ENVIRONMENT CLEARANCE COMPLIANCE REPORT

(April 2025 - September 2025)

For

GRANITE BUILDING STONE QUARRY

of

Sri. 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),
Regional office, MoEFCC Bengaluru, Kedriya Sadan,
4th Floor, E&F Wings, 17th Main Road,
Koramangala II Block, Bangalore – 560034.

Sub: Environmental Clearance Compliance Report for the period April 2025 – September 2025 pertaining to 'Granite Building Stone Quarry of 'Sri. 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 'Sri. 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-2025 to September-2025 for 'Granite Building Stone Quarry of Shri. George Kochuparambil'. Also enclosed relevant Annexures in Support of the compliance report for your perusal and record please. A soft copy of the same is sent by email for your record and perusal.

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

Thanking you,

Yours truly,

For 'Granite Building Stone Quarry of Shri. George Kochuparambil'

George Kochuparambil
Proponent.

Encl: as above

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

Introduction

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

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

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

Description of the project

File No.		1137/EC/SEIAA/KL/2017
Name of the project		Granite Building Stone Quarry (Minor Mineral) of Mr. George Kochuparambil
District and state	:	Idukki, Kerala
Taluk / Mandal	:	Thodupuzha
Village	:	Manakkad
Category & Schedule		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: - unitedgranitesandmetals@gmail.com Website: - www.unitedgranitesandmetals.in

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 were mentioned below.

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 identified endemic species have been safeguarded and relocated to a designated area selected for their continued growth and protection.

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

Sl. No.	Condition	Status of Compliance
1	The buffer zone should be maintained with a uniform width of 7.5m and it should be used for developing and maintaining thick green belt.	A uniform 7.5-meter-wide buffer zone has been established around the lease boundary, where a dense green belt has been successfully developed and is being consistently maintained.
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	The garland canal, silt traps, and overflow channel are regularly cleaned and desilted as needed. Geo-tagged photographs are attached as **Annexure- 01.**

	included in the half yearly compliance report.	
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 a maximum charge per delay and included in the Half Yearly Compliance Report.	The impact of vibration due to blasting on the nearest houses and other structures is regularly monitored in terms of Peak Particle Velocity and amplitude for the maximum charge per delay. The Blast Induced Ground Vibration Study report is enclosed as **Annexure – 24**.
4	NONEL short delay detonator may be used for initiation.	In blasting operations, initiation is carried out using only NONEL short delay detonators.
5	Blasts should be conducted by a blasters or mining mate certificate holder	Blasting operations are conducted exclusively by personnel with statutory certificate issued by Directorate General of Mines Safety.
6	To restrict fly rock within 10m, muffling arrangements should be made.	Muffling arrangements, including the use of blast mats, have been made to restrict fly rock within 10 meters.
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 to minimize ground vibrations and reduce the risk of triggering landslides, formation of cracks in surrounding buildings, and disturbance to both human and wildlife.

8	Blasting mats should be used during rock blasting to contain the blast, prevent fly rocks and suppress dust.	Blasting mats are utilized during rock blasting to control the blast, minimize fly rock, and reduce dust generation. The photograph of the blasting mat is attached as **Annexure – 02**.
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.	The rainwater harvesting facility has been set up in accordance with the prevailing provisions of KMBR/KPBR. Photographs of the rainwater harvesting ponds are provided in **Annexure-03**.
2	Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.	The Environment Monitoring Cell has been constituted and is actively functioning. Recent copy of Meeting minutes are enclosed as **Annexure-04**.
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.	Suitable avenue trees have been planted along both sides of the tarred road, including approach and internal roads, as well as in open parking areas, wherever applicable. Geo-tagged photographs of the avenue plantation are enclosed as **Annexure – 05.**
4	Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.	The project has adopted solar energy generation and utilization to the maximum extent possible. Photographs of installed solar lights are provided in **Annexure – 06.**

5	Sprinklers shall be installed and used in the Project Site to contain dust emissions.	To control dust emissions, sprinklers have been installed and are in regular use at the project site. Additionally, a water tanker fitted with sprinklers is deployed along the haulage roads for effective dust suppression. To contain the propagation of dust generated due to mining, water misting system is installed. Photos of the water sprinklers, water tanker with sprinkler and water misting system are attached as **Annexure-07.**
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 the closure of the mine, at least 10 percent of the total excavated pit area will be retained as a water storage area, while the remaining area will be reclaimed using stacked dumping and overburden, followed by planting indigenous and eco-friendly plant species.
8	Corporate Social Responsibility (CSR) agreed upon by the Proponent should be implemented.	Various Corporate Social Responsibility (CSR) activities have been undertaken. The details of CSR activities carried out is attached as **Annexure – 22.**
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 boundary indicators (boards, stores, markings, etc.) shallbe protected at all times and shall be conspicuous.	Barbed wire fencing has been erected along the entire lease boundary. Sign boards have been installed at prominent locations. Photos of the fencing and sign boards are attached as **Annexure-08.**
10	Warning alarms indicating the time of Blasting(to be done at specific timings) has to be arranged as per stipulations of the Explosives department.	A warning siren is sounded before and after blasting to indicate the scheduled blasting times. Blasting timing boards have been installed at prominent locations. Photographs of the warning siren and safety board displaying blasting timings are attached as **Annexure - 09**.

11	Control measures on noise and vibrations prescribed by KSPCB should be implemented.	The following control measures have been implemented to control noise and vibrations as prescribed by KSPCB: ➢ Use of controlled blasting techniques, including the use of NONELs. ➢ Utilization of sharp drilling bits, optimal delivery of compressed air, and proper maintenance of compressors, excavators, jackhammers, and tipper trucks. ➢ Regular monitoring of noise levels in both the core zone and the buffer zone of the mining lease area.
12	Quarrying activities should be limited to daytime as per KSPCB guidelines/specific conditions.	Quarrying activities are restricted to daytime only, in accordance with KSPCB guidelines.
13	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, such as the use of NONELs and blast mats, have been implemented as per the regulations of the Explosives Department and other concerned agencies.
14	A licensed person should supervise/control the Blasting Operations	Blasting operations are supervised and controlled by personnel holding a statutory certificate issued by DGMS.
15	Access roads to the quarry shall be tarred tocontain dust emission that may arise during the transportation of material.	Access roads to the quarry have been tarred to control dust emissions during material transportation. In addition, regular water sprinkling is carried out to further suppress dust. Photos of access road are attached as **Annexure- 11.**
16	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 designated location near the quarry lease area and will be utilized for mine pit reclamation as per the Mine Closure Plan, as required.

17	Height of Benches should not exceed 5 M and width should not be less than 5 M, if there is no mention in the Mining Plan/specific conditions	Benches are maintained in a safe manner. Photographs of the site are attached as **Annexure – 19**.
18	Mats to reduce fly rock blast to a maximum of 10 PPV should be provided	Blasting Mats are used to cover the area to be blasted to reduce fly rock and minimize the impact of blasting.
19	Maximum depth of mining and general ground level at site shall not exceed 10m	Mining operations were carried out as per the approved mining plan. The maximum depth of mining and the general ground level at the site will be restricted to 10m.
20	No mining operation should be carried out at place having a slope greater than 45^0	No mining operations will be carried out in areas with a slope greater than 45°.
21	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.
22	The workers on the site should be provided with the required protective equipment such as ear muffs helmet, etc.	Personal Protective Equipment (PPE), including ear muffs, helmets, Safety shoes and other necessary safety gear, has been provided to all workers on the site.
23	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	Garland drains with clarifiers have been provided to channelize stormwater. Photograph of the garland drain is attached as **Annexure-01.**
24	The transportation of minerals should be done in covered trucks to contain dust emissions.	The transportation of minerals is carried out in covered trucks to contain dust emissions.
25	The proponent should plant trees at least 5 times the loss that has been occurred while clearing the land for the project.	Afforestation is being carried out to compensate for the loss of trees, with a planting ratio of 5 times the number of trees cleared for the project. Photographs of the plantation activities are attached as **Annexure – 18**.
26	Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.	Spent oil is being re-used as a lubricant for drilling purposes.
27	Explosives should be stored in magazines in isolated place specified and approved by the Explosive Department.	Explosives are stored in magazines that are specified and approved by the Explosive Department. The copy of Magazine license

		is attached as **Annexure-12**, and photos of the magazines are provided in **Annexure-20**.
28	A minimum buffer distance of 100 M from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.	There are no dwelling units or other structures situated within 100m of the quarry boundary.
29	100 M buffer distance should be maintained from forest boundaries	The mining area is not located near any forest boundaries.
30	Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.	Consent from the Kerala State Pollution Control Board under the Water and Air Act(s) has been obtained prior to the initiation of mining activities. A copy of the KSPCB consent is attached as **Annexure-13**.
31	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 other statutory clearances, including the Panchayat license, have been obtained as required for the project. Copy of the Panchayath License is attached as **Annexure – 14.**
32	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.
33	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
34	The stipulations by the Statutory Authorities under different Acts and Notifications should be complied with	Agreed

	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	
35	The project proponent should advertise in at least 2 newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the Project has been accorded Environment Clearance and the copies of the Clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at www.seiaakerala.org. The advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same signed in all the pages should be forwarded to the Office of this Authority as confirmation	Advertisements were published in two newspapers: 1. The Hindu Daily (English) on 12/04/2018 2. Kerala Kaumudy (Malayalam) on 12/04/2018 Copies of the published advertisements are attached as **Annexure-15.**
36	A copy of the clearance letter shall be sent by the proponent to the concerned Gram Panchayat/District Panchayat/Municipality/Corporation/Urban local Body and also to the Local NGO, if any from whom suggestions/representations, if any were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.	A copy of the Environmental Clearance letter has been provided to the concerned Panchayat. Copy of Panchayat license obtained is attached as **Annexure-14.**
37	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	The half-yearly compliance report, including the results of monitored data, has been submitted to the State Environmental Impact Assessment Authority and the Regional Office of MoEF&CC, Bangalore, as required. Photographs of monitoring activities are attached as **Annexure-16**,

	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	and the monitored data results for Air, Noise, and Water are mentioned in **Annexure-17**.
38	The details of Environment Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times Roman font of size not less than 40. Sign board with extent of Lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public	The details of the Environmental Clearance are prominently displayed on a board as stipulated. Photo of the board displaying EC details is attached as **Annexure-10**
39	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 confirming adherence to all EC conditions has been submitted. copy of Notarized affidavit is attached as **Annexure – 21.**
40	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.
41	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.	There are no natural water courses or first order streams within the mining lease area; thus, no obstruction has occurred due to mining operations.
42	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 as per CPCB norms. Monitoring photos are attached as **Annexure – 16** and monitoring reports are enclosed as **Annexure – 17**. Regular water sprinkling is undertaken at key locations to control fugitive dust emissions.
43	The top soil, if any, shall be temporarily be stored at earmarked site(s) only for the	Topsoil generated is stored in the designated area and will be used for

	topsoil shall be used for land reclamation and plantation. The Over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8 m and the width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo-textiles shall be undertaken for stabilization of the dump. The entire excavated area should continue until the vegetation becomes self-sustaining	afforestation and greenbelt development. Overburden is separately stacked and stabilized by planting locally available shrubs and grasses to prevent erosion and surface runoff.
44	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development, etc. The drains shall be regularly de silted particularly after monsoons and maintained properly	Catch drains have been constructed around the mining workings, and the runoff water is directed to siltation ponds and subsequently to the Rainwater Harvesting Pond. Water from the RWHP is utilized for dust suppression, road maintenance, and green belt development. Drains are regularly de-silted, especially post-monsoon, and are properly maintained. Photos of Garland Drains and RWHP are attached as **Annexure – 01** and **Annexure – 03** respectively**.**
45	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 is carried out in critical areas prone to air pollution, such as haul roads, loading and unloading points, and transfer points, using water tankers and sprinklers. Photos of water sprinklers and water tanker with sprinkler are attached as **Annexure – 07.** Ambient air quality is monitored regularly to ensure conformity with the norms prescribed by the Central Pollution Control Board. Ambient air quality Monitoring photos are attached as **Annexure – 16** and monitoring reports are enclosed as **Annexure – 17**.

46	Fugitive dust emissions from all sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and transfer points should be provided and properly maintained.	Water sprinkling arrangements have been made on haul roads, loading and unloading points, and transfer points, and are being properly maintained to control fugitive dust emissions.
47	Measures should be taken for control of noise levels below 85 dB (A) in the work environment.	Adequate measures for noise control, such as the use of PPEs and proper maintenance of machinery, have been adopted to ensure noise levels remain below 85 dB (A) in the work environment.
48	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.	An Environmental Management Cell has been established and is fully functional. The details of the Environmental Monitoring Cell and meeting minutes are attached as **Annexure – 4.**
49	The funds earmarked for environment protection measures and CSR activities should be kept in a separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.	The funds earmarked for environmental protection measures and CSR activities are kept in a separate account and are not diverted for any other purpose.
50	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
51	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
52	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

53	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
54	The above conditions shall prevail not withstanding 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
55	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
56	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
57	The Mining operations shall be restricted to above ground water table and it should not intersect ground water table.	Mining operations will be carried out above the ground water table and 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	All vehicles used for transportation within the mine and for other operations have valid PUC certificates from authorized pollution checking centers. Vehicle washing is carried out within the lease area.
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 extracted for dust suppression or any other activities. The primary water source for the project will be the Rainwater Harvesting Pond located within the mining lease area. Photos of the Rainwater Harvesting Pond are attached as **Annexure – 03**.
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.

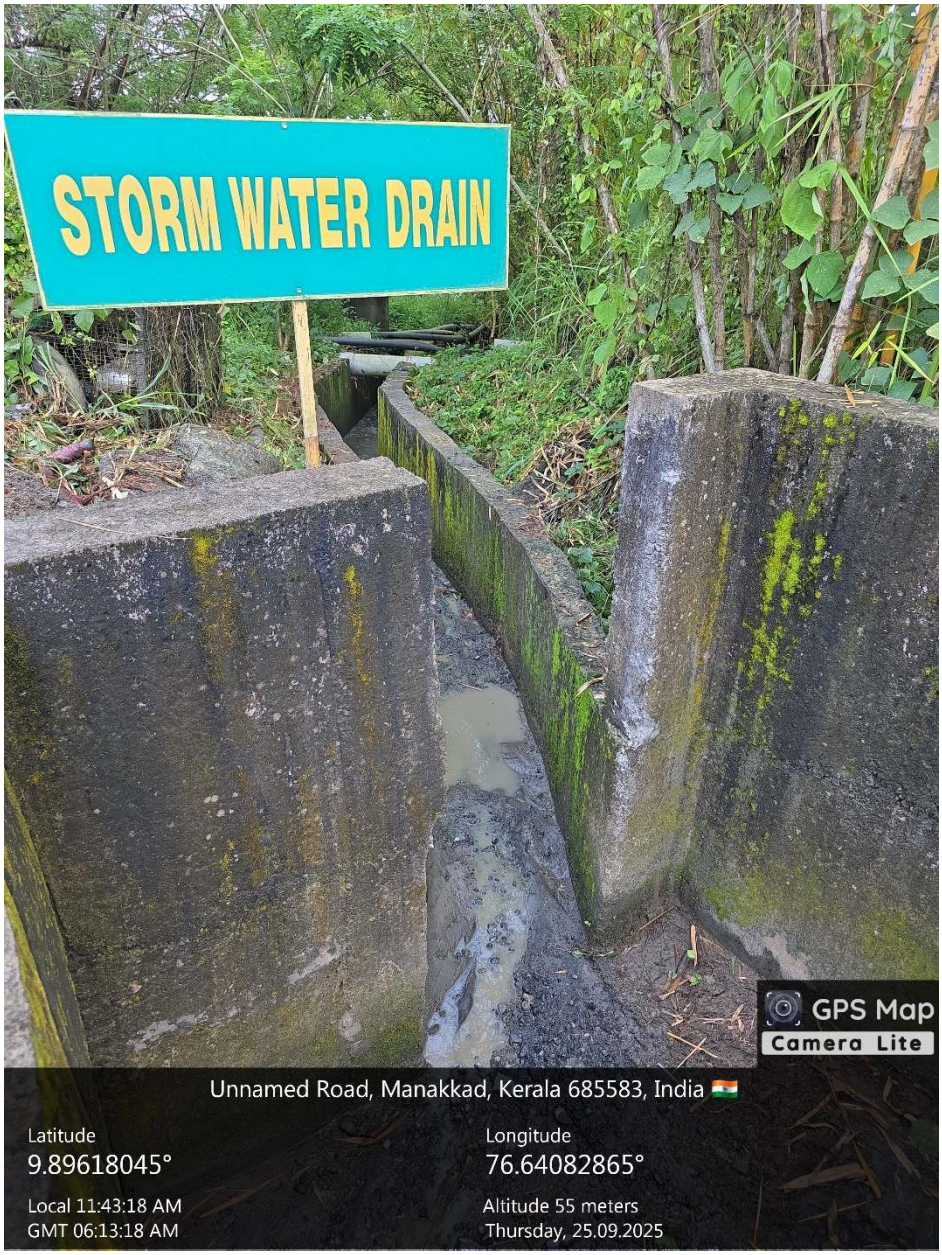
61	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	All employees are covered under health insurance. Copy of Policy Schedule and premium receipt are attached as **Annexure 23.**

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

George Kochuparambil
Proponent.
Date: 29-10-2025.

Annexure-1

GARLAND DRAINS & SILT SETTLING TANKS


STORM WATER DRAIN
GPS Map
Camera Lite
Unnamed Road, Manakkad, Kerala 685583, India
Latitude
9.89618045°
Longitude
76.64082865°
Local 11:43:18 AM
GMT 06:13:18 AM
Altitude 55 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89428078°
Longitude
76.64234197°
Local 11:57:20 AM
GMT 06:27:20 AM
Altitude 100 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJWW+243, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89631004°
Longitude
76.64333454°
Local 12:04:38 PM
GMT 06:34:38 AM
Altitude 46 meters
Thursday, 25.09.2025

Annexure-2

BLASTING MATS


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89522048°
Longitude
76.6396895°
Local 01:16:46 PM
GMT 07:46:46 AM
Altitude 77 meters
Thursday, 25.09.2025

Annexure-3

RAINWATER HARVESTING POND


GPS Map
Camera Lite
Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89686923°
Longitude
76.64265518°
Local 12:02:44 PM
GMT 06:32:44 AM
Altitude 39 meters
Thursday, 25.09.2025

Annexure-4

EMC MEETING MINUTES

Minutes of the 33rd meeting of the Environment Monitoring committee held on 22-05-2025 at 3.30 PM.

Minutes of the 32nd meeting reviewed.

Use of ED (Electric Detonators)

Govt. of India has permitted use of ED till 30.06.2025. Alternate devices are not in practical use in small mines. Till such time we will be using ordinary detonators and fuses.

New Points

① Weather Forecasts are warning early monsoon this year. On this situation our Managing Director called for a meeting today of all associated employees dealing with dewatering of the mine. Garland drains at phericphery of the workings are to be cleaned so that all storm water shall be diverted to village nallas. Water inside quarry to be pumped to the Rainwater Harvesting Ponds. EMC members were also present in the meeting

② We constructed a concrete chamber with trap door in the garland drain to silt Settling Tank 1 (SST1). In case of heavy rains the storm water ~~is~~ can be diverted to the RWHP instead of sending to SST. Water will through the concrete pipes installed from chamber to RWHP.

③ Tree Plantation.

500 saplings are purchased from forest department. These will be planted in another area as compensatory Plantation. Similarly 50 coconut plants are planted in another nearby land.

(4) Some of the sign boards in the quarry are slanting. All of them are to be repositioned to ~~stad~~ stand upright.

(5) Monitoring of Ground Movement.

We have hired a Bengaluru based consultant for monitoring of Ground (benches) movements if any. They have fixed few permanent points in benches with concrete and steel plate over it. They will be measuring this every month with DGPS instrument. The readings will be recorded in a bound paged book.

(6) A new road is under formation through Eastern side of lease to have an access to South side of lease.

Members.

1. Mr. Baby. P. Paulose - ~~Baby~~
2. Mr. Prasanth P.P - ~~Prasanth~~
3. Mr. Joseph K.Y - ~~Joseph~~
4. Mr. Tomy Joy - ~~Tomy Joy~~
5. Mr. John Peter - ~~John~~

Mr Sonu Jose
(Head of Committee)

Minutes of the 34th meeting of the Environment Monitoring Committee held on 12 August at 4 PM

Minutes of the 33rd meeting reviewed.

Use of Electric detonators are stopped from 01-07-2025 as per Government of India Notification.

We started using Electronic Detonators from 17-07-2025 for initiating NONEL.

Rains this year are not continuous. So there is enough time for Storm water to flow out.

Our rain water harvest Ponds and Silt settling tanks are effectively used for allowing clean water to flow out into the drains outside our lease area.

The newly ~~cover~~ constructed concrete chamber with trap door functioned well. When clean, water it is allowed to flow through concrete pipes into Rain water Harvest Pond. Other times the dirty water flows into Silt setting tank.

500 saplings bought earlier are planted at the new compensatory plantation area near the water tank we built for drinking water supply for villagers.

Slanting sign boards are fixed upright.

Monitoring of Ground Movement is done by consultant every month. The readings are recorded in a bound paged book.

The proposed new road through Eastern Side is formed. Widening has to be done when we use dumpers. The Eastern portion of the road through Southern side is Slippery. Gravel

P.T.O

has to be spread after the rains Stop.

New Points

Police Sub Inspector with constables inspected our anagazine on 9th August. They visited quarry also.

795 new sapplings are purchased and planted around the North Eastern side of quarry & behind the boundary.

Under the CSR scheme we donated a vehicle to Idukki Cherukkda Vyavasai Co-operative Society Ltd No. 1573, Thodupuzha. This vehicle will be operated by society for patients to attend hospitals on request.

Present drainage at North side has to be diverted. Concrete 'U' sections are to be placed.

Monitoring of rainfall is done on daily basis. Reddings are recorded.

Bench Number boards are to be made for easy communication and understanding of persons working in quarry.

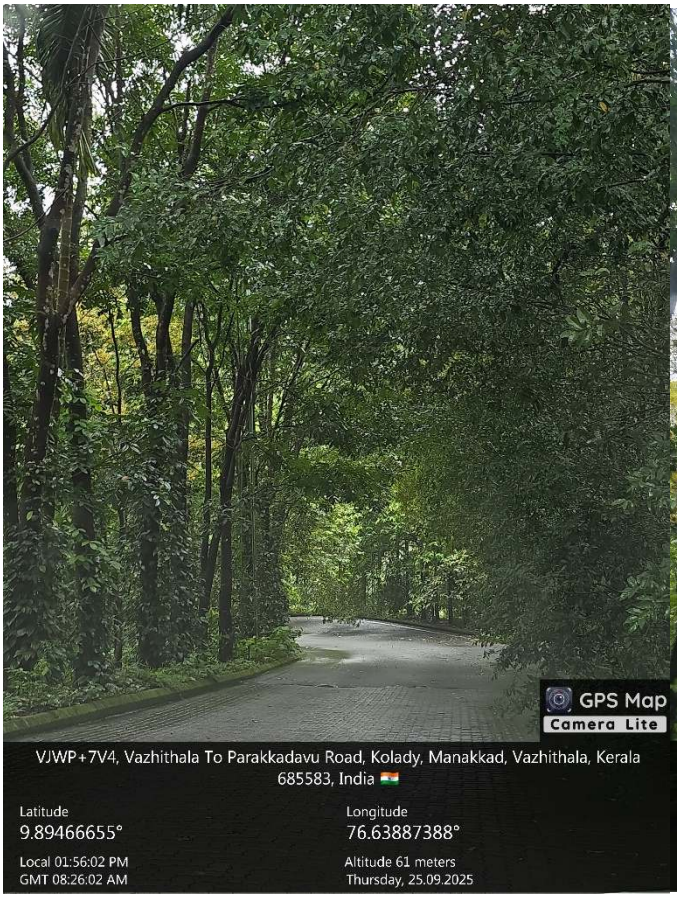
Members.

1. Mr. Baby. P. Paulose
2. Mr. Joseph K.Y
3. Mr. Prasanth P. P.
4. Mr. Jommy Joy
5. Mr. John Peter

(Somu Jose)
Head of Committee

Annexure-5

AVENUE PLANTATION


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
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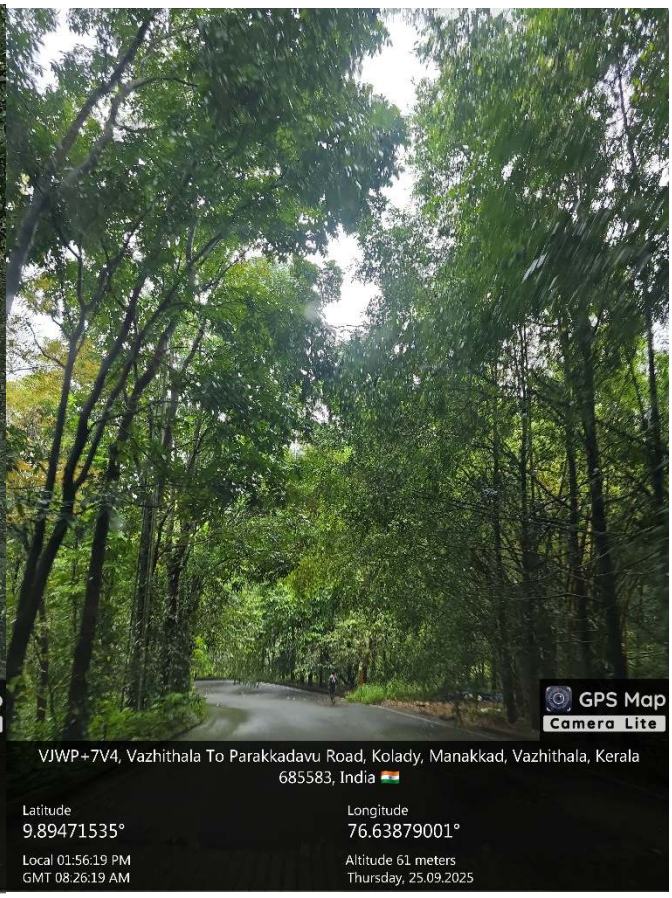
Longitude
76.63887388°
Local 01:56:02 PM
GMT 08:26:02 AM
Altitude 61 meters
Thursday, 25.09.2025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Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
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Longitude
76.63879001°
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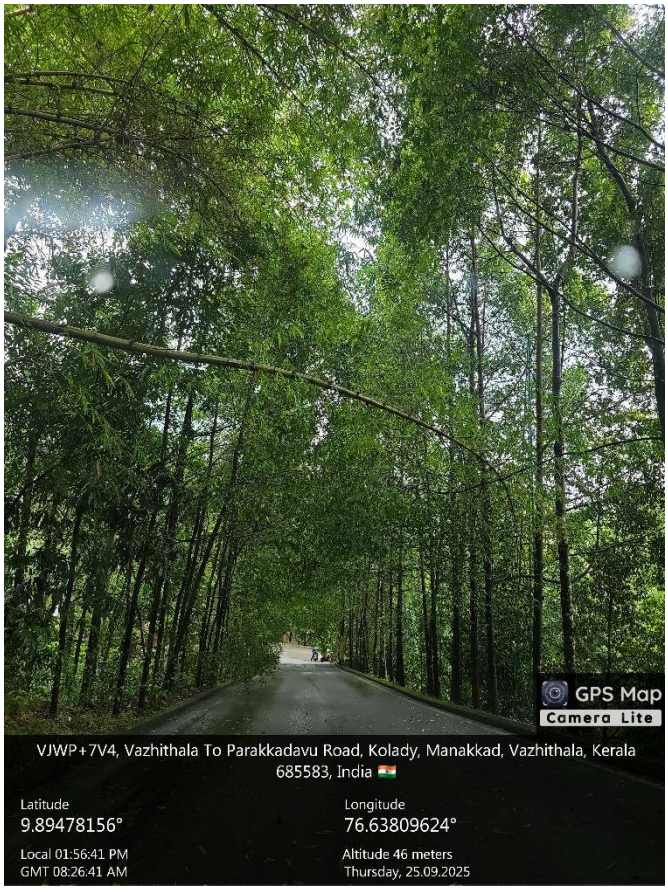
GMT 08:26:19 AM
Altitude 61 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89478156°
Longitude
76.63809624°
Local 01:56:41 PM
GMT 08:26:41 AM
Altitude 46 meters
Thursday, 25.09.2025

Annexure-06

SOLAR LIGHTS


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89422546°
Longitude
76.63834634°
Local 01:07:38 PM
GMT 07:37:38 AM
Altitude 61 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
Unnamed Road, Manakkad, Kerala 685583, India
Latitude
9.89616646°
Longitude
76.64064913°
Local 12:09:38 PM
GMT 06:39:38 AM
Altitude 65 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89534711°
Longitude
76.63904967°
Local 12:59:57 PM
GMT 07:29:57 AM
Altitude 62 meters
Thursday, 25.09.2025

Annexure-07

WATER TANKER & WATER MIST SYSTEM


കുടിവെള്ളം
കുടിവെള്ളം
KL 38 J005A
SOUND HORN
KL 38 J005A
STOP


കുടിവെള്ളം
TATA
KL 38 J005A


VELLAPALLY CONSTRUCTIONS
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89442594°
Longitude
76.63900626°
Local 01:12:22 PM
GMT 07:42:22 AM
Altitude 61 meters
Thursday, 25.09.2025

Annexure-08

FENCING & SIGN BOARDS


GPS Map
Camera Lite
VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89254907°
Longitude
76.64153041°
Local 12:26:23 PM
GMT 06:56:23 AM
Altitude 44 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89248276°
Longitude
76.64192417°
Local 12:27:18 PM
GMT 06:57:18 AM
Altitude 149 meters
Thursday, 25.09.2025

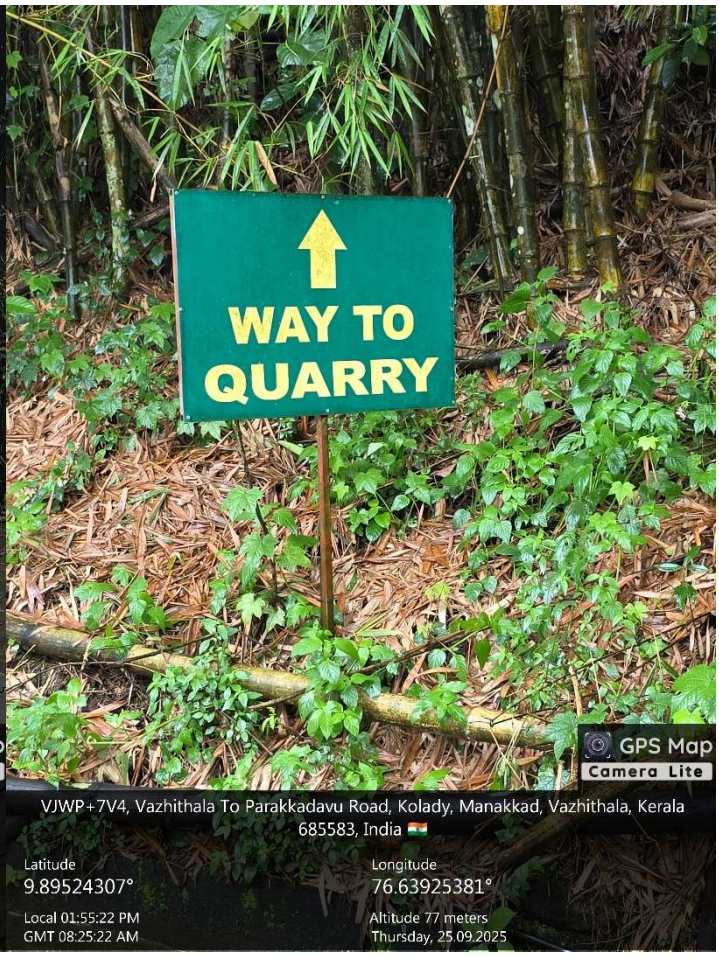

GPS Map
Camera Lite
VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.8925073°
Longitude
76.64172701°
Local 12:29:12 PM
GMT 06:59:12 AM
Altitude 116 meters
Thursday, 25.09.2025

