

COMPLIANCE REPORT

OCTOBER 2018 – MARCH 2019

QUARRY PROJECT

M/s TRIPTHY GRANITES

PALAKKAD DISTRICT

KERALA

TRIPHY GRANITES

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Pallippadam
Chazhiyattiri P.O.
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Dt. 14-06-2019

The Additional Principal Chief Conservator of Forests (C)
Ministry of Environment, Forests & Climate Change,
4th Floor, E& F Wing, Kendriya Sadan,
Koramangala, Bangalore - 560034

Ref :- File No. 826/SEIAA/EC1/2609/2015

Sub :- Environment Clearance – Quarry project at Thirumittacode-II,
Thirumittacode Panchayat, Pattambi Taluk, Palakkad District, Kerala –
Compliance Report – Second half – Reg.

Respected Sir,

The Quarry (Building stone) project was accorded Environmental Clearance for 4.7811 Ha. by order No. 826/SEIAA/EC1/2609/2015 dated 17/08/2016 by State Environmental Impact Assessment Authority, Kerala. The compliance report of **Second Half** (October 2018 – March 2019) to the specific and general conditions of the Environment Clearance order is enclosed.

Thanking you,

Yours respectfully,

For TRIPHY GRANITES

M/s Triphy Granites
Partner

Encl: - As Above

Copy to : **The Chairman & The Member Secretary**
State Environment Impact Assessment Authority (SEIAA)
Thiruvananthapuram,
Kerala –

Corporate Office : ESSKAY GROUP OF COMPANIES, Madapparambil Arcade, Oushadhi Junction, Perumbavoor,
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COMPLIANCE REPORT

TO
THE CONDITIONS
OF
ENVIRONMENTAL CLEARANCE ORDER
NO: 826/SEIAA/EC1/2609/2015
Dated: 17-08-2016

BY
STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA)
FOR
BUILDING STONE QUARRY
(MINOR MINERAL MINING) PROJECT

AT
SURVEY NOS. 274, 275/1A3
THIRUMITTACODE-II, THIRUMITTACODE PANCHAYAT,
PATTAMBI TALUK, PALAKKAD DISTRICT,
KERALA

BY
M/S TRIPHY GRANITES
PALAKKAD DISTRICT
KERALA

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INTRODUCTION

The quarry project of **M/s Triptyh Granites** is situated at Survey Nos. 274, 275/1A3, Thirumittacode-II, Thirumittacode Panchayat, Pattambi Taluk, Palakkad District, Kerala.

The quarry project was accorded with the Environmental Clearance (EC) by State Environmental Impact Assessment Authority on 17-08-2016. As part of general condition No.37 of Environmental Clearance order, half yearly compliance report needs to be submitted by the project proponent. The compliance report of Second half to the specific conditions and general conditions of the Environmental Clearance order for the period of **October 2018 – March 2019** is being submitted.

COMPLIANCE REPORT
(SPECIFIC CONDITIONS)
PART A

PART - A – SPECIFIC CONDITIONS

01	Over burden should be stored in a planned manner in the designated place. It must be protective support and no soil be taken outside the lease area.	complied
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Compliance:

Over burden and top soil need to extract during the mining. The over burden and top soil is being stored in a planned manner in the designated place. No soil will taken outside the lease area and it is well protected. The topsoil will be kept I the project site for eco restoration.

02	The drainage from the quarry should be channeled through a settling tank.	Being complied
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Compliance:

The project is constructing settling tank to settle down the sediments at the bottom of the pond. There are natural drainages in the project site for channelization of storm water.

03	The approach road to the quarry from the main road is not maintained at all. This road must be maintained in good motoroble condition by the proponent.	Being Complied
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Compliance:

The project is maintaining the approach road to the quarry from the main road.. At present the approach roads are motoroble condition with more than 7 meters of width.

04	Dust suppression mechanism must be in place	complied
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Compliance:

The project splashes haulage road and critical areas with the help of vehicle for suppress the emission of dust in the project site.

05	Fencing shall be provided at vulnerable points of the quarry to avoid accidents.	Complied
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Compliance:

The project has erected fencing around the lease area and at the critical area and at vulnerable points of the quarry to avoid accidents

06	Sign boards should be fixed in the proper places	Complied
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Compliance:

The sign boards are fixed in the project site in proper places to provide necessary warning to the labours and humans. The project is intending to fix sign board where ever it is necessary.

COMPLIANCE REPORT
(GENERAL CONDITIONS)
PART B

PART – B – GENERAL CONDITIONS

01	Rain Water Harvesting capacity should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified.	Complied
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Compliance:

During the time of monsoon season all runoff from the quarry site is collecting at the pond developed in the project site. The storm water flow is leading to the pond through garland drains. The rain water is used for irrigation purposes, watering of plants, wetting of roads and for dust suppression system (mainly sprinklers system).

02	Environment Monitoring Cell (EMC) as agreed under the affidavit filed by the proponent should be formed and made functional.	Complied
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Compliance:

The Project Proponent has formed Environmental Monitoring Cell (EMC) with Mr. Benny Pathrose as head of the monitoring cell. The EMC meeting convened regularly to evaluate and monitor quarrying work in connection with the specific and general conditions stipulated in the Environmental Clearance (EC) order. The details of the monitoring cell are given in the **Table No.1**. The NABET accredited consultant helps the company to upkeep the environment friendly mining

TABLE 1 - ENVIRONMENTAL MONITORING CELL (EMC)

Sl. No.	Post	Name
1.	Head of the monitoring cell	: Benny Pathrose
2.	Member	. Baby K V
3.	Member	Basil Varghese

03	Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, inclusive of approach road and internal roads.	complied
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Compliance:

The project proponent has planted suitable avenue trees along either side of the roads and parking area. There are natural vegetations including trees, shrubs, herbs and climbers along the road side. This vegetation is working as green belt against emitting dust. The details of vegetation are given below in **Table No.2**.

