ENVIRONMENT CLEARANCE COMPLIANCE REPORT (October 2022 - March 2023)

For

GRANITE BUILDING STONE QUARRY

(Minor Mineral)

Extent: 12.2987 Ha.

At

Re-Sy No.	:	354/4, 354/5, 355/1 pt, 351/1 pt, 350, 352/1 pt
Village	:	Manakkad
Taluk	:	Thodupuzha
District	:	Idukki
State	:	Kerala

'Granite Building Stone Quarry of Sri. George Kochuparambil'

E. C. No:1137/EC/SEIAA/KL/2017, Dated:17/03/2018,

EC Revalidated on. 02/03/2023

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

Date:28.04.2023

To,

The Deputy Director General of Forests (C)
MoEF, Regional office, Koramangala, Bangalore.
KendriyaSadan, 4th Floor, E&F. Wings, 17th Main Road,
Koramangala,2ND Block, Bangalore - 560034

Sub:Environmental ClearanceCompliance Report for the period October2022–March2023pertaining to Granite Building StoneQuarry 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,

EC No. 1137/EC/SEIAA/KL/2017 dated 17.03.2018 was valid till 15.03.2023. This EC is renewed with same File No. on 02.03.2023 with some additional specific conditions. This is complied and reports are attached.
As per conditions of the above referred Environmental Clearance(EC),please find enclosed compliance report for period from October2022to March2023 of the EC Granted to 'Granite Building Stone Quarry ofSri. George Kochuparambilby Ministry of Environmental& Forest under EPA(1986). Also enclosed relevant Annexures in Support of the compliance report for your perusal and record please.

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

Thanking you,

Yours truly,

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

Mr. George Kochuparambil
(Managing Partner)

Encl: as above
*Cc:***The Member Secretary**
State Environment Impact Assessment Authority (SEIAA)
Directorate of Environment & Climate Change
4th Floor, KSTRC Bus Terminal,
Thampanoor, Kerala-01

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A Sand Graded Quality

Introduction

Shri. 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 a maximum production of 4,00,000 MTA. Vide letter no. 1137/EC/SEIAA/KL/2017 dated 02.03.2023, the validity of EC is extended for the project life of 16 years from the date of original EC (ie 17.03.2018).

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		Shri. George Kochuparambil, Kochuparambil house, Vazhithala-Post, Thodupuzha Taluk, Idukki District Pincode: 685 583 E-mail: - unitedgranitesandmetals@gmail.com

Compliance Status of the General Conditions for Mining Projects Laid down by the State Environment Impact Assessment Authority, Kerala vide their Environment Clearance No.56/2018 Dated:17/03/2018, EC Revalidated on. 02/03/2023

Part A – Specific Conditions (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 Endemic species are properly protected and transplanted to a suitable area.

Specific Conditions (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.	7.5m wide buffer zone is maintained. Thick green belt is maintained. Geo tagged photograph is attached as **Annexure- 1**
2	The garland canal, silt traps and overflow channel should be maintained periodically by cleaning and desilting and geo-tagged photographs of the process should be included in the half yearly compliance report.	The garland canal, silt traps and overflow channel are maintained periodically by cleaning and desilting. Geo-tagged photographs are attached as **Annexure- 2**

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.	Study of blast vibration is being done. Monitoring is done near the nearest house also. Report is attached as **Annexure-03.**
4	NONEL short delay detonator may be used for initiation.	Nonel initiation system is only used in blasting.
5	Blasts should be conducted by a blasters or mining mate certificate holder	Blasting is done by person having statutory certificate issued by DGMS.
6	To restrict fly rock within 10m, muffling arrangements should be made.	Blasting mats are used to restrict fly rocks up to 10m. Photograph is attached as **Annexure- 4.**
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.	Initiation by NONEL is only used for blasting.
8	Blasting mats should be used during rock blasting to contain the blast, prevent fly rocks and suppress dust.	Blasting mats are used. Photograph is attached as **Annexure- 4.**
9	The violation of EC condition may lead to cancellation of EC and action under	Agreed.

	The Environment (Protection) Act, 1986.	

Part B – General Conditions

Sl. No.	Condition	Status of Compliance
1	Rainwater harvesting facility should be installed as per prevailing provisions of KMBR/KPBR, unless otherwise specified.	Rainwater harvesting is a technically feasible solution for overcoming the problem of water scarcity in Mines. Rain water harvesting facility is installed. The photos of Rain Water harvesting Pond is attached as **Annexure- 5**
2	Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.	Environment monitoring cell is formed & is made functional. The details of Environmental monitoring cell are given as **Annexure-6**. Minutes of meeting of 20th meeting held on 27.10.2022, 21st meeting held on 29.12.2022 and 22nd meeting held on 16.03.2023 are attached.
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 types of trees are planted along either side of the road & parking areas. Photographs are attached as **Annexure-7**
4	Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.	Solar Energy generation and utilization is adopted. Photos of solar lights are attached as **Annexure- 8**
5	Sprinklers shall be installed and used in the Project Site to contain dust emissions.	Sprinklers are used in project site to control dust emission. Photos are attached as **Annexure-9**.

6	Eco-restoration, including the Mine Closure Plan shall be done at the own cost of the Project Proponent.	Plantation of various saplings within the project area has been initiated. The mine closure plan will be prepared as agreed by the project proponent. Photos are attached as **Annexure- 10**.
7	At least 10 per cent of total excavated Pit area should be retained as water storage area and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco- friendly, if no other specific condition on reclamation of the Pit is stipulated in the EC.	During Closure of the mine, 10 percent of total excavated pit will be retained as water storage area and the remaining area will be reclaimed with stacked dumping & overburden and indigenous plant species will be planted.
8	Corporate Social Responsibility (CSR) agreed upon by the Proponent should beimplemented.	Several Corporate Social Responsibility (CSR) activities has been carried out by the project proponent. The Activities were carried in the sectors like Education, Infrastructure, Environment and Health care etc. The details of CSR provided in the period is mentioned in the below table. 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.	Lease area is fenced off. Sign boards have been erected at prominent places. Photos of Boundary fencing are attached as **Annexure-11**
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.	Blasting time and safety boards have been erected at all entrance to the mine. Siren is blown before blasting as warning and after blasting siren is hooted to give all clear message. Photographs of sign boards are attached as **Annexure- 12**.
11	Control measures on noise and vibrations prescribed by KSPCB should be implemented.	➢ Noise and vibration control measures is implemented byadapting

		controlled blasting. ➢ Use of sharp drilling bits, delivery of compressed air at optimal pressure, Proper maintenance ofcompressor, drilling machine, jackhammers and tipper trucks. ➢ Regular monitoring of noise levels is being donewithin 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 limited to daytime only as per KSPCB guidelines. Photograph of sign board showing quarry working time is attached as **Annexure- 12**.
13	Blasting should be done in a controlled manneras specified by the regulations of the Explosives department or any other concerned agency.	Controlled blasting is done with Nonel initiation. Muffling is done to control flyrocks.
14	A licensed person should supervise/control the Blasting Operations	Blast design is approved by the First Class Mines Manager. Supervision is done by the Second Class Mines Manager
15	Access roads to the quarry shall be tarred tocontain dust emission that may arise during the transportation of material.	Access road to the Quarry is tarred and tiled to control dust emission. Photographs of road are attached as **Annexure- 13**.
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/Topsoil is stacked at the southeast corner of the site for future use of reclamation and green belt afforestation.
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.

18	Mats to reduce fly rock blast to a maximum of 10 PPV should be provided	Mats are laid on the top of the charged holes area to control fly rock. Blasting is done with Nonel initiation system only. Controlled blasting keeps the vibration below 10ppv. Photographs are attached as **Annexure-04**
19	Maximum depth of mining and general ground level at site shall not exceed 10m	The Mining is done as per the approved mining plan. Maximum depth of mining and general ground level at site shall not exceed 10m.
20	No mining operation should be carried out at place having a slope greater than 45^0	No mining operation will be carried out at place having a slope greater than 45^0
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.	All the employees are provided with Personal Protective equipment (PPE's).
23	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	Drains are provided to channelize Storm water. Photograph is attached as **Annexure-02**.
24	The transportation of minerals should be done in covered trucks to contain dust emissions.	All trucks transporting material are covered by firmly tied tarpaulin. Photograph is attached as Annexure- 13
25	The proponent should plant trees at least 5 times the loss that has been occurred while clearing the land for the project.	Plantations of about 5 times the loss that has been occurred while clearing the land is being done. Nursery receipts are enclosed as **Annexure-14**
26	Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.	Spent oil is re-used as a lubricant for drilling. Excess oil is sold to authorized agencies

27	Explosives should be stored in magazines in isolated place specified and approved by the Explosive Department.	Explosives are stored in a Licensed Explosives Magazine. Copy of Explosive license is attached as **Annexure-15**
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.	No dwellings are situated within 100 M from the boundary of the quarry.
29	100 M buffer distance should be maintained from forest boundaries	Mining area is not located near any forest areas.
30	Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.	Consent from KSPCB under Air and Water Act(s) is obtained. Copy of the consent is attached as **Annexure-16**
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 required statutory clearances are obtained.
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	Agreed

	Notifications should be complied with including the provisions of the Water (Prevention and control of Pollution) Act,1974, the Air (Prevention and control of Pollution) Act1981, the Environment (Protection) Act,1986, the Public Liability (Insurance) Act,1991 and EIA Notification,2006	
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 are given in two newspapers. 1. **Kerala Kaumady – Malayalam – 12/04/2018** 2. **The Hindu Daily – English – 12/04/2018** Copies of advertisements published in the newspapers are attached as **Annexure- 17**
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 Clearance is submitted to the concerned authorities. Copy of Panchayat license attached as **Annexure-18**
37	The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results	Half yearly compliance reports are submitted as stipulated to State Environmental Impact Assessment

	of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective regional office of the MOEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office	Authority and the Regional Office of MoEF&CC, Bangalore. The monitored data of Air, Noise and Water is attached as **Annexure-19**
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	Details of Environmental Clearances is prominently displayed at the entrance to the Mine. Photograph is attached as **Annexure- 20**
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 is submitted.
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.
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.	No natural water course is obstructed. Necessary safeguard measures are taken to protect first order streams if originating from the mining lease in the future.
42	Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central	Monitoring of Ambient Air Quality is carried out. Monitoring reports have been enclosed as **Annexure- 19**.

	Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.	
43	The top soil, if any, shall be temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The Over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8 m and the width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo-textiles shall be undertaken for stabilization of the dump. The entire excavated area should continue until the vegetation becomes self-sustaining	Top Soil dump is stacked at the designated area and will be utilized during the Mine Closure for Afforestation and Green belt development. OB generated is stacked separately and is vegetated with locally available shrubs and grasses.
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	All storm water from lease area is collected in Silt Settling Tank (SST 1) through garland drains. After settling it overflows to SST 2 and then to SST3. The clear water from SST 3 is diverted to Rain water Harvesting Ponds for use in water sprinkling, gardening, etc.
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	Regular water sprinkling is done on all necessary roads with water tankers and sprinklers. Photograph is attached as **Annexure- 9**

	conform to the norms prescribed by the Central Pollution Control Board in this regard.	
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.	Fugitive dust emissions are controlled by using water tankers with sprinklers.
47	Measures should be taken for control of noise levels below 85 dB (A) in the work environment.	Adequate measures for noise control have been adopted.
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 Environment Management Cell has been set up with Mr. Sonu Jose as the head of the Cell. The details of Environmental monitoring cell are given as **Annexure-6**. Minutes of meeting of 20th meeting held on 27.10.2022, 21st meeting held on 29.12.2022 and 22nd meeting held on 16.03.2023 are attached.
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 environment protection measures and CSR activities Shall be kept in a separate account and will not be diverted for other purpose. CSR activities are distributed in 4 sectors Education, Infrastructure, Environment and Health care. Photos of the CSR receipts are enclosed as Annexure-22.
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	Agreed

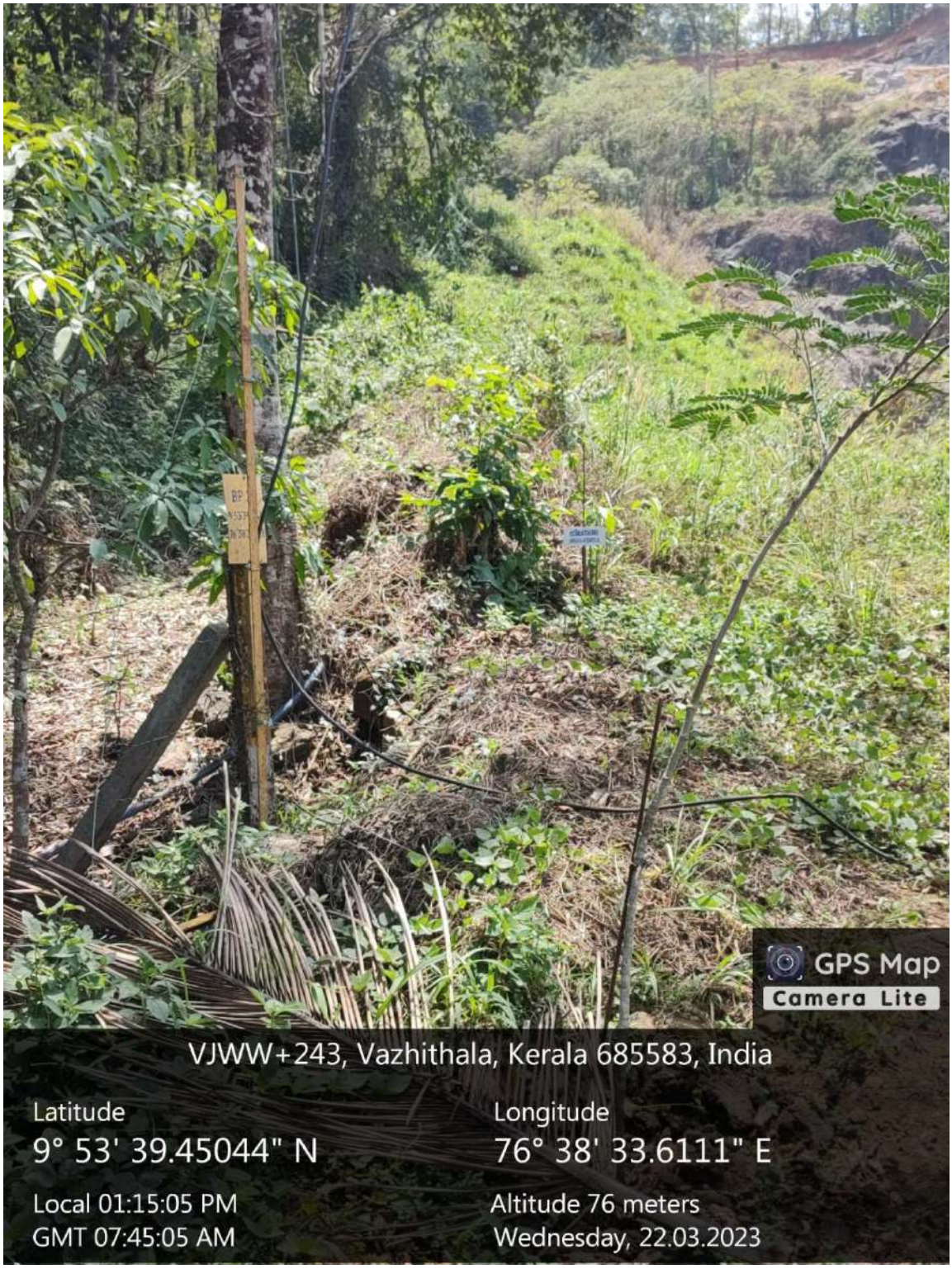
	Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	
52	Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance 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	Agreed
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 restricted to above ground water table and due care will be taken so as not to intersect ground water.
58	All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution checking center. Washing of all vehicles shall be inside the Lease area	It is ensured that all transportation vehicles have 'PUC' Certificate issued by an authorized Pollution checking center. All the vehicles are washed inside the lease area.

59	Project proponent should obtain necessary prior permission of the competent authorities for drawl of necessary quantity of surface and ground water for the project.	There is no need for drawl of Surface and ground water for the project activities. As there is Rain Water Harvesting Pond present which will be main source of water. Photograph of Rain water harvesting pond is attached as **Annexure- 5**.
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.	Occupational health surveillance will be undertaken periodically. Periodical Medical Examination is done as per Mines Rules 1955. Medical certificates are issued in Form "O". Additionally all employees are covered under Medical Insurance. Health insurance for Employees is enclosed as **Annexure-21**

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

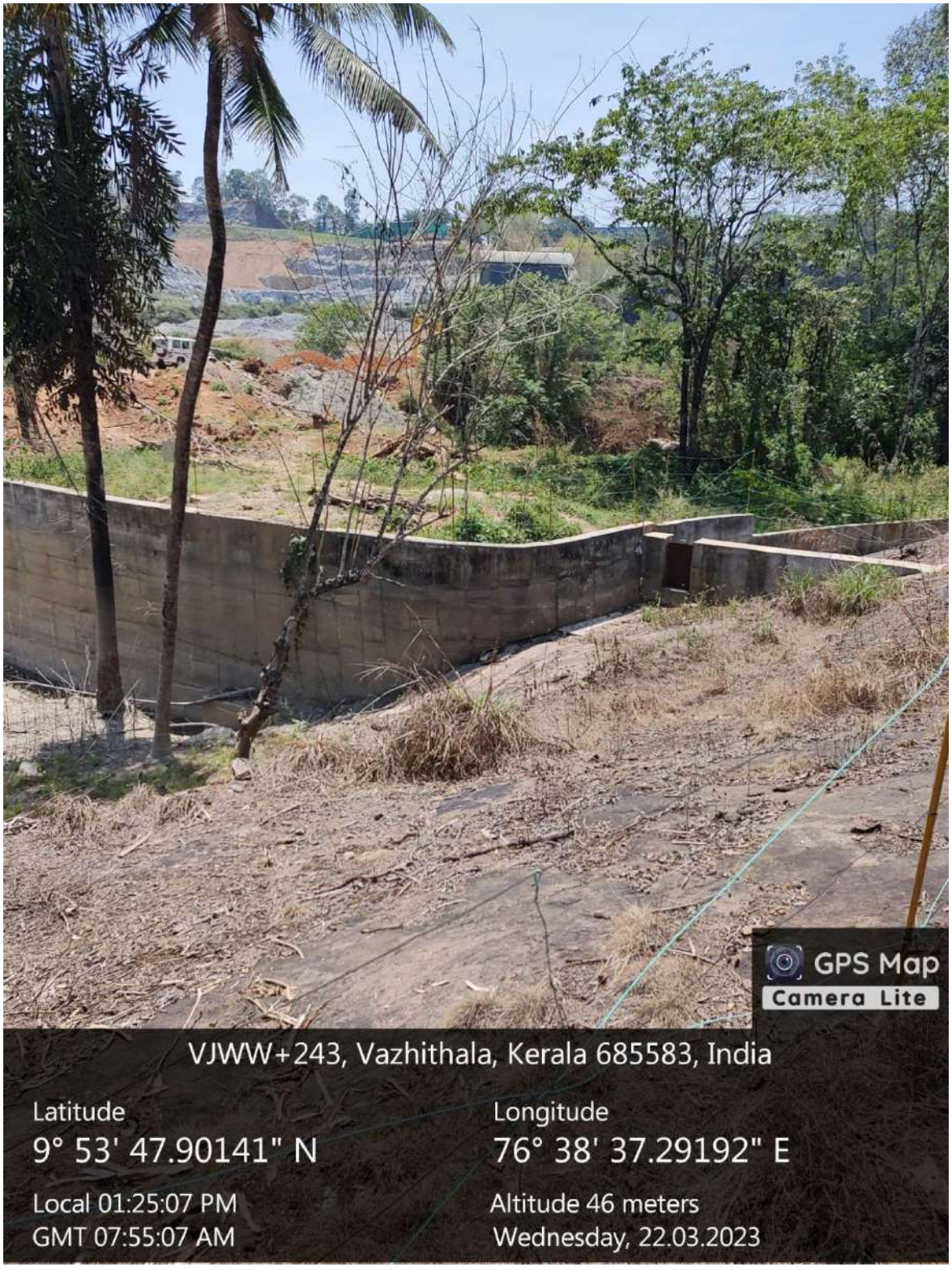
George Kochuparambil
Managing Director
Date: 28-04-2023

Annexure- 1



Green Belt

Annexure- 2



Garland Drain


GPS Map
Camera Lite
VJWW+243, Vazhithala, Kerala 685583, India
Latitude
9° 53' 52.3824" N
Longitude
76° 38' 39.62256" E
Local 01:26:02 PM
GMT 07:56:02 AM
Altitude 46 meters
Wednesday, 22.03.2023

Annexure-3

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

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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.

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ABSTRACT

Shri. George Kochuparambil, 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 (9.51 Acres) 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.

A reconnaissance survey was made in the last week of March 2023. 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, 15 blast were conducted at Four different location in the quarry blasting operations were monitored through geophone at the distance of 59 m, 74 m, 100 m, 145 m, 209 m, 283 m. The data obtained from the Instantel micromate instrument were interpreted 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 10 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.

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

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

1. In total, fifteen blasts were conducted and monitoring were done in nearest house of Mr. Tomy Kurian, Towards South West of Mine lease boundary, near the Mines office & inside the Mine. Out of the fifteen blasts, three blasts were conducted with box cut pattern and the rest twelve blasts were 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. The depth of holes used in box cut blasts were 6ft with burden and spacing values of 1.0 m and 1.2 m respectively. The total number of holes per round of blast for the three blasts was 25. Explosive charge per hole was 0.375 Kg,

maximum charge per delay was 0.375 Kg and total explosive charge per blast was 9.375 Kg. The charge factor used in box cut pattern was 0.173 Kg/M^3.

4. In the bench blast, the depth of holes used are 8ft and 6ft. The total number of holes varied from 25 to 16. All the blasts were done in hard rock. So staggered pattern of drilling was used.
5. The burden and spacing for the bench blast was 1.0 m and 1.2 m respectively. The 8 ft holes were charged with two cartridges of slurry explosives and ANFO. The explosive quantity per hole was 0.650 Kg. The 6 ft holes were charged with one cartridge of slurry explosive and ANFO. The explosive quantity per hole was 0.425 Kg.
6. 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 59 to 283 m.
7. The Peak Particle Velocity recorded near the house of Mr. Tomy Kurian varied from 0.254 to 0.863 mm/s. Distance of house from blast locations was 283m.
8. The highest value of vibration recorded at 59m from blast site was 3.751 mm/s. This was recorded in blast no: 14 where maximum charge per delay was 0.375 Kg and total explosive charge in the blasting round was 9.375 Kg. This blast was done in box cut pattern.
9. Fly rocks up to 20 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.

10. 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.
11. 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. 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. Vide letter no. 1137/EC/SEIAA/KL/2017 dated 02.03.2023, the validity of EC is extended for the project life of 16 years from the date of original EC (i.e. 17.03.2018).

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.

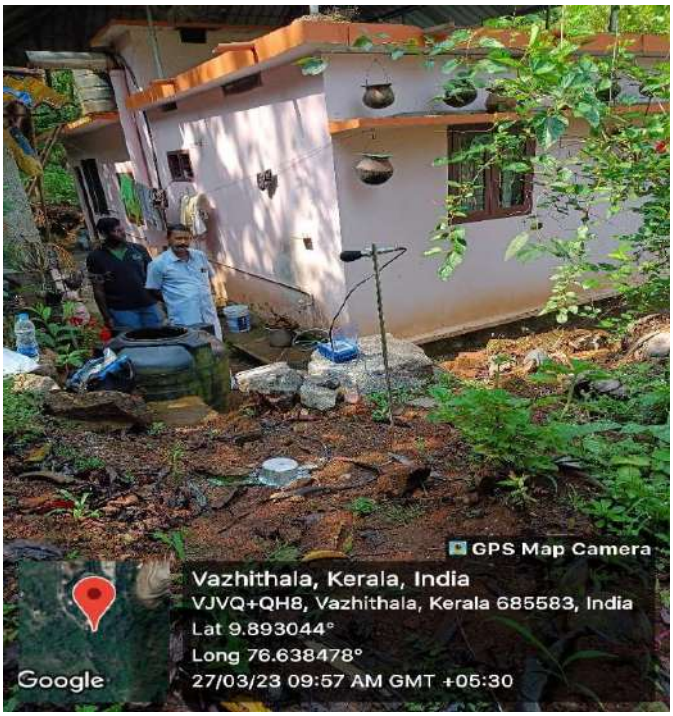


Fig 2: House of Mr. Tomy Kurian

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 35.4 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 27.03.2023, 15 Rounds of Blasts were conducted. The locations of Blasting & Monitoring stations are plotted in the Google Earth and shown below.

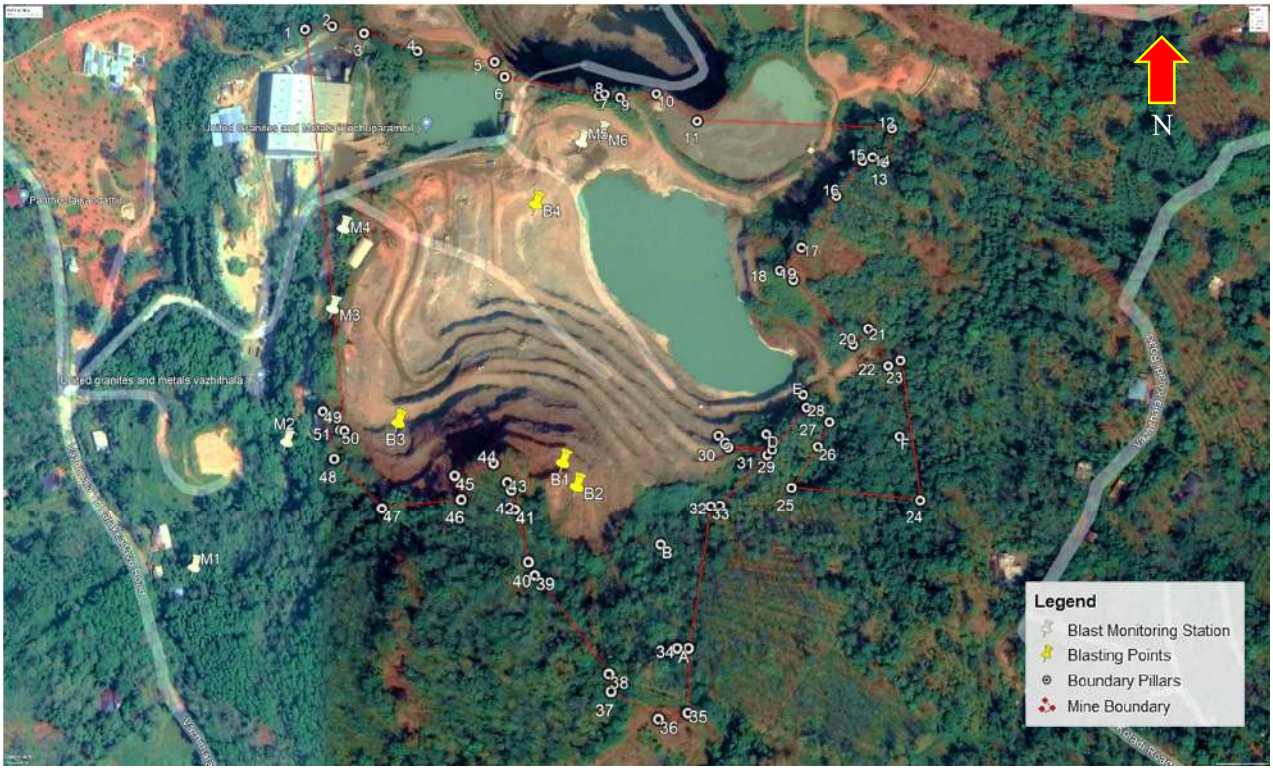


Fig 3: Google Earth Image of the Mine showing Blasting Locations & Monitoring Points

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

GROUND VIBRATIONS

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

Ground vibration radiates outwards from the blast site and gradually reduces in magnitude. When an explosive charge is detonated in a blast hole, strain waves are generated in the surrounding rock mass carrying huge quantity of energy. This energy generates cracks and fractures in the strata due to various breakage mechanisms such as crushing, radial cracking, reflection breakage etc. Combined, the crushed and fractured zones encompass a certain volume of permanently deformed rock. When the intensity of strain waves diminishes to the level where no permanent deformation occurs in the rock mass, i.e., beyond the fragmentation zone, strain waves propagate through the strata in the form of elastic waves. These waves in the elastic zone are known as ground vibrations.

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

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

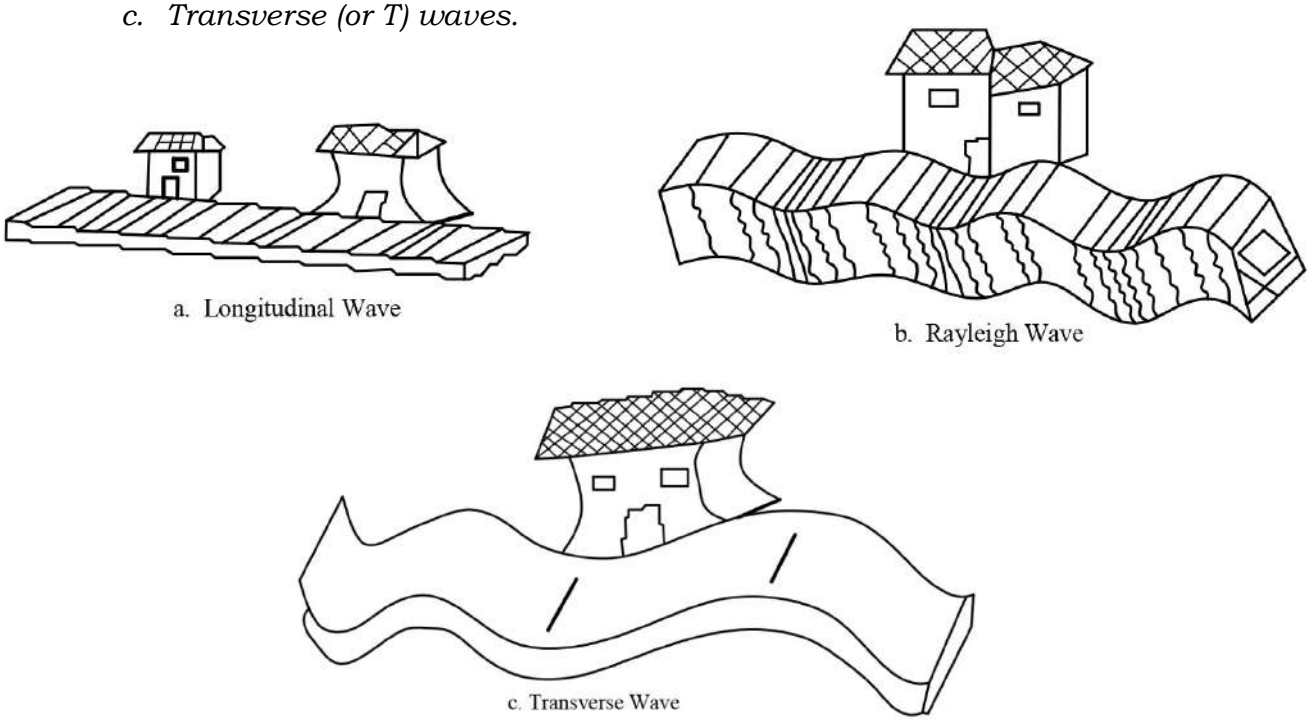


Fig 4: Different kind of waveforms

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 6 feet (1.80m) & 8 Feet (2.40m) depth, using hand held jackhammer drills (Fig. 5). The Burden is about 1.0 m & the Spacing is about 1.2 m. Once the blast hole is ready, these holes are charged with small diameter (25mm) explosive cartridges, weighing 125g (fig. 8) & ANFO. NONEL detonators (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. 10) 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. 9). Fig. 11 shows the muffling arrangement of blasting area/charged holes with blasting mats to control the fly rocks. Fig.12 shows the fragmented material from the blasting operations.

Fig 5: Drilling of Blast Holes using Jack Hammer

Fig 6: A Close view of the Bench Face

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

Fig 8: Explosive Cartridges used in the Quarry

Fig 9: Stemming of Blast Holes

Fig 10: Charged Holes

Fig 11: Muffling arrangements to control the Fly rocks

Fig 12: Fragmented Rock after Blasting

Fig 13: 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, 15 blasts were conducted at different locations in the quarry. Blastholes of 6 Ft depth were charged with the ANFO & Slurry explosive quantity of 425 gms and Blastholes of 8 Ft depth were charged with the ANFO & Slurry explosive quantity of 650 gms. NONEL based shock tube detonator & Surface Trunk Line Delays (STLD) are used for achieving required delay timing. The blast round was initiated after getting safety clearance from all directions. Ground vibration generated from different blast were monitored using Instantel Micromate, Canada and geophone of these blast vibration monitors records the ground vibration. Trigger level geophone was set to a minimum PPV of 0.127 mm/sec. This indicate that the instrument will start monitoring the ground vibration. Geophone of the instrument is glued to the ground effectively using Plaster of Paris. Monitoring was done at different distances from blasting site to know the propagation of ground vibration from the quarry site. Fig.13 shows the study carried out to monitor the ground vibration towards the nearby house & near to Mine Office situated 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	Blast No. 5
1	Date of Blast	*27.03.2023*	*27.03.2023*	*27.03.2023*	*27.03.2023*	*27.03.2023*
2	Time of Blasts (Hours)	*09:57:51*	*09:58:42*	*10:02:34*	*10:03:00*	*10:20:28*
3	Location of blasts	*9°53'37.79"N, 76°38'27.60"E*	*9°53'37.79"N, 76°38'27.60"E*	*9°53'37.79"N, 76°38'27.60"E*	*9°53'37.79"N, 76°38'27.60"E*	*9°53'37.26"N, 76°38'27.90"E*
4	Diameter of blast hole (mm)	*33*	*33*	*33*	*33*	*33*
5	Burden (m)	*1*	*1*	*1*	*1*	*1*
6	Spacing (m)	*1.2*	*1.2*	*1.2*	*1.2*	*1.2*
7	Depth of blast hole (Ft)	*8*	*8*	*8*	*8*	*6*
8	No of blast holes	*18*	*18*	*20*	*16*	*25*
9	Explosive charge/ Hole (kg)	*0.65*	*0.65*	*0.65*	*0.65*	*0.425*
10	Maximum Charge per delay (kg)	*0.65*	*0.65*	*0.65*	*0.65*	*0.425*
11	Total Charge / Blast (kg)	*11.7*	*11.7*	*13*	*10.4*	*10.625*
12	Initiation System	*Nonel*	*Nonel*	*Nonel*	*Nonel*	*Nonel*
13	Initiation Pattern	*Row to Row*	*Row to Row*	*Row to Row*	*Row to Row*	*Row to Row*
14	Location of instrument	*9°53'35.16"N, 76°38'18.64"E*	*9°53'35.16"N, 76°38'18.64"E*	*9°53'35.16"N, 76°38'18.64"E*	*9°53'35.16"N, 76°38'18.64"E*	*9°53'38.16"N, 76°38'21.06"E*
15	Distance (m)	*283*	*283*	*283*	*283*	*209*
16	PPV (mm/s)	*0.254*	*0.632*	*0.597*	*0.863*	*0.825*
17	Noise (dB)	*93.23*	*94.7*	*92.6*	*93.5*	*97.44*
18	Dominant Frequency (Hz)	*25.63*	*50.38*	*52.63*	*104*	*53.5*

Table 2: Monitored Blast details

S. No	Description	Blast No. 6	Blast No. 7	Blast No. 8	Blast No. 9	Blast No. 10
1	Date of Blast	*27.03.2023*	*27.03.2023*	*27.03.2023*	*27.03.2023*	*27.03.2023*
2	Time of Blasts (Hours)	*10:21:10*	*10:29:34*	*10:30:01*	*10:30:26*	*12:37:10*
3	Location of blasts	*9°53'37.26"N, 76°38'27.90"E*	*9°53'37.26"N, 76°38'27.90"E*	*9°53'37.26"N, 76°38'27.90"E*	*9°53'37.26"N, 76°38'27.90"E*	*9°53'38.64"N, 76°38'23.88"E*
4	Diameter of blast hole (mm)	*33*	*33*	*33*	*33*	*33*
5	Burden (m)	*1*	*1*	*1*	*1*	*1*
6	Spacing (m)	*1.2*	*1.2*	*1.2*	*1.2*	*1.2*
7	Depth of blast hole (Ft)	*6*	*6*	*6*	*6*	*6*
8	No of blast holes	*25*	*25*	*23*	*21*	*25*
9	Explosive charge/ Hole (kg)	*0.425*	*0.425*	*0.425*	*0.425*	*0.425*
10	Maximum Charge per delay (kg)	*0.425*	*0.425*	*0.425*	*0.425*	*0.425*
11	Total Charge / Blast (kg)	*10.625*	*10.625*	*9.775*	*8.925*	*10.625*
12	Initiation System	*Nonel*	*Nonel*	*Nonel*	*Nonel*	*Nonel*
13	Initiation Pattern	*Row to Row*	*Row to Row*	*Row to Row*	*Row to Row*	*Row to Row*
14	Location of instrument	*9°53'38.16"N, 76°38'21.06"E*	*9°53'38.16"N, 76°38'21.06"E*	*9°53'38.16"N, 76°38'21.06"E*	*9°53'38.16"N, 76°38'21.06"E*	*9°53'41.22"N, 76°38'22.20"E*
15	Distance (m)	*209*	*209*	*209*	*209*	*100*
16	PPV (mm/s)	*0.531*	*0.463*	*0.453*	*0.722*	*0.821*
17	Noise (dB)	*94.58*	*95.18*	*95.30*	*96.07*	*113.44*
18	Dominant Frequency (Hz)	*17.63*	*50*	*41.75*	*51.13*	*111.8*

Table 2: Monitored Blast details

S. No	Description	Blast No. 11	Blast No. 12	Blast No. 13	Blast No. 14	Blast No. 15
1	Date of Blast	*27.03.2023*	*27.03.2023*	*27.03.2023*	*27.03.2023*	*27.03.2023*
2	Time of Blasts (Hours)	*12:38:44*	*12:44:32*	*12:55:11*	*12:56:00*	*13:23:16*
3	Location of blasts	*9°53'38.64"N, 76°38'23.88"E*	*9°53'38.64"N, 76°38'23.88"E*	*9°53'43.62"N, 76°38'26.88"E*	*9°53'43.62"N, 76°38'26.88"E*	*9°53'43.62"N, 76°38'26.88"E*
4	Diameter of blast hole (mm)	*33*	*33*	*33*	*33*	*33*
5	Burden (m)	*1*	*1*	*1*	*1*	*1*
6	Spacing (m)	*1.2*	*1.2*	*1.2*	*1.2*	*1.2*
7	Depth of blast hole (Ft)	*6*	*6*	*6*	*6*	*6*
8	No of blast holes	*25*	*18*	*25*	*25*	*25*
9	Explosive charge/ Hole (kg)	*0.425*	*0.425*	*0.375*	*0.375*	*0.375*
10	Maximum Charge per delay (kg)	*0.425*	*0.425*	*0.375*	*0.375*	*0.375*
11	Total Charge / Blast (kg)	*10.625*	*7.65*	*9.375*	*9.375*	*9.375*
12	Initiation System	*Nonel*	*Nonel*	*Nonel*	*Nonel*	*Nonel*
13	Initiation Pattern	*Row to Row*	*Row to Row*	*Row to Row*	*Row to Row*	*Row to Row*
14	Location of instrument	*9°53'41.22"N, 76°38'22.20"E*	*9°53'43.08"N, 76°38'22.38"E*	*9°53'45.24"N, 76°38'27.90"E*	*9°53'45.48"N, 76°38'28.38"E*	*9°53'45.48"N, 76°38'28.38"E*
15	Distance (m)	*100*	*145*	*59*	*59*	*74*
16	PPV (mm/s)	*0.240*	*0.425*	*3.124*	*3.751*	*2.270*
17	Noise (dB)	*93.78*	*120.24*	*131.04*	*113.36*	*129.94*
18	Dominant Frequency (Hz)	*24.13*	*23.38*	*165.9*	*154.9*	*108.3*

Summary of the Blast Monitoring:

Monitoring Station	Blast Points	Distance (m)	Max Charge Per Delay (Kg)	PPV (mm/s)	Noise (dB)	Dominant Frequency (Hz)
M1	Blast No 1	283	0.650	0.254	93.23	25.63
	Blast No 2	283	0.650	0.632	94.70	50.38
	Blast No 3	283	0.650	0.597	92.60	52.63
	Blast No 4	283	0.650	0.863	93.50	104.00
M2	Blast No 5	209	0.425	0.825	97.44	53.50
	Blast No 6	209	0.425	0.531	94.58	17.63
	Blast No 7	209	0.425	0.463	95.18	50.00
	Blast No 8	209	0.425	0.453	95.30	41.75
	Blast No 9	209	0.425	0.722	96.07	51.13
M3	Blast No 10	100	0.425	0.821	113.44	111.80
	Blast No 11	100	0.425	0.240	93.78	24.13
	Blast No 12	145	0.425	0.425	120.24	23.38
M4	Blast No 13	59	0.375	3.124	131.04	165.90
	Blast No 14	59	0.375	3.751	113.36	154.9
	Blast No 15	74	0.375	2.270	129.94	108.3

Table 3: Summary of the Blast monitoring

From the Table 2, it can be observed that the highest peak Particle velocity (PPV) recorded was 3.751 mm/sec at the distance of 59 m in Blast No 14 conducted at the Pit bottom, and the next highest PPV was 3.124 mm/sec at the distance of 59 m in Blast No 13.

The ground vibrations recorded in the Buildings/Structures not belonging to Owner is less than 10 mm/sec and the vibrations recorded in the Building/Structures belonging to Owner is also less than 10 mm/sec. Thus, the Ground Vibration values were within the Permissible limits standards as mentioned by DGMS *[Technical Circular: 7/1997]*.

Use of Nonel detonating system provided required delay time to reduce the maximum charge per delay, which helped in controlling ground vibrations within permissible limits. The highest noise level of 131.04 dB was recorded at the distance of 59 m from blast location in blast No. 13 and the next highest noise level was 129.94 dB at the distance of 74 m from blast location in Blast No 15. The noise level recorded while monitoring in the nearby house is less than 100 dB.

Fly rocks another serious problem associated with blasting operations. It was observed to a distance of 20 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.*

RECOMMENDATIONS

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

1. Blasts may be conducted with a maximum of 25 holes in a blast round using 33 mm diameter blast holes drilled with hand held jackhammer drills to a maximum depth of 8 feet (2.4 m), each hole charged with maximum of 650 gm of explosive.
2. NONEL detonator & Surface Trunk Line Delay (STLD) may be used for initiation.
3. Blasts to be conducted by a Competent Blaster or Mining Mate certificate holder only, following all the rules and regulations stipulated by Director General of Mines Safety (DGMS) and other regulating agencies.
4. If fly rock to be restricted to within 10m, muffling arrangement to be made.
5. Blasting methodology suggested in Table-4 may be followed
6. Blast layouts suggested in Fig No.14 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.

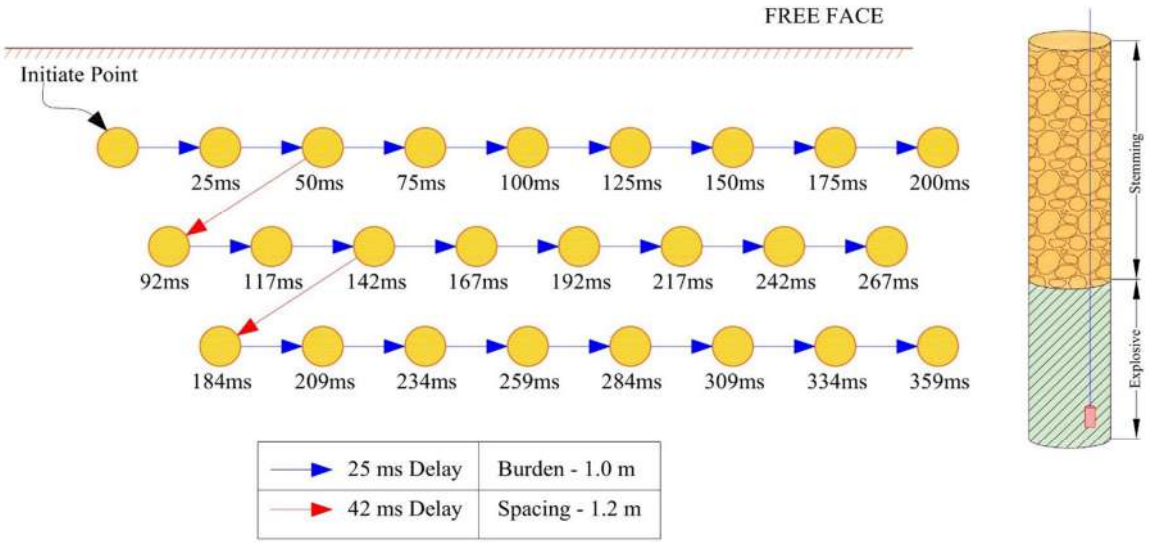


Fig 14: Recommended Blasthole pattern

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)	425	650
7	Maximum charge/ Delay (gm)	425	650
8	Total charge/ Blast (kg)	10.625	16.25
9	Initiation system	Short delay detonators	Short delay detonators
10	Initiation Pattern	Row by row	Row by row
11	Delay timing between any two blast holes	At least 25ms	At least 25ms
12	No. of rows	Maximum of 3	Maximum of 3

Table 4: Blasting recommendations

Mr. Cyriac Joseph,

Managing Partner

Global Environment & Mining Services.

