Wed, 18 Sep 2024

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





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

Lat 9° 53' 39.98353" N Long 76° 38' 33.87901" E

Local 01:13:10 PM

Altitude 76 meters

GMT 07:43:10 AM

Date Wed, 18 Sep 2024





 **GPS Map**  
**Camera Lite**

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

Latitude  
**9.89532573°**

Longitude  
**76.63976976°**

Local 12:51:21 PM  
GMT 07:21:21 AM

Altitude 77 meters  
Wednesday, 18.09.2024

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





 **GPS Map**  
**Camera Lite**

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

Latitude

9.89715541°

Longitude

76.6390399°

Local 12:10:06 PM

GMT 06:40:06 AM

Altitude 73 meters

Wednesday, 18.09.2024





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

Latitude  
9.89797013°

Longitude  
76.6385921°

Local 12:12:51 PM  
GMT 06:42:51 AM

Altitude 77 meters  
Wednesday, 18.09.2024



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

Latitude  
9.89719762°

Longitude  
76.63842625°

Local 12:16:58 PM  
GMT 06:46:58 AM

Altitude 73 meters  
Wednesday, 18.09.2024



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



के००६० केरल 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

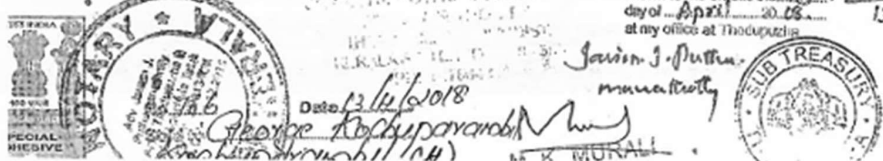
**Verification :**

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 13th day of April 2018 at my office at Thodupuzha



## **Annexure-22**

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

## **CSR EXPENDITURES & RECEIPTS**

CSR REPORT ON 01/04/2024 to 30/09/2024			
DATE	NAME	PURPOSE	AMOUNT
15-04-2024	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	28,500.00
18-04-2024	KANIV	PALIYETIVE CARE	50,000.00
04-05-2024	KANIV	PALIYETIVE CARE	51,000.00
08-05-2024	MARY THOMAS	MEDICAL HELP (5monts x 3000)	15,000.00
08-06-2024	KANIV	PALIYETIVE CARE	50,000.00
2-07-2024	ST THOMAS LP SCHOOL KOLADY	AUTO CASH	8,500.00
06-07-2024	REJI SUBASH	MATERIAL SUPPLY	29,565.00
08-07-2024	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	69,400.00
13-07-2024	KANIV	PALIYETIVE CARE	50,000.00
24-07-2024	MANAKKAD GRAMA PANCHAYATH	HARITHAKARMA SENA (9000 Bags)	459,735.00
5-08-2024	ST THOMAS LP SCHOOL KOLADY	AUTO CASH	8,600.00
07-08-2024	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	69,400.00
08-08-2024	JINEESH	MEDICAL HELP	10,000.00
24-08-2024	KANIV	PALIYETIVE CARE	51,000.00
03-09-2024	ST THOMAS LP SCHOOL KOLADY	AUTO CASH	7,310.00
04-09-2024	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	59,750.00
13-09-2024	KANIV	PALIYETIVE CARE	49,000.00
27-09-2024	SIVARAMAN	HOUSE CONSTRUCTION	944,000.00
27-09-2024	ALEKUTTY	HOUSE CONSTRUCTION	826,000.00
27-09-2024	CHINNAMMA	HOUSE CONSTRUCTION	708,000.00
		<b>TOTAL</b>	<b>3,544,760.00</b>



Nidhin T Rajan,  
Tholkudiyil(H),  
Vazhithala p o,Thodupuzha  
Mobile;9846302892  
Pin:685583  
FORM GST INV-1  
[See Rule-7]  
INVOICE – CASH/CREDIT

GSTIN.32AUJPN0237F1Z0

INV. NO. 02

Date: 27-09-2024

Place of supply:Vazhithala

Date of Supply:27-09-2024

Details of Receiver

Name:United Granites and Metals

Address:Vazhithala p o,Thodupuzha

State:KERALA

State Code:32

GSTIN/Unique ID:32AFJPK9650E1ZH

Sl No.	Description of Goods	HSN Code	Amount
1	Construction of Residential Building for Sivaraman P K Building Number:297/B, Ward No.12,Manakkad GramaPanchayath	9954	800000
Bank Details		Freight Insurance Packing & Forwarding	
Bank A/c No.1028102000002387			
Bank Branch/IFSC: IBKL0001028			
Authorized Signatory (with status & seal)		SUB TOTAL	800000
		Discount	
		Taxable Value	800000
		CGST Rate	Amount 72000
		SGST Rate	Amount 72000
		IGST Rate	Amount
		GRAND TOTAL	944000
Grand Total in Words; Nine Lakhs and Forty four Thousand only			
Amount of Tax Subject to Reverse Charge			







തീയതി 8/8/24

To,

മാനേജർ,  
യൂണൈറ്റഡ് ഗ്രാമനേറ്റ്സ് യൂണിയൻ  
വഴിത്തല.

Myr

ജിനിക്ക് ജോസഫ്, കപ്പനൂരലയിൽ, മണക്കാട്  
ഗ്രാമപഞ്ചായത്തിൽ 13-ാം വാർഡിൽ നിർമ്മാണശുശ്രൂഷ  
നാണ്. ദിവാജു ഷെൽക്ക് നേരിട്ടറിയാവുന്നതാണ്.  
ദിവാജു നാലരവയസ്സുള്ള കുഞ്ഞിന് പെട്ടെന്നുണ്ടായ  
ഒരു അസുഖത്തെ ഫാർൻ അടുത്ത ആശുപത്രിയിൽ  
ചികിത്സയിലാണ്. ഈ ചികിത്സയ്ക്ക് ഭീഷണി  
പണം ആവശ്യമുണ്ട്. സമ്പന്നികമായി വലിയ  
ആശുപത്രിയിലേക്ക് ഈ കുഞ്ഞിന്റെ ചികിത്സയ്ക്കുള്ള  
പണം കണ്ടെത്തുക വലിയ പ്രയാസമാണ്. ദിവാജുവിൽ  
ദിവാജു ചികിത്സ സഹായത്തിന് അർഹനാണെന്ന്  
സിദ്ധപ്പെടുത്തുന്നു.

മേൻ,

Shiny  
SHINY SHAJI  
Vice President  
Manakkad  
Grama Panchayat

**FEDERAL BANK**  
YOUR PERFECT BANKING PARTNER

**View Transaction Details**

Transaction Date:

08-08-2024

Amount Type:

Dr.

Amount:

INR 10,000.00

Nature Of Transaction:

EBIZ TP JINEESH JOSEPH UNITED



File No - 1055 01000 77652  
FSC - FDRCL 0001055

Gineesh Joseph.

Varadithala.

9947852668.

10000/-

26

Pediatric Endocrinologist  
Amrita Hospital

Respected Sir/Madam,

Kindly take care of Aiden since a 4yr 5month  
old body with the hypoglycemia (4 episodes)  
during short episodes of illness and poor feeding.  
He also has ASD on history.

Thanking you.

  
21/7/24

DR ELIZABETH MARY JOHN  
MBBS, MD, DNB FELLOWSHIP in Neonatology (IAP)

Reg No. TEMC 68349

Consultant, Pediatrician and Neonatologist,  
Smita Memorial Hospital & Research Centre  
Thodumukha, Vengalloor

DR. SURESH ADVANIS  
**SMITA MEMORIAL**  
HOSPITAL AND RESEARCH CENTRE



Nidhin T Rajan,  
Tholkudiyil(H),  
Vazhithala p o,Thodupuzha  
Mobile;9846302892  
Pin:685583  
FORM GST INV-1  
[See Rule-7]

GSTIN.32AUJPN0237F1Z0

INVOICE – CASH/CREDIT

INV. NO. 01

Place of supply:Vazhithala

Date: 27-09-2024

Date of Supply:27-09-2024

Details of Receiver Name:United Granites and Metals Address:Vazhithala p o,Thodupuzha State:KERALA State Code:32 GSTIN/Unique ID:32AFJPK9650E1ZH				
Sl No.	Description of Goods	HSN Code	Amount	
1	Construction of Residential Building for Chinnamma Building Number:297/A, Ward No.12,Manakkad GramaPanchayath	9954	600000	
Bank Details Bank A/c No.1028102000002387 Bank Branch/IFSC: IBKL0001028		Freight Insurance Packing & Forwarding		
Authorized Signatory (with status & seal)		SUB TOTAL	600000	
		Discount		
		Taxable Value	600000	
		CGST Rate	Amount	54000
		SGST Rate	Amount	54000
		IGST Rate	Amount	
		GRAND TOTAL	708000	
Grand Total in Words; Seven Lakhs and Eight Thousand only				
Amount of Tax Subject to Reverse Charge				











ബിബിൻ അഗസ്റ്റിൻ

മെമ്പർ, വാർഡ് - 3 തൊമ്മൻകുത്ത്  
കരിമണ്ണൂർ ഗ്രാമപഞ്ചായത്ത്  
ഫോൺ : 04862-262221



കല്ലിടുകിൽ  
തൊമ്മൻകുത്ത് പി. ഒ.  
മൊബൈൽ : 9947845050

തീയതി 5/7/2024

To, മേജർ

അന്നാൾ ഗ്രാമപഞ്ചായത്ത്  
വഴിനൽ,

കുരിശ്ശൂർ ഗ്രാമപഞ്ചായത്തിൽ വാർഡ് 5ൻ  
(കോട്ടക്കുന്ന്) ലിൽ താമസിക്കുന്ന റെജിസ്ട്രാർ വാർഡ് 5ൻ (H)  
എന്ന പേരിൽ കുരിശ്ശൂർ സെന്റ് മേരീസ് പള്ളിയിൽ  
നിന്നും ട്രാഫിക് നമ്പർ നൽകിയിട്ടുള്ളതാണ്, സാമ്പത്തിക  
മാധി വകുപ്പ് സർവ്വീസ് അനുവദിക്കുന്ന ഉപയുക്ത പലതും  
സാമ്പത്തിക സ്ഥാപനം നൽകിയാണ് വീട് പണി കൂടുവാൻ  
പോകുന്നത്, സാമ്പത്തിക മാധി വകുപ്പ് ഉടൻ അനുവദിക്കു-  
ന്ന ഉപയുക്ത വീട് പണിക്കായി രണ്ട് ലോഡ് റെഗുലേഷൻ,  
രണ്ട് ലോഡ് മോഡൽ നൽകിയാണ് വകുപ്പ് സ്ഥാപനങ്ങളും  
ഈ സ്ഥാപനം ഉപയുക്ത നൽകുന്നതാണ് അനുവദിക്കുന്നു.

നിൻ

**BIBIN AUGUSTINE**  
Member, Ward-3  
Karimannoor Gramapanchayat  
Mob: 9947845050





# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8281885888

STIN: 32AFJPK9650E1ZH

Application for Electronic Reference Number of an Invoice

Invoice No : 1739

Invoice Date : 06/07/2024

Vehicle : KL38H9222

Place of Supply : KARIMANNOOR

Details of Receiver (Billed to)							Details of consignee (Shipped to)					
Name and Address  REJI SUBHASH CSR C/O ROY K PAULOSE  VAYALMATTAM HOUSE KARIMANNOOR GRAMA PANCHAYATH WARD 5							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	20MM 25171010	6.09	1100.00	6699.00	0	6699.00	2.5	167.48	2.5	167.48	0.00	
2												
Total						6699.00	167.48		167.48			

Invoice Value (In words) Rupee Seven Thousand Thirty Four Only.  
Invoice Value (In Figure) 7034.00

Bank Details

Bank Federal Bank, Vazhithala  
Acc No 10555500004370  
IFSC FDRL0001055

United Gran  
Pin: 685  
Vazhithala  
Authorised Signatory

# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8281885888

STIN: 32AFJPK9650E1ZH

Application for Electronic Reference Number of an Invoice

Invoice No : 1740

Invoice Date : 06/07/2024

Vehicle : KL38J3066

Place of Supply : KARIMANNOOR

Details of Receiver (Billed to)							Details of consignee (Shipped to)					
Name and Address REJI SUBHASH CSR C/O ROY K PAULOSE  VAYALMATTAM HOUSE KARIMANNOOR GRAMA PANCHAYATH WARD 5							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	20MM 25171010	6.05	1100.00	6655.00	0	6655.00	2.5	166.38	2.5	166.38	0.00	
2												
	Total					6655.00		166.38		166.38		

Invoice Value (In words) Rupee Six Thousand Nine Hundred Eighty Eight Only.  
Invoice Value (In Figure) 6988.00

## Bank Details

Bank Federal Bank, Vazhithala  
Acc No 10555500004370  
IFSC FDRL0001055



E & O E

Authorised Signatory



# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8281885888

STIN: 32AFJPK9650E1ZH

Application for Electronic Reference Number of an Invoice

Invoice No : 1745  
Invoice Date : 06/07/2024

Vehicle : KL38J3066  
Place of Supply : KARIMANNOOR

Details of Receiver (Billed to)							Details of consignee (Shipped to)					
Name and Address  REJI SUBHASH CSR C/O ROY K PAULOSE  VAYALMATTAM HOUSE KARIMANNOOR GRAMA PANCHAYATH WARD 5							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	2MM 25171010	6.87	1075.00	7385.25	0	7385.25	2.5	184.63	2.5	184.63	0.00	
2												
	Total					7385.25	184.63		184.63			

Invoice Value (In words)      Rupee Seven Thousand Seven Hundred Fifty Five Only.  
Invoice Value (In Figure)      7755.00

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



*[Signature]*

# UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZZHA, PH: 8281885888

STIN: 32AFJPK9650E1ZH

Application for Electronic Reference Number of an Invoice

Vehicle : KL38H9222

Invoice No : 1746

Place of Supply : KARIMANNOOR

Invoice Date : 06/07/2024

Details of Receiver (Billed to)							Details of consignee (Shipped to)					
Name and Address REJI SUBHASH CSR C/O ROY K PAULOSE  VAYALMATTAM HOUSE KARIMANNOOR GRAMA PANCHAYATH WARD 5							Name and Address  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	2MM 25171010	6.9	1075.0 n	7417.50	0	7417.50	2.5	185.44	2.5	185.44	0.00	
2												
	Total					7417.50	185.44		185.44			

Invoice Value (In words) Rupee Seven Thousand Seven Hundred Eighty Eight Only.  
Invoice Value (In Figure) 7788.00

## Bank Details

Bank Federal Bank, Vazhithala  
Acc No 10555500004370  
IFSC FDRL0001055



E & O E

Nidhin T Rajan,  
Tholkudiyil(H),  
Vazhithala p o,Thodupuzha  
Mobile;9846302892  
Pin:685583  
FORM GST INV-1  
[See Rule-7]  
INVOICE – CASH/CREDIT

GSTIN.32AUJPN0237F1Z0  
INV. NO. 03  
Date: 27-09-2024

Place of supply:Vazhithala  
Date of Supply:27-09-2024

Details of Receiver Name:United Granites and Metals Address:Vazhithala p o,Thodupuzha State:KERALA State Code:32 GSTIN/Unique ID:32AFJPK9650E1ZH				
Sl No.	Description of Goods	HSN Code	Amount	
1	Construction of Residential Building for Aleykutty Ouseph Building Number:297/C, Ward No.12,Manakkad GramaPanchayath	9954	700000	
Bank Details Bank A/c No.1028102000002387 Bank Branch/IFSC: IBKL0001028		Freight Insurance Packing & Forwarding		
Authorized Signatory (with status & seal)		SUB TOTAL	700000	
		Discount		
		Taxable Value	700000	
		CGST Rate	Amount	63000
		SGST Rate	Amount	63000
		IGST Rate	Amount	
		GRAND TOTAL	826000	
Grand Total in Words; Eight Lakhs Twenty-Six Thousand only				
Amount of Tax Subject to Reverse Charge				





**Annexure-23**

**REPORT ON BLAST INDUCED  
GROUND VIBRATION STUDY**

**TECHNICAL REPORT ON BLAST INDUCED GROUND VIBRATION STUDIES AND  
ASSESSMENT OF EFFECT OF BLASTING OPERATIONS IN  
GRANITE BUILDING STONE QUARRY OF  
Shri. GEORGE KOCHUPARMBIL,  
MANAKKAD VILLAGE, THODUPUZHA (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.

**Saju. K** BE (Mining), FCC.

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



## **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/>



## 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. Saju K BE (Mining), FCC.
- 4) Mr. Jaikaran H.J BE (Mining), SCC.

A reconnaissance survey was made in the 8<sup>th</sup> of August 2024. 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, 11 blast were conducted at four different locations in the quarry blasting operations were monitored through geophone at the distance of 90.6m, 135.5m, 265m and 454.7m. The data obtained from the InstanTel micromate instrument were analysed 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.

## INDEX

NO	TITLE	PAGE NO
1	EXECUTIVE SUMMARY	1
2	INTRODUCTION	4
3	DETAILS OF STRUCTURES NOT BELONGING TO THE OWNER	5
4	TOPOGRAPHY & LOCAL GEOLOGY OF THE AREA	6
5	BLAST VIBRATION STUDY	7
6	DRILLING & BLASTING	7
7	OBJECTIVES	9
8	METHODOLOGY	9
9	GROUND VIBRATIONS	10
10	PARAMETERS AND PROPAGATIONS	11
11	DAMAGE LEVEL	13
12	HUMAN RESPONSE TO GROUND VIBRATION	14
13	FIELD INVESTIGATION	14
14	GROUND VIBRATION MONITORING	21
15	SUMMARY OF BLAST MONITORING	25
16	RECOMMENDATIONS	27
17	BIBLIOGRAPHY	30

## APPENDIX

NO	TITLE	PAGE NO
1	LAYOUTS OF BLAST STUDY	31
2	BLAST EVENT REPORTS	36

### LIST OF FIGURES

NO	TITLE	PAGE NO
1	OVERVIEW OF MINES	4
2	HOUSE OF Mr. TOMY KURIAN	5
3	HOUSE OF Mr. KRISHNAN KRISHNAN	6
4	GOOGLE EARTH IMAGE OF THE MINE SHOWING BLASTING LOCATIONS & MONITORING POINTS	7
5	DIFFERENT KIND OF WAVEFORMS	11
6	DRILLING OF BLAST HOLES USING JACK HAMMER	15
7	A CLOSE VIEW OF THE BENCH VIEW	16
8	NON-ELECTRIC DELAY DETONATOR USED IN THE QUARRY	16
9	EXPLOSIVE CARTRIDGES USED IN QUARRY	16
10	STEMMING OF BLAST HOLES	17
11	CHARGED HOLES	17
12	MUFFLING ARRANGEMENT	18
13	WATER SPRAYING SYSTEM	18
14	WATER MIST SYSTEM	19
15	FRAGMENTED ROCK AFTER BLASTING	19
16	BLAST VIBRATION MONITORING	20
17	RECOMMENDED BLASTHOLE PATTERN	28

## LIST OF TABLES

NO	TITLE	PAGE NO
1	PERMISSIBLE PPV LEVELS RECOMMENDED BY DGMS	13
2	BLAST DETAILS	22, 23, 24
3	SUMMARY OF THE BLAST MONITORING	25
4	BLASTING RECOMMENDATIONS	29

## 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.

Eleven 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, eleven blasts were conducted and monitoring were done in nearest house of Mr. Tomy Kurian (towards South West of Mine lease boundary – M3), house of Mr. Krishnan Krishnan (towards North East of Mine lease boundary -M4), M1 (inside the Mine), & M2 (western side of mine lease area, inside the Mine). All the eleven 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 8ft and 6ft. The total number of holes varied from 30 to 12. 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 8 ft holes were charged with three cartridges of slurry explosives and 270gm of ANFO and 6 ft holes were charged with one cartridge of slurry explosives and 300gm of ANFO. The explosive quantity per hole was 0.645 Kg for 8ft holes and 0.425Kg for 6ft 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 90.6m to 454.7m.
6. The Peak Particle Velocity was not detected near the house of Mr. Krishnan Krishnan (M4). Distance of house from blast location was 454.7m.
7. The Peak Particle Velocity recorded near the house of Mr. Tomy Kurian (M3) were 0.176mm/s, 0.193mm/s and 0.216mm/s. Distance of house from blast locations was 265m.
8. The Peak Particle Velocity recorded at Monitoring Point M1 were 3.541mm/s, 3.101mm/s and 2.067mm/s. Distance of M1 from blast location was 90.6m.
9. The Peak Particle Velocity recorded at Monitoring Point M2 were 1.039mm/s, 1.020mm/s and 0.894mm/s. Distance of M2 from blast location was 135.5m.
10. The highest value of vibration recorded was at monitoring point M1 which was at a distance of 90.6m from blast site. PPV recorded was 3.541 mm/s. This was recorded in blast no: 1 where maximum charge per delay was 0.645 Kg and total explosive charge in the blasting round was 19.35Kg.
11. Fly rocks up to 30 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.