Table 2 - Details of the natural vegetation existing along the road side

Sl. No.	Scientific Name	Common Name	Family	Type
1.	Artocarpus heterophyllus	Plavu	Moraceae	Tree
2.	Nerium oleander	Arali	Apocynaceae	Small tree
3.	Tectona grandis	Thekku	Verbenaceae	Tree
4.	Chromolaena odorata	Communist-pacha	Compositae	Shrub
5.	Mangifera indica	Mavu	Anacardiaceae	Tree
6.	Ziziphus oenopolia	Thodalli	Rhamnaceae	Climber
7.	Swietenia macrophylla	Mahogany	Meliaceae	Tree

04	Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.	Will be Complied
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Compliance:

In order to reduce the consumption of electricity from the conventional sources, the project will install solar street lights to use maximum renewable energy to reduce electrical consumption from KSEB.

05	Sprinklers shall be installed and used in the project site to contain dust emissions.	Complied
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Compliance:

To prevent dust emissions from the road while transportation of materials, the project does splashes the haulage road and critical areas with the help of tanker vehicles in regular intervals. The project also installed sprinklers in the project site.

06	Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.	Noted
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Compliance:

Eco restoration will be done after closure of the mine. To achieve this aim, the project will plant various saplings in the project area and stacked the top soil and overburden in a designated place. The mine closure plan will be done at own cost of project proponent as agreed in the proposal.

07	At least 10 percent out of the total excavated pit area should be retained as water storage areas 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 pit is stipulated in the EC.	Will be complied
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Compliance:

To save rain water, ten percent of the excavated pit area will be retained as water storage area. This will help to improve the ground water table. The remaining area will be reclaimed with stacked dumping of overburden and top soil. As part of its eco – restoration plan, the project will plant indigenous plant species that are eco – friendly on the reclaimed area

08	Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented.	Complied
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Compliance:

The project proponent has carrying out many activities for social integration and community development. The activities under Corporate Social Responsibility (CSR) activities are executed in the sector of Health, Housing. The project proponent is intending to carry out more activities under CSR for inclusive growth in the community.

Table 3 - Details of performed activities under CSR

Sectors	Activities	Amount spent in Rs.
Health	Donation	15000
Education	Donation	10000
Local Community Developments	Donation	58500
Total		83500

09	The lease area shall be fenced off with barbed wires to a maximum height of 4ft around, before starting of mining. All the boundary indicators (boards, stores, markings etc) shall be protected at all times and shall be conspicuous.	Complied
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Compliance:

As per the stipulation of Department of Mining and geology and State Environment Impact Assessment Authority, the project has fenced around the mining area to prevent falling of animals/human being/dumping of garbage etc, the project has erected barbed metal wire fencing around the mining area with height of 5 ft.

10	Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.	complied
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Compliance:

To give warning to the labours and community people prior to the blasting in quarry, the project has installed warning alarms as per the stipulation of Explosive department in the quarry site.

11	Control measures on noise and vibration prescribed by KSPCB should be implemented.	Complied
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Compliance:

To reduce noise level in the project site, the project proponent has implemented mitigate masseurs. The major noise generating sources from the mining activity is working machineries, drilling, blasting and plying of vehicles. The following control measures are undertaken to bringing down the noise levels:-

- Proper maintenance of machinery and equipments
- The machineries like breaker and excavator has well sound proof cabin so that the machine operators can work without stress due to the sound.
- Personal protective devices i.e., ear plugs are provided to workers working in high noise areas.
- The mining activity held in day time only.
- Noise level at quarry site checked periodically.

Blast vibrations and control measures

- ❖ Controlled blasting technique is adopted in this project in order to reduce blast vibrations.
- ❖ Ordinary delayed detonators are using for the blasting
- ❖ The maximum charge per delay is not more than 10kg to limit the PPV values to 10mm/sec.
- ❖ Optimum delay sequence and stem to column ratio is maintaining to minimize the ground vibration intensity.

12	Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.	complied
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Compliance:

To reduce noise & air pollution and community nuisance, quarrying activities are limited to day time. The project proponent is strictly adhered the guideline of

pollution control board regarding the time schedule of the quarrying activities. The quarry working time is 6.30am to 4.30 pm. This will help to limit the sound pollution.

13	Blasting should be done in a controlled manner as specified by the regulations of explosives department or any other concerned agency.	Complied
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Compliance:

The project has appointed a license person to supervise and monitor all the activities carrying out in the project site. The blasting is done in controlled manner by using ordinary/electrical delayed detonators. All blasting activities are carrying out with the specified regulations of explosive department. This technology reduces the PPV value so as to the vibration.

14	A licensed person should supervise/control the blasting operations.	Complied
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Compliance:

The project has appointed Foreman and Second Class Manager in the project site to supervise/control the blasting operations for the extraction of granite building stones. The certificate of qualified person is attached as **Annexure No.6**.

15	Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.	Complied
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Compliance:

To reduce emission of dust through the vehicle movement, the access road from the entrance of project site to quarry is tarred and maintaining in good manner. The project is spraying water on the road to arrest the dust production during summer season.