BIBLIOGRAPHY

ISEE, Blaster's Hand Book (1998)

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

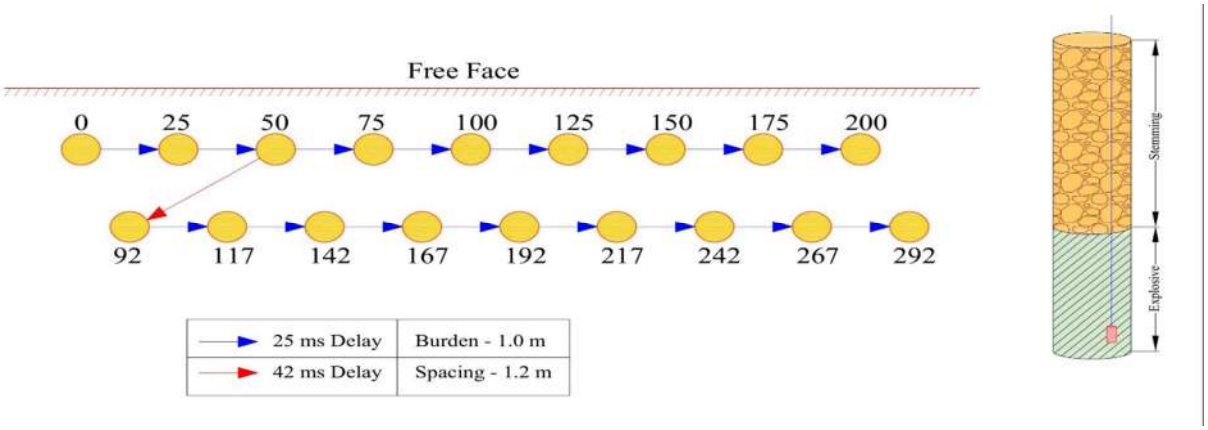
Siskind, D.E., et al, (1980), "Structure response and damage produced by air blast from surface mining", USBM RI 8485.

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

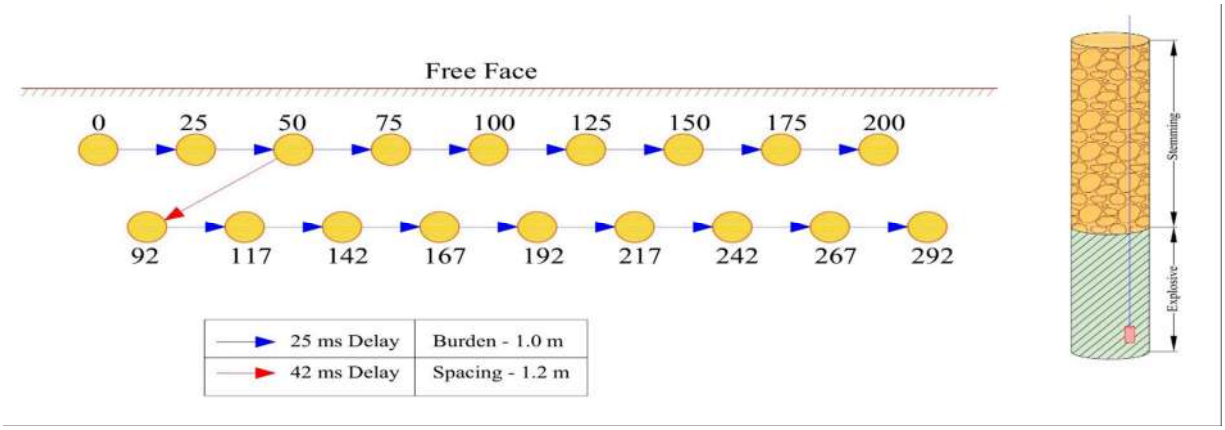
http://www.vulcanhammer.net/svinkin/prediction.php
http://terrock.com.au/vibration/blasting.html

APPENDIX – I
(LAYOUTS OF BLASTS STUDIES)

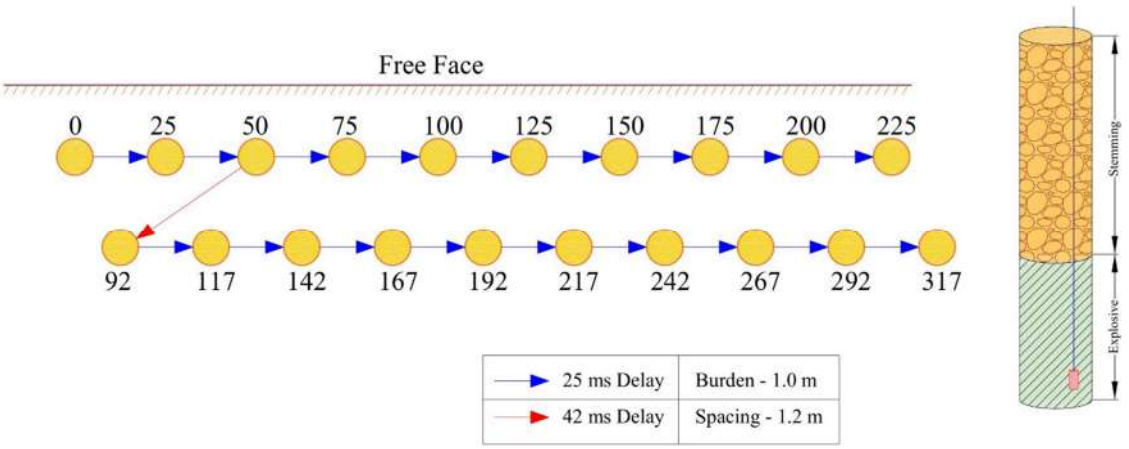
Layout of Blast No: 1



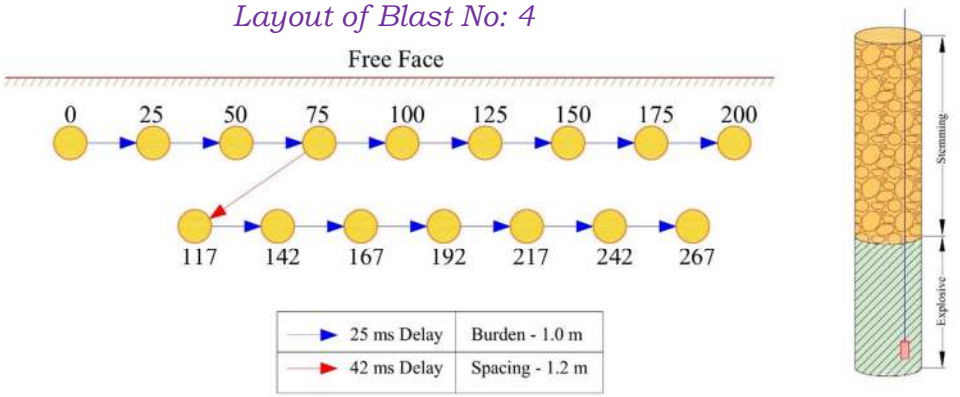
Layout of Blast No: 2



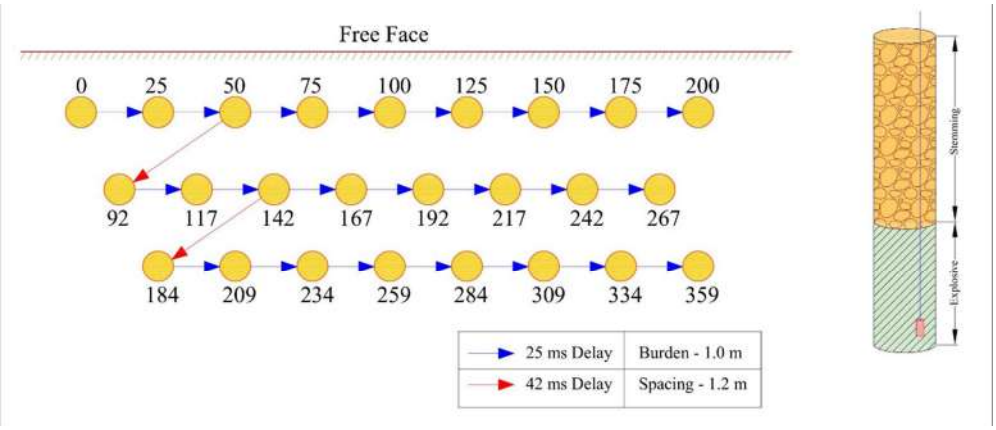
Layout of Blast No: 3



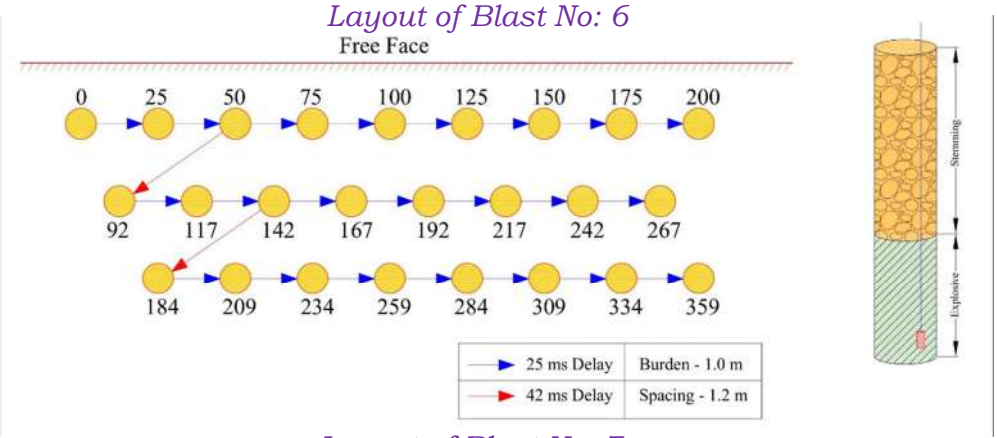
Layout of Blast No: 4



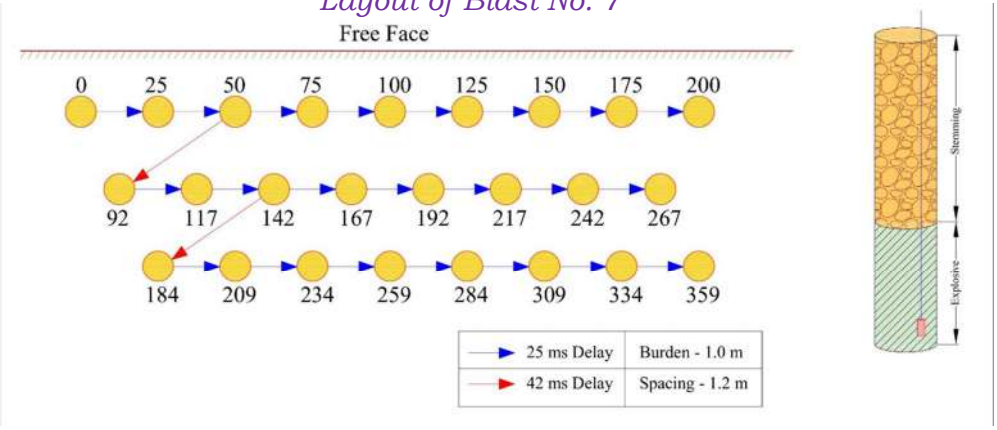
Layout of Blast No: 5



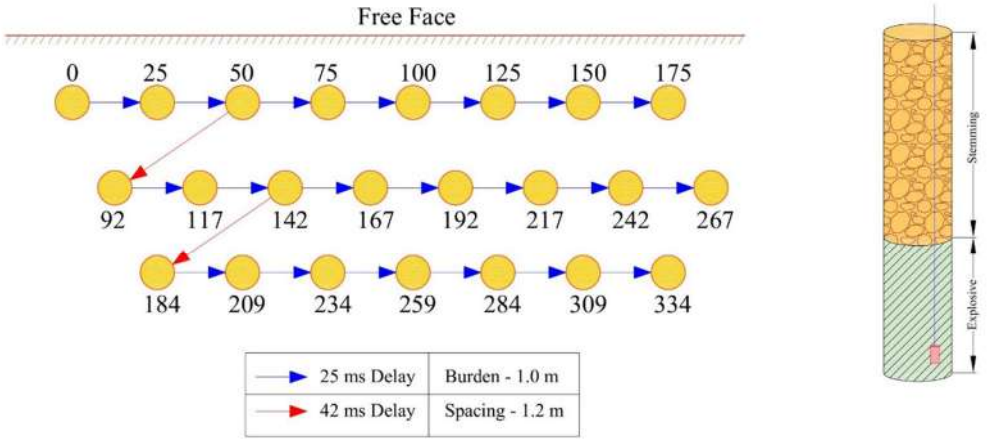
Layout of Blast No: 6



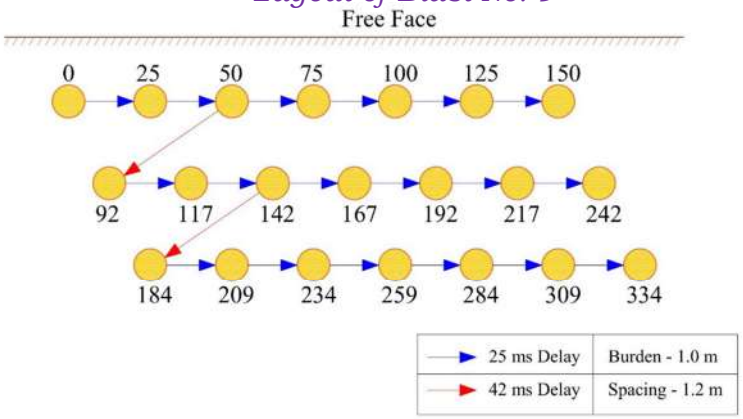
Layout of Blast No: 7

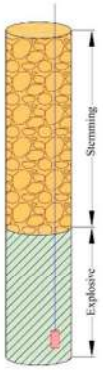


Layout of Blast No: 8



Layout of Blast No: 9





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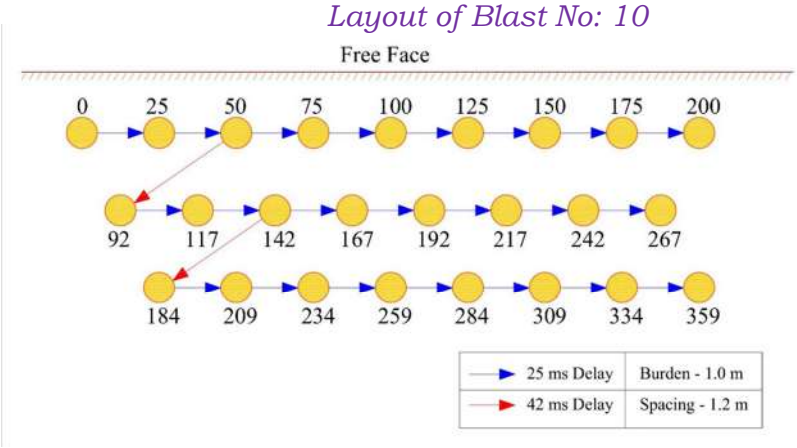
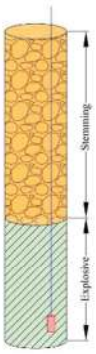
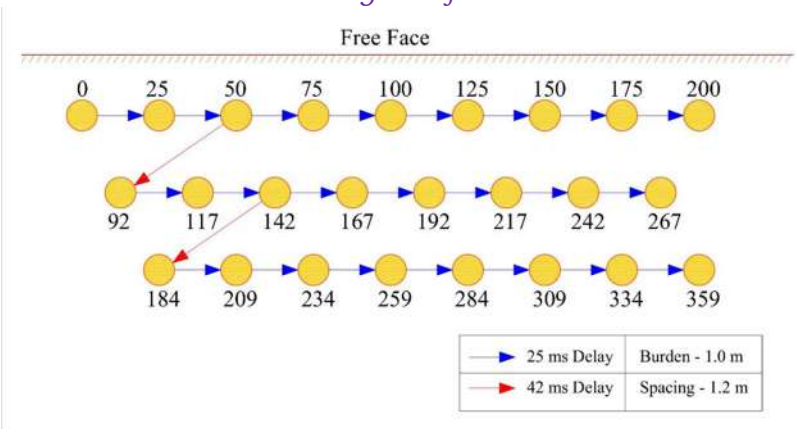
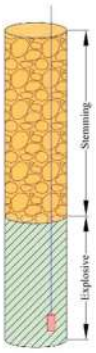


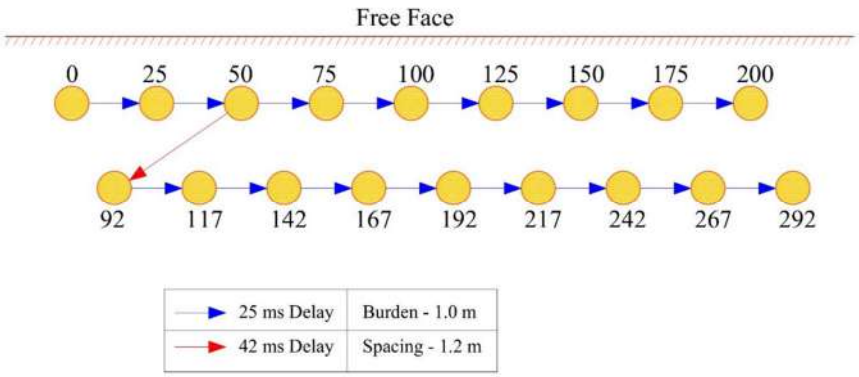


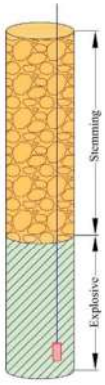
Layout of Blast No: 11





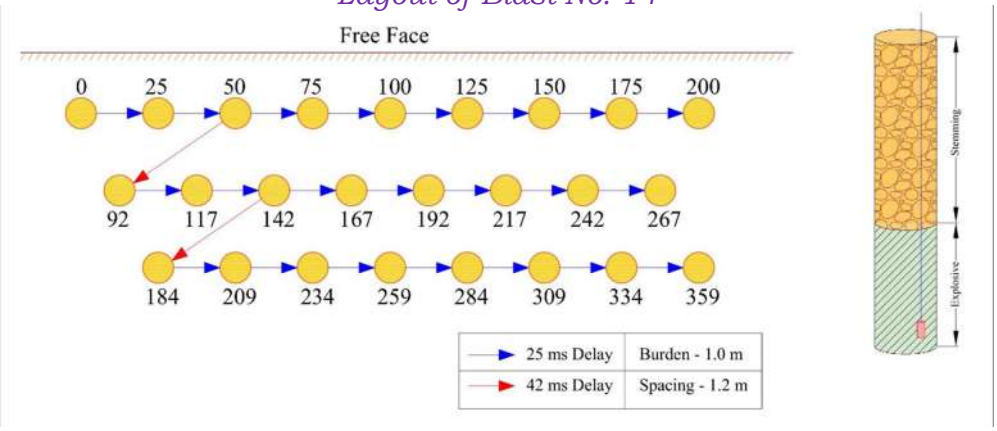
Layout of Blast No: 12



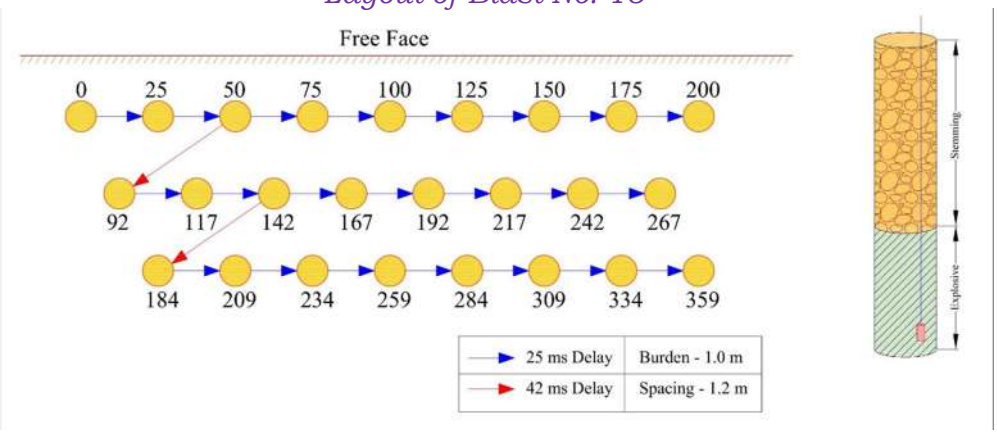


Layout of Blast No: 13

Layout of Blast No: 14



Layout of Blast No: 15



APPENDIX – II
(BLAST EVENT REPORTS)

Event Report

Date/Time	Tran at 09:57:51 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 1024 sps
Operator/Setup:	Operator/factory.MMB

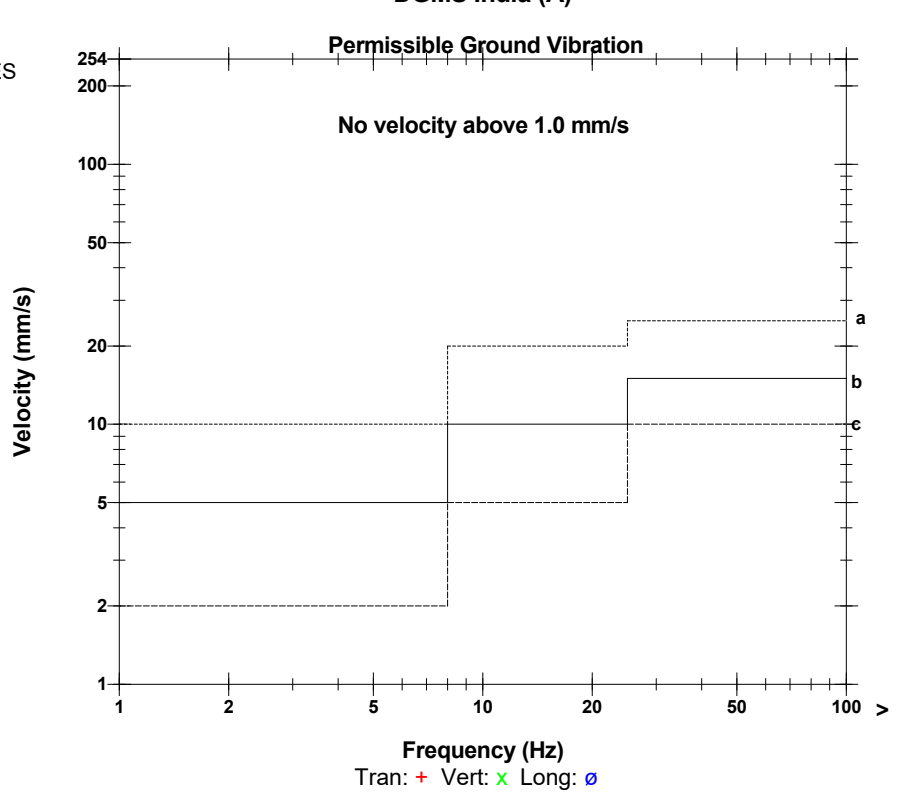
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	400.2 (283.0 m, 0.5 kg)

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

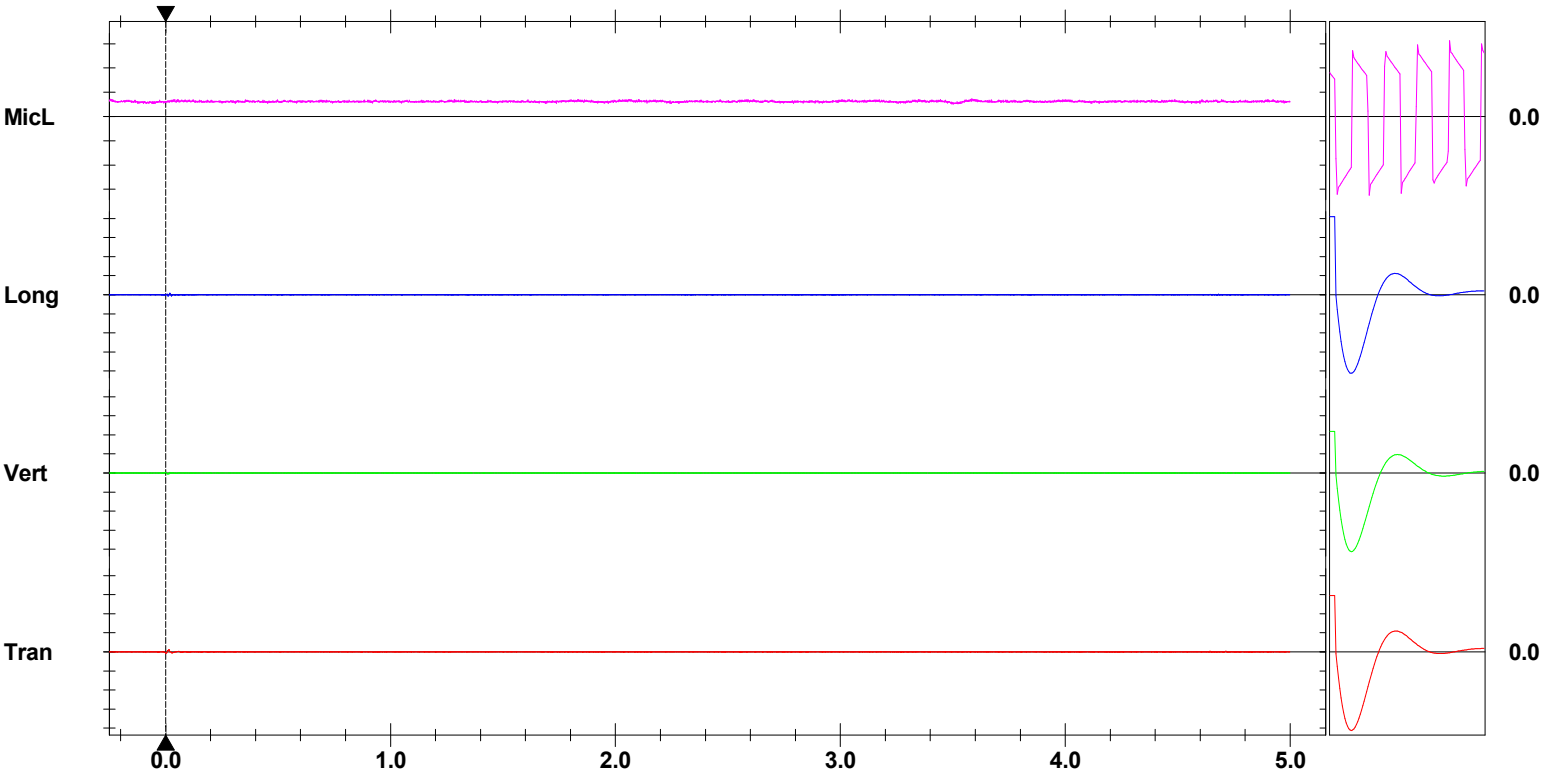
Microphone	Linear Weighting
PSPL	0.729 pa.(L) at 3.584 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1227 mv)

	Tran	Vert	Long	
PPV	0.229	0.102	0.158	mm/s
ZC Freq	39	39	64	Hz
Time (Rel. to Trig)	0.015	0.008	0.019	sec
Peak Acceleration	0.011	0.006	0.007	g
Peak Displacement	0.001	0.000	0.000	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.7	Hz
Overswing Ratio	3.8	4.3	3.7	

Peak Vector Sum 0.254 mm/s at 0.015 sec
N/A: Not Applicable



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



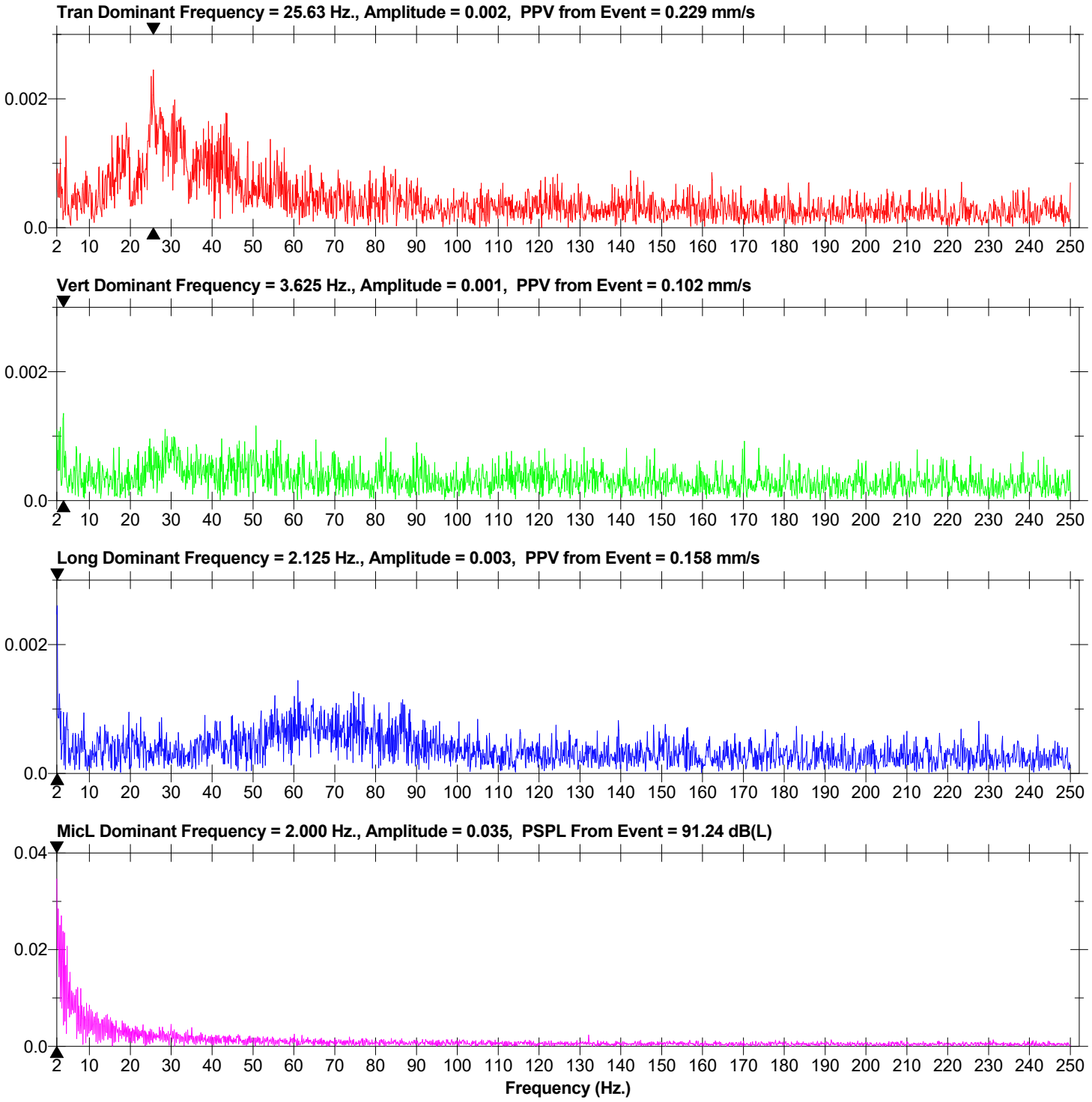
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
Trigger = ▶----------◀

Sensor Check

FFT Report

Date/Time	Tran at 09:57:51 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 1024 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	400.2 (283.0 m, 0.5 kg)

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



Event Report

Date/Time	Vert at 09:58:42 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 1024 sps
Operator/Setup:	Operator/factory.MMB

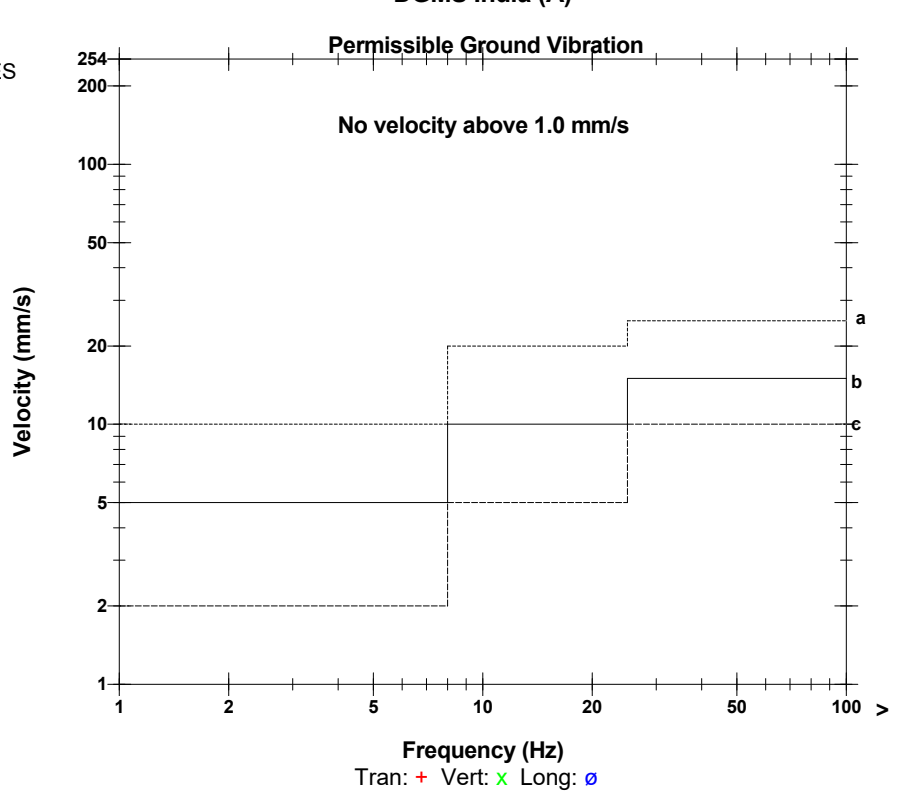
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	400.2 (283.0 m, 0.5 kg)

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

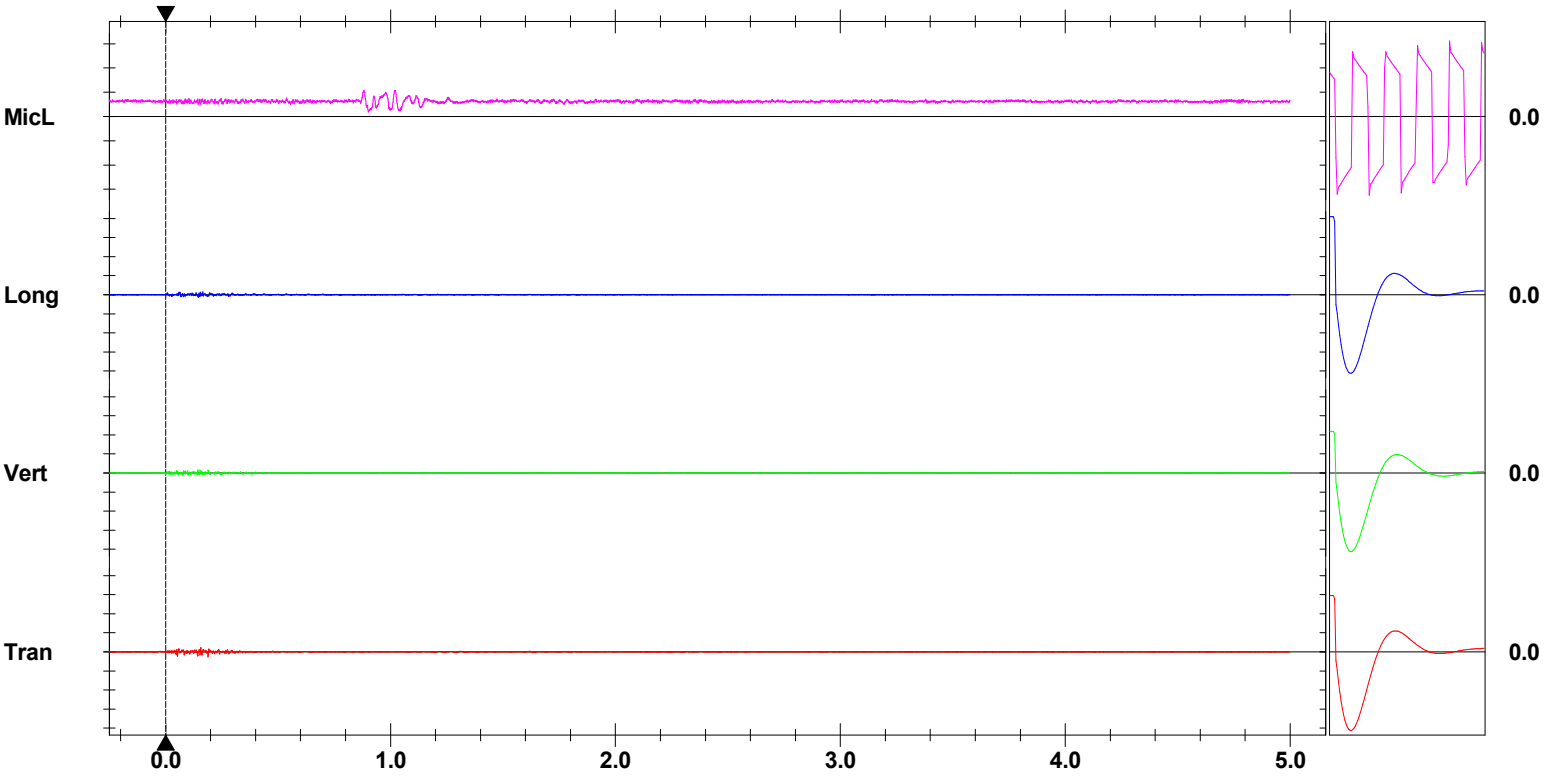
Microphone	Linear Weighting
PSPL	1.086 pa.(L) at 0.881 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1228 mv)

	Tran	Vert	Long	
PPV	0.552	0.339	0.307	mm/s
ZC Freq	>100	>100	>100	Hz
Time (Rel. to Trig)	0.188	0.144	0.165	sec
Peak Acceleration	0.043	0.030	0.023	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.7	Hz
Overswing Ratio	3.8	4.3	3.7	

Peak Vector Sum 0.632 mm/s at 0.188 sec
N/A: Not Applicable



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

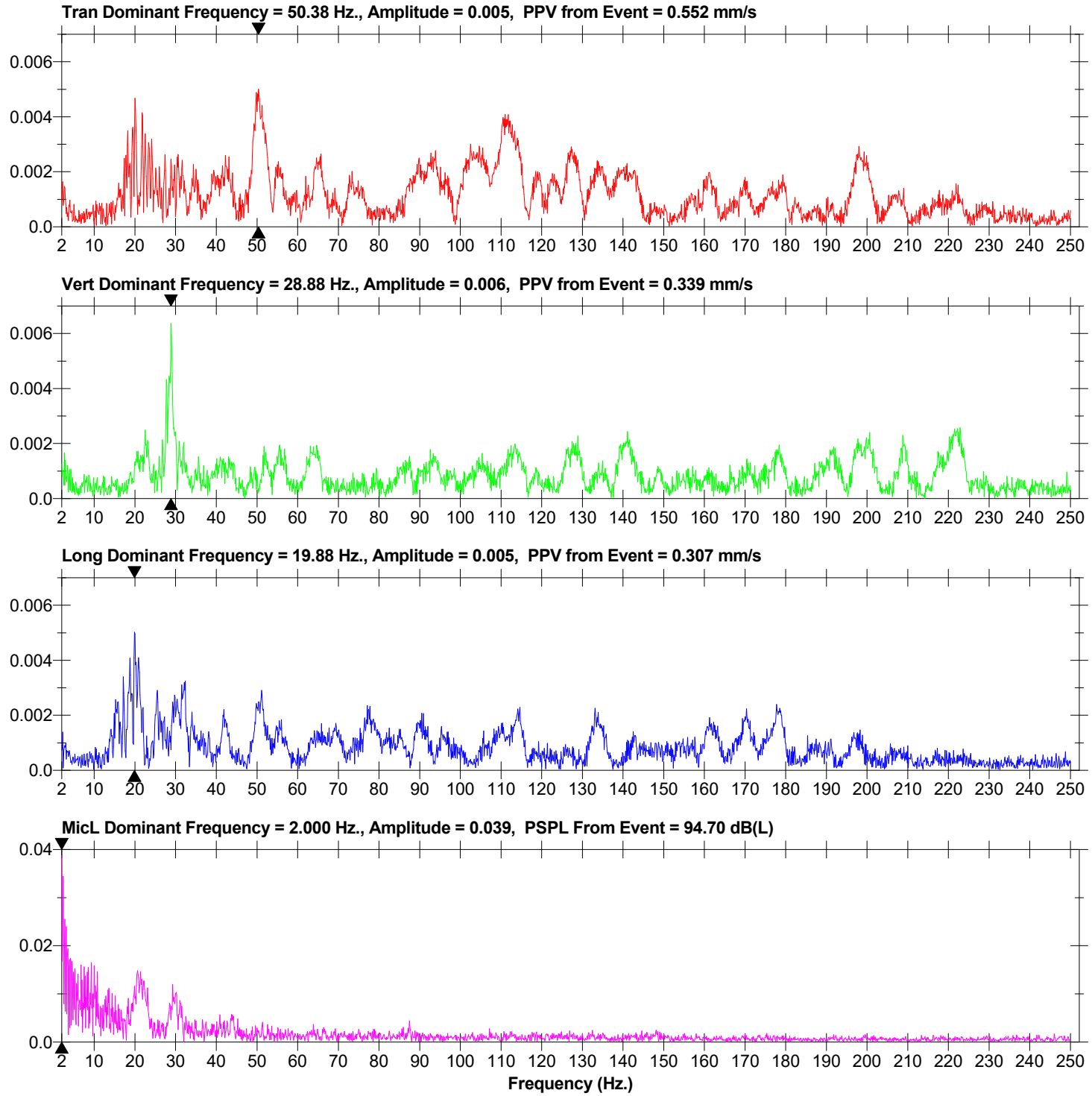


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Vert at 09:58:42 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 1024 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	400.2 (283.0 m, 0.5 kg)

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



Event Report

Date/Time	Vert at 10:02:34 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 1024 sps
Operator/Setup:	Operator/factory.MMB

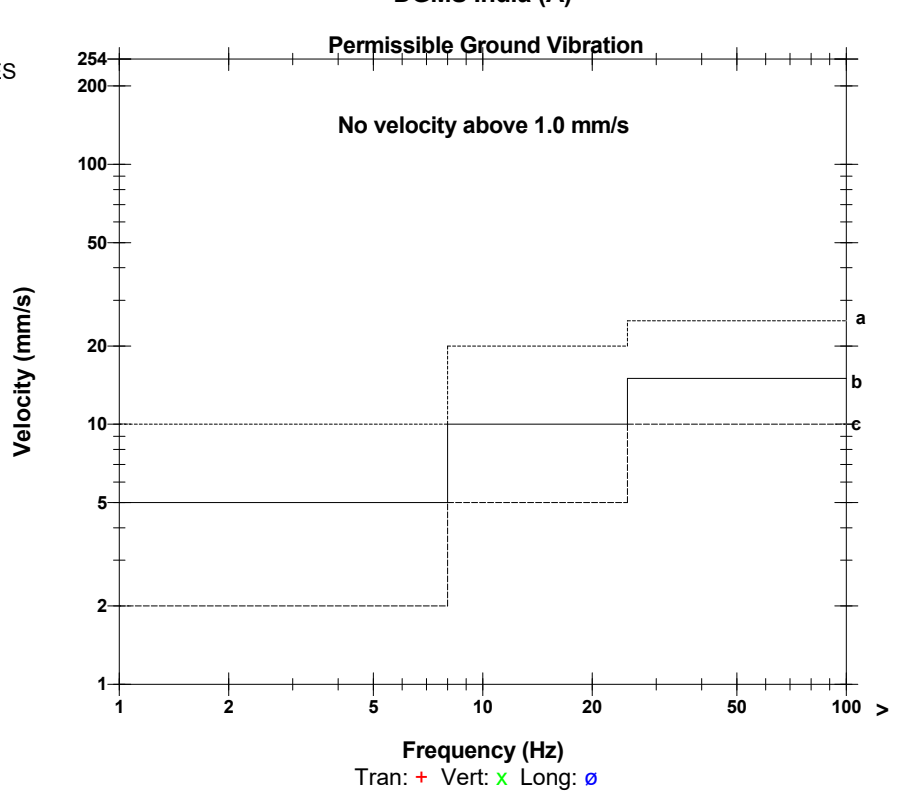
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	400.2 (283.0 m, 0.5 kg)