12. 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.
13. 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.

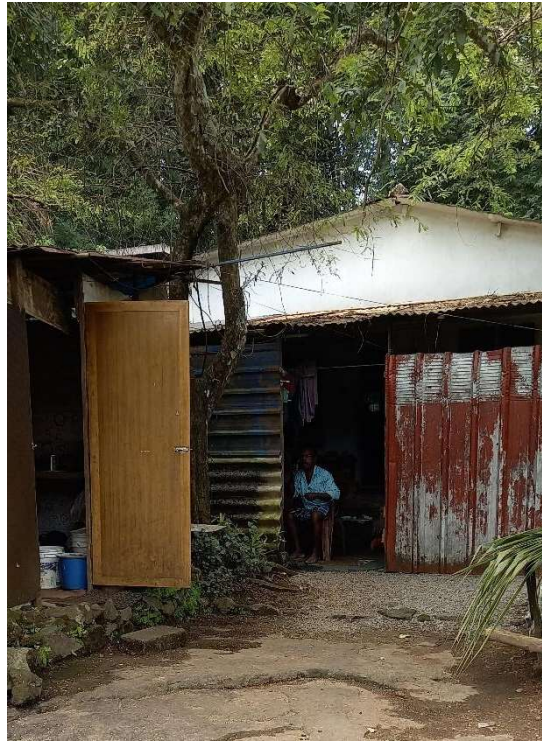
### **DETAILS OF STRUCTURES NOT BELONGING TO THE OWNER:**

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°53'35.16"N & 76°38'18.64"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°53'48.36"N & 76°38'41.28"E. This the nearest house located in the North East direction of the Lease Area.



*Fig 3: House of Mr. Krishnan Krishnan*

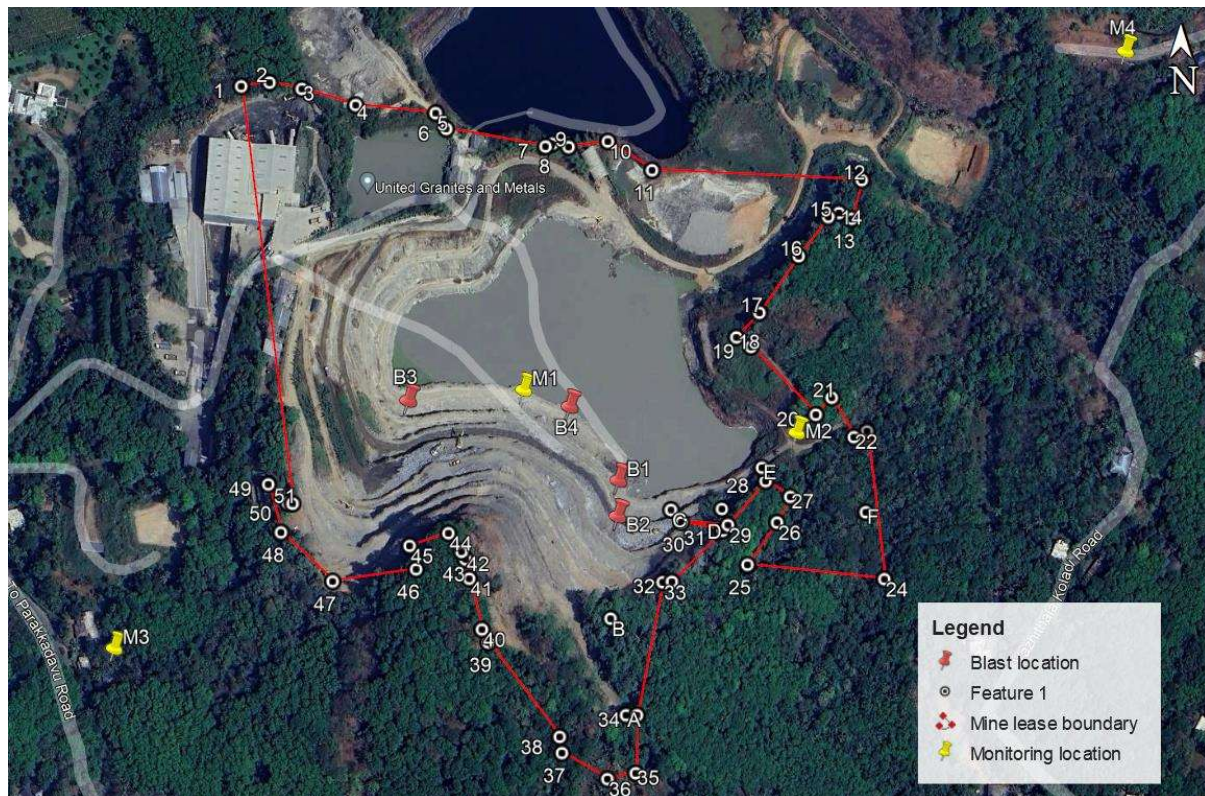
## **TOPOGRAPHY & LOCAL GEOLOGY OF THE AREA:**

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 09.08.2024, 11 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
- Eleven blasts were conducted at Four 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

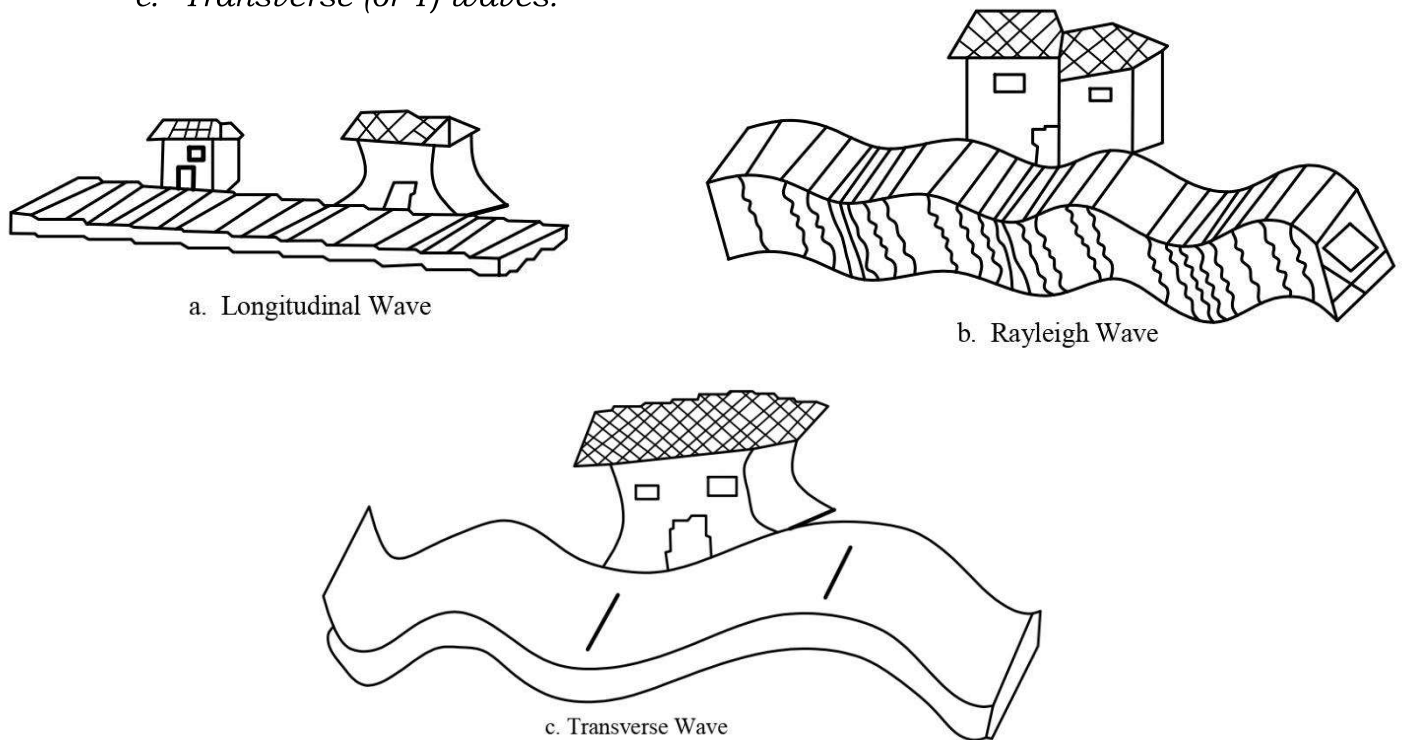
The movement of any particle in the ground can be described in three ways; displacement, velocity and acceleration. Velocity transducers (Geophones) produce the voltage which is proportional to the velocity of movement, and can be easily measured and recorded. They are robust and relatively inexpensive 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.*



*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
(A) Buildings/Structures not belong to the Owner			
(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) Buildings belonging to Owner with limited span of life			
(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 8 Feet (2.40m) and 6 feet (1.8m) 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 hole is ready, these holes are charged with small diameter (25mm) explosive cartridges, weighing 125g (fig. 9) & ANFO. 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. 8). 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. 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 fragmented material from the blasting operations.



*Fig 6: Drilling of Blast Holes using Jack Hammer*





*Fig 7: A Close view of the Bench Face*



*Fig 8: Non-Electric Detonator & Surface Trunk Line Delay used in the Quarry*



*Fig 9: Explosive Cartridges used in the Quarry*





*Fig 10: Stemming of Blast holes*



*Fig 11: Charged Holes*





*Fig 12: Muffling arrangements to control the Fly rocks*



*Fig 13: Water spray system*





*Fig 14: Water mist system*



*Fig 15: Fragmented Rock after Blasting*





*Monitoring Station-1*



*Monitoring Station-2*



*Monitoring Station-3*



*Monitoring Station-4*

*Fig 16: 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, 11 blasts were conducted at different locations in the quarry. Blastholes of 8 Ft depth were charged with the 270gms of ANFO & 375gms of Slurry explosive and 6 Ft depth were charged with the 300gms 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 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.16 shows the study carried out to monitor the ground vibration towards the nearby house & 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

S. No	Description	Blast No. 1	Blast No. 2	Blast No. 3	Blast No. 4
1	Date of Blast	09.08.2024	09.08.2024	09.08.2024	09.08.2024
2	Time of Blasts (Hours)	9:59:58	10:00:42	10:02:54	10:09:23
3	Location of blasts	9°53.6484'N, 76°38.4988'E	9°53.6484'N, 76°38.4988'E	9°53.6484'N, 76°38.4988'E	9°53.6351'N, 76°38.4985'E
4	Diameter of blast hole (mm)	33	33	33	33
5	Burden (m)	1.0	1.0	1.0	1.0
6	Spacing (m)	1.2	1.2	1.2	1.2
7	Depth of blast hole (m)	2.4	2.4	2.4	2.4
8	No of blast holes	30	25	19	27
9	Explosive charge/ Hole (kg)	0.645	0.645	0.645	0.645
10	Maximum Charge per delay (kg)	0.645	0.645	0.645	0.645
11	Total Charge / Blast (kg)	19.35	16.125	12.255	17.415
12	Initiation System	Nonel	Nonel	Nonel	Nonel
13	Initiation Pattern	Row to Row	Row to Row	Row to Row	Row to Row
14	Location of instrument	9°53.6820'N, 76°38.4631'E	9°53.6820'N, 76°38.4631'E	9°53.6820'N, 76°38.4631'E	9°53.6661'N, 76°38.5661'E
15	Distance (m)	90.6	90.6	90.6	135.5
16	PPV (mm/s)	3.541	3.101	2.067	1.039
17	Noise (dB)	117.3	115.9	116.2	119.4
18	Dominant Frequency (Hz)	144.80	114.00	113.00	156.50

Table 2: Monitored Blast details

S. No	Description	Blast No. 5	Blast No. 6	Blast No. 7	Blast No. 8
1	Date of Blast	09.08.2024	09.08.2024	09.08.2024	09.08.2024
2	Time of Blasts (Hours)	10:09:58	10:12:49	12:38:57	12:39:56
3	Location of blasts	9°53.6351'N, 76°38.4985'E	9°53.6351'N, 76°38.4985'E	9°53.6780'N, 76°38.4195'E	9°53.6780'N, 76°38.4195'E
4	Diameter of blast hole (mm)	33	33	33	33
5	Burden (m)	1.0	1.0	1.0	1.0
6	Spacing (m)	1.2	1.2	1.2	1.2
7	Depth of blast hole (m)	2.4	2.4	1.8	1.8
8	No of blast holes	21	26	25	13
9	Explosive charge/ Hole (kg)	0.645	0.645	0.425	0.425
10	Maximum Charge per delay (kg)	0.645	0.645	0.425	0.425
11	Total Charge / Blast (kg)	13.545	16.77	10.625	5.525
12	Initiation System	Nonel	Nonel	Nonel	Nonel
13	Initiation Pattern	Row to Row	Row to Row	Row to Row	Row to Row
14	Location of instrument	9°53.6661'N, 76°38.5661'E	9°53.6661'N, 76°38.5661'E	9°53.5861'N, 76°38.3085'E	9°53.5861'N, 76°38.3085'E
15	Distance (m)	135.5	135.5	265.0	265.0
16	PPV (mm/s)	0.894	1.020	0.193	0.176
17	Noise (dB)	121.7	120.6	96.28	98.7
18	Dominant Frequency (Hz)	114.50	177.80	64.25	34.25

Table 2: Monitored Blast details

S. No	Description	Blast No. 9	Blast No. 10	Blast No. 11
1	Date of Blast	09.08.2024	09.08.2024	09.08.2024
2	Time of Blasts (Hours)	12:41:21	13:11:02	13:12:49
3	Location of blasts	9°53.6780'N, 76°38.4195'E	9°53.6758'N, 76°38.4804'E	9°53.6758'N, 76°38.4804'E
4	Diameter of blast hole (mm)	33	33	33
5	Burden (m)	1.0	1.0	1.0
6	Spacing (m)	1.2	1.2	1.2
7	Depth of blast hole (m)	1.8	1.8	1.8
8	No of blast holes	25	25	12
9	Explosive charge/ Hole (kg)	0.425	0.425	0.425
10	Maximum Charge per delay (kg)	0.425	0.425	0.425
11	Total Charge / Blast (kg)	10.625	10.625	5.10
12	Initiation System	Nonel	Nonel	Nonel
13	Initiation Pattern	Row to Row	Row to Row	Row to Row
14	Location of instrument	9°53.5861'N, 76°38.3085'E	9°53.8076'N, 76°38.6902'E	9°53.8076'N, 76°38.6902'E
15	Distance (m)	265.0	454.7	454.7
16	PPV (mm/s)	0.216	NOT DETECTED	
17	Noise (dB)	97.35		
18	Dominant Frequency (Hz)	40.50		



## Summary of the Blast Monitoring:

Monitoring Station	Blast Points	Distance (m)	Max Charge Per Delay (Kg)	PPV (mm/s)	Noise (dB)	Dominant Frequency (Hz)
M1	Blast No 1	90.6	0.645	3.541	117.3	144.80
	Blast No 2	90.6	0.645	3.101	115.9	114.00
	Blast No 3	90.6	0.645	2.067	116.2	113.00
M2	Blast No 4	135.5	0.645	1.039	119.4	156.50
	Blast No 5	135.5	0.645	0.894	121.7	114.50
	Blast No 6	135.5	0.645	1.020	120.6	177.80
M3	Blast No 7	265.0	0.425	0.193	96.28	64.25
	Blast No 8	265.0	0.425	0.176	98.7	34.25
	Blast No 9	265.0	0.425	0.216	97.35	40.50
M4	Blast No 10	454.7	0.425	Not detected		
	Blast No 11	454.7	0.425			

*Table 3: Summary of the Blast monitoring*

From the Table 3, it can be observed that the highest peak Particle velocity (PPV) recorded was 3.541 mm/sec at the distance of 90.6 m in Blast No 1 and the next highest PPV was 3.101 mm/sec at the distance of 90.6 m in Blast No 2.

The ground vibrations recorded in the Buildings/Structures not belonging to Owner is less than 10 mm/sec. 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 121.7 dB was recorded at the distance of 135.5 m from blast location in blast No. 5 and the next highest noise level was 120.6 dB at the distance of 135.5 m from blast location in Blast No 6. The noise level recorded while monitoring in the nearby house were 96.28 dB, 97.35 dB and 98.7dB.

Fly rocks another serious problem associated with blasting operations. It was observed to a distance of 30 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).*

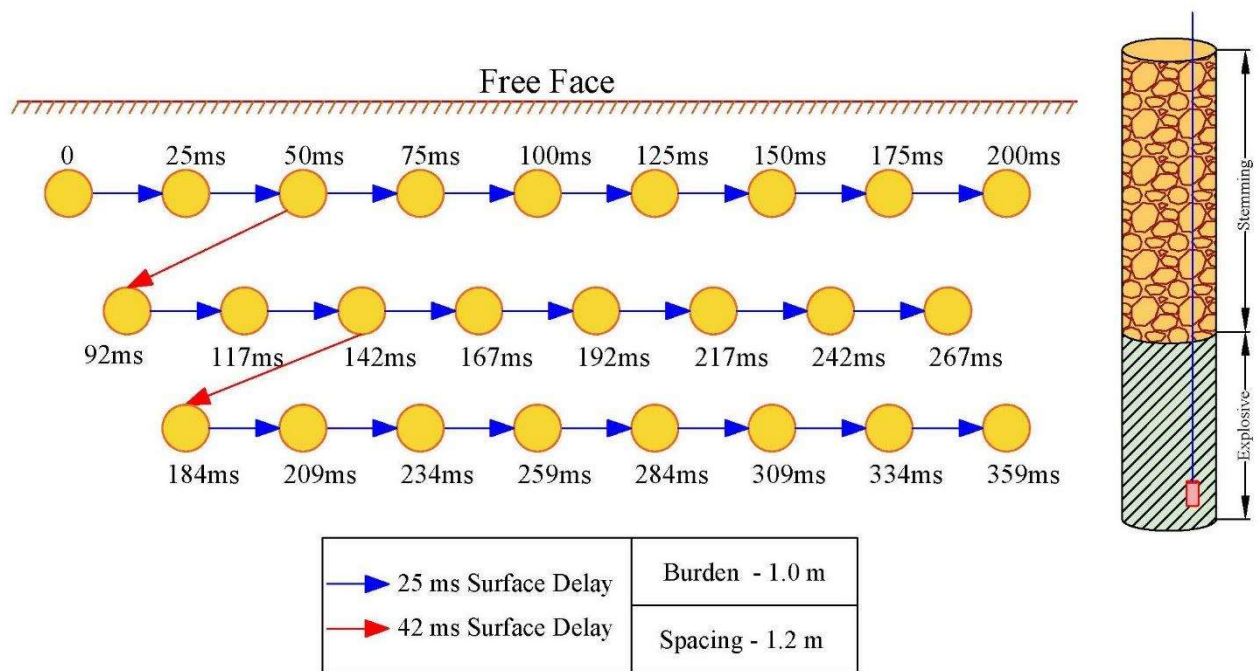
## RECOMMENDATIONS

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 25 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 650 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.17 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 17: 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 25	Maximum of 25
6	Explosive charge/ Hole (gm)	425	650
7	Maximum charge/ Delay (gm)	425	650
8	Total charge/ Blast (kg)	10.625	16.25
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
12	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

<http://www.vulcanhammer.net/svinkin/prediction.php>

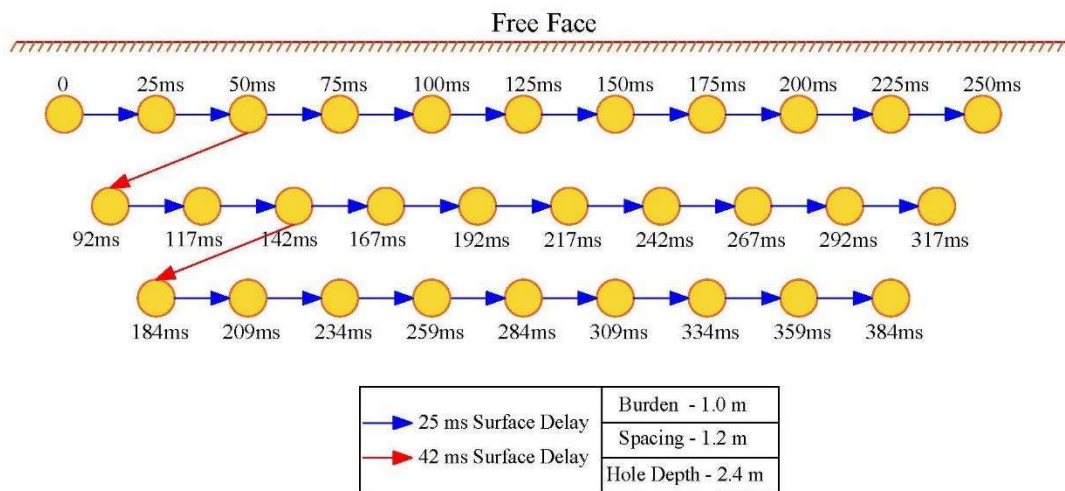
<http://terrock.com.au/vibration/blasting.html>