16	Overburden materials should be managed within the site and used for reclamation of mine pits as per mine closure plan/ specific conditions.	complied
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Compliance:

There is no old quarry in the site for restoration so the overburden materials are stored at designated place within the project site. The project proponent has started concurrent eco restoration in the project site.

17	Height of the benches should not exceed 5m, and width should not be less than 5m, if there is no mention is the mining plan/specific conditions.	Complied
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Compliance:

To enhance safety and to promote eco friendly mining, the quarrying activity in the project site is progressing by creating benches of 5 meter width and 5 meter height. The formation of benches is under the direction and supervision of competent person.

18	Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.	Noted
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Compliance:

The project proponent is using ordinary detonators for blasting. Therefore the problem with fly rock in the community is not happened. The project is also assures the maximum PPV is under 10 with the controlled blasting operations.

19	Maximum depth of mining from general ground level at site shall not exceed 10m.	Will be complied
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Compliance:

Mining depth will not exceed beyond 10 meter or not below the level of the nearest stream bed, whichever is less.

20	No mining operations should be carried out at places having a slope greater than 45°.	Noted
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Compliance:

In the project site, there is no area with a slope greater than 45°. Therefore it is not necessary to explore from the slopes greater than 45°.

21	Acoustic enclosures should be provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.	Being Complied
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Compliance:

To reduce sound amplification a green belt is developed around the project site to reduce noise and air pollution. This helps the noise and sound level is kept within the prescribed standards. The labours in the project site are wearing ear plugs to reduce the impact of noise generating from the machines. There is no crusher unit is working near to the quarry site.

22	The workers on the site should be provided with the required protective equipments such as ear muffs, helmet, etc.	Complied
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Compliance:

To ensure the safety of workers in working site, the project proponent provided adequate Personnel Protective Equipments (PPE) such as helmets, ear muffs, safety belts, glows, etc. to labours in the quarry site.

23	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	Being Complied
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Compliance:

The project proponent ensured that all storm water from the mining area is flowing in to the pond creating at mining area. The project proponent has initiated steps to create garland drains where it is necessary in the lower slopes of the project area for storm water management.

24	The transportation of minerals should be done in covered trucks to contain dust emissions.	complied
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Compliance:

To avoid dust emission while transportation of materials, the project assures the trucks are covered before it leaving the project sites.

25	The proponent should plant trees at least 5 times of the loss that has occurred while clearing the land for the project.	Being complied
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Compliance:

As part of concurrent eco restoration, the project planted various saplings in the project area as a compensation of loss of trees while the project is clearing the land for mining.

26	Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.	complied
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Compliance:

A portion of spent oil is using in as lubricant in the project site. The excess used oil will be sold only to the approved recyclers

27	Explosives should be stored in magazines in isolated place specified and approved by the explosives department.	complied
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Compliance:

As part of safety guidelines of explosive department, explosives are stored in magazine. The magazine situated in an isolated place specified and approved by the explosives department. The area surrounded to the magazine was fenced with barbed metal wire.

28	A minimum buffer distance of 100m meter from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.	complied
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Compliance:

The project proponent strictly adhered all guidelines issued by Kerala State Pollution Control Board. Adequate distance from the houses and other buildings are kept. The norms of Kerala State Pollution Control Board regarding the distance criteria of residences, roads, rivers and worship places is adhered by the project. The distance of the nearest house is above 143 meter form the quarry.

29	100 m buffer distance should be maintained from forest boundaries.	Complied
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Compliance:

There is no forest near to the project site.

30	Consent from Kerala Pollution Control Board under Water and Air Act(s) should have been obtained before initiating activity.	Complied
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Compliance:

The Project has obtained “*Consent to Operate*” (Renewal) from Kerala State Pollution Control Board. The copy of consent is provided in **Annexure 1**.

31	All other statutory clearances should have been obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.	Complied
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Compliance:

The certificates obtained from concerned statutory authorities are enclosed in **Annexure No.1, 2, 3, 4 & 5**

TABLE NO.4 – DETAILS OF APPROVALS OBTAINED

Name of the Statutory approval	Name of the Statutory authority	Approval Number & Date
Environmental Clearance order	State Environmental Impact Assessment Authority, Kerala	826/SEIAA/EC1/2609/2015 Dt.17-08-2016

"Consent to Operate" (Renewal)	Kerala State Pollution Control Board	PCB/PLKD/IC/CO-4012/2016 Dt. 18-10-2016
Explosive License	Ministry of Commerce & Industry – Petroleum & Explosives Safety Organization (PESO)	E/SC/KL/22/1745(E81598)
License for quarry operations	<i>Panchayath</i>	A7-183/18-19 Dt. 03-05-2018
Movement Lease	<i>Mining and Geology Dept.</i>	1842/17 Dt. 29-05-2017

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 environmental 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.	Will be complied
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Compliance:

At present the project is running as per plan submitted in Environmental Impact Assessment Authority, Govt. of India and approved mining plan. There is no change in the scope of the project. The project will seek for a new Environmental clearance in the case of any change(s) in the scope of the project.

33	The Authority reserves the right to add additional safe guard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted
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Compliance:

To improve the safety of mine and human life, the project will incorporate all possible measures in the mine industry, If the authority instructs to add additional safeguard measures subsequently.