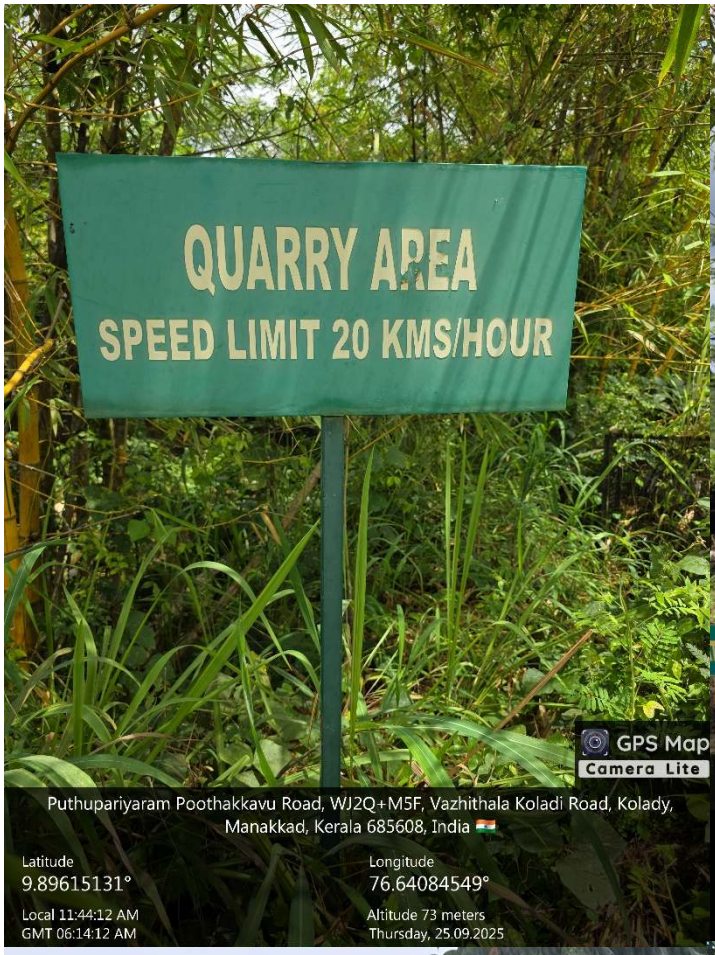

BP 36
9°53'32.89"N
76°38'29.80"E
GPS Map
Camera Lite
VJRV+WJJ, Vazhithala Koladi Road, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89250291°
Longitude
76.64174248°
Local 12:29:41 PM
GMT 06:59:41 AM
Altitude 116 meters
Thursday, 25.09.2025


QUARRY ACTIVITIES
TIMINGS
6.00 AM - 6.00 PM
NO ENTRY
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89555432°
Longitude
76.63959882°
Local 01:19:22 PM
GMT 07:49:22 AM
Altitude 77 meters
Thursday, 25.09.2025


QUARRY AREA
SPEED LIMIT 20 KMS/HOUR
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89568737°
Longitude
76.639639°
Local 01:19:51 PM
GMT 07:49:51 AM
Altitude 77 meters
Thursday, 25.09.2025


MINING AREA
BLASTING ZONE
ENTRY RESTRICTED
KEEP AWAY
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89546499°
Longitude
76.63929059°
Local 01:55:08 PM
GMT 08:25:08 AM
Altitude 77 meters
Thursday, 25.09.2025


WAY TO
QUARRY
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89524307°
Longitude
76.63925381°
Local 01:55:22 PM
GMT 08:25:22 AM
Altitude 77 meters
Thursday, 25.09.2025


QUARRY AREA
SPEED LIMIT 20 KMS/HOUR
GPS Map
Camera Lite
Puthupariyaram Poothakkavu Road, WJ2Q+M5F, Vazhithala Koladi Road, Kolady, Manakkad, Kerala 685608, India
Latitude
9.89615131°
Longitude
76.64084549°
Local 11:44:12 AM
GMT 06:14:12 AM
Altitude 73 meters
Thursday, 25.09.2025


WAY TO PIT
BOTTOM
GPS Map
Camera Lite
Unnamed Road, Manakkad, Kerala 685583, India
Latitude
9.89615255°
Longitude
76.64083133°
Local 11:44:26 AM
GMT 06:14:26 AM
Altitude 55 meters
Thursday, 25.09.2025


QUARRY AREA
GPS Map
Camera Lite
Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89319952°
Longitude
76.6407757°
Local 12:33:47 PM
GMT 07:03:47 AM
Altitude 129 meters
Thursday, 25.09.2025


Danger
EXPLOSIVES MAGAZINE
ONLY AUTHORISED PERSONS PERMITTED
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.8979446°
Longitude
76.63872507°
Local 12:52:57 PM
GMT 07:22:57 AM
Altitude 77 meters
Thursday, 25.09.2025

Annexure-09

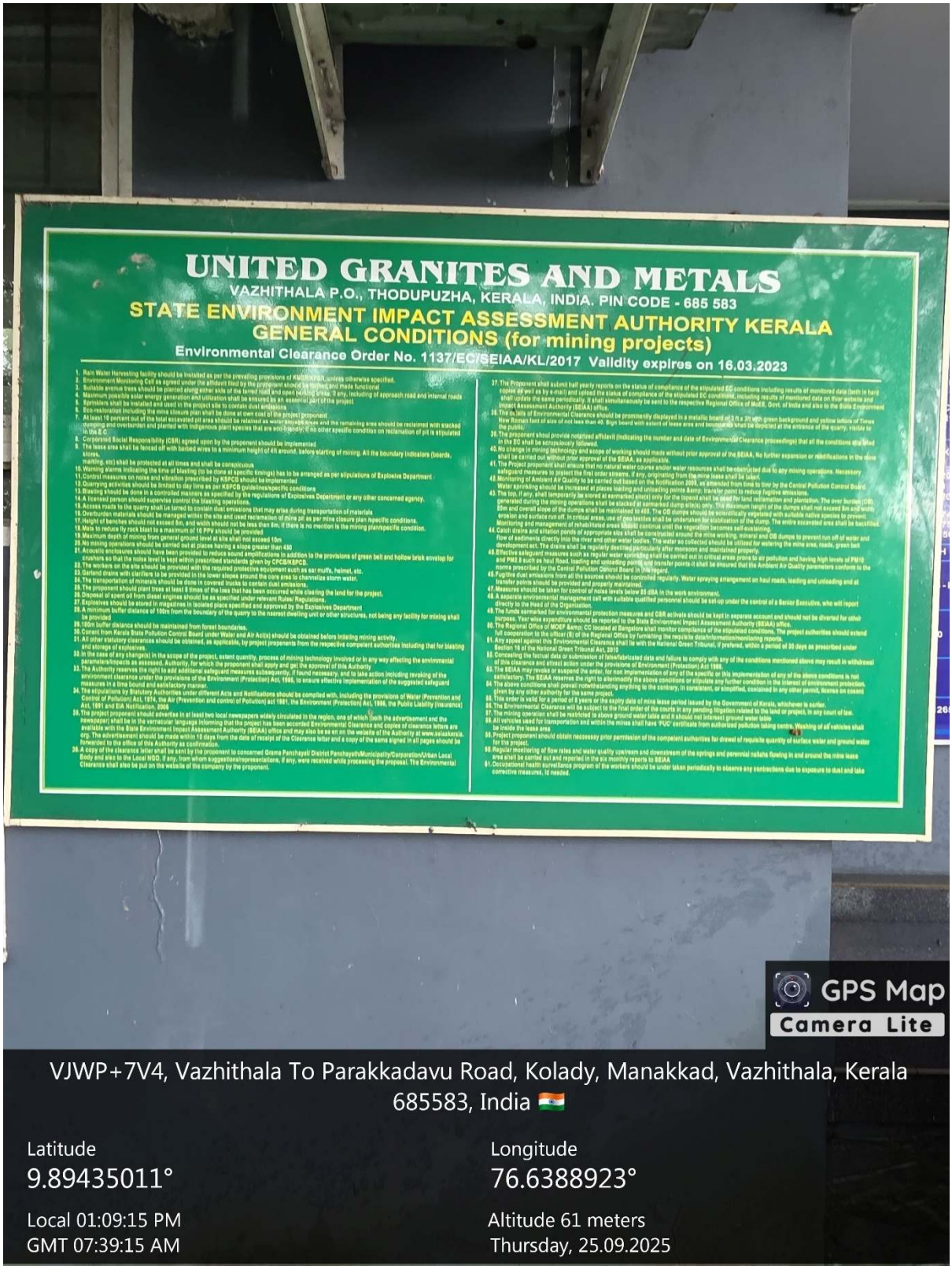
WARNING SIREN & BOARD INDICATING BLASTING TIMINGS


BLASTING TIMINGS
9.30 AM - 10.00 AM
12.30 PM - 1.00 PM
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89554592°
Longitude
76.63958663°
Local 01:19:15 PM
GMT 07:49:15 AM
Altitude 77 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Lat 9° 53' 43.64808" N Long 76° 38' 22.50708" E
Local 12:29:01 PM
GMT 06:59:01 AM
Altitude 77 meters
Date Thu, 25 Sep 2025

Annexure-10

BOARD INDICATING EC DETAILS



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

Latitude
9.89435011°

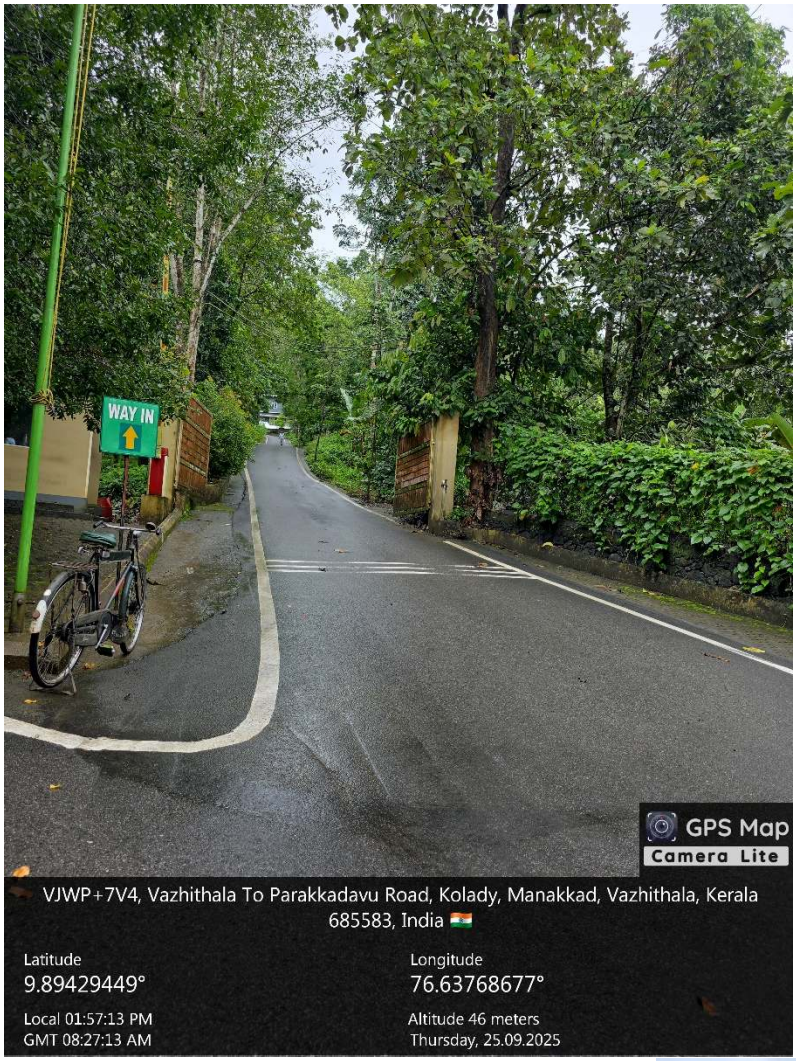
Longitude
76.6388923°

Local 01:09:15 PM
GMT 07:39:15 AM

Altitude 61 meters
Thursday, 25.09.2025

Annexure-11

ACCESS ROAD


WAY IN
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89429449°
Longitude
76.63768677°
Local 01:57:13 PM
GMT 08:27:13 AM
Altitude 46 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
Unnamed Road, Manakkad, Kerala 685583, India
Latitude
9.89612082°
Longitude
76.6407764°
Local 12:09:18 PM
GMT 06:39:18 AM
Altitude 65 meters
Thursday, 25.09.2025

Annexure-12

LICENSES OF MAGAZINE, AMMONIUM NITRATE STORAGE & MANUFACURING OF ANFO

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, IInd Floor, Shastri Bhavan
26 हड्डोउस रोड, नुंगम्बक्कम चेन्नै | 26 Haddous Road, Nungambakkam Chennai 600006
फोन (Phone):- 28281023 | फैक्स (Fax):- 28284848

संख्या (No.): E/SC/KL/22/1730(E72220) दिनांक (Date): 11/06/2024

सेवा में | To,

Shri GEORGE KOCHUPARAMBIL,
KOCHUPARAMBIL HOUSE,VAZHITHALA P.O,THODUPUZHA,IDUKKI DISTRICT, 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 **Shri GEORGE KOCHUPARAMBIL** द्वारा विस्फोटक के मैगजीन में उपयोग के लिए कक्षा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञप्ति सं E/SC/KL/22/1730(E72220) के संशोधन संदर्भ में।
(प्राधिकृत अधिकर्ता / अठिषता में परिवर्तन)

Subject: **Possession for Use of 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 उपर्युक्त विषय पर पत्र संख्या 123213 दिनांक 11/06/2024 को संदर्भ प्राप्त करें।
Please refer to your letter no. 123213 dated 11/06/2024.

अनुज्ञप्ति संख्या E/SC/KL/22/1730(E72220) **प्राधिकृत अधिकर्ता / अठिषता 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

लाइसेंस रिकॉर्ड में प्राधिकृत अधिकर्ता / अठिषता के नाम इस प्रकार है।
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 लाइसेंस 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 (अनुच्छेद 3 (ख) और (ग) के अधीन अनुज्ञप्ति 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 अनुज्ञप्ति दिनांक **31 मार्च 2027** तक प्रवृत रहेगी।
This Licence shall remain valid till **31st day of March 2027.**

अनुज्ञप्ति के आगामी 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.थनुलिंगम | Dr. T. L. THANULINGAM)
संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives
|
दक्षिणांचल, चेन्नै | South Circle, Chennai

प्रतिलिपि प्रेषित | Copy Forwarded to:

1. उप मुख्य विस्फोटक नियंत्रक कोच्ची
   The Dy. Chief Controller of Explosives, Kochi
2. District Magistrate, IDUKKI, Kerala with reference to his Noc No: E2.50676/12/K.Dis Dated: 30/11/2013
3. Superintendent of Police, IDUKKI, Kerala.

संयुक्त मुख्य नियंत्रक निरीक्षक | Joint Chief Controller of Explosives
दक्षिणांचल, चेन्नै | South Circle, Chennai

(अधिक जानकारी जैसे 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.

Digitally signed by Dr T L THANULINGAM
Reason: Licence No. : E/SC/KL/22/1730
Location:Chennai [E72220]

अनुज्ञप्ति प्ररुप एल. ई.-3 | LICENCE FORM LE-3

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग I के अनुच्छेद 3(क) से (घ) देखिए।)

(See article 3(a) to (d) of Part I 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 अनुज्ञप्ति

Licence to possess : (c) for use,explosives of class 1, 2,3,4,5,6 or 7 in a magazine

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

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

1. Licence is hereby granted to

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

को अनुज्ञप्ति अनुदत्त की जाती है।

2. अनुज्ञप्तिधारी की प्रास्थिति | Status of licensee : **Proprietorship Firm**

3. अनुज्ञप्ति निम्नलिखित प्रयोजनों के लिए विधिमान्य है। : possess for use of **Ordinary/Electric/Non Electric Detonators, Safety Fuse, Nitrate Mixture,** - के उपयोग के लिए
Licence is valid only for the following purpose.

4. अनुज्ञप्ति विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमान्य है।
Licence is valid for the following kinds and quantity of explosives: -- (क) (a)

क्र Sr. No.	नाम और विवरण Name and Description	वर्ग और प्रभाग Class & Division	उप-प्रभाग Sub-division	मात्रा किसी एक समय में Quantity at any one time
1.	Nitrate Mixture	2 ,0	0	400 Kg.
2.	Ordinary/Electric/Non Electric Detonators	6 ,3	0	10000 Nos.
3.	Safety Fuse	6 ,1	0	3000 Mtrs

(ख) किसी एक कलैंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा [अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञप्ति के लिए] : **20 times as above.**
(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 अनुज्ञप्त परिसर की पुष्टि होती है। : रेखाचित्र क्र. (Drawing No.) E/SC/KL/22/1730(E72220)
The licensed premises shall conform to the following drawing(s): . दिनांक (Dated) 01/04/2015

6. अनुज्ञप्ति परिसर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address:
Survey No. 359, Block No. 11 , ग्राम (Town/Village) : **Manakkadu (v), Thodupuzha Taluk**
पुलिस थाना (Police Station) : **Thodupuzha**

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

7. अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्विष्ट हैं। : **Two portable magazines "A Type" bearing Sl No:044 and "A Type" bearing Sl No:045 fabricated by M/s.Everest Granites Ernakulam**
The licensed premises consist of following facilities.

8. अनुज्ञप्ति समय - समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उसके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधो, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबंधों 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, 2008 framed there under and the conditions, additional conditions and the following Annexures.

1. उपर्युक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थान, सन्निर्माण संबंधी और अन्य विवरण दर्शित करते हुए)।
Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
2. अनुज्ञप्ति प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञप्ति की शर्तें और अतिरिक्त शर्तें।
Conditions and Additional Conditions of this licence signed by the licensing authority.
3. दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञप्ति तारीख **31 मार्च 2019** तक विधिमान्य रहेगी। This licence shall remain valid till **31st day of March 2019.**
यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट.VII के अधीन तथा उपवर्णित इस अनुज्ञप्ति की शर्तों का अतिक्रमण करने या यदि अनुज्ञप्त परिसर योजना या उससे संलग्न उपबंध में वर्णित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिसंहृत 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/Occupier/Partners/Directors dated : 11/06/2024

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

नवीनीकरण के पृष्ठांकन के लिए स्थान
Space for Endorsement of Renewal

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

कानूनी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरूपयोग विधि के अधीन गंभीर दांडिक 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 [E72220]

(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 व्दारा प्रदान किए जाने वाले अनुज्ञप्ति 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.

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1. 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.
2. विस्फोटकों के भंडारण के लिए प्रयुक्तार होने वाली मैगजीन अनुसूची III और अनुज्ञप्ति के उपाबंध में विनिर्दिष्ट सुरक्षा दूरी बनाए रखना होगा।
   The magazine used for storage of explosives shall maintain safety distance specified in Schedule III and annexure to the licence.
3. मैगजीन का प्रयोग उन सभी विस्फोटकों के, जो इस अनुज्ञप्ति में विनिर्दिष्ट है, रखे जाने के लिए और ऐसे रखे जाने से संबध्द 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.
4. पैकजों को खोलने का कार्य और विस्फोटकों को तौलने 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.
5. दो या दो से अधिक वर्णन के विस्फोटकों को, जिन्हें मैगजीन में रखे जाने की अनुज्ञा दी जा सकती है, मैगजीन में तभी रखे जाएंगे जब उनमें से प्रत्येक को, ऐसे पदार्थ या स्वरूप का कोई मध्यवर्ती विभाजक लगाकर या उनके बीच ऐसा मध्यवर्ती स्थान छोड़कर, परस्पर पृथक कर दिया जाए कि किसी वजह से विस्फोटक में लगने वाली आग या होने वाला विस्फोट किसी अन्य वर्णन के विस्फोटक तक न पहुंच सके : परंतु –
   (घ) 2 (नाइट्रेट मिश्रण), वर्ग 3 (नाइट्रो योगिक) के विभिन्न विस्फोटक, वर्ग 6 प्रथम प्रभाग के अंतर्गत आने वाले सुरक्षा पलीते और वर्ग 6 प्रभाग 2 के अंतर्गत आनेवाले विस्फोटक प्रेरक पलीते, जिनमें कोई खुला लोहा या इस्पात नहीं है, एक दूसरे के साथ बिना किसी मध्यवर्ती विभाजक या स्थायन के रखे जा सकते हैं ।
   (ङ) वर्ग 6 प्रभाग 3 के अंतर्गत आनेवाले विस्फोटक प्रेरक अलग रखे जाएंगे ।
   (च) वर्ग 1 के अंतर्गत आने वाले बारूद को अलग रखा जाएगा ।
   Two or more description or explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening space, as will effectually prevent explosion or fire in the one communicating with the other; Provided that—
   (d) the various explosives of Class 2 (nitrate-mixture), Class 3 (nitro-compound), safety fuses belonging to Class 6 Division 1and 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.
6. वर्ग 3 (नाइट्रो योगिक) 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.
7. वर्ग 3 (नाइट्रो योगिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के पश्चात मैगजीन में तभी रखा जाएगा जब कि किसी विस्फोटक नियंत्रक ने इसके लिए विशेष मंजूरी दे दी हो ।
   (i) जब ऐसी मंजूरी दे दी गई हो तो प्रत्येक निरीक्षण पर किसी विस्फोटक नियंत्रक से ऐसा लिखित प्रमाणपत्र अभिप्राप्त कर लिया जाए जिसमें दी गई मंजूरी के अंतर्गत आनेवाली अवधि दर्शित की गई हो और ऐसे प्रमाणपत्र के अनुज्ञप्तिधारी अपने पास रखेगा और मांग की जाने पर प्रस्तुरत करेगा ।
   (ii) जब कोई विस्फोटक मानक शुध्दता का न रह जाने के कारण या द्रवणीकरण या नाइट्रो ग्लीअसरीन या द्रव नाइट्रो योगिक के निकल जाने के चिन्ह प्रकट होने के कारण मैगजीन में भण्डारित किए जाने के उपयुक्त नहीं रह जाता है तो अनुज्ञप्तिधारी अपने ही व्यय पर ऐसे विस्फोटक के निपटारे के लिए ऐसे निदेशों का अनुपालन करेगा जो मुख्य नियंत्रक या विस्फोटक नियंत्रक जारी करें ।
   Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of the Controller of Explosives.
   (i) When such sanction has been given, a written certificate showing the period covered by the sanction shall be obtained from the Controller of Explosives at each inspection, and shall be kept by the licensee and produced on demand.
   (ii) When an explosive owing to its being no longer of standard purity or owing to signs of liquefaction or of exuded nitro-glycerin or liquid nitro-glycerin or liquid nitrocompound is no longer fit for storage in the magazine or store house the licensee shall comply, at his own expense, with such directions as to its disposal as the Chief Controller or Controller of Explosives may issue.
8. मैगजीन के भीतरी भाग या उसमें लगी बैंचो, 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 बैंचे, शैल्फें और फिटिंग यथासाध्य ग्रिट से मुक्त एवं साफ रखे जाएंगे तथा ऐसे विस्फोटक, जो जल से खतरनाक रूप में प्रभावित हो सकते हैं, इस बाबत सम्यक सावधानी बरती जाएगी कि वहां कोई जल मौजूद न रहे : परंतु किसी लोहे या इस्पात के खुले होने के विरूध्द सावधानी से संबंधित इस शर्त का वह भाग ऐसे किसी भवन में बाध्येकर 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.
9. यदि तड़ित चालक का परीक्षण विस्फोटक नियंत्रक करता है तो अनुज्ञाप्तिधारी ऐसे परीक्षण के लिए विहित फीस का संदाय करेगा यदि परीक्षण असमाधानकारी साबित होता है तो उतनी ही फीस अनुज्ञप्तिधारी व्दारा पश्चात्वर्ती 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 संबध्द 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 lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for test: [illegible] even of the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lighting conductor is

passed by the testing officer as satisfactory:
Provided that the fees payable for a single test shall be charged for all tests made on a conductor during any one day :

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

10. उपयुक्त तथा जेब रहित कार्यकरण वस्त्रों , उपयुक्त जूतों के प्रयोग व्दारा तथा तलाशी लेकर या अन्यथा अथवा ऐसे किन्हीं साधनों व्दारा इस बाबत सम्यक 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 लोहे या इस्पात के अपकर्जन को लागू होता है, ऐसे किसी भवन के संबंध में बाध्य कर नहीं होगा जिससे भिन्न कोई विस्फोटक नहीं रखा गया है ।
Due provisions shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of fie, 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. अनुज्ञप्तिधारी 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 व्दारा 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 पूर्वानुमोदन बिना नहीं की जाएगी और अनुज्ञप्तिधारी ऐसी किसी शर्त का अनुपालन करेगा जो इस निमित्त अनुज्ञापन प्राधिकारी विनिर्दिष्ट करें ।
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 अनुज्ञप्तिधारी 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 अनुज्ञप्तिधारी इन नियमों के नियम 24 के उप-नियम 3 के अनुसार त्रैमासिक विवरणी प्रस्तुत करेगा ।
The licensee of the magazine shall submit quarterly return as per sub-rules (3) and (4) of rule 24 of these rules.

14. यदि सुरक्षा दूरी का कोई अधिक्रमण होता है तो उसकी सूचना अनुज्ञापन प्राधिकारी को आवश्यक सलाह और कार्यवाही के लिए तुरंत दी जाएगी ।
Any encroachment of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.

15. यदि कोई विस्फोटक विनष्ट हुआ अथवा अनुपयोगी जाया जाता है तो उसकी सूचना अनुज्ञापन प्राधिकारी को, सलाह प्राप्त करने के लिए, तुरंत दी जाएगी ।
The licensing authority shall be immediately informed for advice if any explosive is found deteriorated or unserviceable.

16. विस्फोटकों के पैकेटों के चट्टे इस प्रकार लगाए जाएंगे कि कम से कम एक व्यक्ति भण्डार किए गए सभी पैकजों की हालत की जांच करने और प्रत्येक पैकेज की विनिर्माण विशिष्टियों 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.
तडित चालकों की भूमि के लिए प्रतिरोध यथासंभव न्यूनतम होगा और किसी भी दशा में 10 ओह्म 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 शुत्क घास या झाड़ी या ज्वलनशील सामग्री नहीं रहने दी जाएगी ।
A distance of 15 meters surrounding the magazine or store house shall be kept clear of dried grass or bush or flammable materials.

18. विस्फोटकों के प्रत्येक पैकेट की, जब उसे मैगजीन के भीतर लिया जा रहा हो, ठीक दशा जानने के लिए परीक्षा की जाएगी ।
Every package of explosive at the time of bringing inside the magazine shall be examined for its sound condition.

19. किसी मैगजीन / भंडारगृह 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 पैकजों को शीघ्रतिशीघ्र वहां से हटा दिया जाएगा और नष्ट कर दिया जाएगा ।
Empty packages of the explosives shall be removed at the earliest and destroyed. \

21. अनुज्ञप्तिधारी और कर्मचारीयों को परिसर के भीतर आपातकाल के दौरान की जाने वाली प्रक्रियाओं से अवगत होना चाहिए ।
The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.

22. निरीक्षण या नमूना अधिकारी को सभी युक्तियुक्त समयों पर अनुज्ञत 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 सम्यकत: 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 नियंत्रक अनुज्ञप्तिधारक को अनुज्ञात परिसरों या मशीनरी, टूल या उपकरण में ऐसी कोई मरम्मत या परिवर्धन या परिवर्तन करने या सिफारिशों को लागू करने को लिखित रूप में सूचित करता है जो परिसर के अंदर या बाहर या व्यक्तियों की सुरक्षा के लिए आवश्यक है, अनुज्ञप्तिधारक सिफारिशों को निष्पादित करेगा और विनिर्दिष्ट अवधि के भीतर अनुपालन रिपोर्ट ऐसे प्राधिकारी को देगा ।
If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.

24. अनुज्ञप्तिधारी मैगजीन में रखने और बिक्री के लिए प्राधिकृत विस्फोटक सूची में उल्लिखित अनुज्ञत फैक्टरी या कंपनी से प्राधिकृत विस्फोटक आतिशबाजी या सुरक्षा पलीते खरीदेगा ।

मुख्य विस्फोटक नियंत्रक
Chief 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 बिक्री और रखने के लिए –
(क) जो फटने की जगह से चार मीटर की दूरी पर है, 125 डी.बी.(ए1) या 145 डी.बी.(सी)पी.के. प्रतिबंधित होंगे;
(ख) श्रृंखला (जुड़े हुए पटाखे) को गठन करने वाले व्यक्तिगत पटाखों के लिए उपर्युक्त उल्लिखित सीमा 5 लॉग.10(एन) डी.बी. (सी) पी.के.प्रतिबंधित होंगे ;
The possession and sale of fire-crackers generating noise level exceeding;
a) 125 dB(AI) 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. **अनुज्ञप्तीधारी विदेशी मूल के आतिशबाजी को ना प्रदर्शित करेगा, ना रखेगा और ना 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
दक्षिणांचल, चेन्नै | South Circle, Chennai

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कृते उप मुख्य विस्फोटक नियन्त्रक
For Deputy Chief Controller of Explosives
एरनाकुलम Ernakulam

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

Safety distances required to be kept clear around magazine for high explosives or fire works or factory licence number E/SC/KL/22/1730(E72220) in form LE-3 granted to George Kolhuparambil,Proprietor, M/s. United Granites & Metals, Vazhithala P.O., Thodupuzha,, Kerala-685588 .

	Type of Structure(s)	Safety distances meters	
	Inside Safety Distances(ISD)	**M**	**UM**
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		
	Middle Safety Distances(MSD)		
4	Magazine Keeper's or Chowkidar's Dwelling house		
5	Railway including Minerals and Private Railways		
6	Canal (in active use) or other navigable water		
7	Dock or Pier or Jetty		
8	Public Highway or Public Road		45
9	Private Road which is PRINCIPAL means of access to a Temple, Mosque, Church, Gurudwara or other places of worships, Hospital, College, School or Factory		
10	River Embankment or Sea Embankment or Public Well		
11	Reservoir or Bounded tank/rope way		
12	Windmillor or Solar panel for Power Generation		
	Outside Safety Distances(OSD)		
13	Dwelling House		
14	Govt. and Public Building		
15	Temple, Mosque, Church or Gurudwara or other Places of Worships		
16	Shops, Market place, Public recreation and Sports Ground, College, School, Hospital, Theater, Cinema or other Building where the public are accustomed to assemble		
17	Factory		
18	Buildings or Works used for the Storage in Bulk of Petroleum, Sprit, gas, or other inflammable or hazardous substances		
19	Building or Works used for Storage and Manufacture of Explosives or of articles which 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		
	Overhead Electric lines		
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

For Joint Chief Controller of Explosives
South Circle, Chennai
कृते उप मुख्य विस्फोटक नियंत्रक
For Deputy Chief Controller of Explosives
एरनाकुलम Ernakulam

Amendments :

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

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

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, IInd Floor, Shastri* **Bhawan**
26 हेडोज रोड, नुंगम्बक्कम चेन्नै | *26 Haddows Road, Nungambakkam Chennai 600006*
फोन *(Phone) :- 28281023* | फैक्स *(Fax) :- 28284545*

अनुज्ञप्ति संख्या | Licence No. :A/SC/KL/P3/14(A2264) — दिनांक | Date :10/06/2024

सेवा में | To,
Shri GEORGE KOCHUPARAMBIL
KOCHUPARAMBIL HOUSE,VAZHITHALA P.O,THODUPUZHA,IDUKKI DISTRICT
Distt. IDUKKI, State: Kerala, Pincode-685583

विषय | Subject: अमोनियम नाइट्रेट नियम, 2012 के प्ररूप P-3 में विस्फोटक विनिर्माण इकाई (एएनएफओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञप्ति -
Amendment of Quantity of Ammonium Nitrate
Change in Postal Address
Amendment in Drawings/Facilities/Premises
Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO) granted in Form P-3 of Ammonium Nitrate, 2012 -
Amendment of Quantity of Ammonium Nitrate
Change in Postal Address
Amendment in Drawings/Facilities/Premises

महोदय | Sir,

कृपया ऊपर उद्धृत विषय पर आपके दिनांक 10/06/2024 के पत्र संख्या : 123121 का संदर्भ ग्रहण करें।
Please refer to your letter No. 123121 dated 10/06/2024 on the subject cited above.

अनुज्ञप्ति संख्या : A/SC/KL/P3/14(A2264) विधिवत् संशोधित की गई।
The Licence No.: A/SC/KL/P3/14(A2264) is duly amended in respect of ;

और इसके साथ अग्रेषित।
and forwarded herewith:

Quantity of Ammonium Nitrate
उपरोक्त के अनुसार डाक पते में परिवर्तन
Change in Postal Address as above
Drawings/Facilities/Premises

The Licence stands issued for the विस्फोटक विनिर्माण इकाई (एएनएफओ) से जुड़े गोदाम से, अमोनियम नाइट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञप्ति of the following kinds and quantities of Ammonium Nitrate ;
The Licence stands issued for the Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO) of the following kinds and quantities of Ammonium Nitrate ;

नाम Name	विस्फोटक Explosive(s)	महीना प्रति क्षमता Capacity Per Month	इकाई Unit
1	Ammonium Nitrate (Solid)	30000	Kg

यह अनुज्ञप्ति 31/3/2027 तक वैध रहेगी।
This Licence shall remain valid till 31st day of March 2027.

कृपया अनुज्ञप्ति के आगामी नवीकरण हेतु अमोनियम नाइट्रेट नियम, 2012 के अंतर्गत नियम 35(3) की प्रक्रिया का पालन करें।
For further renewal of licence, please follow the procedure under Rule 35(3)of Ammonium Nitrate, 2012.

कृपया इस पत्र की प्रति की पावती दें।
Receipt of this letter may please be acknowledged.