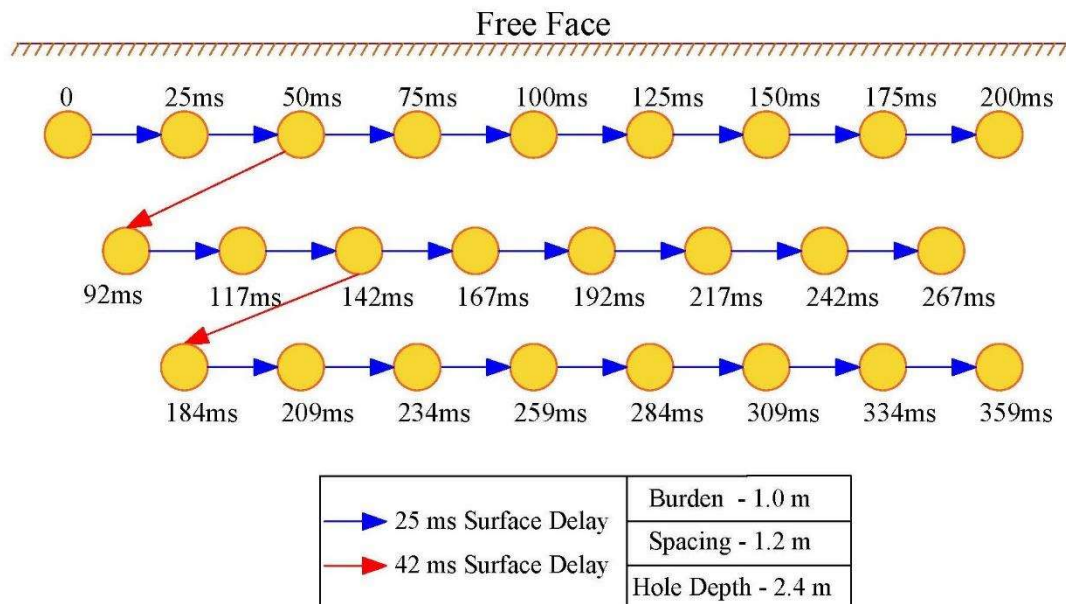
# APPENDIX – I

## (LAYOUTS OF BLASTS STUDIES)

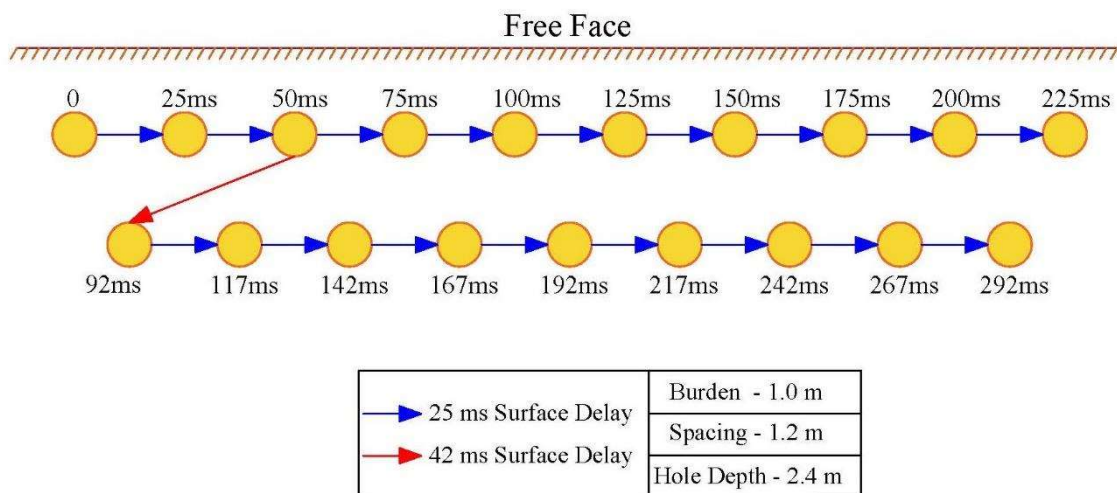
### Layout of Blast No: 1



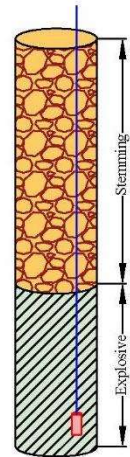
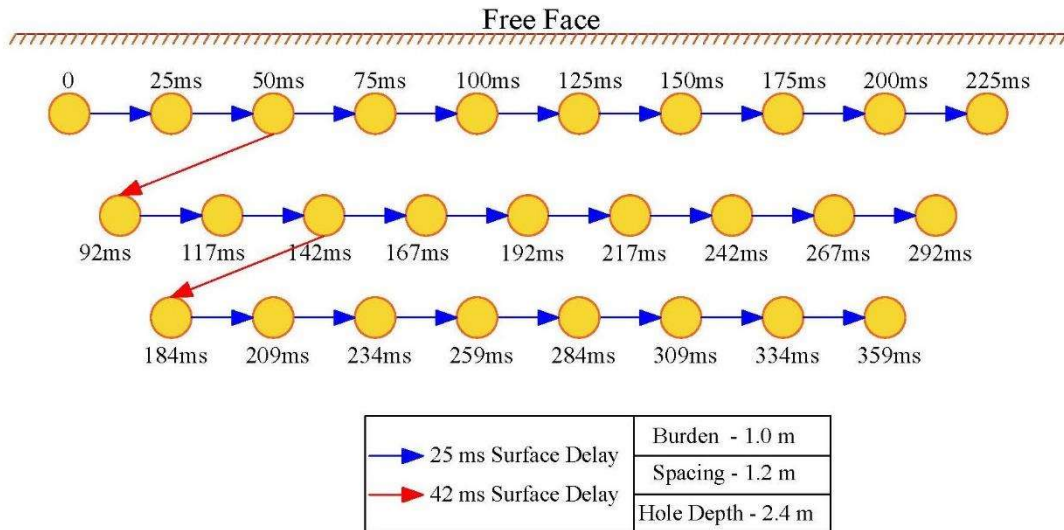
### Layout of Blast No: 2



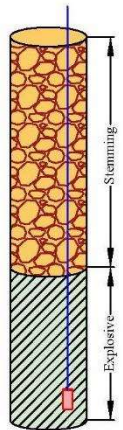
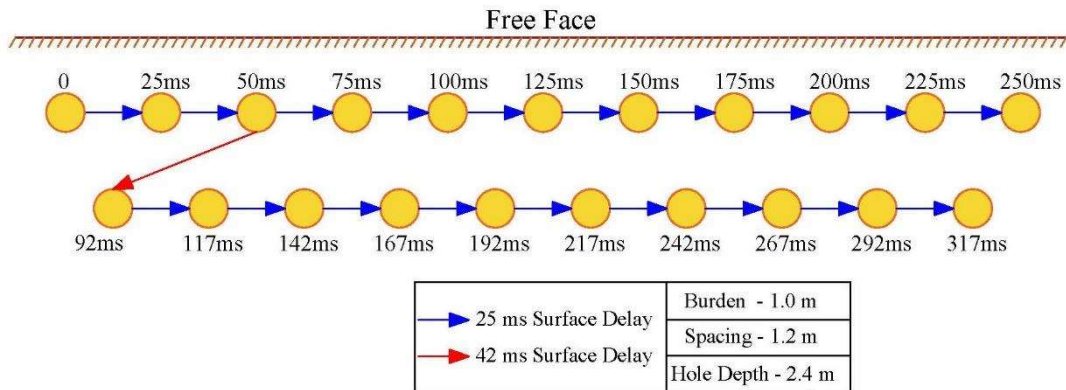
### Layout of Blast No: 3



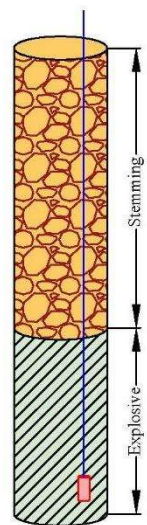
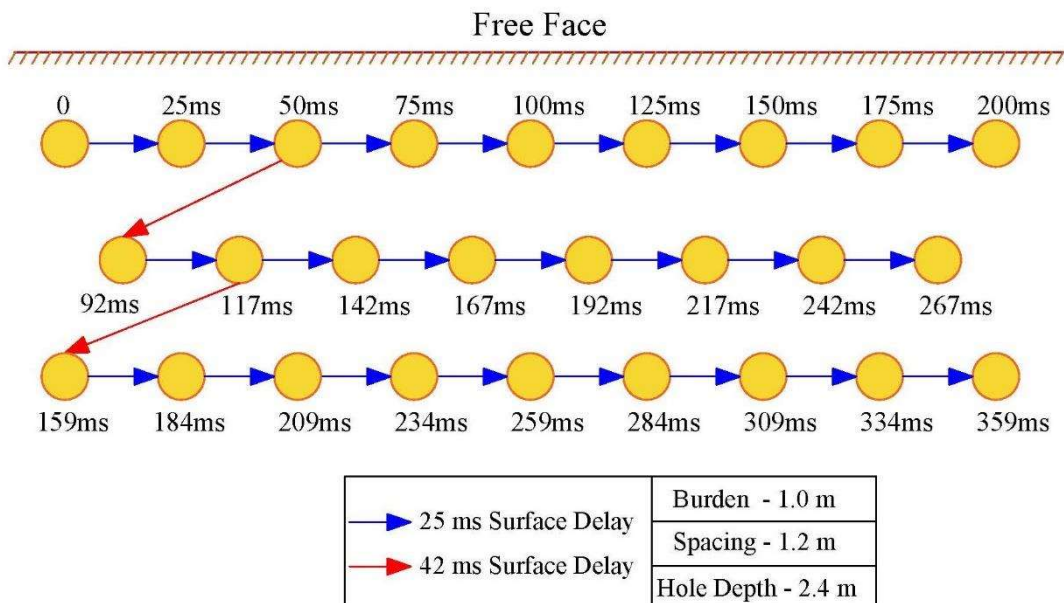
### Layout of Blast No: 4



### Layout of Blast No: 5

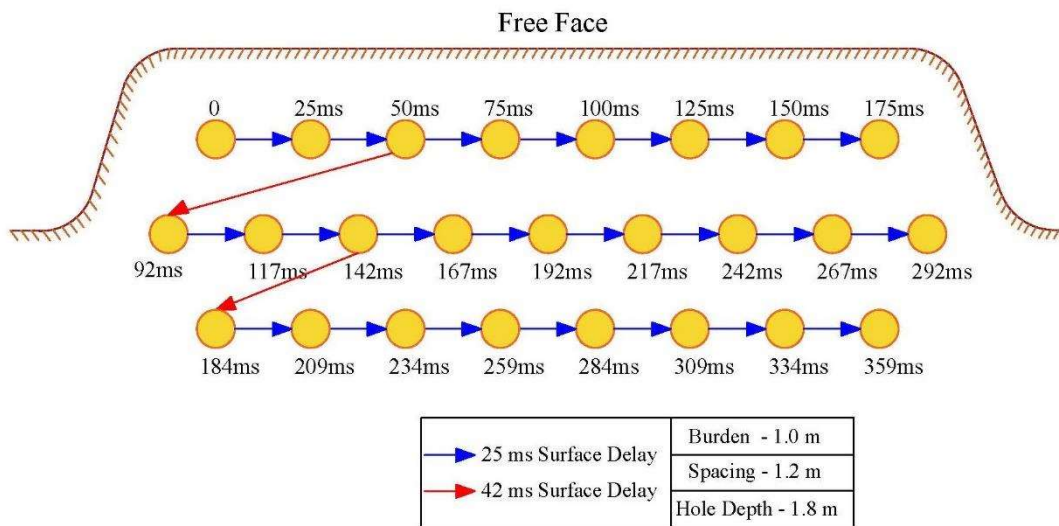


### Layout of Blast No: 6

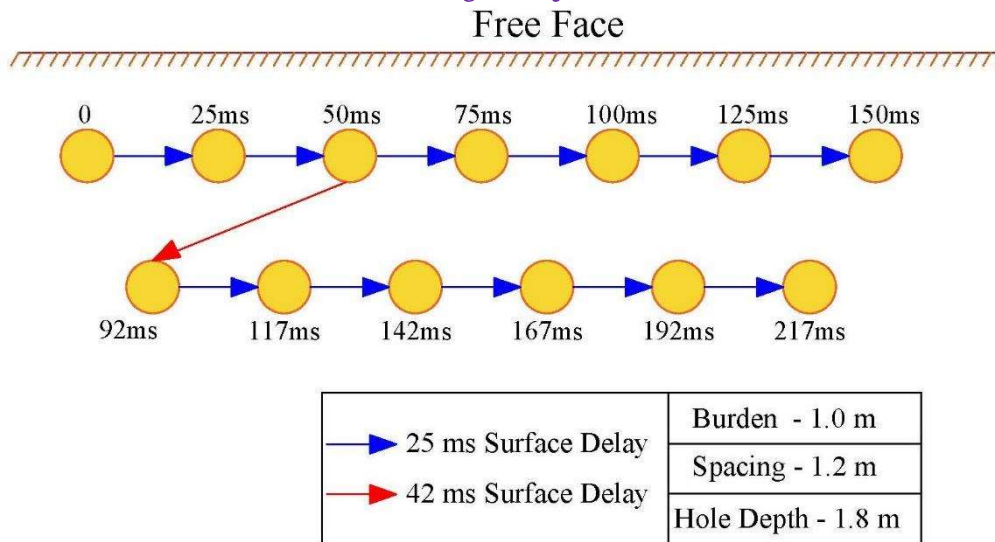




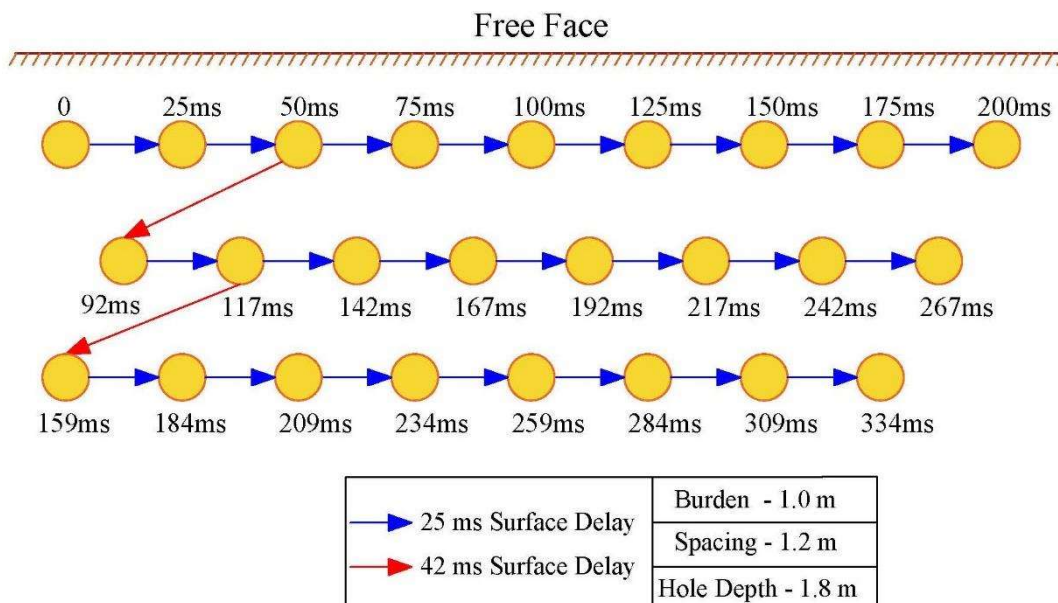
### Layout of Blast No: 7



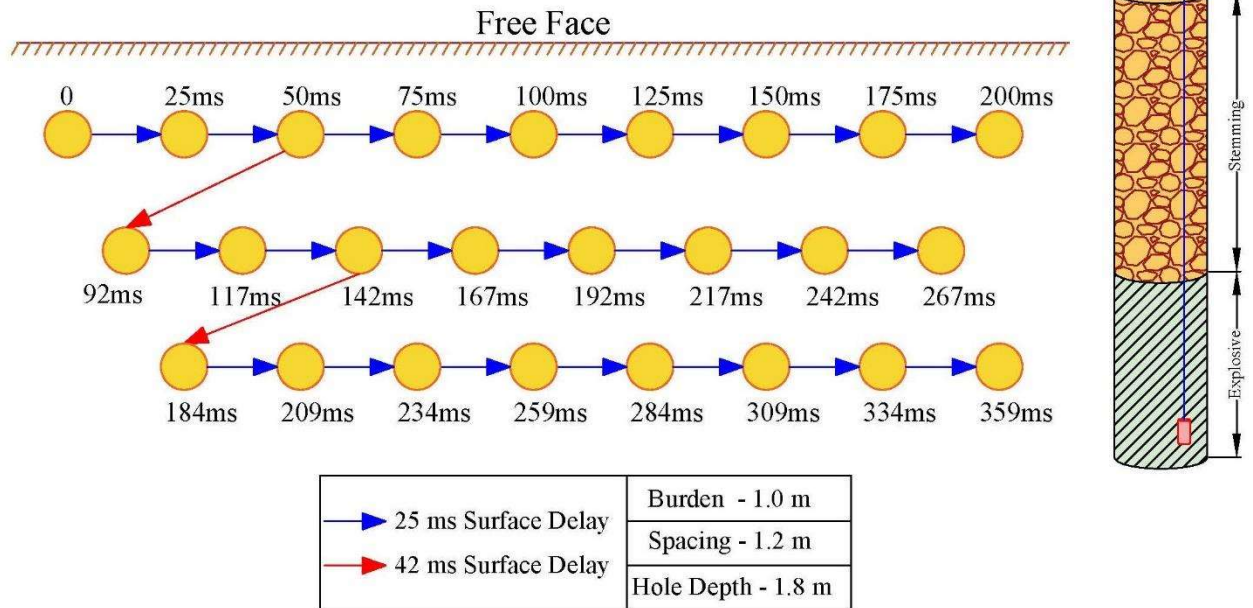
### Layout of Blast No: 8



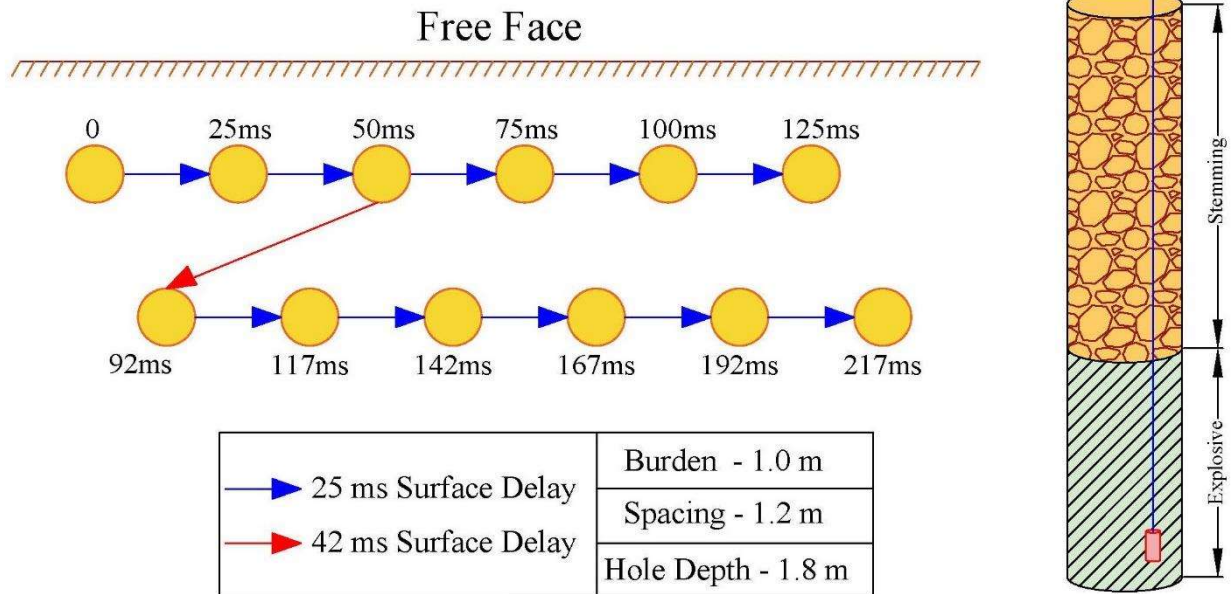
### Layout of Blast No: 9



### Layout of Blast No: 10



### Layout of Blast No: 11



## APPENDIX – II (BLAST EVENT REPORTS)



**Date/Time** MicL at 09:59:58 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

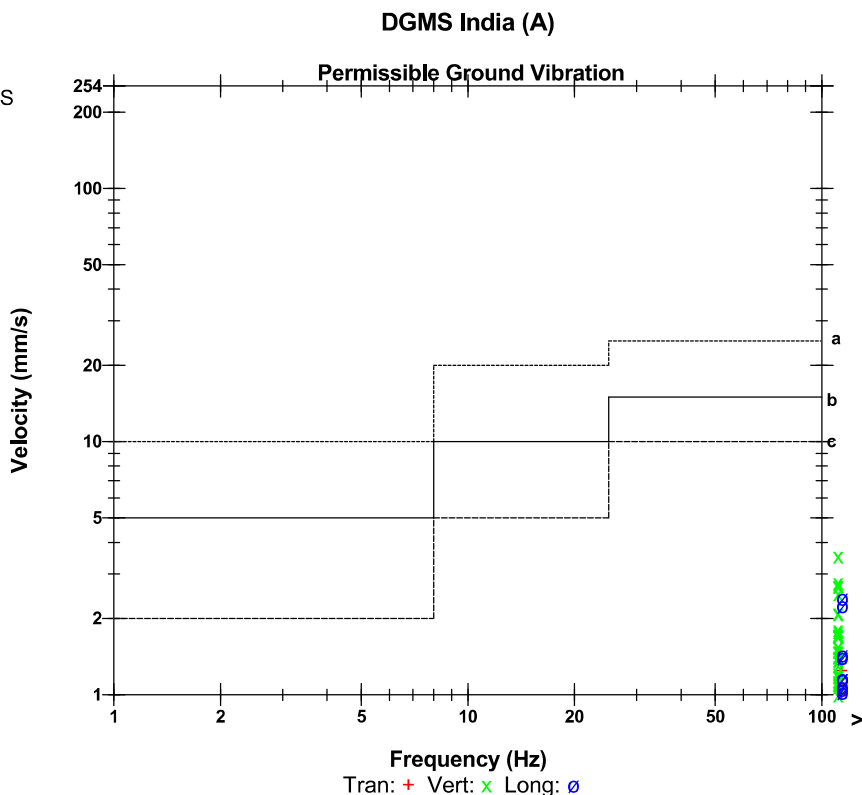
**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809095958.IDFW  
**Scaled Distance** 117.0 (90.6 m, 0.6 kg)