34	The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, The Environment (Protection) Act, 1986 the public liability (Insurance) Act, 1991 and EIA notification, 2006.	Noted
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Compliance:

The stipulated orders and directions under different act and notification including EIA notification will be scrupulously followed. A brief list of various Acts and notifications which are followed by the proponent is given below

- Kerala Minor Mineral Concession Rules, 2015.
- Mines Act, 1952
- Explosive Rules, 2008
- Kerala Panchayat Raj Act, 1994
- Water Pollution (Prevention & Control) Act, 1974
- Air Pollution (Prevention & Control) Act, 1981
- The Kerala Promotion of Tree Growth in Non-Forest Areas (Amendment) Act, 2007.
- Environment Protection Act, 1986
- EIA Notification, 2006 / 2009

35	The project proponent should advertise in at least two local news papers widely circulated in the region, one which (both advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Department of Environment and Climate Change, Govt. of Kerala 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	Complied
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	receipt of the Clearance letter and the copy of the same signed in all pages should be forwarded to the office of this authority as confirmation.	
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Compliance:

An advertisement in two local daily newspapers (English and Malayalam) regarding Environmental Clearance accorded to the quarry project was given within the stipulated period and the copy of the same was submitted at SEIAA Kerala.

36	A copy of the clearance letter shall be sent by the proponent to concerned Grama/District Panchayath / 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.	Complied
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Compliance:

A copy of the Environment Clearance letter was submitted to the Panchayat Office. The project proponent did not receive any suggestions / representation from anywhere while the processing the proposal therefore did not give the copy of clearance letter to anyone. At present the project does not have a website this will be created soon.

37	The proponent shall submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office.	Complied
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Compliance:

The project proponent is bound to follow the conditions stipulated in the Environmental Clearance order. The compliance report of first half is being submitted to the Directorate of Environment and Climate Change, Govt. of Kerala and also to the Regional Office of MoEF&CC, Govt. of India both in hard copy as well as mail. The monitored data of Air, Water and Noise is attached as **Annexure No. 7, 8 & 9**

38	The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3ft with green background and yellow letters of Times New Roman font of size of 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.	Complied
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Compliance:

The detail of the Environmental Clearance has display on metallic board in the project site. The metallic board installed as specified in the conditions of Environmental Clearance order.

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.	Complied
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Compliance:

An assurance in the form of affidavit was already submitted to SEIAA Kerala. The project is scrupulously following the conditions mentioned in the EC order.

40	No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modification in the mine shall be carried out without prior approval of the SEIAA, as applicable.	Noted
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Compliance:

At present, the project proponent is not intending to expand the area of mine, technology and scope of working. The project will appear SEIAA for Environment Clearance if the project is thinking to expand its scope.

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.	Noted
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Compliance:

There is no natural water course from the upper slope of the project instead of storm water channel. There is no stream originating from the lease area. The project has created proper drainages for the storm water management.

42	Monitoring of Ambient air Quality to be carried out based on the notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and un loading points & transfer point to reduce fugitive emissions.	Complied
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Compliance:

The project proponent has monitored the ambient air quality as per National Ambient Air Quality Standard (NAAQS), during the time of appraisal of the project. The project proponent is intending to increase splashing of water and installation of sprinklers at loading, unloading and transfer points.

43	The top soil, if any, shall be temporarily 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 staked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of	Being complied
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	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 bump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.	
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Compliance:

To prevent the soil erosion, the top soil and overburden are stacked in designated place within the project site. Only topsoil will be used for plantation. Overburden will be used for landfill and to construct haulage roads in the mining area. The excess will be stored in a designated place as per the direction of State Environment Impact Assessment Authority (SEIAA). The Environment Monitoring Cell will monitor the execution of eco restoration.

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 monsoon and maintained properly.	Being complied
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Compliance:

The project proponent has constructed effective garland drains to catch all the storm water during the time of monsoon season. These channels directed the water to the rain water collection pond. All sediments and silts are settling at the bottom of the pond and only cleared water is letting out. The water from the pond can be used for splashing of water on roads to arrest the dust. The project proponent indenting to create de siltation chambers along with catch drains.

45	Effective safeguard measures such as regular water sprinkling shall be carries out in critical areas prone to air pollution and having high	complied
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	levels of PM ₁₀ and PM _{2.5} , such as haul road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality Parameters conform to the norm prescribed by the Central Pollution Control Board in this regard.	
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Compliance:

The project proponent is regularly checking the pollution of all vehicles in the site and spraying water in critical areas prone to air pollution with the help of vehicle. The project proponent will fix sprinklers in critical area to reduce the dust emission such as loading and unloading points, haul roads and transfer points. The ambient air quality is monitoring with the help of an approved laboratory.

46	Fugitive dust emission from all the sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer point should be provided and properly maintained.	Being complied
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Compliance:

The project proponent has installed sprinklers in critical area to reduce the dust emission such as loading and unloading points, haul roads and transfer points. The ambient air quality will be monitored with the help of an approved laboratory. The mechanisms will be properly maintained.

47	Measures should be taken for control of noise levels below 85 dBA in the work environment.	Noted
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Compliance:

The main sound generating activities in the mining industries are the playing of jack hammer, breaker, vehicles and blasting operations. The level noise from all these activities will not go beyond 85dBA. The project proponent will take appropriate action to reduce the sound by employing possible measures. These are mentioned under the condition number 11.

48	A separate Environmental Management Cell with suitable qualified personal should be set up under the control of a senior executive, who will report directly to the Head of the Organization.	Complied
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Compliance:

To monitor all conditions stipulated in the Environment Clearance and environment Management Plan, the project constitutes an Environment Monitoring Cell with Mr. benny Pathrose as head of the monitoring Cell. This Environment Monitoring cell monitors and evaluates the safeguard measures implemented in the project site.