संलग्नक | **Enclosures** :

भवदीय | Yours faithfully

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

प्रतिलिपि प्रेषित | Copy Forwarded to:

1. **उप मुख्य विस्फोटक नियंत्रक कोच्ची | The Dy. Chief Controller of Explosives, Kochi.**
2. **जिला मजिस्ट्रेट, IDUKKI, Kerala को उनके अनापत्ति प्रमाणपत्र संख्या: E2.50476/13/K.Dis दिनांक: 30/11/2013 | District Magistrate, IDUKKI, Kerala with reference to his Noc No: E2.50476/13/K.Dis Dated: 30/11/2013.**
3. **पुलिस अधीक्षक , IDUKKI, Kerala | Superintendent of Police, IDUKKI, Kerala**

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

[अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए कृपया हमारी वेबसाइट http://peso.gov.in देखें।
For more information regarding status, fees and other details, please visit our web site http://peso.gov.in]

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

Digitally signed by Dr T L THANULINGAM
Reason: Licence No. : A/SC/KL/P3/14
Location:Chennai (A2264)

अनुज्ञप्ति प्ररुप P-3
(अमोनियम नाइट्रेट नियम, 2012 की अनुसूची I 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 (एएनएफओ) से जुड़े गोदाम से, अमोनियम नाईट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञप्ति
Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO)

अनुज्ञप्ती संख्या | **Licence No. : A/SC/KL/P3/14(A2264)**
वार्षिक अनुज्ञप्ती शुल्क | Annual licence Fee Rs: 1000/-

अनुज्ञप्ति एतद्वारा जारी की जाती है :
Licence is hereby granted to :

Shri GEORGE KOCHUPARAMBIL (अधिष्ठाता : GEORGE KOCHUPARAMBIL)
KOCHUPARAMBIL HOUSE,VAZHITHALA P.O,THODU[PUZHAIDUKKI DISTRICT ,
शहर \ गाँव - Thodupuzha
जिला- IDUKKI , राज्य- Kerala , पिन कोड - 685583
Phone - , Email- unitedgranitesandmetals@gmail.com , फैक्स-

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

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

4. अनुज्ञप्त परिसर निम्नलिखित आरेखण(यों) के अनुरूप होगा
   The licensed premises shall conform to the following drawing(s):
   आरेखण संख्या | Drawing No : A/SC/KL/P3/14 (A2264) दिनांक | Dated : 10/06/2024
5. अनुज्ञप्त परिसर निम्नलिखित पते पर स्थित है :
   The Licensed premises are situated at following address:
   Survey No. 359, Block No.11, शहर\गाँव | Town\Village : **Manakkadu**
   पुलिस स्टेशन | Police Station : **Thodupuzha** जिला | District : **IDUKKI** राज्य | State : **Kerala**
   पिन कोड | PinCode : **685588** फोन | Phone : ईमेल | E-Mail : फैक्स | Fax :
6. अनुज्ञप्त परिसर में निम्नलिखित सुविधाएँ उपलब्ध है :
   The licensed premises consist of following facilities :
   Consist of one store house .
7. अनुज्ञप्ति, समय-समय पर यथा संशोधित विस्फोटक अधिनियम 1884, एवं उसके अधीन बनाए गए अमोनियम नाइट्रेट नियम, 2012 की शर्तें, अतिरिक्त शर्तें तथा निम्नलिखित उपबन्धों के अधीन जारी की जाती है
   (i)उक्त क्रम संख्या 5 में उल्लिखित आरेखण (जिसमें स्थल, निर्माण एवं अन्य विवरण दर्शाए गए है) ।
   (ii)अनुज्ञप्ति जारी करने वाले प्राधिकारी द्वारा हस्ताक्षरित अनुज्ञप्ति की शर्तें एवं अतिरिक्त शर्तें ।

   The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Ammonium Nitrate Rules, 2012 framed there under and the conditions, additional conditions and Annexures.
   (i) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
   (ii) Conditions and Additional Conditions of this licence signed by the license issuing authority.

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

यह अनुज्ञप्ति विस्फोटक अधिनियम, 1884 या उसके अधीन बनाए गए अमोनियम नाइट्रेट नियम, 2012 या इस अनुज्ञप्ति की किसी शर्तों का उल्लंघन करने पर या यदि अनुज्ञप्त परिसर, आरेखन और उससे संलग्न उपाबद्ध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलम्बित या प्रतिसंहृत 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 license,if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

दिनांक | Date: 09/11/2017

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

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

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

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

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

सांविधिक चेतावनी: अमोनियम नाइट्रेट कानून का दुरूपयोग 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/SC/KL/P3/14
Location: Chennai [A2264]
Date: 10-06-2024 17:20:58 PM

Conditions

मुख्य विस्फोटक नियंत्रक / या विस्फोटक नियंत्रक व्दारा प्रदत्त प्ररूप P-3 मे विस्फोटक विनिर्माण इकाई (एएनएफओ) से जुड़े गोदाम से, अमोनियम नाईट्रेट के उपयोग के लिए, रखने हेतु अनुज्ञप्ति, अनुज्ञप्ति संख्या A/SC/KL/P3/14(A2264) की शर्तें निम्नलिखित हैं।

The following are the conditions of licence number A/SC/KL/P3/14(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 अनुज्ञप्ति के साथ संलग्न अनुमोदित आरेखन में दर्शाए गए अनुज्ञप्त गोदाम या मेल्ट 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, अनुज्ञप्त 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. छलका हुआ या अपशिष्ट अमोनियम नाईट्रेट को एकत्र कर अनुज्ञप्तिधारी द्वारा विनष्ट किया जाना चाहिए एवं विनष्ट किए गए अमोनियम नाइट्रेट की मात्रा का लेखाजोखा रखा जायेगा।
   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. अनुज्ञप्तिधारी और विनिर्माण तथा संपरिवर्तन के लिए परिसर में नियुक्त प्रत्येक व्यक्ति को विनिर्माण तथा संपरिवर्तन के लिए अनुज्ञप्ति परिसर में अग्नि या विस्फोट से होने वाली दुर्घटना से बचाव तथा विनिर्माण तथा संपरिवर्तन के लिए अनुज्ञप्त परिसर में अनधिकृत व्यक्तियों के प्रवेश से बचाव के लिए पूर्ण सावधानी बरतनी होगी एवं ऐसे किसी भी कार्य से विरत 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 नियंत्रक या अनुज्ञापन प्राधिकारी की पूर्व लिखित स्वीकृति के बिना अनुज्ञप्त परिसर में किसी भी प्रकार का परिवर्तन एवं परिवर्धन नही किया जाएगा। स्वीकृत किए गए इस प्रकार के परिवर्तन एवं परिवर्धन अनुज्ञप्ति 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. अनुज्ञप्तिधारक 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 अनुज्ञप्त परिसर में युक्तियुक्त समय पर बराबर अबाध पहुँच प्रदान की जाएगी और ऐसे अधिकारी को वे सभी सुविधाएँ उपलब्ध की जाएगी जिससे कि वह सुनिश्चित कर सके कि अधिनियम और इन नियमों के उपबंधों 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 duly observed.
8. यदि जिला प्राधिकारी या निरीक्षण अधिकारी अनुज्ञप्तिधारी को लिखित में अधिकृत परिसर में कोई मरम्मत या कोई परिवर्तन या परिवर्धन या ऐसी सिफारिशों को क्रियान्वित करने के लिए, 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 अनुज्ञप्तिधारी उन सिफारिशों को निष्पादित करेगा और ऐसे प्राधिकारी द्वारा विनिर्दिष्ट अवधि में अनुपालन की रिपोर्ट देगा।
   If the License Issuing authority or the inspecting officer informs in writing, the holder of the License to execute any repairs or to make any additions or alterations to the licensed premises or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and therefore the same is necessary for the safety or security of the premises or persons, the holder of the License shall execute the recommendations and report compliance within the period specified by such authority.
9. अग्नि या विस्फोट से होने वाली दुर्घटनाओं और अमोनियम नाइट्रेट की हानि, उसमे कमी या चोरी की सूचना निकटतम पुलिस स्टेशन और जिला प्राधिकारी के स्थानीय कार्यालय को तुरन्त, 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. अनुज्ञप्तिधारी अनुसूची-II भाग 3 में विनिर्दिष्ट प्ररूप में इनका अभिलेख रखेंगे जिससे कि अमोनियम नाइट्रेट के लिए उत्तरदायित्व सुनिश्चित कर उनकी पहचान कर खोज की जा सके एवं नियम 50 में विहित प्राधिकारी के मांगे जाने पर ऐसे अभिलेख प्रस्तुत किए जाए।
    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. अनुज्ञप्तिधारी, अनुसूची II भाग 3 में विनिर्दिष्ट प्ररूप ट-9 में जिला प्राधिकारी को मासिक विवरणी इस प्रकार प्रेषित करेंगे कि वह प्रत्येक आगामी महीने की 10 तारीख तक अनुज्ञापन प्राधिकारी या जिला प्राधिकारी को प्राप्त हो जाए।
    The License holder shall submit monthly returns of AN received, sold /used/stolen or short received and destroyed in the form prescribed in Form R-9 of Part 3 of Schedule II so as to reach Licensing Authority and District Authority within 10th day of every succeeding month.

कृते संयुक्त मुख्य विस्फोटक नियंत्रक
दक्षिणांचल, 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.

For Deputy Chief Controller of Explosives
एर्णाकुलम Ernakulam

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 ओर D - विंग, ब्लॉक 1-8, दूसरा तल, शास्त्री भवन | A & D - Wing, Block 1-8, IInd Floor, Shastri Bhavan
26 हड्डोउस रोड, नुंगमबक्कम चेन्नै | 26 Haddous Road, Nungambakkam Chennai 600006
फोन (Phone):- 28281023 | फैक्स (Fax):- 28284848

संख्या (No.): E/SC/KL/38/21(E98818) दिनांक (Date): 11/06/2024

सेवा में | To,

Shri GEORGE KOCHUPARAMBIL,
KOCHUPARAMBIL HOUSE,VAZHITHALA POTHODUPUZHAIDUKKI 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 **Shri GEORGE KOCHUPARAMBIL** द्वारा एनको विस्फोटक के एनफो शेड में विनिर्माण हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-1 में जारी अनुज्ञप्ति सं E/SC/KL/38/21(E98818) के संशोधन संदर्भ में।
(विस्फोटक की मात्रा में परिवर्तन डाक पते में परिवर्तन अरेखण / सुविधाएं / परिसर में परिवर्तन)

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

आपका 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.

अनुज्ञप्ति संख्या E/SC/KL/38/21(E98818) विस्फोटक की मात्रा में परिवर्तन डाक पते में परिवर्तन अरेखण / सुविधाएं / परिसर में परिवर्तन के संदर्भ में यथा संशोधित कर भेजी जा रही है।
The Licence No.: E/SC/KL/38/21(E98818) is forwarded herewith duly amended in respect of followings :

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

किसी भी एक समय में लाइसेंस 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	200	Kg

यह अनुज्ञप्ति दिनांक 31 मार्च 2027 तक प्रवृत रहेगी।
This Licence shall remain valid till **31st day of March 2027.**

अनुज्ञप्ति के आगामी 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.धनुलिंगम | Dr. T. L. THANULINGAM)
संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives

दक्षिणांचल, चेन्नै | South Circle, Chennai

प्रतिलिपि प्रेषित | Copy Forwarded to:

1. उप मुख्य विस्फोटक नियंत्रक कोचीं
   The Dy. Chief Controller of Explosives, Kochi
2. District Magistrate, IDUKKI, Kerala with reference to his Noc No: 2012/50767/6 and 2013/88965/6 Dated: 30/11/2013.
3. Superintendent of Police, IDUKKI, Kerala.

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

(अधिक जानकारी जैसे 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.

Digitally signed by Dr T L THANULINGAM
Reason: Licence No. : E/SC/KL/38/21
Location Chennai IE98818I

सेट III | Set III)

मुख्य विस्फोटक नियंत्रक या विस्फोटक नियंत्रक द्वारा अनुदत्त प्ररूप एल ई 1 [अनुच्छेद (ए)] में ए.एन.एफ.ओ. विस्फोटकों के विनिर्माण के लिए अनुज्ञप्ति सं. E/SC/KL/38/21(E98818) की शर्तें निम्नलिखित हैं ।

The following are the conditions of licence number E/SC/KL/38/21(E98818) for manufacture of ANFO explosives in Form LE-1 [article 1(d)] granted by Controller or Controller of Explosives.

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1. परिसर या उसके किसी भाग में एएनएफओ विस्फोटकों की मात्रा किसी एक समय में उस मात्रा से अधिक नहीं होगी, जिसके लिए अनुज्ञप्ति 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
2. एएनएफओ विनिर्माण शेड को 15 मीटर की दूरी पर बाड़ लगा कर संरक्षित किया जाएगा और वह अनुसूची- VIII की सारणी 1 में यथाविनिर्दिष्ट 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.
3. शेड में कार्य कड़ाई में अधिकथित सुरक्षाकार्य प्रक्रियाओं और अनुदेशों के अनुसार किया जाएगा ।
   Work in the shed shall be carried out strictly in accordance with the laid down safe working procedures and instructions
4. एएनएफओ विस्फोटकों को विनिर्माण अनुज्ञप्तिधारी द्वारा नियुक्त किसी अर्हित उत्तरदायी व्यक्ति के सीधे पर्यवेक्षणाधीन किया जाएगा ।
   The ANFO explosives shall be manufactured under the immediate supervision of a qualified responsible person appointed by the licensee.
5. अनुज्ञप्तिधारी और प्रत्येक नियोजित व्यक्ति उस स्थान या उन स्थानों में जहां एएनएफओ 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.
6. एएनएफओ विस्फोटकों के सभी अवशेषों को एकत्रित किया जाएगा और अनुभवी व्यक्ति के पर्यवेक्षण के अधीन अनुज्ञप्त 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.
7. एएनएफओ विस्फोटकों के विनिर्माण के लिए प्रयुक्त् आधानों और मिश्रणों को प्रयोग के पश्चात उपयुक्त डिटरजेन्टण घोल से अच्छी तरह साफ किए जाएगा 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.
8. अनुज्ञप्तिधारी 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.
9. किसी निरीक्षण या नमूना लेने वाले अधिकारी को सभी युक्तिपुक्त समयों पर अनुज्ञप्त परिसर में अबाध पहुंच प्रदान की जाएगी और यह अभिनिश्चित करने के लिए कि अधिनियम और इन नियमों के उपबंधो या सुरक्षा संबंधी शर्तों का सम्यक रूप से पालन किया जाता है, उस अधिकारी को प्रत्येक सुविधा उपलब्धक 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.
10. यदि अनुज्ञापन प्राधिकारी या विस्फोटक नियंत्रक लिखित में अनुज्ञप्ति धारक को अनुज्ञप्त परिसर या मशीनरी, औजारों या साधित्रों में कोई मरम्मत या कोई परिवर्धन या परिवर्तन करने के लिए या ऐसी सिफारिशों को क्रियान्वित करने के लिए, जोखिम प्रदर्शित कर सकती है और परिसर या व्यक्तियों की स्थल पर या स्थल से बाहर सुरक्षा के लिए आवश्यक है, सूचित करता है जो अनुज्ञप्ति धारक उन सिफारिशों को निष्पादित करेगा और ऐसे प्राधिकारी व्दा रा विनिर्दिष्ट अवधि के भीतर अनुपालन 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 license shall execute the recommendations and report compliance within the period specified by such authority.
11. अग्नि या विस्फोट के कारण होनेवाली दुर्घटनाओं और विस्फोटकों की हानि, कमी या चोरी के बारे में निकटतम पुलिस स्टेशन और अनुज्ञापन प्राधिकारी तथा अनुज्ञापन प्राधिकारी के स्थानीय कार्यालय में तुरंत रिपोर्ट की जाएगी ।
    Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority

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

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For Deputy Chief Controller of Explosives
एर्णाकुलम Ernakulam

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 THODUPUZHA** is hereby renewed up to **15.07.2029** and issued to **Sri GEORGE KOCHUPARAMBIL , KOCHUPARAMBIL HOUSE VAZHITHALA P.O MANAKKAD**.
The consent(s)/ variation order(s) cited under reference are integral part of this renewal order and this order is subject to the conditions stipulated therein and the following modifications/ additions.

1. GENERAL

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

6	OCCUPIER	Sri George Kochuparambil Kochuparambil House Vazhithala P.O Manakkad

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 Act 1981 and Environment Protection Act, 1986 and The Rules there under. The operation of the quarry shall be commenced only after obtaining clearances from all concerned Authorities.

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

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

5.10. There shall be a minimum distance of 50 m from boundary of quarry operating area to residential building, place of worship, public buildings, public road having vehicular traffic, river or lake, railway line, bridges etc.
5.11. The PM10 in ambient air at the boundary shall not exceed 100 microgram/m3.
5.12. The PM 2.5 in ambient air at the boundary shall not exceed 60 microgram/m3.
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 RABURAJAN 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 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)

പിന്: 685608, ഫോണ്: 04862-202248, ഇ-മെയില്: manakkadgp@gmail.com

വ്യവസായം, വാണിജ്യം, സംരഭകത്വം, മറ്റ് സേവനങ്ങൾക്കുള്ള ലൈസൻസ്

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

ലൈസൻസിയുടെപേര്	ജോർജ്ജ് കൊച്ചുപറമ്പിൽ
ലൈസൻസിയുടെ മേൽവിലാസം	കൊച്ചുപറമ്പില്, വഴിത്തല പി.ഒ.
സ്ഥാപനത്തിന്റെ പേരും, സ്ഥലനാമവും	യുണൈറ്റഡ് ഗ്രാനൈറ്റ്സ്&മെറ്റൽസ്, വഴിത്തല
ലൈസൻസ് നൽകിയിട്ടുള്ള പ്രവർത്തനങ്ങൾ	കരിങ്കൽ ക്വാറി നടത്തി സ്റ്റോൺ അഗ്രിഗെയ്റ്റ്സ് ഉൽപ്പാദിപ്പിക്കുന്നതിന്
വാർഡ് നമ്പർ/കെട്ടിട നമ്പർ	XII/-
ലൈസൻസ് കാലാവധി	01/04/2023 മുതൽ 31/03/2028 വരെ

	തുക	രസീത് നമ്പർ	തീയതി
ലൈസൻസ് ഫീസ്	75000 /- രൂപ	1220303816, 3817, 4430	15/03/2023, 31/03/2023
മോട്ടോർ ഫീസ്	22200 /- രൂപ	1220303816, 3817, 4430	15/03/2023, 31/03/2023
തൊഴിൽ നികുതി	12500 /- രൂപ	1220303816, 4430	15/03/2023, 31/03/2023

ലൈസൻസ് അനുവദി-ക്കുന്നതിന് ഹാജരാക്കിയ നിരാക്ഷേപ പത്രങ്ങളുടെ വിശദാംശങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽകിയ അധികാര സ്ഥാപനം)

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

ഓഫീസ് മുദ്ര

സെക്രട്ടറി

മണക്കാട് ഗ്രാമപഞ്ചായത്ത്

Tool developed by://: Ansar Thachayil

ലൈസൻസി താഴെ പറയുന്ന വ്യവസ്ഥകൾ അനുസരിക്കേണ്ടതാകുന്നു.

1 കേരള പഞ്ചായത്ത് രാജ് ആകടും അതേ തുടർന്നുള്ള ചട്ടങ്ങളും ബൈലകളും അനുസരിച്ചു പ്രവർത്തിക്കേണ്ടതാകുന്നു.

2 തൊഴിൽ സ്ഥലവും അതിലുള്ള സാധനസാമഗ്രികളും പഞ്ചായത്തധികാരികൾക്കോ/സെക്രട്ടറി അധികാരപ്പെടുത്തുന്ന മറ്റ് ഉദ്യോഗസ്ഥർക്കോ പരിശോധിക്കുന്നതിന് ലൈസൻസി വേണ്ട സൈകര്യം നൽകേണ്ടതും അവർ ആവശ്യപ്പെട്ടാൽ ഈ ലൈസൻസ് കാണിക്കേണ്ടതുമാണ്.

3 ഏത് സ്ഥലത്തിന്റെ കാര്യത്തിൽ ലൈസൻസ് നൽകിയിരിക്കുന്നവോ ആ സ്ഥലത്ത് എല്ലാവരും കാണത്തക്ക വിധത്തിലുള്ള ഒരു ഭാഗത്ത് ലൈസൻസി തന്റെ പേരും, ലൈസൻസിന്റെ നമ്പരും ഉദ്ദേശവും കാണിക്കുന്ന ഒരു അടയാളപ്പലക വച്ചിരിക്കേണ്ടതാണ്.

4 പഞ്ചായത്തിൽ നിന്നും അനുവാദം ലഭിച്ചശേഷമല്ലാതെ തൊഴിൽ സ്ഥലം മാറ്റാൻ പാടില്ലാത്തതും തൊഴിൽ നിർത്തുന്ന പക്ഷം വിവരം മുൻകൂട്ടി പഞ്ചായത്തിൽ അറിയിക്കേണ്ടതുമാകുന്നു.

5 തൊഴിൽ സ്ഥലവും പരിസരങ്ങളും വൃത്തിയായും സാംക്രമികരോഗാണുക്കൾ ഉണ്ടാക്കാത്ത വിധത്തിലും പൊതുജനോപദ്രവമാകാത്ത വിധത്തിലും വ്യപാരത്തിനു വച്ചിട്ടുള്ള ഭക്ഷണപദാർത്ഥങ്ങൾ ഈച്ച,അണുക്കൾ,പൊടി മുതലായവയുടെ ശല്യം ഉണ്ടാകാത്ത വിധത്തിലും സൂക്ഷിക്കേണ്ടതാണ്.

6 ഒരോ പ്രവർത്തിദിവസത്തിന്റെയും ഒടുവിൽ സ്ഥലം വൃത്തിയാക്കേണ്ടതാണ്.

7 ആ സ്ഥലത്തിന്റെയോ പരിസരത്തിന്റെയോ, ഏതെങ്കിലും ഭാഗത്ത് വീഴുകയോ 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 തെറിച്ചുവീഴാനിടയുള്ള ഏതെങ്കിലും ദ്രാവകമോ, മാലിന്യമോ, ചപ്പുചവറോ, അസഹ്യവും, ഉപദ്രവകരവുമാ ഏതെങ്കിലും പദാർത്ഥമോ അവിടെ ലയിക്കുന്നത് തടയത്തക്കവിധം എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് നിലനിർത്തേണ്ടതാണ്.

9 ലൈസൻസി മേൽപറഞ്ഞ സ്ഥലത്തോ, പരിസരത്തോ അതോടു ചേർന്നോ ഉള്ള ഏതൊരു ഓവുചാലും, അഴുക്കുജലം കളയുന്നതിനുള്ള ഉപകരണവും എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് വയ്പിക്കേണ്ടതാണ്.

10 അയിത്തം ആചരിക്കുന്ന കടകളുടെ ലൈസൻസ് റദ്ധുചെയ്യുന്നതാണ്.

11 ഏതെങ്കിലും തരത്തിലുള്ള ത്വക്ക് രോഗമോ കുഷ്ഠ രോഗമോ വ്രണമോ പകർച്ച വ്യാധികളോ ഉള്ള യാതൊരാളും കച്ചവടം നടത്തുന്നതിന് ഉപയോഗിക്കുന്ന സ്ഥലത്തും പരിസരത്തും പ്രവർത്തിക്കുവാൻ പാടില്ലാത്തതാകുന്നു.

12 17/02/2019 ലെ സ.ഉ. (കൈ) നം.7/2019 പരിസ്ഥിതി ഉത്തരവ് പ്രകാരം ഒറ്റത്തവണ ഉപയൊഗിക്കുന്ന 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 ടോയ്ലറ്റ് സൗകര്യം ഏർപ്പെടുത്തേണ്ടതാണ്.

15 നിരോധിത ഉൽപന്നങ്ങളായ പാൻമസാല, ഗുഡ്ഖ തുടങ്ങിയവ സംഭരിച്ചുവയിക്കുവാനോ വിൽക്കുവാനോ പാടില്ല.

16 ബാലവേല അനുവദിക്കാൻ പാടില്ല.

17 മുകളിൽ കാണിച്ചിരിക്കുന്ന വ്യവസ്ഥകളുടെ ലംഘനം ഈ ലൈസൻസ് റദ്ദ് ചെയ്യപ്പെടുന്നതിന് കാരണമാകാവുന്നതാണ്.

സെക്രട്ടറി

മണക്കാട് ഗ്രാമപഞ്ചായത്ത്

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

Annexure-15

NEWSPAPER ADVERTISEMENT

നോട്ടീസ്

പൊതുജനത്തെയറിയിക്കുന്നത്, കേരള സംസ്ഥാനം, ഇടുക്കി ജില്ല, തൊടുപുഴ താലൂക്ക്, മണക്കാട് ഗ്രാമപഞ്ചായത്ത്, മണക്കാട് വില്ലേജിലുംപെട്ട റീസർവ്വേ നമ്പർ 354/4, 354/5, 355/1pt, 351/1pt, 350, 352/1pt-ൽ ഖനനം ചെയ്യുന്നതിനുവേണ്ട പരിസ്ഥിതി അനുമതി ശ്രീ. ജോർജ്ജ് കൊച്ചുപറമ്പിൽ-ന് കേരള സംസ്ഥാന പരിസ്ഥിതി ഇംപാക്ട് അസ്സസ്മെന്റ് അതോറിറ്റിയിൽനിന്നും ഓർഡർ നമ്പർ 1137/EC/SEIAA/KL/2017 തീയതി 17-03-2018 ഓർഡർ പ്രകാരം ലഭിച്ചിരിക്കുന്നു. ഈ ഓർഡറിന്റെ പകർപ്പ് കേരള സംസ്ഥാന പരിസ്ഥിതി ഇംപാക്ട് അസ്സസ്മെന്റ് അതോറിറ്റിയിൽ ലഭ്യമാണ്. 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

Annexure-16

MONITORING PHOTOS


GREENTECH INSTRUMENTS
COMBINED SAMPLER
GTI-241

Annexure-17

MONITORING REPORTS

GLOBAL ENVIRONMENT & MINING SERVICES LLP
(Consulting Engineers, Mine designers, Geologist & Surveyors)
3rd Main Road, Basaveswara Badavane,
HOSPETE – 583201, Dist.., Vijayanagara (Karnataka)
Ph : +918394 355369
e-mail : gems_hpt@yahoo.com
Website : www.globalmining.in

GEMS-LD/TF/11/01
Report Issue Date: 15.09.2025

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	Granite Building Stone Quarry of **Shri. George Kochuparambil** Extent: 12.2987Ha Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt, Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala.
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	Respirable Dust Sampler, FPS Sampler & CO Analyzer
Month	:	**September - 2025**
Location	:	**Core zone area**
Monitoring station code	:	**A1**
Duration of Monitoring		24 Hour
Report Number	:	ULR-TC161802500001029F

RESULTS

Parameters			**PM_{10} [µg/m³]**		**$PM_{2.5}$ [µg/m³]**		**SO_2 [µg/m³]**		**NO_2 [µg/m³]**		**CO (1 Hour) (mg/ m³)**	
Reference method			**IS: 5182:2006 (Part 23) (RF- 2017)**		**IS: 5182 (Part 24): 2019**		**IS: 5182: 2001 (Part 2) (RF 2017)**		**IS: 5182: (Part 6) 2006 (RF 2017)**		**IS: 5182: (Part 10) 1999 (RF 2006)**	
Date of Sampling	**Date of sample received**	**Sample code**	**Result**	**STD**	**Result**	**STD**	**Result**	**STD**	**Result**	**STD**	**Result**	**STD**
10.09.2025	13.09.2025	401	43.2	**100**	18.4	**60**	4.3	**80**	7.2	**80**	ND	**4.0**

Note:
CO - GEMS/SOP/86/as per CO analyzer Manual (1 hour)
ND - Not Detected (<0.001)

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

Analyzed By
Anusha M
Chemist

Authorized Signatory
K. Ramakrishna Reddy
Technical Manager

GLOBAL ENVIRONMENT & MINING SERVICES LLP ★ HOSPET

Note:
1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days, Minerals 3 Months, Filter papers & Thimbles after analysis Discard.
3. 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.
4. Total liability of our laboratory is limited to the Invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.
5. Recognized by Ministry of Environment, Forest and Climate Change for Laboratory.
6. Recognized by Government of Karnataka, Maharashtra, Goa for DGPS survey.

GLOBAL ENVIRONMENT & MINING SERVICES LLP
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Website : www.globalmining.in

GEMS-LD/TF/11/01
Report Issue Date: 15.09.2025

ANALYSIS REPORT OF AMBIENT AIR QUALITY DATA

Name of the Industry	:	Granite Building Stone Quarry of **Shri. George Kochuparambil** Extent: 12.2987Ha Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt, Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala.
Sample Type	:	Ambient Air Quality Monitoring
Particulars of Sample Collected	:	Respirable Dust Sampler, FPS Sampler & CO Analyzer
Month	:	**September - 2025**
Location	:	**Kolady.**
Monitoring station code	:	**A2**
Duration of Monitoring		24 Hour
Report Number	:	ULR-TC161802500001030F

RESULTS

Parameters			PM_{10} [µg/m³]		$PM_{2.5}$ [µg/m³]		SO_2 [µg/m³]		NO_2 [µg/m³]		CO (1 Hour) (mg/ m³)	
Reference method			IS: 5182:2006 (Part 23) (RF- 2017)		IS: 5182 (Part 24): 2019		IS: 5182: 2001 (Part 2) (RF 2017)		IS: 5182: (Part 6) 2006 (RF 2017)		IS: 5182: (Part 10) 1999 (RF 2006)	
Date of Sampling	Date of sample received	Sample code	Result	STD	Result	STD	Result	STD	Result	STD	Result	STD
11.09.2025	13.09.2025	402	44.8	**100**	16.7	**60**	5.0	**80**	11.2	**80**	ND	**4.0**

Note:
CO - GEMS/SOP/86/as per CO analyzer Manual (1 hour)
ND - Not Detected (<0.001)

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

Analyzed By
Anusha M
Chemist

Authorized Signatory
K. Ramakrishna Reddy
Technical Manager

GLOBAL ENVIRONMENT & MINING SERVICES LLP ★ HOSPET

Note:
1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days. Minerals 3 Months. Filter papers & Thimbles after analysis Discard
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Website : www.globalmining.in

GEMS-LD/TF/08/01
Report Issue Date: 15.09.2025

TEST REPORT OF AMBIENT NOISE LEVEL DATA

1	Name of the Industry	:	Granite Building Stone Quarry of **Shri. George Kochuparambil** Extent: 12.2987Ha Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt, Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala.
2	Sample Description	:	**Ambient Noise Level monitoring**
3	Sample Collected By	:	GLOBAL Environment & Mining Services LLP.
4	Particulars of Sample Collected	:	Noise Level Meter (Lutron SL-4023SD)
5	Month	:	**September - 2025**
6	Duration of the Monitoring	:	24 Hours Sampling
7	Report Number	:	ULR-TC161802500001031F

Result

Date	10.09.2025	11.09.2025
Area	Industrial	Residential
Name of the Location	Core zone	Kolady
Sample code	542	543
Time (hrs)	N1	N2
6.00	42.3	40.6
7.00	54.7	51.3
8.00	62.3	53.7
9.00	60.6	55.9
10.00	64.8	57.1
11.00	63.2	56.0
12.00	58.1	50.5
13.00	57.5	49.9
14.00	59.8	52.4
15.00	61.0	53.0
16.00	62.4	51.3
17.00	56.9	57.1
18.00	53.3	56.6
19.00	48.9	50.3
20.00	48.1	47.8
21.00	46.5	46.1
22.00	41.6	42.3
23.00	39.7	39.0
00.00	40.3	38.5
01.00	38.4	39.0
02.00	37.6	38.7
03.00	38.9	38.8
04.00	39.4	39.6
05.00	41.8	40.3

GLOBAL ENVIRONMENT & MINING SERVICES LLP HOSPET

Note:
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GLOBAL ENVIRONMENT & MINING SERVICES LLP
(Consulting Engineers, Mine designers, Geologist & Surveyors)
3rd Main Road, Basaveswara Badavane,
HOSPETE – 583201, Dist.., Vijayanagara (Karnataka)
Ph : +918394 355369
e-mail : gems_hpt@yahoo.com
Website : www.globalmining.in

Name of the location	Core zone	Kolady
L max	64.8	57.1
L min	37.6	38.5
L 10	39.1	38.9
L 50	51.1	50.1
L 90	62.4	56.4
Ld	59.8	53.8
Ln	40.3	39.8
Ldn	58.0	52.7
Leq	57.7	51.8

All Measured Values are in Db(A)

NOISE: (AMBIENT STANDARDS)

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

Note	Day time shall mean from 6:00 am and 10.00 pm
	Night time shall mean from in between 10.00 pm and 6.00 am
	Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority
	Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
	*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which relatable to human being
	A "decibel" is a unit in which noise is measured
	"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
Leq: It is energy mean of the noise level over a specified period.	