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

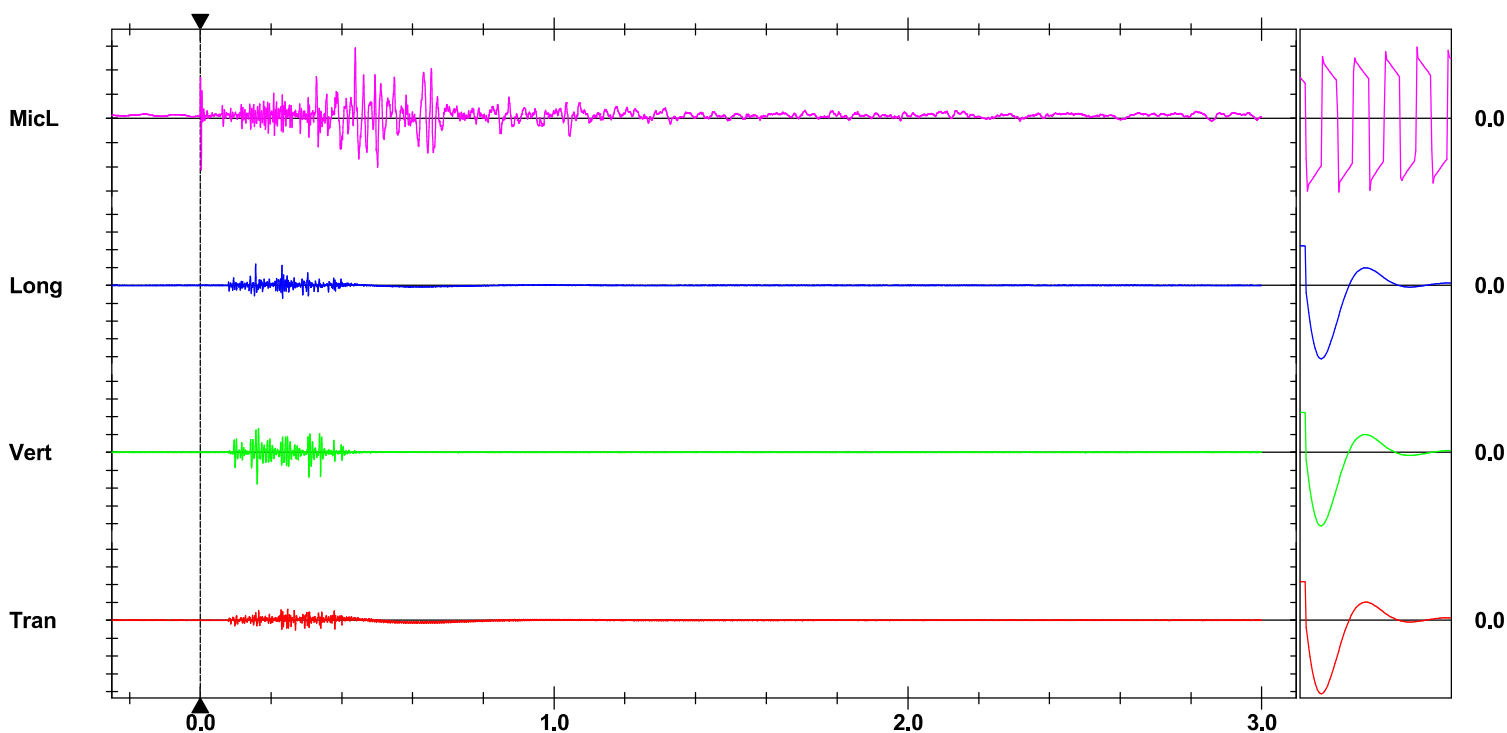
**Microphone** Linear Weighting  
**PSPL** 117.3 dB(L) at 0.438 sec  
**ZC Freq** 43 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1172 mv )

	Tran	Vert	Long	
PPV	1.245	3.539	2.412	mm/s
ZC Freq	>200	128	146	Hz
Time (Rel. to Trig)	0.248	0.161	0.157	sec
Peak Acceleration	0.202	0.288	0.283	g
Peak Displacement	0.023	0.005	0.015	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.5	7.3	Hz
Overswing Ratio	4.1	4.1	4.2	

**Peak Vector Sum** 3.541 mm/s at 0.161 sec



a) Industrial Buildings  
b) Domestic houses/structures  
c) Historic objects, sensitive structures



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

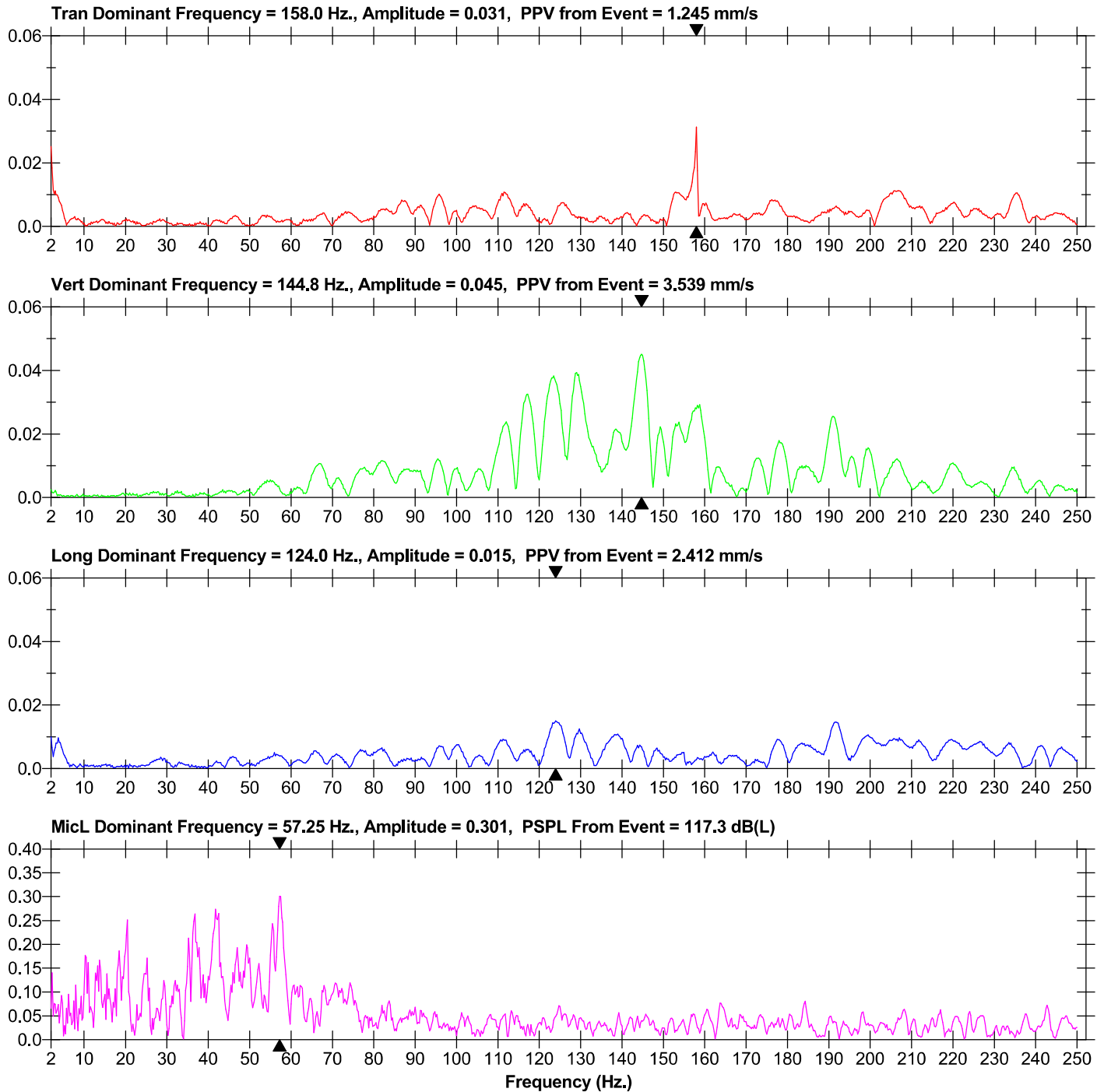
Sensor Check

**Date/Time** MicL at 09:59:58 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 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  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809095958.IDFW  
**Scaled Distance** 117.0 (90.6 m, 0.6 kg)

## Notes

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



**Date/Time** MicL at 10:00:42 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 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  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_202400809100042.IDFW  
**Scaled Distance** 117.0 (90.6 m, 0.6 kg)

## Notes

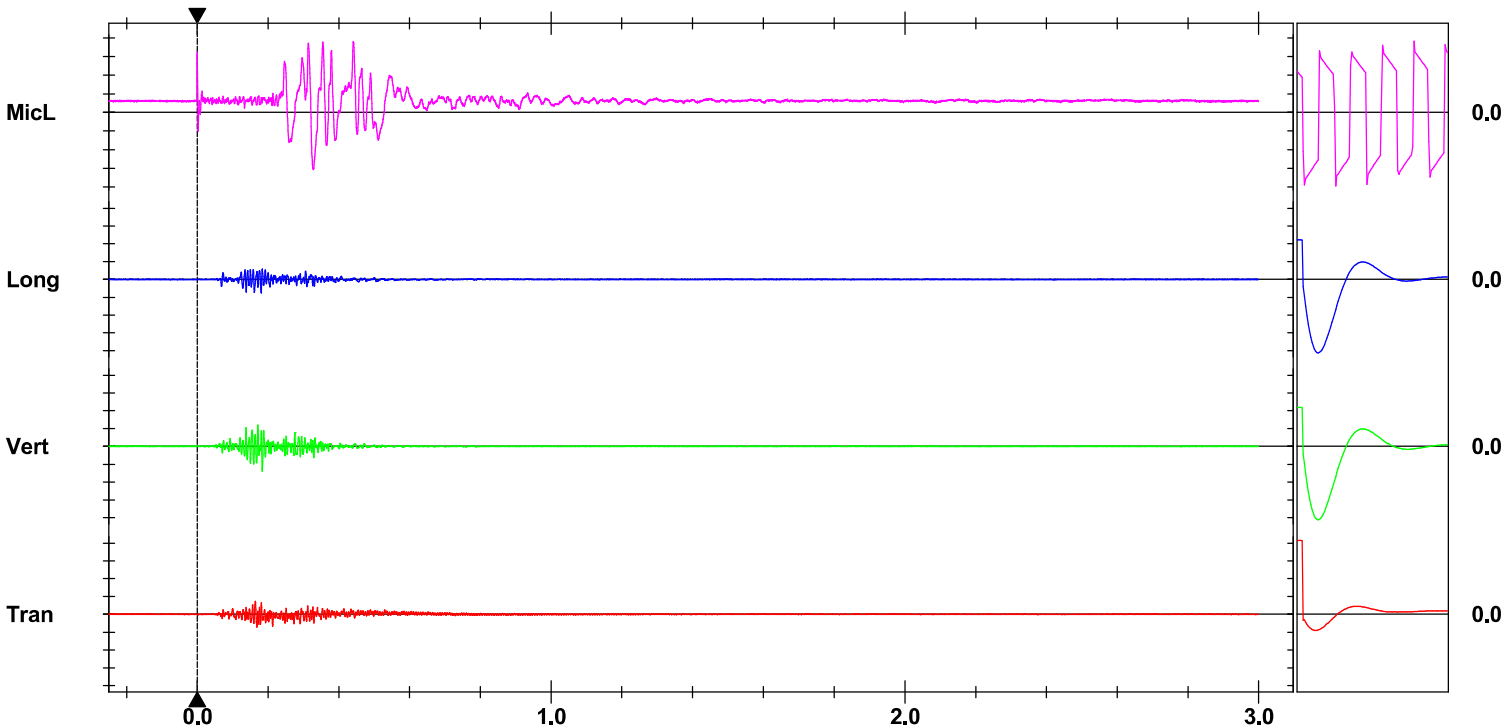
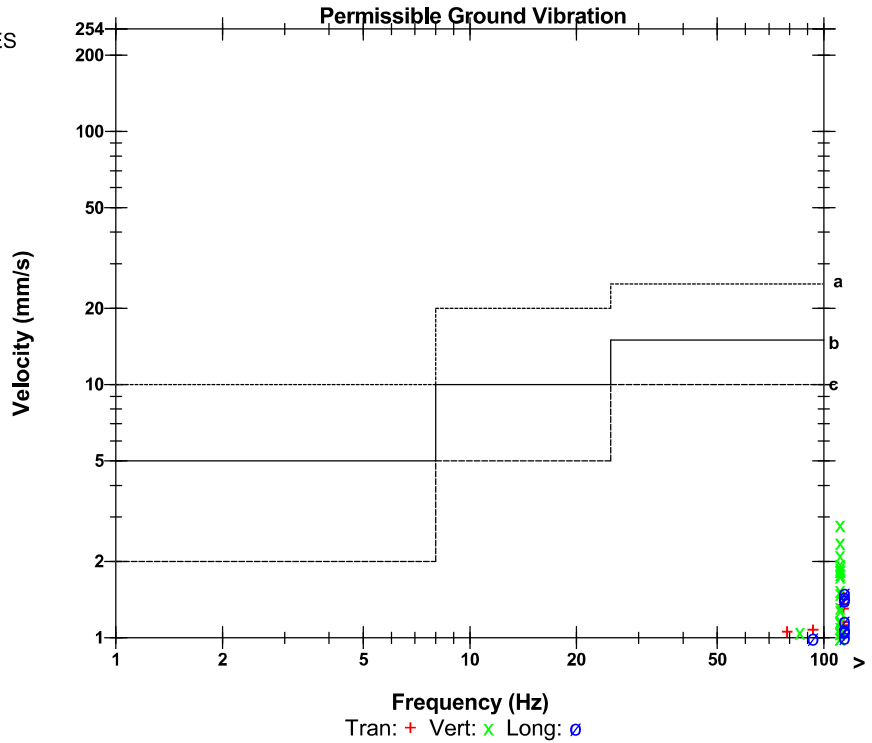
**Location:** STATION-1  
**Client:** GEORGE KOCUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**

**Microphone** Linear Weighting  
**PSPL** 115.9 dB(L) at 0.441 sec  
**ZC Freq** 11.0 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1226 mv )

	Tran	Vert	Long	
<b>PPV</b>	1.450	2.798	1.505	mm/s
<b>ZC Freq</b>	114	146	102	Hz
<b>Time (Rel. to Trig)</b>	0.164	0.184	0.181	sec
<b>Peak Acceleration</b>	0.140	0.229	0.145	g
<b>Peak Displacement</b>	0.002	0.003	0.002	mm
<b>Sensor Check</b>	Check	Passed	Passed	
<b>Frequency</b>	9.1	7.3	7.3	Hz
<b>Overswing Ratio</b>	1867.0	4.2	4.2	

**Peak Vector Sum** 3.101 mm/s at 0.184 sec

## DGMS India (A)



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

Sensor Check

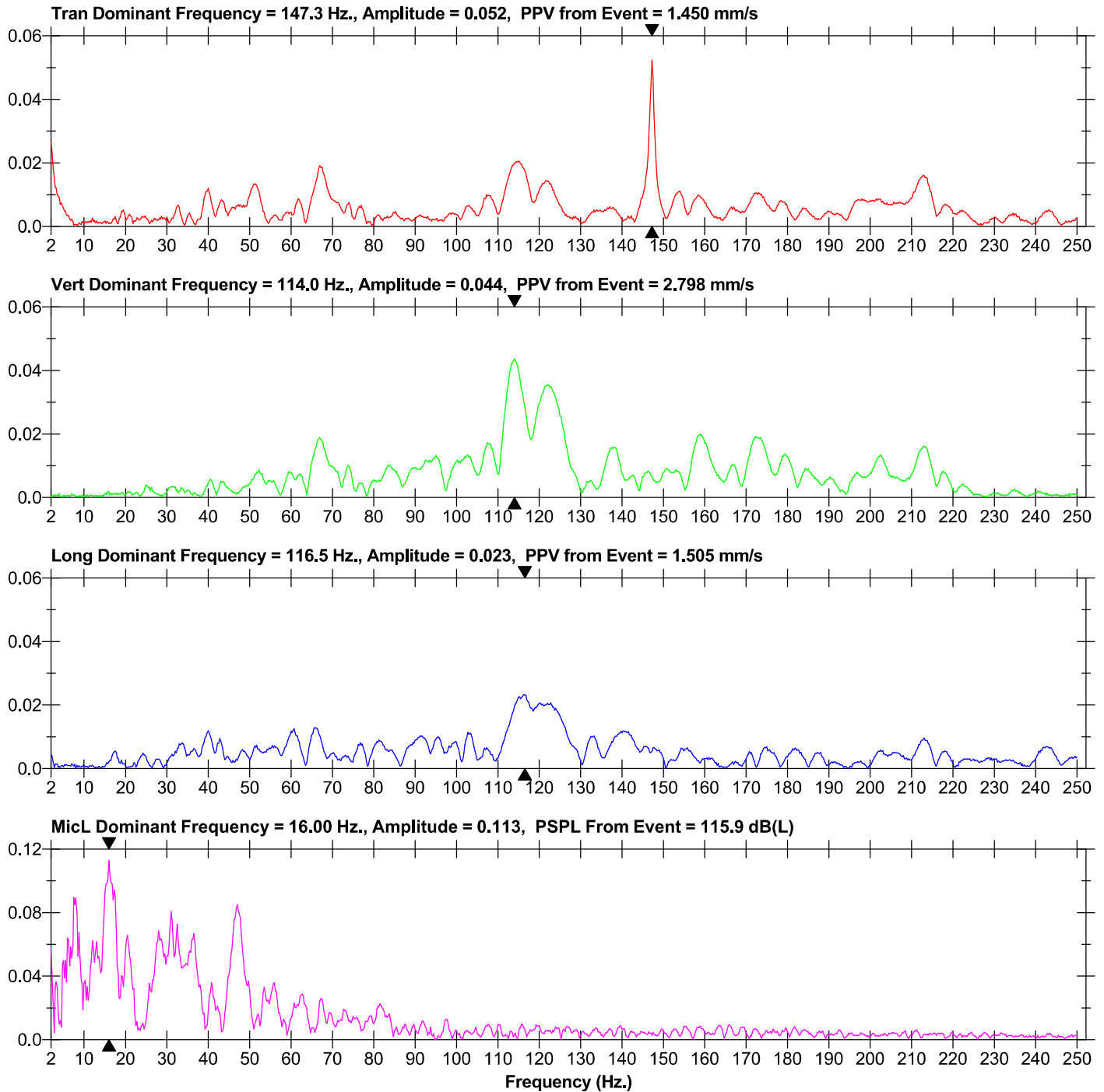


**Date/Time** MicL at 10:00:42 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809100042.IDFW  
**Scaled Distance** 117.0 (90.6 m, 0.6 kg)