49	The funds earmarked for environmental protection and CSR activities should be kept in 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.	Being complied
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Compliance:

The project proponent could execute many activities under Corporate Social Responsibility (CSR) for community development. To implement these activities in a good manner, the project proponent will open an account for keeping the funds earmarked for environmental protection and CSR.

50	The Regional Office of MoEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the regional Office by furnishing the requisite data/information/monitoring reports.	Will be complied
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Compliance:

The project proponent will extent all possible cooperation to the officers form regional office of MoEF & CC and can produce all data/information/reports when they are asking for.

51	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred within a period of 30 days as prescribed under section 16 of the National Green tribunal Act, 2010.	Noted
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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 the provisions of Environment (Protection) Act, 1986.	Noted
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53	The SEIAA may revoke or suspend the order, for non implementation of any of the specific or this implementation of any of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted
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Compliance:

The project proponent is willing to implement the conditions stipulated in the Environment Clearance order. The project can execute all possible measures in the project site for the conservation of environment..

54	The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.	Noted
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Compliance:

The project will give priority to the conditions stipulated in the Environment clearance Order.

55	This order is valid for a period of 5 years or the expiry date of mine lease period issued by the Govt. of Kerala, whichever is earlier.	Noted
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56	The environmental clearance will be subject to the final order of the courts in any pending litigation related to the land or project, in any court of law.	Noted
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57	The mining operation shall be restricted to above ground water table and is should not intersect ground water table.	Will be complied
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Compliance:

The project will restrict its mining operations above the ground water table.

58	All vehicle used for transportation and within the mine shall have "PUC" certificate from authorized pollution taking center. Washing of all vehicles shall be inside the lease area.	complied
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Compliance:

As part of reduce air pollution, the project proponent monitors the pollution level of all vehicles playing in the project site. This monitoring will be conducted only in authorized pollution checking center.

59	Project proponent should obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project.	Noted
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Compliance:

At present, the need of prior approval is not necessary to draw ground water and surface water for the project.

60	Regular monitoring of flow rates and water quality upstream and down streams of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly report to SEIAA.	Will be complied
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Compliance:

There is no stream or springs flowing in and around to the mine lease area. The project will install de siltation trap and other mechanism to prevent sediments and wastes from the mining area entering in to the public drainage system.


61	Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Being complied
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Compliance:


The project proponent has initiated steps an occupational health surveillance program in association with Primary Health Center (PHC) of Kerala government for the labours working in mining area.

ANNEXURE

Annexure No.1



FILE NO : PCB/PLKD/IC/CO-4012/2016
Date of issue : 18/10/2016



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. :3750529
Dated:06-09-2016

TO

M/s TRIPTHY GRANITES
Sri Benny Pathrose,
TRIPTHY GRANITES
CHALIYATTIRI P.O PALLIPPADAM
PALAKKAD - 679535

Consent No. :PCB/PLKD/IC/CO/F/4417/2016
Valid Upto :30/09/2019



Copy of Consent form PCB

Annexure No.2

Validity expires on 16-08-2021



सत्यमेव जयते

**Proceedings of the State Environment Impact Assessment
Authority Kerala**

*Present: Prof. (Dr.) K.P. Joy, Chairman, Dr. J. Subhashini, Member and Sri. V. S. Senthil, I.A.S.,
Member Secretary.*

Sub: Environmental Clearance -Application for environmental clearance for the quarry project in Sy. Nos. 274 and 275/1A3 at Thirumittacode Village II, Thirumittacode Panchayath, Pattambi Taluk, Palakkad District, Kerala by M/s Triphy Granites- E.C-Granted-Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY

No. 826/SEIAA/EC1/2609/2015

dated, Thiruvananthapuram 17-08-2016

- Read:* - 1. Application dated 27-06-2015 from Sri. Benny Pathrose, Partner, M/s Triphy Granites, Pallippadam, Malatyamkunnathu, Chaliyattiri P.O., Palakkad District-679535.
2. Minutes of the 48th meeting of SEAC held on 6-7/11/2015.
3. Minutes of the 56th meeting of SEAC held on 6-7/06/2016.
4. Minutes of the 55th meeting of SEIAA held on 16/07/2016.

ENVIRONMENTAL CLEARANCE NO. 116/2016

Sri. Benny Pathrose, Partner, M/s Triphy Granites, Pallippadam, Malatyamkunnathu, Chaliyattiri P.O., Palakkad District-679535, vide his application received on 07-07-2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 274, 275/1A3 at Thirumittacode Village II, Thirumittacode Panchayath, Pattambi Taluk, Palakkad District, Kerala for an area of 4.7811 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA.II (M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the O.M. No. J-13012/12/2013-IA-II (I) dated 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares. Other details of the project are as follows:



Page 1 of 10

Copy of Environmental Clearance

Annexure No. 3

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

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

अनुज्ञप्ति सं. (Licence No.): E/SC/KL/22/1745(E81598)
वार्षिक फीस रूपए (Annual Fee Rs): 2400/-

1. Licence is hereby granted to
Sh. Benny Pathrose, Partner (अधिभोगी / Occupier : Sh. Benny Pathrose), M/s. Triphy Granites, Pallipadam, Malayankulam, Chazhikkal, Peringode Via, Town/Village - Chaliyattiri, District-PALAKKAD, State-Kerala, Pincode - 679535

को अनुज्ञप्ति अनुदत्त की जाती है।

2. अनुज्ञप्तिधारी की प्रास्थिति | Status of licensee : Partnership Firm

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

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

क्र. सं.	नाम और विवरण	वर्ग और प्रभाग	उप-प्रभाग	मात्रा किसी एक समय में
Sr. No.	Name and Description	Class & Division	Sub-division	Quantity at any one time
1.	Nitrate Mixture	2, 0	0	400 Kg.
2.	Safety Fuse	6, 1	0	1000 Mtrs
3.	Ordinary Detonator	6, 3	0	5000 Nos.
4.	Electric Detonators	6, 3	0	5000 Nos.