Authorized Signatory
K. Ramakrishna Reddy
Technical Manager

GLOBAL ENVIRONMENT & MINING SERVICES LLP ★ HOSPET

Note:

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e-mail : gems_hpt@yahoo.com
Website : www.globalmining.in

GEMS-LD/TF/23/01
Report Issue Date: 15.09.2025

Analysis Report of Water Quality Data

1	Name of the Industry	:	Granite Building Stone Quarry of **Shri. George Kochuparambil** Extent: 12.2987Ha Re-Sy. Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt, Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala.
2	Customer Reference		-
3	Sample Collected by	:	GLOBAL Environment & Mining Services LLP
4	Particulars of sample collected		Grab Sampling
5	Sampling procedure		GEMS-LD/SOP/32
6	Sample Type		**Water Sample (Ground Water)**
7	Date of sampling	:	10.09.2025
8	Sample Received	:	12.09.2025
9	Date of Analysis	:	13.09.2025
10	Report Number	:	ULR-TC161802500001032F

Results

Sl. No.	Parameters	Protocol	Unit	Results Sample Code 733 GW	Standard as per IS : 10500 : 2012 Desirable limits	Permissible limits
1.	Temperature	Thermometer	^{o}C	**24.8**	-	-
2.	pH	APHA 23rd Edition 2017 4500 H+ B (Pg No. 4-95 to 4-99)	-	**6.70**	6.5-8.5	NR
3.	Conductivity	APHA 23rd Edition 2017 2510 A (Pg No. 2-56 to 2-58)	µS/cm	**295**	-	-
4.	Total Dissolved Solids	APHA 23rd Edition 2017 2540 C (Pg No. 2-69 to 2-70)	mg/L	**141**	500	2000
5.	Turbidity (NTU)	APHA 23rd Edition 2017 2130 B (Pg No. 2-13 to 2-15)	NTU	**0.3**	1	5
6.	Phosphorous P	APHA-23RD Edition 2017 4500-D (Pg No. 4-163 to 4-164)	mg/L	**<0.01**	-	-
7.	Sodium as Na	APHA 23rd Edition 2017 Na 3500 B (Pg No. 3-99 to 3-100)	mg/L	**21.7**	-	-
8.	Potassium as K	APHA 23rd Edition 2017 K 3500 B (Pg No. 3-89 to 3-90)	mg/L	**0.77**	-	-
9.	Calcium as Ca	APHA 23rd Edition 2017 3500 Ca B (Pg No. 3-69 to 3-70)	mg/L	**44.7**	75	200
10.	Magnesium as Mg	APHA 23rd Edition 2017 3500 B Mg By calculation (Pg No. 3-86)	mg/L	**9.1**	30	100
11.	Total Hardness as $CaCO_3$	APHA 23rd Edition 2017 2340 C (Pg No. 2-48 to 2-50)	mg/L	**105**	200	600
12.	Chloride as Cl	APHA 23rd Edition 2017 4500 Cl- (Pg No. 4-75 to 4-76)	mg/L	**25.6**	250	1000
13.	Sulphate as SO_4	APHA 23rd Edition 2017 4500 $-SO_4^{2-}$ E(Pg No. 4-199 to 4-200)	mg/L	**<1.0**	200	400
14.	Fluoride as F	APHA 23rd Edition 2017 4500 F-D (Pg No. 4-90 to 4-91)	mg/L	**0.3**	1.0	1.5
15.	Nitrate Nitrogen as NO_3	APHA 23rd Edition - 4500 NO_3, – E (Pg No. 4-131 to 4-132)	mg/L	**<1.0**	45	
16.	Total Alkalinity as $CaCO_3$	APHA 23rd Edition 2017 2320 B (Pg No. 2-37 to 2-39)	mg/L	**57.0**	200	600

GLOBAL ENVIRONMENT & MINING SERVICES LLP HOSPET

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e-mail : gems_hpt@yahoo.com
Website : www.globalmining.in

ULR-TC161802500001032F

17.	Total Iron as Fe	APHA 23rd Edition 2017 3500 B Fe B. (Pg No. 3-80 to 3.82)	mg/L	**0.22**	0.30	NR
18.	Nickel as Ni	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame method	mg/L	**<0.01**	0.02	NR
19.	Manganese as Mn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame method	mg/L	**<0.1**	0.10	0.30
20.	Copper as Cu	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame method	mg/L	**<0.05**	0.05	1.50
21.	Zinc as Zn	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame method	mg/L	**<0.1**	5	15
22.	Lead as Pb	APHA 23rd Edition 3111 B. Direct Air Acetylene Flame method	mg/L	**<0.01**	0.01	NR
23.	Total Coliforms	IS 15185:2016	MPN/100ml	**Ab**	Shall not be detectable in any 100ml sample	-
24.	E- Coli	IS 15185:2016	MPN/100ml	**Ab**	Shall not be detectable in any 100ml sample	-

Note: GW: **Kolady.**
NR: No Relaxation. **Ab**: Absent

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

Analyzed By
Anusha M
Chemist

Authorized Signatory
K.Ramakrishna Reddy
Technical Manager

GLOBAL ENVIRONMENT & MINING SERVICES LLP ★ HOSPET

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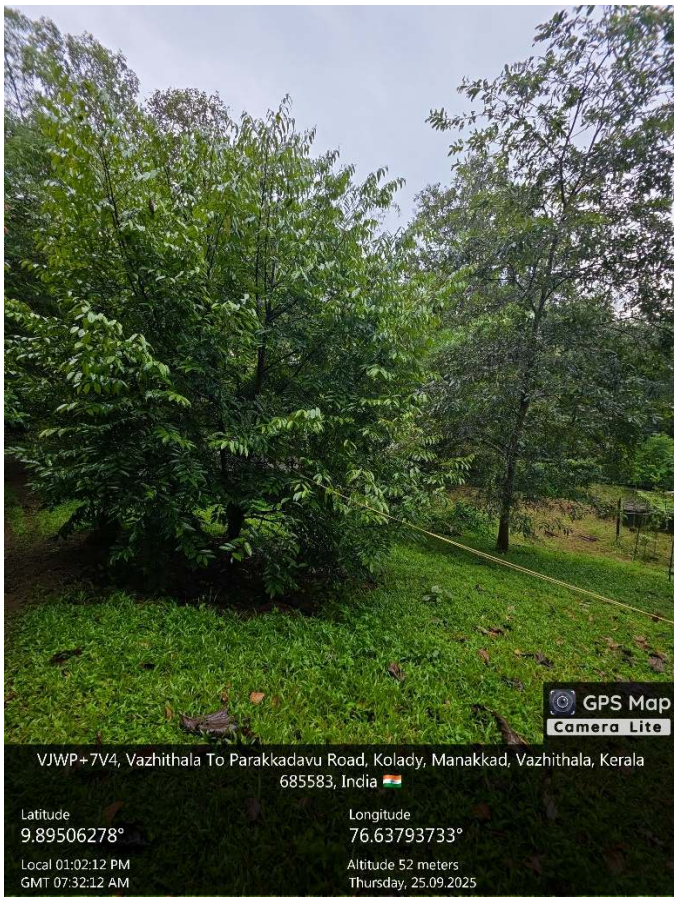
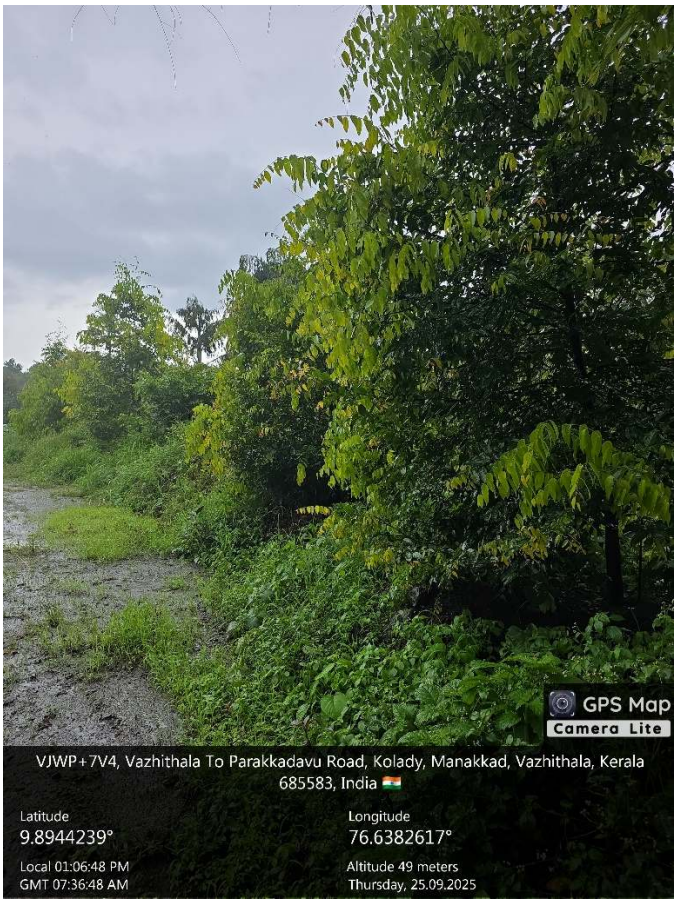
Annexure-18

AFFORESTATION


COMPENSATORY PLANTATION
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89440583°
Longitude
76.6376522°
Local 01:01:17 PM
GMT 07:31:17 AM
Altitude 46 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89506278°
Longitude
76.63793733°
Local 01:02:12 PM
GMT 07:32:12 AM
Altitude 52 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
Puthupariyaram Poothakkavu Road, WJ2Q+M5F, Vazhithala Koladi Road, Kolady, Manakkad, Kerala 685608, India
Latitude
9.9027269°
Longitude
76.6374807°
Local 01:03:41 PM
GMT 07:33:41 AM
Altitude 52 meters
Thursday, 25.09.2025

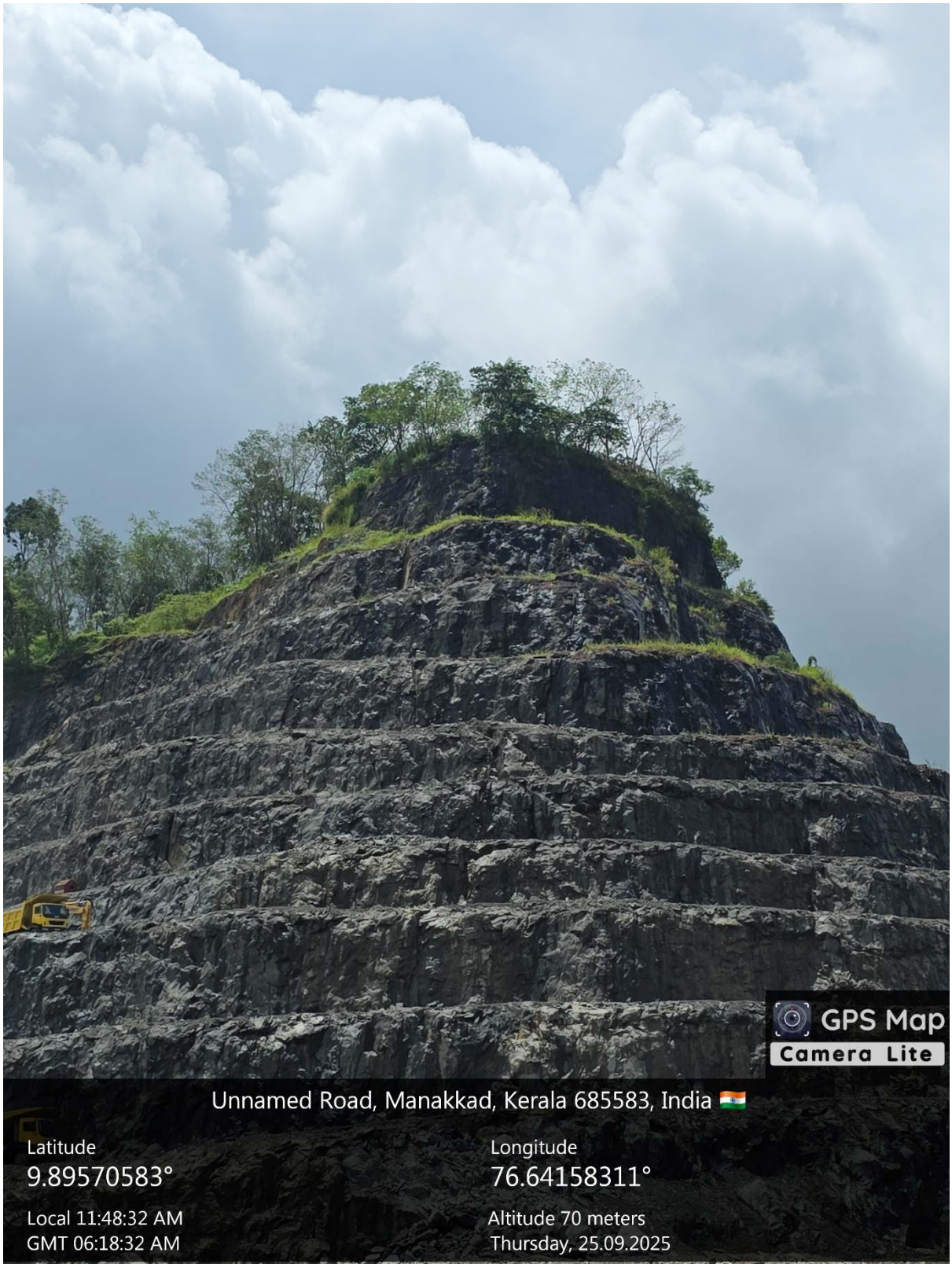

GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.8944239°
Longitude
76.6382617°
Local 01:06:48 PM
GMT 07:36:48 AM
Altitude 49 meters
Thursday, 25.09.2025


GPS Map
Camera Lite
VJWW+243, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89660394°
Longitude
76.64344629°
Local 12:05:27 PM
GMT 06:35:27 AM
Altitude 46 meters
Thursday, 25.09.2025


കല്ലരയാൽ
FICUS RAMOTTAMA
GPS Map
Camera Lite
VJWW+243, Vazhithala, Manakkad, Kerala 685583, India
Latitude
9.89672004°
Longitude
76.64337767°
Local 12:05:52 PM
GMT 06:35:52 AM
Altitude 48 meters
Thursday, 25.09.2025

Annexure-19

SITE PHOTOGRAPHS


GPS Map
Camera Lite
Unnamed Road, Manakkad, Kerala 685583, India
Latitude
9.89570583°
Longitude
76.64158311°
Local 11:48:32 AM
GMT 06:18:32 AM
Altitude 70 meters
Thursday, 25.09.2025

Annexure-20

PHOTOGRAPHS OF MAGAZINE, AMMONIUM NITRATE STORAGE & ANFO MIXING SHED


GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89791365°
Longitude
76.63868671°
Local 12:52:46 PM
GMT 07:22:46 AM
Altitude 77 meters
Thursday, 25.09.2025


AMMONIUM NITRATE
STORE HOUSE
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89725292°
Longitude
76.63904184°
Local 12:51:12 PM
GMT 07:21:12 AM
Altitude 73 meters
Thursday, 25.09.2025


ANFO MIXING SHED
GPS Map
Camera Lite
VJWP+7V4, Vazhithala To Parakkadavu Road, Kolady, Manakkad, Vazhithala, Kerala 685583, India
Latitude
9.89722026°
Longitude
76.6385184°
Local 12:56:23 PM
GMT 07:26:23 AM
Altitude 73 meters
Thursday, 25.09.2025

Annexure-21

NOTARIZED AFFIDAVIT

കേരളം केरल KERALA 547173

AFFIDAVIT

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

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

DEPONENT: GEORGE KOCHUPARAMBIL

Verification :

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

DEPONENT: GEORGE KOCHUPARAMBIL

Place : Idukki
Date : 13-04-2018

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

13/4/18

Date 13/4/2018
George Kochuparambil

SUB TREASURY

Annexure-22

LIST OF CSR ACTIVITIES WITH RECEIPTS

CSR REPORT ON 1/04/2025 to 30/09/2025			
DATE	**NAME**	**PURPOSE**	**AMOUNT**
02-04-25	BOOTHAKAVU WATER PROJECT	NON RETURN VALVE	6000
02-04-25	REENA JAISON	MEDICAL AID	5000
05-04-25	HM & PTA PRESIDENT ST SEBASTIANS HSS	STUDENTS BUS FARE	33,750.00
05-04-25	KANIV	PALIATIVE CARE	50,000.00
08-04-25	MARY THOMAS	MEDICAL AID	5,000.00
08-04-25	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	8,170.00
01-05-25	KANIV	PALIATIVE CARE	51,000.00
06-05-25	MARY THOMAS	MEDICAL AID	5,000.00
13-05-25	ST SEBASTIAN HSS PURAPUZHA	EDUCATIONAL HELP	10,000.00
02-06-25	KANIV	PALIATIVE CARE	51,000.00
06-06-25	MARY THOMAS	MEDICAL AID	5,000.00
30-06-25	PRIYA BS	EDUCATIONAL HELP	25,000.00
04-07-25	KANIV	PALIATIVE CARE	48,000.00
05-07-25	MARY THOMAS	MEDICAL AID	5,000.00
07-07-25	HM & PTA PRESIDENT ST SEBASTIANS HSS	STUDENTS BUS FARE	70,450.00
08-07-25	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	8,330.00
08-07-25	NAAM Early Intervention Centre (NEIC)	CHILD DEVELOPMENT CENTRE	1,00,000.00
21-07-25	KANIV	PALIATIVE CARE	48,000.00
30-07-25	AMBULANCE PURCHASE	PANCHAYATH	7,02,549.00
09-08-25	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	9,310.00
09-08-25	MARY THOMAS	MEDICAL AID	5,000.00
11-08-25	HM & PTA PRESIDENT ST SEBASTIANS HSS	STUDENTS BUS FARE	82,000.00
16-08-25	GRAMAPANCHAYATH MANAKKAD	KARSHAKA DINACHARANAM	6,780.00
20-08-25	KANIV	PALIATIVE CARE	50,000.00
28-08-25	PRIYA BS	EDUCATIONAL HELP	5,000.00
04-09-25	ST THOMAS LP SCHOOL KOLADY	STUDENTS AUTO FARE	9,310.00
05-09-25	MARY THOMAS	MEDICAL AID	5,000.00
10-09-25	HM & PTA PRESIDENT ST SEBASTIANS HSS	STUDENTS BUS FARE	78,150.00
11-09-25	VAZHAKULAM CHARITABLE TRUST	DIALYSIS UNIT	25,000.00
26-09-25	KANIV	PALIATIVE CARE	50,000.00
		Total	**15,62,799.00**

Mob : 9645226523

ST. SEBASTIAN'S HIGHER SECONDARY SCHOOL
PURAPUZHA

PURAPUZHA P.O., THODUPUZHA, IDUKKI DIST., PIN - 685583
E-mail : 29049sshs@gmail.com

No .68./2025-26...

Date .06/05/2025.....

Sub : സാമ്പത്തികമായി പിന്നോക്കാവസ്ഥയിൽ കഴിയുന്ന കുട്ടികൾക്ക് സഹായം നൽകുന്നതിന് –

Sir,

പുറപ്പുഴ സെന്റ് സെബാസ്റ്റ്യൻസ് ഹൈസ്കൂളിലെ 2025-26 അധ്യയന വർഷത്തിൽ പഠിക്കുന്ന സാമ്പത്തികമായി പിന്നോക്കാവസ്ഥയിൽ കഴിയുന്ന കുട്ടികൾക്ക് സഹായം നൽകി സഹകരിക്കണമെന്ന് വിനീതമായി അപേക്ഷിക്കുന്നു.

എന്ന്
വിശ്വസ്തതയോടെ

BINU T. FRANCIS
PEN : 483721
Headmaster
St. Sebastian's H.S.S
Purappuzha - 685 583

To sebu puthoo.
10000/- a/c.

FEDERAL BANK
YOUR PERFECT BANKING PARTNER

FEDERAL BANK- PAYMENT ADVICE

CUSTOMER NAME	UNITED GRANITES AND METALS
BENEFICIARY NAME	ST SEBASTIAN HIGH SCHOORL PURAPUZHA
VALUE DATE	05/13/2025
BENEFICIARY ACCOUNT	*******6065
BENEFICIARY BANK	STATE BANK OF INDIA
BENEFICIARY IFSC CODE	SBIN0070155
CURRENCY	INR
TOTAL AMOUNT	***10,000.00***
UTR NUMBER	FBPT251331086713
CUSTOMER REF NUMBER	I130525132872693
BANK REF NUMBER	I130525132872693
TYPE OF PAYMENT	EFT
CUSTOMER REFERENCE	I130525132872693
CUSTOMER REMARKS	

This is a system generated advice and it does not require a signature.

UNITED
United Granites & Metals
Vazhithala P.O.Thodupuzha, Kerala, India
Business Relation: 04862 274694, 8281885888
mail : unitedgranitesandmetals@gmail.com
Kochuparambil
Group of Venture

To
The Manager
Indus Motor Co. Pvt. Ltd
Thodupuzha
Idukki 685 584

Subject: Confirmation of Payment by United Granites under CSR Fund for FY 2025-26

Dear Sir/Madam,

This is to confirm that we, United Granites and Metals (GSTN 32AFJPK9650E1ZH), Vazhithala, Idukki have made the following payment towards the purchase of the vehicle in the name of The President, Idukki Cherukida Vyavasai Co-op Society Ltd No I 573, Thodupuzha, Idukki, as part of our Corporate Social Responsibility (CSR) contribution for the Financial Year 2025-26.

- On 23.07.2025 Advance payment of Rs. 30,000/-
- On 30.07.2025 Bank Transfer Rs. 6,72,549/-

We further confirm that the said vehicle has been purchased by The President, Idukki Cherukida Vyavasai Co-op Society Ltd No I 573 utilizing the CSR funds provided by United Granites and Metals, and the payment was made directly to your account as per the agreed terms.

We request you to kindly acknowledge this confirmation and update your records accordingly.

Thanking you,

Yours faithfully,

George Kochuparambil
Proprietor

United Granites and Metals * Pin-685 583 * Vazhithala P. O *

30.07.2025
Vazhithala

Name		UNITED GRANITES AND METALS	Branch Name	:	Vazhithala
Communication Address	:	Vazhithala P O Thodupuzha Vazhithala Kerala 685583 India	Branch Sol Id	:	1055
			Account Number	:	10555500004370
Address Last Updated On	:	26/09/2016	Customer Id	:	16933700
Regd. Mobile Number	:	919995878898	Account Open Date	:	04/07/2009
Email Id	:	unitedgranitesandmetals@gmail.com	Account Status	:	Active
Type of Account	:	Cash Credit	Mode of Operation	:	Single
Scheme	:	CC-GENERAL	Joint Holders	:	GEORGE KOCHUPARAMBIL,DEKSY GEORGE,KOCHUPARAMBIL PLANTATIONS PRIVATE LTD,TESA PLANTATIONS PRIVATE LI
IFSC	:	FDRL0001055			
MICR Code	:	685049810			
SWIFT Code	:	FDRLINBBIBD	Nomination	:	Not Registered
Effective Available Balance	:	359517.34	Currency	:	INR
Opening Balance	:	-2,48,02,005.37	Date of Issue	:	22/10/2025

Statement of Account for the period 30-JUL-2025 to 30-JUL-2025

Date	Value Date	Particulars	Tran Type	Tran ID	Cheque Details	Withdrawals	Deposits	Balance	Balance Type
30-07-2025	30-07-2025	MB FTB/252113170921/GEORGE KOC/United/	MB	S69168212			7,00,000.00	2,41,02,005.37	DR
30-07-2025	30-07-2025	IFN/FEDONE/I300725088213988/INDUS MOTOR COMPANY PV	TFR	S69249644		6,72,549.00		2,47,74,554.37	DR
30-07-2025	30-07-2025	CHRG/IMPS/46000/28-07-2025	TFR	S72869581		8.00		2,47,74,562.37	DR
30-07-2025	30-07-2025	IFN/FEDONE/I300725138234018/GEORGE KOCHUPARAMBIL/I	TFR	S73184927		1,00,000.00		2,48,74,562.37	DR
30-07-2025	30-07-2025	CASH:UNITED GRANITES AND METALS	CASH	FB128596			30,000.00	2,48,44,562.37	DR
30-07-2025	30-07-2025	FT IMPS/IFO/521116752126/SBIN0008661/I300725168284	IMPS	S76486216		36,113.00		2,48,80,675.37	DR
30-07-2025	30-07-2025	FT IMPS/IFI/521146011165/KADAPATTOOR SAND/IMPS P2A	IMPS	S79295731			33,600.00	2,48,47,075.37	DR

KANIV Beneficiary List for Account transfer July 2025

Manakkadu Grama Panchayat

Sl.No.	A/c Holder	A/c No	Bank	Branch	IFSC	Amount
MA 2	Aleykutty Issac	67202104800	State Bank of India	Vazhithala	SBIN0070962	1000
MA 14	Baiju A K	33254532282	State Bank of India	Nediyasala	SBIN0006457	1000
MA 16	Jagadamma	338002010021202	Union Bank of India	Thodupuzha	UBIN0533807	1000
MA 18	Gauriamma Kunjikuttan	40328101066623	Kerala Gramin Bank	Thodupuzha	KLGB0040328	1000
MA 23	Kumari Sreekumar	4355001702005679	Punjab National Bank	Thodupuzha	PUNB0435500	1000
MA 26	Parukutty K O	0722108030732	Canara Bank	Thodupuzha	CNRB0000722	1000
MA 31	Mercy	11210100258690	Federal Bank	Thodupuzha	FDRL0001121	1000
MA 39	Sarojini Sukumaran	32865143845	State Bank of India	Nediyasala	SBIN0006457	1000
MA 41	Shibu Thomas	32668155787	State Bank of India	Nediyasala	SBIN0006457	1000
MA 42	Syjan Thomas	33055429907	State Bank of India	Nediyasala	SBIN 0006457	1000
MA 43	Thankamma Ayyappan	33452841784	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 47	Bhavani	67203548926	State Bank of India	Vazhithala	SBIN0070962	1000
MA 55	Valsala Kunjappan	32951554314	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 59	Mercy	32987339555	State Bank of India	Thodupuzha	SBIN 0008674	1000
MA 60	Molly Babu	20302987028	State Bank of India	Nediasala	SBIN0006457	1000
MA 64	Joseph Mathai	138312301029184	Kerala Bank	Thodupuzha Town	KSBK0001383	1000
MA 69	Thresssia Paulose	32984323559	State Bank of India	Nediasala	SBIN0006457	1000
MA 72	Subhashini Divakaran	39683230052	State Bank of India	Vazhithala	SBIN0070962	1000
MA 73	Thankamani Prabhakaran	67226875505	State Bank of India	Vazhithala	SBIN 0070962	1000
MA 77	Jomesh Raju	20395607378	State Bank of India	Nediasala	SBIN0006457	1000
MA 79	Sreeja Sajeevan	67354156196	State Bank of India	Thodupuzha Town	SBIN0070155	1000
MA 82	Rajan	121710100045772	Union Bank of India	Thodupuzha	UBIN0812170	1000
MA 83	Bhavani	32993597881	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 84	Geetha Devi	67242878415	State Bank of India	Thodupuzha Town	SBIN0070155	1000
MA 85	Kamaladas Krishnan	40328101056538	Kerala Gramin Bank	Thodupuzha	KLGB0040328	1000
MA 90	Indira	20176945205	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 92	Raji Gopi	338002010020072	Union Bank of India	Thodupuzha	UBIN0533807	1000
MA 93	Pankajam P P	20213775682	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 94	Manikandan	67179632202	State Bank of India	Karikode	SBIN0070886	1000
MA 96	Sumathy Narayanan	33070117014	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 99	Valsa	32679818585	State Bank of India	Nediasala	SBIN0006458	1000
MA 100	Thressiamma	32994541882	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 102	Ansamma M Devasia	32681821219	State Bank of India	Nediasala	SBIN0006457	1000
MA 104	Shincy	99980115537545	Federal Bank	Vazhakulam	FDRL0001430	1000
MA 106	Vilasini Sasi	1028104000109642	IDBI Bank	Ramamangalm	IBKL0001028	1000
MA 108	Thomas Mathew	32989988532	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 109	Molly Joy	'0722119000238	Canara Bank	Thodupuzha	CNRB0000722	1000
MA 112	Mareena Thomas	20395605778	State Bank of India	Nediasala	SBIN0006457	1000
MA 113	Sreelatha Prasad	20263070819	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 114	Brijitha	16940100033033	Federal Bank Ltd	Thodupuzha West	FDRL0001694	1000
MA 115	Annakkutty	16940100015931	Federal Bank Ltd	Thodupuzha West	FDRL0001694	1000
MA 117	John Joseph	33415788347	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 121	Lucy Philip	33025125495	State Bank of India	Nediasala	SBIN0006457	1000
MA 122	Mamachan Mathew	67246949268	State Bank of India	Nediasala	SBIN0006457	1000
MA 123	Shyama Jijo	40357101041387	Kerala Gramin Bank	Vazhithala	KLGB0040357	1000
MA 124	Seenath Simon	32991524881	State Bank of India	Thodupuzha	SBIN0008374	1000
MA 125	Mariyam Varghese	32972496572	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 126	Sosamma Ulahannan	10550100084419	Federal Bank Ltd.	Vazhithala	FDRL0001055	1000
MA 127	Savithry K G	67263784577	State Bank of India	Thodupuzha Town	SBIN0070155	1000
MA 128	Nevin Joseph	162001000006969	Indian Overseas Bank	Thodupuzha	IOBA0001620	1000
MA 129	Martin Joseph	40357101042094	Kerala Gramin Bank	Vazhithala	KLGB0040357	1000
				Total		**51000**

Please avoid MA 103 Thankappan N K & Add MA 129 Martin Joseph

Name		UNITED GRANITES AND METALS	Branch Name	:	Vazhithala
Communication Address	:	Vazhithala P O Thodupuzha Vazhithala Kerala 685583 India	Branch Sol Id	:	1055
			Account Number	:	14100200006064
Address Last Updated On	:	26/09/2016	Customer Id	:	16933700
Regd. Mobile Number	:	919995878898	Account Open Date	:	28/11/2006
Email Id	:	unitedgranitesandmetals@gmail.com	Account Status	:	Active
Type of Account	:	Current	Mode of Operation	:	Single
Scheme	:	FREEDOM CURRENT	Joint Holders	:	NIL
IFSC	:	FDRL0001055			
MICR Code	:	685049810			
SWIFT Code	:	FDRLINBBIBD	Nomination	:	Not Registered
Effective Available Balance	:	50756.37	Currency	:	INR
Opening Balance	:	20,922.18	Date of Issue	:	22/10/2025

Statement of Account for the period 21-JUL-2025 to 21-JUL-2025

Date	Value Date	Particulars	Tran Type	Tran ID	Cheque Details	Withdrawals	Deposits	Balance	Balance Type
21-07-2025	21-07-2025	STD INS TO 10555600001581 / GEORGE KOCHUPARAMBIL	TFR	S52351184		20,000.00		922.18	CR
21-07-2025	21-07-2025	UPI IN/556844182649/ nelsonthomas456-1@okicic/5051	UPI	S52399555			30,000.00	30,922.18	CR
21-07-2025	21-07-2025	UPI IN/556895265374/l aluphilip1988@okic ici/U/5051	UPI	S52655726			2,900.00	33,822.18	CR
21-07-2025	21-07-2025	IFN/FEDONE/I210 725087552276/210 72025/UNITED GRANIT	TFR	S52957096			1,00,000.00	1,33,822.18	CR
21-07-2025	21-07-2025	UPI IN/556895931375/ 9745408085@supe ryes/Paid/5051	UPI	S52983883			1,200.00	1,35,022.18	CR
21-07-2025	21-07-2025	UPI IN/108451749702/ mohankumarpunna ckal-1@ok/5051	UPI	S53148627			2,700.00	1,37,722.18	CR

Date	Value Date	Particulars	Tran Type	Tran ID	Cheque Details	Withdrawals	Deposits	Balance	Balance Type
21-07-2025	21-07-2025	UPI IN/108453541996/shamal.assis@okhdfcbank//5051	UPI	S53596203			6,700.00	1,44,422.18	CR
21-07-2025	21-07-2025	UPI IN/520281321246/laluphilip1988@okaxis/UP/5051	UPI	S54723055			2,600.00	1,47,022.18	CR
21-07-2025	21-07-2025	NFT/FBPT252023461337/KSBK/SECRETARY CPI M THODUPUH	NEFT	S54892334		1,00,000.00		47,022.18	CR
21-07-2025	21-07-2025	UPI IN/108460821547/noelshince14@okhdfcbank//5051	UPI	S55454252			40,000.00	87,022.18	CR
21-07-2025	21-07-2025	IFN/FEDONE/SALARY/IFT/B210725107556739/SLRY/210720	TFR	S56006460		5,000.00		82,022.18	CR
21-07-2025	21-07-2025	IFN/FEDONE/SALARY/NFT/B210725107556693/SLRY/210720	TFR	S56006519		45,000.00		37,022.18	CR
21-07-2025	21-07-2025	NFT/FBPT252023463655/ICIC/NUCOMET VENTURES/I210725	NEFT	S56020660		11,864.00		25,158.18	CR
21-07-2025	21-07-2025	UPI IN/556899898491/8075069931@superyes/Paid/5051	UPI	S56240393			6,700.00	31,858.18	CR
21-07-2025	21-07-2025	NFT/I21072510755 6728/Molly Joy/14100200006064	NEFT	S56493249			1,000.00	32,858.18	CR
21-07-2025	21-07-2025	NFT/I21072510755 6731/John Joseph/14100200006064	NEFT	S56494083			1,000.00	33,858.18	CR
21-07-2025	21-07-2025	UPI IN/108467912144/ratheeshsukumaranr@okhdf/5051	UPI	S57303918			7,500.00	41,358.18	CR
21-07-2025	21-07-2025	UPI IN/108468245955/noelshince14@okhdfcbank//5051	UPI	S57391817			40,000.00	81,358.18	CR
21-07-2025	21-07-2025	UPI IN/556846195452/bibincs.bibincs@okicici//5051	UPI	S57431016			2,500.00	83,858.18	CR

Annexure-23

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 Manakkad 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

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.)

Annexure-24

BLAST INDUCED GROUND VIBRATION STUDY REPORT

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

MANAKKAD VILLAGE, THODUPUZHA (TK), IDUKKI DISTRICT, KERALA

GLOBAL ENVIRONMENT & MINING SERVICES

GEMS

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

NABL

NABET Accreditated

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.