## Notes

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





Event Report

Date/Time Vert at 10:02:54 August 9, 2024  
Trigger Source Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
Range Geo: 254.0 mm/s  
Record Time 3.0 sec at 2048 sps  
Job Number: 1  
Operator/Setup: Operator/factory.MMB

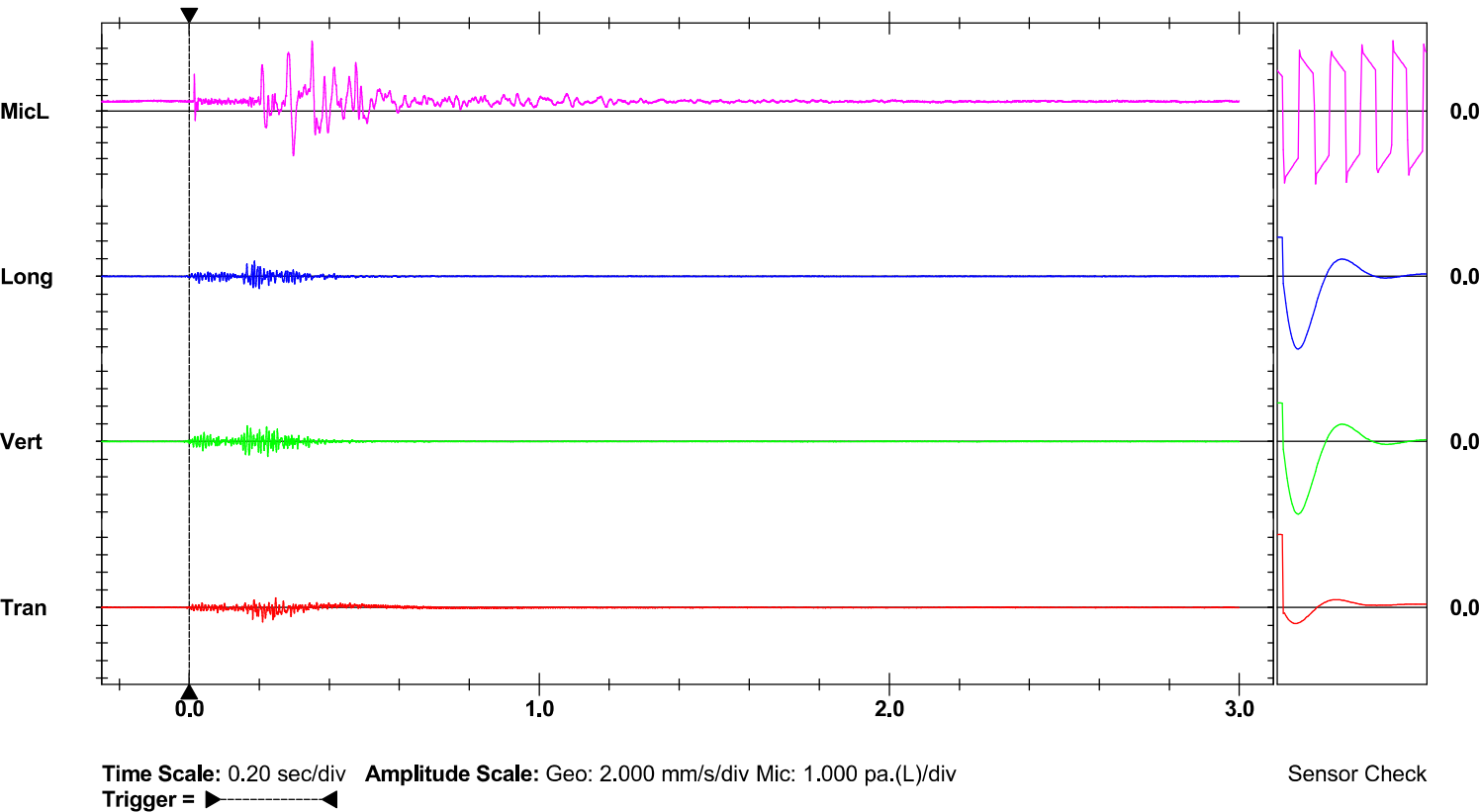
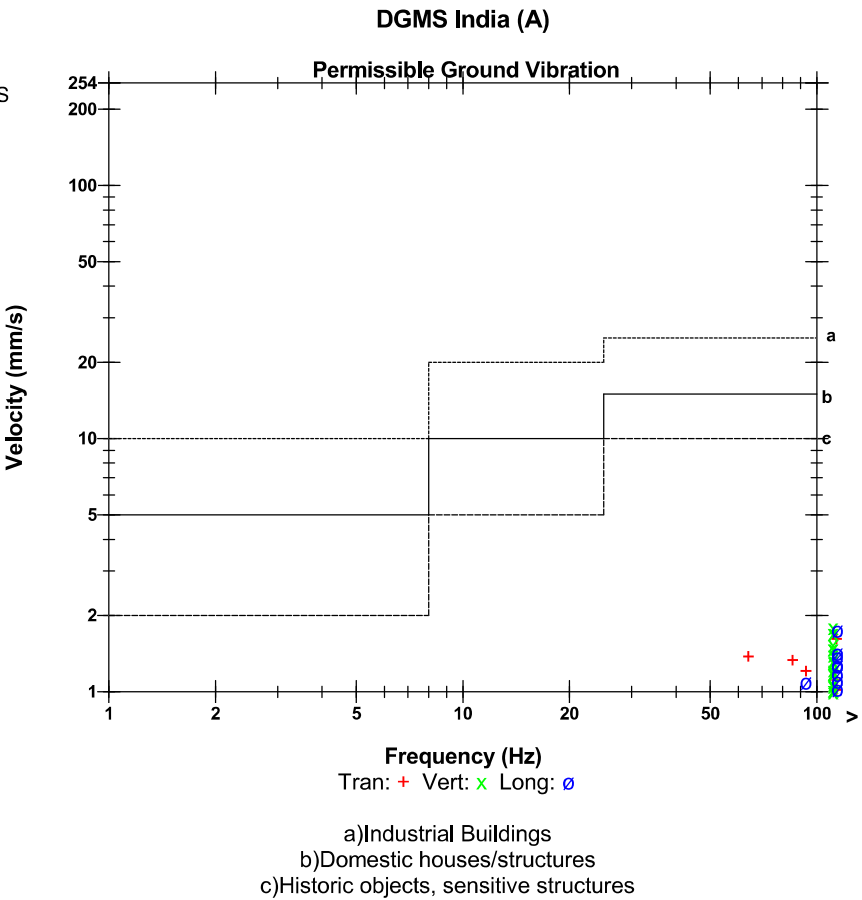
Serial Number UM18455 V 10-90FB Micromate ISEE  
Battery Level 3.8 Volts  
Unit Calibration October 3, 2023 by UES New Delhi  
File Name UM18455\_20240809100254.IDFW  
Scaled Distance 117.0 (90.6 m, 0.6 kg)

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

Microphone Linear Weighting  
PSPL 116.2 dB(L) at 0.351 sec  
ZC Freq 9.6 Hz  
Channel Test Passed (Freq = 19.7 Hz Amp = 1226 mv )

	Tran	Vert	Long	
PPV	1.616	1.797	1.758	mm/s
ZC Freq	102	102	146	Hz
Time (Rel. to Trig)	0.209	0.166	0.187	sec
Peak Acceleration	0.100	0.165	0.150	g
Peak Displacement	0.003	0.003	0.002	mm
Sensor Check	Check	Passed	Passed	
Frequency	9.1	7.3	7.3	Hz
Overswing Ratio	1867.0	4.2	4.2	

Peak Vector Sum 2.067 mm/s at 0.166 sec

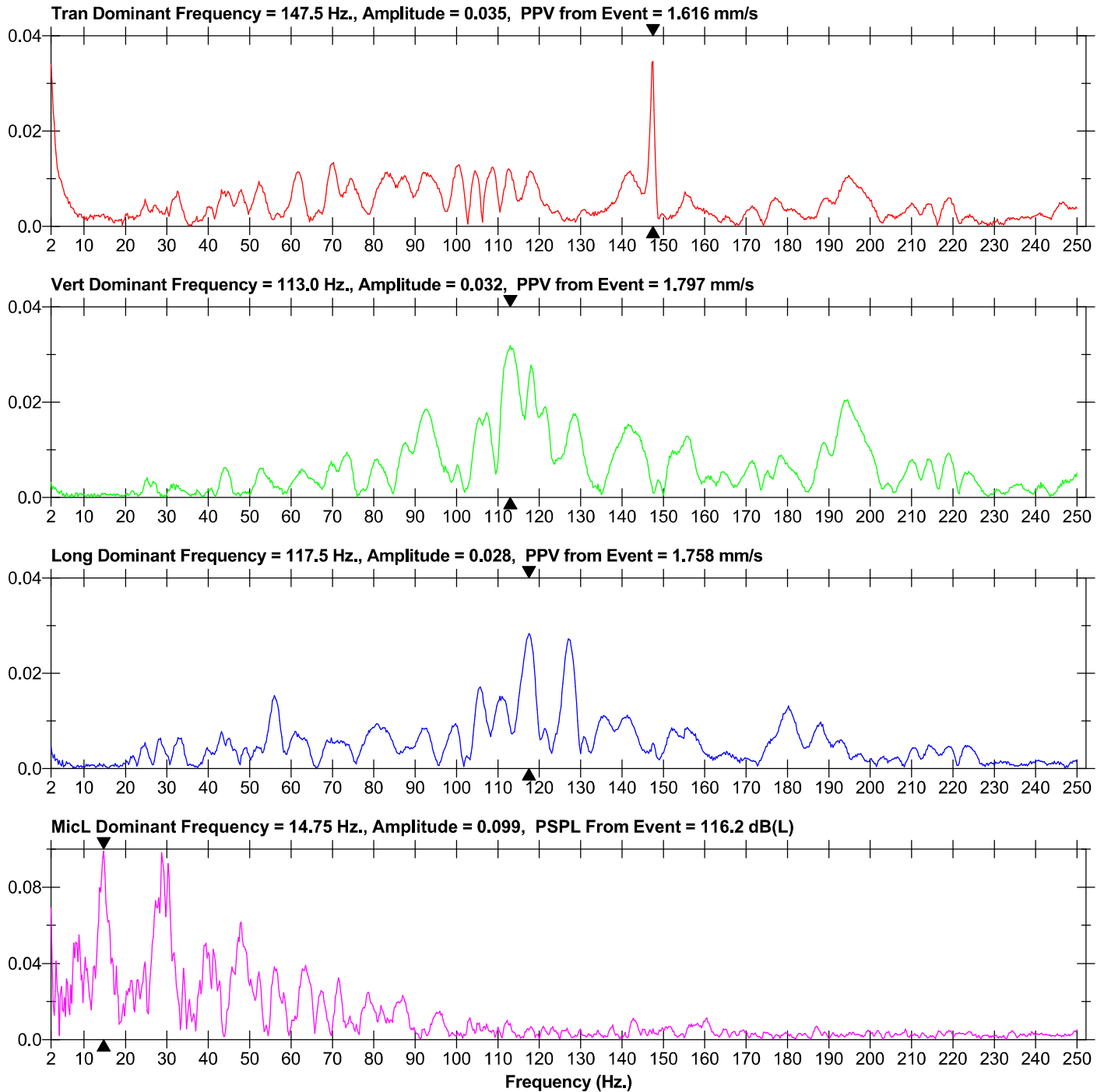


**Date/Time** Vert at 10:02:54 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809100254.IDFW  
**Scaled Distance** 117.0 (90.6 m, 0.6 kg)

## Notes

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







Event Report

Date/Time MicL at 10:09:23 August 9, 2024  
Trigger Source Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
Range Geo: 254.0 mm/s  
Record Time 3.0 sec at 2048 sps  
Job Number: 1  
Operator/Setup: Operator/factory.MMB

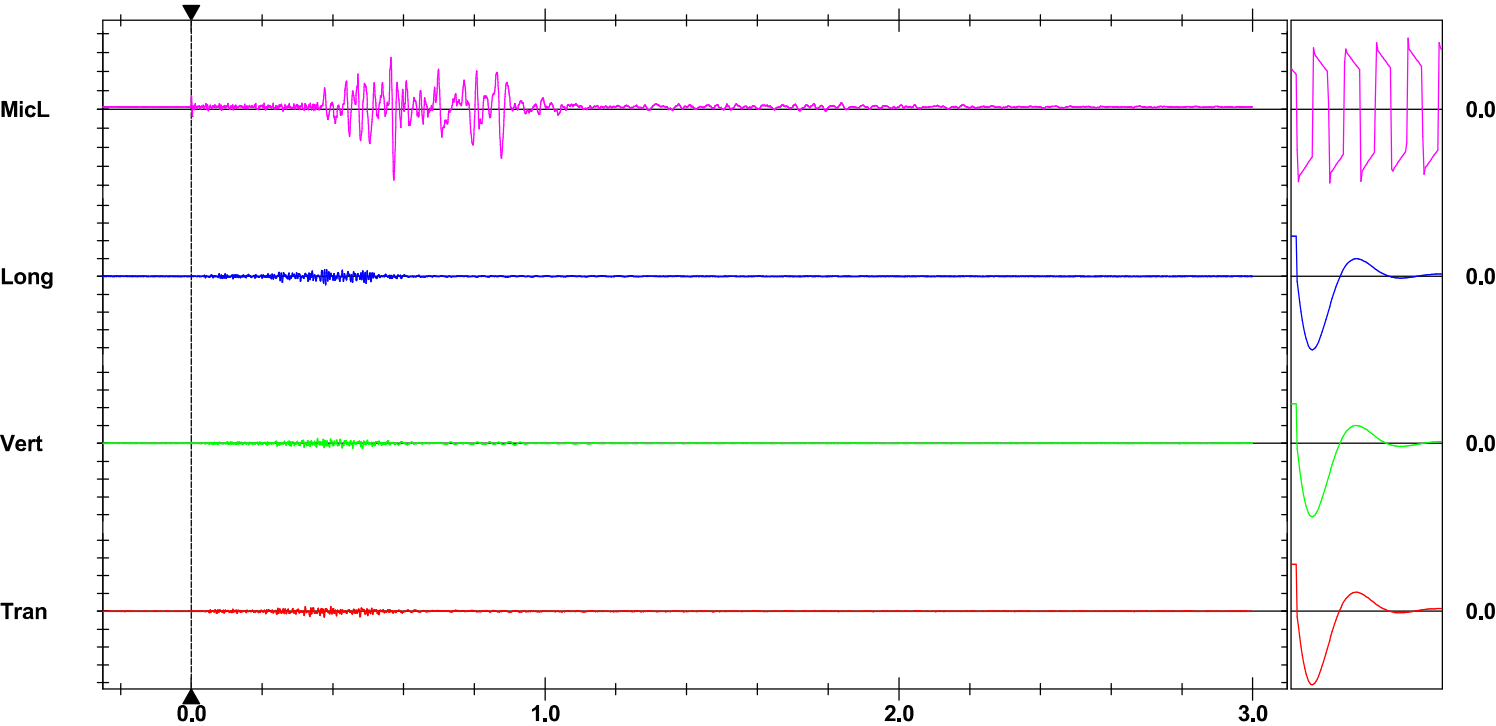
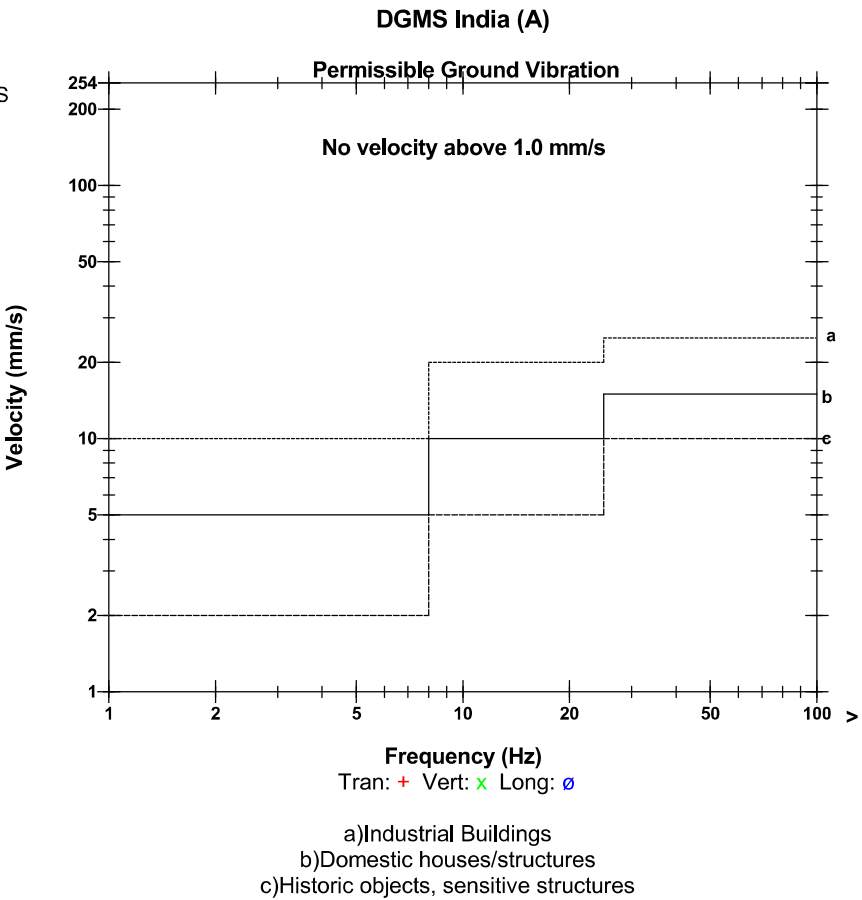
Serial Number UM18455 V 10-90FB Micromate ISEE  
Battery Level 3.8 Volts  
Unit Calibration October 3, 2023 by UES New Delhi  
File Name UM18455\_20240809100923.IDFW  
Scaled Distance 174.9 (135.5 m, 0.6 kg)

Notes  
Location: STATION-2  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

Microphone Linear Weighting  
PSPL 119.4 dB(L) at 0.572 sec  
ZC Freq 47 Hz  
Channel Test Passed (Freq = 19.7 Hz Amp = 1185 mv )

	Tran	Vert	Long	
PPV	0.646	0.583	0.977	mm/s
ZC Freq	114	146	171	Hz
Time (Rel. to Trig)	0.376	0.356	0.380	sec
Peak Acceleration	0.058	0.069	0.100	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.3	Hz
Overswing Ratio	3.9	4.1	4.2	

Peak Vector Sum 1.039 mm/s at 0.380 sec



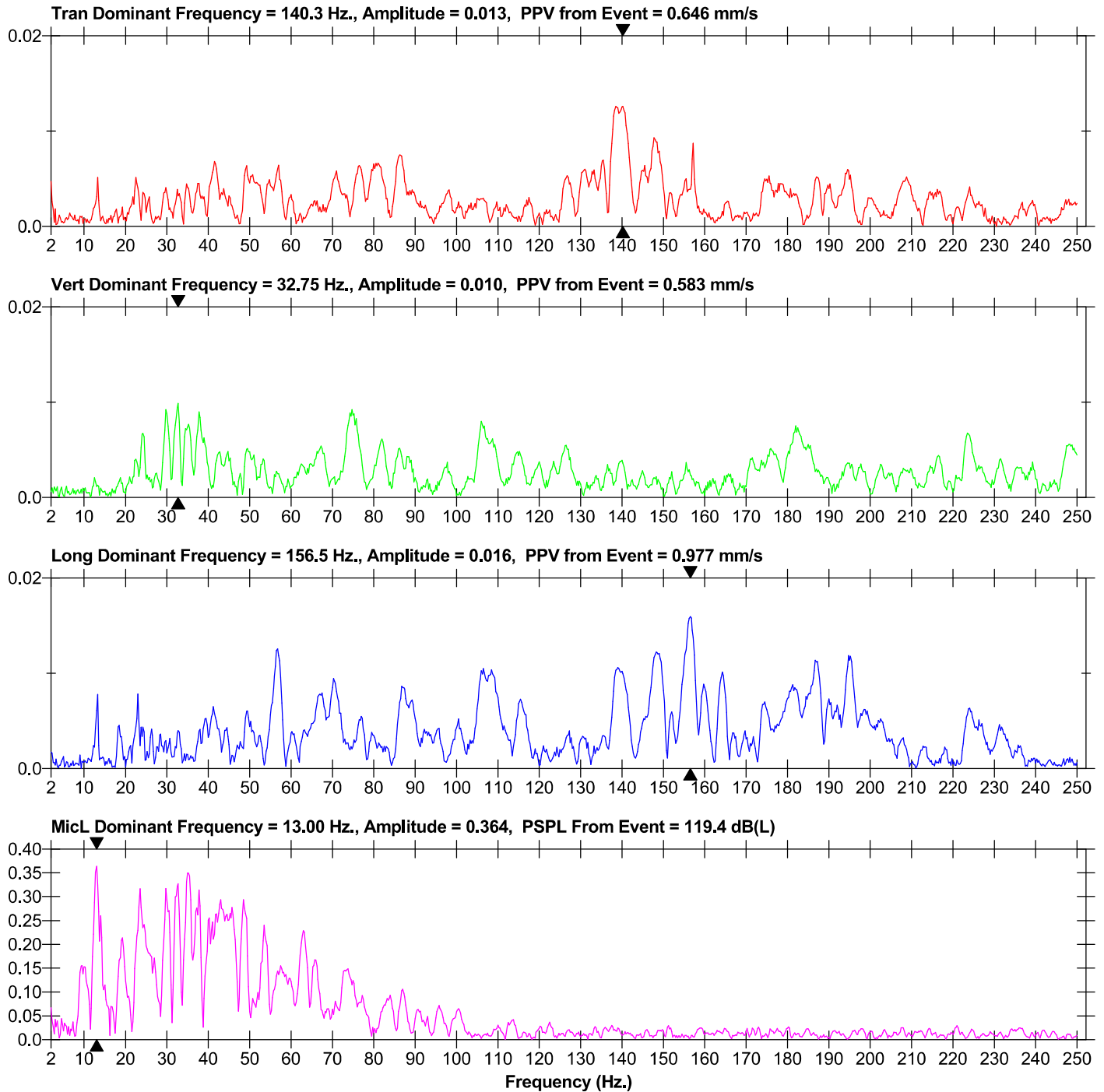
Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div  
Trigger =