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

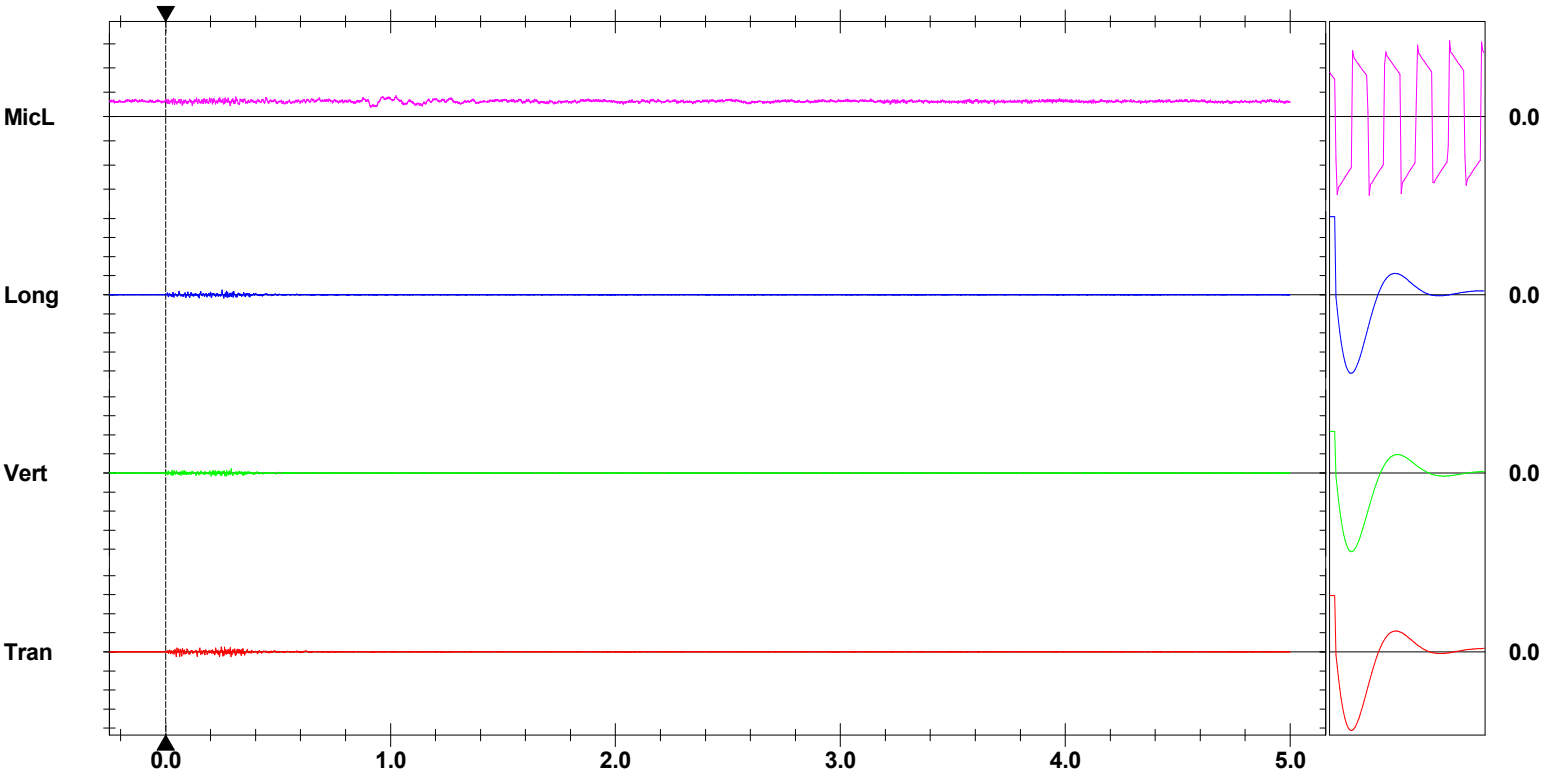
Microphone	Linear Weighting
PSPL	0.853 pa.(L) at 1.023 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1231 mv)

	Tran	Vert	Long	
PPV	0.512	0.473	0.489	mm/s
ZC Freq	64	>100	>100	Hz
Time (Rel. to Trig)	0.239	0.292	0.251	sec
Peak Acceleration	0.049	0.032	0.036	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.7	Hz
Overswing Ratio	3.8	4.3	3.7	

Peak Vector Sum 0.597 mm/s at 0.291 sec
N/A: Not Applicable



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



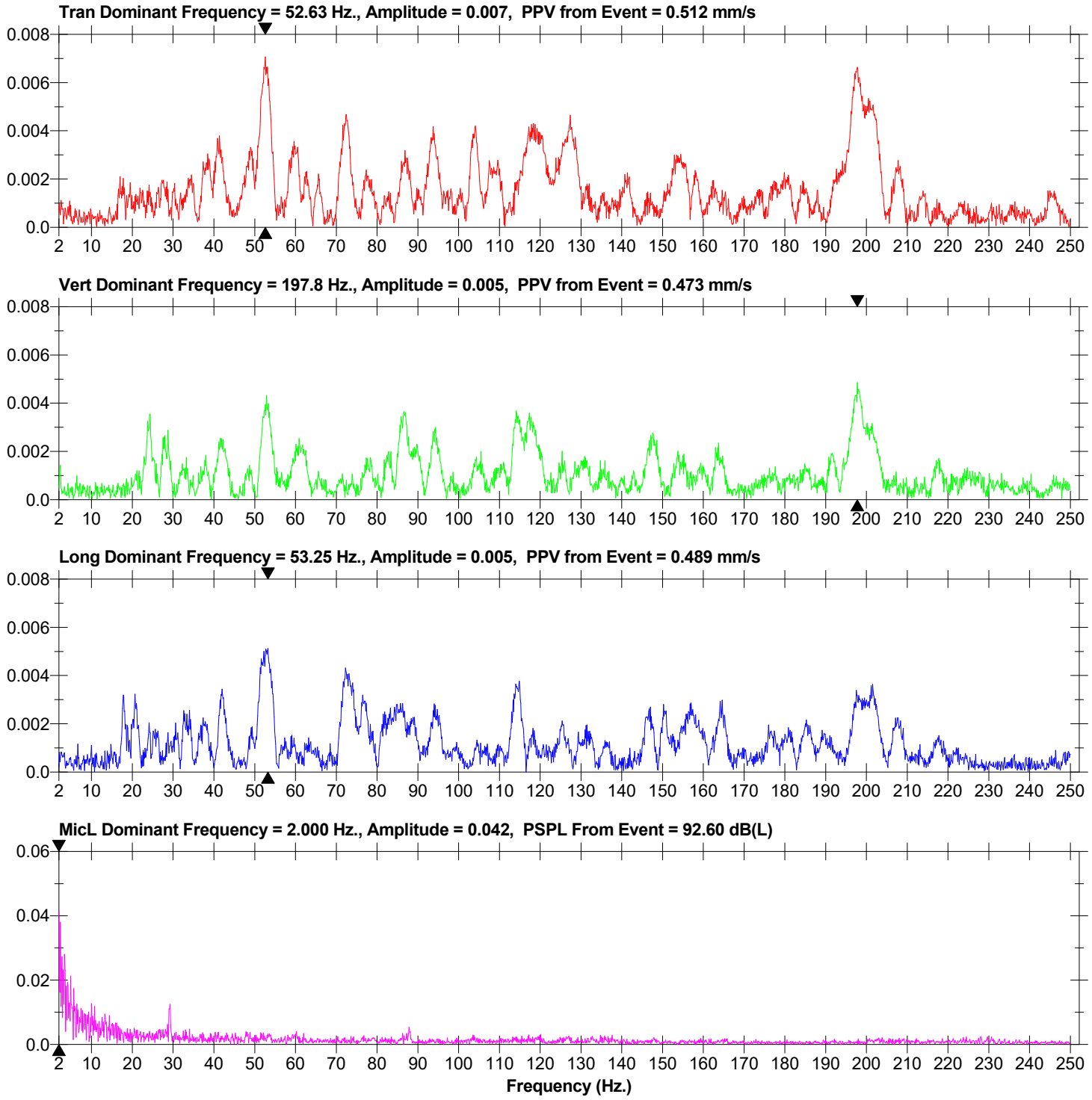
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
Trigger = ▶----------◀

Sensor Check

FFT Report

Date/Time	Vert at 10:02:34 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 1024 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	400.2 (283.0 m, 0.5 kg)

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



Event Report

Date/Time	Vert at 10:03:00 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 1024 sps
Operator/Setup:	Operator/factory.MMB

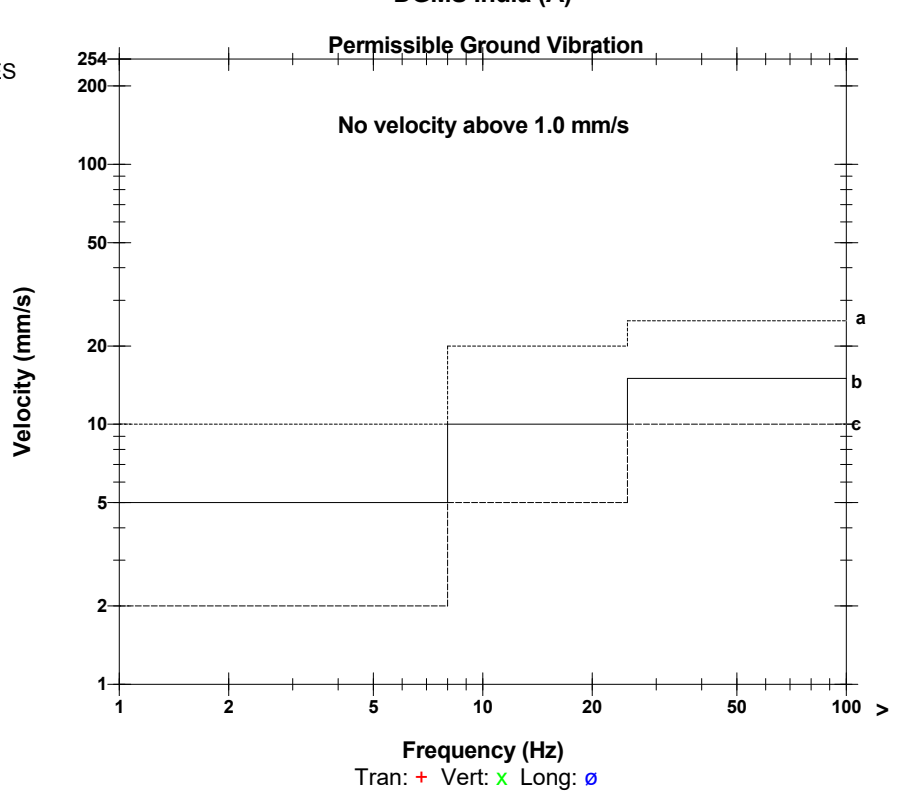
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	400.2 (283.0 m, 0.5 kg)

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

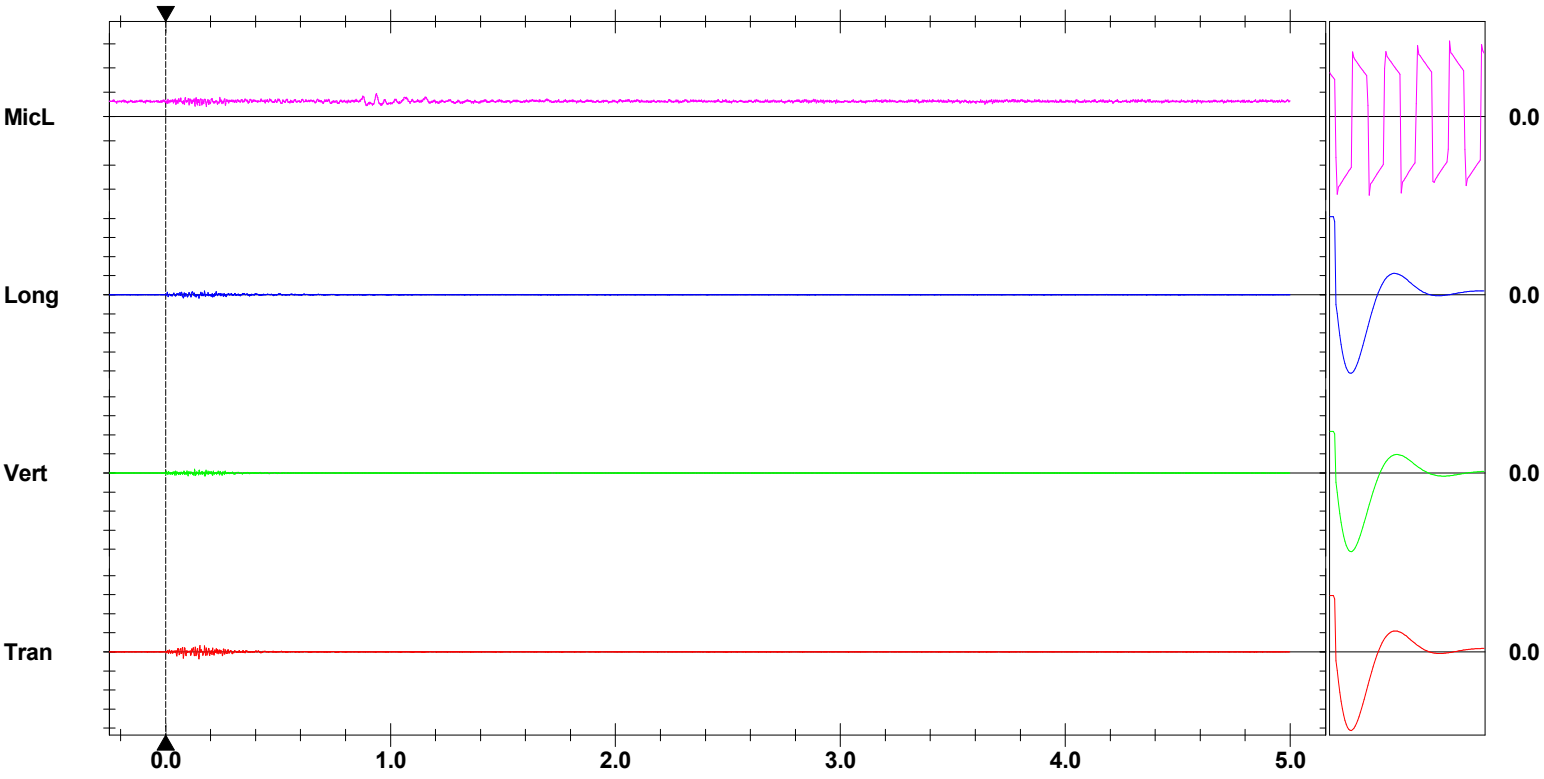
Microphone	Linear Weighting
PSPL	0.946 pa.(L) at 0.938 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1232 mv)

	Tran	Vert	Long	
PPV	0.741	0.394	0.394	mm/s
ZC Freq	64	>100	>100	Hz
Time (Rel. to Trig)	0.148	0.129	0.173	sec
Peak Acceleration	0.053	0.031	0.025	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.7	Hz
Overswing Ratio	3.7	4.3	3.7	

Peak Vector Sum 0.863 mm/s at 0.148 sec
N/A: Not Applicable



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

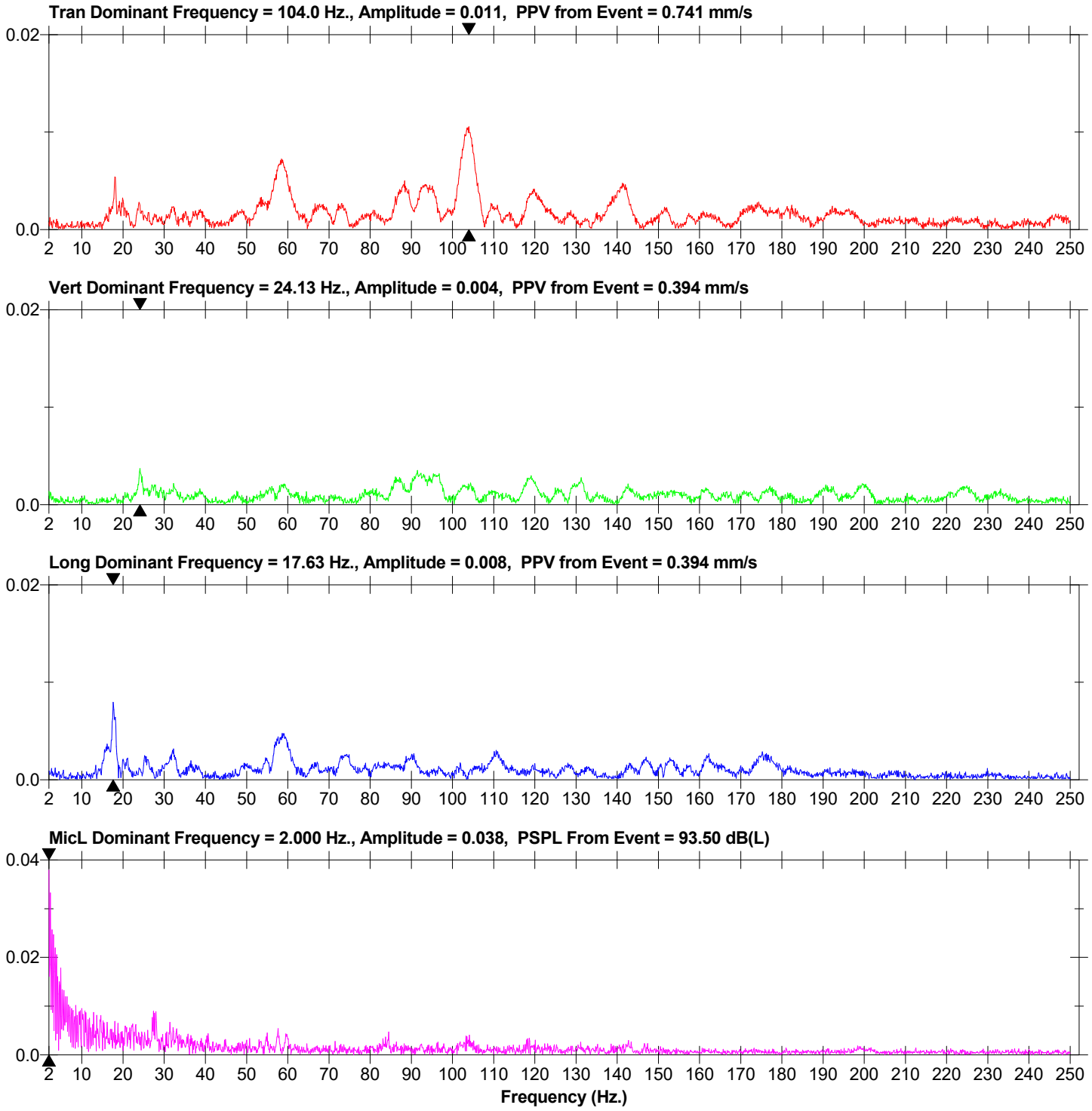


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Vert at 10:03:00 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 1024 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	400.2 (283.0 m, 0.5 kg)

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



Event Report

Date/Time	Long at 10:20:28 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

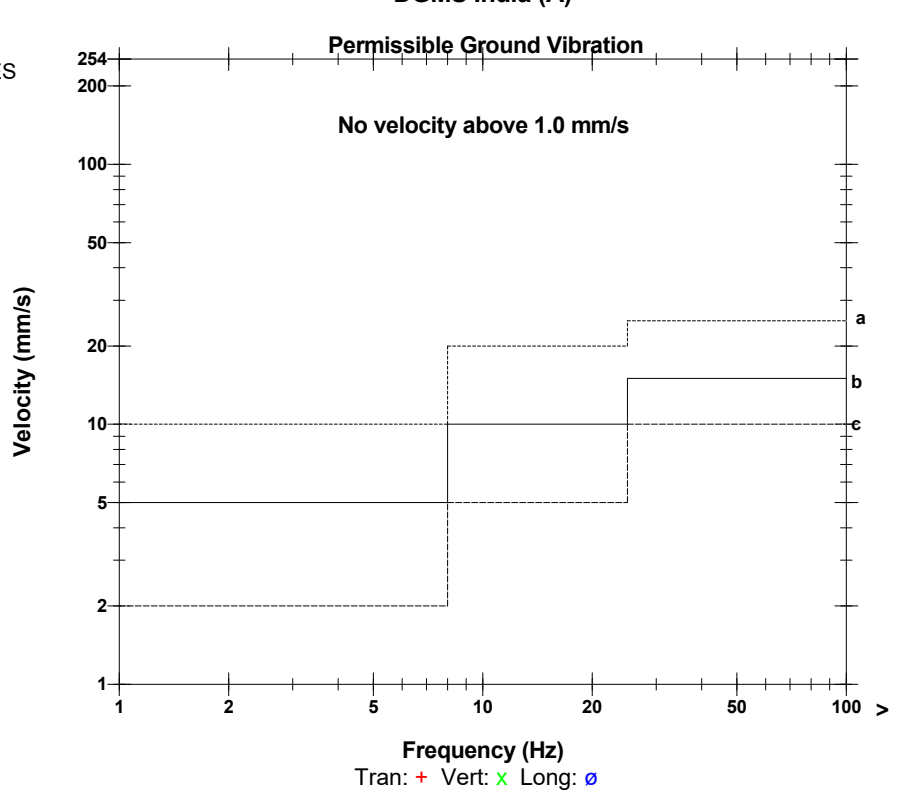
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	296.7 (209.8 m, 0.5 kg)

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

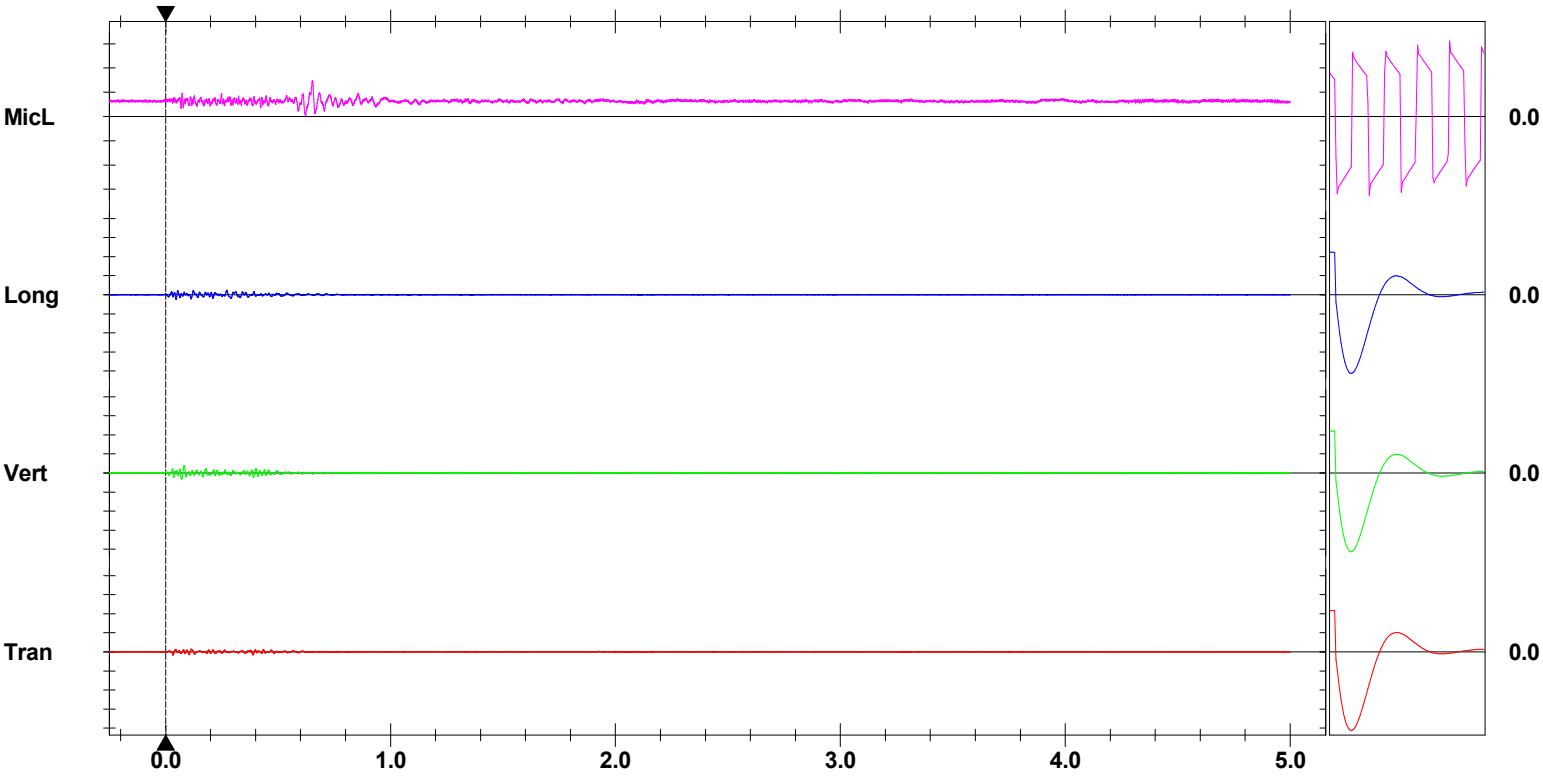
Microphone	Linear Weighting
PSPL	1.490 pa.(L) at 0.652 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1219 mv)

	Tran	Vert	Long	
PPV	0.323	0.772	0.504	mm/s
ZC Freq	47	47	68	Hz
Time (Rel. to Trig)	0.032	0.083	0.047	sec
Peak Acceleration	0.013	0.028	0.025	g
Peak Displacement	0.001	0.003	0.002	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.1	4.2	4.2	

Peak Vector Sum 0.825 mm/s at 0.083 sec
N/A: Not Applicable



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

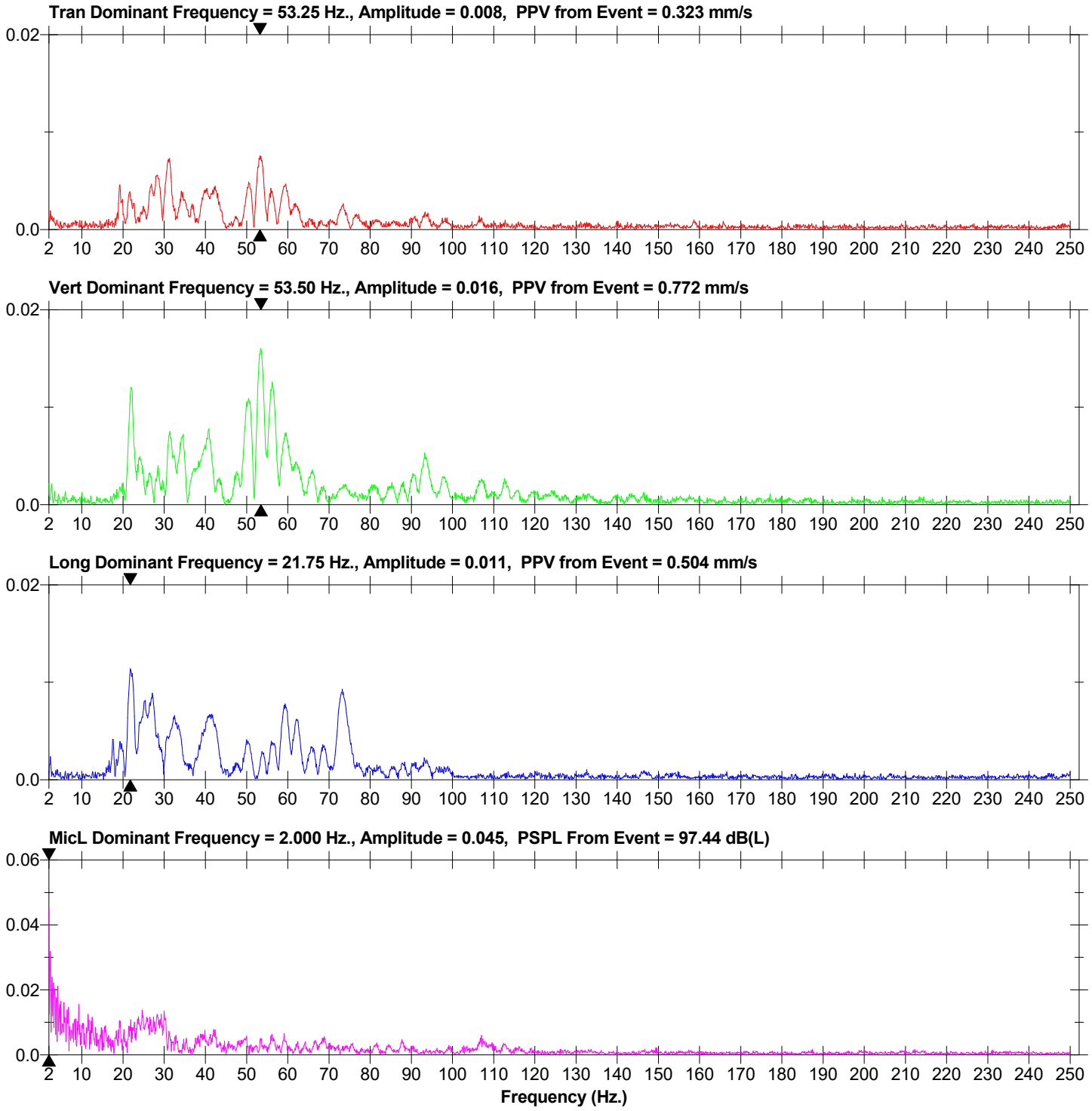


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Long at 10:20:28 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	296.7 (209.8 m, 0.5 kg)

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



Event Report

Date/Time	Vert at 10:21:10 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

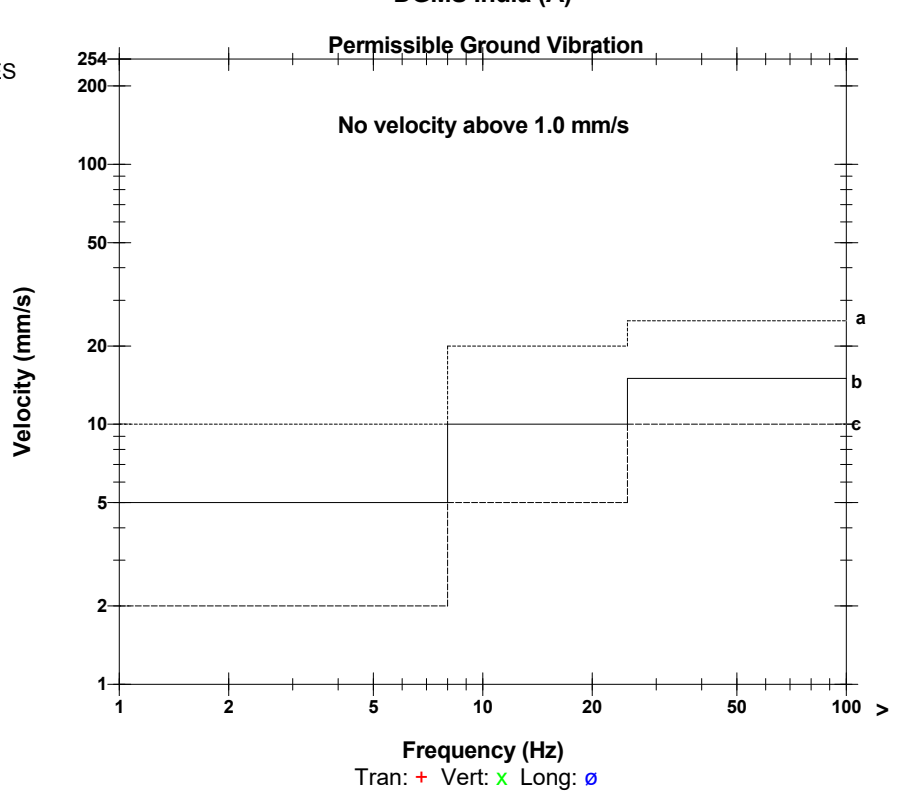
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	296.7 (209.8 m, 0.5 kg)

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

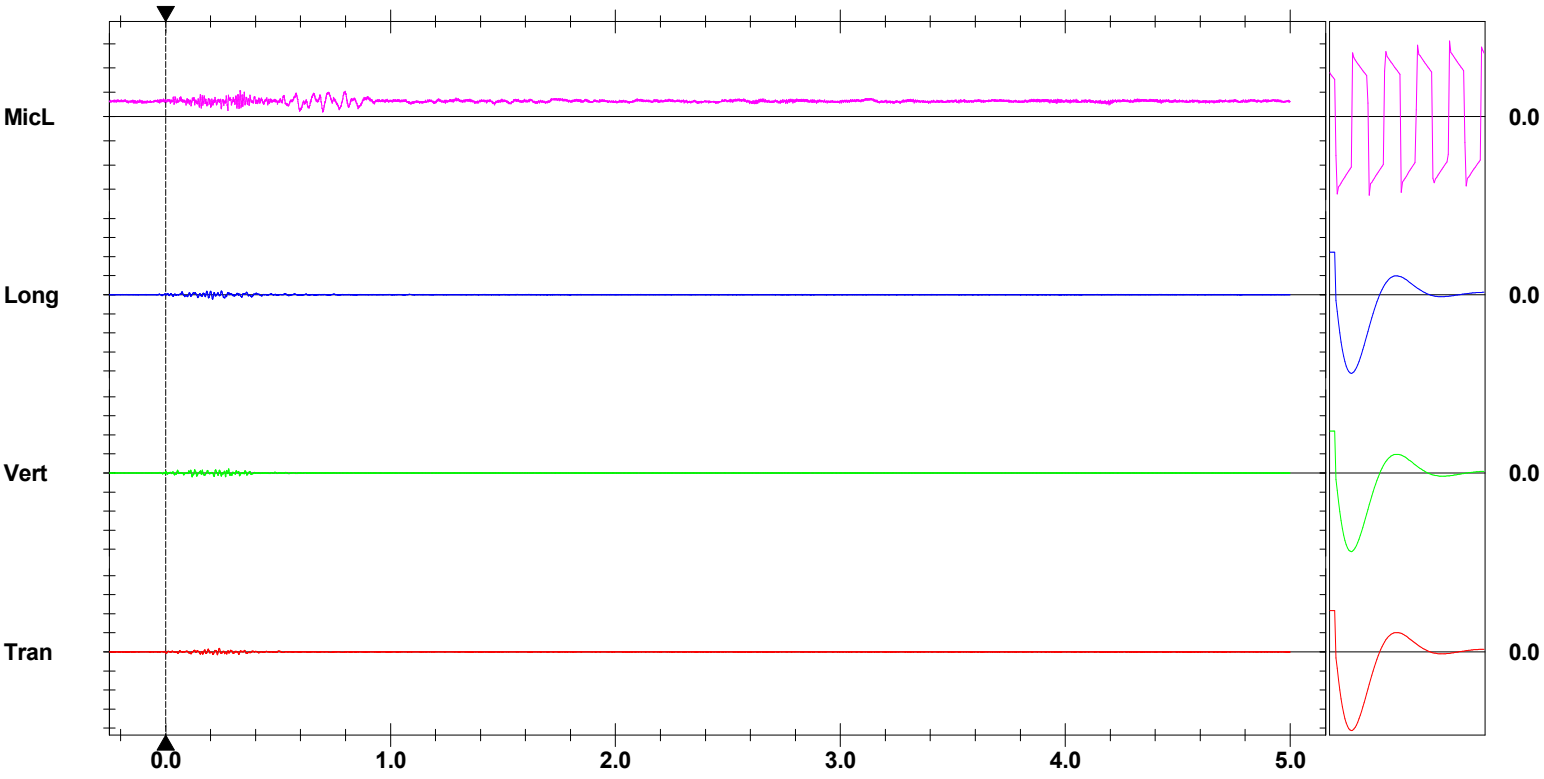
Microphone	Linear Weighting
PSPL	1.071 pa.(L) at 0.331 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1221 mv)

	Tran	Vert	Long	
PPV	0.378	0.441	0.481	mm/s
ZC Freq	54	79	57	Hz
Time (Rel. to Trig)	0.239	0.280	0.208	sec
Peak Acceleration	0.015	0.028	0.021	g
Peak Displacement	0.001	0.001	0.002	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.1	4.2	4.2	

Peak Vector Sum 0.531 mm/s at 0.248 sec
N/A: Not Applicable



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

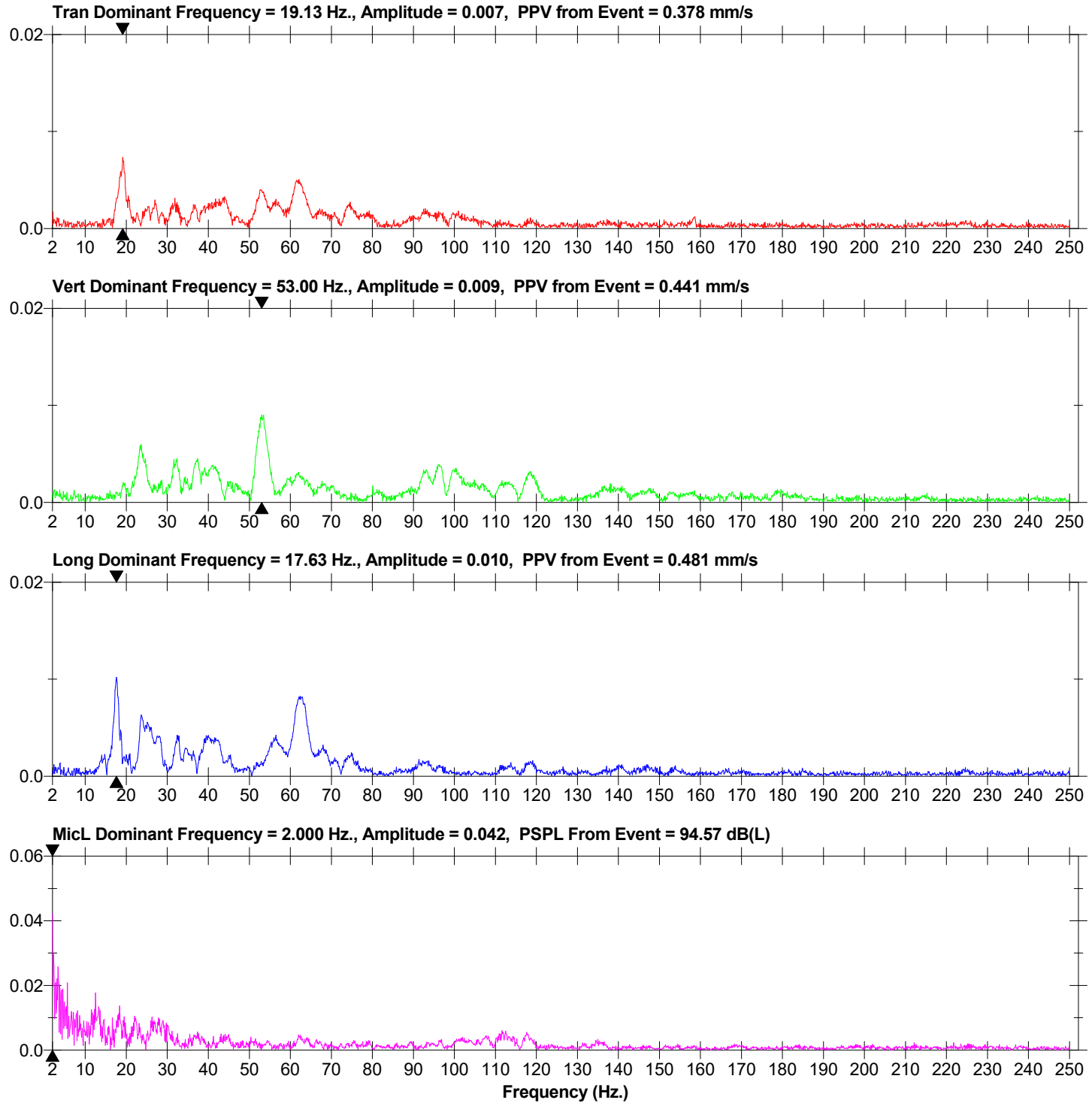


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Vert at 10:21:10 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	296.7 (209.8 m, 0.5 kg)

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



Event Report

Date/Time	Vert at 10:29:34 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

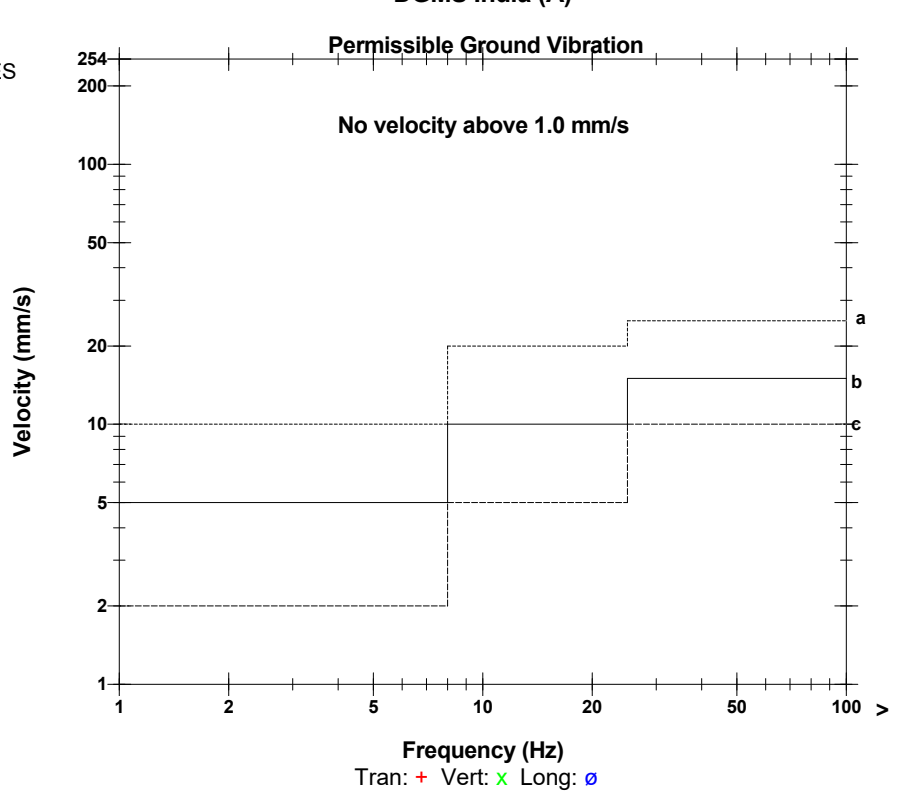
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	296.7 (209.8 m, 0.5 kg)

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

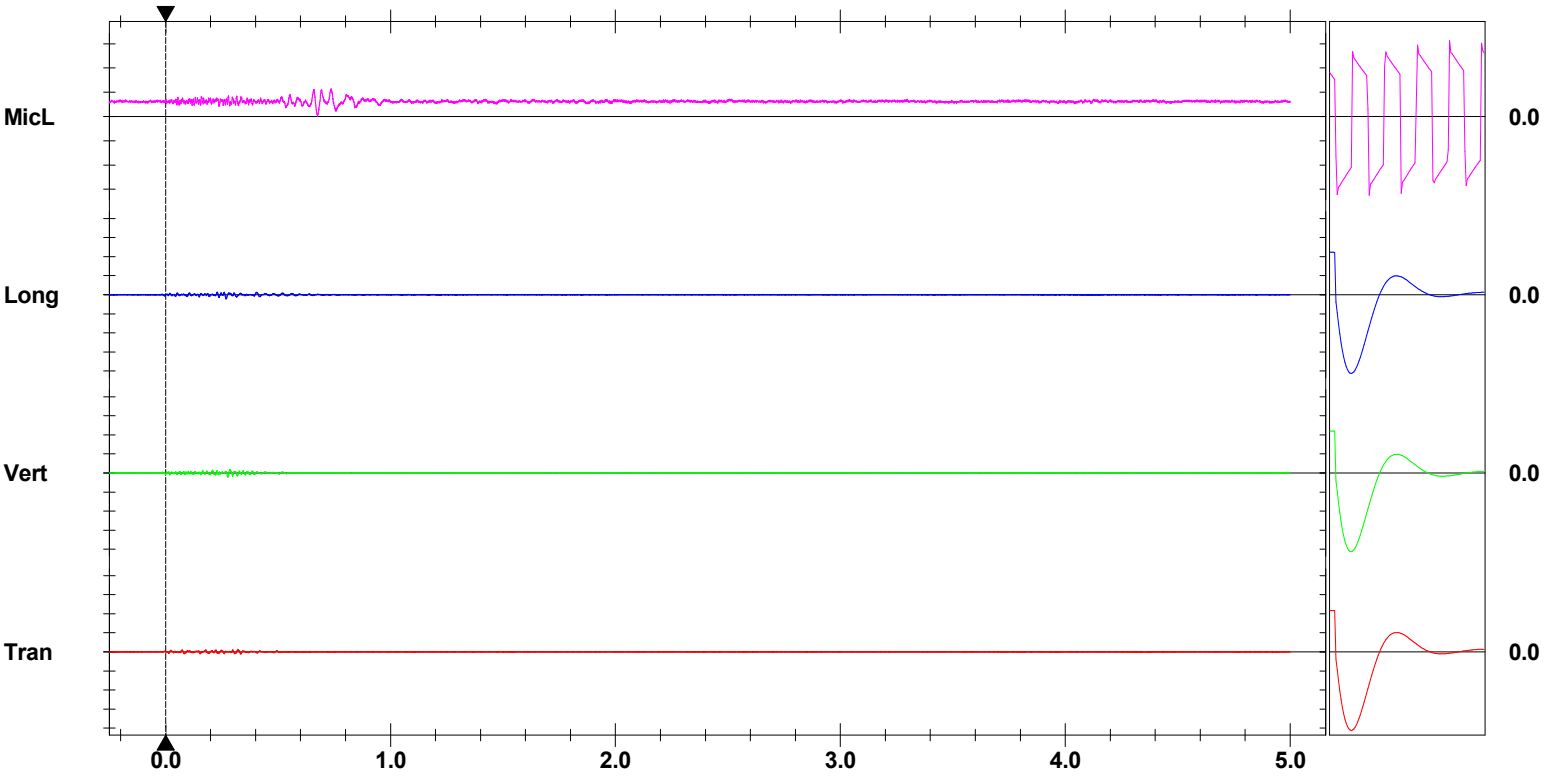
Microphone	Linear Weighting
PSPL	1.148 pa.(L) at 0.735 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1228 mv)