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NABL

NABET
Accreditated

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 13th of September 2025. 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, 12 blast were conducted at three different locations in the quarry blasting operations were monitored through geophone at the distance of 47.0m, 69.3m, 83.6m, 113.0m, 150.6m, 329.1m and 473.5m. The data obtained from the Instantel micromate instrument were analyzed and graphical output was obtained from the instrument. The Peak Particle Velocity (PPV), Maximum charge per delay, air over pressure was recorded for each blast. After that the various observations were compared with standards to determine the Conclusion.

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

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APPENDIX

LIST OF FIGURES

LIST OF TABLES

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.

Twelve 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, twelve blasts were conducted and monitoring were done in nearest house of Mr. Tomy Kurian (towards South West of Mine lease boundary – M4), house of Mr. Krishnan Krishnan (towards North East of Mine lease boundary -M5), M1 (Southeastern side of mine lease, inside the Mine), M2 (South side of mine lease, inside the mine) and M3 (western side of mine lease area, inside mine). All the twelve 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 2.4m and 1.8m. The total number of holes varied from 31 to 10. 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 2.4m holes were charged with two cartridges of slurry explosives and 375gm of ANFO and 1.8m holes were charged with two cartridges of slurry explosives and 170gm of ANFO. The explosive quantity per hole was 0.625 Kg for 2.4m holes and 0.420Kg for 1.8m holes.
5. Blast induced ground vibrations and air overpressure/ noise generated during the blasts were monitored on compacted ground surface using Micromate of Instantel, Canada. Distances of monitoring points from the blast site varied from 47.0m to 473.5m.
6. The Peak Particle Velocity was not detected near the house of Mr. Krishnan Krishnan (M5). Distance of house from blast location was 473.5m.
7. The Peak Particle Velocity was not detected near the house of Mr. Tomy Kurian. Distance of house from blast locations was 329.1m.
8. The Peak Particle Velocity recorded at Monitoring Point M1 were 1.526mm/s & 1.900mm/s at a distance of 83.6m and 0.938mm/s at a distance of 113.0m from blast locations.
9. The Peak Particle Velocity recorded at Monitoring Point M2 were 3.327mm/s & 2.795mm/s at a distance of 69.3m and 3.644mm/s at a distance of 47.0m from blast locations.
10. The Peak Particle Velocity recorded at Monitoring Point M3 were 0.503mm/s and 0.576mm/s. Distance of M3 from blast location was 150.6m.
11. The highest value of vibration recorded was at monitoring point M2 which was at a distance of 47.0m from blast site. PPV recorded was 3.644 mm/s. This was recorded in blast no: 6 where maximum charge per delay was 0.420 Kg and total explosive charge in the blasting round was 13.02Kg.

12. Fly rocks up to 28 m was observed in blasting without muffling mats and up to 5 m in muffled blasting. The control of fly rock was achieved through proper blast design, Nonel initiation system and proper implementation and supervision of blasting operation.
13. 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.
14. 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). 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 15.09.2025, 12 Rounds of Blasts were conducted. The locations of Blasting & Monitoring stations are plotted in the Google Earth and shown below.

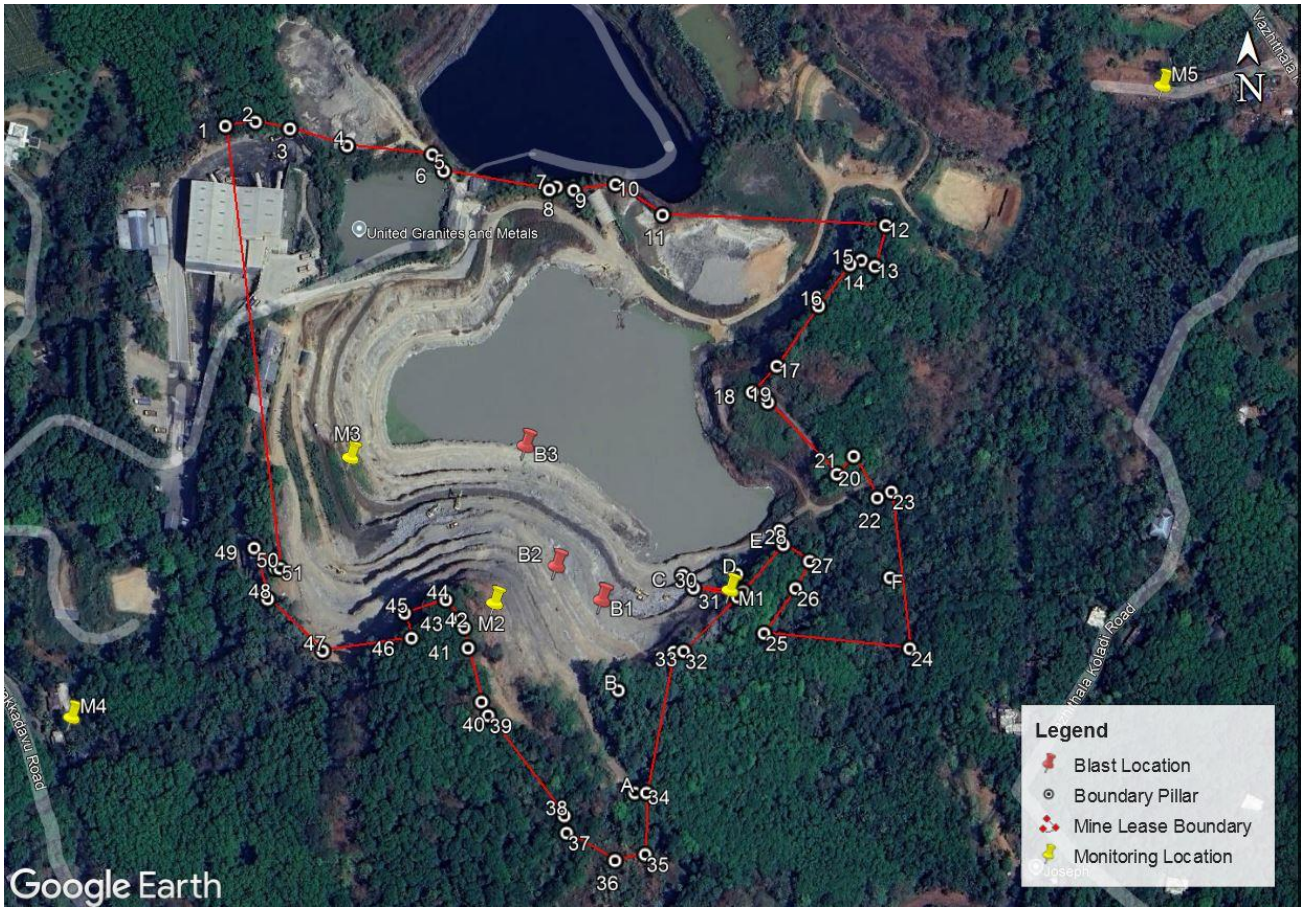


Fig 4: Google Earth Image of the Mine showing Blasting Locations & Monitoring Points

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
- Twelve blasts were conducted at three 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.*

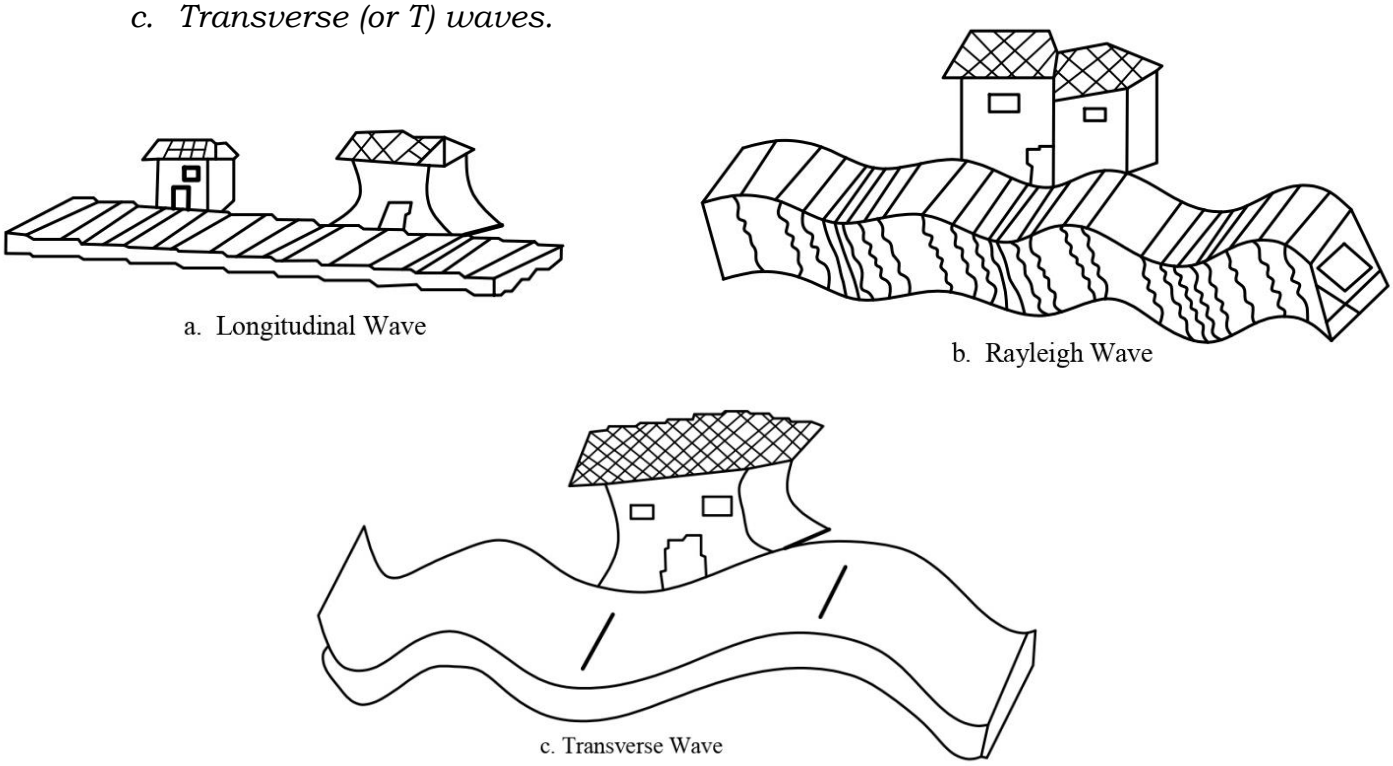


Fig 5: Different kind of waveforms

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 a 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 complaint 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 2.40m and 1.80m depth, using hand held jackhammer drills (Fig. 6). The Burden is about 1.0 m & the Spacing is about 1.2 m. Once the blast holes are ready, these holes are charged with small diameter (25mm) explosive cartridges, weighing 125g (fig. 8) & ANFO. Fig 9 shows the charging of holes. NONEL detonators

(DTH-250ms and surface-25ms) are used for initiating the blast holes and also Surface Trunk Line Delay (STLD of 42ms) for achieving required delay in the blast round (Fig. 7). Fig. 11 shows the charged holes after placing required quantity of explosive into the blast holes. The remaining length of the hole is stemmed using the 3 mm material and Drill cuttings (Fig. 10). Fig. 12 shows the muffling arrangement of blasting area/charged holes with blasting mats to control the fly rocks. Prior to blasting, the area to be blasted is wetted with the water sprayer attached to the water tanker. Fig. 13 shows the water tanker mounted spraying system. Blasting holes are initiated with the help of Electronic Detonator, NEO EDET (80mm, 2.5mtr). These Electronic detonators are initiated by Smartchip Single Initiator, M100 instrument(Fig. 9). Water misting system is installed to arrest the propagation of dust generated by mining activities. Fig. 14 shows the misting system. Fig. 15 shows the blasting shelter for safety of blasting personals. Fig.16 shows the fragmented material from the blasting operations.

Fig 6: Drilling of blast holes using jack hammer

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

Fig 8: Explosive Cartridges used in the Quarry

Fig 9: Initiator used to fire Electronic Detonator

Fig 10: Charging of Blast holes

Fig 11: Stemming of Blast holes

Fig 12: Charged Holes

Fig 13: Muffling arrangements to control the Fly rocks

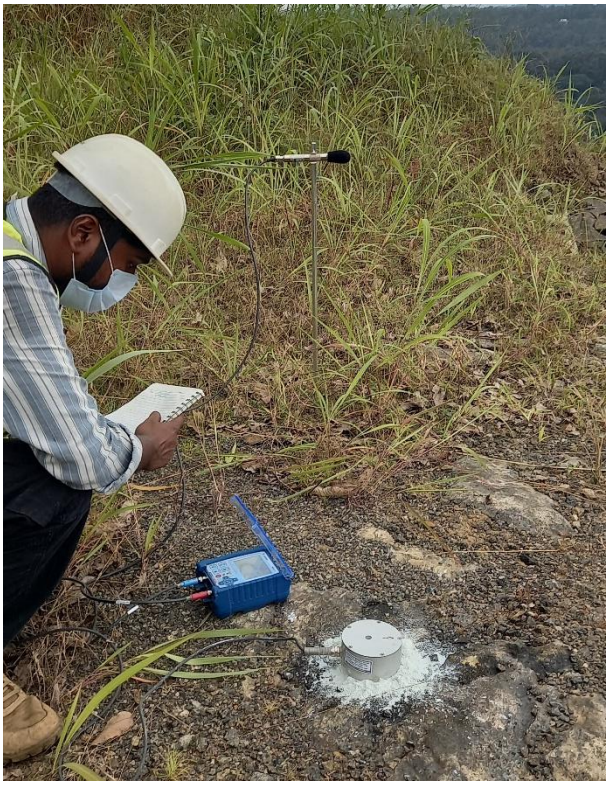
Fig 14: Water spray system and water sprinkled face

Fig 15: Water mist system

Fig 16: Blasting shelter for Safety of Blasting Personals

Fig 17: Fragmented Rock after Blasting

Monitoring Station-1



Monitoring Station-2

Monitoring Station-3

Monitoring Station-4

Fig 18: Blast Vibration Monitoring

Monitoring Station-5

Fig 18: Blast Vibration Monitoring

GROUND VIBRATION MONITORING

Scientific study was carried out to assess the intensity of ground vibrations generated due to blasting operations and their impact on the surrounding structures. In total, 12 blasts were conducted at different locations in the quarry. Blastholes of 2.4m depth were charged with the 375gms of ANFO & 250gms of Slurry explosive and 1.8m depth were charged with the 170gms of ANFO & 250gms of Slurry explosive. NONEL based shock tube detonator & Surface Trunk Line Delays (STLD) are used for achieving required delay timing. The blast round was initiated after getting safety clearance from all directions. Ground vibration generated from different blast were monitored using Instantel Micromate, Canada and geophone of these blast vibration monitors records the ground vibration. Trigger level of geophone was set to a minimum PPV of 0.127 mm/sec. This indicate that the instrument will start monitoring the ground vibration. Geophone of the instrument is glued to the ground effectively using Plaster of Paris. Monitoring was done at different distances from blasting site to know the propagation of ground vibration from the quarry site. Fig.17 shows the study carried out to monitor the ground vibration towards the nearby houses & inside the Mine. Details of all the blasts studied are given in the table-2 & the summary of the blast are given in Table-3. All the blasts layouts are given in Appendix- I. Blast events are given in Appendix- II.

Table 2: Monitored Blast details

S. No	Description	Blast No. 1	Blast No. 2	Blast No. 3	Blast No. 4
1	Date of Blast	*15.09.2025*	*15.09.2025*	*15.09.2025*	*15.09.2025*
2	Time of Blasts (Hours)	*9:56:32*	*9:59:28*	*10:05:28*	*10:17:38*
3	Location of blasts	*9°53.6295'N, 76°38.4900'E*	*9°53.6295'N, 76°38.4900'E*	*9°53.6414'N, 76°38.4743'E*	*9°53.6295'N, 76°38.4900'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*	*2.4*
8	No of blast holes	*11*	*30*	*21*	*22*
9	Explosive charge/ Hole (kg)	*0.625*	*0.625*	*0.420*	*0.625*
10	Maximum Charge per delay (kg)	*0.625*	*0.625*	*0.420*	*0.625*
11	Total Charge / Blast (kg)	*6.875*	*18.75*	*8.82*	*13.75*
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°53.6333'N, 76°38.5349'E*	*9°53.6333'N, 76°38.5349'E*	*9°53.6333'N, 76°38.5349'E*	*9°53.6283'N, 76°38.4518'E*
15	Distance (m)	*83.6*	*83.6*	*113.0*	*69.3*
16	PPV (mm/s)	*1.526*	*1.900*	*0.938*	*3.327*
17	AOP/ Noise (dB)	*115.1*	*115.4*	*114.3*	*114.2*
18	Dominant Frequency (Hz)	*143.5*	*95.75*	*153.3*	*84.25*

Table 2: Monitored Blast details

S. No	Description	Blast No. 5	Blast No. 6	Blast No. 7	Blast No. 8
1	Date of Blast	*15.09.2025*	*15.09.2025*	*15.09.2025*	*15.09.2025*
2	Time of Blasts (Hours)	*10:20:18*	*10:22:08*	*10:44:53*	*10:45:59*
3	Location of blasts	*9°53.6295'N, 76°38.4900'E*	*9°53.6414'N, 76°38.4743'E*	*9°53.6414'N, 76°38.4743'E*	*9°53.6414'N, 76°38.4743'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*	*1.8*	*1.8*	*1.8*
8	No of blast holes	*17*	*31*	*21*	*31*
9	Explosive charge/ Hole (kg)	*0.625*	*0.420*	*0.420*	*0.420*
10	Maximum Charge per delay (kg)	*0.625*	*0.420*	*0.420*	*0.420*
11	Total Charge / Blast (kg)	*10.625*	*13.02*	*8.82*	*13.02*
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°53.6283'N, 76°38.4518'E*	*9°53.6283'N, 76°38.4518'E*	*9°53.6792'N, 76°38.4011'E*	*9°53.6792'N, 76°38.4011'E*
15	Distance (m)	*69.3*	*47.0*	*150.6*	*150.6*
16	PPV (mm/s)	*2.795*	*3.644*	*0.503*	*0.576*
17	AOP/ Noise (dB)	*105.4*	*113.4*	*100.3*	*105.4*
18	Dominant Frequency (Hz)	*89.00*	*98.25*	*148.8*	*222.5*

Table 2: Monitored Blast details

S. No	Description	Blast No. 9	Blast No. 10	Blast No. 11	Blast No. 12
1	Date of Blast	*15.09.2025*	*15.09.2025*	*15.09.2025*	*15.09.2025*
2	Time of Blasts (Hours)	*12:44:14*	*12:46:05*	*13:14:23*	*13:15:12*
3	Location of blasts	*9°53.6414'N, 76°38.4743'E*	*9°53.6414'N, 76°38.4743'E*	*9°53.6825'N, 76°38.4631'E*	*9°53.6825'N, 76°38.4631'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)	*1.8*	*1.8*	*2.4*	*2.4*
8	No of blast holes	*16*	*30*	*10*	*20*
9	Explosive charge/ Hole (kg)	*0.420*	*0.420*	*0.625*	*0.625*
10	Maximum Charge per delay (kg)	*0.420*	*0.420*	*0.625*	*0.625*
11	Total Charge / Blast (kg)	*6.72*	*12.60*	*6.25*	*12.50*
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°53.5841'N, 76°38.3085'E*	*9°53.5841'N, 76°38.3085'E*	*9°53.8098'N, 76°38.6896'E*	*9°53.8098'N, 76°38.6896'E*
15	Distance (m)	*329.1*	*329.1*	*473.5*	*473.5*
16	PPV (mm/s)	*NOT DETECTED*		*NOT DETECTED*	
17	AOP/ Noise (dB)				
18	Dominant Frequency (Hz)				

Summary of the Blast Monitoring:

Monitoring Station	Blast Points	Distance (m)	Max Charge Per Delay (Kg)	PPV (mm/s)	AOP/ Noise (dB)	Dominant Frequency (Hz)
M1	Blast No 1	83.6	0.625	1.526	115.1	143.5
	Blast No 2	83.6	0.625	1.900	115.4	95.75
	Blast No 3	113.0	0.420	0.938	114.3	153.3
M2	Blast No 4	69.3	0.625	3.327	114.2	84.25
	Blast No 5	69.3	0.625	2.795	105.4	89.00
	Blast No 6	47.0	0.420	3.644	113.4	98.25
M3	Blast No 7	150.6	0.420	0.503	100.3	148.8
	Blast No 8	150.6	0.420	0.576	105.4	222.5
M4	Blast No 9	329.1	0.420	Not detected		
	Blast No 10	329.1	0.420			
M5	Blast No 11	473.5	0.625	Not detected		
	Blast No 12	473.5	0.625			

Table 3: Summary of the Blast monitoring

From the Table 3, it can be observed that the highest peak Particle velocity (PPV) recorded was 3.644 mm/sec at the distance of 47.0 m in Blast No 6 and the next highest PPV was 3.327 mm/sec at the distance of 69.3 m in Blast No 4.

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

Use of Nonel detonating system provided required delay time to reduce the maximum charge per delay, which helped in controlling ground vibrations within permissible limits. The highest noise level of 115.4 dB was recorded at the distance of 83.6 m from blast location in blast No. 2 and the next highest noise level was 115.1 dB at the distance of 83.6 m from blast location in Blast No 1. The noise levels were not detected while monitoring at the nearby two houses.

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

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

RECOMMENDATIONS

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

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

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

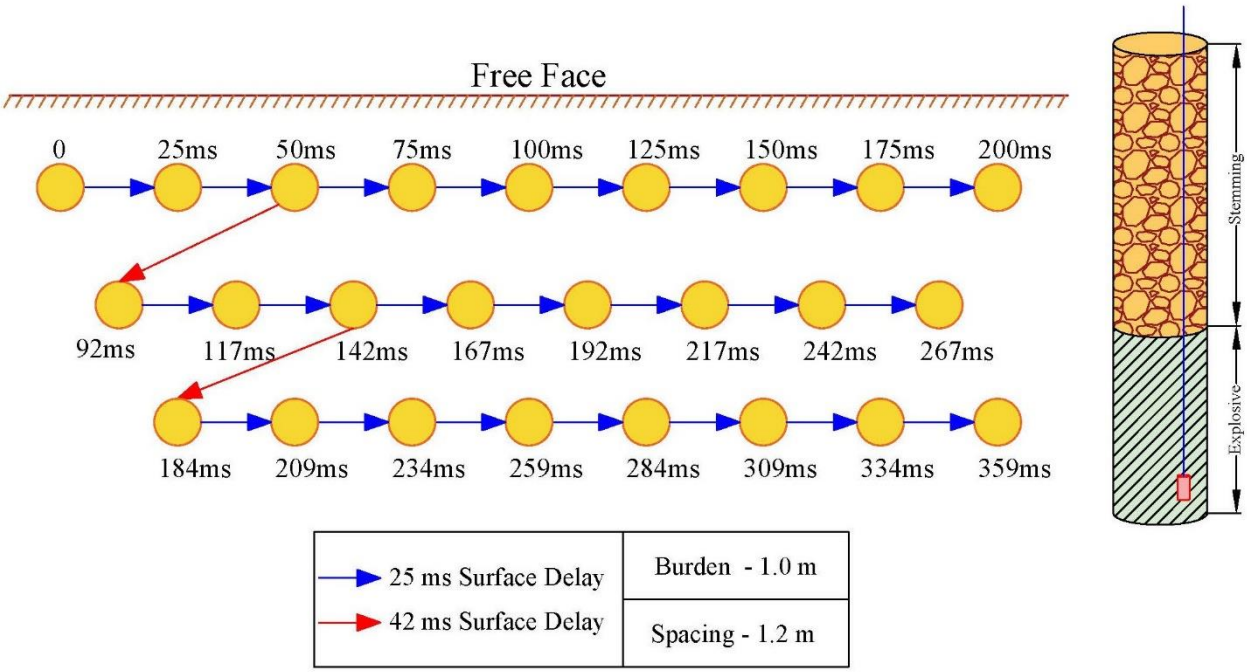


Fig 19: Recommended Blasthole pattern

Sl No	Parameters	Suggestion- I	Suggestion- II
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)	420	625
7	Maximum charge/ Delay (gm)	420	625
8	Total charge/ Blast (kg)	10.50	15.625
9	Initiation system	Short delay detonators	Short delay detonators
10	Initiation Pattern	Row by row	Row by row
11	Delay timing between any two blast holes	At least 25ms	At least 25ms
12	Delay timing between any two blast holes	At least 42ms	At least 42ms
12	No. of rows	Maximum of 3	Maximum of 3

Table 4: Blasting recommendations

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

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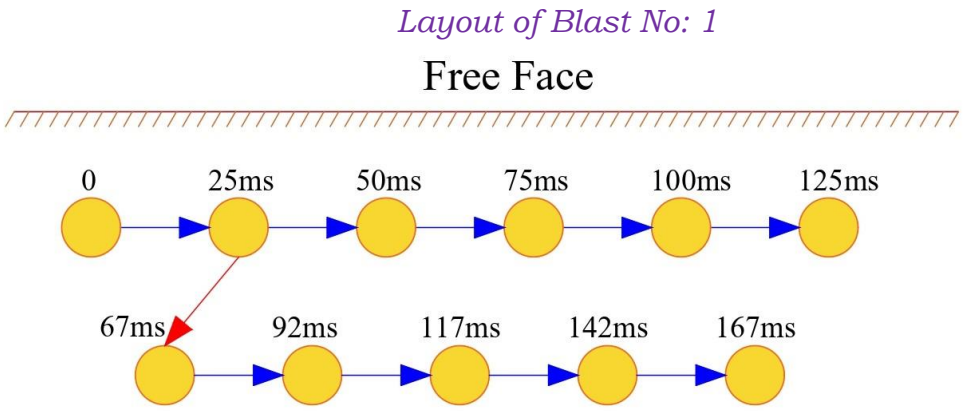
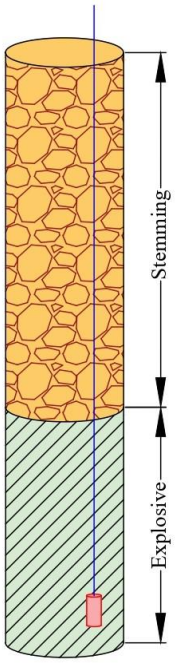
http://www.vulcanhammer.net/svinkin/prediction.php
http://terrock.com.au/vibration/blasting.html

APPENDIX – I
(LAYOUTS OF BLASTS STUDIED)

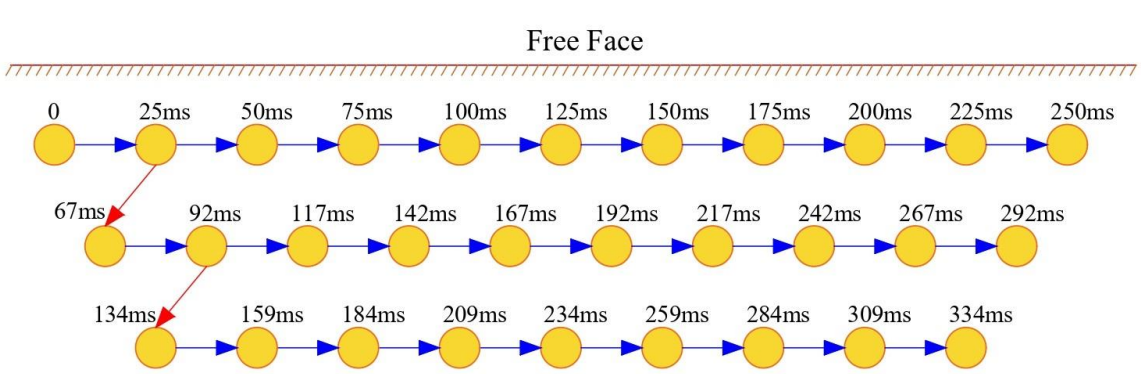
Layout of Blast No: 1



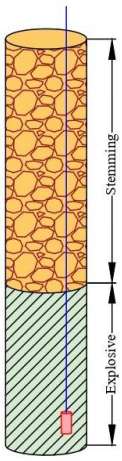
25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 2.4 m



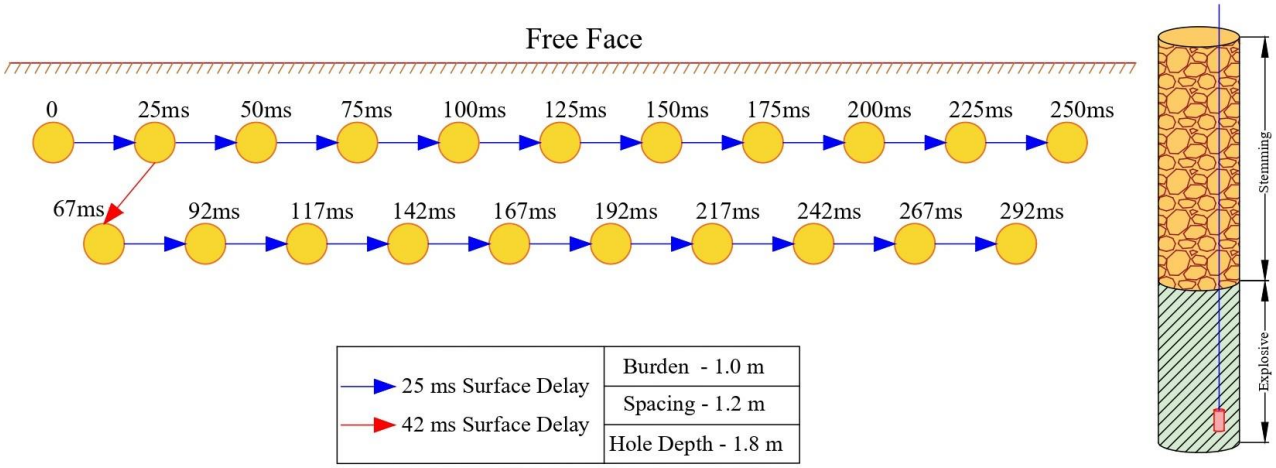
Layout of Blast No: 2



25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 2.4 m

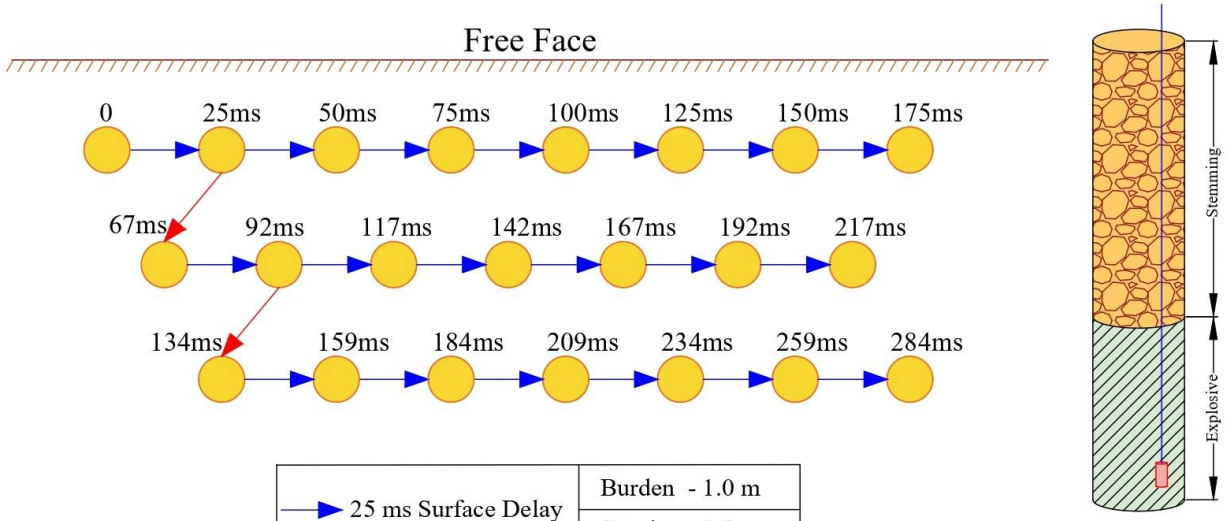


Layout of Blast No: 3



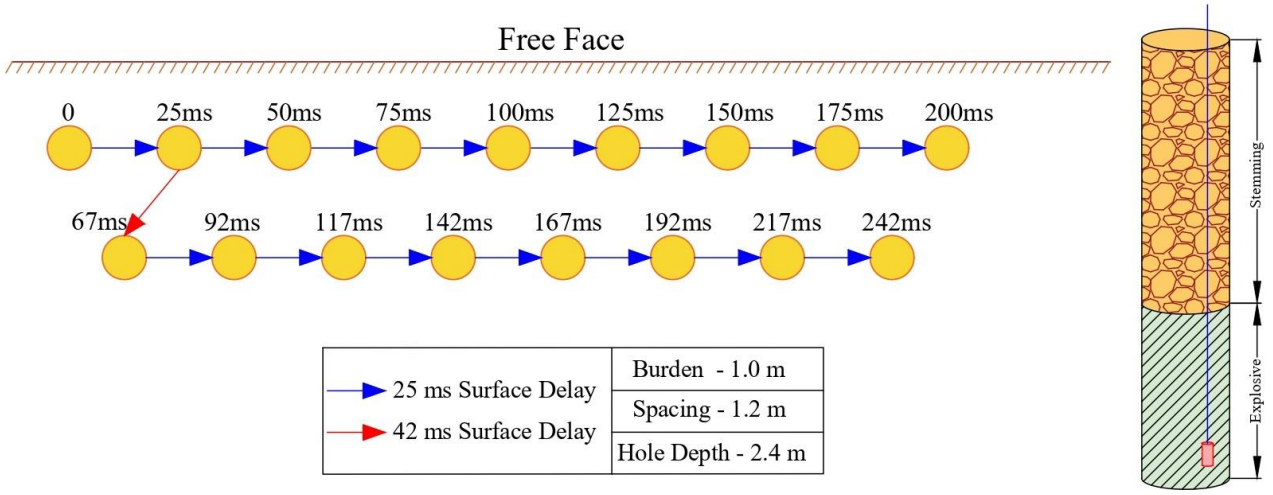
25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 1.8 m