(ख) किसी एक कैलेंडर 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 (g)]: 10 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/22/1745(E81598)
दिनांक (Dated) 25/07/2017

6. अनुज्ञप्ति परिसर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address:
Survey No. 274, ग्राम (Town/Village): Thirumittacode-2 (v), Pattambi Taluk पत्तिस थाना (Police Station): Chalissery
जिला (District): PALAKKAD राज्य (State): Kerala पिनकोड (Pincode): 679535
दूरभाष (Phone) ई.मेल (E-Mail): फेक्स (Fax)

7. अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्विष्ट हैं।
The licensed premises consist of following facilities. Two portable magazines of B(No.11) & B(No.12) type fabricated by M/s. Industrial Explosives (P) Ltd., Nagpur.

8. अनुज्ञप्ति समय - समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबंधों के अधीन रहते हुए अनुदत्त की जाती है।
The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.
1. उपर्युक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थान, सन्निर्माण संबंधी और अन्य विवरण दर्शित करते हुए।)
Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
2. अनुज्ञप्ति प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञप्ति की शर्तों और अतिरिक्त शर्तों।
Conditions and Additional Conditions of this licence signed by the licensing authority.
3. दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञप्ति तारीख 31 मार्च 2022 तक विधिमाम्य 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-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 प्रतिसंकेत की जा सकती है, जहां वह लागू हो।
This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख | The Date - 25/07/2017 संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives South Circle, Chennai

नवीनीकरण के पृष्ठोत्तर के लिए स्थान
Space for Endorsement of Renewal


नवीनीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प Signature of licensing authority and stamp
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कानूनी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरुपयोग विधि के अधीन गंभीर दंडित अपराध होगा।
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

उप मुख्य विस्फोटक नियंत्रक
Deputy Chief Controller of Explosives
एरनाकुलम Ernakulam

Copy of Explosive


Annexure No. 4




ലൈസൻസ് നമ്പർ A7-183/18-19 തീയതി 03/05/2018
ട്രിഫി ഗ്രാനൈറ്റ് ഗ്രാമ പഞ്ചായത്തിൽ നിന്നും
 1994 ലെ കേരളാ പഞ്ചായത്ത് രാജ് ആക്ട് (1994 ലെ 13) 232, 233, 234, 254 എന്നീ
 വകുപ്പുകളും അതേ തുടർനുള്ള ചട്ടങ്ങളും അനുസരിച്ചു നൽകുന്ന

ഡി & ഒ ലൈസൻസ്

ലൈസൻസിയുടെ പേരും മേൽവിലാസവും	ശ്രീമതി പത്മിനി പി.ആർ.എസ്. ന്യൂപ്തി ഡി.എസ്.പി., പള്ളിപാടം, ചിറ്റാഴിപ്പള്ളി	
സ്ഥാപനത്തിന്റെ പേരും, സ്ഥലനാമവും	ന്യൂപ്തി ഡി.എസ്.പി., പള്ളിപാടം	
ലൈസൻസ് നൽകിയിട്ടുള്ള പ്രവർത്തനങ്ങൾ	SY No: 274, 275 / 1A3 കരിങ്കൽ ഖനനം ചെയ്യുന്നതിന്	
കെട്ടിടത്തിന്റെ നമ്പരും വാർഡ് നമ്പരും	SY No: 274 4.7811 hectares SX No: 275/1A3 നിരവധി ട്രാക്ട് വില്ലേജ് II, താലൂക്ക്	
ലൈസൻസ് കാലയളവ്	03/05/2018 മുതൽ 31/03/2019 വരെ	
ഇടാക്കിയ ലൈസൻസ് ഫീസ്	15000 / രൂപ	രസീത് നമ്പർ
		117010108180
ലൈസൻസ് അനുവദിക്കുന്നതിനായി ഹാജരാക്കിയ നിരീക്ഷണ പത്രങ്ങളുടെ വിവരങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽകിയ അധികാരസ്ഥാനം)	As per the order No of Hon. High Court No: WP(C) No. 12122/2017(M) In addition to this Court order the applicant submit the following documents 1. State Environmental Impact Assessment Authority clearance No: 826/SEIAA/ECI/2609/2015 dtd 17/08/2016 2. Pollution Control Consent to Operate/Authorisation/Registration Order No: PCB/PLKD/IC/CO/F/4417/2016 3 Mining and geology letter No: 5160/M3/2016 Dtd 15/6/16 4. Explosive license No: E/SC/KL/22/1745 (E81 599) dt - 25/09/2017 5. Blaster's Certificate of Competency.	