	Tran	Vert	Long	
PPV	0.229	0.449	0.434	mm/s
ZC Freq	38	51	47	Hz
Time (Rel. to Trig)	0.321	0.276	0.269	sec
Peak Acceleration	0.012	0.025	0.020	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.1	4.2	4.2	

Peak Vector Sum 0.463 mm/s at 0.269 sec
N/A: Not Applicable



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

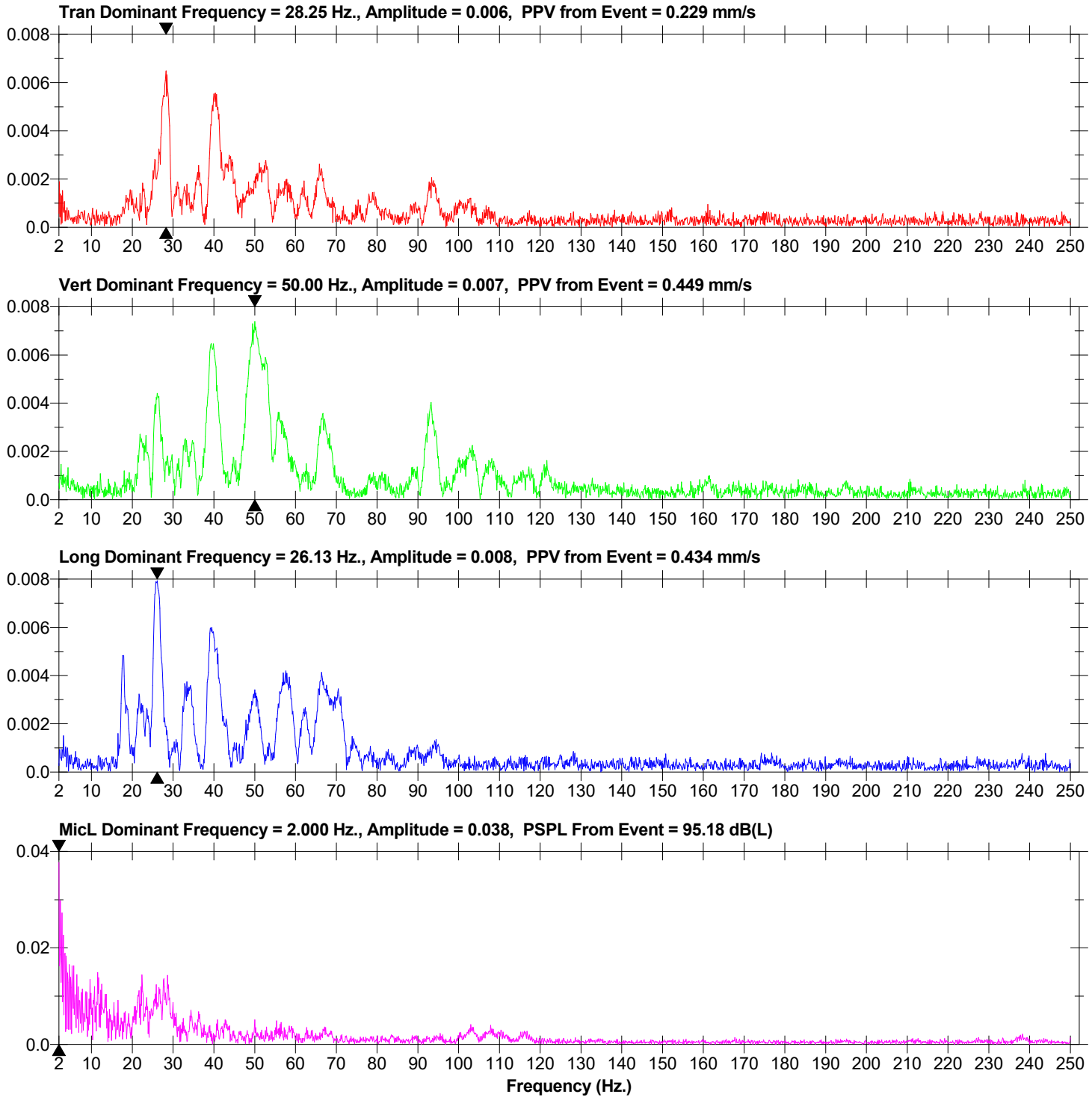


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Vert at 10:29:34 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	296.7 (209.8 m, 0.5 kg)

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



Event Report

Date/Time	Vert at 10:30:01 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

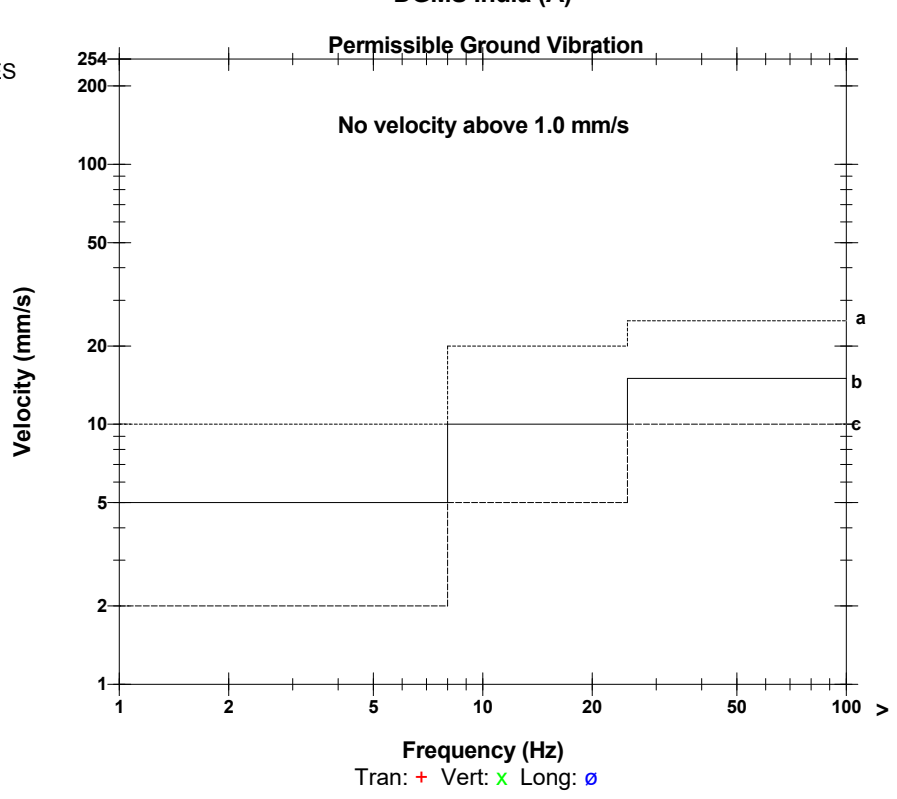
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	296.7 (209.8 m, 0.5 kg)

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

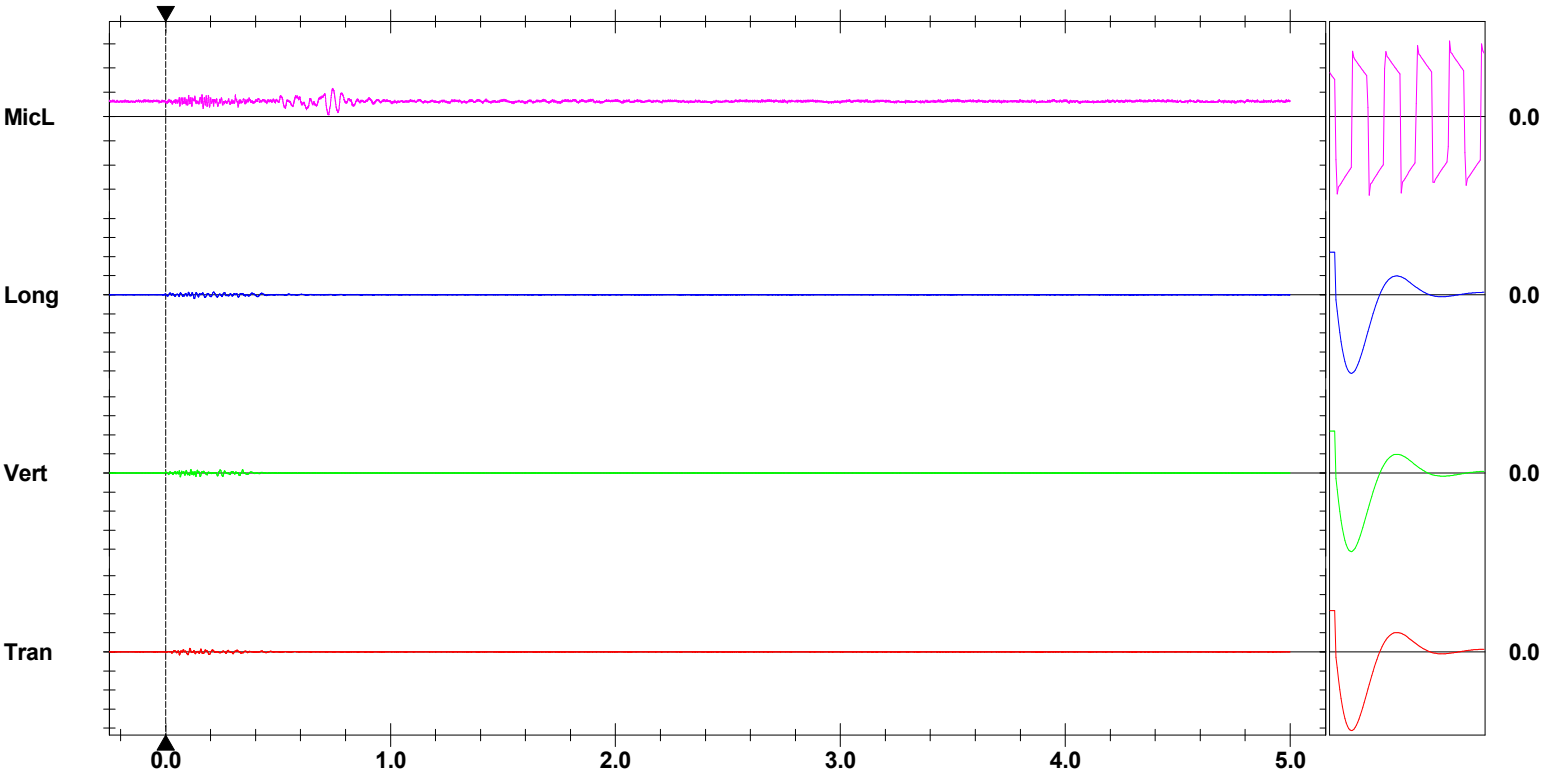
Microphone	Linear Weighting
PSPL	1.164 pa.(L) at 0.742 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1223 mv)

	Tran	Vert	Long	
PPV	0.363	0.394	0.410	mm/s
ZC Freq	54	73	49	Hz
Time (Rel. to Trig)	0.107	0.065	0.127	sec
Peak Acceleration	0.016	0.023	0.018	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.1	4.2	4.2	

Peak Vector Sum 0.453 mm/s at 0.126 sec
N/A: Not Applicable



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

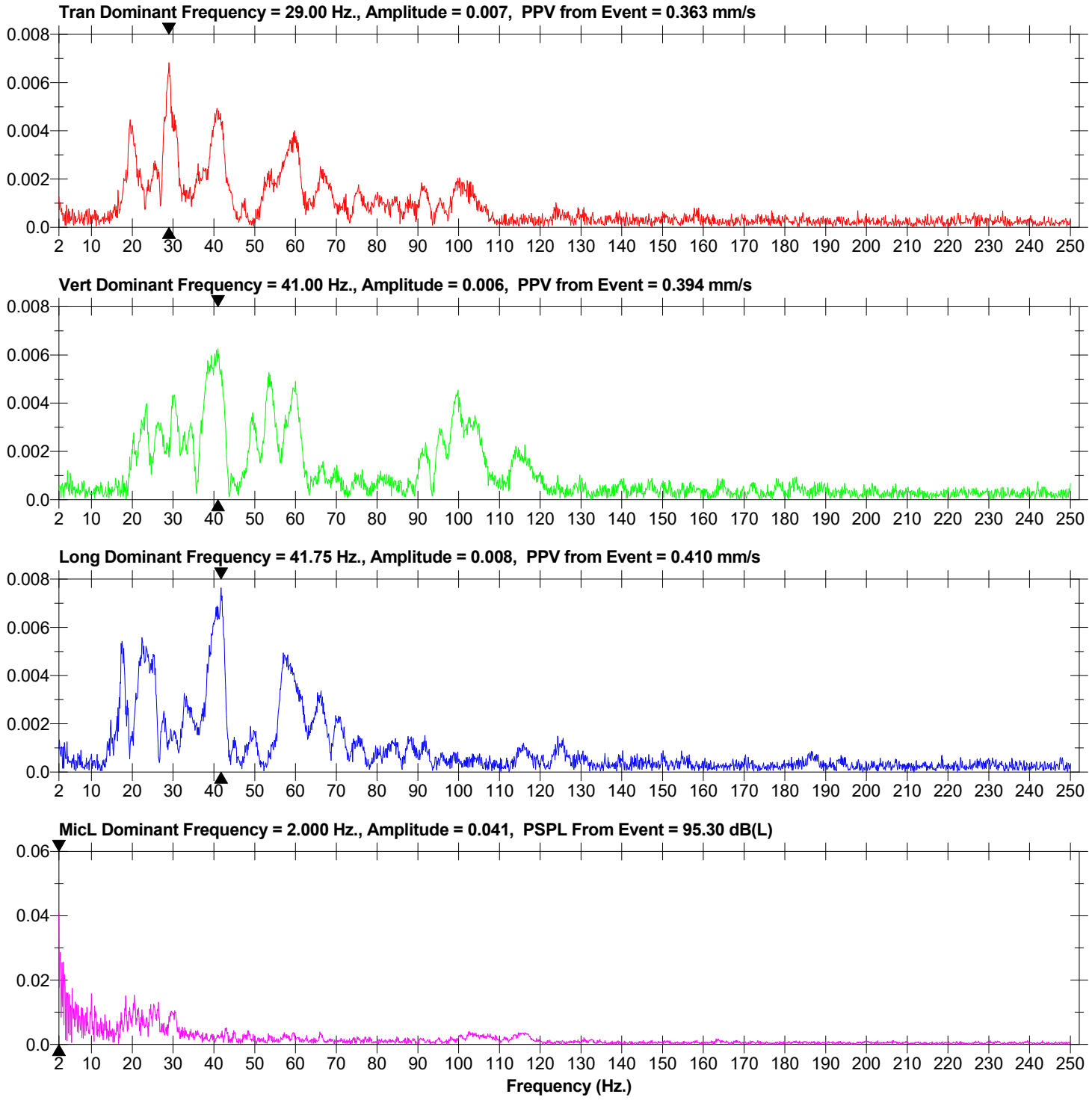


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Vert at 10:30:01 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	296.7 (209.8 m, 0.5 kg)

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



Event Report

Date/Time	Long at 10:30:26 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

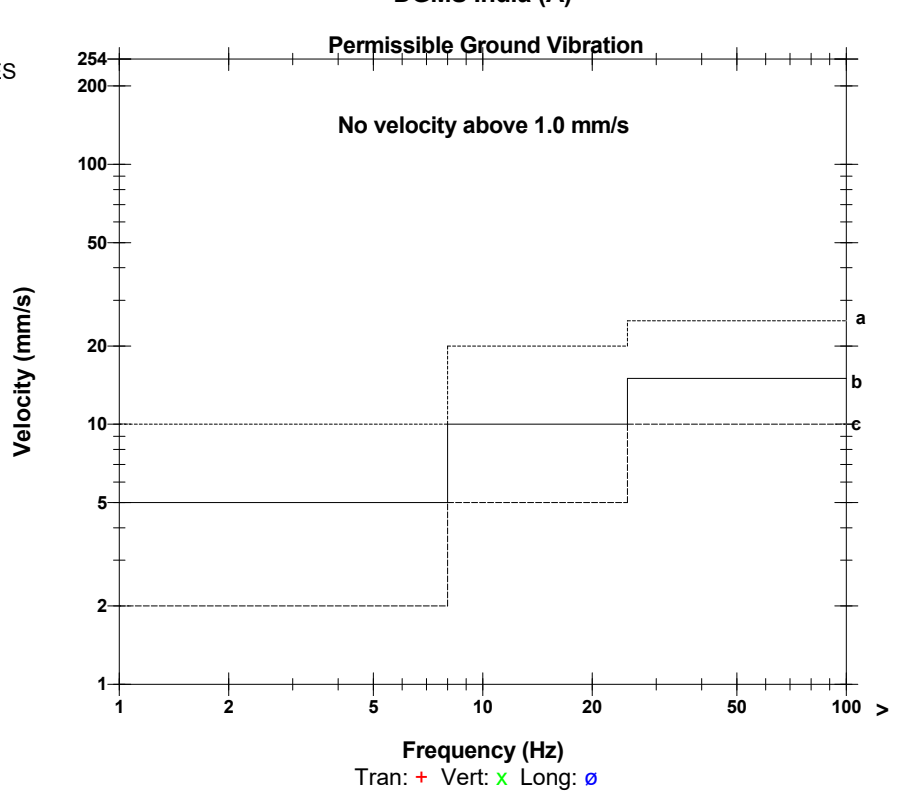
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	296.7 (209.8 m, 0.5 kg)

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

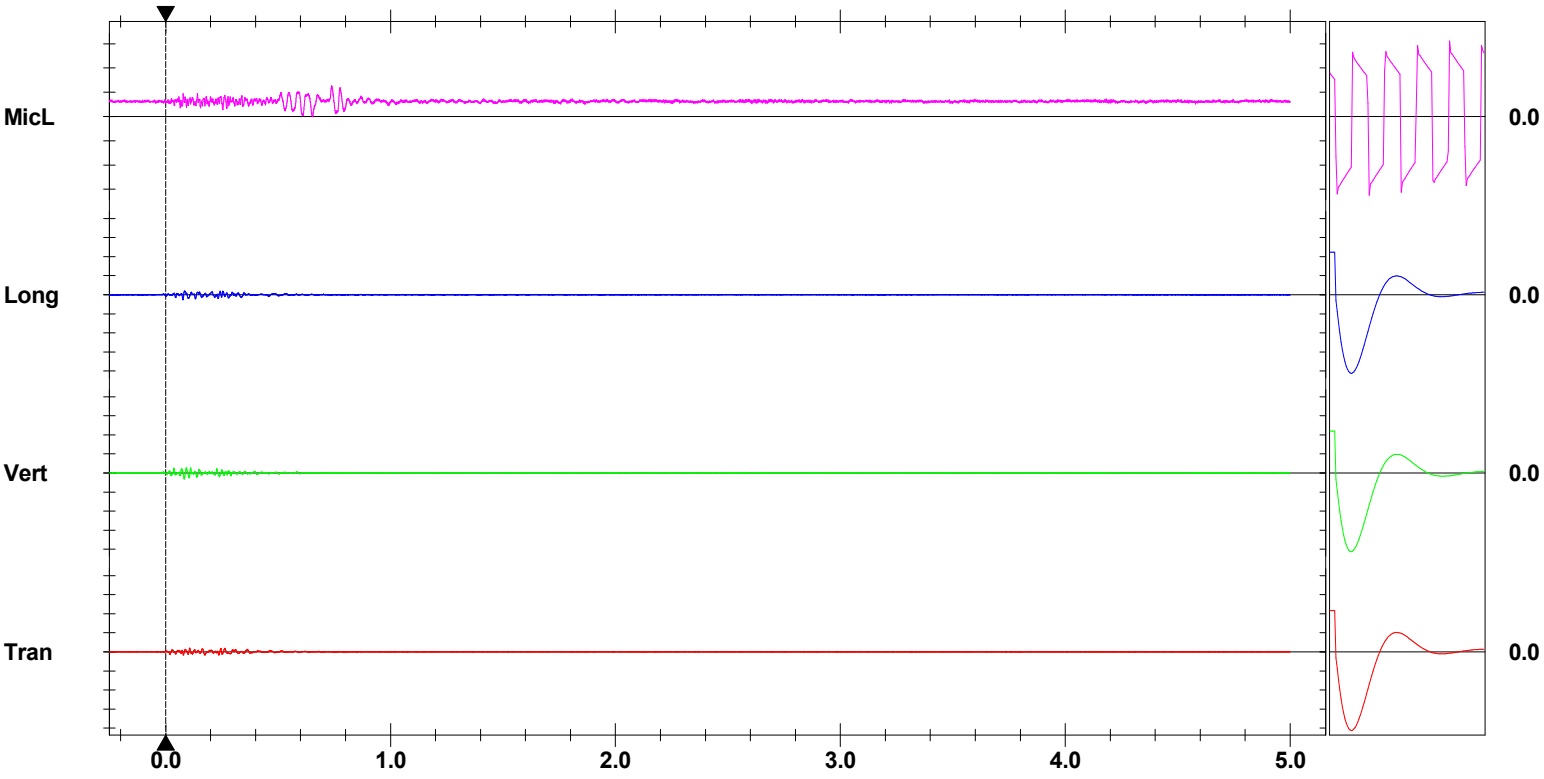
Microphone	Linear Weighting
PSPL	1.272 pa.(L) at 0.738 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1227 mv)

	Tran	Vert	Long	
PPV	0.402	0.638	0.520	mm/s
ZC Freq	68	54	68	Hz
Time (Rel. to Trig)	0.107	0.083	0.077	sec
Peak Acceleration	0.020	0.035	0.025	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	4.2	4.2	

Peak Vector Sum 0.722 mm/s at 0.083 sec
N/A: Not Applicable



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



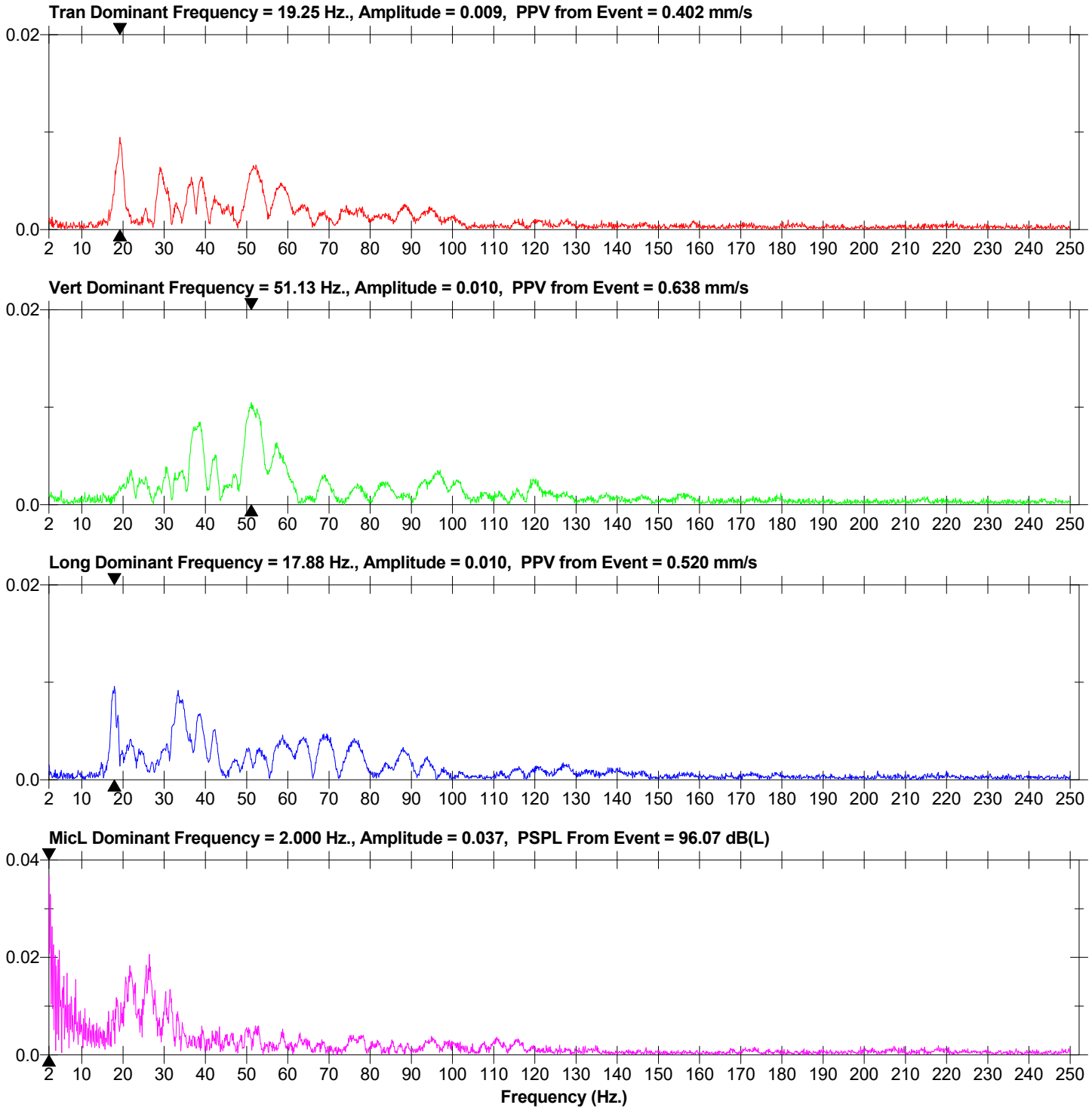
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
Trigger = ▶----------◀

Sensor Check

FFT Report

Date/Time	Long at 10:30:26 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	296.7 (209.8 m, 0.5 kg)

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



Event Report

Date/Time Long at 12:37:10 March 27, 2023
Trigger Source Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range Geo: 254.0 mm/s
Record Time 5.0 sec at 4096 sps
Operator/Setup: Operator/factory.MMB

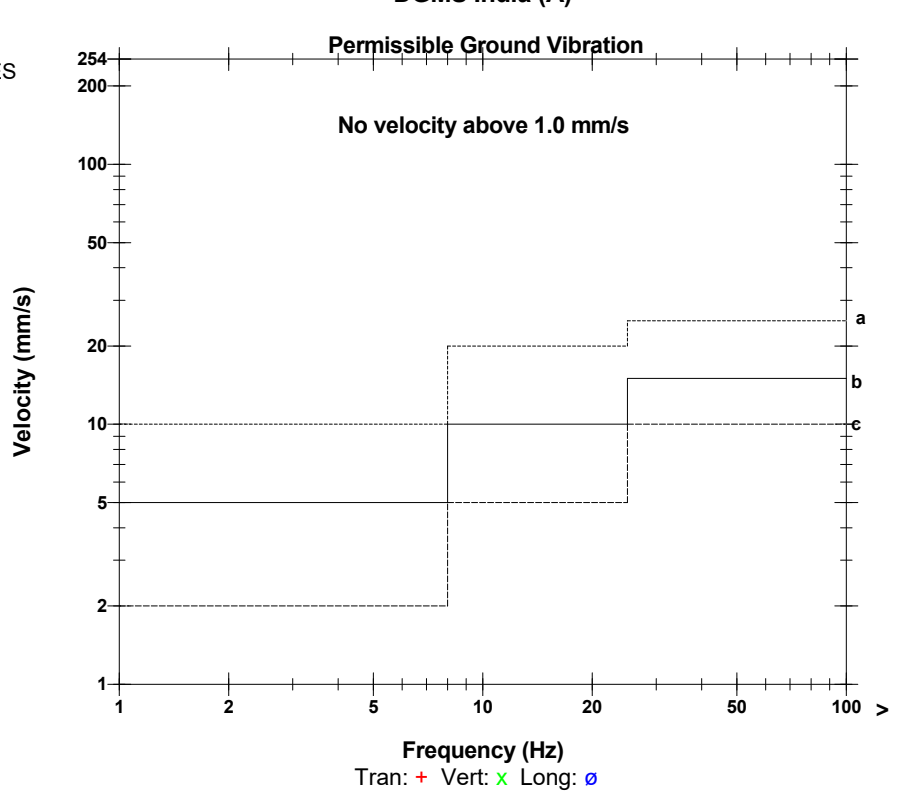
Serial Number UM18455 V 10-90FB Micromate ISEE
Battery Level 3.8 Volts
Unit Calibration November 18, 2021 by UES New Delhi
File Name __TEMP.EVT
Scaled Distance 142.6 (100.8 m, 0.5 kg)

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

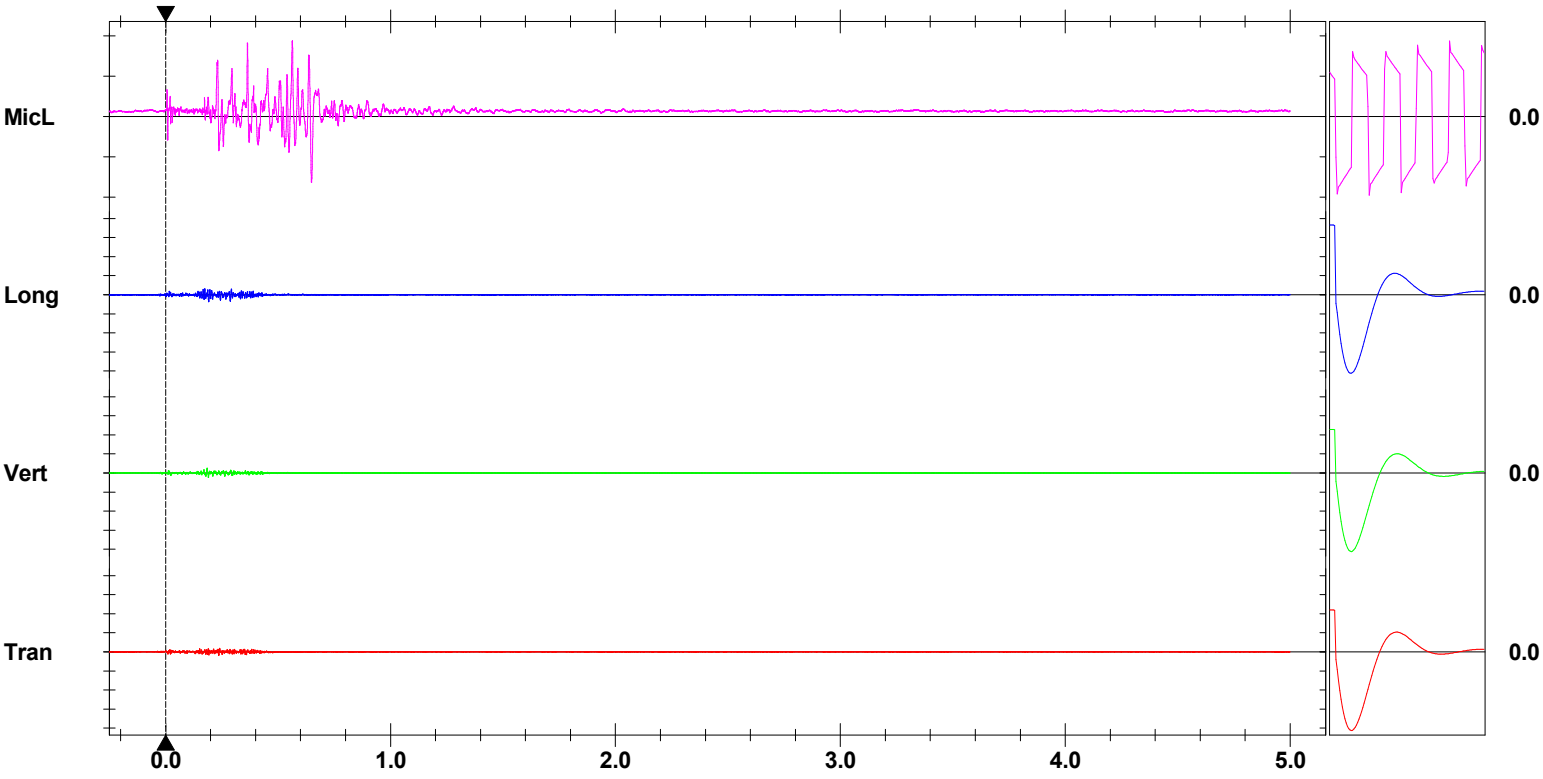
Microphone Linear Weighting
PSPL 9.403 pa.(L) at 0.563 sec
ZC Freq 31.0 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 1074 mv)

	Tran	Vert	Long	
PPV	0.370	0.520	0.741	mm/s
ZC Freq	120	73	93	Hz
Time (Rel. to Trig)	0.236	0.184	0.191	sec
Peak Acceleration	0.049	0.033	0.069	g
Peak Displacement	0.001	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.7	Hz
Overswing Ratio	4.0	4.1	3.7	

Peak Vector Sum 0.821 mm/s at 0.191 sec



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

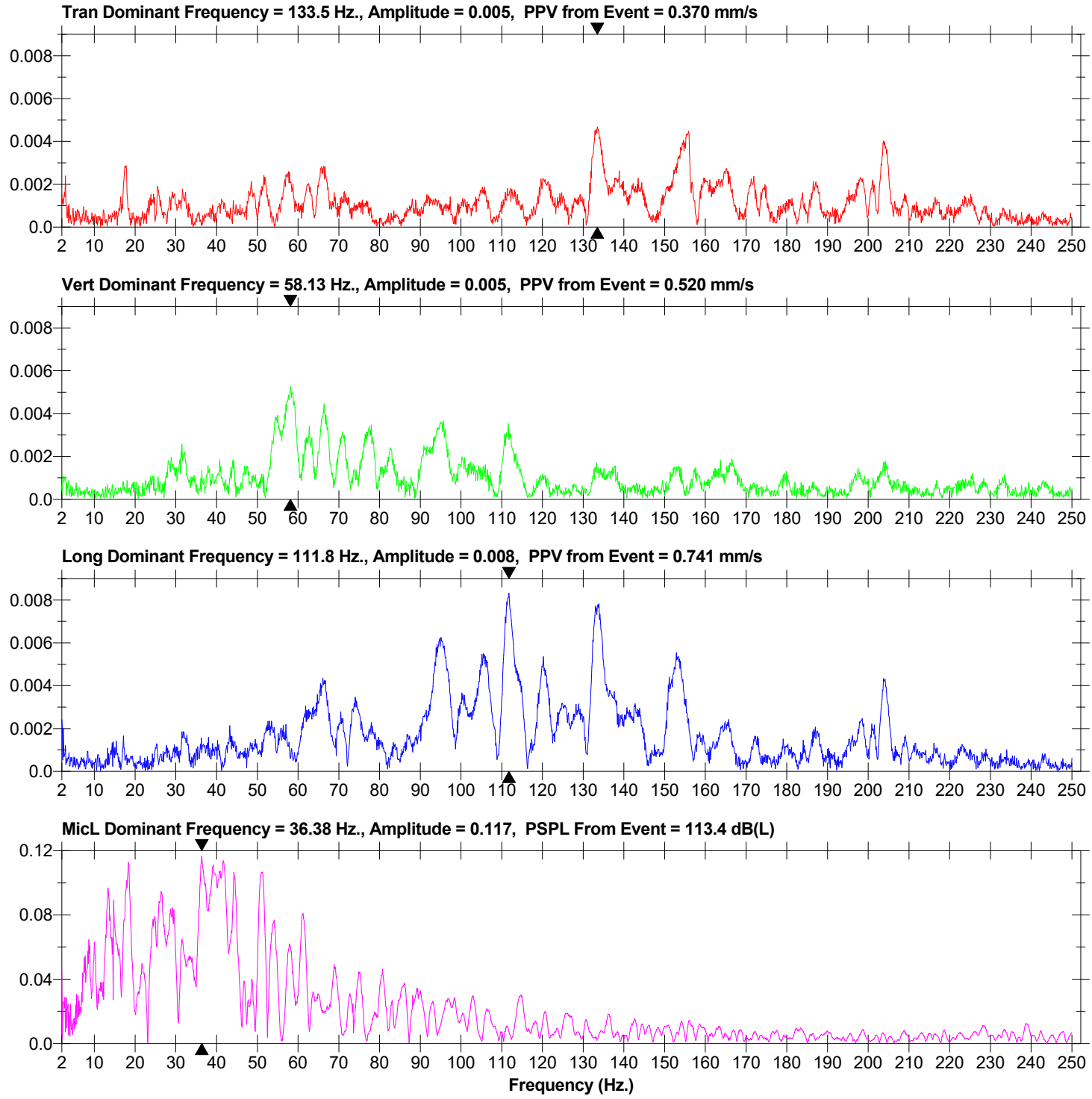


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Long at 12:37:10 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 4096 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	142.6 (100.8 m, 0.5 kg)

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



Event Report

Date/Time	Vert at 12:38:44 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 4096 sps
Operator/Setup:	Operator/factory.MMB

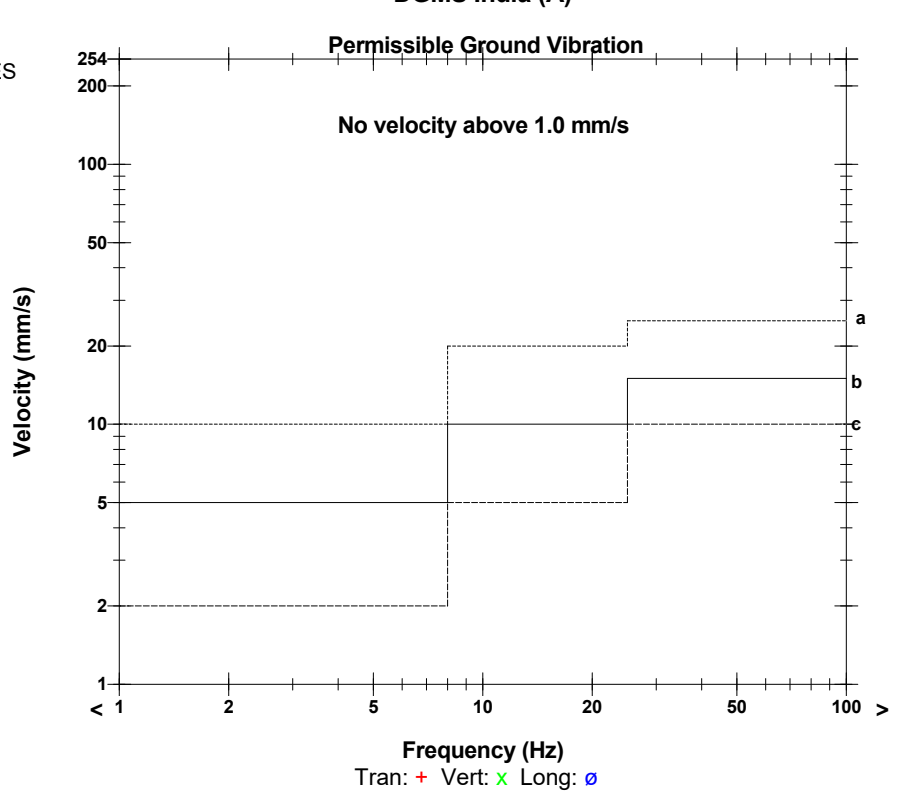
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	142.6 (100.8 m, 0.5 kg)

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

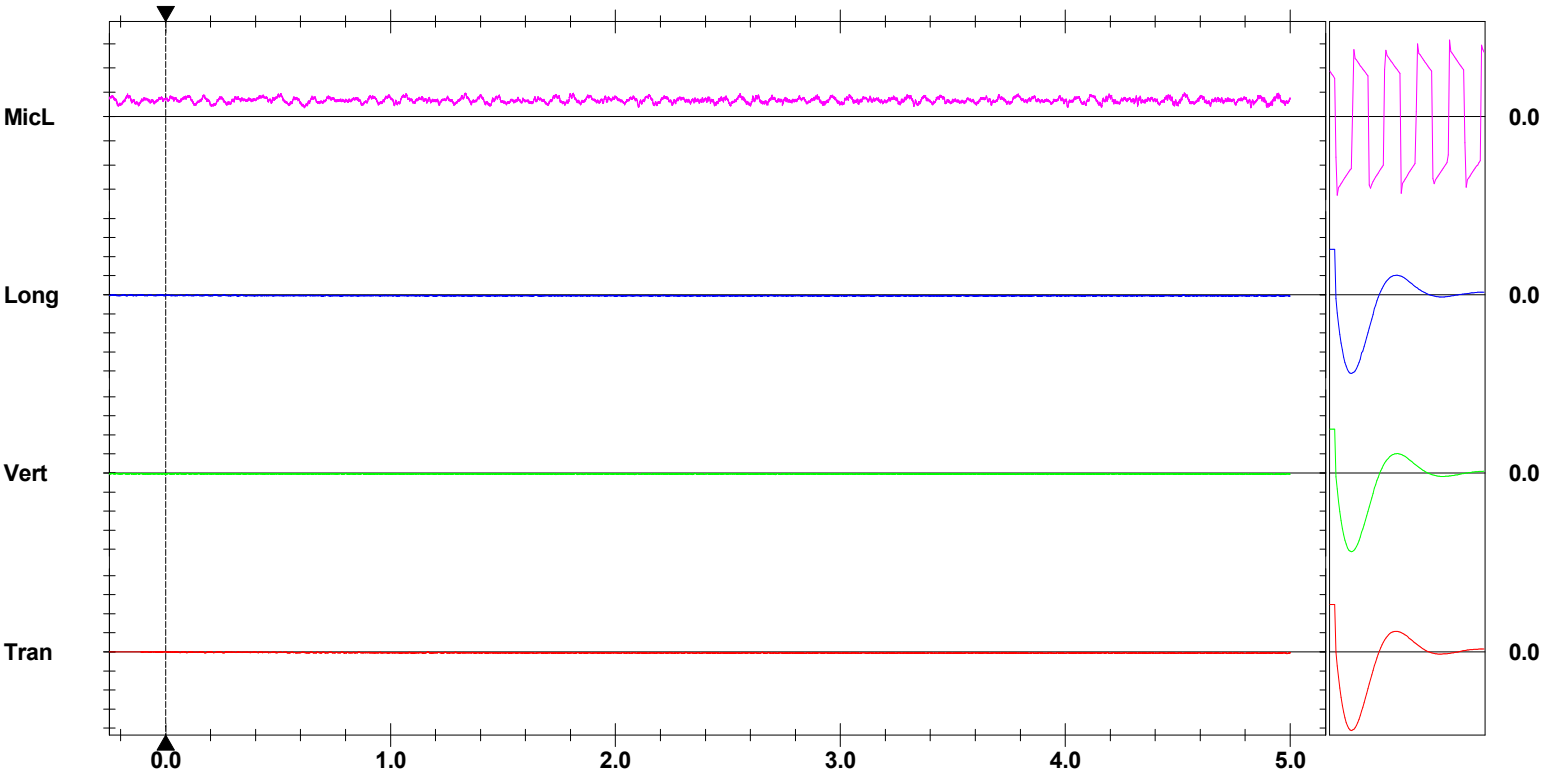
Microphone	Linear Weighting
PSPL	0.977 pa.(L) at 4.529 sec
ZC Freq	N/A
Channel Test	Passed (Freq = 19.7 Hz Amp = 1085 mv)

	Tran	Vert	Long	
PPV	0.205	0.173	0.173	mm/s
ZC Freq	N/A	N/A	N/A	Hz
Time (Rel. to Trig)	4.985	2.085	4.966	sec
Peak Acceleration	0.020	0.016	0.020	g
Peak Displacement	0.027	0.000	0.000	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.3	7.5	Hz
Overswing Ratio	3.8	4.0	4.0	

Peak Vector Sum 0.240 mm/s at 4.985 sec
N/A: Not Applicable



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



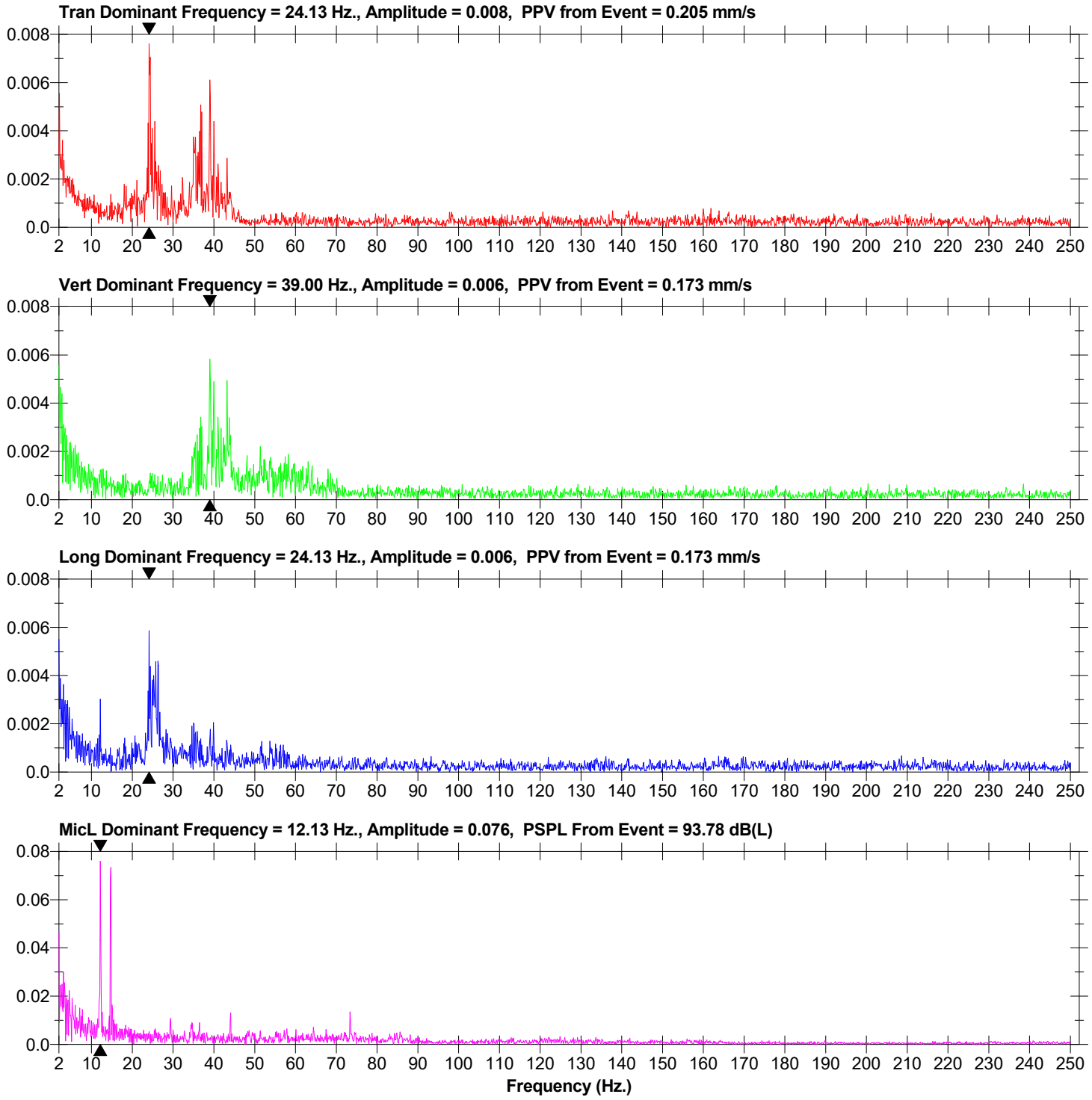
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
Trigger = ▶----------◀