Sensor Check

**Date/Time** MicL at 10:09:23 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 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  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809100923.IDFW  
**Scaled Distance** 174.9 (135.5 m, 0.6 kg)

**Notes**  
 Location: STATION-2  
 Client: GEORGE KOCHUPARAMBIL  
 User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
 General:





Event Report

Date/Time MicL at 10:09:58 August 9, 2024  
Trigger Source Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
Range Geo: 254.0 mm/s  
Record Time 3.0 sec at 2048 sps  
Job Number: 1  
Operator/Setup: Operator/factory.MMB

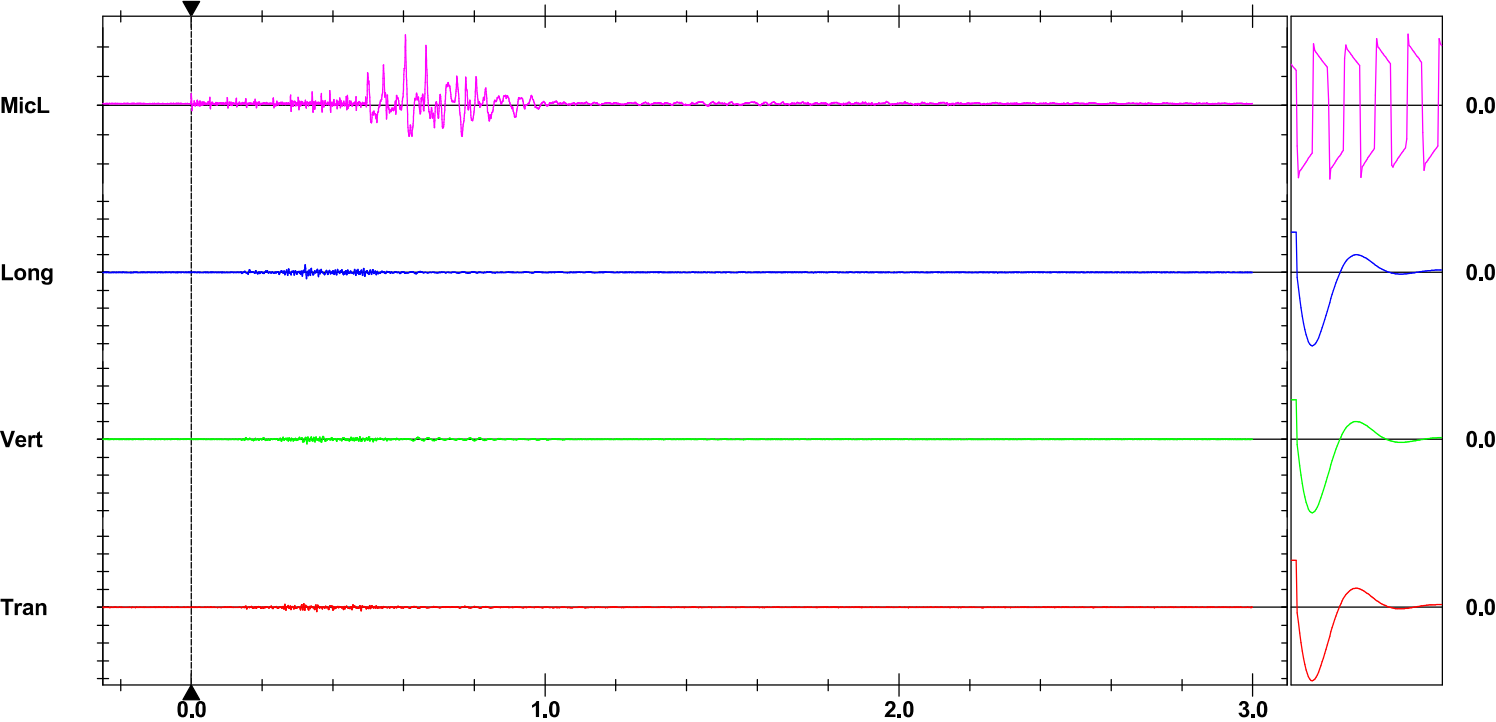
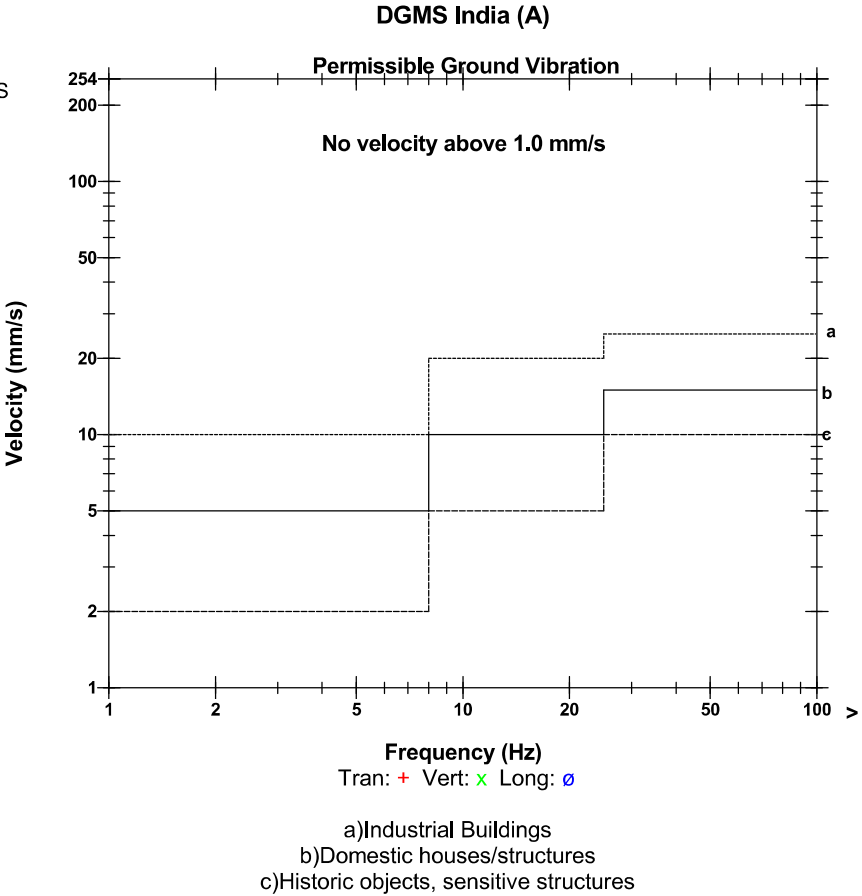
Serial Number UM18455 V 10-90FB Micromate ISEE  
Battery Level 3.8 Volts  
Unit Calibration October 3, 2023 by UES New Delhi  
File Name UM18455\_20240809100958.IDFW  
Scaled Distance 174.9 (135.5 m, 0.6 kg)

Notes  
Location: STATION-2  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

Microphone Linear Weighting  
PSPL 121.7 dB(L) at 0.605 sec  
ZC Freq 34 Hz  
Channel Test Passed (Freq = 19.7 Hz Amp = 1185 mv )

	Tran	Vert	Long	
PPV	0.481	0.497	0.867	mm/s
ZC Freq	171	171	93	Hz
Time (Rel. to Trig)	0.354	0.327	0.322	sec
Peak Acceleration	0.051	0.048	0.077	g
Peak Displacement	0.000	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.3	Hz
Overswing Ratio	3.9	4.1	4.2	

Peak Vector Sum 0.894 mm/s at 0.322 sec



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 10.000 pa.(L)/div  
Trigger =

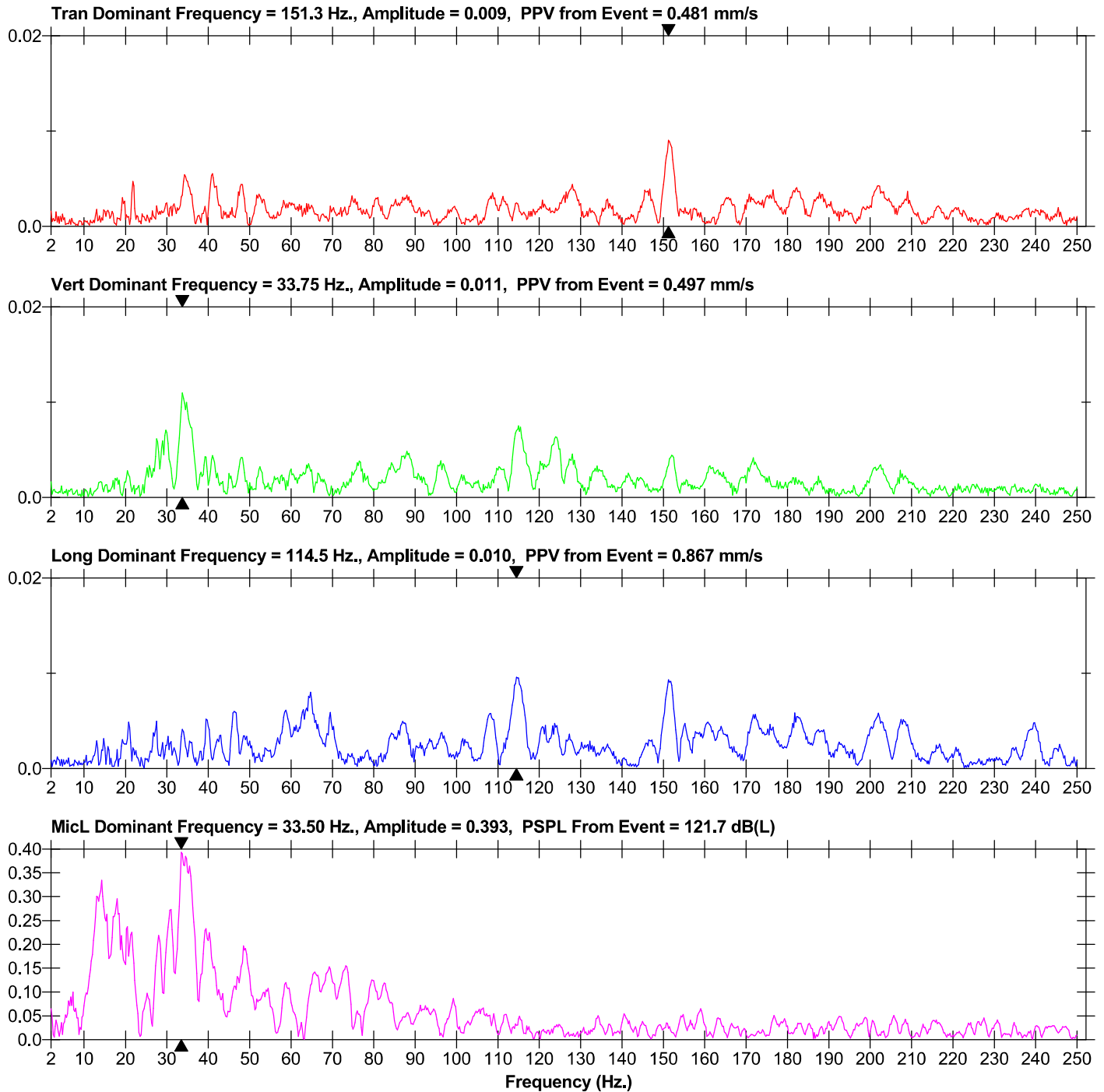
Sensor Check

**Date/Time** MicL at 10:09:58 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 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  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809100958.IDFW  
**Scaled Distance** 174.9 (135.5 m, 0.6 kg)

## Notes

**Location:** STATION-2  
**Client:** GEORGE KOCHUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**







Event Report

Date/Time Long at 10:12:49 August 9, 2024  
Trigger Source Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
Range Geo: 254.0 mm/s  
Record Time 3.0 sec at 2048 sps  
Job Number: 1  
Operator/Setup: Operator/factory.MMB

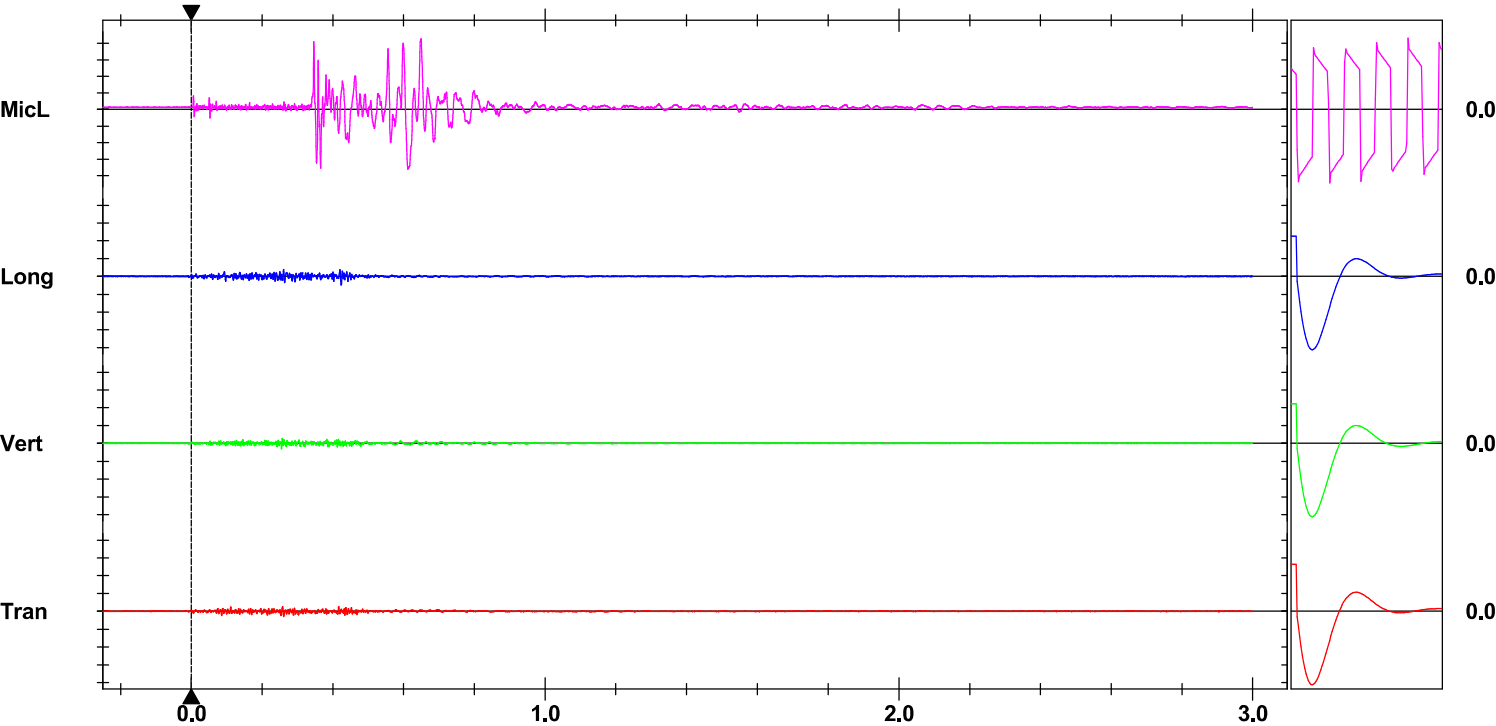
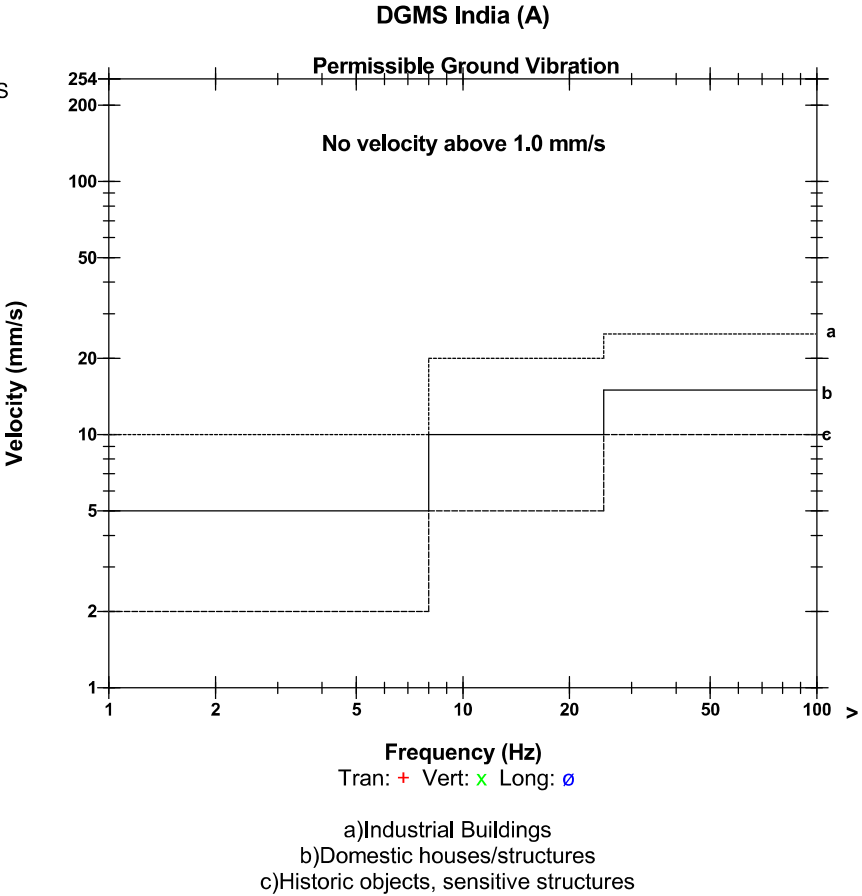
Serial Number UM18455 V 10-90FB Micromate ISEE  
Battery Level 3.8 Volts  
Unit Calibration October 3, 2023 by UES New Delhi  
File Name UM18455\_20240809101249.IDFW  
Scaled Distance 174.9 (135.5 m, 0.6 kg)

Notes  
Location: STATION-2  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

Microphone Linear Weighting  
PSPL 120.6 dB(L) at 0.649 sec  
ZC Freq 33 Hz  
Channel Test Passed (Freq = 19.7 Hz Amp = 1185 mv )

	Tran	Vert	Long	
PPV	0.560	0.599	0.962	mm/s
ZC Freq	114	>200	128	Hz
Time (Rel. to Trig)	0.261	0.255	0.423	sec
Peak Acceleration	0.058	0.086	0.079	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.3	Hz
Overswing Ratio	3.9	4.1	4.2	