ഒഫീസ് മുദ്ര
 Date: _____
 Signature: _____



സെക്രട്ടറി
 ഗ്രാമപഞ്ചായത്ത്

GLM-30-Y-2014

Copy of license from Gram Panchayat


Annexure No.5

Date: 18/02/17 DuMada II


भारतीय गैर न्यायिक भारत INDIA
₹. 500 FIVE HUNDRED RUPEES
पाँच सौ रुपये Rs. 500
INDIA NON JUDICIAL

FORM H
(See Rule 43)
QUARRYING LEASE

C 638842



Benny Pathrose



കേരളം കേരള KERALA

This deed of lease made on this the.....^{29th}..... day of May.....2017 between the Governor of Kerala (hereinafter referred to as the "State Government" which expression shall, where the context so admits be deemed to include his successors and assigns) of the one part and **Shri. Benny Pathrose, Partner, M/s. Triphy Granites, Pallipadam, Chazhiyattiri. P. O., Palakkad, aged 46 years, son of Shri. M. M. Pathrose** resident of **Madappillil House, Malayidomthuruthu Post, Kunnathunadu Taluk, Ernakulam District** (hereinafter called the "lessee/lessees" which expression shall where the context so admits, include his/their heirs, executors, administrators, representatives and permitted assigns) of the other part.

Witnesseth that in consideration of the rents and royalties and lessee's/Lessees' covenants, hereinafter reserved and contained the State Government hereby give on lease to the lessee/lessees the land measuring **4.7811 hectares** described in the schedule hereunder and delineated on the plan hereto annexed and therein coloured red (hereinafter called the "said lands") to hold the same for a period of **Ten (10) years** commencing from the 29/5/2017.....and ending on the 28/5/2027 for the purposes of extracting minor mineral/minerals and subject to the terms and conditions contained in the


Lessor *[Signature]* **29/5/17**
K. K. SAJEEVAN
 Geologist
 District Office of the Department of Mining and Geology, Palakkad
 Pin-678 014.

For Lessee *[Signature]*
R. SARASWATHY
 Collectorate Vendor
 PALAKKAD

Copy of Lease

Annexure No.6

Cert No. FUE /1485

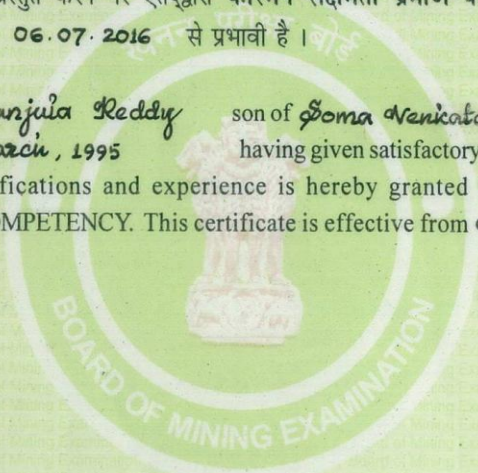
 सत्यमेव जयते


भारत सरकार/Government of India
खान अधिनियम, 1952/Mines Act, 1952
खनन परीक्षा बोर्ड/Board of Mining Examinations


फोरमैन सक्षमता प्रमाण-पत्र
FOREMAN'S CERTIFICATE OF COMPETENCY
(धात्विकीय खान विनियम, 1961 के अन्तर्गत)
(Under the Metalliferous Mines Regulations, 1961)

श्री सोमा रमनजूला रेड्डी सुपुत्र सोमा वेंकट रेड्डी
जिनकी जन्म तिथि 08.03.1995 है, को विहित अर्हताएं एवं अनुभव प्राप्त करने
का सन्तोषजनक प्रमाण प्रस्तुत करने पर एतद्वारा फोरमैन सक्षमता प्रमाण-पत्र प्रदान किया जाता है।
यह प्रमाण-पत्र दिनांक 06.07.2016 से प्रभावी है।

Shri Soma Ramanjula Reddy son of Soma Venkata Reddy
born on 08th March, 1995 having given satisfactory evidence of possessing
the prescribed qualifications and experience is hereby granted MINE FOREMAN'S
CERTIFICATE OF COMPETENCY. This certificate is effective from 06.07.2016




सचिव
खनन परीक्षा बोर्ड
Secretary
Board of Mining
Examinations


अध्यक्ष
खनन परीक्षा बोर्ड
Chairman
Board of Mining
Examinations

Signed and Sealed
Date 04.01.17

Certificate of Second class manager



Certificate of Foreman

Annexure No. 7

**TEST REPORT**

Test Report No: 20190216/R013	Date: 20.02.2019	Page 1 of 1
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CUSTOMER DETAILS			
Customer Details	Name & Address	M/s Triphy Granites Pattambi, Palakkad District	
Location of Site	Survey No	274,275/1A3	
	Village	Thirumittacode II	
	Panchayath	Thirumittacode	
	Taluk	Pattambi	
	District	Palakkad	
	State	Kerala	
Customer Reference	Test Request form dated 16.02.2019		
SAMPLE DETAILS			
Source of Sample	Ambient Air	Sample Code	20190216/S013
Location of Monitoring	South side boundary	Sampled By	Laboratory
Date of Monitoring	16.02.2019	Test Started On	17.02.2019
Sample Received On	17.02.2019	Test Completed On	20.02.2019
Humidity	55%	Sampling Procedure	IS 5182 Part V & XIV

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULTS	NAAQ STANDARD
01	Particulate matter (PM ₁₀)	IS 5182 Part 23: 2006 RA 2017	µg/m ³	56.7	100
02	Particulate matter (PM _{2.5})	EPA 40 CFR Part 50 Appendix – L	µg/m ³	23.7	60.0
03	Sulphur dioxide (SO ₂)	IS 5182 Part 2: 2001 RA 2017	µg/m ³	< 2.00	80.0
04	Nitrogen dioxide (NO ₂)	IS 5182 Part 6: 2006 RA 2017	µg/m ³	< 2.00	80.0