Sensor Check

FFT Report

Date/Time	Vert at 12:38:44 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 4096 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	142.6 (100.8 m, 0.5 kg)

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



Event Report

Date/Time	Tran at 12:44:32 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

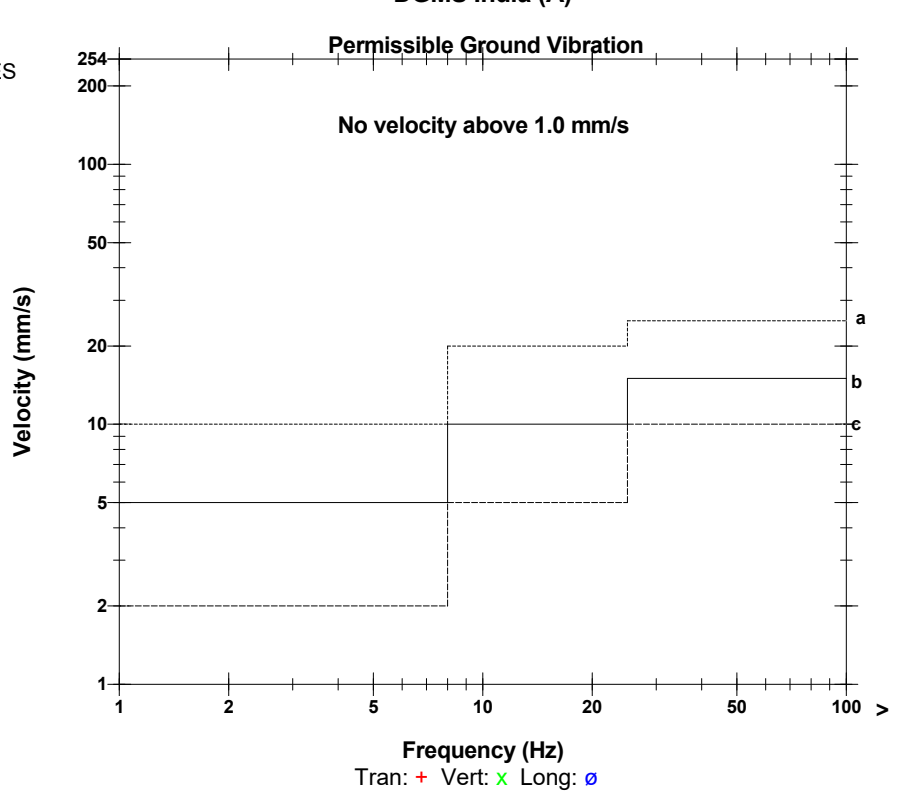
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	204.4 (144.5 m, 0.5 kg)

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

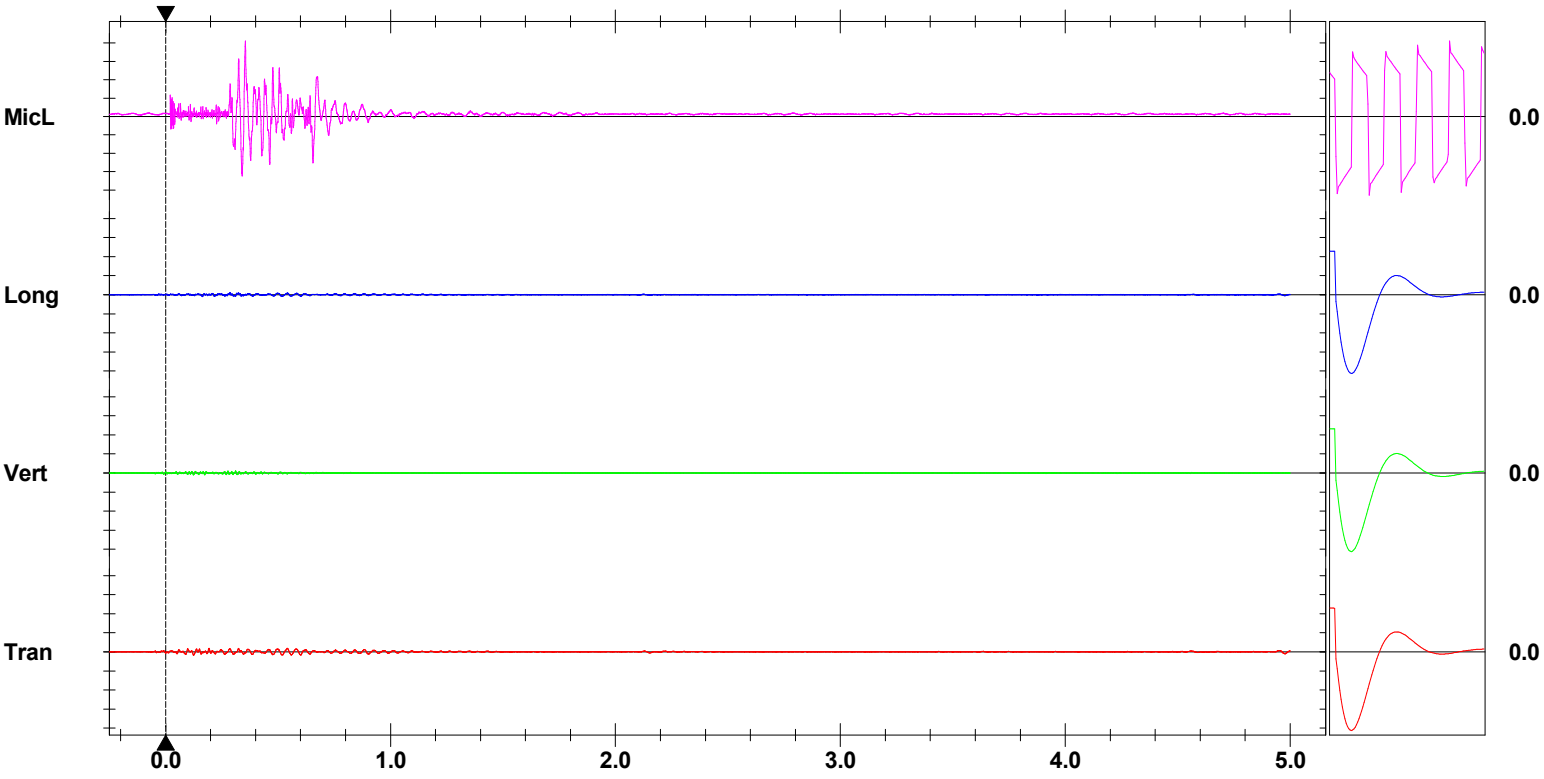
Microphone	Linear Weighting
PSPL	20.57 pa.(L) at 0.354 sec
ZC Freq	26 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1085 mv)

	Tran	Vert	Long	
PPV	0.378	0.236	0.221	mm/s
ZC Freq	51	43	37	Hz
Time (Rel. to Trig)	0.192	0.311	0.286	sec
Peak Acceleration	0.015	0.016	0.013	g
Peak Displacement	0.002	0.001	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	3.9	4.0	4.1	

Peak Vector Sum 0.425 mm/s at 0.541 sec



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

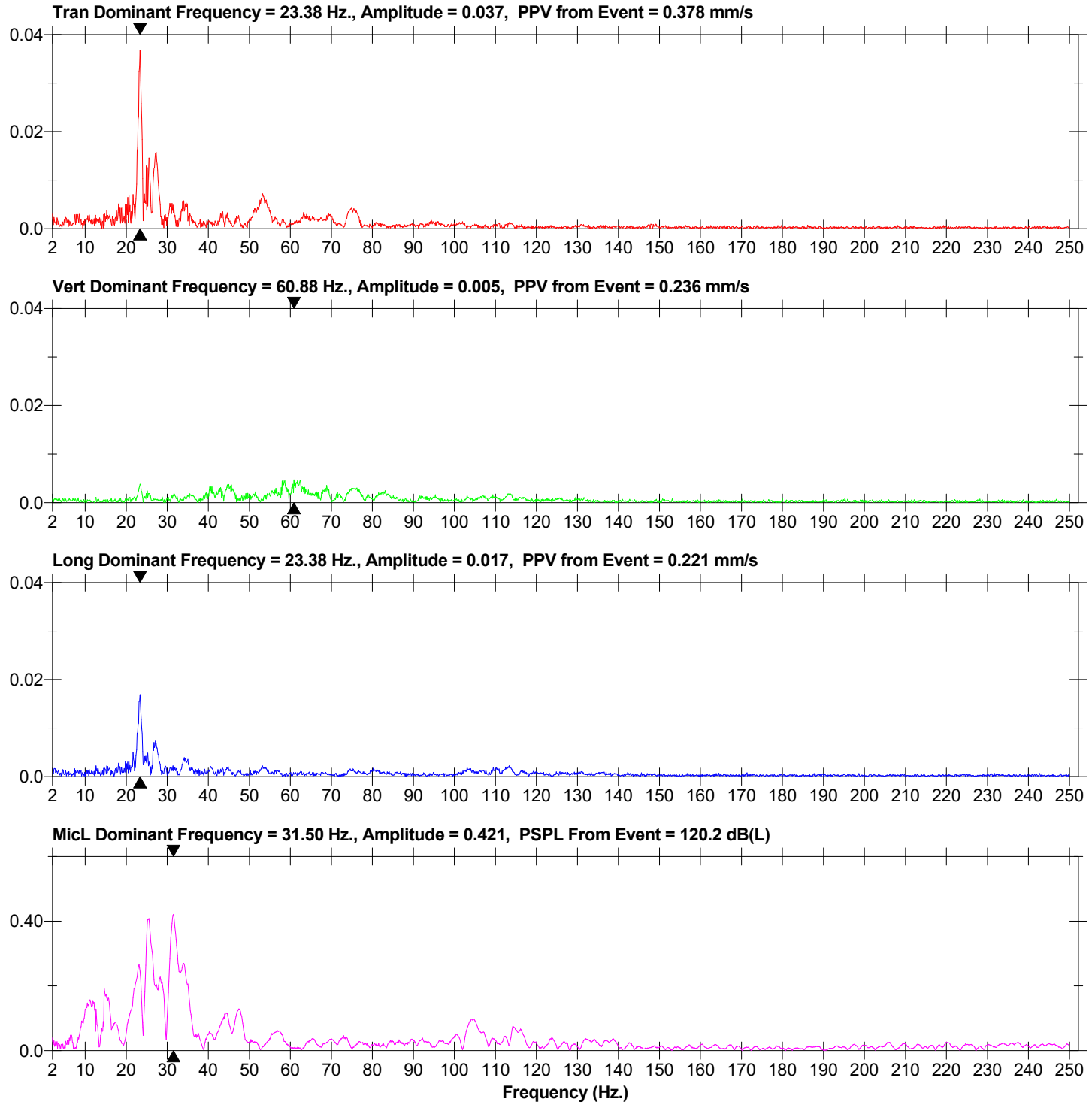


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	Tran at 12:44:32 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	204.4 (144.5 m, 0.5 kg)

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



Event Report

Date/Time	MicL at 12:55:11 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

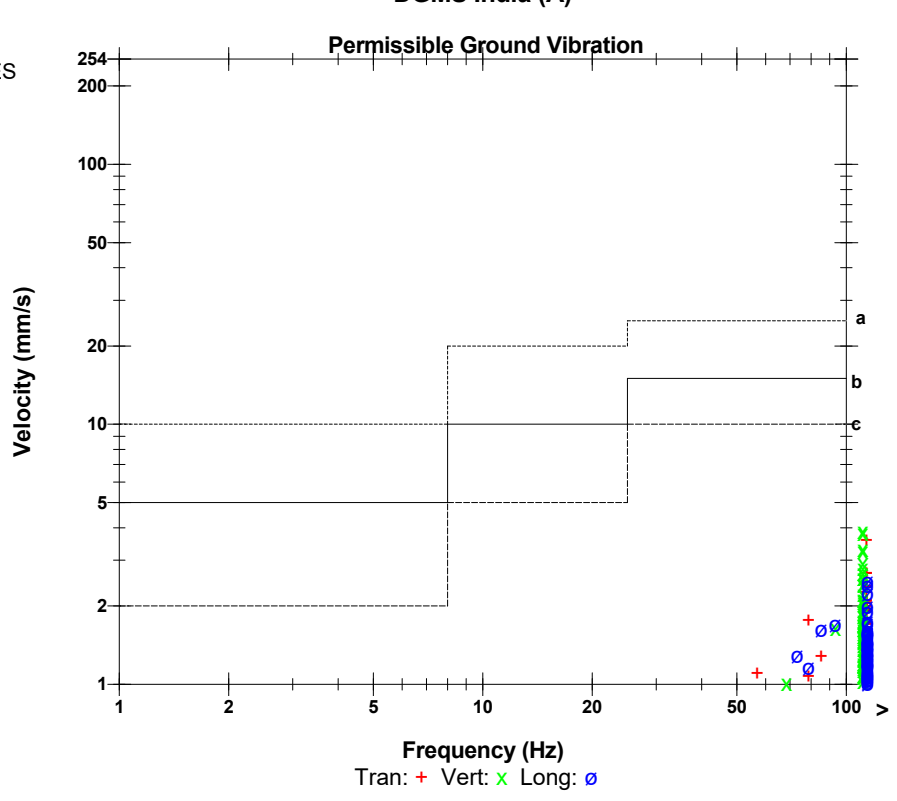
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	83.2 (58.8 m, 0.5 kg)

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

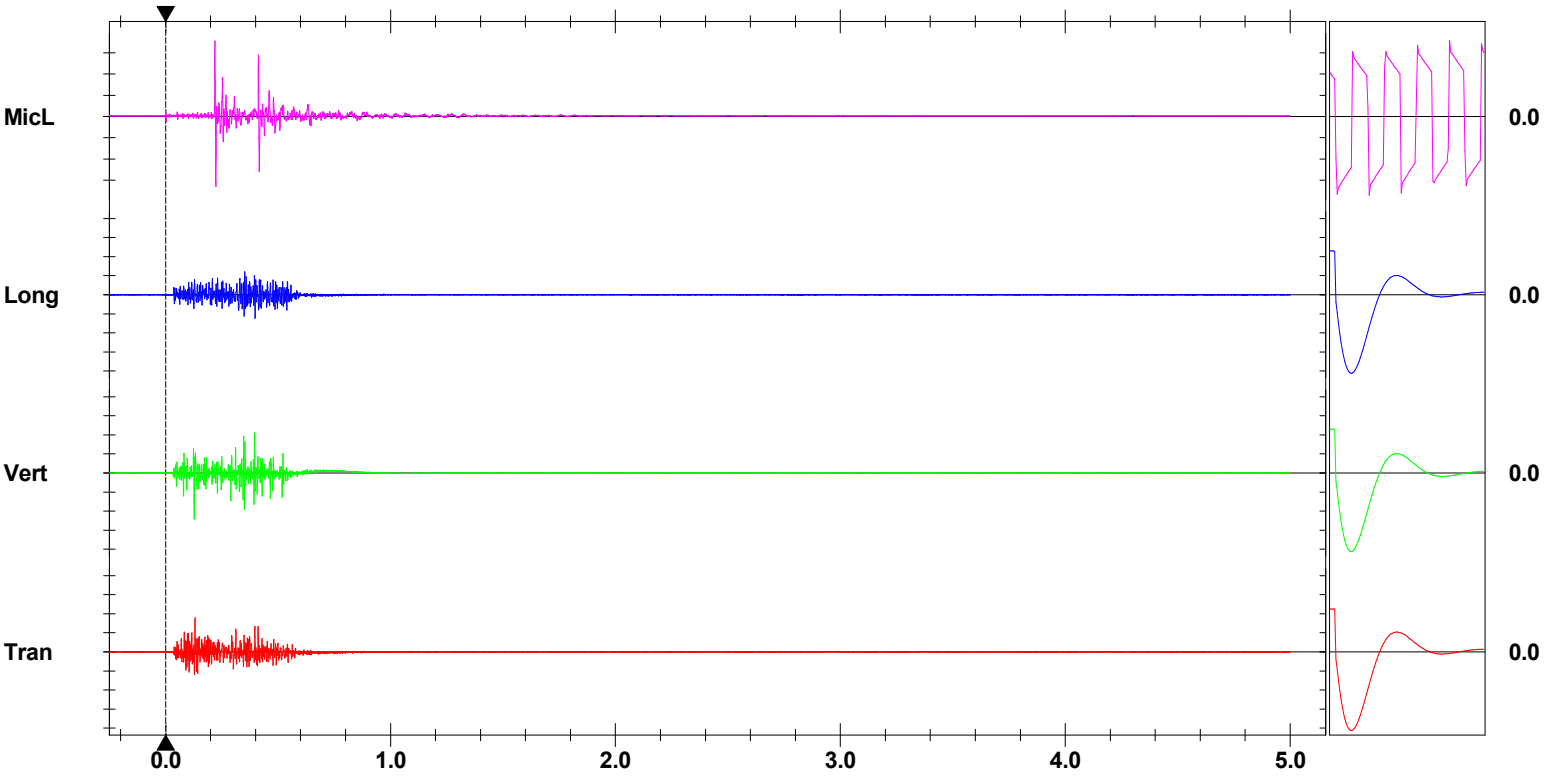
Microphone	Linear Weighting
PSPL	71.28 pa.(L) at 0.219 sec
ZC Freq	73 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1104 mv)

	Tran	Vert	Long	
PPV	3.578	3.952	2.491	mm/s
ZC Freq	146	146	146	Hz
Time (Rel. to Trig)	0.131	0.127	0.398	sec
Peak Acceleration	0.350	0.479	0.260	g
Peak Displacement	0.003	0.021	0.003	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.0	4.1	4.1	

Peak Vector Sum 3.124 mm/s at 0.127 sec



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

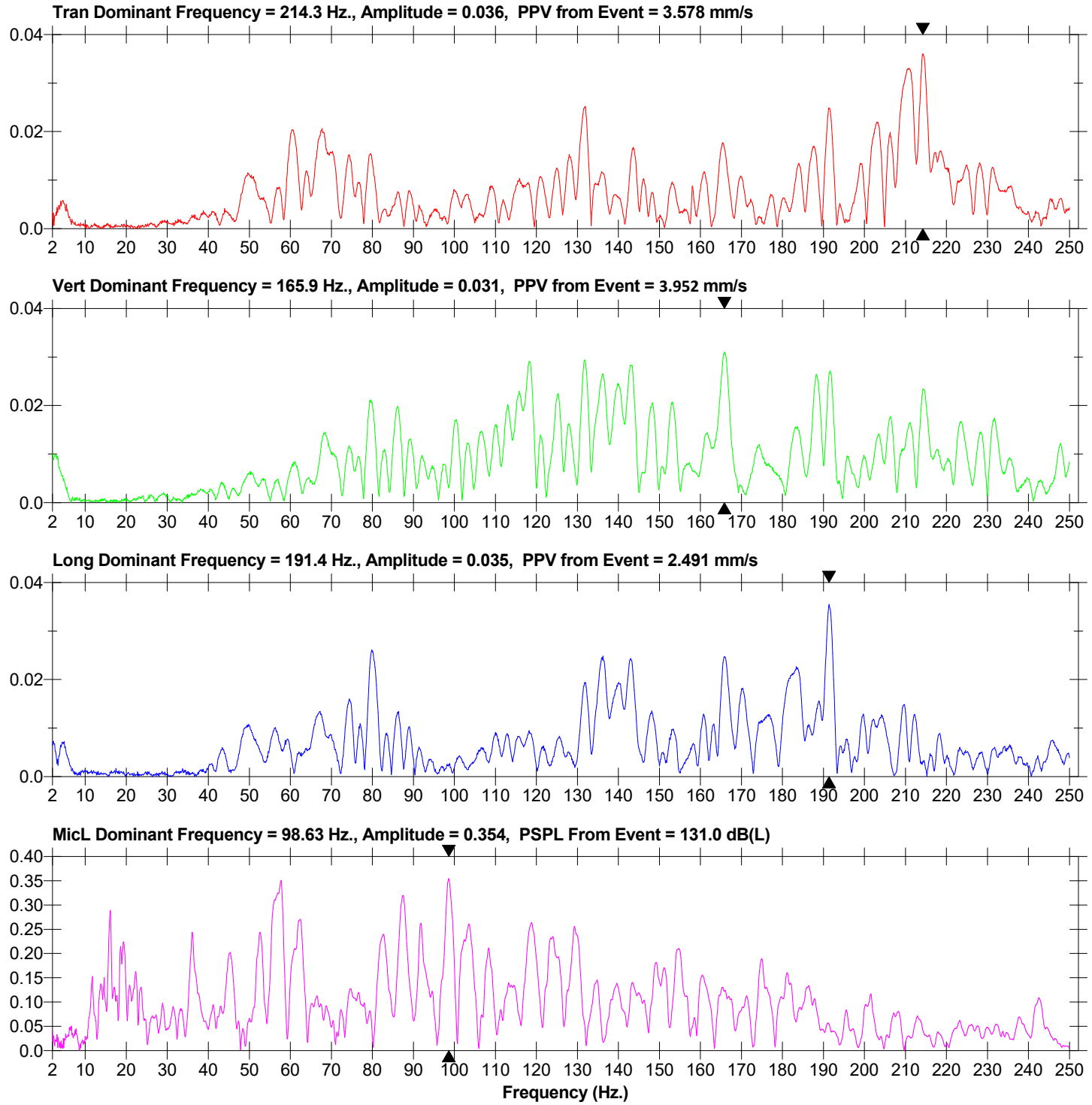


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 20.00 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	MicL at 12:55:11 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	83.2 (58.8 m, 0.5 kg)

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



Event Report

Date/Time	MicL at 12:56:00 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	83.2 (58.8 m, 0.5 kg)

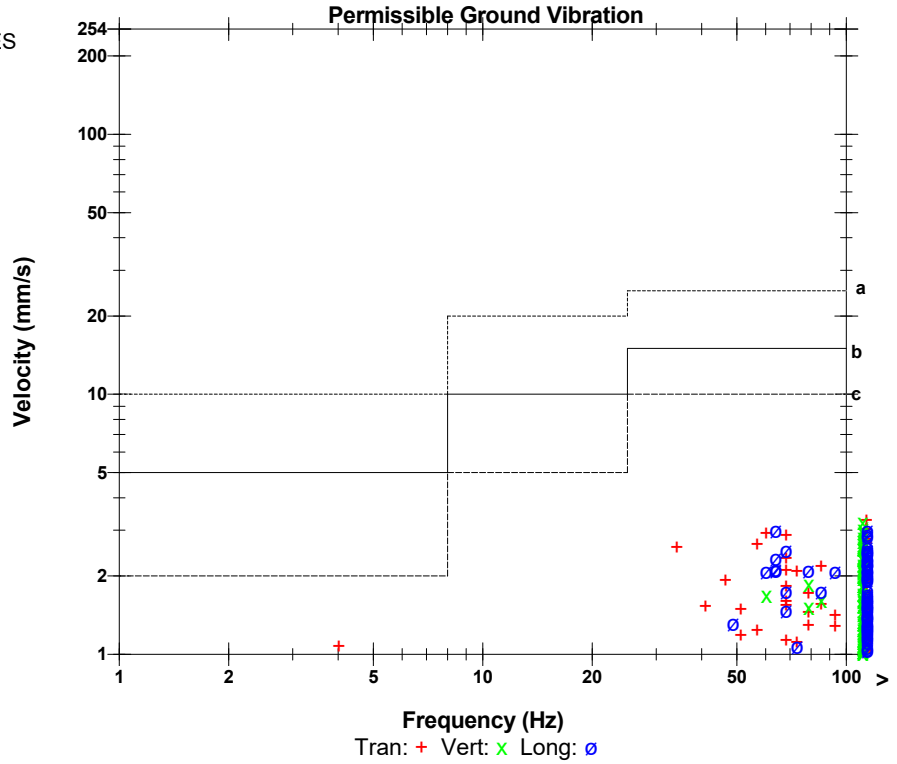
Notes
Location: STATION-3
Client: GEORGE KOCHUPARAMBIL
User Name: GLOBAL ENVIRONMENT AND MINING SERVICES
General:

Microphone	Linear Weighting
PSPL	9.309 pa.(L) at 0.269 sec
ZC Freq	43 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1102 mv)

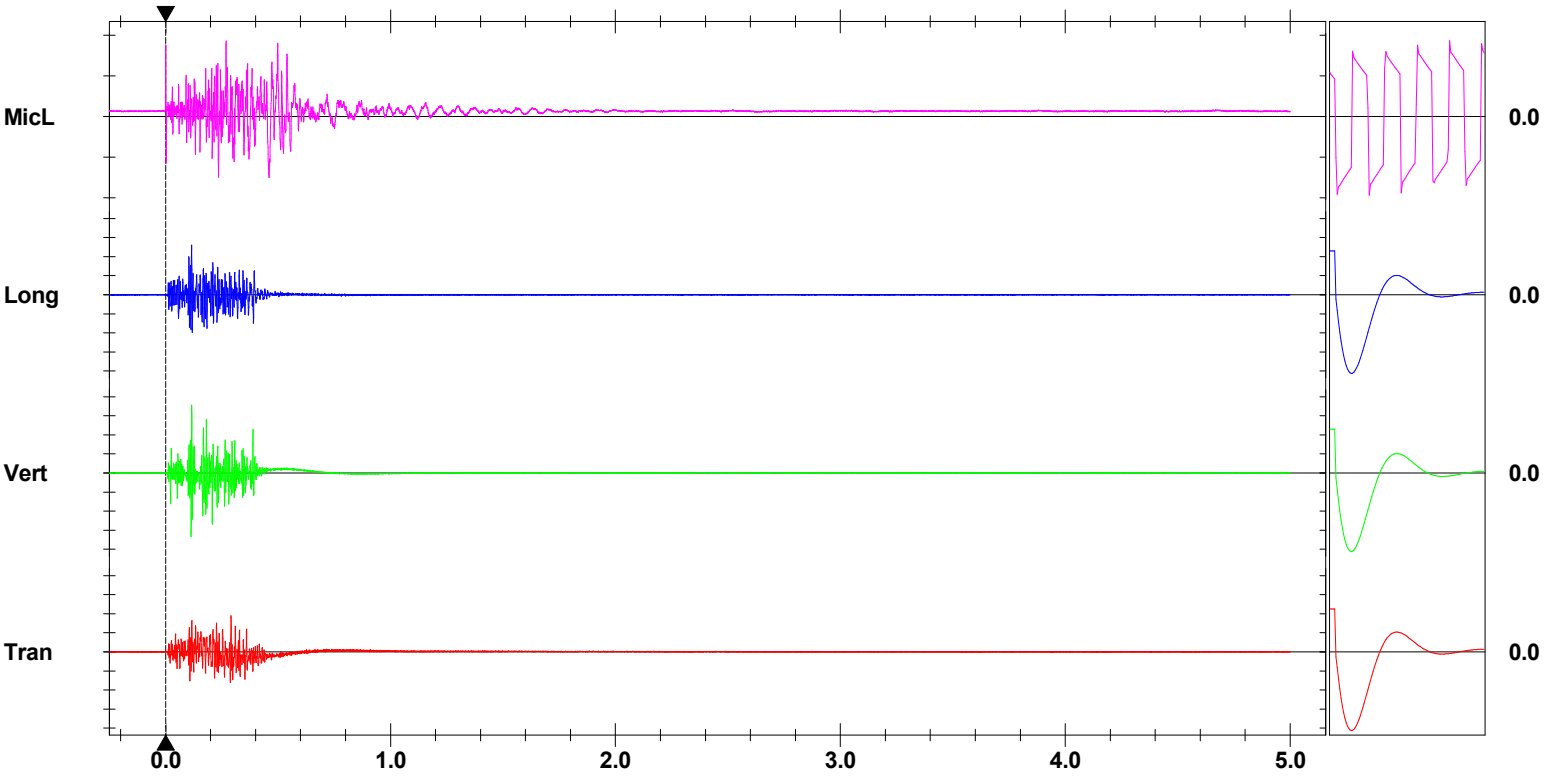
	Tran	Vert	Long	
PPV	2.807	3.553	3.127	mm/s
ZC Freq	171	146	146	Hz
Time (Rel. to Trig)	0.291	0.116	0.116	sec
Peak Acceleration	0.461	0.918	0.504	g
Peak Displacement	0.021	0.040	0.005	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.0	4.1	4.1	

Peak Vector Sum 3.751 mm/s at 0.116 sec

DGMS India (A)



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



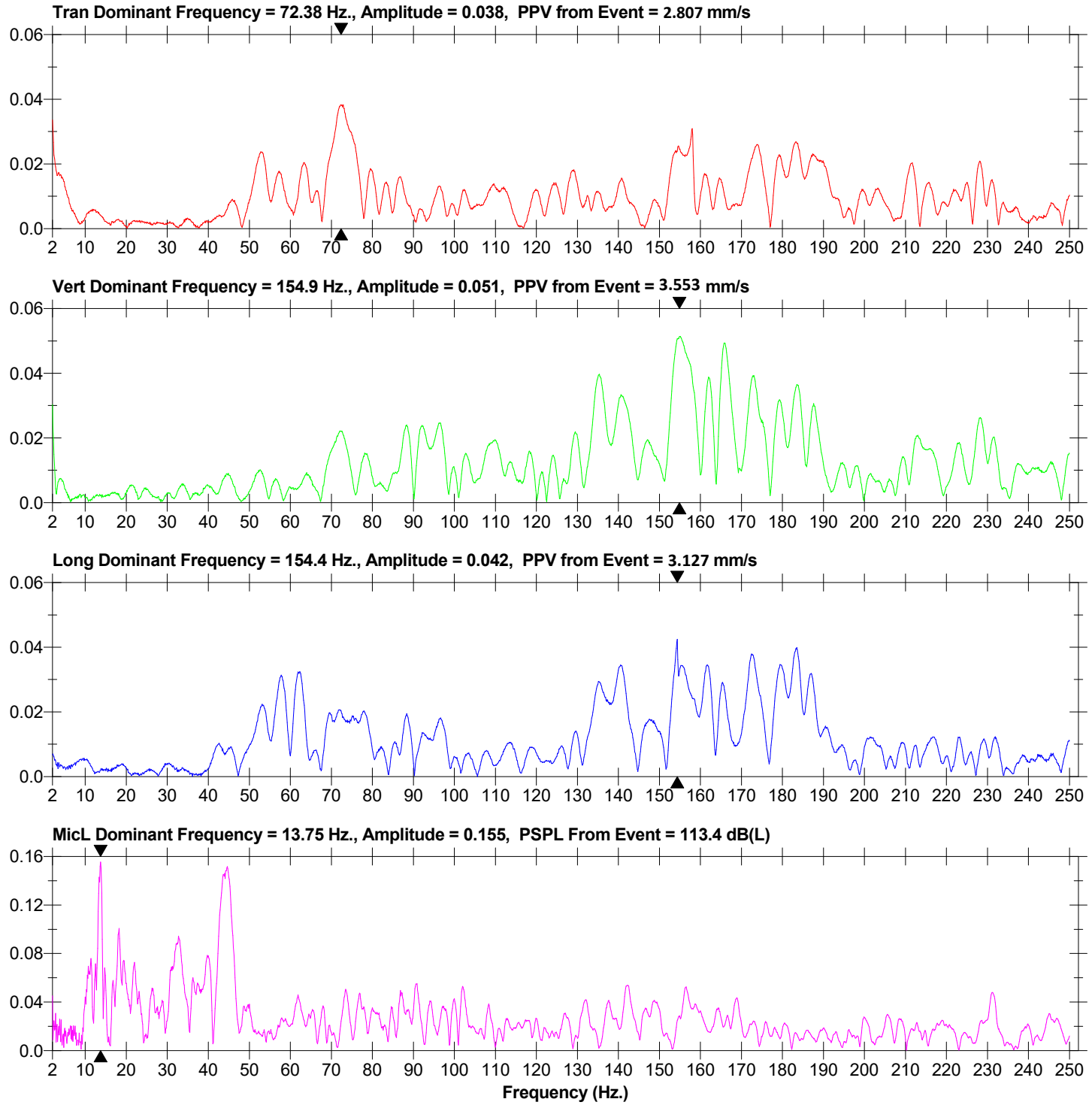
Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 5.000 pa.(L)/div
Trigger = ▶----------◀

Sensor Check

FFT Report

Date/Time	MicL at 12:56:00 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	83.2 (58.8 m, 0.5 kg)

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



Event Report

Date/Time	MicL at 13:23:16 March 27, 2023
Trigger Source	Geo: 0.127 mm/s, Mic: 2.000 pa.(L)
Range	Geo: 254.0 mm/s
Record Time	5.0 sec at 2048 sps
Operator/Setup:	Operator/factory.MMB

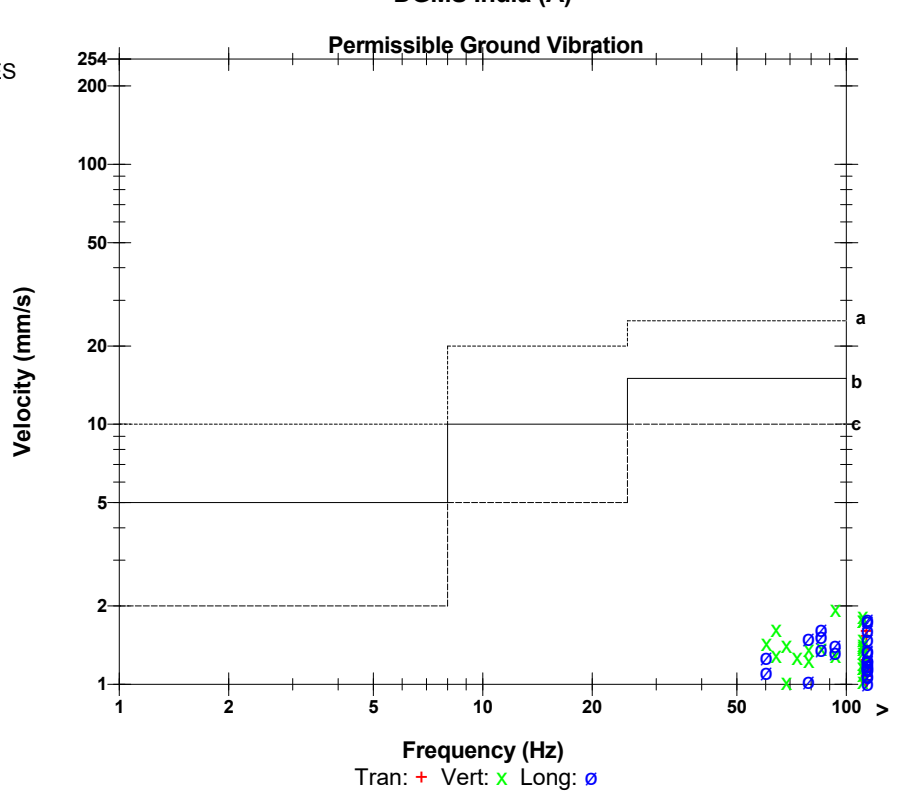
Serial Number	UM18455 V 10-90FB Micromate ISEE
Battery Level	3.8 Volts
Unit Calibration	November 18, 2021 by UES New Delhi
File Name	__TEMP.EVT
Scaled Distance	104.0 (73.5 m, 0.5 kg)

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

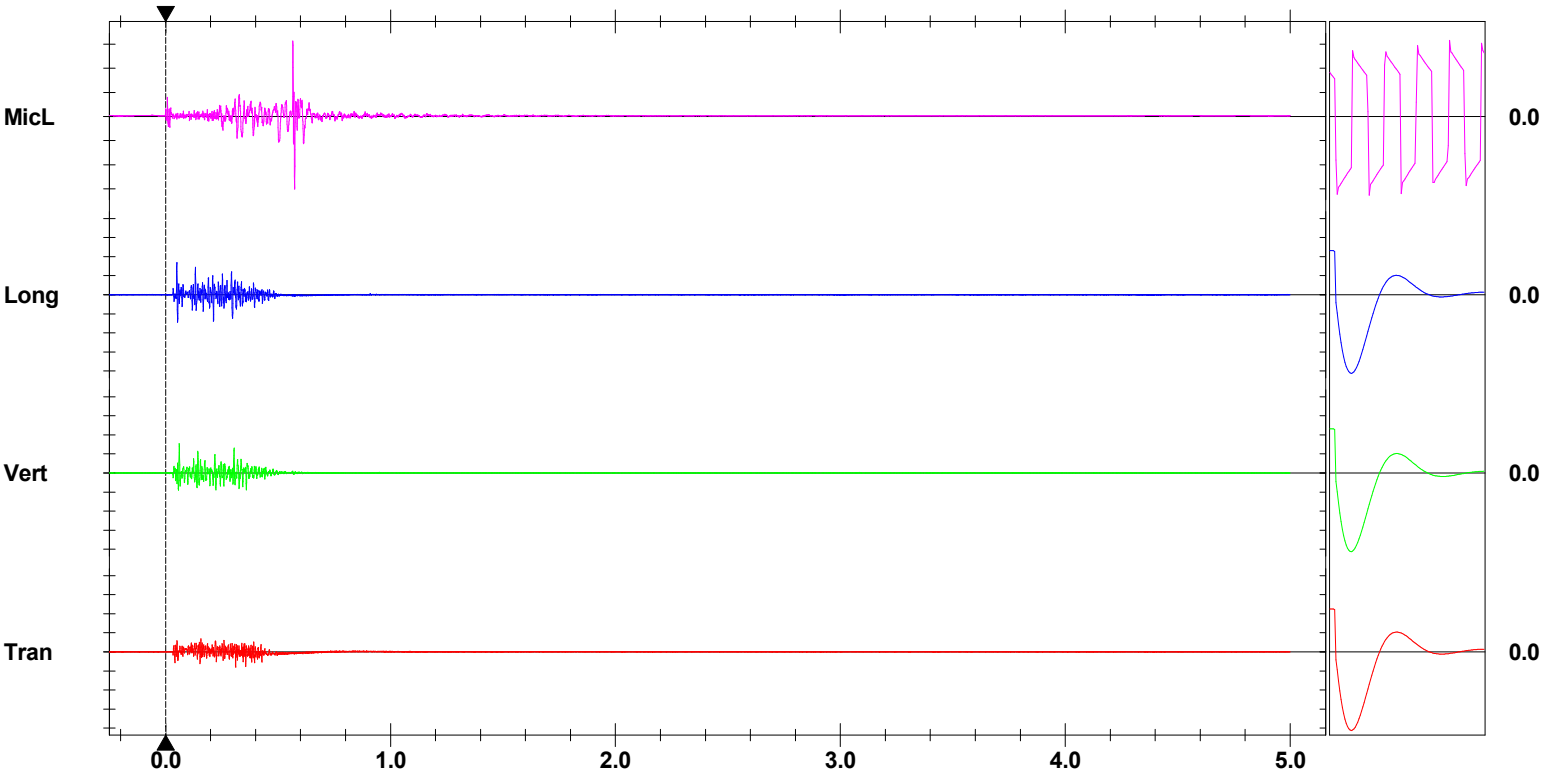
Microphone	Linear Weighting
PSPL	62.81 pa.(L) at 0.566 sec
ZC Freq	60 Hz
Channel Test	Passed (Freq = 19.7 Hz Amp = 1100 mv)

	Tran	Vert	Long	
PPV	1.608	2.090	2.758	mm/s
ZC Freq	171	114	146	Hz
Time (Rel. to Trig)	0.312	0.061	0.050	sec
Peak Acceleration	0.201	0.214	0.308	g
Peak Displacement	0.010	0.004	0.004	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.3	Hz
Overswing Ratio	4.0	4.0	4.0	

Peak Vector Sum 2.270 mm/s at 0.050 sec



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

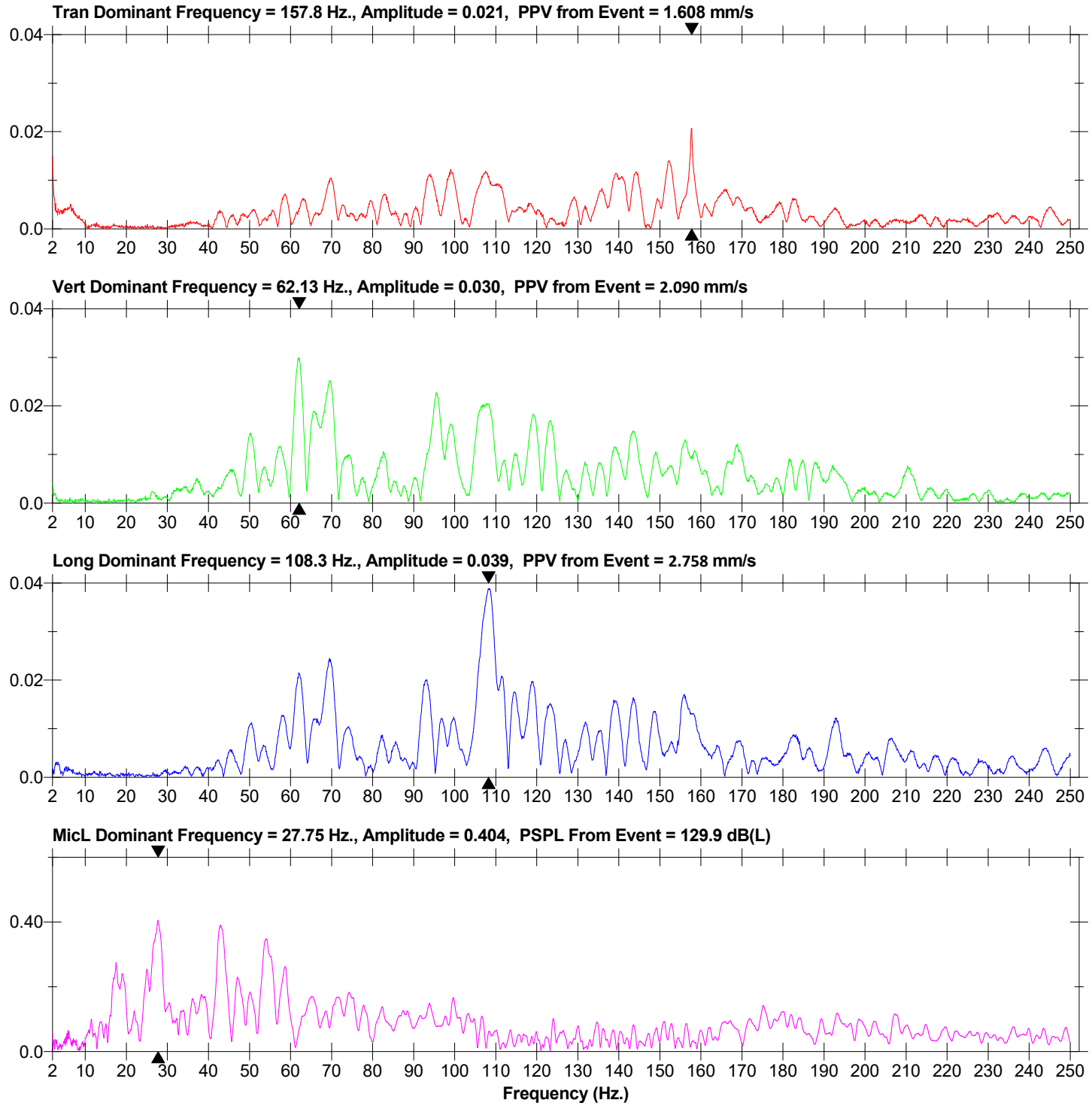


Time Scale: 0.20 sec/div **Amplitude Scale:** Geo: 2.000 mm/s/div Mic: 20.00 pa.(L)/div Sensor Check
Trigger = ▶----------◀

FFT Report

Date/Time	MicL at 13:23:16 March 27, 2023	**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**	November 18, 2021 by UES New Delhi
Record Time	5.0 sec at 2048 sps	**File Name**	__TEMP.EVT
Operator/Setup:	Operator/factory.MMB	**Scaled Distance**	104.0 (73.5 m, 0.5 kg)

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



Annexure- 4

Blasting Mats

Annexure- 5


RAIN WATER
HARVESTING
PIT NO : I
GPS Map
Camera Lite
Unnamed Road, Manakkad, Kerala 685583, India
Latitude
9° 53' 45.23298" N
Longitude
76° 38' 30.11215" E
Local 01:36:00 PM
GMT 08:06:00 AM
Altitude 45 meters
Wednesday, 22.03.2023


RAIN WATER
HARVESTING
PIT NO: II
GPS Map
Camera Lite
Unnamed Road, Manakkad, Kerala 685583, India
Latitude
9° 53' 44.49991" N
Longitude
76° 38' 30.77261" E
Local 01:34:57 PM
GMT 08:04:57 AM
Altitude 57 meters
Wednesday, 22.03.2023


RAIN WATER
HARVESTING
PIT NO: III
GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 46.75776" N
Longitude
76° 38' 26.29968" E
Local 01:07:27 PM
GMT 07:37:27 AM
Altitude 65 meters
Wednesday, 22.03.2023

Annexure- 6

Sl No.	Name	Post
1	Shri. Sonu Jose	Head of Monitoring Cell
2	Mr. Baby P Poulose	In charge
3	Mr. Joseph K Y	Member
4	Mr. Prasanth P P	Member
5	Mr. Jomy Joy	Member
6	Mr. John Peter	Member

20th meeting of the Environment Monitoring Committe held on 27.10.2022 at 2.15 PM.