Peak Vector Sum 1.020 mm/s at 0.261 sec



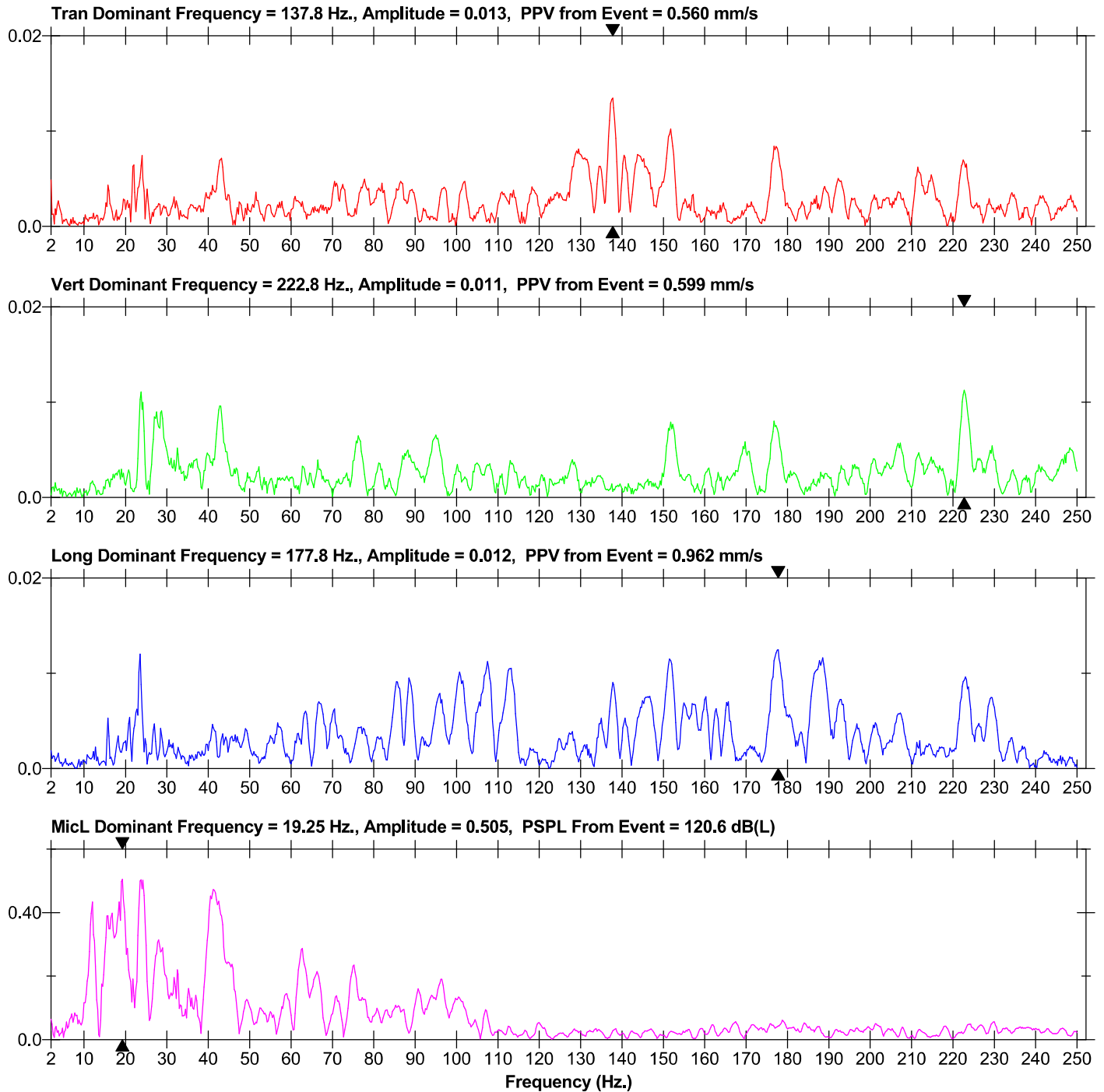
Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div  
Trigger =

Sensor Check

**Date/Time** Long at 10:12:49 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 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  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809101249.IDFW  
**Scaled Distance** 174.9 (135.5 m, 0.6 kg)

**Notes**  
**Location:** STATION-2  
**Client:** GEORGE KOCHUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**





Event Report

Date/Time Long at 12:38:57 August 9, 2024  
Trigger Source Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
Range Geo: 254.0 mm/s  
Record Time 3.0 sec at 2048 sps  
Job Number: 1  
Operator/Setup: Operator/factory.MMB

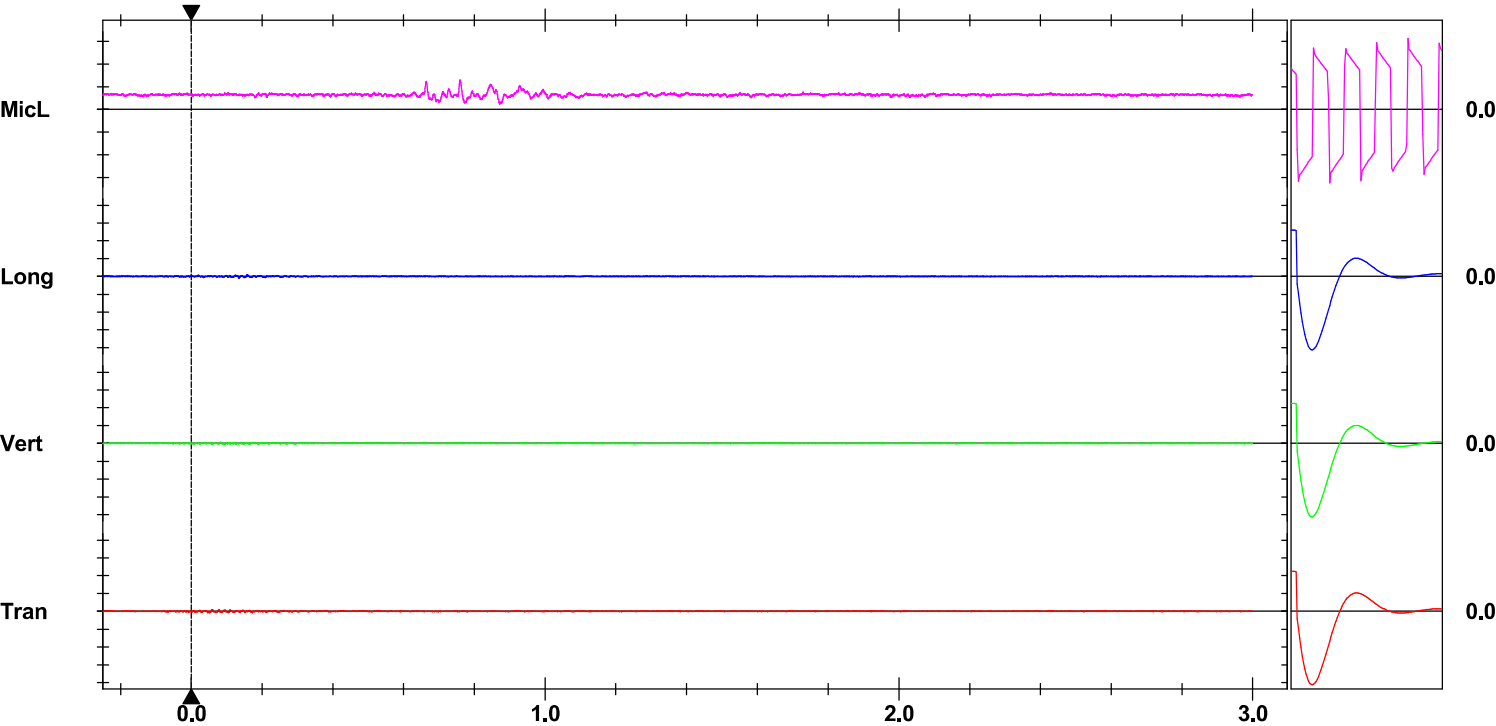
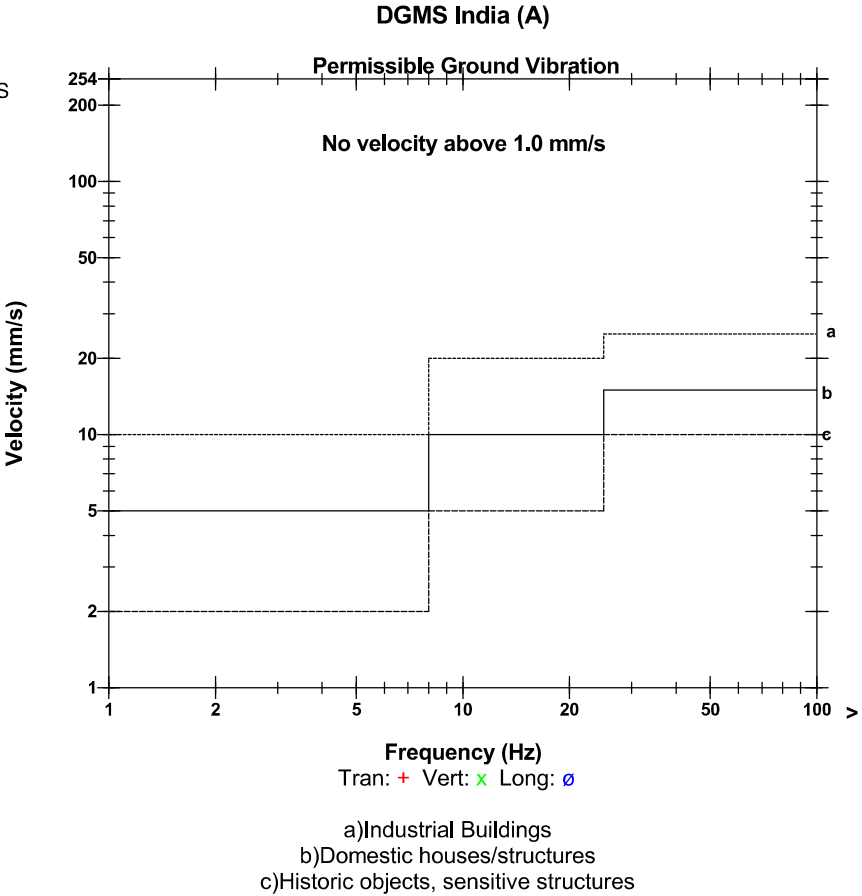
Serial Number UM18455 V 10-90FB Micromate ISEE  
Battery Level 3.8 Volts  
Unit Calibration October 3, 2023 by UES New Delhi  
File Name UM18455\_20240809123857.IDFW  
Scaled Distance 419.0 (265.0 m, 0.6 kg)

Notes  
Location: STATION-3  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

Microphone Linear Weighting  
PSPL 96.28 dB(L) at 0.760 sec  
ZC Freq N/A  
Channel Test Passed (Freq = 19.7 Hz Amp = 1157 mv )

	Tran	Vert	Long	
PPV	0.173	0.134	0.181	mm/s
ZC Freq	68	79	85	Hz
Time (Rel. to Trig)	0.060	0.083	0.135	sec
Peak Acceleration	0.013	0.010	0.016	g
Peak Displacement	0.001	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 0.193 mm/s at 0.135 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 =

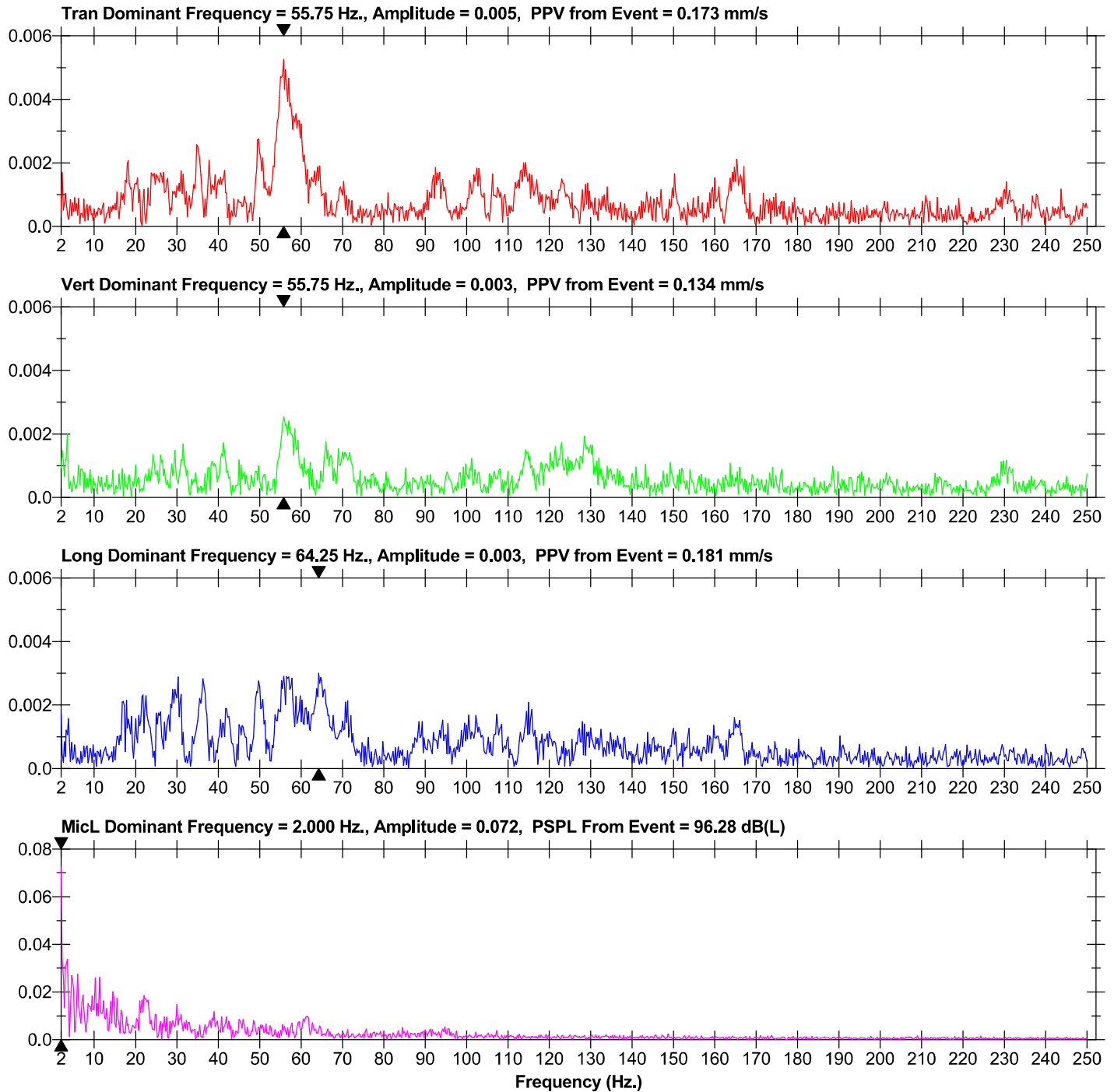
Sensor Check

**Date/Time** Long at 12:38:57 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 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  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809123857.IDFW  
**Scaled Distance** 419.0 (265.0 m, 0.6 kg)

## Notes

**Location:** STATION-3  
**Client:** GEORGE KOCHUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**







Event Report

Date/Time Tran at 12:39:56 August 9, 2024  
Trigger Source Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
Range Geo: 254.0 mm/s  
Record Time 3.0 sec at 2048 sps  
Job Number: 1  
Operator/Setup: Operator/factory.MMB

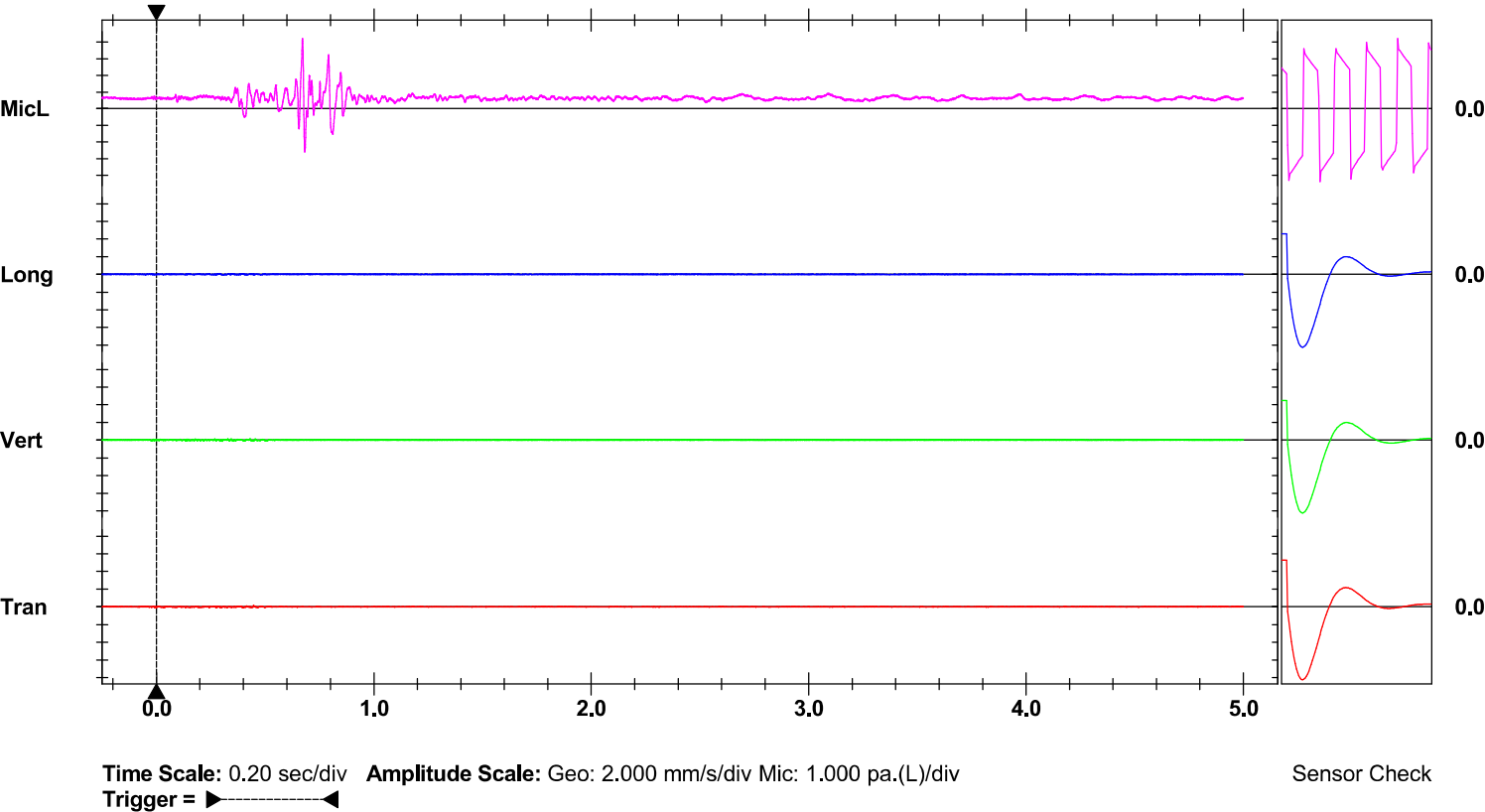
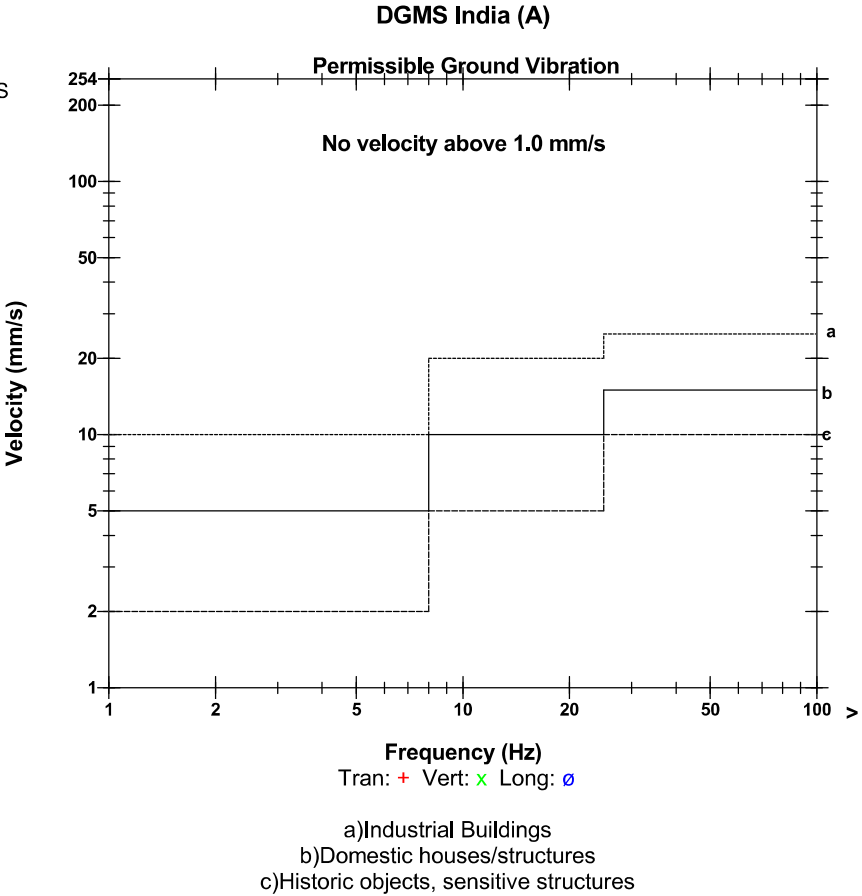
Serial Number UM18455 V 10-90FB Micromate ISEE  
Battery Level 3.8 Volts  
Unit Calibration October 3, 2023 by UES New Delhi  
File Name UM18455\_20240809123956.IDFW  
Scaled Distance 419.0 (265.0 m, 0.6 kg)