End of Report

For and on behalf of
Standard^s Environmental & Analytical Laboratories

Rija
Authorized Signatory
Rija Joseph
Technical Manager

Standard^s Environmental & Analytical Laboratories

Accreditation and Approval: NABL as per ISO 17025: 2017 & "A" Grade Laboratory of KSPCB
K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43
Web: www.sealabs.in, E-mail: seaalab@gmail.com

Ambient Air

Annexure No.8

**TEST REPORT**

Test Report No: 20190216/R014	Date: 20.02.2019	Page 1 of 1
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CUSTOMER DETAILS	
Customer Details	Name & Address M/s Triphy Granites Pattambi, Palakkad District
Location of Site	Survey No 274,275/1A3
	Village Thirumittacode II
	Panchayath Thirumittacode
	Taluk Pattambi
	District Palakkad
State Kerala	
Customer Reference	Test Request Form dated 16.02.2019
SAMPLE DETAILS	
Source of Sample	Ambient Sound Level
Sample Code	20190216/S014
Location of Monitoring	West side Boundary
Date of Monitoring	16.02.2019
Method	IS 9989:1981 RA:2008

DAYTIME	RESULT	NIGHTTIME	RESULT
06.00 Hrs	38.1 dB (A)	23.00 Hrs	35.7 dB (A)
07.00 Hrs	40.9 dB (A)	00.00 Hrs	38.3 dB (A)
08.00 Hrs	45.2 dB (A)	01.00 Hrs	39.0 dB (A)
09.00 Hrs	48.7 dB (A)	02.00 Hrs	38.6 dB (A)
10.00 Hrs	51.1 dB (A)	03.00 Hrs	39.4 dB (A)
11.00 Hrs	54.2 dB (A)	04.00 Hrs	38.3 dB (A)
12.00 Hrs	51.5 dB (A)	05.00 Hrs	40.1 dB (A)
13.00 Hrs	50.7 dB (A)	RESULTS	
14.00 Hrs	51.1 dB (A)		
15.00 Hrs	51.5 dB (A)	Noise Level (Leq) Daytime	49.6 dB (A)
16.00 Hrs	52.7 dB (A)		
17.00 Hrs	53.1 dB (A)	Noise Level (Leq) Nighttime	38.5 dB (A)
18.00 Hrs	47.6 dB (A)		
19.00 Hrs	44.0 dB (A)		
20.00 Hrs	40.1 dB (A)		
21.00 Hrs	39.6 dB (A)		
22.00 Hrs	36.9 dB (A)		

End of Report

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Result of ambient sound

Annexure No.9

**TEST REPORT**

Test Report No: 20190216/R015	Date: 20.02.2019	Page 1 of 1
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CUSTOMER DETAILS

Customer Details	Name & Address	M/s Triphy Granites Pattambi, Palakkad District	
Location of Site	Survey No	274,275/1A3	
	Village	Thirumittacode II	
	Panchayath	Thirumittacode	
	Taluk	Pattambi	
	District	Palakkad	
	State	Kerala	
Customer Reference	Test Request form dated 17.04.2019		

SAMPLE DETAILS

Sample Code	20190216/S015	Sample Received On	17.02.2019
Sample Name	Water	Sampling Procedure	---
Sample Description	Open well	Sampling Location	---
Identification By Customer	---	Sample Condition	Good
Sampled On	16.02.2019	Test Started On	17.02.2019
Sampled By	Customer	Test Completed On	20.02.2019

SL NO	TEST PARAMETER	TEST METHOD	UNITS	RESULT	ACCEPTABLE LIMIT (IS 10500 – 2012)
01	Colour	IS 3025 Part 4:1983 RA 2017	Hazen	1.00	5.00 (Max)
02	Odour	IS 3025 Part 5:1983 RA 2017	---	Unobjectionable	Unobjectionable
03	Turbidity	IS 3025 Part 10:1984 RA 2017	NTU	< 0.10	1.00 (Max)
04	pH	IS 3025 Part 11:1983 RA 2017	---	7.11	6.50 – 8.50
05	Conductivity	IS 3025 Part 14:1984 RA 2013	µS/cm	138	---
06	Total Dissolved Solids	IS 3025 Part 16:1984 RA 2017	mg/L	89.0	500 (Max)
07	Total Hardness (as CaCO ₃)	IS 3025 Part 21:2009 RA 2014	mg/L	32.0	200 (Max)
08	Calcium (as Ca)	IS 3025 Part 40:1991 RA 2014	mg/L	8.00	75.0 (Max)
09	Magnesium (as Mg)	IS 3025 Part 46:1994 RA 2014	mg/L	2.92	30.0 (Max)
10	Chloride (as Cl)	IS 3025 Part 32:1988 RA 2014	mg/L	19.9	250 (Max)
11	Total Alkalinity (as CaCO ₃)	IS 3025 Part 23:1986 RA 2014	mg/L	25.7	200 (Max)
12	Iron (as Fe)	IS 3025 Part 53:2003 RA 2014	mg/L	0.12	1.00 (Max)
13	Sulphate (SO ₄)	IS 3025 Part 24:1986 RA 2014	mg/L	6.80	200 (Max)
14	Total Coliform Bacteria	IS 15185 : 2016	---	Absent/100 ml	Absent/100 ml
15	E coli	IS 15185 : 2016	---	Absent/100 ml	Absent/100 ml

End of Report

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Result of drinking water