Minutes of the 19th meeting was reviewed.

Quarry operations restarted on 21-07-2022 after the restrictions due to rain were lifted by the district authorities.

As informed the sub-committee of 2 officials of SEAA inspected our quarry operations on 30-07-22. The members expressed their satisfaction on our quarry Shape and operation.

New Points.

200 plants were planted in the newly purchased area, adjoining our lease. This is like a compensatory plantation.

3 grown up coconut trees in the mining area was replanted near the check dam. Watering is done regularly.

Rear cameras are fitted in the dumpers so that drivers can see the premises at back of dumper.

Equipments are fitted with Fire Extinguishers

A/c ~~of~~ in all equipments are to be maintained considering the upcoming Summer.

A new road is under construction to the topmost point of lease (west end) Maximum care is taken to uproot minimum trees.

Minutes of Meetings of EMC

Under CSR scheme a new house is being constructed within this pachayat for a needy person.

Another person's house is being renovated.

During the recent "Onam" Festival 1500 nos of food grain packets worth Rs 1500/- each packet were distributed to each and every house around the quarry.

The commanittees expressed their gratitute to the management.

Mist water sprinkling arrangements are under construction near office and Crusher etc. This will be in operation soon. The old one became inoperational. At present dust control is done by water sprinkling in tanks.

Members:

Mr. Baby. P. Ponlose
Mr. Joseph K Y
Mr. Prasanth P.P.
Mr. Jomy Joy
Mr. John Peter.

(Sonu Jose)
Head of Environment Monitoring Cell.

Minutes of Meeting of EMC

21st meeting of the Environment Monitoring Committee held on 29 December 2022 at 3 PM.

Minutes of the 20th meeting was reviewed.

New road to top of lease is completed. Development of the top 1st bench started.

Main Agenda of today's meeting is to discuss arrangements for the ~~ATE~~ inspection of the committee appointed by NGT to study pollutions in quarries.

The inspection is scheduld ~~for~~ between 1st to 4th January as below.

01-01-2023 — Fixing of equipments by KSPCB and CMFR teams.

02-01-2023 — Ambient readings of Noise, dust, Vibration. (without any operation).

03-01-2023 — Above tests with full operation from 6AM to 6PM

Separate teams were formed with different tasks as ~~bet~~ below

1. Transport arrangements.
2. Equipment shifting to monitoring points & power supply.
3. Quarry operation arrangemats.
4. Hospitality, Drinking water supply Food arrangements, Food for monitoring staff outside the lease

M.D also attended the meeting.

Members.

1. Baby. P. Ponlose
2. Joseph K.Y
3. Prasanth P.P.
4. Tomy Joy
5. John Peter

Sonu Jose
(Head of Environment Monitoring Commi.)

22nd Meeting of the Environment Monitoring Committee held on 16.03.23 at 3 PM.

Minutes of the 21st meeting were reviewed.

Head of Committee conveyed his utmost appreciation on the works done by each employee with regard to the NGT appointed committee's inspection from 1st to 4th January 2023.

New Points:

1. A new water is purchased. This will be in operation by next week end after registration etc. This will be utilized for dust suppression in addition to the present tanks.
2. 4th bench at top of lease is being started today.
3. Grass planted at side of benches are growing well. Watering is done daily. Also the trees planted at back of canteen - office building is ~~also~~ also growing very well.
4. The road from crush plant to the main road is tarred.
5. Two solar lights will be added to this road. 5 Nos
6. Road safety mirrors are fixed at different junctions at public roads.
7. A new water cooler is booked quarry & plant workers.
8. Under CSR scheme many house repairs / renovations are in progress.

- Contd -

9. A 'Chapath' is under construction in the road from crusher plant to the public road. Once completed this 'Chappath' will be filled with water. Truck tyres will be washed automatically leaving all dust/sand inside water. The 'chappath' will be cleaned regularly to remove all sand etc.

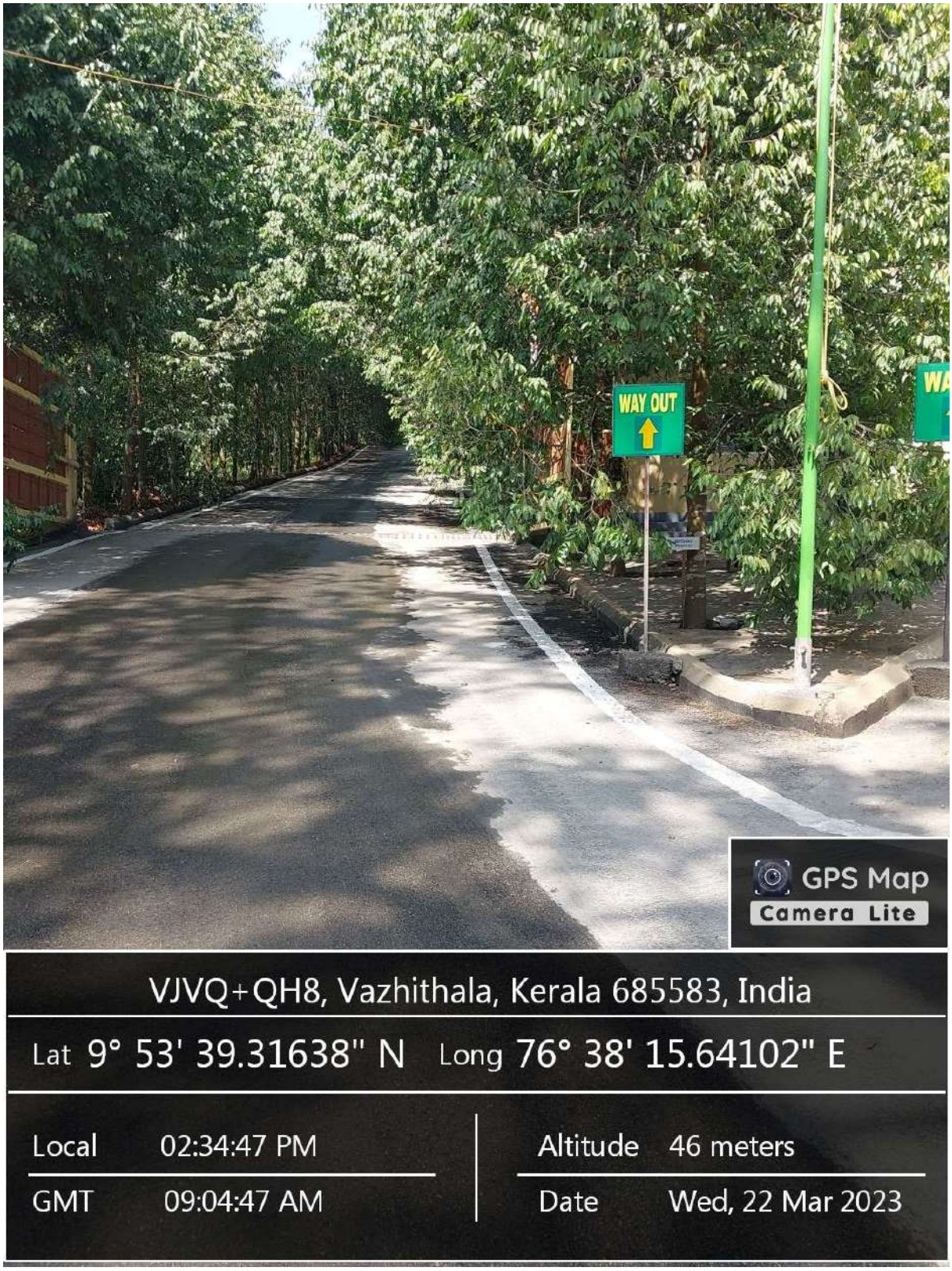
Members

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

Soman Jose

Head of Environment Monitoring Comm.

Annexure- 7



ACCESS ROAD

VJVQ+QH8, Vazhithala, Kerala 685583, India

Lat 9° 53' 39.25457" N Long 76° 38' 15.58622" E

Local	02:34:58 PM	Altitude	46 meters
GMT	09:04:58 AM	Date	Wed, 22 Mar 2023

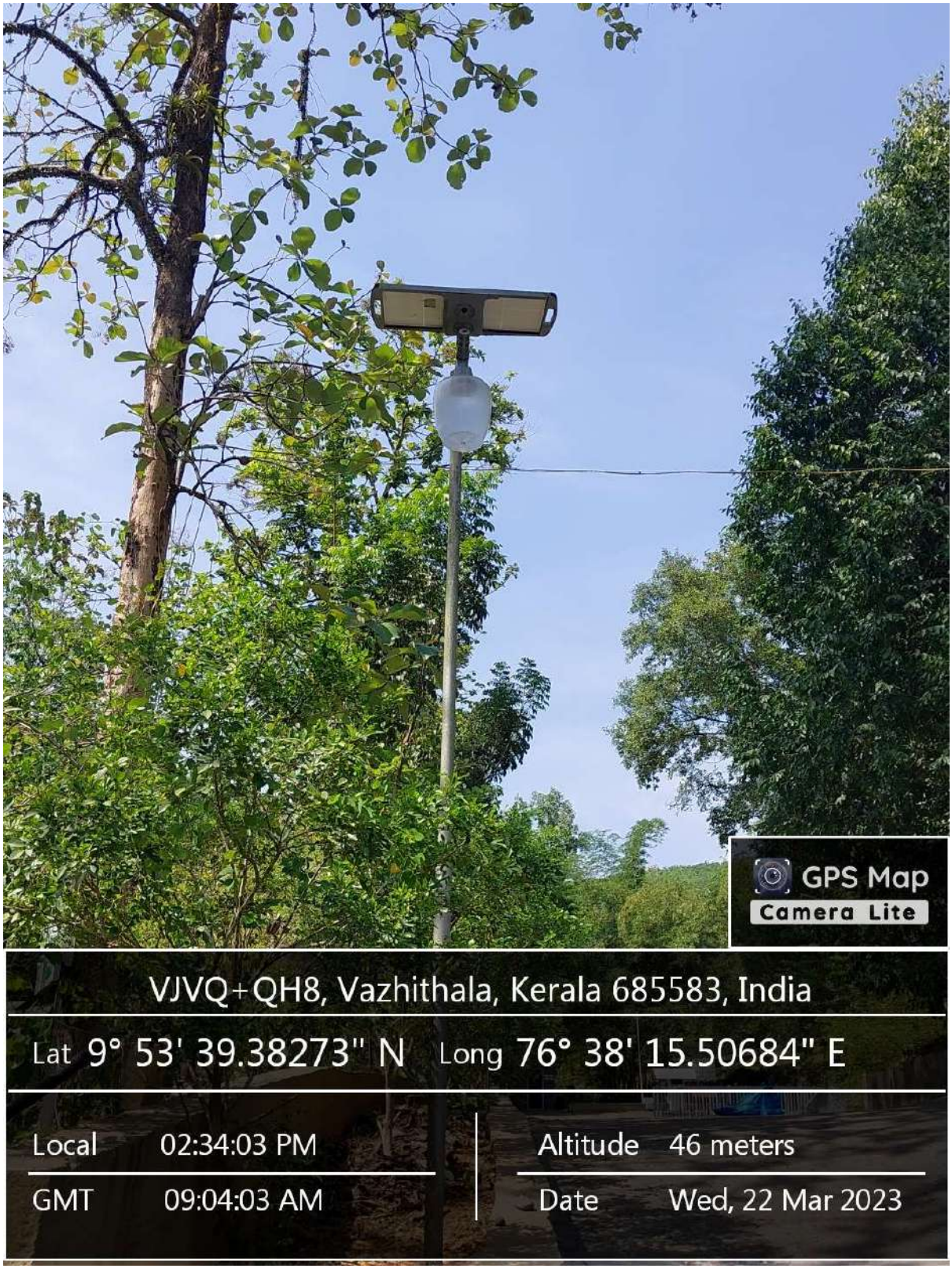
VJVQ+QH8, Vazhithala, Kerala 685583, India

Lat 9° 53' 42.86724" N Long 76° 38' 22.89484" E

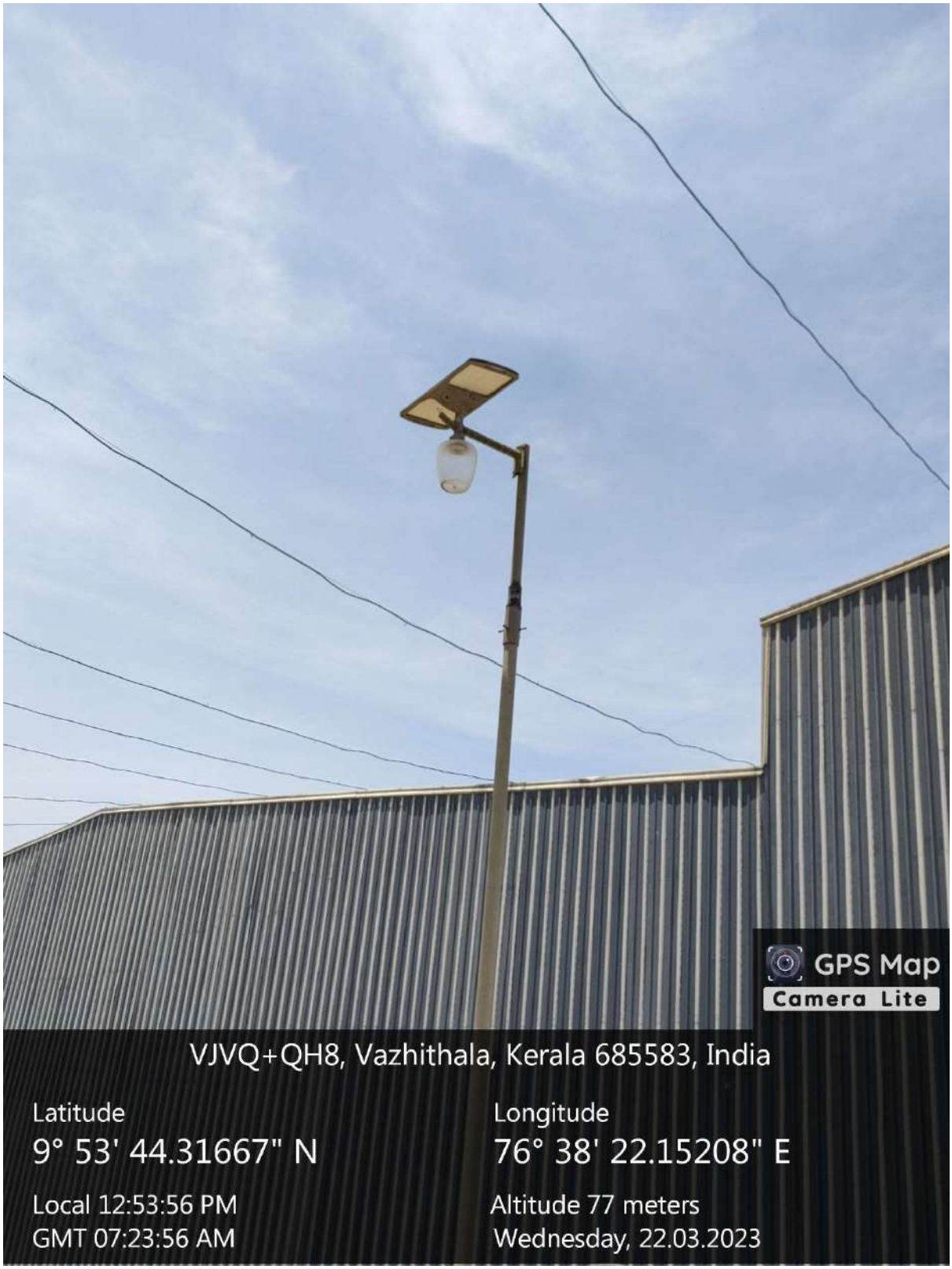
Local	02:32:30 PM	Altitude	77 meters
GMT	09:02:30 AM	Date	Wed, 22 Mar 2023


GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 42.32846" N
Longitude
76° 38' 21.11014" E
Local 12:45:24 PM
GMT 07:15:24 AM
Altitude 77 meters
Wednesday, 22.03.2023

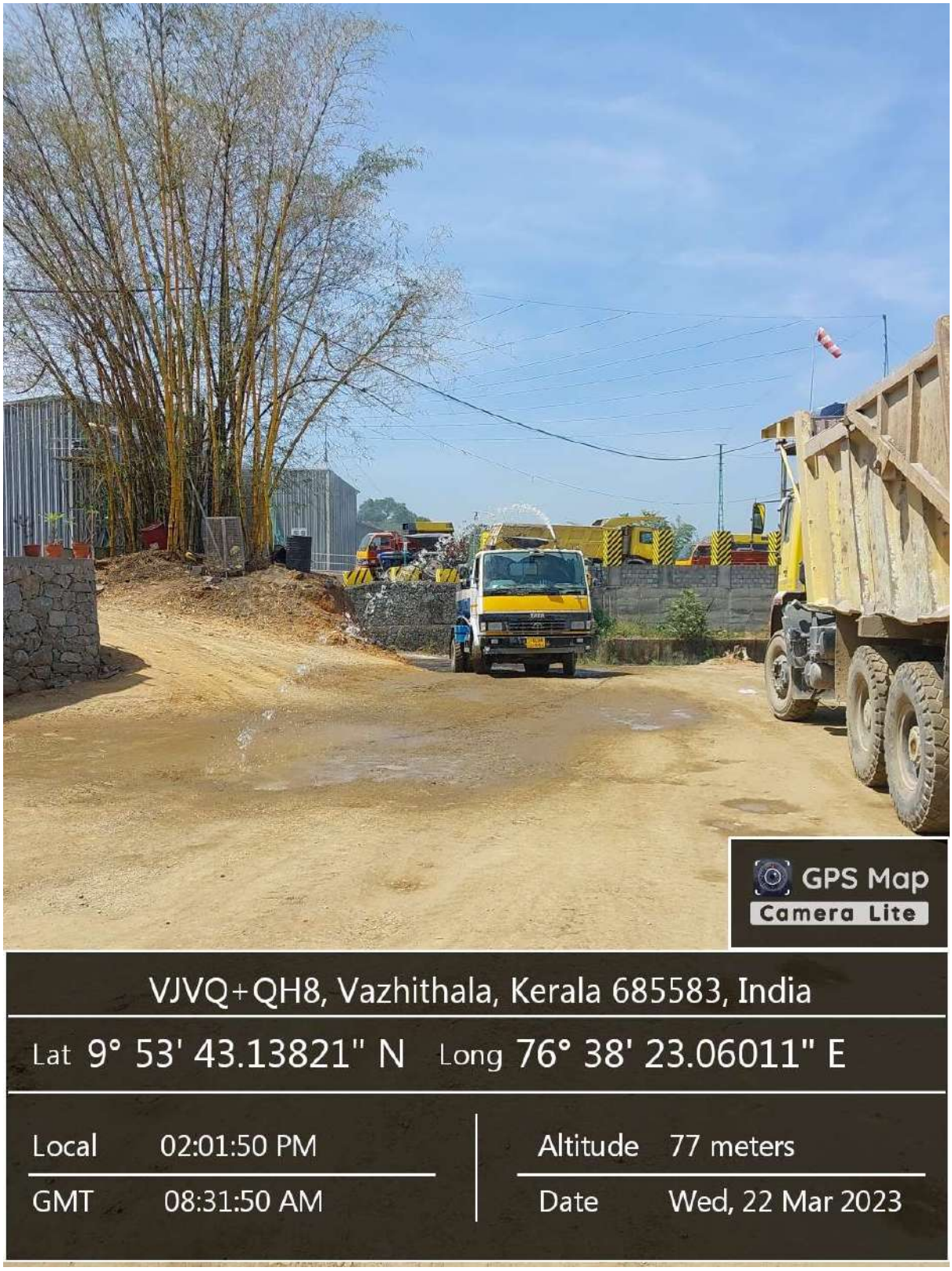
Annexure- 8



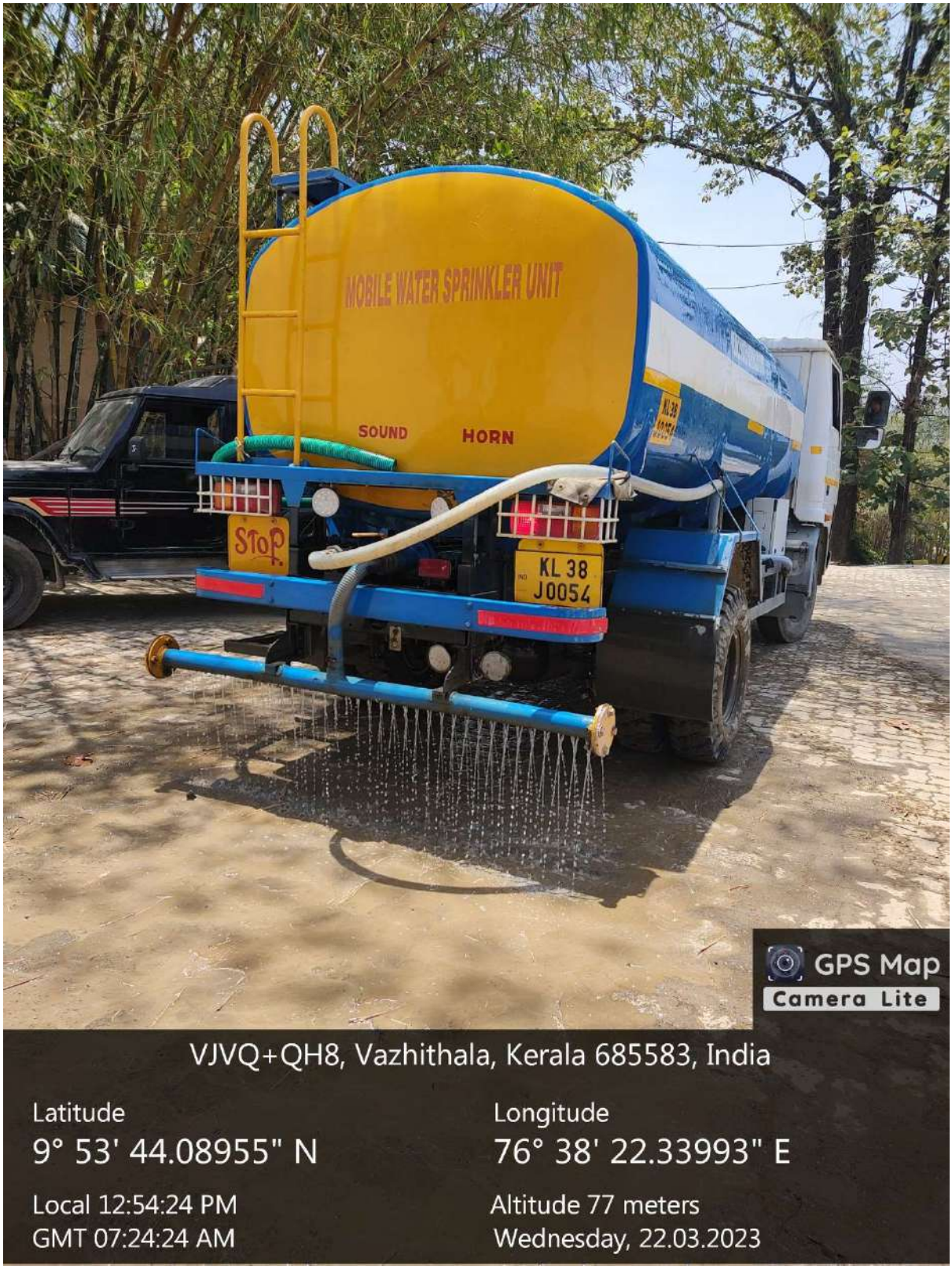
SOLAR LIGHTS


GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 44.31667" N
Longitude
76° 38' 22.15208" E
Local 12:53:56 PM
GMT 07:23:56 AM
Altitude 77 meters
Wednesday, 22.03.2023

Annexure- 9

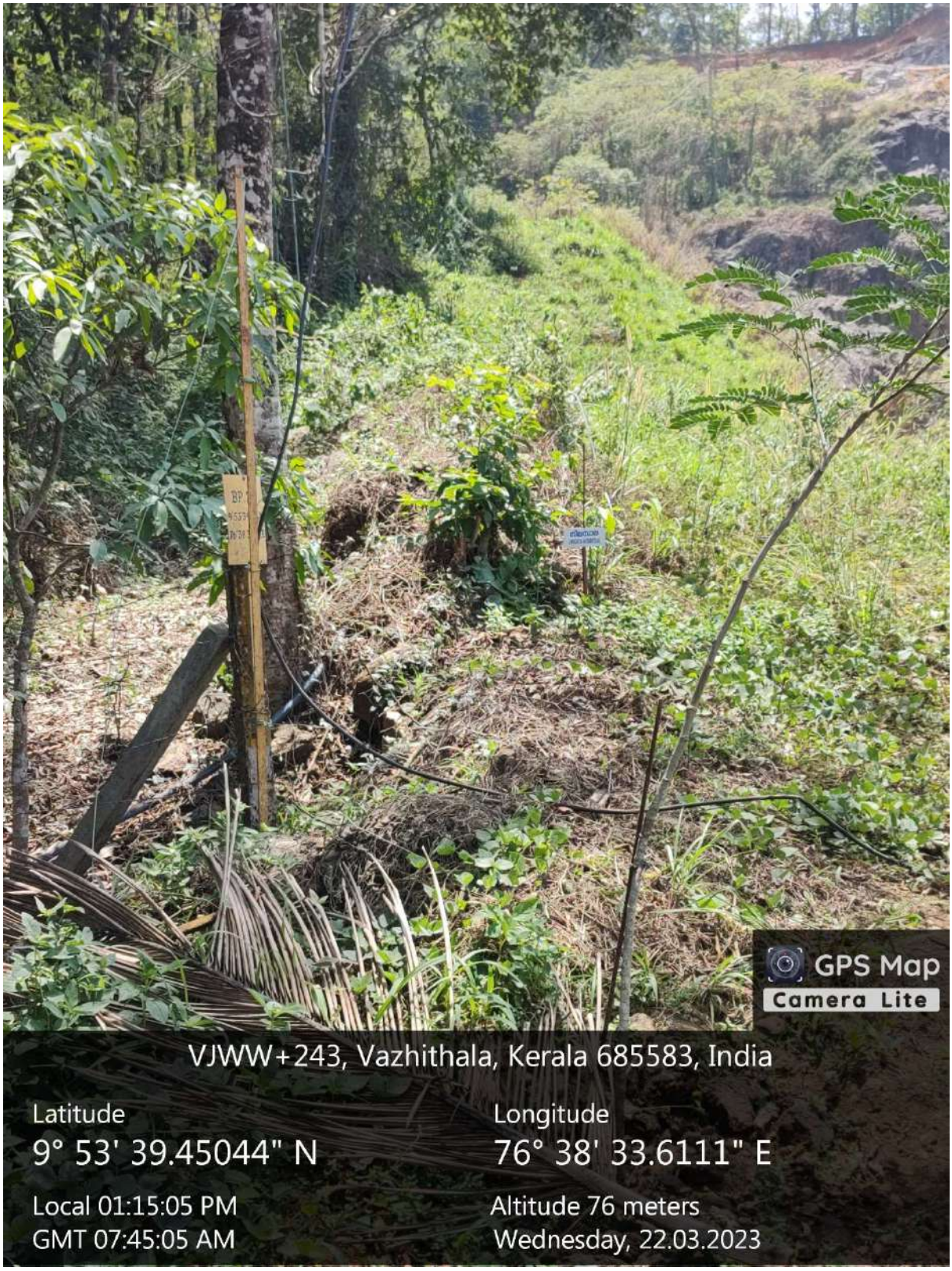


WATER TANKER WITH SPRINKLER


MOBILE WATER SPRINKLER UNIT
SOUND HORN
STOP
KL 38
J0054
GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 44.08955" N
Longitude
76° 38' 22.33993" E
Local 12:54:24 PM
GMT 07:24:24 AM
Altitude 77 meters
Wednesday, 22.03.2023

MIST SPRAYERS

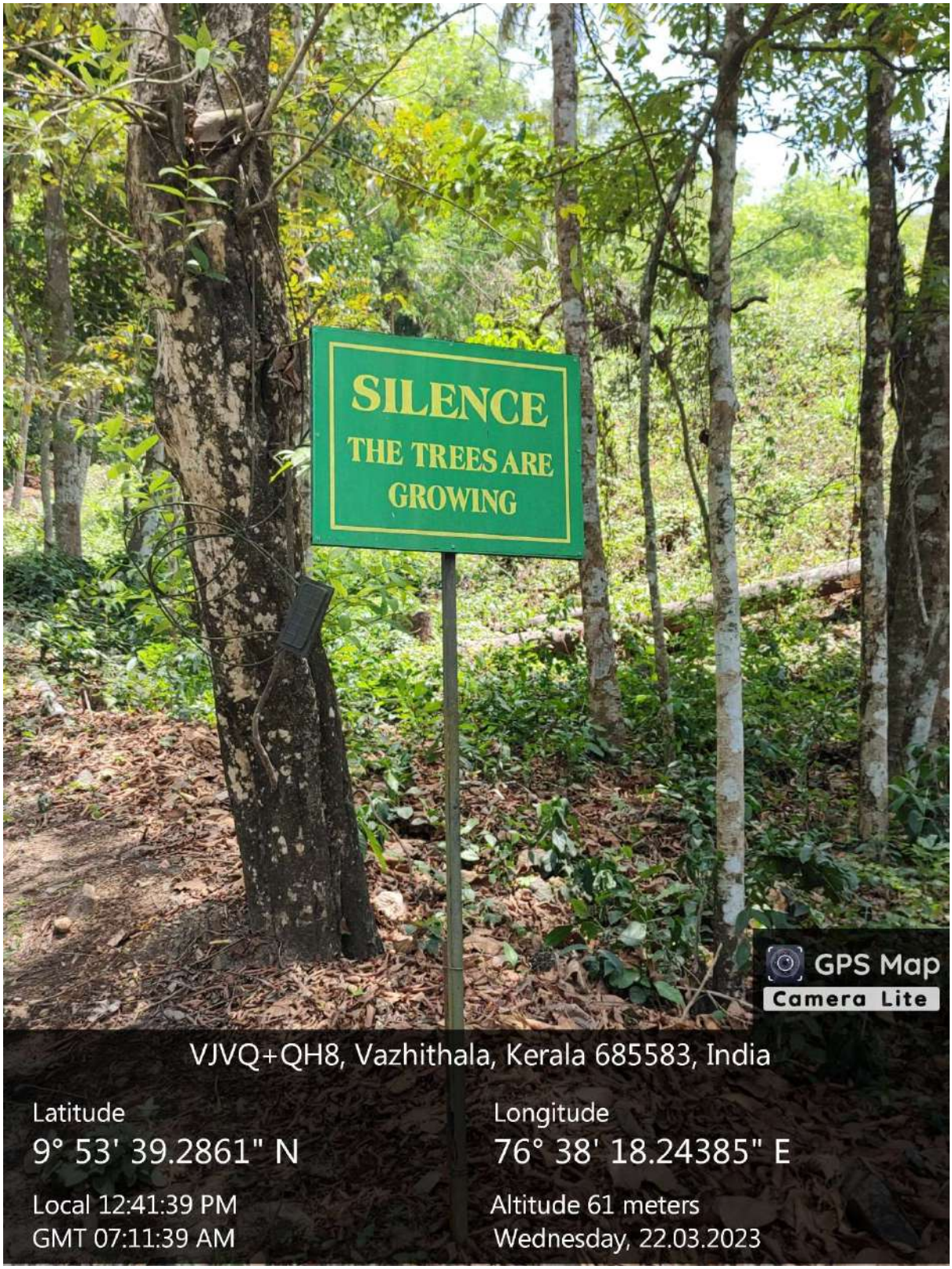
Annexure- 10


GPS Map
Camera Lite
VJWW+243, Vazhithala, Kerala 685583, India
Latitude
9° 53' 39.45044" N
Longitude
76° 38' 33.6111" E
Local 01:15:05 PM
GMT 07:45:05 AM
Altitude 76 meters
Wednesday, 22.03.2023

AVENUE PLANTATION

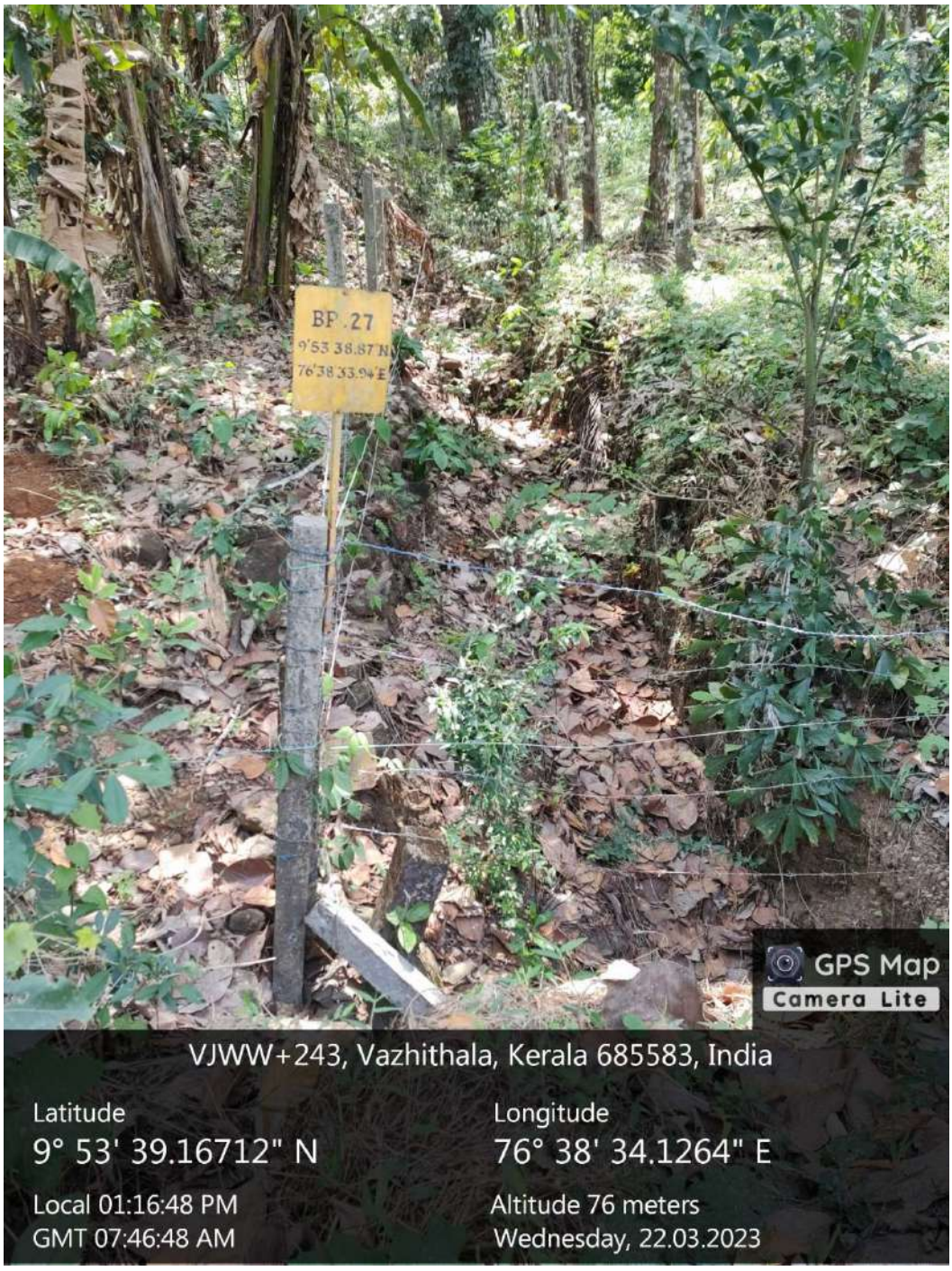

GPS Map
Camera Lite
Vazhithala Koladi Road, Vazhithala, Kerala 685583, India
Latitude
9° 53' 49.15669" N
Longitude
76° 38' 33.51998" E
Local 01:31:23 PM
GMT 08:01:23 AM
Altitude 39 meters
Wednesday, 22.03.2023


GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Lat 9° 53' 43.52622" N Long 76° 38' 22.81729" E
Local 12:47:56 PM
GMT 07:17:56 AM
Altitude 77 meters
Date Wed, 22 Mar 2023


SILENCE
THE TREES ARE
GROWING
GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 39.2861" N
Longitude
76° 38' 18.24385" E
Local 12:41:39 PM
GMT 07:11:39 AM
Altitude 61 meters
Wednesday, 22.03.2023

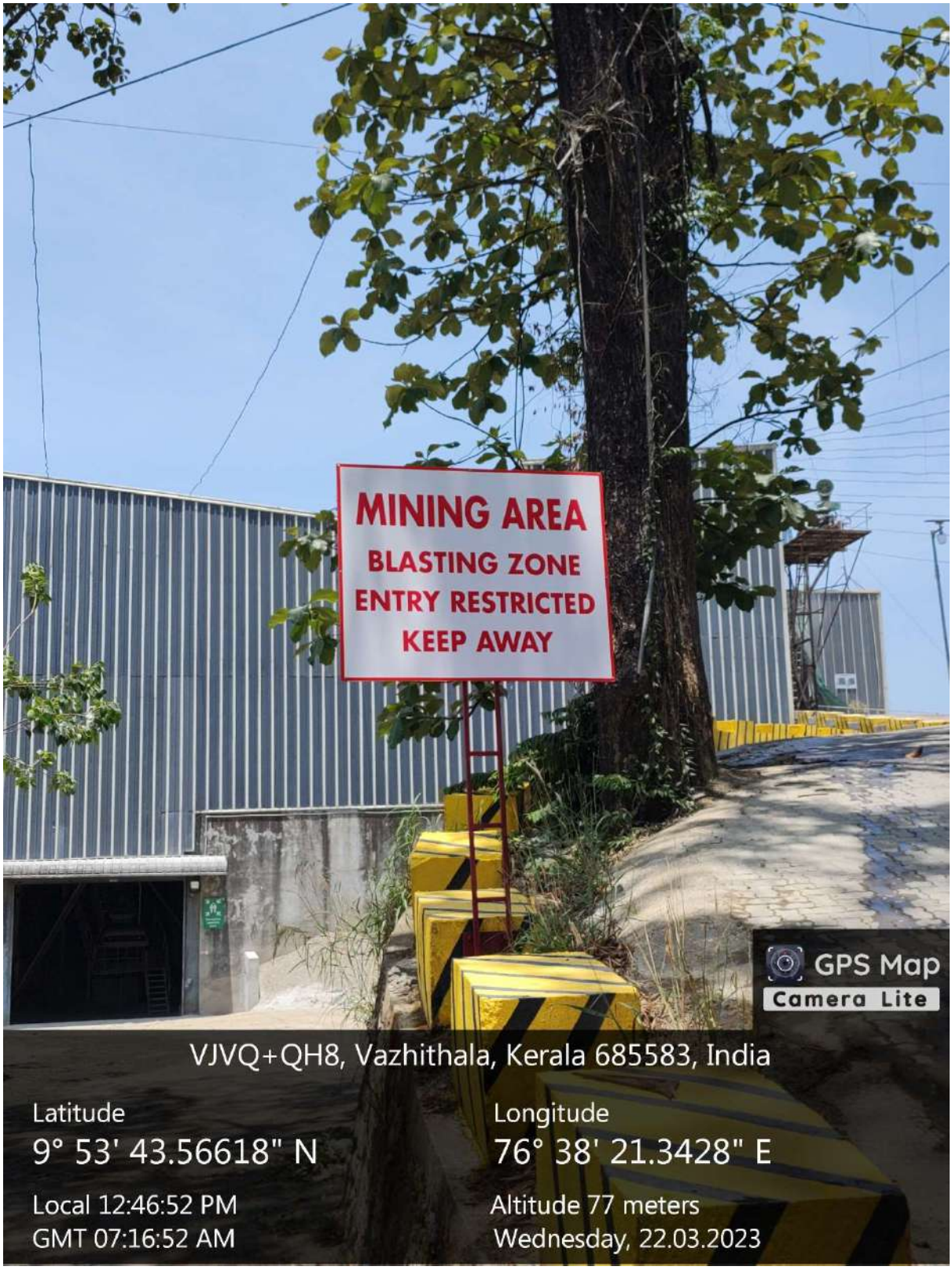

COMPENSATORY PLANTATION
GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Lat 9° 53' 39.74226" N Long 76° 38' 15.65423" E
Local 02:34:28 PM
GMT 09:04:28 AM
Altitude 46 meters
Date Wed, 22 Mar 2023