Layout of Blast No: 4



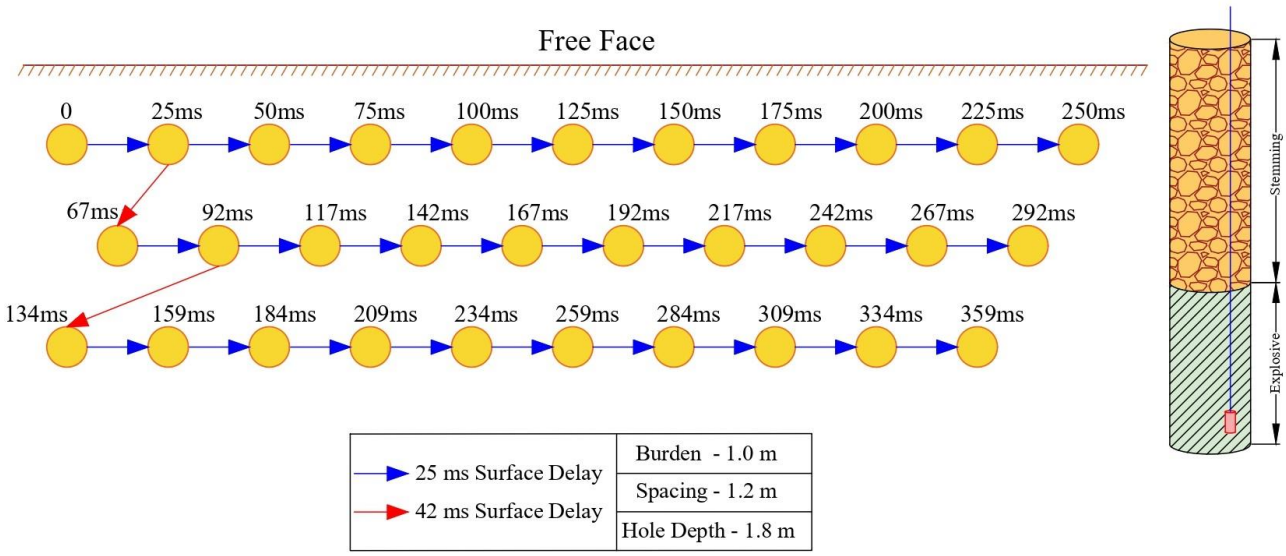
25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 2.4 m

Layout of Blast No: 5



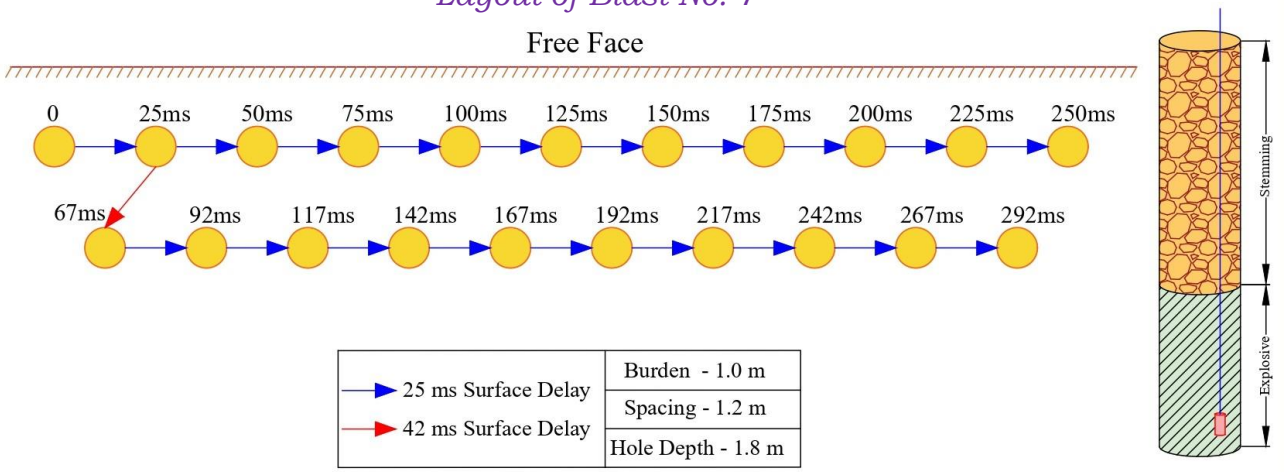
25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 2.4 m

Layout of Blast No: 6



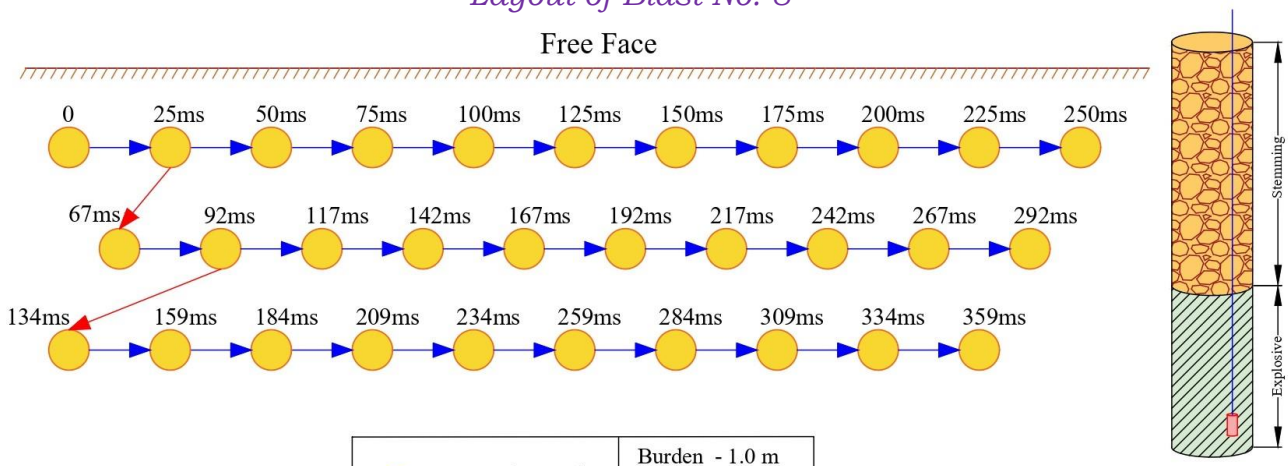
25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 1.8 m

Layout of Blast No: 7



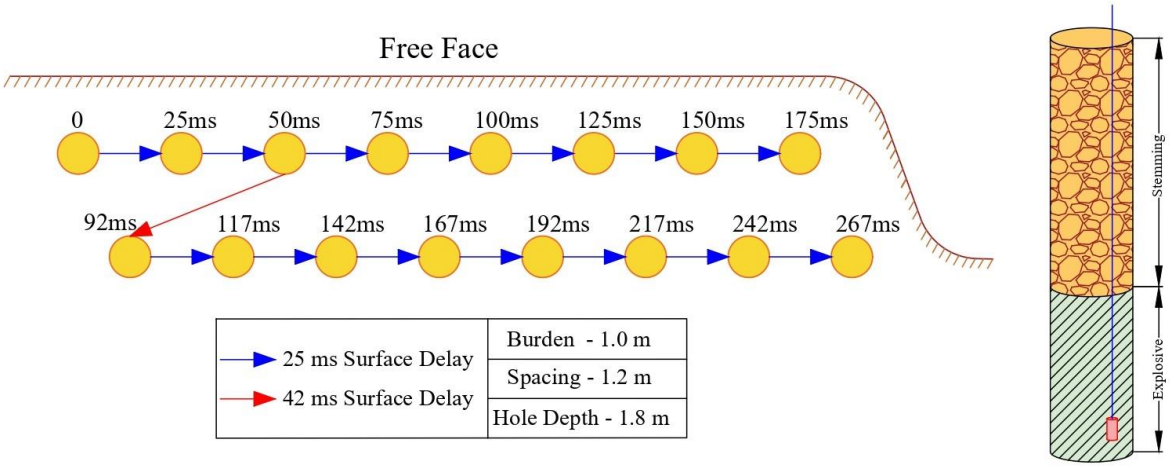
25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 1.8 m

Layout of Blast No: 8

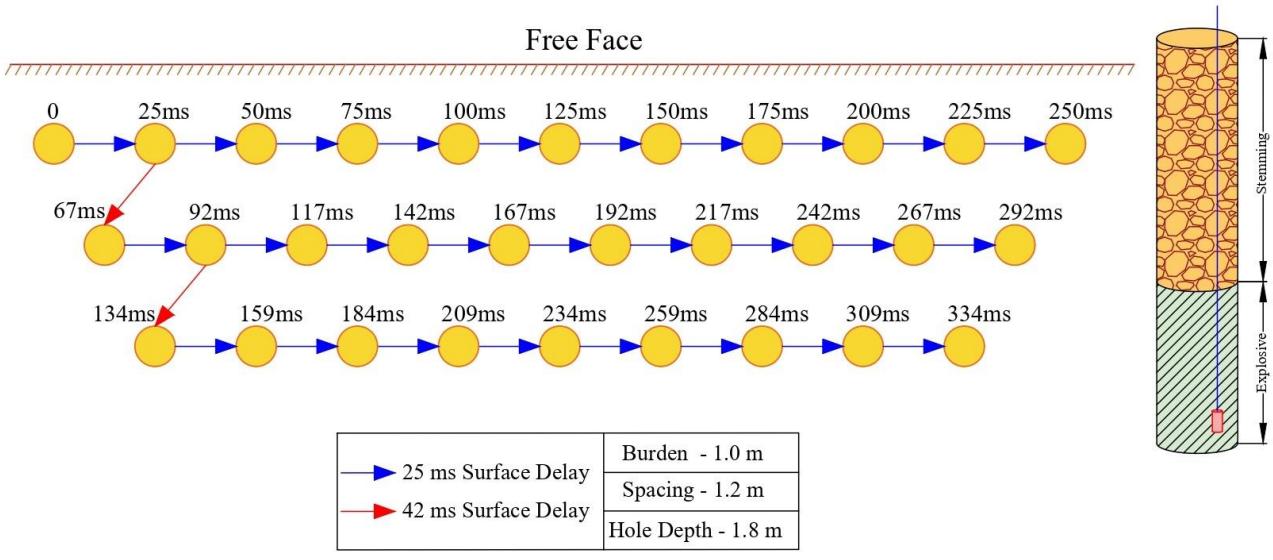


25 ms Surface Delay 42 ms Surface Delay	Burden - 1.0 m Spacing - 1.2 m Hole Depth - 1.8 m

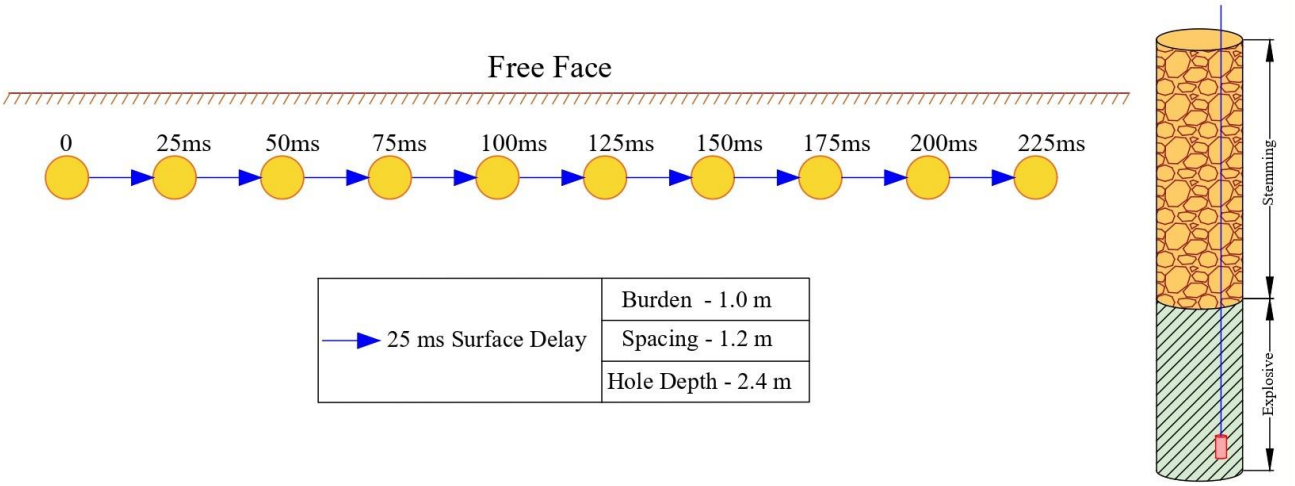
Layout of Blast No: 9



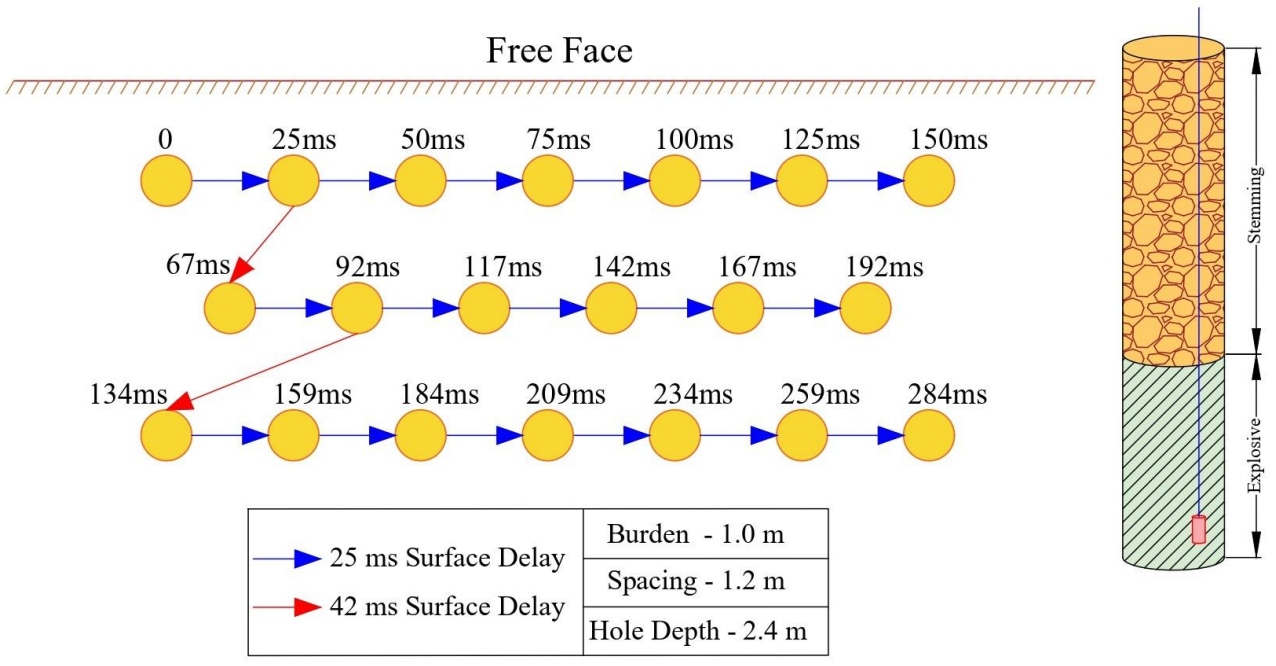
Layout of Blast No: 10



Layout of Blast No: 11



Layout of Blast No: 12



APPENDIX – II
(BLAST EVENT REPORTS)

Event Report

Date/Time	Long at 09:56:32 September 15, 2025
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915095632.IDFW
Scaled Distance	107.9 (83.6 m, 0.6 kg)

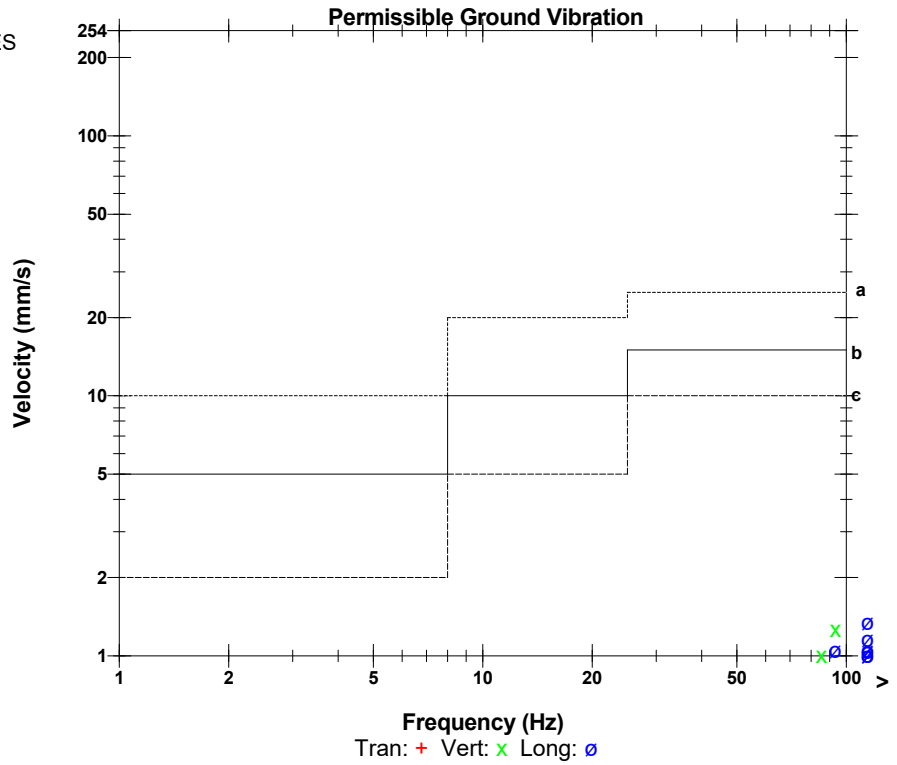
Notes
Location: STATION- 1
Client: SRI GEORGE KOCHUPARAMBIL
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES
General:

Microphone	Linear Weighting
PSPL	115.1 dB(L) at 0.414 sec
ZC Freq	146 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1216 mv)

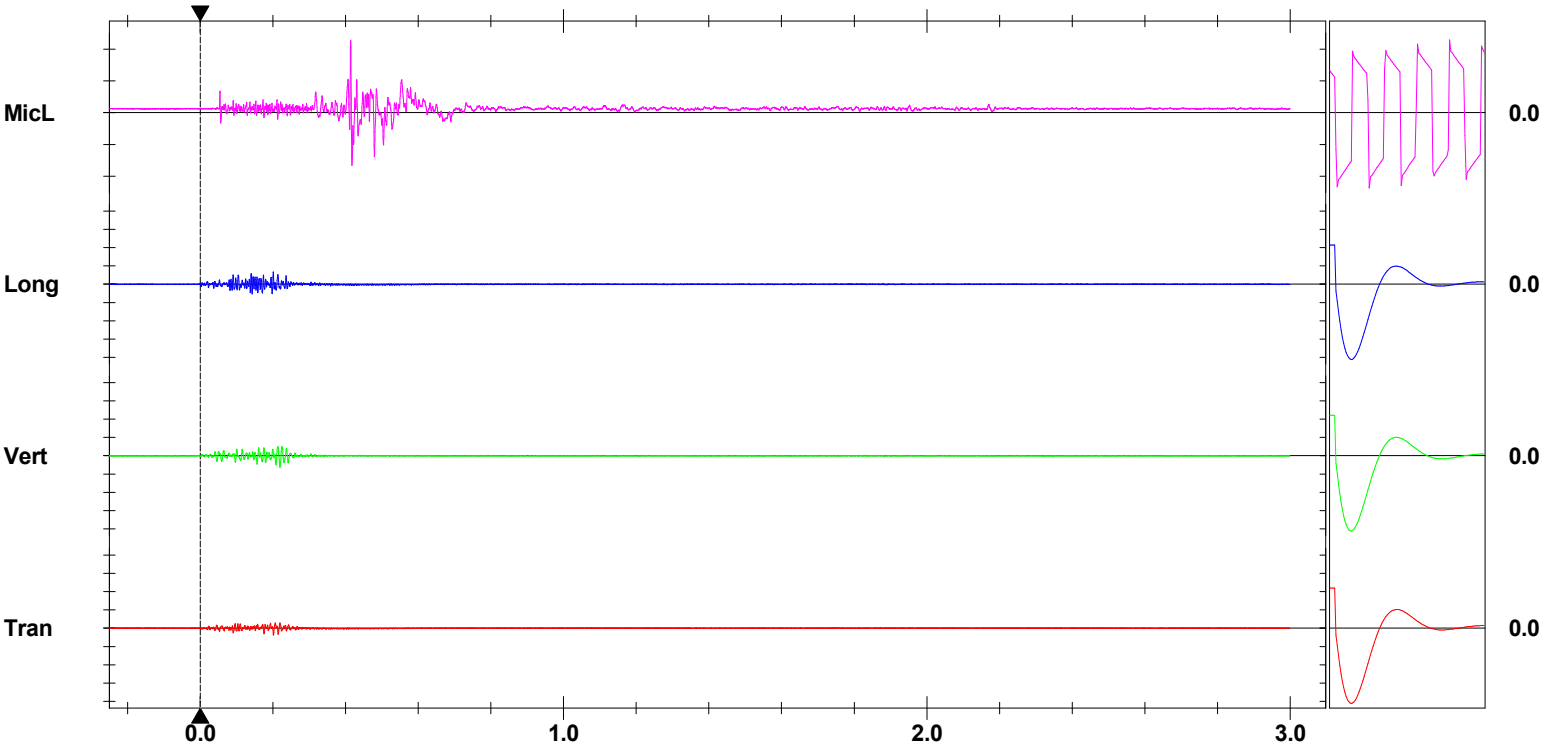
	Tran	Vert	Long	
PPV	0.765	1.269	1.348	mm/s
PPV	48.67	53.07	53.59	dB
ZC Freq	146	93	146	Hz
Time (Rel. to Trig)	0.202	0.220	0.201	sec
Peak Acceleration	0.064	0.076	0.138	g
Peak Displacement	0.001	0.002	0.002	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.1	4.1	4.2	

Peak Vector Sum 1.526 mm/s at 0.201 sec

DGMS India (A)



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



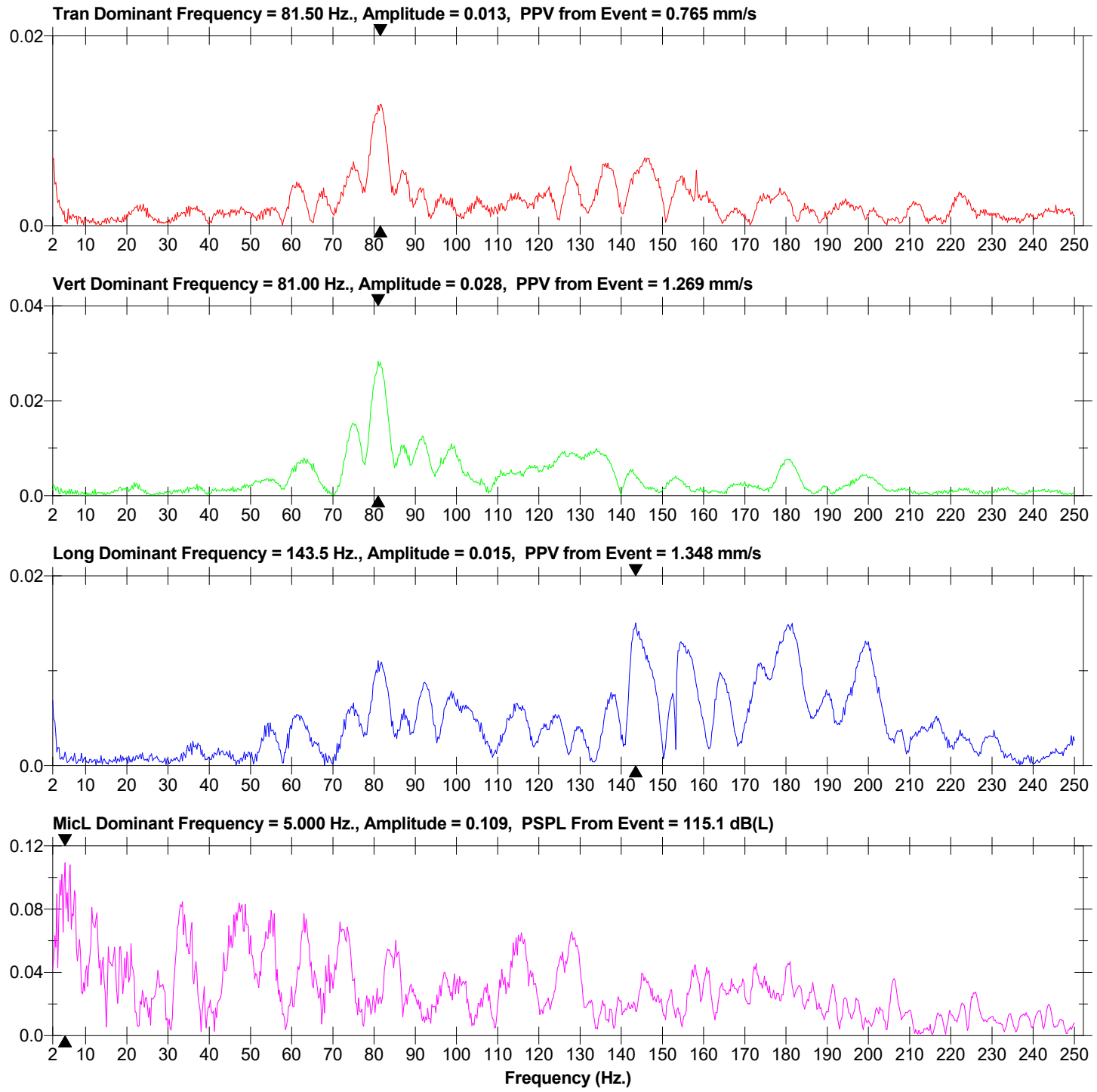
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Long at 09:56:32 September 15, 2025	**Serial Number**	UM18455 V 10-90FB Micromate ISEE
Trigger Source	Geo: 0.127 mm/s, Mic: 100.00 dB(L)	**Battery Level**	3.8 Volts
Range	Geo: 254.0 mm/s	**Unit Calibration**	January 6, 2025 by UES New Delhi
Record Time	3.0 sec at 2048 sps	**File Name**	UM18455_20250915095632.IDFW
Job Number:	1	**Scaled Distance**	107.9 (83.6 m, 0.6 kg)
Operator/Setup:	Operator/factory.MMB		

Notes

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



Event Report

Date/Time	MicL at 09:59:28 September 15, 2025
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

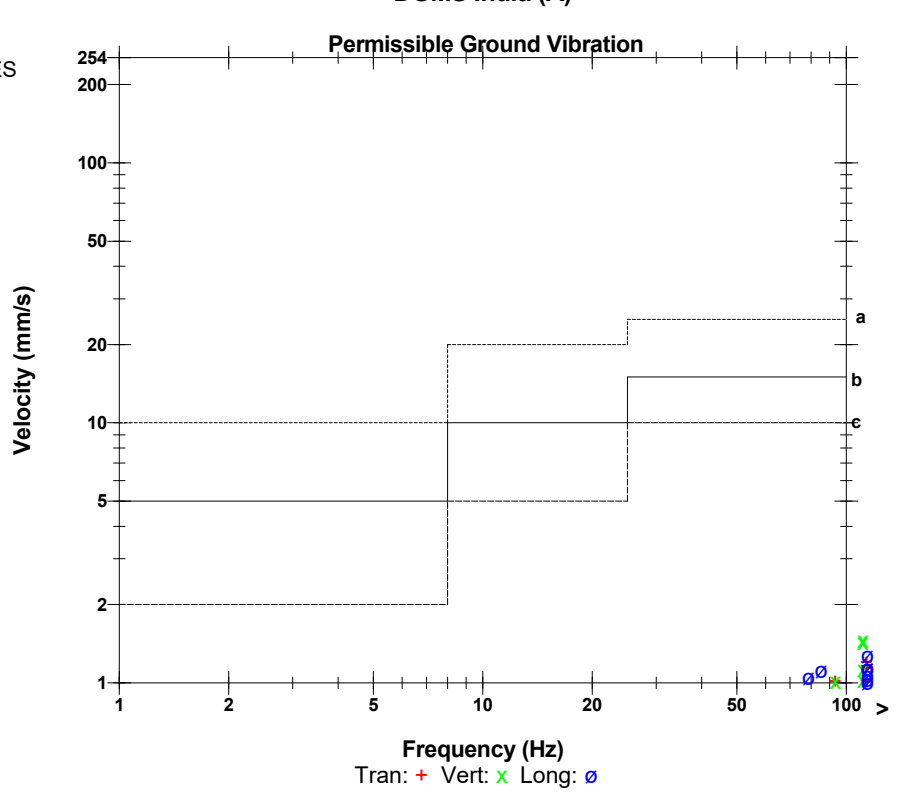
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915095928.IDFW
Scaled Distance	107.9 (83.6 m, 0.6 kg)

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

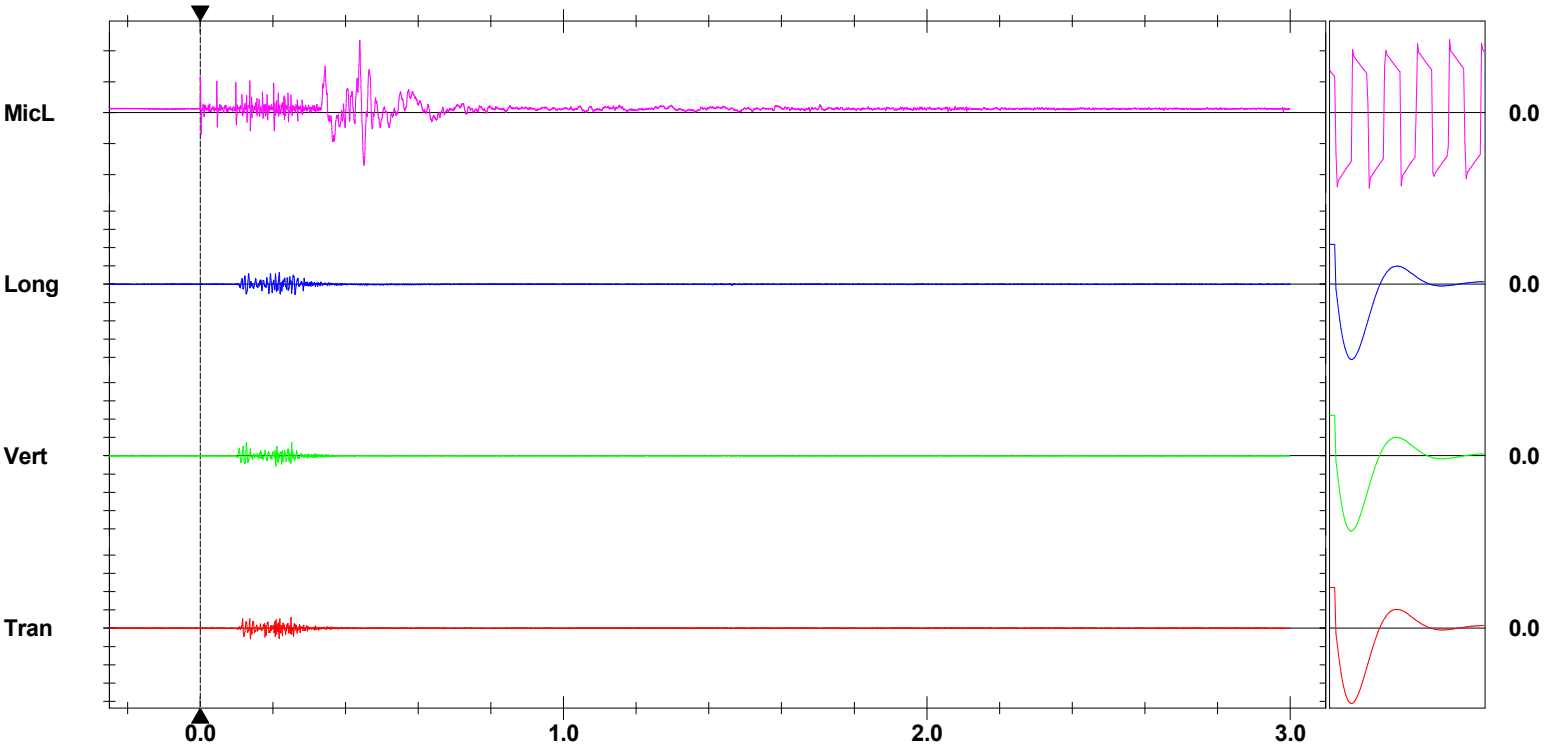
Microphone	Linear Weighting
PSPL	115.4 dB(L) at 0.439 sec
ZC Freq	28 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1209 mv)