Notes  
Location: STATION-3  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

Microphone Linear Weighting  
PSPL 98.7 dB(L) at 0.672 sec  
ZC Freq 28 Hz  
Channel Test Passed (Freq = 19.7 Hz Amp = 1196 mv )

	Tran	Vert	Long	
PPV	0.158	0.150	0.102	mm/s
ZC Freq	43	73	102	Hz
Time (Rel. to Trig)	0.448	0.430	0.279	sec
Peak Acceleration	0.012	0.012	0.012	g
Peak Displacement	0.000	0.000	0.000	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.3	Hz
Overswing Ratio	3.8	4.1	4.1	

Peak Vector Sum 0.176 mm/s at 0.274 sec



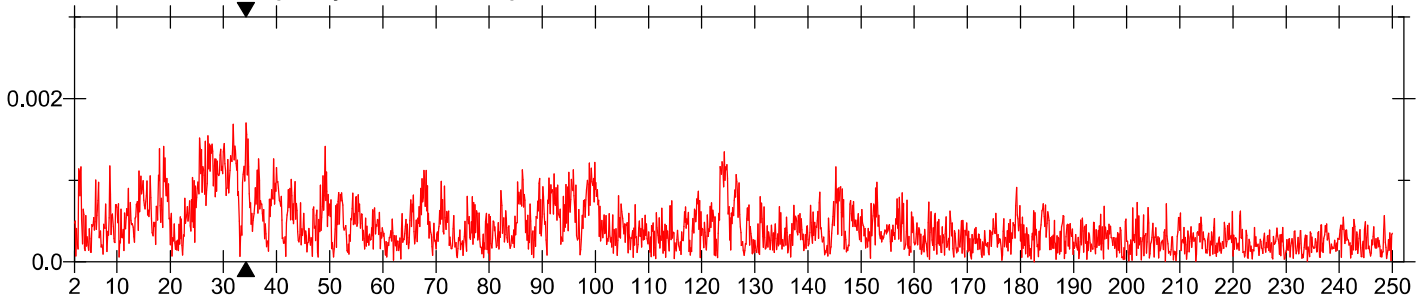
**Date/Time** Tran at 12:39:56 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 sec at 2048 sps  
**Job Number:** 1  
**Operator/Setup:** Operator/factory.MMB

**Serial Number** UM18455 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809123956.IDFW  
**Scaled Distance** 419.0 (256.0 m, 0.6 kg)

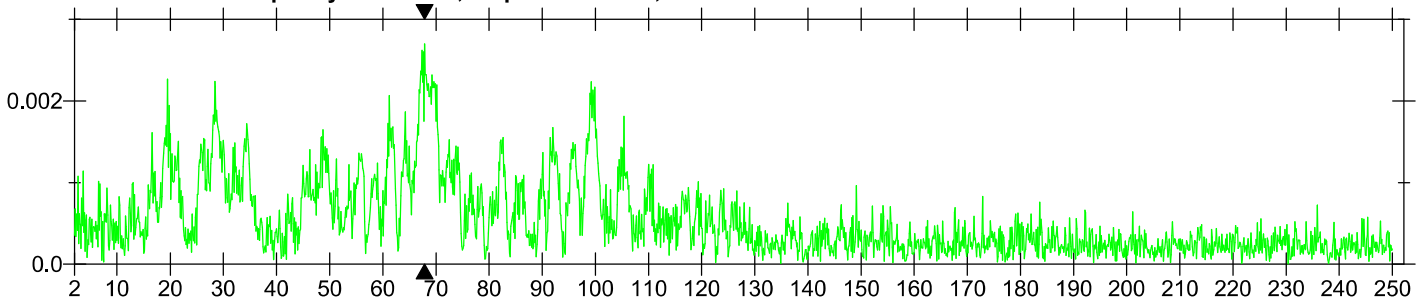
## Notes

**Location:** STATION-3  
**Client:** GEORGE KOCHUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**

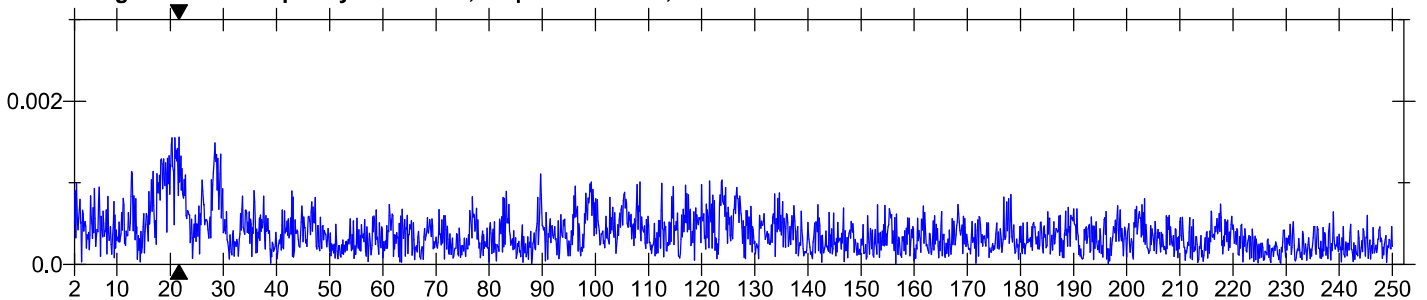
**Tran Dominant Frequency = 34.25 Hz., Amplitude = 0.002, PPV from Event = 0.158 mm/s**



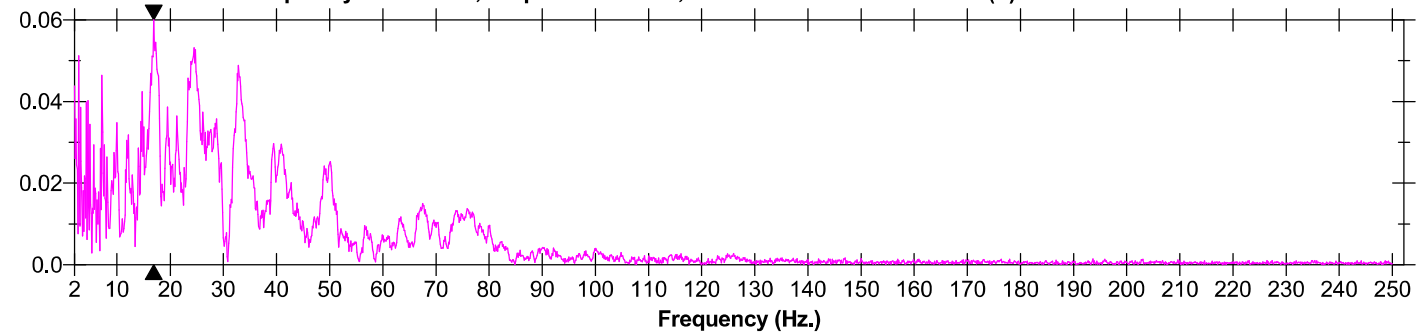
**Vert Dominant Frequency = 67.88 Hz., Amplitude = 0.003, PPV from Event = 0.150 mm/s**



**Long Dominant Frequency = 21.63 Hz., Amplitude = 0.002, PPV from Event = 0.102 mm/s**



**MicL Dominant Frequency = 16.88 Hz., Amplitude = 0.060, PSPL From Event = 98.7 dB(L)**





Event Report

Date/Time Tran at 12:41:21 August 9, 2024  
Trigger Source Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
Range Geo: 254.0 mm/s  
Record Time 3.0 sec at 2048 sps  
Job Number: 1  
Operator/Setup: Operator/factory.MMB

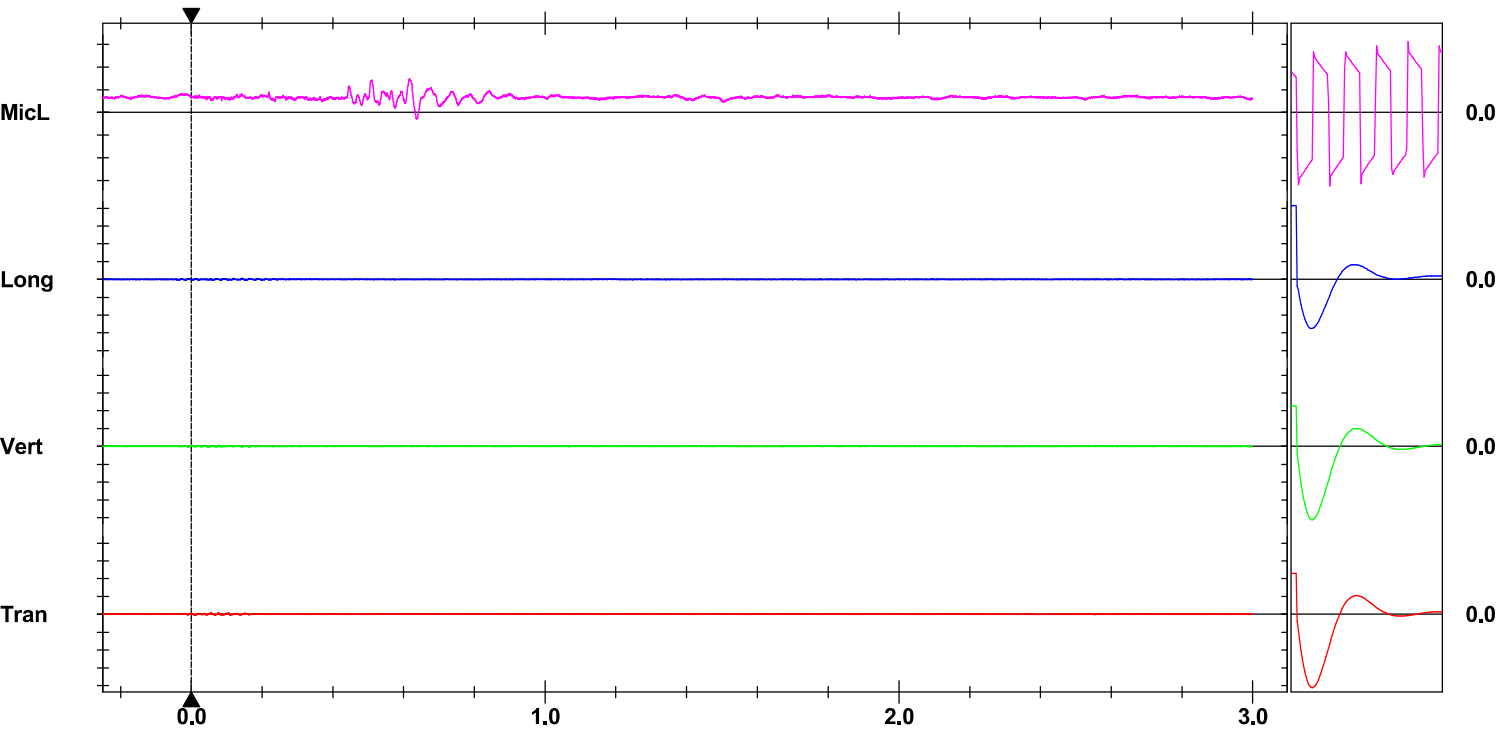
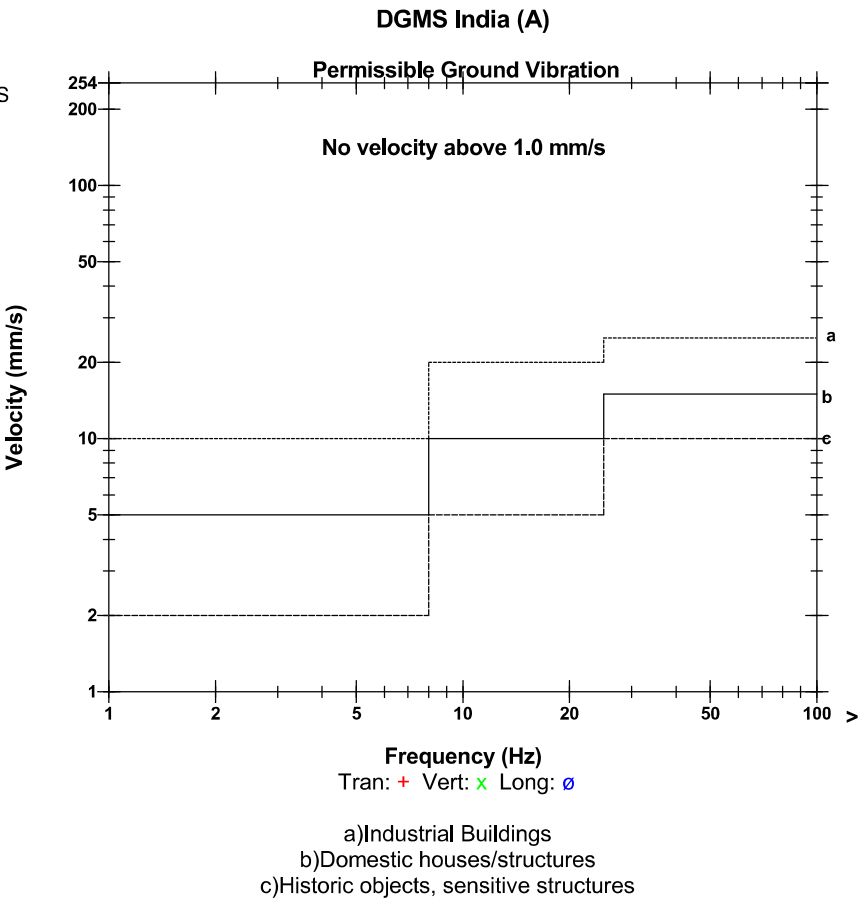
Serial Number UM18455 V 10-90FB Micromate ISEE  
Battery Level 3.8 Volts  
Unit Calibration October 3, 2023 by UES New Delhi  
File Name UM18455\_20240809124121.IDFW  
Scaled Distance 419.0 (265.0 m, 0.6 kg)

Notes  
Location: STATION-3  
Client: GEORGE KOCHUPARAMBIL  
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES  
General:

Microphone Linear Weighting  
PSPL 97.35 dB(L) at 0.616 sec  
ZC Freq N/A  
Channel Test Passed (Freq = 19.7 Hz Amp = 1132 mv )

	Tran	Vert	Long	
PPV	0.181	0.134	0.134	mm/s
ZC Freq	68	57	64	Hz
Time (Rel. to Trig)	0.077	0.001	0.084	sec
Peak Acceleration	0.015	0.012	0.012	g
Peak Displacement	0.000	0.000	0.000	mm
Sensor Check	Passed	Passed	Check	
Frequency	7.3	7.3	7.7	Hz
Overswing Ratio	3.9	4.1	3.3	

Peak Vector Sum 0.216 mm/s at 0.077 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 =

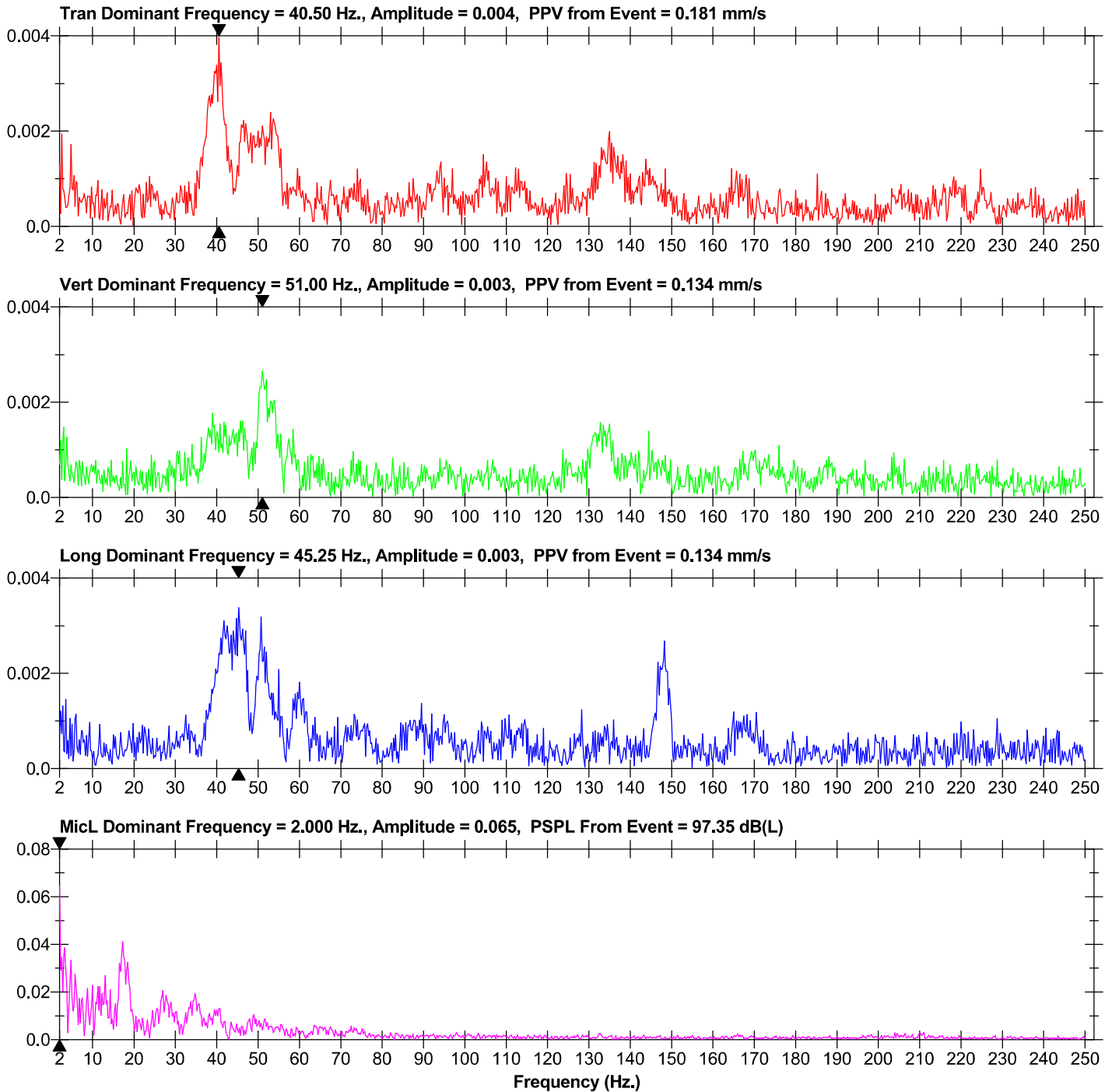
Sensor Check

**Date/Time** Tran at 12:41:21 August 9, 2024  
**Trigger Source** Geo: 0.127 mm/s, Mic: 100.00 dB(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 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  
**Unit Calibration** October 3, 2023 by UES New Delhi  
**File Name** UM18455\_20240809124121.IDFW  
**Scaled Distance** 419.0 (265.0 m, 0.6 kg)

## Notes

**Location:** STATION-3  
**Client:** GEORGE KOCHUPARAMBIL  
**User Name:** GLOBAL ENVIRONMENT AND MINING SERVICES  
**General:**





**Annexure-24**

**COPY OF HEALTH INSURANCE FOR  
EMPLOYEES**

## Policy Schedule

Issuing office	Niva Bupa Health Insurance Company Limited (formerly known as Max Bupa Health Insurance Co. Ltd.)
Policyholder's name	United Granites & Metals
Policyholder's address	0 255 United Granites Kolady Marakkad IDUKKI KERALA
Policy number	50979900202400
Date and time of Policy commencement	27/10/2024 12:00 AM
Date and time of Policy expiry	26/10/2025 11:59 PM
Aggregate Sum Insured	23000000.00
Premium Payment Frequency	Annual
Free look Period	30 Days
Intermediary name	The Federal Bank Ltd.
Intermediary code	BNK0040001
Intermediary contact number	04842385604
Claims Administrator	In-House
Total no of lives (115)	Self 115 + Dependents 0
Initial no of lives (115)	Self 115 + Dependents 0
Rater Type	Per member



## Premium Receipt

Dony  
0 255 United Granites Kolady Manakkad IDUKKI KERALA  
685583

We acknowledge the receipt of payment towards the premium of the following health insurance policy:

Policy Holder's Name: United Granites & Metals	Policy Number	50979900202400	
	Sum Insured (Rs.)	Rs. 23000000.00	
Commencement Date	27/10/2024 12:00 AM	Expiry date	26/10/2025 11:59 PM

Gross Premium(Rs.)	Rs. 636260.00
--------------------	---------------

Upon issuance of this receipt, all previously issued temporary receipts, if any, related to this policy are considered null and void.

GST Details	
GSTI No.: 09AAFCM7916H1Z6	SAC Code / Type of Service: 997133 / General Insurance Services
Niva Bupa State Code: 09	Customer State Code / Customer GSTI No.: 32 / 32AFJPK9650E1ZH

*Padmahani*

Location: New Delhi  
Date: 24/10/2024

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