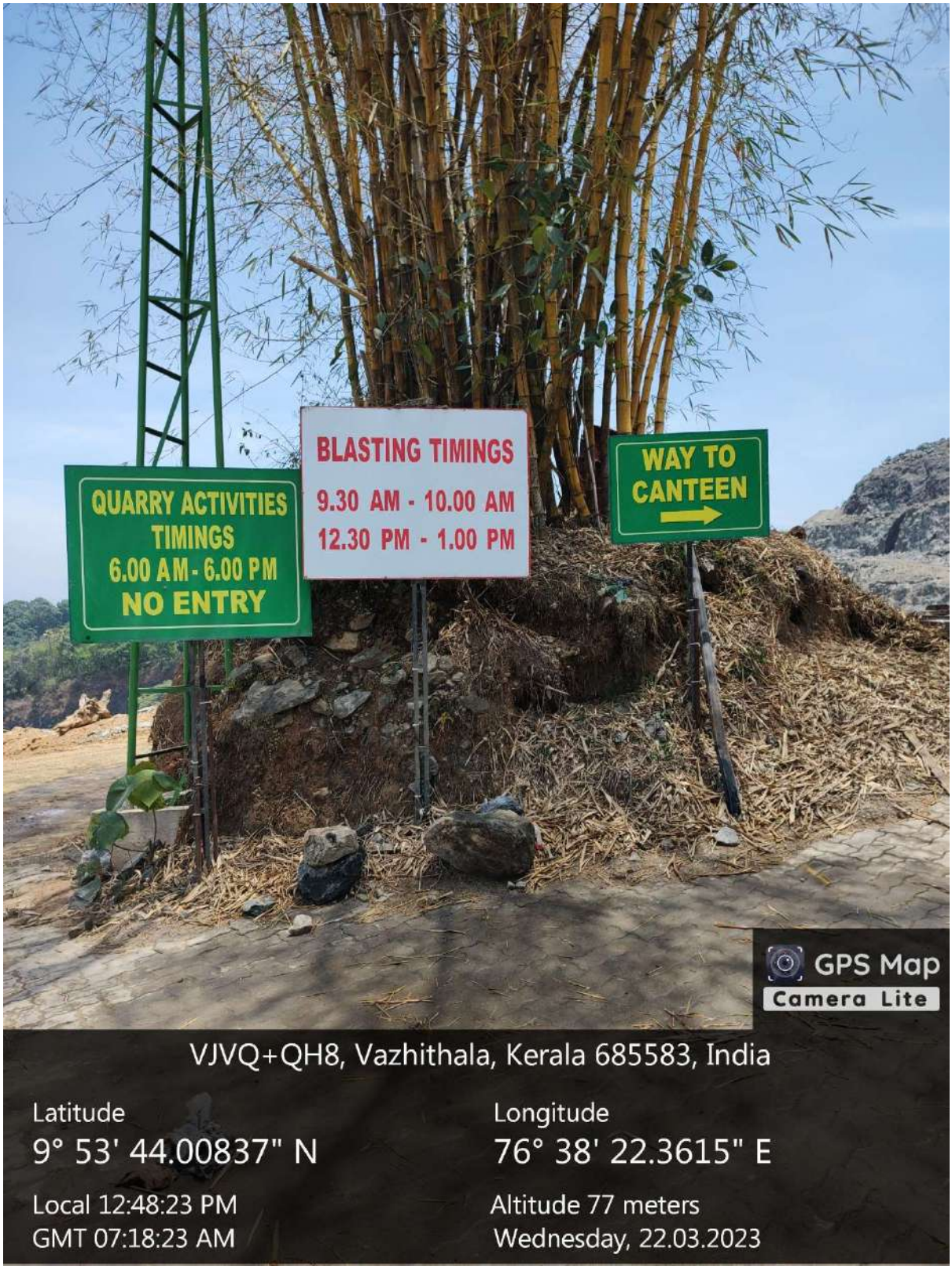
Annexure-11



Boundary Fencing

Annexure- 12

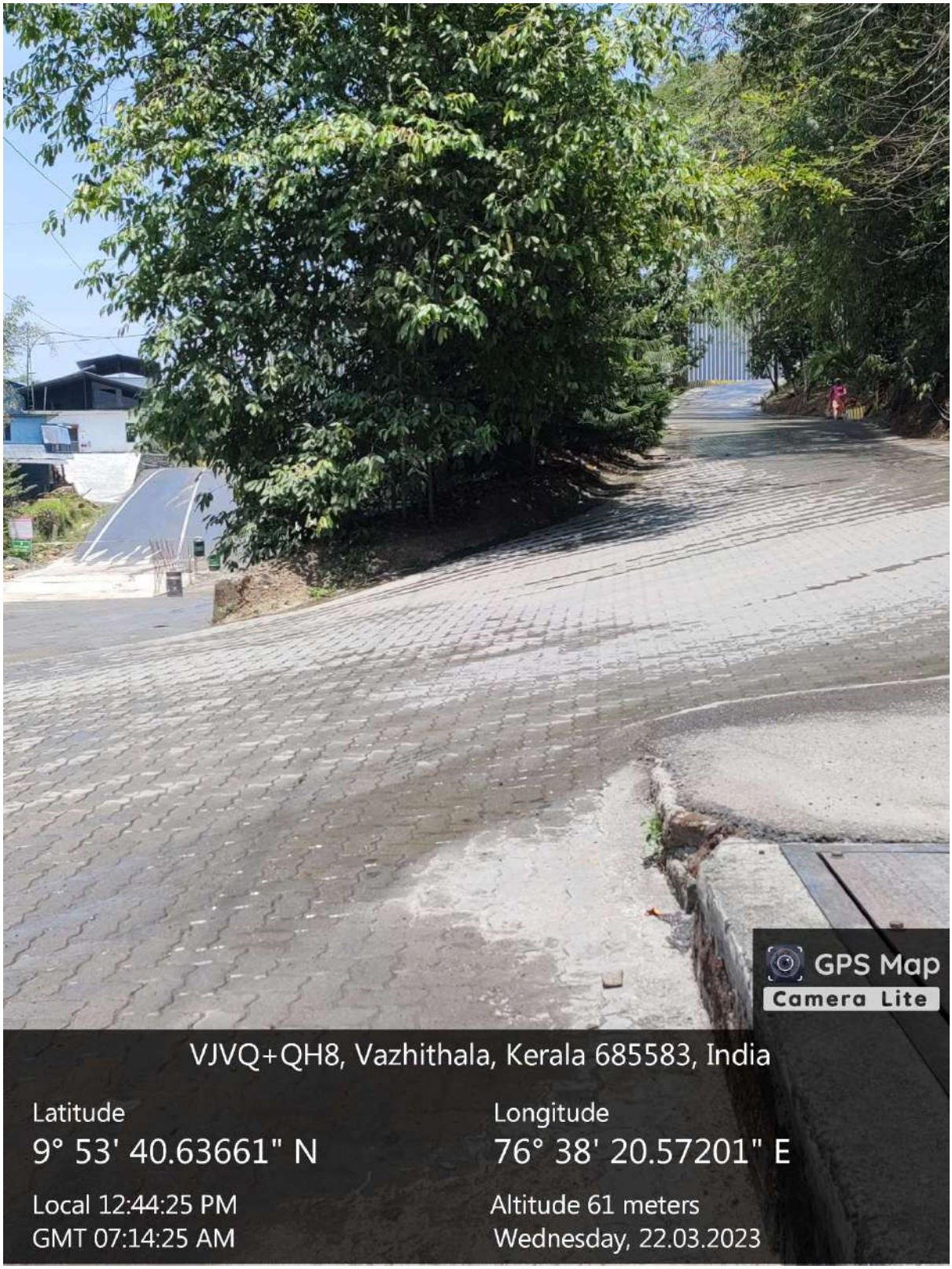

MINING AREA
BLASTING ZONE
ENTRY RESTRICTED
KEEP AWAY
GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 43.56618" N
Longitude
76° 38' 21.3428" E
Local 12:46:52 PM
GMT 07:16:52 AM
Altitude 77 meters
Wednesday, 22.03.2023


QUARRY ACTIVITIES
TIMINGS
6.00 AM - 6.00 PM
NO ENTRY
BLASTING TIMINGS
9.30 AM - 10.00 AM
12.30 PM - 1.00 PM
WAY TO
CANTEEN
GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 44.00837" N
Longitude
76° 38' 22.3615" E
Local 12:48:23 PM
GMT 07:18:23 AM
Altitude 77 meters
Wednesday, 22.03.2023

SIGN BOARD

Annexure- 13

ACCESS ROAD


GPS Map
Camera Lite
VJVQ+QH8, Vazhithala, Kerala 685583, India
Latitude
9° 53' 40.63661" N
Longitude
76° 38' 20.57201" E
Local 12:44:25 PM
GMT 07:14:25 AM
Altitude 61 meters
Wednesday, 22.03.2023

Annexure- 14

കളപ്പുരയ്ക്കൽ റബ്ബർ നഴ്സറി & ഗാർഡൻ

വാഴക്കുളം. H.O. തൊടുപുഴ
PH. OFF: 9847428399, MOB: 9388870005
ബ്രാഞ്ച്: ഈസ്റ്റ് മാറാടി, മൂവാറ്റുപുഴ
MOB : 9388002077

Date 16/11
No. 1003
Vehicle No.
To United Granites & Metals
9447536733

No.	Particulars	Qty.	Rate	Amount
1	[illegible]	1	2200	2200
2	[illegible]	1	2500	2500
3				
4				4700
5	[illegible]		-	200
6				
7				4500
8				
9				
10				
11				
12				
			TOTAL	

Rupees

For KALAPPURACKAL RUBBER NURSERY & GARDEN

ESTIMATE

12
Brought of

M/s. United Granite & Metal
Vazhu thala.
No. 8589008864
Date 5-12-22

QUANTITY	PARTICULARS	RATE	AMOUNT Rs.	P.
10	Poochapazham	50/-	500	-
20	Manja mandharam	180/-	3600	-
7	Ashoka	60/-	420	-
10	Maramulla	200/-	2000	-
1	Simsiba	1800/-	1800	-
2	Hydranjia	70/-	140	-
7	Rose wood	50/-	350	-
20	Veg.	10/-	200	-
			9010	-
	Thank You !	Total		

Signature

NAGARJUNA HERBAL CONCENTRATES LTD

THODUPUZHA, IDUKKI - 685 588 AGR. NURSERY, AVOLY, VAZHAKULAM
Ph:04852 261903, Mob:9961000981, EMail:

GSTIN : 32AAACN8383Q1ZV
PAN : AAACN8383Q

TAX INVOICE(B2C) - CASH **Original/Duplicate/Triplicate**

Name: UNITED GRANAITES AND METALS
Inv. No: B/22-23/2687
Address: VAZHITHALA
Inv. Date: 07-Dec-22
Veh. No:
Phone:
Mobile:
Sup.Place:
GSTIN/UID:
State: KERALA
Code: 32

SL	Description of Goods / Service	HSN/SAC	GST %	Qty/Uom	Rate	Disc%	Net Value
1	PLAAVU VIETNAM SUPER EARLY BIG		0	6 Nos	800.00		4800.00
	Sub Total:						4800.00
	Less Discount:						0.00
	Net Value:						4800.00
	CGST:						0.00
	SGST:						0.00
	Round Off:						0.00
		Total:		6			4800.00

Rupees Four Thousand Eight Hundred Only
E&OE

For NAGARJUNA HERBAL CONCENTRATES LTD

Bank Details :
Certified that the particulars given above are true and correct.
Authorized Signatory

NAGARJUNA HERBAL CONCENTRATES LTD

THODUPUZHA, IDUKKI - 685 588 AGR. NURSERY, AVOLY, VAZHAKULAM

Ph:04852 261903, Mob:9961000981, EMail:

GSTIN : 32AAACN8383Q1ZV PAN : AAACN8383Q

TAX INVOICE(B2C) - CASH **Original/Duplicate/Triplicate**

Name: **UNITED GRANTS AND METALS** Inv. No: **B/22-23/2883**

Address: VAZHITHALA Inv. Date: **30-Dec-22**

Veh. No:

Phone: Mobile: Sup.Place:

GSTIN/UID: State: KERALA Code: 32

SL	Description of Goods / Service	HSN/SAC	GST %	Qty/Uom	Rate	Disc%	Net Value
1	PLAAVU THENVAIKKA BIG COVER		0	3 Nos	800.00		2400.00
2	PLAAVU DANGSURYA BIG PLANT		0	3 Nos	800.00		2400.00
3	MAAVU KOTTOORKONAM BIG COVER		0	1 Nos	800.00		800.00
4	MURIKOOTTI	0601	0	3 Nos	40.00		120.00
	Sub Total:						5720.00
	Less Discount:						0.00
	Net Value:						5720.00
	CGST:						0.00
	SGST:						0.00
	Adnl.Discount:						-70.00
	Round Off:						0.00
	Total:			10			**5650.00**

Rupees Five Thousand Six Hundred and Fifty Only

E&OE **For NAGARJUNA HERBAL CONCENTRATES LTD**

Bank Details :

Certified that the particulars given above are true and correct. Authorized Signatory

NAGARJUNA HERBAL CONCENTRATES LTD

THODUPUZHA, IDUKKI - 685 588 AGR. NURSERY, AVOLY, VAZHAKULAM

Ph:04852 261903, Mob:9961000981, EMail:

GSTIN : 32AAACN8383Q1ZV PAN : AAACN8383Q

TAX INVOICE(B2C) - CASH **Original/Duplicate/Triplicate**

Name: **UNITED GRANAITE & METALS VAZHITHAL** Inv. No: **B/22-23/3419**

Address: Inv. Date: **28-Feb-23**

Veh. No:

Phone: Mobile: Sup.Place:

GSTIN/UID: State: KERALA Code: 32

SL No	Description of Goods / Service	HSN/SAC	GST %	Qty/Uom	Rate	Disc%	Net Value
1	PLAAVU VIETNAM SUPER EARLY BIG		0	1 Nos	800.00		800.00
2	PLAAVU SEEDLESS BIG COVER		0	1 Nos	800.00		800.00
3	PLAAVU DANGSURYA BIG PLANT		0	1 Nos	800.00		800.00
4	KUTTIKURUMULAKU - POT	0601	0	2 Nos	250.00		500.00
	Sub Total:						2900.00
	Less Discount:						0.00
	Net Value:						2900.00
	CGST:						0.00
	SGST:						0.00
	Round Off:						0.00
	Total:			5			**2900.00**

Rupees Two Thousand Nine Hundred Only

E&OE **For NAGARJUNA HERBAL CONCENTRATES LTD**

Bank Details :

Certified that the particulars given above are true and correct. Authorized Signatory

Nursery Receipts

Annexure- 15

EXPLOSIVE LICENSE

भारत सरकार | Government of India
वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो) | Petroleum & Explosives Safety Organisation (PESO)
पूर्व नाम- विस्फोटक विभाग | Formerly- Department of Explosives
केन्द्रीय भवन, ब्लाक सी-2, तीसरी मंजिल | Kendriya Bhavan, Block C-2, 3rd Floor
CSEZ पी ओ कक्कानाड कोच्ची | CSEZ PO Kakkanad Dist. Ernakulam Ernakulam 682037
फोन (Phone)- 2427286 | फैक्स (Fax)- 2427276
ई-मेल Email: dycceernakulam@explosives.gov.in

17 FEB 2020

संख्या (No.): **E/SC/KL/22/811(E38112)** दिनांक (Date): 06/02/2020

सेवा में | To,

Shri George Kochuparambil,
M/S United Granites & Metal,Vazhithala P.O, Idukki,Kerala., Town/Village -
District-IDUKKI, State-Kerala, Pincode -

विषय: Survey No(s).519/1-13, ग्राम Manakkadu,Thodupuzha, जिला IDUKKI, राज्य Kerala में विस्फोटक के मैगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञप्ति सं E/SC/KL/22/811(E38112) के नवीनीकरण संदर्भ में।

Subject: Possession for Use of of Explosives from magazine situated at Survey No(s).:519/1-13, Manakkadu,Thodupuzha, Dist. IDUKKI, Kerala - Licence No.: E/SC/KL/22/811(E38112) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding

महोदय | Sir,

आपका उपर्युक्त विषय पर पत्र संख्या Nil दिनांक 29/01/2020 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्ररूप LE-3 में जारी अनुज्ञप्ति दिनांक **31/3/2025** तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।
Reference to your letter No.: Nil dated: 29/01/2020, the subject licence duly renewed upto **31/3/2025** and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.

अनुज्ञप्ति के आगामी नवीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक **31/03/ 2025** से पहले **इस कार्यालय** को भेजे जाएं
For further renewal of licence, please submit the following documents so as to reach **this office** on or before **31/3/2025**

- प्ररूप आरई-1 में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।
  Application in Form RE-1 duly filled in and signed.
- एक से पाँच वर्ष के अनुज्ञप्ति शुल्को का, विस्फोटक नियम, 2008 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से लाइसेंस शुल्क ऑनलाइन जमा किया जाना है।
  Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2008.
- अनुमोदित प्लान के साथ मूल अनुज्ञप्ति।
  Original licence with approved plan.
- कृपया इस संबंध में विस्फोटक नियम, 2008 के नियम 112 का भी संदर्भ ग्रहण करें।
  In this connection, please also refer to Rule 112 of Explosives Rules, 2008.
- विस्फोटकों के क्रय हेतु आरई-11 में मांगपत्र (इंडेंट) आपूर्तिकर्ता को दिया जाए और उसी की एक प्रति इस कार्यालय को भेजी जाएं (आतिशबाजी गोदाम के लिए लागू नहीं ¶□
  Indent for purchase of explosives shall be placed in RE-11 with the supplier and copy of the same shall be sent to this office.(Not applicable for fireworks store house)
- कृपया विस्फोटकों की त्रैमासीक विवरणी हर तिमाही के अंत में आरई-7 में प्रस्तुत की जाएं । विवरणी इस कार्यालय के कार्यालय में आगामी तिमाही के 10 तारीख से पहले पहुंच जानी चाहिए (आतिशबाजी गोदाम के लिए लागू नहीं ¶□Please submit quarterly returns of explosives in RE-7 at the end of every quarter so as to reach this office by 10th of the succeeding quarter.(Not applicable for fireworks store house)
- सभी ब्लास्टिंग आपरेशन एक सक्षम द्वारा की जाएगी जो उपरोक्त नियमों के तहत एक वैध शॉट फायर प्रमाणपत्र धारक हो। हालांकि, खान अधिनियम 1952 के अधीन आने वाले खानों में ब्लास्टिंग आपरेशन करने वाले ब्लास्टर की योग्यता उसी अधिनियम से निर्धारित हो।
  All blasting operations shall be carried out by a competent person holding a valid shot firer's permit granted under above rules. However, blasting operations in mines coming under the purview of the Mines Act 1952, the blaster shall have qualifications prescribed in the regulations framed under the said Act.

भवदीय | Your's faithfully

(आर.वेणुगोपाल | Dr. R.Venugopal)
उप मुख्य विस्फोटक नियंत्रक | Deputy Chief Controller of Explosives
कोच्ची | Ernakulam

Deputy Chief Controller of Explosives
एरणाकुलम Ernakulam

प्रतिलिपि प्रेषित | Copy Forwarded to:
1. ज़िला मॉजस्ट्रेट (District Magistrate), IDUKKI (Kerala)- सूचना के लिए (for information.)

उप मुख्य विस्फोटक नियंत्रक | Deputy Chief Controller of Explosives
कोच्ची | Ernakulam

(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)

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

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) से (घ) देखिए।)

(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)

(ग) उपयोग के लिए एक समय पर वर्ग 1,2,3,4,5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखने के लिए अनुज्ञप्ति

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

Licensee Photo w

अनुज्ञप्ति सं. (Licence No.) : E/SC/KL/22/811(E38112)

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

1. Licence is hereby granted to

Shri George Kochuparambil (अधिभोगी / Occupier : Shri George Kochuparambil), M/s.United Granites & Metal,Vazhithala P.O, Idukki,Kerala., Town/Village - , District-IDUKKI, State-Kerala, Pincode -

को अनुज्ञप्ति अनुदत्त की जाती है।

2. अनुज्ञप्तिधारी की प्रास्थिति | Status of licensee : **Individual**

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

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	100 Kg.
2.	Safety Fuse	6 ,1	0	1500 Mtrs
3.	Detonators	6 ,3	0	5000 Nos.
4.	Electric Detonators	6 ,3	0	1000 Nos.

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

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञप्त परिसर की पुष्टि होती है।
The licensed premises shall conform to the following drawing(s): .
रेखाचित्र क्र. (Drawing No.) E/SC/KL/22/811 : (E38112)
दिनांक (Dated) 05/05/2004

6. अनुज्ञप्ति परिसर निम्नलिखित पते पर स्थित हैं। The licensed premises are situated at following address:
Survey No(s). 519/1-13 , ग्राम (Town/Village) : **Manakkadu,Thodupuzha** पुलिस थाना (Police Station) : **Thodupuzha**
जिला (District) **IDUKKI** राज्य (State) **Kerala** पिनकोड (Pincode)
दूरभाष (Phone) इ. मेल (E-Mail) फेक्स (Fax)

7. अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्विष्ट हैं।
The licensed premises consist of following facilities. : **NA**

8. अनुज्ञप्ति समय – समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधो, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबध्दों 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 व्दारा हस्ता.क्षरित इस अनुज्ञप्ति की शर्तें और अतिरिक्ति 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 2006** तक विधिमान्य रहेगी। This licence shall remain valid till **31st day of March 2006.**

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 अधिक्रमण करने या यदि अनुज्ञप्त परिसर योजना या उससे संलग्न उपबंध में दर्शित 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.

Sd/-

तारीख | The Date - 05/05/2004

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

Amendments :

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 27/12/2011
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 04/03/2014

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
06/02/2020	31/03/2025	Dy. Chief Controller of Explosives, Ernakulam

उप मुख्य विस्फोटक नियंत्रक
Deputy Chief Controller of Explosives
एरनाकुलम 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.

(सेट VIII | Set VIII)

मैगजीन में वर्ग 1,2,3,4,5,6, और 7 के विस्फोटकों को विक्री 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/22/811(E38112) की शर्तें निम्नलिखित हैं ।

The following are the conditions of licence number E/SC/KL/22/811(E38112) 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.

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 प्रयुक्तर 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 ।
   (ड) 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 बेंचे, 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 ।

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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 तडित चालक का परीक्षण विस्फोटक नियंत्रक करता है तो अनुज्ञप्तिधारी 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 तडित 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 तडित 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 तडित चालक के परीक्षण के लिए हर स्थिति में विहित की गई है ।
If the lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for test. In the 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 वस्तुऐं या पदार्थ, जिससे विस्फोट हो सकता है या आग लग सकती हो, किन्तु इस शर्त के कारण ऐसी संरचना, स्थिति या स्वरूप में किसी कृत्रिम बत्ती का प्रवेश वर्जित नहीं है जिससे आग लगने या विस्फोट होने का खतरा न हो :
परंतु इस शर्त का वह भाग, जो लोहे या इस्पात के अपवर्जन को लागू होता है, ऐसे किसी भवन के संबंध में बाध्य कर नहीं होगा जिससे भिन्न कोई विस्फोटक नहीं रखा गया है ।
Due provisions shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of 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. मैगज़ीन 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 ओहा 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 शुल्क घास या झांड़ी या ज्वलनशील सामग्री नहीं रहने दी जाएगी ।

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

25. निम्न से अधिक ध्वनि स्तर उत्पादित करने वाले आतिशबाजियों पटाखों की बिक्री और रखने के लिए –
(क) जो फटने की जगह से चार मीटर की दूरी पर है, 125 डी.बी.(ए1) या 145 डी.बी.(सी)पी.के. प्रतिबंधित होंगे;
(ख) श्रृंखला (जुड़े हुए पटाख) को गठन करने वाले व्यक्तिगत पटाखों के लिए उपर्युक्त उल्लिखित सीमा 5 लॉग.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 व्दारा 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

उप मुख्य विस्फोटक नियंत्रक
Deputy Chief Controller of Explosives
एरणाकुलम 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/22/811(E38112) in form LE-3 granted to Shri George Kochuparambil, M/s.United Granites & Metal,Vazhithala P.O, Idukki,Kerala., Kerala-.

	Type of Structure(s)	Safety distances meters	
	Inside Safety Distances(ISD)	M	UM
1	Room or Workshop used in Connection with the Magazine	11	17
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		33
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		45
19	Building or Works used for Storage and Manufacture of Explosives or of articles which contain Explosives		
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		45
28	Electric Power over head Transmission Lines upto 440V		15

The Date : 05/05/2004

For Joint Chief Controller of Explosives
South Circle, Chennai

उप मुख्य विस्फोटक नियंत्रक
Deputy Chief Controller of Explosives
एर्नाकुलम Ernakulam

Amendments :

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 27/12/2011
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 04/03/2014

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
केन्द्रीय भवन, ब्लाक सी-2, तीसरी मंजिल | Kendriya Bhavan, Block C-2, 3rd Floor
CSEZ पी ओ कक्कानाड कोच्ची | CSEZ PO Kakkanad Dist. Ernakulam Ernakulam 682037
फोन (Phone):- 2427286 | फैक्स (Fax):- 2427276

संख्या/ No:**A/SC/KL/P3/14(A2264)**

दिनांक / Dated : 01/02/2022

सेवा में / To,
GEORGE KOCHUPARAMBIL,Prop.M/s United Granites and Metal,
S.No.357/3, Block No.11,Manakkadu Village,Thodupuzha Tk.,
Town/Village - Thodupuzha
Distt. IDUKKI, State. Kerala, Pincode-685588

विषय / Subject: **Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing unit (ANFO) situated at Survey No.:357/3, Block No.11, Village/Town. Manakkadu, Distt. IDUKKI, State Kerala Licence No.: A/SC/KL/P3/14(A2264) granted in Form P-3 of Ammonium Nitrate Rules, 2012 - Renewal regarding**

महोदय / Sir(s),

आपके पत्र संख्यां Nil दिनांक 19/01/2022 के सन्दनर्भ में अमोनियम नाइट्रेट नियम 2012 के प्ररूप पी--3 में जारी विषयक अनुज्ञप्तिस दिनांक **31/3/2027** तक विधिवत नवीनीकृत कर आपको प्रेषित की जा रही है ।कृपया अनुज्ञप्तिप की पावती स्वीमकार करें । / Reference to your letter No.: Nil dated: 19/01/2022, the subject licence duly renewed upto **31/3/2027** and issued in Form P-3 of Ammonium Nitrate Rules, 2012 is forwarded herewith, Please acknowledge receipt of the licence.

अनुज्ञप्ति के आगामी नवीनीकरण हेतु कृपया निम्नलिखित दस्तावेज इस प्रकार प्रेषित करें कि वह दिनांक **31/3/2027**. को या उससे पूर्व **this office** में प्राप्तन हो जाएं / For further renewal of licence, **please submit** the following **documents** so as to reach **this office** on or before **31/3/2027**.

- विधिवत भरा हुआ एवं हस्तापक्षरित प्ररूप आर – 1 /Application in Form R-1 duly **filled in and** signed.
- एक से पाँच वर्ष के अनुज्ञप्ति शुल्को का, अमोनियम नाइट्रेट नियम, 2012 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से लाइसेंस शुल्क ऑनलाइन जमा किया जाना है।
  Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Ammonium Nitrate Rules, 2012.
- मूल अनुज्ञप्ति मय अनुमोदित आरेखण / Original licence with approved plan.
- इस सम्बन्धत में कृपया अमोनियम नाइट्रेट नियम, 2012 के नियम 36 का भी सन्दर्भ लें / In this connection, please also refer to Rule 36 of Ammonium Nitrate Rules, 2012.
- रंगीन पासपोर्ट साइज के 6 फोटोग्राफ जिन पर सामने की ओर काले रंग की अमिट स्याही से ऑक्यूपायर (अमोनियम नाइट्रेट नियम, 2012 के नियम 2 (O) के अन्तर्गत यथा परिभाषित) द्वारा विधिवत हस्ताक्षर किया गया हो (यदि जमा नहीं किया गया हो) / Six copies of colour passport size photographs duly signed by the occupier (as defined under Rule 2 (O) of Ammonium Nitrate Rules,2012) 'in front' by 'black color indelible ink'.(if not submitted).

संलग्नक / Enclosures :

भवदीय / Yours faithfully,

(पी.के.राणा) | (Dr. P. K. Rana)
विस्फोटक नियंत्रक | Controller of Explosives
For Dy. Chief Controller of Explosives
कोच्ची
Ernakulam

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

प्रतिलिपि प्रेषित / Copy Forwarded to:

1. **District Magistrate, IDUKKI (Kerala) for information**

कृते उप मुख्य विस्फोटक नियंत्रक | For Dy. Chief Controller of Explosives,
कोच्ची | Ernakulam

(स्टेटस, शुल्क, एवं अन्य विवरणों के बारे में अधिक जानकारी हेतु कृपया संगठन का 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.

Licence Endorsed under Rule 107(3) of Explosives Rules,2008
By Shri Dr. R.Vencgopal, Joint Chief Controller of Explosives, Ernakulam on 26/06/2019

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
Licence to possess for use of Ammonium Nitrate from a store house attached to explosives manufacturing

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 :

GEORGE KOCHUPARAMBIL,Prop.M/s United Granites and Metal (अधिष्ठाता : GEORGE KOCHUPARAMBIL)
S.No.357/3, Block No.11,Manakkadu Village,Thodupuzha Tk., ,
शहर । गांव - Thodupuzha
जिला- IDUKKI , राज्य- Kerala , पिन कोड - 685588
Phone - , Email- , फैक्स-

1. अनुज्ञप्तिधारी का स्तर: **Individual**
   Status of licence holder: **Individual**
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 निम्नेलिखित 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)	35000	420000

4. अनुज्ञप्त परिसर निम्नलिखित आरेखण(णों) 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 : 09/11/2017**
5. अनुज्ञप्त परिसर निम्नलिखित पते पर स्थित है :
   The Licensed premises are situated at following address:
   Survey No. 357/3, Block No.11, शहर।गांव | 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 हैं :
   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, आरेखण 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 I Date: 09/11/2017

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

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	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.

Conditions

मुख्य विस्फोटक नियंत्रक / या विस्फोटक नियंत्रक द्वारा 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 आरेखण 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 अनुज्ञप्त् 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 जाएं ।
    License holder shall maintain records in the prescribed forms specified in Schedule II Part 3 to ensure accountability, identification and traceability of Ammonium Nitrate and shall produce such records on demand to authority specified in rule 50.
11. अनुज्ञप्तिधारी, अनुसूची II भाग 3 में विनिर्दिष्ट प्रारूप द-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.

कृते उप मुख्य विस्फोटक नियंत्रक
For Deputy Chief Controller of Explosives
एरनाकुलम 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
केन्द्रीय भवन, ब्लाक सी-2, तीसरी मंजिल | Kendriya Bhavan, Block C-2, 3rd Floor
CSEZ पी.ओ.कक्कानाड कोच्ची | CSEZ PO Kakkanad Dist. Ernakulam Ernakulam 682037
फ़ोन (Phone):- 2427286 | फैक्स (Fax):- 2427276
ई-मेल Email: dycceernakulam@explosives.gov.in

संख्या (No.): **E/SC/KL/38/21(E98818)** दिनांक (Date): 01/02/2022

सेवा में | To,

George Kochuparambil,Proprietor,
M/s.United Granites & Metals, Manakkadu (v), Vazhithala P.O., Thodupuzha Taluk,, Town/Village - IDUKKI
District-IDUKKI, State-Kerala, Pincode - 685588

विषय : Survey No.357/3, Block No.11,, ग्राम Manakkadu (v), Thodupuzha Taluk, जिला IDUKKI, राज्य Kerala में एनफ़ों विस्फोटक के एनफ़ों शेड में विनिर्माण हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-1 में जारी अनुज्ञप्ति सं E/SC/KL/38/21(E98818) के नवीनीकरण संदर्भ में।

Subject: Manufacturing of ANFO situated at Survey No.:357/3, 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 - Renewal regarding

महोदय | Sir,

आपका उपर्युक्त विषय पर पत्र संख्या Nil दिनांक 19/01/2022 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्ररूप LE-1 में जारी अनुज्ञप्ति दिनांक **31/3/2027** तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।
Reference to your letter No.: Nil dated: 19/01/2022, the subject licence duly renewed upto **31/3/2027** and issued in Form LE-1 of Explosives Rules, 2008 is forwarded herewith.

अनुज्ञप्ति के आगामी नवीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक **31/03/ 2027** से पहले **इस कार्यालय** को भेजे जाएं.
For further renewal of licence, please submit the following documents so as to reach **this office** on or before **31/3/2027**.

- प्ररूप आरइ-1 में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।
  Application in Form RE-1 duly filled in and signed.
- एक से पाँच वर्ष के अनुज्ञप्ति शुल्को का, विस्फोटक नियम, 2008 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से लाइसेंस शुल्क ऑनलाइन जमा किया जाना है।
  Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2008.
- अनुमोदित प्लान के साथ मूल अनुज्ञप्ति।
  Original licence with approved plan.
- कृपया इस संबंध में विस्फोटक नियम, 2008 के नियम 112 का भी संदर्भ ग्रहण करें।
  In this connection, please also refer to Rule 112 of Explosives Rules, 2008. आपके द्वारा विनिर्माण किए गए विस्फोटको का रिकार्ड (खाता) विस्फोटक नियम, 2008 के प्रारूप आर.इ.2 और आर.इ.5 में बनाए रखने की सलाह दी जाती है।
  You are advised to maintain accounts of explosives manufactured by you in Form RE-2 and RE-5 of Explosives Rules, 2008.

भवदीय | Your's faithfully

(पी.के.राणा | Dr. P. K. Rana)
विस्फोटक नियंत्रक | Controller of Explosives
कृते उप मुख्य विस्फोटक नियंत्रक | For Dy. Chief Controller of Explosives
कोच्ची | Ernakulam

प्रतोलिपे प्रेषित | Copy Forwarded to:

1. ज़िला मॉजिस्ट्रेट (District Magistrate), IDUKKI (Kerala)- सूचना के लिए (for information.)

कृते उप मुख्य विस्फोटक नियंत्रक | For The Dy. Chief Controller of Explosives,
कोच्ची | Ernakulam

(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.

Licence Endorsed under Rule 107(3) of Explosives Rules,2008
By Shri Dr. R.Venugopal, Joint Chief Controller of Explosives, Ernakulam on 29/04/2019

अनुज्ञाप्ति प्ररुप एल. इ.-1 | LICENCE FORM LE-1

(विस्फोटक नियम, 2008 की अनुसूची 4 के 1(घ) देखिए।)

(See article 1(d) of Schedule IV of Explosives Rules, 2008)

(घ) एक समय में 200 किलोग्राम से अनधिक स्थल पर ए.एन.एफ.ओ. विस्फोटक के विनिर्माण के लिए अनुज्ञप्ति

Licence to manufacture : (d) ANFO explosives not exceeding 200 kilogrammes at any one time.

अनुज्ञाप्ति सं. (Licence No.) : E/SC/KL/38/21(E98818)
वार्षिक फीस रुपए (Annual Fee Rs): 1200/-

1. Licence is hereby granted to

George Kochuparambil,Proprietor (औधभागी / Occupier : George Kochuparambil), M/s.United Granites & Metals, Manakkadu (v), Vazhithala P.O., Thodupuzha Taluk,, Town/Village - IDUKKI, District-IDUKKI, State-Kerala, Pincode - 685588

को अनुज्ञप्ति अनुदत्त की जाती है।

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

3. अनुज्ञप्ति निम्नलिखित प्रयोजनों के लिए विधिमान्य है। / Licence is valid only for the following purpose. : Manufacture of - **ANFO** - के विनिर्माण के लिए।

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.	ANFO	2 ,0	0	200 Kg.

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञप्त परिसर की पुष्टि होती है। / The licensed premises shall conform to the following drawing(s): . : रेखाचित्र क्र. (Drawing No.) E/SC/KL/38/21(E98818) दिनांक (Dated) 02/04/2018

6. अनुज्ञप्ति परिसर निम्नलिखित पते पर स्थित हैं। The licensed premises are situated at following address:
Survey No. 357/3, 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) इ. मेल (E-Mail) फैक्स (Fax)

7. अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्विष्ट हैं। / The licensed premises consist of following facilities. : **as per attached Annexture details**

8. अनुज्ञप्ति समय – समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधो, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबध्दों 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 व्दारा हस्ताक्षरित इस अनुज्ञप्ति की शर्तें और अतिरिक्त शर्तें। Conditions and Additional Conditions of this licence signed by the licensing authority.
   3. परिशिष्ट | Annexure

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

यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट Set III के अधीन तथा उपवर्णित इस अनुज्ञप्ति की शर्तों का अधिक्रमण करने या यदि अनुज्ञप्त परिसर योजना या उससे संलग्न उपबंध में दर्शित 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 Set III, 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.

Sd/-

तारीख | The Date - 02/04/2018

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

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
01/02/2022	31/03/2027	उप मुख्य विस्फोटक नियंत्रक, एरणाकुलम Dy. Chief Controller of Explosives, Ernakulam कृते उप मुख्य विस्फोटक नियन्त्रक For Deputy Chief Controller of Explosives

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.

(सेट III | Set III)

मुख्य विस्फोटक नियंत्रक या विस्फोटक नियंत्रक व्दारा अनुदत्त प्ररूप एल ई 1 [अनुच्छेद (घ)] 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.

1. परिसर या उसके किसी भाग में एएनएफओ विस्फोटकों की मात्रा किसी एक समय में उस मात्रा से अधिक नहीं होगी, जिसकें 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 संकर्मो 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 व्दारा 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 स्थानकों 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 युक्तियुक्त 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 स्थारनीय 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

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

Annexure- 16

KSPCB LICENSE

FILE NO : PCB/RO-EKM/IDK/OL-845/18
Date of issue : 16/07/2018

KERALA STATE POLLUTION CONTROL BOARD

CONSENT TO

OPERATE/AUTHORISATION/REGISTRATION

ISSUED UNDER

The Water (Prevention & Control of Pollution) Act, 1974
The Air (Prevention & Control of Pollution) Act, 1981

and

The Environment (Protection) Act, 1986

As per Application No. :7515269
Dated:28-06-2018

TO

M/s SRI.GEORGE KOCHUPARAMBIL,QUARRY OF UNITED GRANITES & METALS
GEORGE KOCHUPARAMBIL VAZHITHALA P O THODUPUZHA

Consent No. :018IDKCTOA7515269
Valid Upto :15/07/2023

1. GENERAL

1.1. This integrated consent is granted subject to the power of the Board to withdraw consent, review and make variation in or revoke all or any of the conditions as the Board deems fit.

1	**VALIDITY**	15/07/2023
2	Name and Address of the establishment	SRI.GEORGE KOCHUPARAMBIL,QUARRY OF UNITED GRANITES & METALS VAZHITHALA P O THODUPUZHA 685583
3	Communication	Telephone :91-9995878898 Fax :- E-mail:unitedgranitesandmetals@gmail.com
4	Occupier Details	GEORGE KOCHUPARAMBIL KOCHUPARAMBIL(H) MANAKKAD VAZHITHALA
5	Local Body	MANAKADU PNCHAYATH
6	Survey Number	351/1 pt,354/4,354/5,355/1pt,352/1pt,350
7	Village	MANAKKAD
8	Taluk	THODUPUZHA
9	District	IDUKKI
10	Capital Investment(Rs in Lakhs)	1200
11	Scale	Large
12	Category	RED
13	Annual fee(Rs) Total Fee remitted(Rs)	Rs. 81000 Rs. 405000/-
14	RAW MATERIAL	PRODUCTS
	ROCK/Y @400000 Metric Tonnes	STONE AGGREGATES/Y @400000 Metric Tonnes
15	Total Power Required (HP)	

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 established as per the Integrated Consent to Establish issued shall be operational at all times during which the industry is functional. 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 along with.

2.2 Water consumption:

2.3 Effluent generation:

2.4 The characteristics of effluent after treatment shall confirm to the following tolerance limits:

SI.NO.	Characteristics	Unit	Tolerance Limit	
			Sewage	Trade Effluent

2.5 Mode of disposal of treated effluent:

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

3.1 Adequate air pollution control measures shall be operational at all times during the functioning of the industry. Additional facilities required, if any, to achieve the standards laid down by the Board shall also be made along with.

Stack No.	Sources of Emission	Emission Rate(Nm3/Hr)	Stack Height above		Control Equipment
			Ground Level	Roof Level	

3.2 Emission characteristics shall not exceed the following:

Sl.No.	Parameter	Limiting Standards (mg/Nm3)

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 lead acid batteries shall be disposed of as per the Batteries (Management and Handling) Rules, 2001

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

4.3.1 Activities for which Authorisation is granted

Collection		**transport**	
Reception		**Storage**	
Treatment		**Reprocessing/Disposal**	

4.3.2 Type, quantity and mode of storage/collection/disposal of hazardous wastes shall be as follows:

Sl.No.	Hazardous Waste	Schedule Category	Quantity Tonne/year

Mode of	
Storage	Disposal

4.4 E-waste shall be disposed off safely as per the E-Waste (Management)Rules, 2016.

5. SPECIFIC CONDITIONS

5.1. This consent, unless withdrawn earlier is valid up to the validity of permit/lease issued by the Department of Mining and Geology or 15.07.2023. In case of operation of the quarry is to be continued

thereafter, application in the prescribed form shall be submitted through the web portal of the Board for Online Consent Management & Monitoring System on or before 16.04.2023. Late application will be accepted with a fine or late fee as applicable.

5.2 This consent is granted for operating quarry with production capacity of 200MT/day granite boulders.

5.3 The consent issued from the board is only with respect to the powers vested under the water Act 1974 Air Act 1981 and the Rules there under. The operation of the unit shall be commenced only after obtaining clearances from all concerned Authorities.

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

5.5 A minimum distance of at least 50m shall be kept from the boundary of quarry area to residential buildings, places of worship, public buildings, public road having vehicular traffic, river or lake, railway line and bridges.

5.6 All control measures provided should be maintained properly to ensure that the system is adequate to control the pollution caused.

5.7 The quarry should not be operated between 6.00 pm and 6.00am.

5.8 Necessary permission from Mining & Geology, Explosive Department may be obtained before doing blasting.

5.9 After excavation at the site is completed the land may be used for rain water harvesting with protective barriers/any other suitable approved purpose or may be reclaimed.

5.10 The depth of excavation below the highest point shall not exceed 6m.

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

5.12 The PM10 in ambient air at the boundary shall not exceed 100 $\mu g/m^3$.

5.13 The PM2.5 in ambient air at the boundary shall not exceed 60 $\mu g/m^3$.

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

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

5.16 No other machineries shall be operated without prior Consent of the Board.

5.17 The validity of this Consent is subject to subsequent Government Orders & directions/judgement of Honourable High Court and National Green Tribunal.

5.18 The location of the quarry unit shall be as shown in the drawing attached and no change, deviation or alteration that may affect the environment, extend and location of the quarry shall be made.

5.19 Fugitive emission from the premises shall be supressed.

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

5.21 All the conditions stipulated in the Environmental clearance No.56/2018 shall be fully complied with during operation of the quarry.

5.22 For renewal of the consent in case of continuance of operation of the quarry, application in the prescribed form shall be submitted through the web portal of the Board for Online Consent Management & Monitoring System 3 months prior to the date of expiry. Late application will be accepted only with fine.

BAIJU M A
Digitally signed by BAIJU M A
Date: 2018.07.18 12:08:10 +05'30'

DATE :16/07/2018

SIGNATURE & SEAL OF ISSUING AUTHORITY

KERALA STATE POLLUTION CONTROL BOARD

To

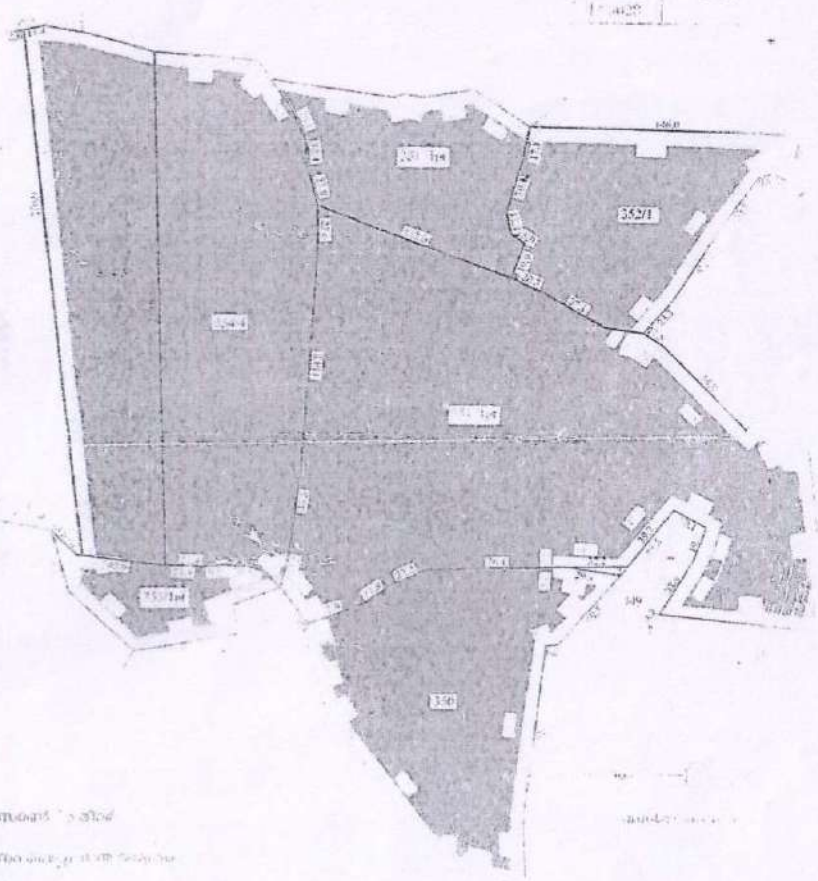
SRI.GEORGE KOCHUPARAMBIL,QUARRY OF UNITED GRANITES & METALS VAZHITHALA
P O THODUPUZHA

Copy to:

1. Member Secretary, Head Office, Trivandrum
2. Environmental Engineer, District Office, Idukki

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

2. For verifying this document please go to krocmms.nic.in and search using date of issue/name of the unit/Application Number in "Consent Granted Applications" link in the home page of the Board's Online Consent Management and Monitoring System.



BAIJU M A

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Date: 2018.07.18 12:05:22 +05'30'

CHIEF ENVIRONMENTAL ENGINEER

KERALA STATE POLLUTION CONTROL BOARD

FILE NO. :PCB/RO-EKM/IDK/OL-845/18
Date of issue :2018-10-17

CONSENT VARIATION ORDER

Consent No : O18IDKCVO8831136

Ref : 1. Consent No.018IDKCTOA7515269 dated 16/07/2018 valid Up to 15/07/2023
2. Consent Variation Order No:O18LDKCVO 8454273 Dated:4.9.2018

The ' Integrated Consent to Operate' issued as per reference above to M/s SRI.GEORGE KOCHUPARAMBIL, QUARRY OF UNITED GRANITES & METALS,
VAZHITHALA P O,THODUPUZHA is hereby modified & issued to M/s SRI.GEORGE KOCHUPARAMBIL, QUARRY OF UNITED GRANITES & METALS,
VAZHITHALA P O,THODUPUZHA The consent(s)/ variation order(s) cited under reference are integral part of this consent variation order and this order is subject to the conditions stipulated therein and the following modifications/ additions.

I. GENERAL

S.No.	Items	Description
1	Survey No	Re Survey Nos.351/1pt,354/4,354/5,355/1pt,352/1pt,350
2	Total Power Required (HP)	444 HP

II. CONDITIONS

2.1.Condition no.5.2 is modified as: This consent is granted for operating quarry with a production capacity of 1500 T/day granite boulders.

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

BAIJU M A
Digitally signed by BAIJU M A
Date: 2018.10.17 12:39:25 +05'30'

DATE :17/10/2018

SIGNATURE & SEAL OF ISSUING AUTHORITY
CHIEF ENVIRONMENTAL ENGINEER

To
SRI.GEORGE KOCHUPARAMBIL,QUARRY OF UNITED GRANITES & METALS,
VAZHITHALA P O, THODUPUZHA

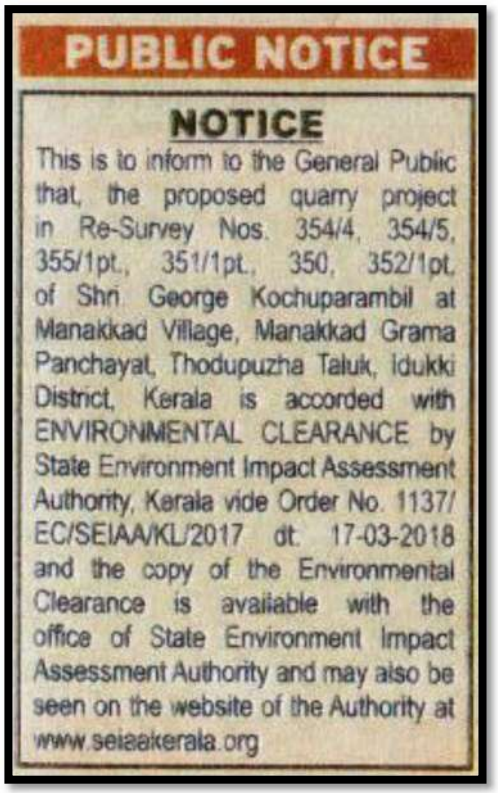
1. This digitally signed document is legally valid as per the Information Technology Act 2000

2. For verifying this document please go to krocmms.nic.in and search using date of issue/name of the unit/Application Number in "Consent Granted Applications" link in the home page of the Board's Online Consent Management and Monitoring System.