	Tran	Vert	Long	
PPV	1.206	1.458	1.277	mm/s
PPV	52.63	54.28	53.12	dB
ZC Freq	>200	146	114	Hz
Time (Rel. to Trig)	0.250	0.252	0.218	sec
Peak Acceleration	0.196	0.169	0.148	g
Peak Displacement	0.002	0.002	0.002	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.0	4.1	4.2	

Peak Vector Sum 1.900 mm/s at 0.127 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 Sensor Check
Trigger = ▶----------◀

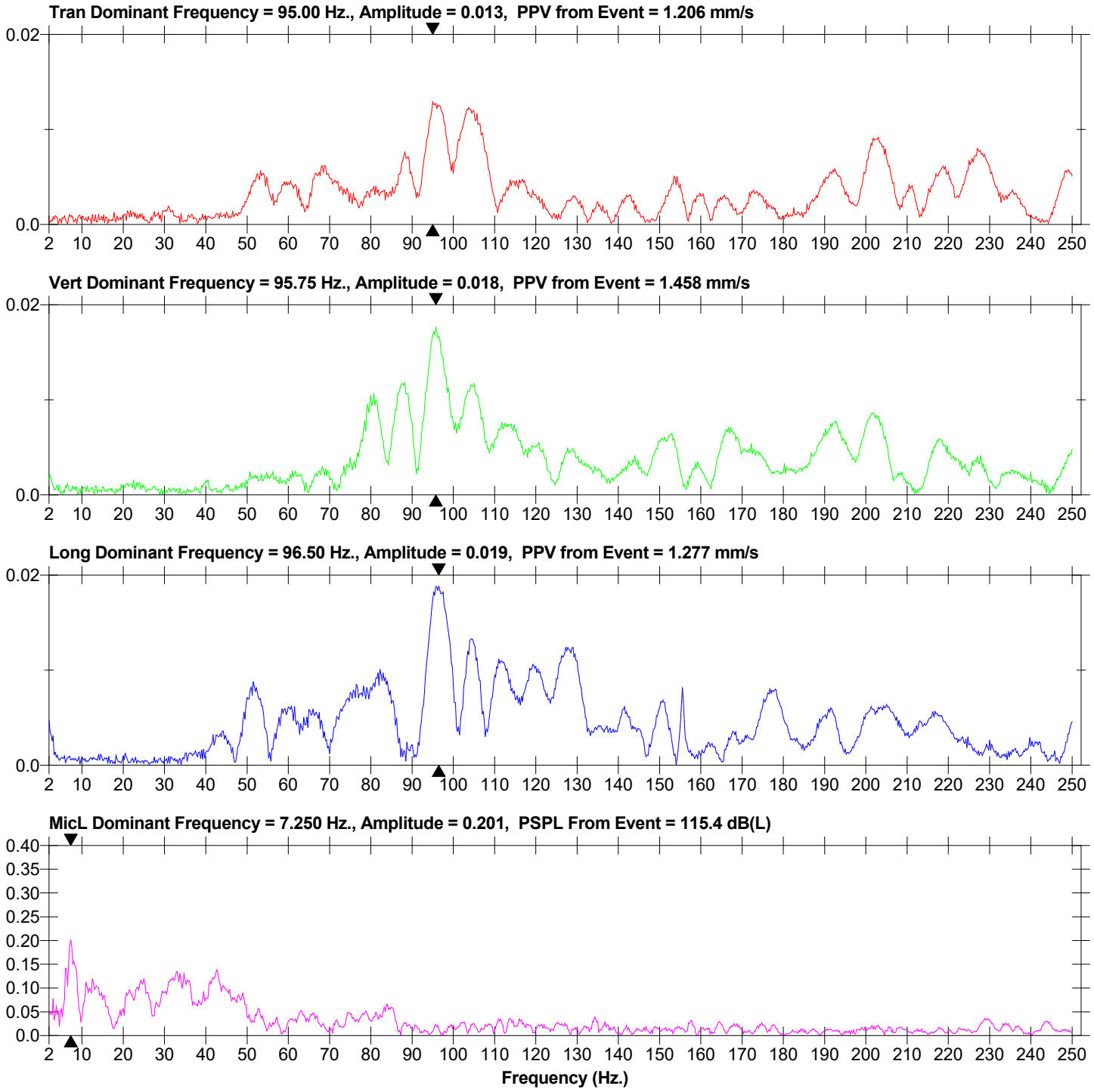
FFT Report

Date/Time	MicL at 09:59:28 September 15, 2025
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915095928.IDFW
Scaled Distance	107.9 (83.6 m, 0.6 kg)

Notes

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



Event Report

Date/Time	Long at 10:05:22 September 15, 2025
Trigger Source	Geo: 0.127 mm/s, Mic: 100.00
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915100522.IDFW
Scaled Distance	282.5 (113.0 m, 0.4 kg)

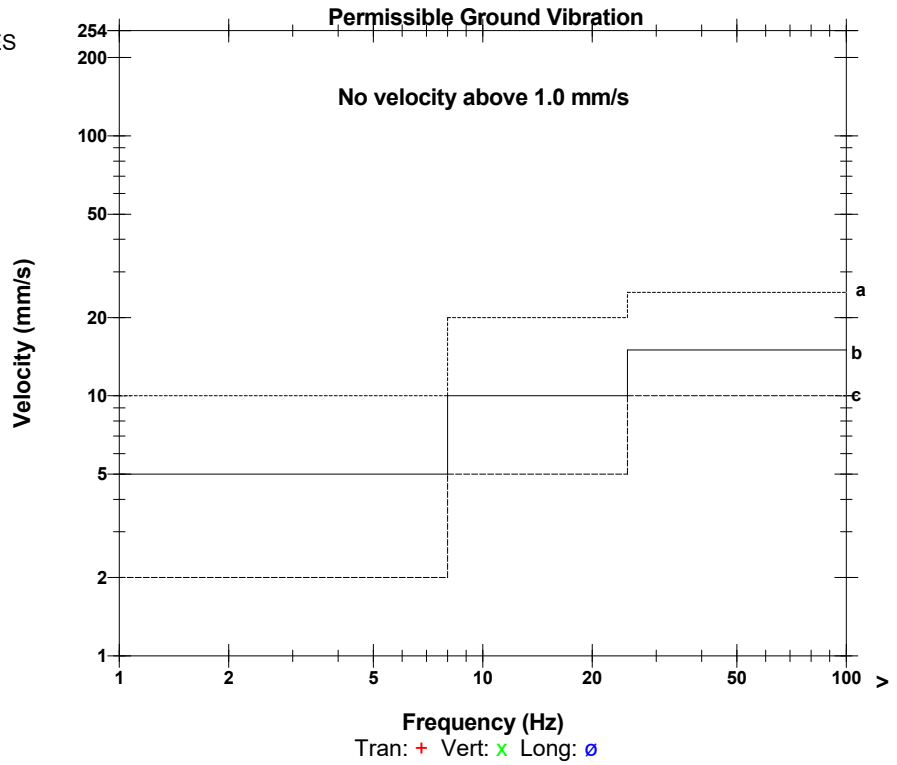
Notes
Location: STATION- 1
Client: SRI GEORGE KOCHUPARAMBIL
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES
General:

Microphone	Linear Weighting
PSPL	114.3 dB(L) at 0.339 sec
ZC Freq	16.3 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1216 mv)

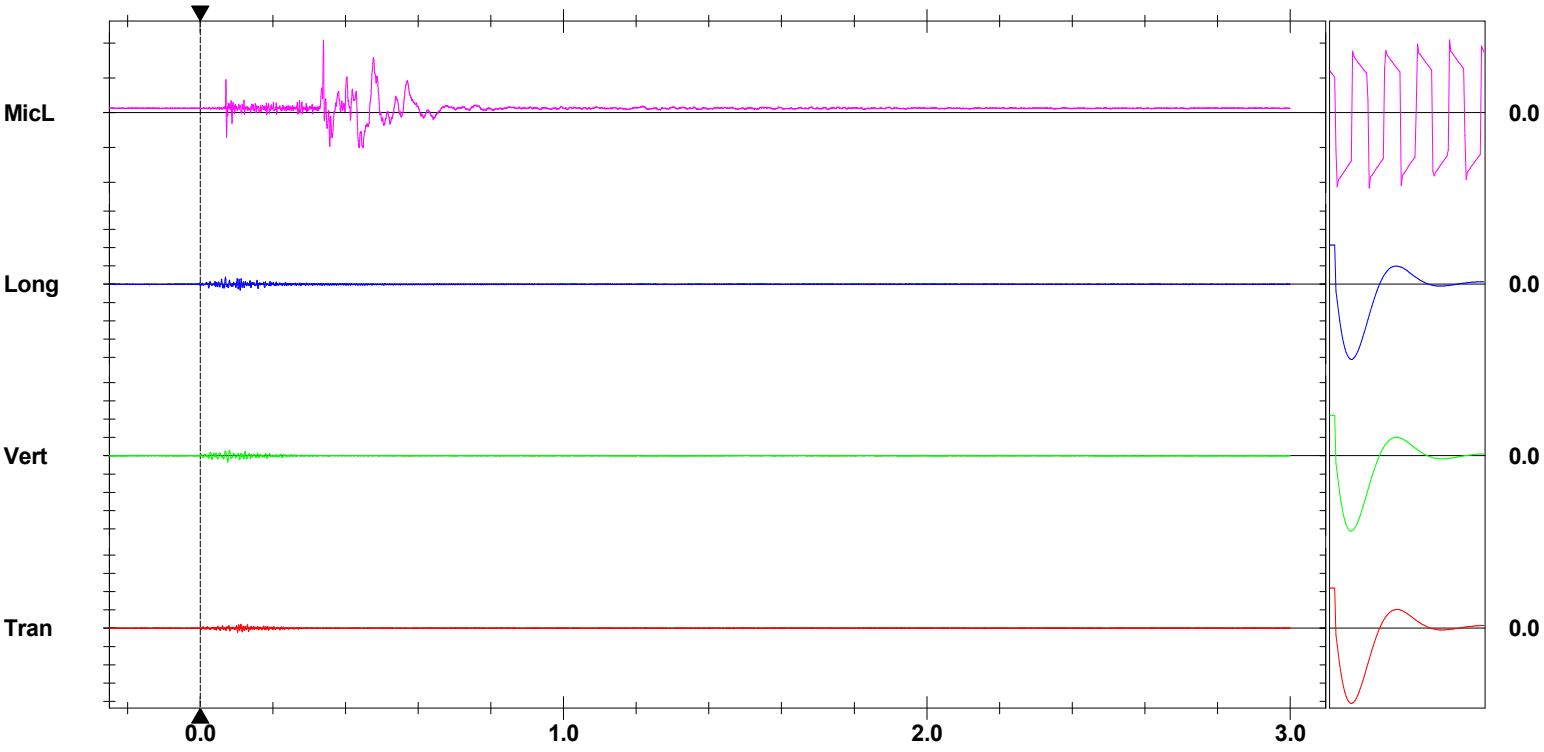
	Tran	Vert	Long	
PPV	0.441	0.694	0.772	mm/s
PPV	43.90	47.82	48.76	dB
ZC Freq	171	93	146	Hz
Time (Rel. to Trig)	0.103	0.076	0.069	sec
Peak Acceleration	0.041	0.044	0.069	g
Peak Displacement	0.000	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.1	4.1	4.2	

Peak Vector Sum 0.938 mm/s at 0.069 sec

DGMS India (A)



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



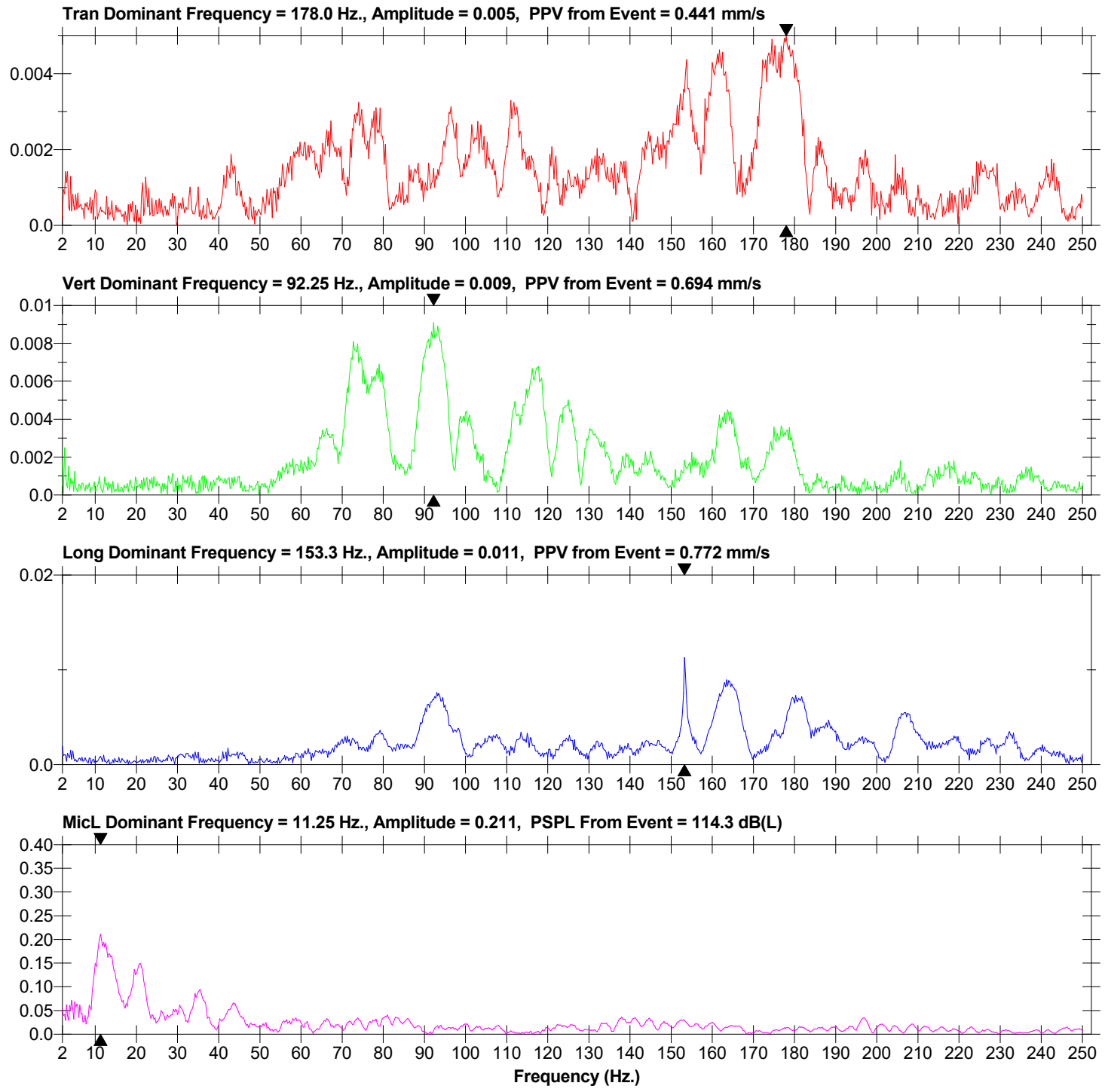
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Long at 10:05:22 September 15, 2025	**Serial Number**	UM18455 V 10-90FB Micromate ISEE
Trigger Source	Geo: 0.127 mm/s, Mic: 100.00 dB(L)	**Battery Level**	3.8 Volts
Range	Geo: 254.0 mm/s	**Unit Calibration**	January 6, 2025 by UES New Delhi
Record Time	3.0 sec at 2048 sps	**File Name**	UM18455_20250915100522.IDFW
Job Number:	1	**Scaled Distance**	282.5 (113.0 m, 0.4 kg)
Operator/Setup:	Operator/factory.MMB		

Notes

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



Event Report

Date/Time	MicL at 10:17:38 September 15, 2025
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915101738.IDFW
Scaled Distance	89.5 (69.3 m, 0.6 kg)

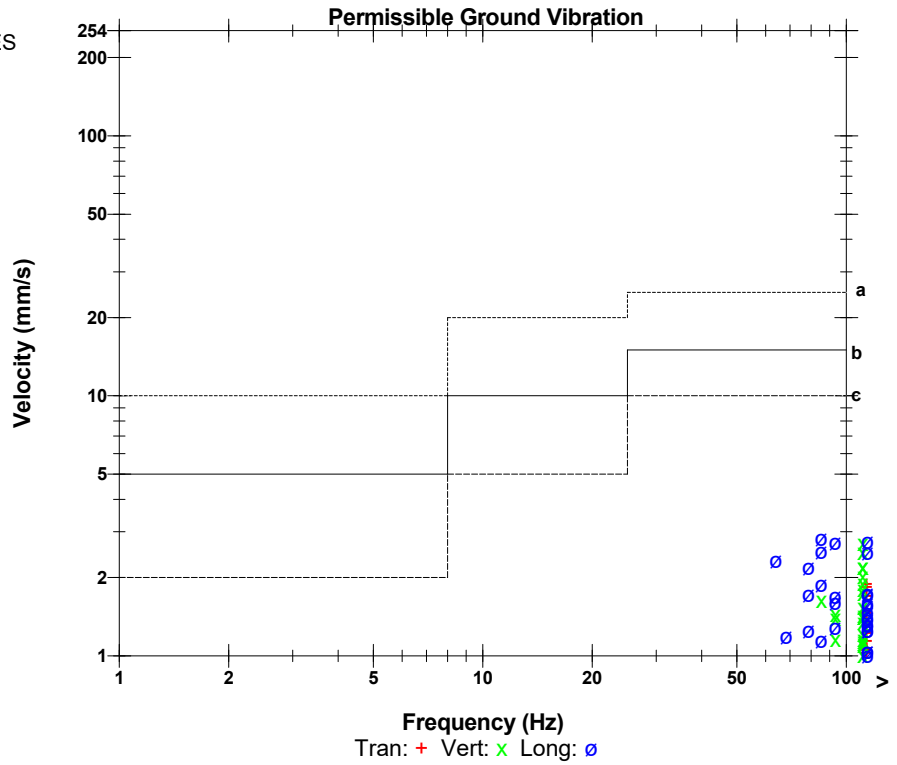
Notes
Location: STATION- 2
Client: SRI GEORGE KOCHUPARAMBIL
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES
General:

Microphone	Linear Weighting
PSPL	114.2 dB(L) at 0.592 sec
ZC Freq	28 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1209 mv)

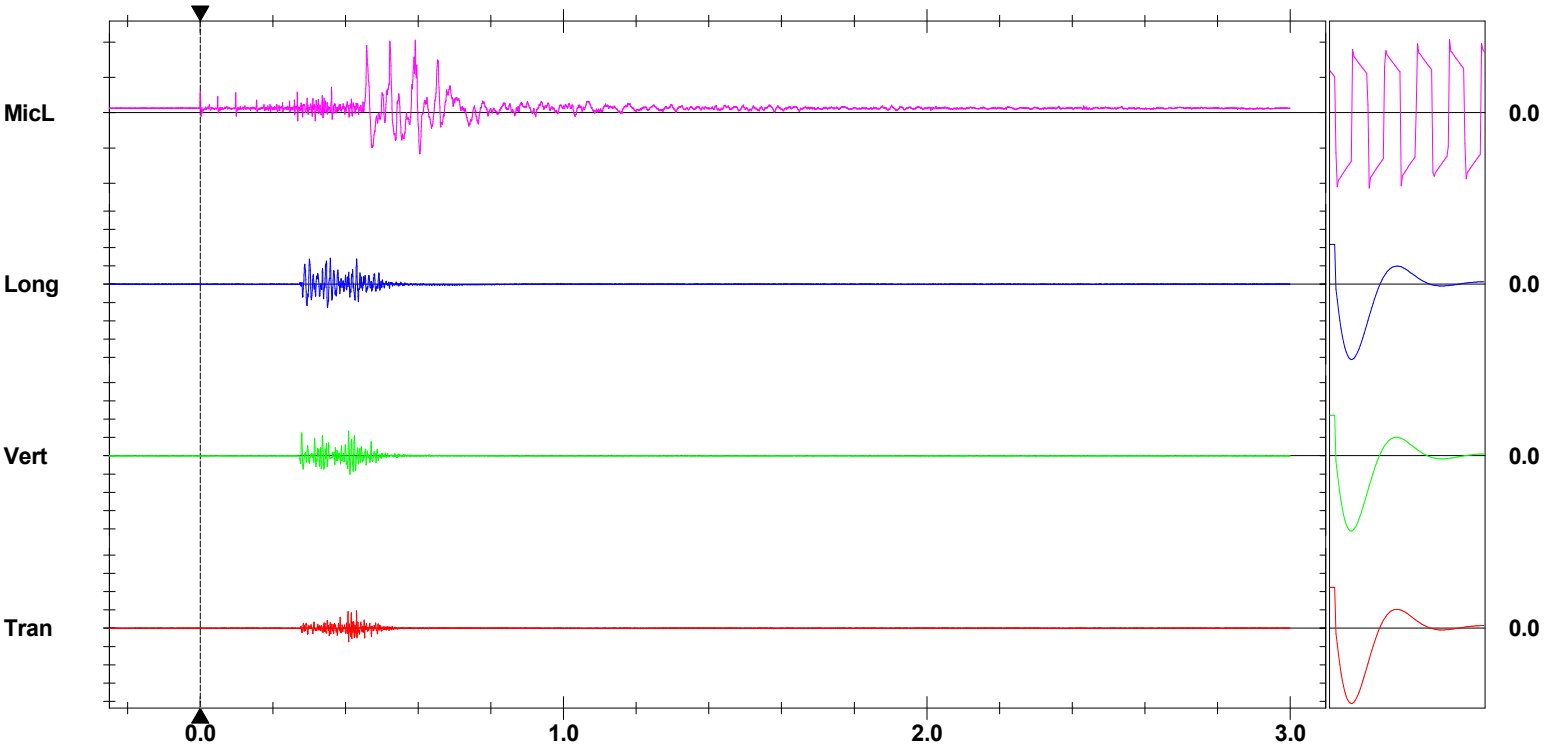
	Tran	Vert	Long	
PPV	1.892	2.719	2.837	mm/s
PPV	56.54	59.69	60.06	dB
ZC Freq	>200	146	85	Hz
Time (Rel. to Trig)	0.430	0.408	0.358	sec
Peak Acceleration	0.405	0.253	0.309	g
Peak Displacement	0.001	0.003	0.005	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.0	4.1	4.2	

Peak Vector Sum 3.327 mm/s at 0.430 sec

DGMS India (A)



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 Sensor Check
Trigger = ▶----------◀

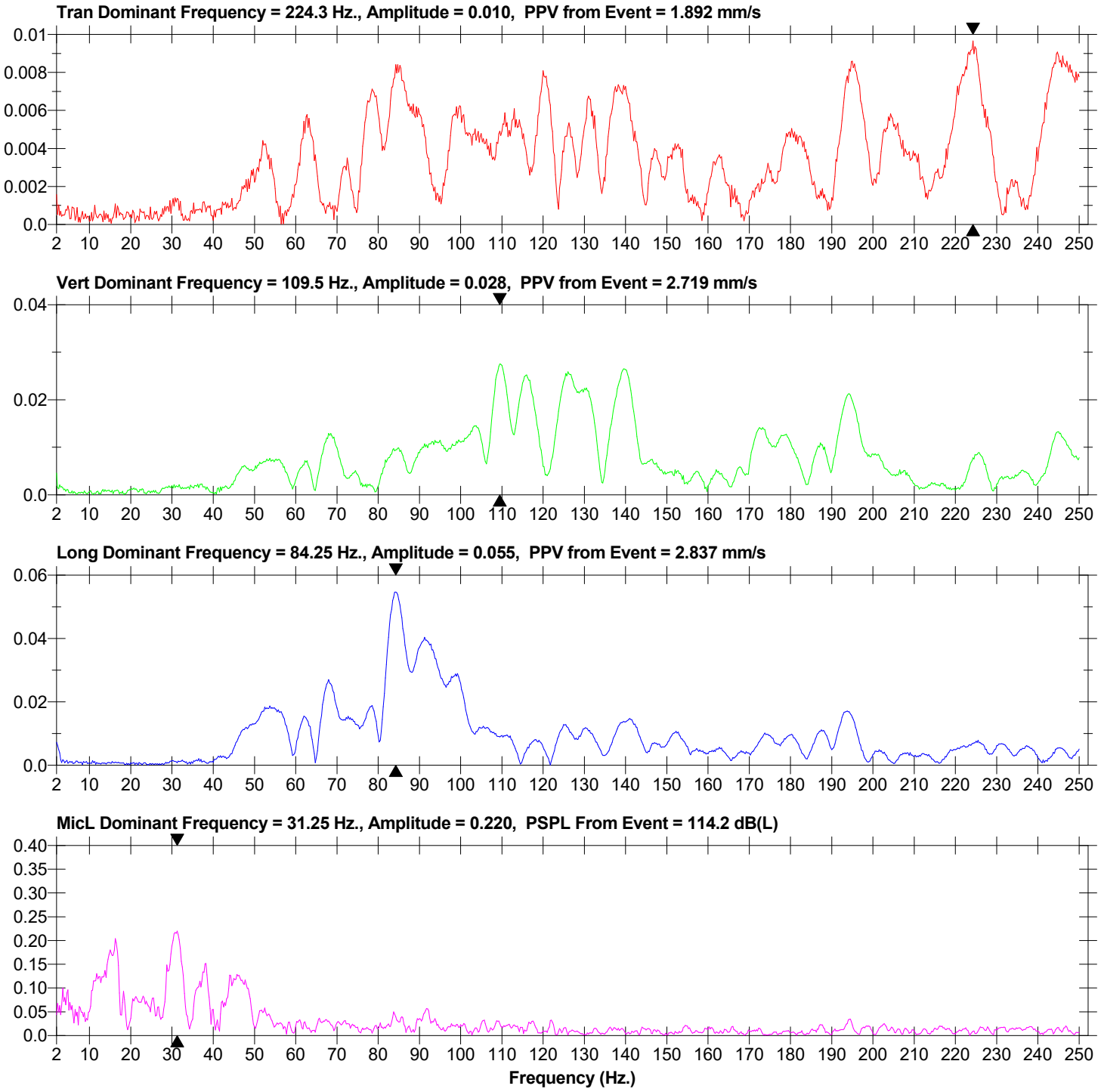
FFT Report

Date/Time	MicL at 10:17:38 September 15, 2025
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915101738.IDFW
Scaled Distance	89.5 (69.3 m, 0.6 kg)

Notes

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



Event Report

Date/Time	Long at 10:20:18 September 15, 2025
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915102018.IDFW
Scaled Distance	89.5 (69.3 m, 0.6 kg)

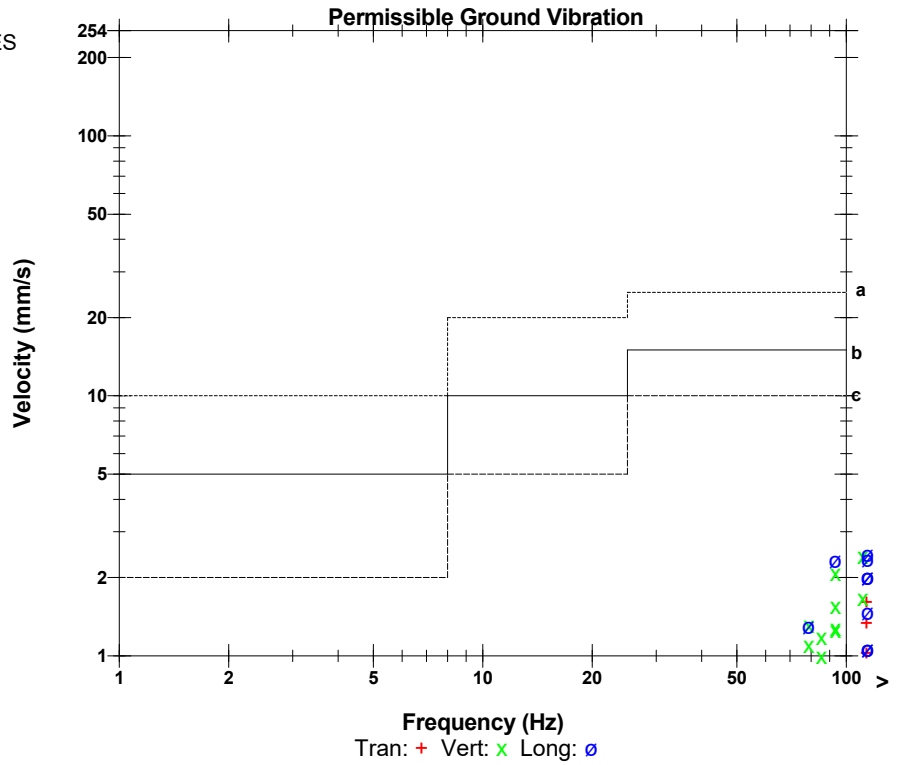
Notes
Location: STATION- 2
Client: SRI GEORGE KOCHUPARAMBIL
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES
General:

Microphone	Linear Weighting
PSPL	105.4 dB(L) at 0.399 sec
ZC Freq	60 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1216 mv)

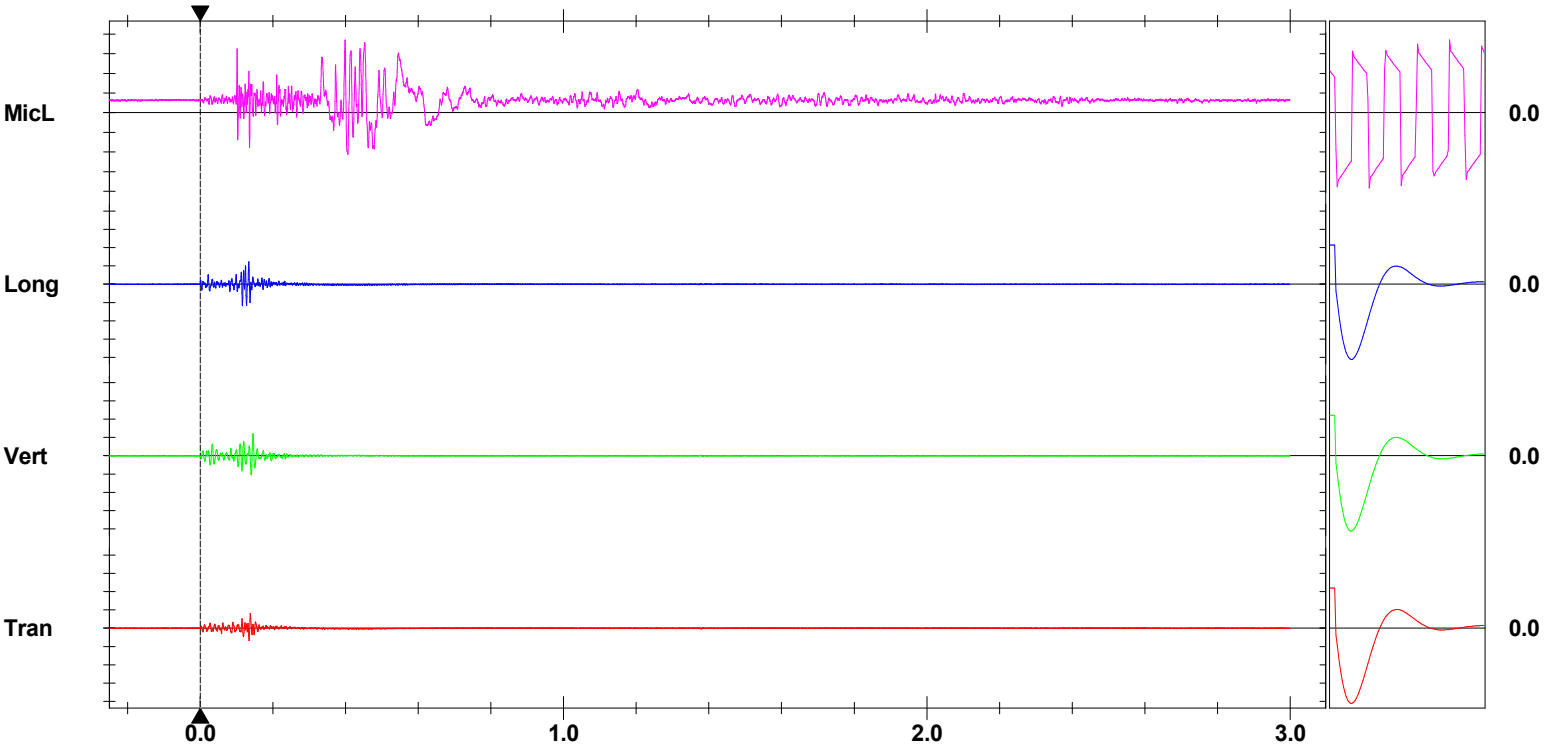
	Tran	Vert	Long	
PPV	1.616	2.428	2.467	mm/s
PPV	55.17	58.70	58.84	dB
ZC Freq	102	102	114	Hz
Time (Rel. to Trig)	0.138	0.146	0.134	sec
Peak Acceleration	0.146	0.150	0.240	g
Peak Displacement	0.002	0.004	0.003	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.1	4.1	4.2	

Peak Vector Sum 2.795 mm/s at 0.134 sec

DGMS India (A)



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

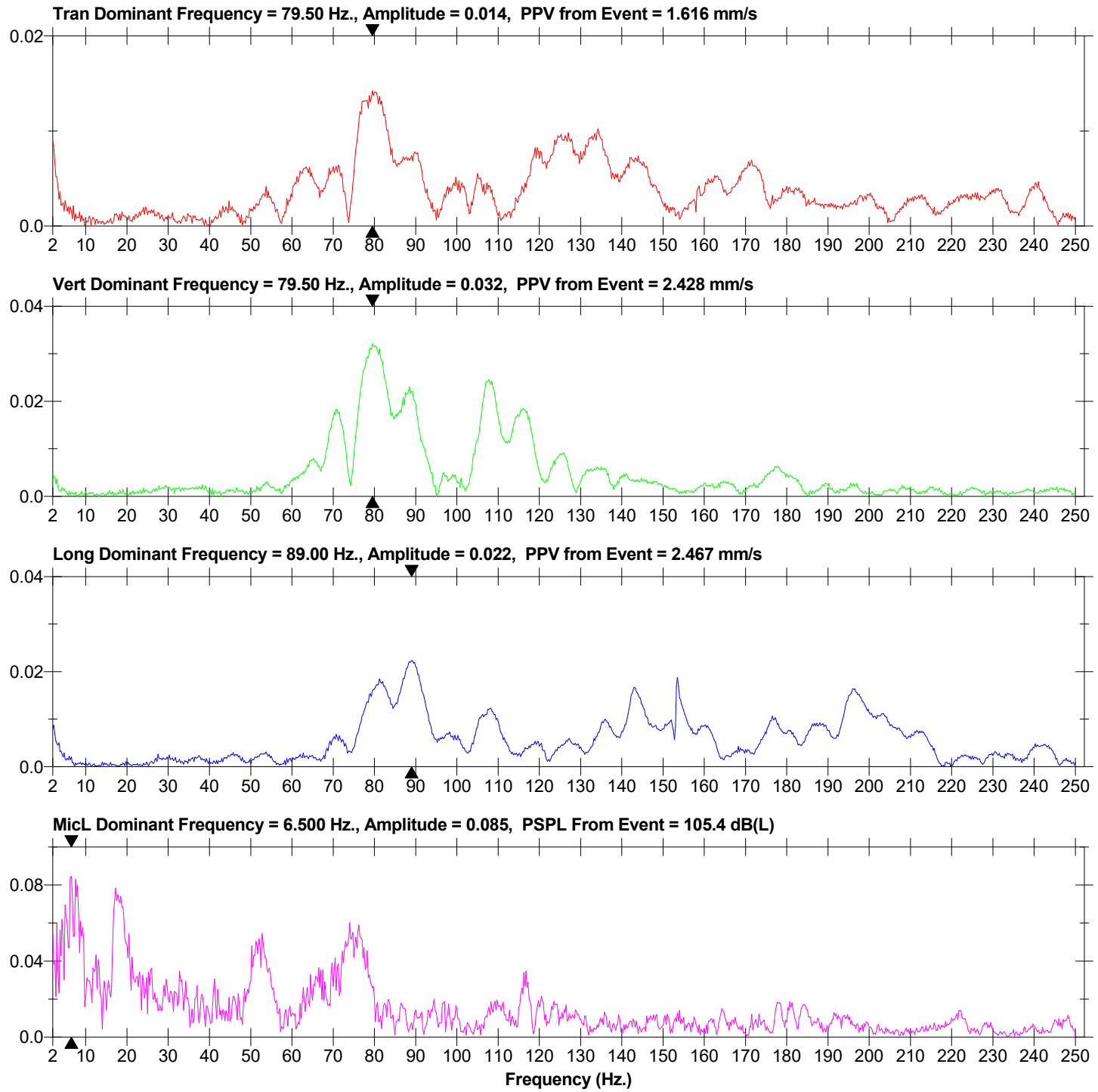


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Long at 10:20:18 September 15, 2025	**Serial Number**	UM18455 V 10-90FB Micromate ISEE
Trigger Source	Geo: 0.127 mm/s, Mic: 100.00 dB(L)	**Battery Level**	3.8 Volts
Range	Geo: 254.0 mm/s	**Unit Calibration**	January 6, 2025 by UES New Delhi
Record Time	3.0 sec at 2048 sps	**File Name**	UM18455_20250915102018.IDFW
Job Number:	1	**Scaled Distance**	89.5 (69.3 m, 0.6 kg)
Operator/Setup:	Operator/factory.MMB		

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



Event Report

Date/Time	MicL at 10:22:08 September 15, 2025
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915102208.IDFW
Scaled Distance	74.3 (47.0 m, 0.4 kg)

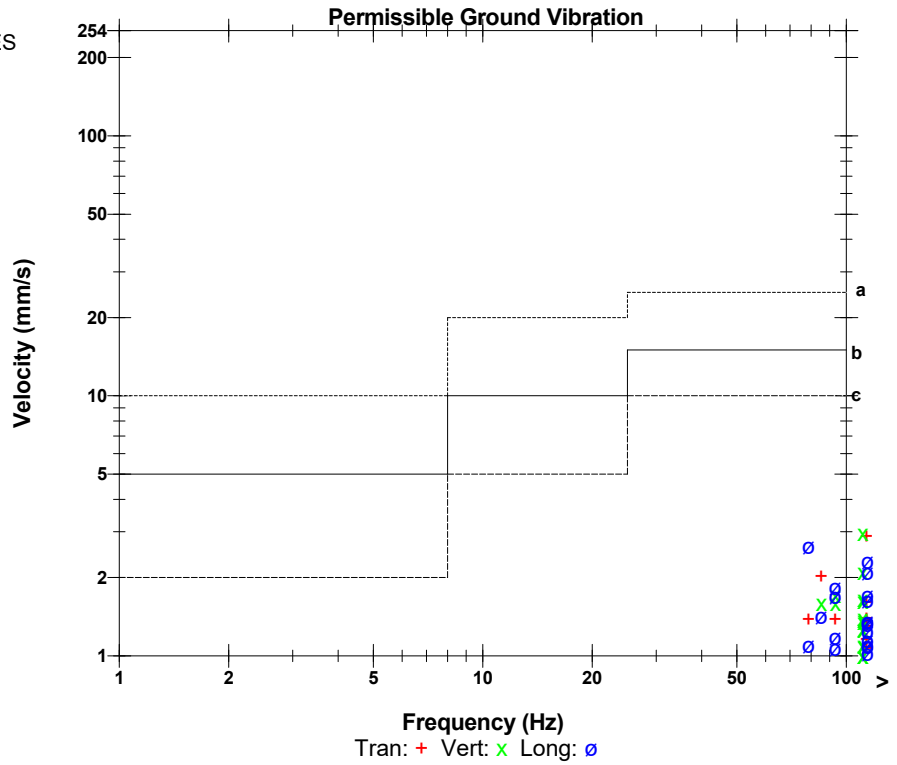
Notes
Location: STATION- 2
Client: SRI GEORGE KOCHUPARAMBIL
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES
General:

Microphone	Linear Weighting
PSPL	113.4 dB(L) at 0.001 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1209 mv)

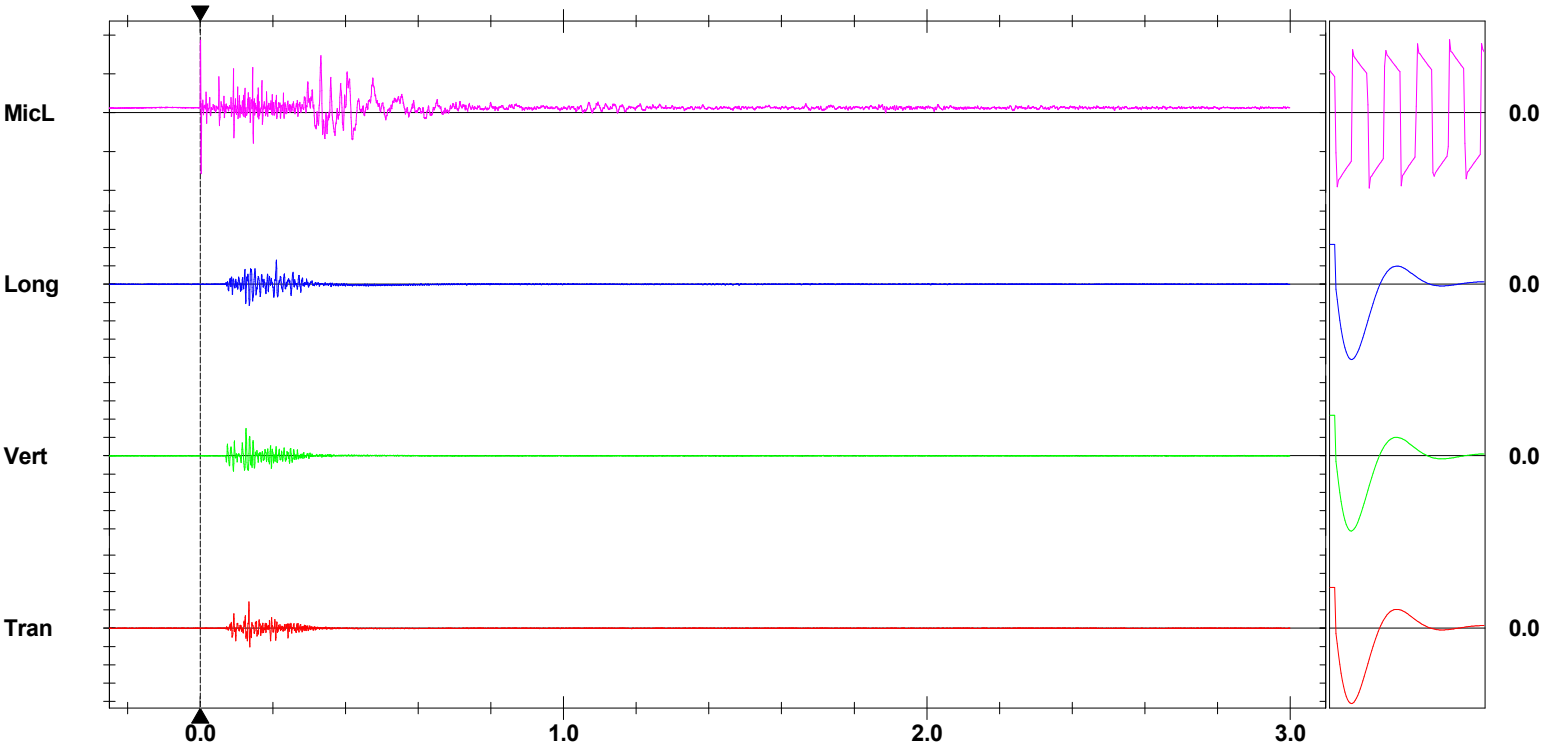
	Tran	Vert	Long	
PPV	2.901	2.979	2.648	mm/s
PPV	60.25	60.48	59.46	dB
ZC Freq	114	128	79	Hz
Time (Rel. to Trig)	0.134	0.126	0.209	sec
Peak Acceleration	0.380	0.227	0.278	g
Peak Displacement	0.003	0.004	0.004	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.0	4.1	4.2	

Peak Vector Sum 3.644 mm/s at 0.126 sec
N/A: Not Applicable

DGMS India (A)



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

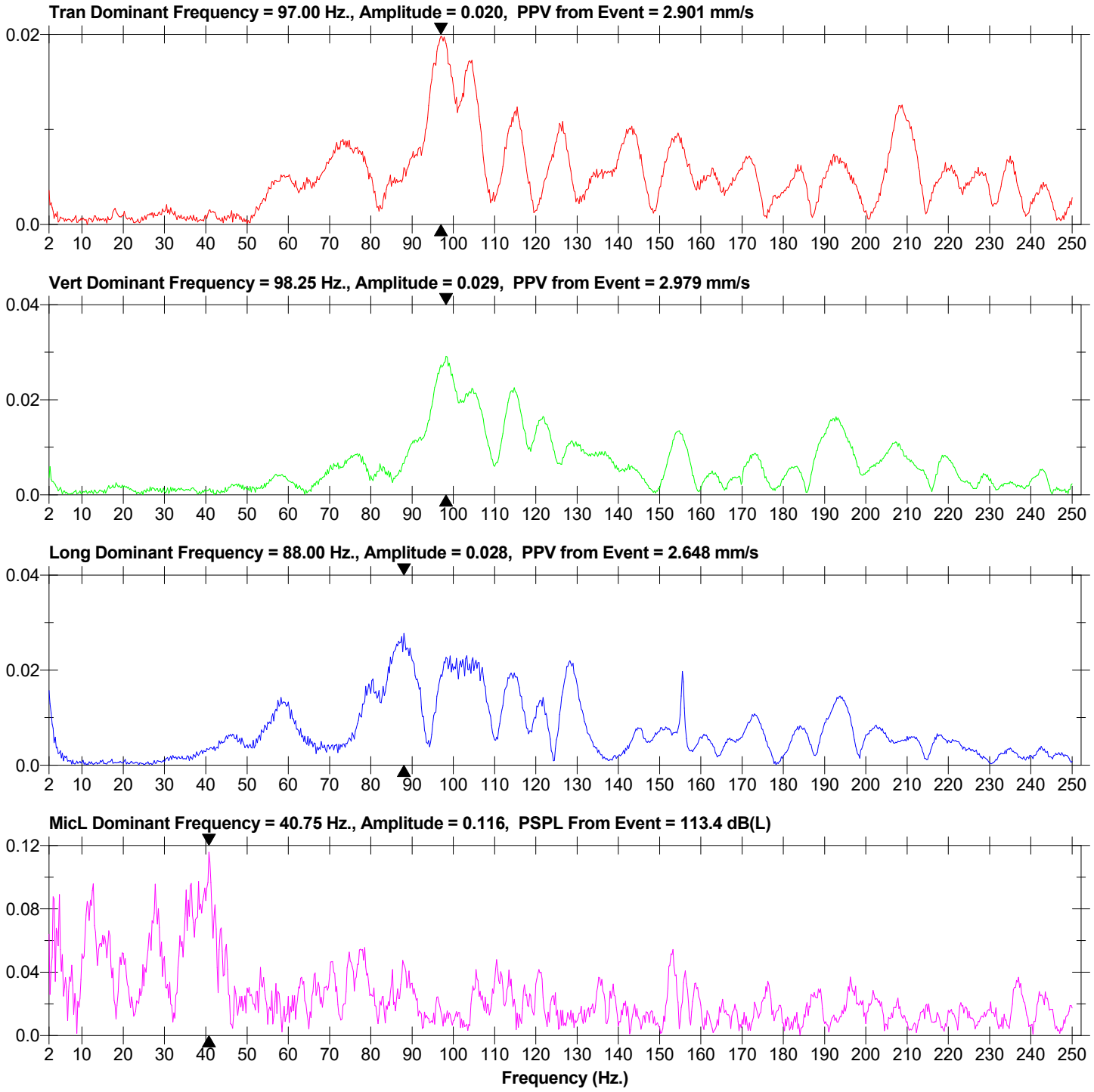
FFT Report

Date/Time	MicL at 10:22:08 September 15, 2025
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	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915102208.IDFW
Scaled Distance	74.3 (47.0 m, 0.4 kg)

Notes

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



Event Report

Date/Time	Tran at 10:44:53 September 15, 2025
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

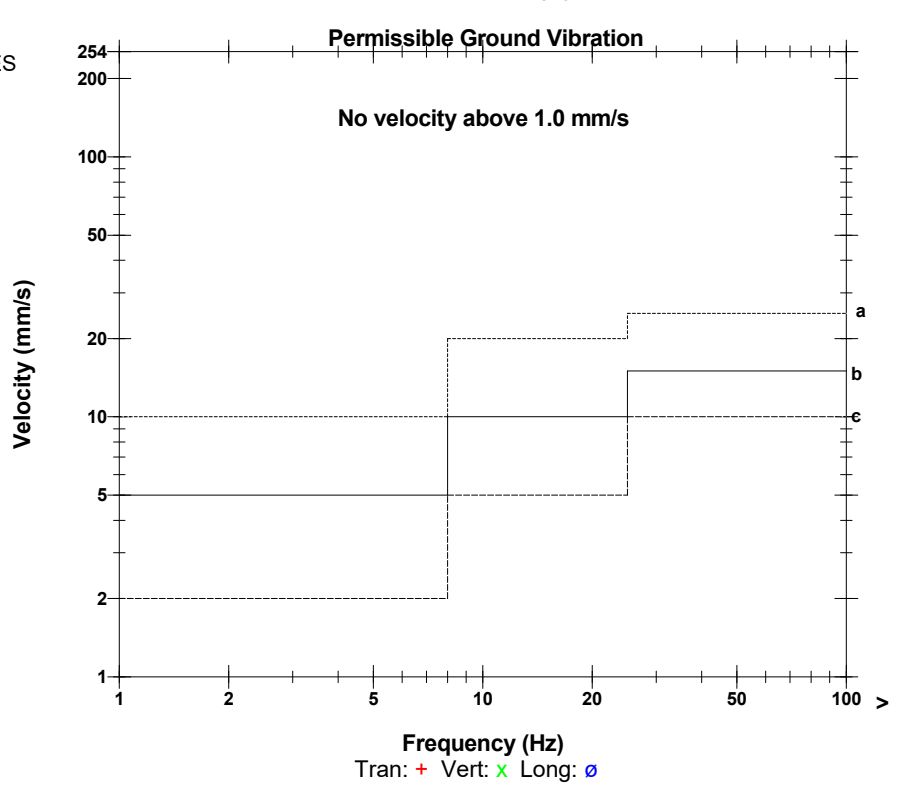
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915104453.IDFW
Scaled Distance	194.5 (150.6 m, 0.6 kg)

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

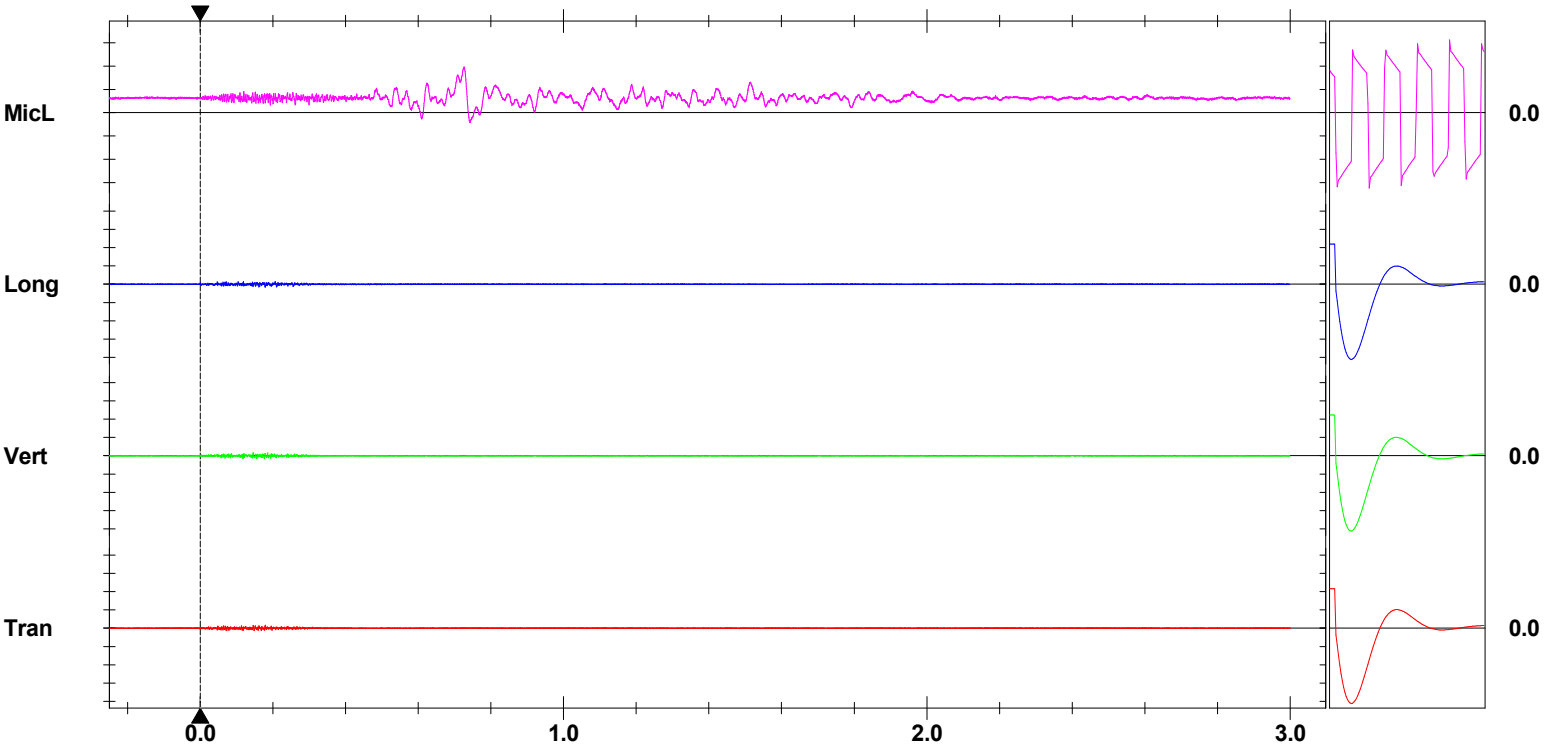
Microphone	Linear Weighting
PSPL	100.3 dB(L) at 0.726 sec
ZC Freq	4.0 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1237 mv)

	Tran	Vert	Long	
PPV	0.323	0.331	0.315	mm/s
PPV	41.19	41.40	40.97	dB
ZC Freq	>200	>200	>200	Hz
Time (Rel. to Trig)	0.179	0.146	0.119	sec
Peak Acceleration	0.063	0.067	0.064	g
Peak Displacement	0.000	0.000	0.000	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 0.503 mm/s at 0.179 sec



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



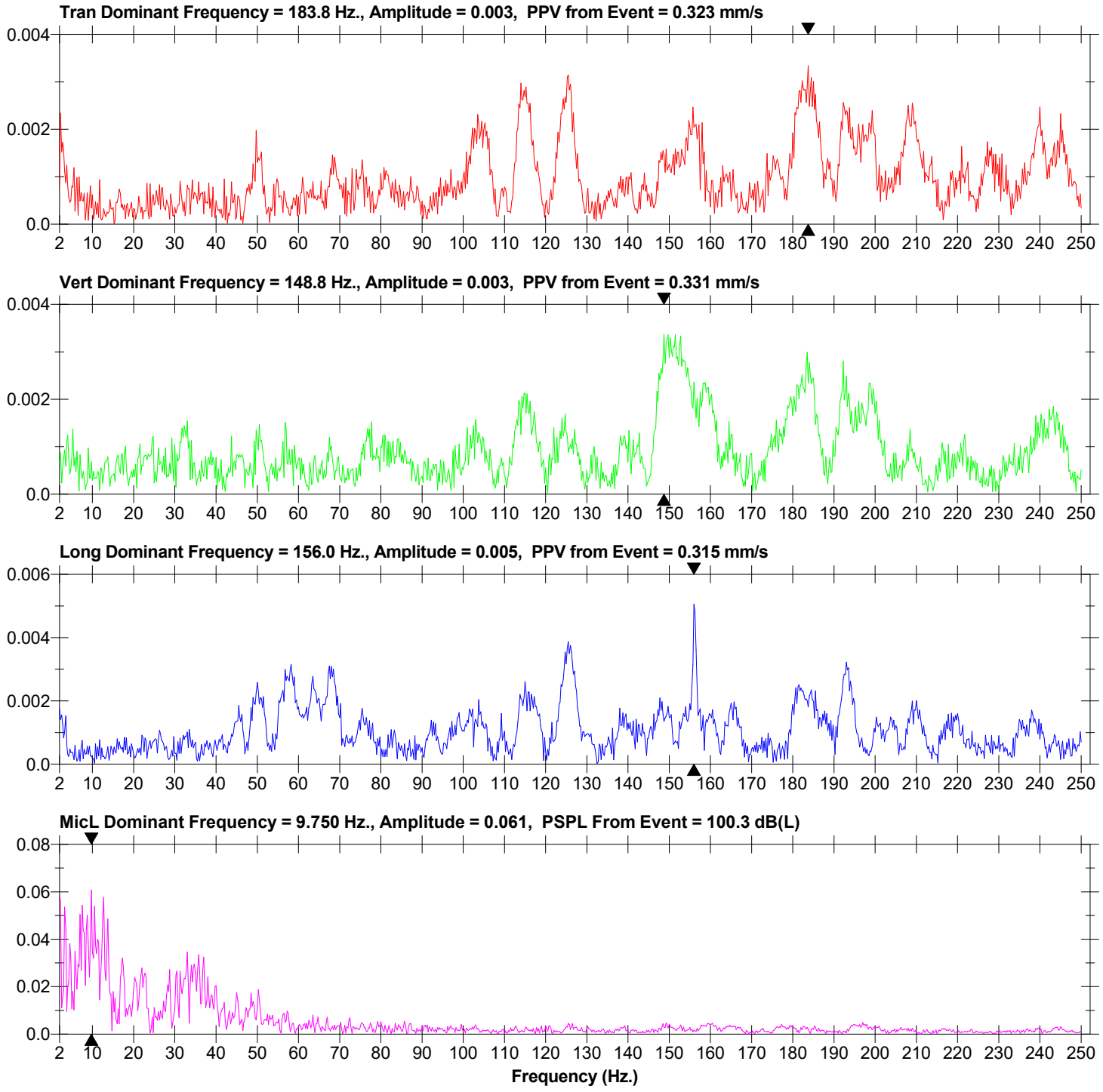
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Tran at 10:44:53 September 15, 2025	**Serial Number**	UM18455 V 10-90FB Micromate ISEE
Trigger Source	Geo: 0.127 mm/s, Mic: 100.00 dB(L)	**Battery Level**	3.8 Volts
Range	Geo: 254.0 mm/s	**Unit Calibration**	January 6, 2025 by UES New Delhi
Record Time	3.0 sec at 2048 sps	**File Name**	UM18455_20250915104453.IDFW
Job Number:	1	**Scaled Distance**	194.5 (150.6 m, 0.6 kg)
Operator/Setup:	Operator/factory.MMB		

Notes

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



Event Report

Date/Time	Long at 10:45:59 September 15, 2025
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

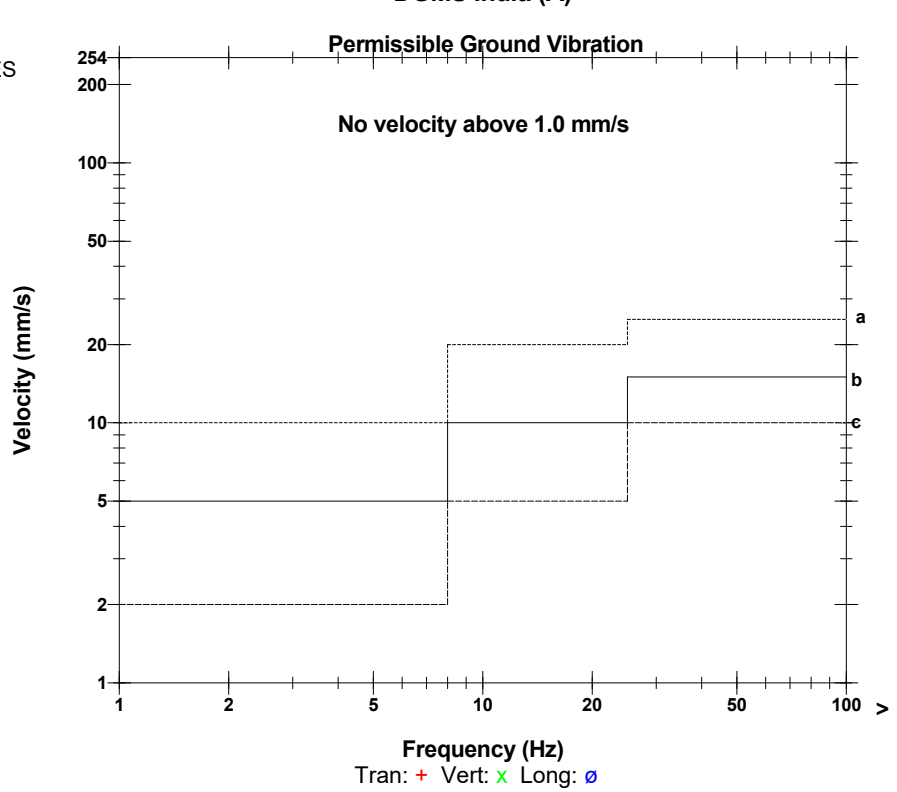
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	January 6, 2025 by UES New Delhi
File Name	UM18455_20250915104559.IDFW
Scaled Distance	194.5 (150.6 m, 0.6 kg)

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

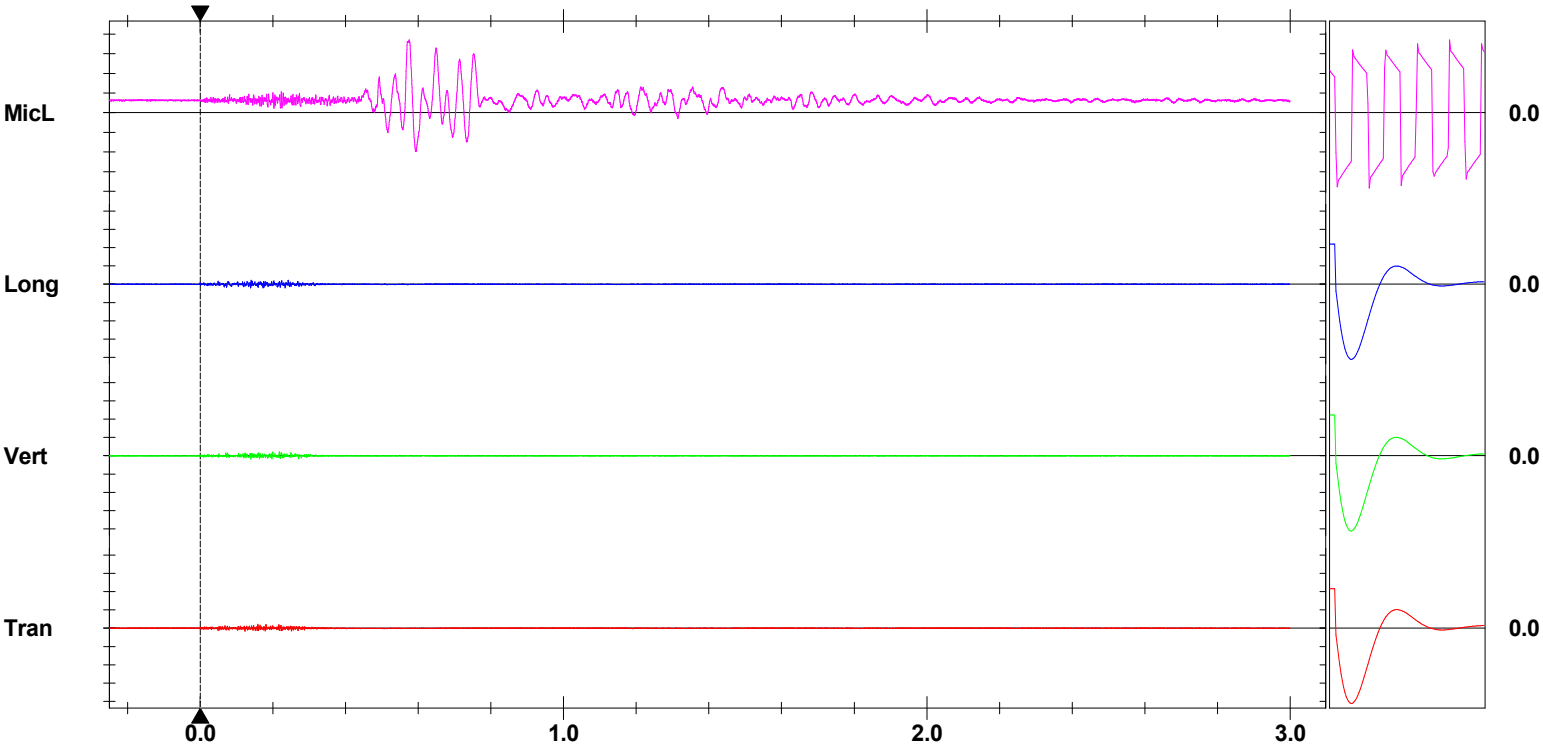
Microphone	Linear Weighting
PSPL	105.4 dB(L) at 0.575 sec
ZC Freq	22 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1237 mv)

	Tran	Vert	Long	
PPV	0.449	0.441	0.441	mm/s
PPV	44.05	43.90	43.90	dB
ZC Freq	>200	>200	171	Hz
Time (Rel. to Trig)	0.159	0.218	0.242	sec
Peak Acceleration	0.090	0.069	0.099	g
Peak Displacement	0.000	0.000	0.001	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 0.576 mm/s at 0.218 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: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Long at 10:45:59 September 15, 2025	**Serial Number**	UM18455 V 10-90FB Micromate ISEE
Trigger Source	Geo: 0.127 mm/s, Mic: 100.00 dB(L)	**Battery Level**	3.8 Volts
Range	Geo: 254.0 mm/s	**Unit Calibration**	January 6, 2025 by UES New Delhi
Record Time	3.0 sec at 2048 sps	**File Name**	UM18455_20250915104559.IDFW
Job Number:	1	**Scaled Distance**	194.5 (150.6 m, 0.6 kg)
Operator/Setup:	Operator/factory.MMB		

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