Annexure- 17

നോട്ടീസ്

പൊതുജനശ്രദ്ധയ്ക്കായി, കേരള സംസ്ഥാനം, ഇടുക്കി ജില്ല, തൊടുപുഴ താലൂക്ക്, മണക്കാട് ഗ്രാമപഞ്ചായത്ത്, മണക്കാട് വില്ലേജിലുംപെട്ട റീസർവ്വേ നമ്പർ 354/4, 354/5, 355/1pt, 351/1pt, 350, 352/1pt-ൽ പാറഖനനം 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

NEWSPAPER ADS

Annexure- 18

Panchayat License

ലൈസൻസ് നമ്പർ-02/2022 -/2023/A6/482/2022 തീയതി-31/03/2022

മണക്കാട് ഗ്രാമപഞ്ചായത്ത്

പുതുപ്പരിയാരം പി.ഒ,ഇടുക്കി (ജില്ല) പിൻ-685608
ഫോൺ -04862 202248 ഇ-മെയിൽ-manakkadgp gmail.com

വ്യവസായം / വാണിജ്യം/ സംരംഭകത്വം/ മറ്റ് സേവനങ്ങൾ എന്നിവയ്ക്ക് നൽകുന്ന ലൈസൻസ്

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

ലൈസൻസിയുടെ പേരും മേൽവിലാസവും	ജോർജ് കൊച്ചുപറമ്പിൽ കൊച്ചുപറമ്പിൽ,വഴിത്തല പി.ഒ.
സ്ഥാപനത്തിന്റെ പേരും സ്ഥലനാമവും	യുണൈറ്റഡ് ഗ്രാനൈറ്റ്സ്&മെറ്റൽസ്
ലൈസൻസ് നൽകിയിട്ടുള്ള പ്രവർത്തനങ്ങൾ	കരിങ്കൽ ക്വാറി നടത്തുന്നതിന്
കെട്ടിടത്തിന്റെ നമ്പരും വാർഡ് നമ്പരും	Ward 12 Sy No.354/4,354/5,355/1pt,351/1pt,350,352/1
ലൈസൻസ് കാലയളവ്	01/04/2022 മുതൽ 31/03/2023 വരെ
ലൈസൻസ് ഫീസ്	15000/ രൂപ രസീത് നമ്പർ 121010102780 തീയതി 24/02/2022
തൊഴിൽ നികുതി	2500/ രസീത് നമ്പർ 121010102780 തീയതി 24/02/2022
മെഷിനറി ഫീസ്	4400/ രസീത് നമ്പർ 121010102780 തീയതി 24/02/2022
ലൈസൻസ് അനുവദിക്കുന്നതിനായി ഹാജരാക്കിയ നിരാക്ഷേപ പത്രങ്ങളുടെ വിശദാംശങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽകിയ അധികാരസ്ഥാനം)	1.Consent to operate from PCB No.PCB/RO-EKM/IDk /OL-845/2018dtd08/16/07/2018Valid upto15/07/2023 2.Environmental clearance certificate No-1137/EC/SEIAA/KL/2017-dtd 17/03/2018 valid upto-16/03/2023 3.Certificate from explosives safety organisation No-E/SE/KL/22/811(E38112) dtd 06/02/2020 valid upto 31/03/2025 4.Blastmans certificate

MANAKKAD GRAMA PANCHAYAT OFFICE PUTHUPPARIYARAM P.O.

സുജിത കെ. എസ്.
സെക്രട്ടറി
മണക്കാട് ഗ്രാമപഞ്ചായത്ത്
പുതുപ്പരിയാരം പി. ഒ. ഇടുക്കി ജില്ല - 685 608
ഫോൺ:04862 202248,മൊബൈൽ:9496045103

ലൈസൻസി താഴെ പറയുന്ന വ്യവസ്ഥകൾ അനുസരിക്കേണ്ടതാകുന്നു

1. കേരള പഞ്ചായത്ത് രാജ് ആക്ടും അതേ തുടർന്നുള്ള ചട്ടങ്ങളും ബൈലകളും അനുസരിച്ച് പ്രവർത്തിക്കേണ്ടതാകുന്നു.

2. തൊഴിൽ സ്ഥലവും അതിലുള്ള സാധന സാമഗ്രഹികളും പഞ്ചായത്തധികാരി കൾക്കോ /സെക്രട്ടറി അധികാരപ്പെടുത്തുന്ന മറ്റ് ഉദ്യോഗസ്ഥർക്കോ പരിശോധിക്കുന്നതിന് ലൈസൻസി വേണ്ട സൗകര്യം നൽകേണ്ടതും അവർ ആവശ്യപ്പെടുമ്പോൾ ഈ ലൈസൻസ് കാണിക്കേണ്ടതുമാകുന്നു.

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

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

5. തൊഴിൽ സ്ഥലവും പരിസരങ്ങളും വൃത്തിയായി സാധാരണ രോഗാണുക്കൾ ഉണ്ടാകാത്ത വിധത്തിലും പൊതുജനോപദ്രവമാകാത്ത വിധത്തിലും വ്യാപാരത്തിന് വച്ചിട്ടുള്ള ഭക്ഷണ പദാർത്ഥ ങ്ങൾ ഈച്ച, അണുക്കൾ , പൊടി മുതലായവയുടെ ശല്യം ഉണ്ടാകാത്ത വിധത്തിലും സൂക്ഷിക്കേണ്ടതാണ്

6.ഓരോ പ്രവർത്തി ദിവസത്തിന്റെയും ഒടുവിൽ സ്ഥലം വൃത്തിയാക്കേണ്ടതാണ്

7. ആ സ്ഥലത്തിന്റെയോ പരിസരത്തിന്റെയോ ഏതെങ്കിലും ഭാഗത്ത് വീഴുകയോ നിക്ഷേപിക്കപ്പെടുകയോ ചെയ്യുന്ന ചപ്പ് ചവറോ , മൃഗങ്ങളുടെ അവശിഷ്ടങ്ങളോ മറ്റ് പദാർത്ഥമോ ശേഖരിച്ച് , സെക്രട്ടറിക്ക് തൃപ്തികരമായ രീതിയിൽ നീക്കം ചെയ്യിക്കേണ്ടതാണ്.

8. ലൈസൻസി ഏതൊരു കെട്ടിടത്തിന്റെയും ചുവരുകളുടെ അകവശത്തിന്റെ ഏതൊരു ഭാഗവും മേൽപറഞ്ഞ പരിസരത്തിലുള്ള തറയും നടപ്പാതയും അവിടെ തൊട്ട് വീഴാനിടയുള്ള ഏതെങ്കിലും ദ്രാവകമോ , മാലിന്യമോ , ചപ്പുചവറോ , അസഹ്യവും , ഉപദ്രവകരവുമായ ഏതെങ്കിലും പദാർത്ഥമോ അവിടെ ലയിക്കുന്നത് തടയത്ത ക്ക വിധം എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് നിലനിർത്തേണ്ടതാണ്.

9. ലൈസൻസി മേൽപറഞ്ഞ സ്ഥലത്തോ പരിസരത്തോ അതിനോട് ചേർത്തോ ഉള്ള ഏതൊരു

ഓവുചാലും അഴുക്ക് ജലം കളയുന്നതിനുള്ള ഉപകരണവും എപ്പോഴും നന്നായി കേടുപാട് തീർത്ത് വയ്ക്കേണ്ടതാണ്.

10. അയിത്തം ആചരിക്കുന്ന കടകളുടെ ലൈസൻസ് റദ്ദ് ചെയ്യുന്നതാണ്.

11. ഏതെങ്കിലും തരത്തിലുള്ള തക്ക് രോഗമോ കുഷ്ഠ രോഗമോ വ്രണമോ പകർച്ച വ്യാധികളോ ഉള്ള യാതൊരാളും കച്ചവടം നടത്തുന്നതിന് ഉപയോഗിക്കുന്ന സ്ഥലത്തും പരിസരത്തും പ്രവർത്തിക്കുവാൻ പാടി ല്ലാത്തതാകുന്നു.

12. 40 മൈക്രോണിൽ കുറവുള്ള പ്ലാസ്റ്റിക്കുകളും മറ്റ് നിരോധിത പ്ലാസ്റ്റിക് ഇനങ്ങളും ഉൽപ്പാദിപ്പിക്കുകയോ ശേഖരിക്കുയോ വിൽക്കുകയോ കൈകാര്യം ചെയ്യുകയോ ചെയ്യാൻ പാടില്ല

13. സ്ഥാപനത്തിന്റെ ബോർഡിൽ സ്ഥലനാമം മലയാളത്തിലും ഇംഗ്ലീഷിലും രേഖപ്പെടുത്തേണ്ടതാണ്.

14. 20 സീറ്റിൽ കൂടുതലുള്ള എല്ലാ ഹോട്ടലുകൾക്കും റസ്റ്റോറന്റുകൾക്കും ടോയ്ലറ്റ് സൗകര്യം ഏർപ്പെടുത്തേണ്ടതാണ

15. നിരോധിത ഉൽപ്പന്നങ്ങളായ പാൻമസാല , ഗുഡ്ക തുടങ്ങിയവ സംഭരിച്ച് വയ്ക്കുവാനോ വിൽക്കുവാനോ പാടില്ല

16. ബാലവേല അനുവദിക്കാൻ പാടില്ല

17. മുകളിൽ കാണിച്ചിരിക്കുന്ന വ്യവസ്ഥകളുടെ ലംഘനം ഈ ലൈസൻസ് റദ്ദ് ചെയ്യപ്പെടുന്നതിന് കാരണമാ കാവുന്നതാണ്.

18.സ്ഥാപനത്തിൽ ഉണ്ടാകുന്ന മാലിന്യങ്ങൾ സ്വന്തം ഉത്തരവാദിത്തത്തിൽ സംസ്കരിക്കേണ്ടതാണ്.

സെക്രട്ടറി

സുജിത കെ. എസ്.
സെക്രട്ടറി
നെടുമ്പാശ്ശേരി ഗ്രാമപഞ്ചായത്ത്
പി.ഒ. നെടുമ്പാശ്ശേരി, എറണാകുളം ജില്ല - 683 574
ഫോൺ: 0484 2612248, മൊബൈൽ: 9496045103

N.B : ഈ ലൈസൻസ് നൽകുന്നതിനുള്ള തീയതിയ്ക്ക് 30 ദിവസം മുമ്പ് ലൈസൻസ് പുതുക്കുന്നതിനുള്ള അപേക്ഷ സമർപ്പിക്കേണ്ടതാണ്.

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

GEMS-LD/TF/11/01
Date: 19.12.2022

Analysis Report of Ambient Air Quality Monitoring

1	Name of the Customer/Address	:	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 Air Quality Monitoring**
3	Sample Collected By	:	GLOBAL Environment & Mining Services
4	Particulars of Sample Collected	:	Combined Sampler (GTI-241)
5	Duration of the Monitoring	:	24 Hour of Sampling
6	Location of Monitoring	:	**Core zone area (A1)**
11	Report Number	:	ULR-TC532322000001273F

Results

Date of Monitoring	PM10 [µg/m³]	PM2.5 [µg/m³]	SO_2 [µg/m³]	NO_2 [µg/m³]
	IS : 5182: (Part 23) 2006 (RA 2012)	USEPA 2001	IS : 5182: (Part 2) 2001 (RF 2014)	IS : 5182: (Part 6) 2006 (RF 2014)
14.12.2022	55.9	21.3	11.5	13.7
Standard	**100**	**60**	**80**	**80**

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

****End of Report****

Analyzed By
J.M. Thippeswamy
Chemist

Authorized Signatory
K. Ramakrishna Reddy
Technical Manager

GLOBAL ENVIRONMENT & MINING SERVICES HOSPET

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

Note:

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

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

GEMS-LD/TF/11/01
Date: 19.12.2022

Analysis Report of Ambient Air Quality Monitoring

1	Name of the Customer/Address	:	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 Air Quality Monitoring**
3	Sample Collected By	:	GLOBAL Environment & Mining Services
4	Particulars of Sample Collected	:	Combined Sampler (GTI-241)
5	Duration of the Monitoring	:	24 Hour of Sampling
6	Name of the Station	:	**Kolady**
7	Report Number	:	ULR-TC532322000001274F

Results

Date of Monitoring	PM10 [µg/m³]	PM2.5 [µg/m³]	SO_2 [µg/m³]	NO_2 [µg/m³]
	IS: 5182: (Part 23) 2006 (RA 2012)	USEPA 2001	IS: 5182: (Part 2) 2001 (RF 2014)	IS: 5182: (Part 6) 2006 (RF 2014)
15.12.2022	51.7	18.8	9.5	12.9
Standard	**100**	**60**	**80**	**80**

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

End of Report

Analysed By
J.M. Thippeswamy
Chemist

Authorized Signatory
K. Ramakrishna Reddy
Technical Manager

GLOBAL ENVIRONMENT & MINING SERVICES ★ HOSPET

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

Note:

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Website : www.globalmining.in

GEMS-LD/TF/11/01
Date: 19.12.2022

TEST REPORT OF AMBIENT NOISE LEVEL MONITORING

1	Name of the Customer/Address	:	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
4	Particulars of Sample Collected	:	Noise Level Meter (Equinox-107)
5	Duration of the Monitoring	:	24 Hours Sampling
6	Date of Analysis Completion	:	15.12.2022
7	Report No	:	ULR-TC53232200001275F

Results

Date	14.12.2022	15.12.2022
Name of the Location	Core Zone	Kolady
Time (hrs)	N1	N2
6.00	38.8	35.3
7.00	40.2	45.2
8.00	44.8	45.7
9.00	50.4	44.8
10.00	56.6	51.3
11.00	55.4	51.7
12.00	51.8	52.5
13.00	52.6	53.2
14.00	56.8	50.5
15.00	51.2	51.6
16.00	57.8	52.1
17.00	55.2	50.7
18.00	54.2	48.5
19.00	51.6	47.2
20.00	48.4	44.5
21.00	46.2	43.8
22.00	42.2	47.1
23.00	40.4	45.6
00.00	38.6	38.3
01.00	36.8	41.2
02.00	36.2	40.5
03.00	34.4	37.3
04.00	34.4	35.9
05.00	34.8	42.2

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GLOBAL ENVIRONMENT & MINING SERVICES
(Consulting Engineers, Mine designers, Geologist & Surveyors)
NABL &MOEFCC RECOGNIZED LABORATORY
3 rd Main Road, Basaveswara Badavane,
HOSPETE – 583201, Dist.., Vijayanagara (Karnataka)
Ph : +918394 229433, 295018
e-mail : gems_hpt@yahoo.com,
Website : www.globalmining.in

		ULR-TC532322000001275F
L max	57.8	53.2
L min	34.4	34.3
Ld	53.5	49.9
Ln	40.1	41.7
LeQ	51.5	48.3

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

Note	Day time shall mean from 6:00 am and 10.00 pm
	Night time shall mean from in between 10.00 pm and 5.00 am
	Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority
	Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority
	*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which relatable to human being
	A "decibel" is a unit in which noise is measured
	"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
Leq: It is energy mean of the noise level over a specified period.	

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Authorized Signatory
Technical Manager

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

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

GEMS-LD/TF/11/01
Date: 19.12.2022

ANALYSIS REPORT OF WATER QUALITY DATA

Granite Building Stone Quarry of
Shri. George Kochuparambil
Extent: 12.2987Ha

1 Name of the Customer/Address : Re-Sy.Nos: 354/4, 354/5, 355/1pt, 351/1pt, 350 & 352/1pt, Manakkad Village, Thodupuzha Taluk, Idukki District, Kerala.
2 Sample Collected By : GLOBAL Environment & Mining Services
5 Date of sample collection : 14.12.2022
6 Date of sample Received : 16.12.2022
7 Date of sample Analyzed : 17.12.2022
8 Report Number : ULR-TC532322000001276F

Sl. No.	Parameters	Unit	Result	Test Protocol	Requirement/Limit IS : 10500 : 2012	
					Acceptable	Permissible
1.	pH	-	6.85	APHA 22nd Edition 2012 4500 B (Pg No. 4-92 to 4-96)	6.5	8.5
2.	Colour*	Hazen	<5	IS: 3025 (PART 14)- 1984, RA- 2012 Platinum cobalt Method	5	15
3.	Taste*	-	Ag	IS 3025 Part 8 1984	Ag	Ag
4.	Odour*	-	Ag	IS: 3025 (Part 5) – 1983, Ra-2012, True Odour	Ag	Ag
5.	Turbidity	NTU	0.21	APHA 22nd Edition 2012 2130 B (Pg No. 2-14)	1	5
6.	Conductivity	µS/cm	143	APHA 22nd Edition 2012 2510 B (Pg No. 2-54)	-	-
7.	Total Dissolved Solids	mg/L	112	APHA 22nd Edition 2012 2540 B (Pg No. 2-65)	500	2000
8.	Total Alkalinity as $CaCO_3$	mg/L	89	APHA 22nd Edition 2320 B (Pg No. 2-35)	200	600
9.	Total Hardness as $CaCO_3$	mg/L	158	APHA 22nd Edition 2012 2340 C (Pg No. 2-46)	200	600
10.	Calcium as Ca	mg/L	22	APHA 22nd Edition 2012 3500 Ca B (Pg No. 3-84)	75	200
11.	Magnesium as Mg	mg/L	6.1	APHA 22nd Edition 2012 3500 B-Mg By Calculation	30	100
12.	Chloride as Cl	mg/L	15.0	APHA 22nd Edition 2012 4500 Cl (Pg No. 4-72)	250	1000
13.	Sulphate as SO_4	mg/L	90	APHA 22nd Edition 2012 4500 SO42 – E (Pg No. 4-190)	200	400
14.	Nitrates as NO_3	mg/L	10	APHA 23rd Edition - 4500 NO_3, – E (Pg No. 4-131 to 4-132)	45	NR
14.	Nitrate Nitrogen as NO_3	mg/L	14	APHA 22nd Edition 2012 4500 NO3 E (Pg No. 4-125 to 4-127)	45	No relaxation

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ULR-TC532322000001276F

15.	Fluoride as F	mg/L	0.77	APHA 23rd Edition 2017 4500 F-D (Pg No. 4-90 to 4-91)	1.0	1.5
16.	Iron as Fe	mg/L	0.42	APHA 23rd Edition – 3500 Fe-B (Pg No. 3-80 to 3-82)	0.3	NR
17.	Sodium as Na	mg/L	9.74	APHA 23rd Edition 2017 Na 3500 B (Pg No. 3-99 to 3-100)	-	-
18.	Potassium as K	mg/L	0.69	APHA 23rd Edition 3500 K B (Pg No. 3-89 to 3-90)	-	-
19.	BOD 3 days at 27° C	mg/L	NIL	IS:3025 (P.44) – 1993 , RA-2014,	-	-
20.	COD as O2	mg/L	NIL	APHA 23rd Edition 5220 C (Pg No. 5-18 to 5-19)	-	-
21.	Oil & Grease	mg/L	NIL	APHA 23rd Edition 5520 B (Pg No.5-41 to 5-42)	0.5	NR
22.	Cadmium as Cd*	mg/L	<0.001	APHA 23RD Edition-3111 –B (Pg No.3-20 to 3-21)	0.003	NR
23.	Copper as Cu	mg/L	<0.001	APHA-23RD Edition 3111-B (Pg No.3-20 to 3-21)	0.02	1.5
24.	Nickel as Ni	mg/L	<0.001	APHA-23RD Edition-3111 –B (Pg No. 3-20 to 3-21)	0.02	NR
25.	Zinc as Zn	mg/L	<0.1	APHA-23RD Edition-3111-B (Pg No. 3-20 to 3-21)	5	15
26.	Salinity*	PPT	NIL	APHA-23RD Edition-3111-B (Pg No. 3-20 to 3-21)	-	-
27.	Total Phosphorous	mg/L	<0.01	APHA-23RD Edition 4500-D (Pg No. 4-154)	-	-
28.	Total Coliforms*	MPN/ 100ml	Ab	APHA 22nd Edition 9222 B (Pg No.9-78)	-	-
29.	Feacal Coliforms	MPN/ 100ml	Ab	APHA 22nd Edition 9222 D (Pg No.9-85)	-	-
30.	Phyto Plankton*	Unit/L	Ab	APHA 23rd Edition 10200 F (Pg No.10-17)	-	-

Note: BDL Below Detectable Limit
Ag: Agreeable
NR: No Relaxation
RA: reaffirmed
Ab: Absent

Location: Kolady

****End of report****

Analyzed By
Chemist

GLOBAL ENVIRONMENT & MINING SERVICES HOSPET

Authorized Signatory
Technical Manager

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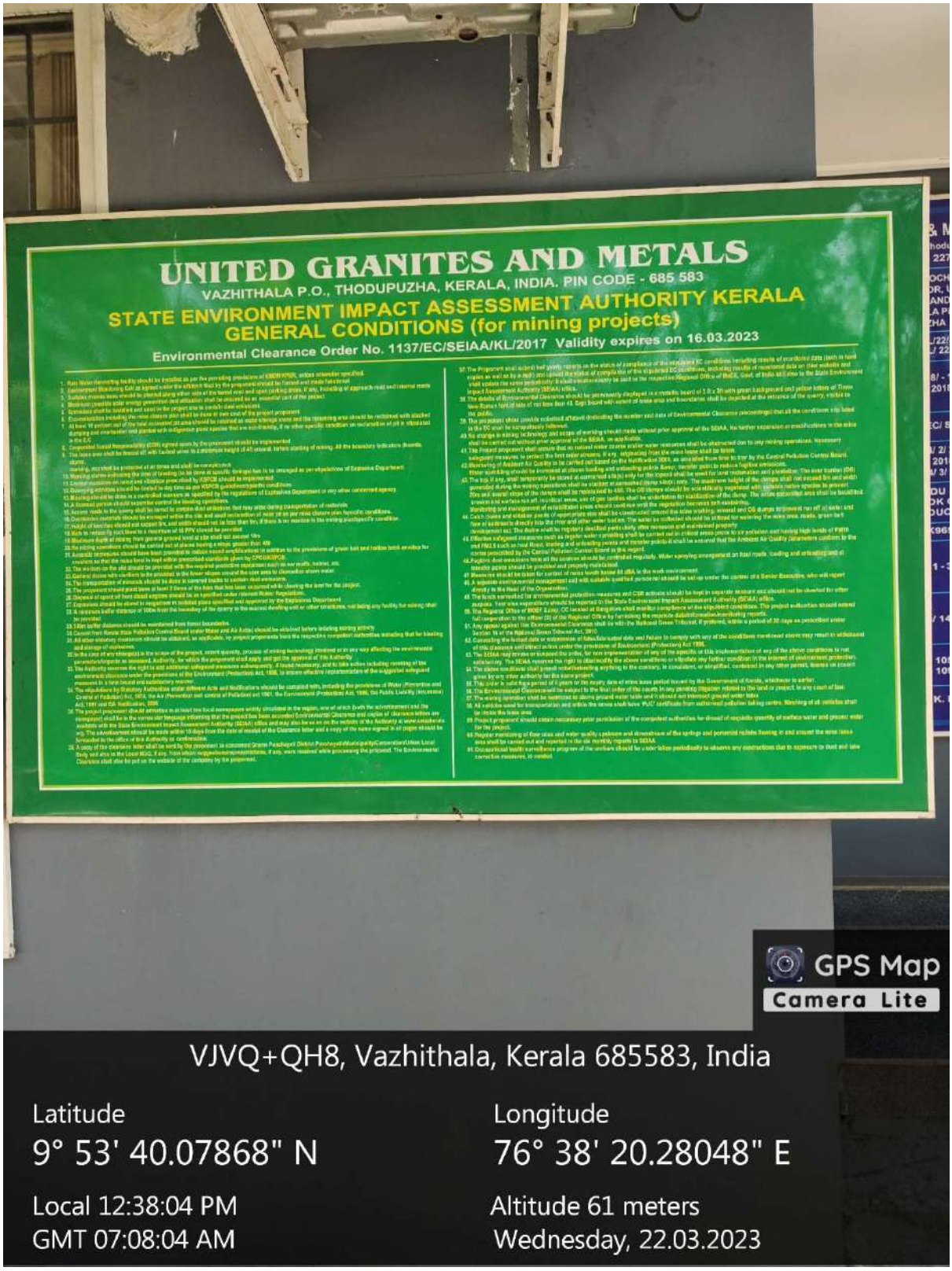
Annexure- 20



DETAILS OF EC

Annexure- 21

Health Plus – Hospitalization Cover

Quote is valid for 15 days from the date of quote issued or policy start date which ever be earlier. Quote is liable to change with change in information. Quote is valid for the given set of data, any change in data will require revised premium.	
Quote No.	30110085
Channel Type	Banca
Expiring Insurer	Niva Bupa Health Insurance Co. Ltd (Formerly known as Max Bupa Health Insurance Company Limited)
Date of Quote Issue	27-Oct-22
Quote Type	Bound
Name of Policyholder	United Granites & Metals
Industry Type	0
Cover Type (Individual/Floater)	Individual
Policy Period – Start Date	29-Oct-22
Policy Period – End Date	22-Oct-23
Policy Type (Fresh/Market Rollover/Own Renewal)	Own Renewal

Premium Details

Premium excluding Tax	GST	Total Premium
4,49,640	80,935	5,30,575

Expiring Policy Snapshot

Claims Report Date	Total Claims (Paid + O/S)
10-Oct-22	56,632

"The quote is based on on the claims details as mentioned above and the demography details as pasted below, if there is any change in the claims or the demography details, the quote is subject to change."

S/No	Basic Details	Particulars
1	Family Structure	Employee Only
2	Total no of employees/Primary Members	134
3	Total no of Insured Members	134
4	Health Card	
5	Claim Servicing	In House

Benefit Structure

Inpatient Care – Sum Insured	INR 2 Lakhs	
Listed Day Care Treatment	Covered upto Sum Insured	
Hospital Accommodation – Room rent/day & ICU/day	Normal	1%
	ICU	2%
	If the Insured Person is admitted in the Hospital in a room category or in a room where the Room Rent is higher than the eligibility as specified above, then Niva Bupa shall be liable to pay only a pro-rated proportion of the total Associated Medical Expenses (including surcharge or taxes thereon) in the proportion of the difference between the Room Rent actually incurred and the entitled room category/eligible Room Rent.	
Pre Hospitalization Medical Expenses	Covered upto Sum Insured for 30 days	
Post Hospitalization Medical Expenses	Covered upto Sum Insured for 60 days	
Emergency Ambulance	INR 1000 per hospitalization	
Maternity Expenses	Normal	Not Covered
	C-Section	Not Covered
	1. Maternity Expenses Benefit is available for Employees or Spouse only if both are covered in Insured members data received from Policyholder 2. The Maternity Benefit may be claimed under the Policy in respect of eligible Insured Person(s) only twice during the lifetime of the Policy including any Renewal thereafter for the delivery of a child or Medically Necessary Treatment and lawful termination of pregnancy up to maximum of 2 pregnancies or terminations.	
Pre & Post Natal Expenses	Not Covered	

Corporate Floater	Not Covered
Corporate Floater Limit	NA
Corporate Floater utilization/family	NA
List of Critical Illness	NA
OPD Coverage	Not Covered

Co-payment	NA
Disease wise capping	NA

Waiting Periods	
Pre-Existing Disease (PED)	Waived Off
2 yr exclusions (Disease Specific Exclusions)	Waived Off
Initial Waiting Period	Waived Off

Special Conditions:
1. Claim for lasik treatment - If power of eye is above +/- 7.5, is payable
2. 50% co-pay for cyberknife treatment/Robotic Surgery/Bio-absorbable Stent/FAMETO Laser Suregry/Toric lens/KT Laser Prostate.

Health Insurance of Employees

Terms & Conditions	
Group to Retail portability clause	Continuity benefit will be provided as per retail medical underwriter.
Claim intimation and Document submission clause	**For Reimbursement – Claim intimation should be given to Niva Bupa within 48 hours of admission or before discharge from hospital. Documents needs to be submitted within 30 days from date of discharge from hospital.** **For Cashless – Incase of cashless hospitalization, claim intimation should be given within 24 hours of admission or before discharge from hospital**
Addition/Deletion Endorsement clause	– Midterm addition is allowed only in case of natural addition (i.e. new born baby, Newly wedded spouse) falling during the Policy period. – In case of deletion, there will be no refund for members who have claimed. – In case of deletion, if intimation will be provided later than the DOL and any claim has been taken by the member in that period, Recovery of the claim amount need to be made from the corporate. – The Insured must inform of new additions or deletions to the company within a reasonable time but not later than 45 days from the date of the joining of the employee or separation of an employee from the organization. – Addition to be done on prorate basis effective from date of joining subject to balance being available in CD account.
Other Standard Conditions	– 50% co-pay applicable for cyber-knife treatment/Robotic Surgery (if opted) – No individual (employee or dependent) can be covered more than once in a policy. – Mid-term increase in Sum Insured due to change in level of the employee (promotion) is allowed, but in case of claims already registered it will not be applicable. – Individuals cannot be covered as an employee and dependent under the same policy, nor may children or parents will be covered by both under the same policy. – Following charges levied by hospitals will not be payable under the policy: - Admission charge / Surcharge / Service charges / miscellaneous charges / Registration fee / Admission Fee / Other non-medical or non-treatment related expenses. – Existing groups may not split into multiple groups to obtain multiple benefit levels. – Excluding a class within a group from coverage is not permitted. – Ineligible employees include: contractors; temporary, seasonal, substitute, uncompensated employees; volunteers, silent partners, shareholders or investors only; owners, officers or managing members who are not active, permanent, full-time employees. – Any type of contraception, sterilization, abortions, voluntary termination of pregnancy or family planning is excluded from the Policy. – Infertility services including artificial insemination and advanced reproductive technologies such as IVF, ZIFT, GIFT, ICSI, gestational surrogacy are excluded under the Policy. – Treatment of any sexual disorder including impotence (irrespective of the cause) and sex changes or gender reassignments or erectile dysfunction are also excluded under the Policy. – Cosmetic and Reconstructive Surgery shall be excluded from scope of policy. ***Subject otherwise to terms, conditions and exclusions of Max Health Plus terms and Conditions.**

Demography												
Sum Insured/ Age band	0-2	3-17	18-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	65+
2,00,000	0	0	12	24	23	17	10	17	11	9	5	6

Per Person premium Rater (Excluding GST)												
Sum Insured/ Age band	0-2	3-17	18-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	65+
2,00,000	1,007.73	1,007.73	1,681.30	1,790.74	1,943.92	2,245.23	2,749.68	3,527.05	4,472.96	6,677.37	8,957.59	10,344.00

Annexure- 22

CSR EXPENDITURES & RECEIPTS

CSR REPORT ON 1/10/2022 to 31/03/2023			
DATE	NAME	PURPOSE	AMOUNT
8/10/2022	MARY THOMAS	MEDICAL HELP (6monts x 3000)	18000
10/10/2022	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	42500
10/10/2022	KANIV	PALIYETIVE CARE	51000
20/10/2022	ALEENA MARY JOY	EDUCATIONAL HELP	5000
03/11/2022	ST THOMAS LP SCHOOL KOLADY	AUTO CASH	6210
03/11/2022	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	45500
08/11/2022	KANIV	PALIYETIVE CARE	51000
08/11/2022	ALPHIA IBRAHIM	EDUCATION HELP	22000
30/11/2022	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	45500
03/12/2022	ST THOMAS LP SCHOOL KOLADY	AUTO CASH	5460
08/12/2022	KANIV	PALIYETIVE CARE	51000
13/12/2022	ROAD SAFETY GLASS	VAZHITHALA	3700
13/12/2022	VIVA ARTS & SPORTS CLUB	INDOOR STADIUM	10000
27/12/2022	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	37500
07/01/2023	DESASTER RISK MANAGEMENT FUND	5th DRVC 2023	100000
07/01/2023	KANIV	PALIYETIVE CARE	50000
13/01/2023	MAMACHAN MATHEW NEDUMPURATH	MEDICAL HELP	5000
06/02/2023	ST THOMAS LP SCHOOL KOLADY	AUTO CASH	5830
18/02/2023	KANIV	PALIYETIVE CARE	51000
02/03/2023	HM & PTA PRESIDENT ST SEBASTIANS HSS VAZHITHALA	STUDENTS BUS FARE	43500
08/03/2023	JOSEPH CHERIAN	MEDICAL HELP	25000
18/03/2023	KANIV	PALIYETIVE CARE	50000
01/02/2023	BRAJEETHA MATHAI KOLLAMPARAYIL	HOUSE CONSTRUCTION	1002648
08/03/2023	ST SEBASTIAN'S H.S. MEMADANGU	MATERIAL FOR SMART CLASS ROOM CONSTRUCTION	8820
15/03/2023	ABHIN MOHAN	MEDICAL HELP	10000
29/03/2023	DARLY JOSE KOONANANICKAL	MATERIAL SUPPLY	77377
		TOTAL	1823545

18/03/23

JOEMON JOSEPH (JOEKUTTAN) CHARITABLE TRUST PURAPUZHA

KANIV Beneficiary List for Account transfer March 2023

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 6	Ammini Appu	338002010014446	Union Bank of India	Thodupuzha	UBIN0533807	1000
MA 12	Augusthy Ulahannan	67202618748	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 Bar	Thodupuzha	PUNB0435500	1000
MA 25	Madhavi	33041198645	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 26	Parukutty K O	0722108030732	Canara Bank	Thodupuzha	CNRB0000722	1000
MA 27	Mathira	33069636011	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 30	Mathai Pathrose	67323931639	State Bank of India	Vazhithala	SBIN0070962	1000
MA 31	Mercy	11210100258690	Federal Bank	Thodupuzha	FDRL0001121	2000
MA 32	Kutty Balan	67225858081	State Bank of India	Vazhithala	SBIN0070962	1000
MA 37	Sali Louis	30188238651	State Bank of India	Nediyasala	SBIN0006457	1000
MA 39	Sarojini Sukumaran	32865143845	State Bank of India	Nediyasala	SBIN0006457	1000
MA 40	Sheela D	0806053000000324	South Indian Bank	Thodupuzha	SBIL0000806	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 45	Annies Sebastian	30322013976	State Bank of India	Nediyasala	SBIN0006457	1000
MA 46	Aravindakshan Nair	33438304010	State Bank of India	Thodupuzha	SBIN0008674	1000

MA 47	Bhavani	67203548926	State Bank of India	Vazhithala	SBIN0070962	1000
MA 48	Chinna Balan	0722119000098	Canara Bank	Thodupuzha	CNRB0000722	1000
MA 50	Nalini Vasu	10550100089533	Federal Bank	Vazhithala	FDRL0001055	1000
MA 55	Valsala Kunjappan	32951554314	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 58	Anil M N	10550100122995	Federal Bank Ltd	Vazhithala	FDRL 0001055	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 63	Sulochana	33024669458	State Bank of India	Thodupuzha	SIBN0008674	1000
MA 64	Joseph Mathai	120321200421432	Idukki Dist. Co Ban	Thodupuzha	IDUK0000032	1000
MA 66	Sivaraman P B	20176937929	State Bank of India	Thodupuzha	SBIN 0008674	1000
MA 69	Thresssia Paulose	32984323559	State Bank of India	Nediasala	SBIN0006457	1000
MA 71	Ammini Ayyappan	32954131340	State Bank of India	Thodupuzha	SBIN00068674	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 75	Annakutty Pathrose	67201841483	State Bank of India	Vazhithala	SBIN 0070962	1000
MA 76	Ammini Johny	67206434799	State Bank of India	Peruva	SBIN 0070869	1000
MA 77	Jomesh Raju	20395607378	State Bank of India	Nediasala	SBIN0006457	1000
MA 78	Thankamma Gopalan	32664273964	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 79	Sreeja Sajeevan	67354156196	State Bank of India	Thodupuzha Tow	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 Tow	SBIN0070155	1000
MA 85	Kamaladas Krishnan	40328101056538	Kerala Gramin Bank	Thodupuzha	KLGB0040328	1000
MA 86	Ravindran Nair	37946219275	State Bank of India	Nediyasala	SBIN0006457	1000
MA 87	Leela Kuriyachan	120111200421136	Idukki Dist. Co Bank	Thodupuzha	UTIB0SIDB99	1000
MA 88	Jinto Jose	20370100005068	Federal Bank	Thodupuzha	FDRL0002037	1000
MA 89	Mariyam Augusthy	67202375316	State Bank of India	Vazhithala	SBIN0070962	1000

CER DETAILS

MA 90	Indira	20176945205	State Bank of India	Thodupuzha	SBIN0008674	1000
MA 91	Narayanan Nair	20263068754	State Bank of India	Thodupuzha	SBIN0008674	1000
				Total		**51000**

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@g	Account Status	:	Active
Type of Account	:	Current	Mode of Operation	:	Single
Scheme	:	FREEDOM CURRENT	Joint Holders	:	GEORGE KOCHUPARAMBIL
IFSC	:	FDRL0001055			
MICR Code	:	685049810			
SWIFT Code	:	FDRLINBBIBD	Nomination	:	Not Registered
Effective Available Balance	:	4375804.4	Currency	:	INR
Opening Balance	:	9,98,129.28	Date of Issue	:	11/04/2023

Statement of Account for the period 18-MAR-2023 to 18-MAR-2023

Date	Value Date	Particulars	Tran Type	Tran ID	Cheque Details	Withdrawals	Deposits	Balance	Dr/Cr
18-03-2023	18-03-2023	UPI IN/307734992377/luckachanmathew50@okhdfc/5051	TFR	S82150286			7,000.00	10,05,129.28	CR
18-03-2023	18-03-2023	EBIZ A2A C79918032308075 1 WAGE	TFR	FB239		2,51,405.00		7,53,724.28	CR
18-03-2023	18-03-2023	EBIZ A2A C74216032312283 4 CSR	TFR	FB240		5,000.00		7,48,724.28	CR
18-03-2023	18-03-2023	EBIZ NEFT C74216032312283 4 CSR	TFR	FB241		46,000.00		7,02,724.28	CR
18-03-2023	18-03-2023	NFT/BT230316388 52534/Leela Kuriyachan/141002 000060	TFR	S82402819			1,000.00	7,03,724.28	CR
18-03-2023	18-03-2023	UPI IN/307736393047/ bobinbaiju@okhdfc bank/UP/5051	TFR	S82959588			1,890.00	7,05,614.28	CR
18-03-2023	18-03-2023	UPI IN/307799722659/ nojjosepalakkattu@okaxis/5051	TFR	S83396053			4,000.00	7,09,614.28	CR

30/3/23

28-3-23

5TH INTERNATIONAL DISASTER RISK AND VULNERABILITY CONFERENCE

(DRVC 2023)

January 19-21, 2023

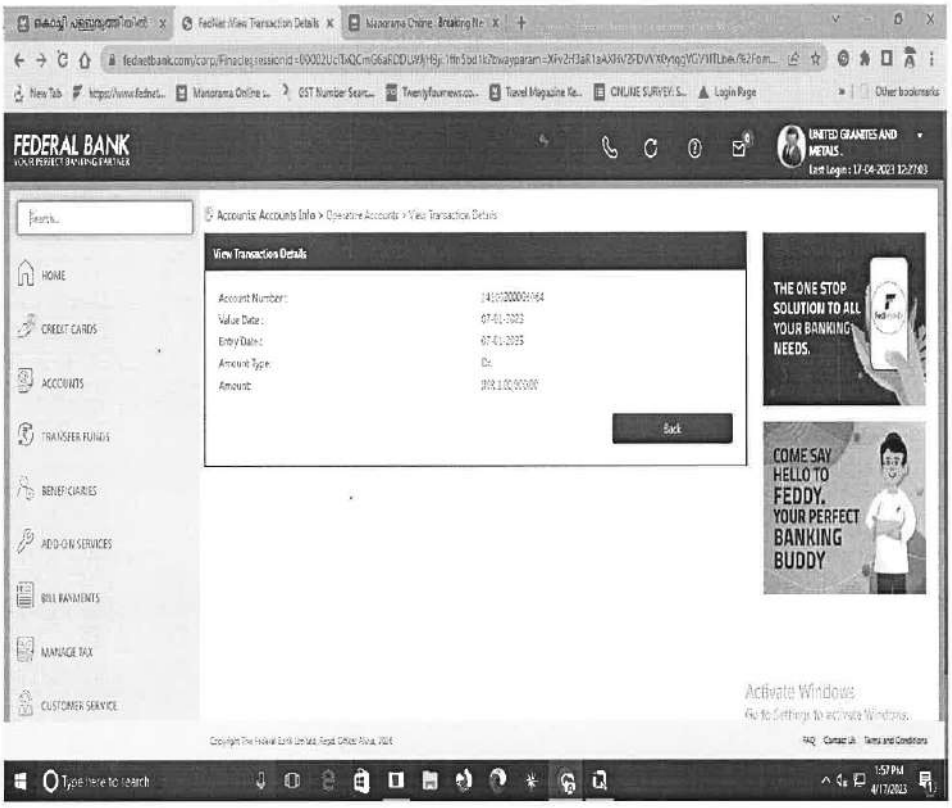
RECEIPT

Received Rs. 1,00,000/- (Rupees. One lakh .....) from. M/s United Granite and Metals towards the. Conducting of DRVC (as part of CSR funding.)

Paid

Convener, DRVC 2023

Prof. (Dr.) K.R.BAIJU
Director, School of Environmental Sciences
Dean, Faculty of Environmental & Atmospheric Sciences
Mahatma Gandhi University
Priyadarshini Hills, Kottayam 686560


FEDERAL BANK
YOUR PERFECT BANKING PARTNER
UNITED GRANITES AND METALS.
Last Login : 17-04-2023 12:27:03
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CREDIT CARDS
ACCOUNTS
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ADD-ON SERVICES
BILL PAYMENTS
MANAGE TAX
CUSTOMER SERVICE
Accounts: Accounts Info > Operative Accounts > View Transaction Details
View Transaction Details
Account Number :
Value Date :
07-01-2023
Entry Date :
07-01-2023
Amount Type :
Amount :
Back
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COME SAY HELLO TO FEDDY. YOUR PERFECT BANKING BUDDY
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Terms and Conditions
Type here to search
1:57 PM
4/17/2023

ST. SEBASTIAN'S U.P. & H.S. MEMADANGU

MEMADANGU P.O., MUVATTUPUZHA
Pin : 686 672, Ph : 04862 278470

No.

Date 2-3-2023

From
The Headmaster

To Anish. G. Kochuparambil

Sub :
Ref. :

Sir,

നമ്മുടെ School-ൽ ഒരു Smart Class-ന്റെ കുറവ് ഉണ്ടായിരുന്നു. അത് പരിഹരിക്കുന്നതിനായിട്ടുള്ള പണികൾ നടക്കുന്നു. സാമ്പത്തികമായും സാമൂഹികമായും വളരെ പിന്നോക്കം നിൽക്കുന്ന കുട്ടികളാണ് ഈ സ്കൂളിൽ പഠിക്കുന്നത്. അവർക്ക് ഉചിതമായ പഠന അന്തരീക്ഷം സൃഷ്ടിച്ചുകൊടുക്കേണ്ടത് വളരെ ആവശ്യമാണ്. അതിന് സാറിൽ നിന്ന് ഒരു സഹായം പ്രതീക്ഷിക്കുന്നു. ഭിത്തി പണിയുന്നതിനു ചെങ്കല്ല് 50+50 ലോഡ് കട്ട വേണമെന്നാണ് മേസ്തിരി പറഞ്ഞത്. ആ കട്ട Sponser ചെയ്തിരുന്നെങ്കിൽ വളരെ ഉപകാരമായിരുന്നു. സാറിൽ നിന്ന് അനുകൂലവും ഉദാരവുമായ ഒരു നടപടി പ്രതീക്ഷിക്കുന്നു.

Yours faithfully

Minijose

MINI P. JOSE
Headmistress
St. Sebastian's High School
Memadangu - 686 672

8/20

140

UNITED GRANITES AND METALS

VAZHITHALA P.O 685583, THODUPUZHA, PH: 8281885888

STIN: 32AFJPK9650E1ZH

Application for Electronic Referance Number of an Invoice

Invoice No : **BU /14546**

Invoice Date : 08/03/2023

Vehicle : KL44A8775

Place of Supply : MEMADANGU

Details of Receiver (Billed to)	Details of consignee (Shipped to)
Name and Address ST SEBASTIAN H S MEMADANGU	Name and Address GSTIN

Sl. No.	Description Good and HSN Code	Qty	Rate	Total Amount	Discount	Taxable Value	CGST		SGST		IGST	
							Rate	Amt	Rate	Amt	Rate	Amt
1	P SAND 25171010	140	60	8400.00	0	8400.00	0.00	210.00	2.50	210.00	0.00	0.00
2												
	Total					8400.00	210.00		210.00		0.00	

Invoice Value (In words) Rupees Eight Thousand Eight Hundred Twenty Only

Invoice Value (In Figure 8820.00

Bank Details

Bank	Fedaral Bank, Vazhithala
Acc No	10555500004370
IFSC	FDRL0001055

United Granites & Metals Pin: 685583 Vazhithala P.O.

E & O E

Authorised Signatory