

**COMPLIANCE REPORT TO THE CONDITIONS  
OF  
ENVIRONMENTAL CLEARANCE ORDER  
NO: 1071 (A)/EC1/2016/SEIAA Dated 15-03-2018**

**BY  
STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY  
(SEIAA)  
FOR QUARRY PROJECT**

**AT  
Sy. Nos. 459/1-1pt., 459/2, 460/10, 12, 460/2-1pt., 460/2-2,  
461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4pt., 446/7pt.,  
446/8pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt.,  
452/5pt., 452/4, 6, 7, 8 OF PEROORKADA VILLAGE,  
THIRUVANANTHAPURAM TALUK, THIRUVANANTHAPURAM  
DISTRICT, KERALA**

**BY  
POABS GRANITES PRIVATE LIMITED  
KUTHIRAKALAM P.O., TRIVANDRUM, KERALA - 695 543**

## April, 2021 - September 2021

### INTRODUCTION

M/s Poabs Granites Pvt. Ltd. is running a stone quarry situated at Sy. Nos. 459/1-1pt., 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4, 6, 7, 8 of Peroorkada Village, Thiruvananthapuram District and Taluk, Kerala. The quarry project is running according to the environmental clearance order by state Environmental Impact Assessment Authority on 15-03-18. Six month compliance reports to the conditions of the environmental clearance are to be submitted as part of compliance. Sixth half yearly Compliance Report to the specific and general conditions of the environmental clearance for the period of April 2021 - September, 2021 is being submitted.

### **PART A - SPECIFIC CONDITIONS**

#### ➤ **Condition 1**

The abandoned pit on the western part to be developed as a Rainwater harvesting pond

#### ✓ **Compliance**

**Project team has converted the abandoned pit on the western part as Rainwater harvesting pond. The Rainwater harvesting system is constructed by earthen wall strengthened by geotextiles. Preserved water is using for sprinkling purposes. Photograph showing the same is attached as Annexure A.**

#### ➤ **Condition 2**

If any plant species endemic to Western Ghats are noticed in the area, they shall be properly protected in situ or by transplanting to an appropriate location inside the lease area.

#### ✓ **Compliance**

**We protecting the plant species that are endemic to Western Ghats in situ or by transplanting to a suitable location. We also plan to develop a plant Nursery for plant species reported from the project area that are endemic to Western Ghats.**

## **PART B - GENERAL CONDITIONS**

### **➤ Condition 1**

Rainwater harvesting facility should be installed as per the prevailing provisions of KMBR/KPBR unless otherwise specified.

### **✓ Compliance**

**We providing rainwater harvesting systems in connection with the present project. The System consists of three tanks constructed with stone masonry wall having the capacity of 190000, 144000 and 360000 liters. Photographs of the rainwater harvesting system are enclosed as Annexure 1. Details of the rainwater harvesting system are as follows.**

<b>Sl. No</b>	<b>Type</b>	<b>Length (m)</b>	<b>Width (m)</b>	<b>Height (m)</b>	<b>Capacity (L)</b>
1	Tank constructed with stone masonry wall 1	20	6	2	190000
2	Tank constructed with stone masonry wall 2	12	6	2	144000
3	Tank constructed with stone masonry wall 3	15	6	4	360000

### **➤ Condition 2**

Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.

### **✓ Compliance**

**An environmental monitoring cell has formed with Mr. Jabu K. Abraham (Director) as head of the monitoring cell and made functional. Meeting of the monitoring cell is arranging monthly and discuss the status of the compliance of the specific and general conditions mentioned in the Environmental clearance order. The details of the monitoring cell members are given below.**

<b>Sl. No.</b>	<b>Post</b>	<b>Name</b>
1	Head of the monitoring cell (Director)	<b>Mr. Jabu K. Abraham</b>
2	Head in charge (Environment)	Mr. Girish Menon
3	Senior Environmental Officer	Dr. Rinoy Varghese
4	Environmental Officer	Mr. Navin Xavier
5	Name of the environmental officer in charge	Mr. Anil kumar. M.
6	Name of the officer Environment, Health and safety	Mr. Viswanathappa
7	Name of the Asst. officer of Environment, Health and safety	Mr. Ravisankar
8	Name of the environmental consultant	M/s Environmental Engineers & Consultants Pvt. Ltd
9	Address of Environmental laboratory	M/s Poluchem Laboratory Pvt. Ltd.

➤ **Condition 3**

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

✓ **Compliance**

**Project team has planted suitable avenue trees along the side of the open parking areas, approach road and internal road systems. Photographs showing the same is provided at Annexure No. 2. Plant saplings maintained in the nursery for roadsides and parking areas as follows.**

Sl. No	Botanical Name	Common Name	Family	Distribution	Status
1	<i>Mangifera indica</i> L.	Mavu	Anacardiaceae	Evergreen and semi-evergreen forests and also widely cultivated	Indo-Malaysia
2	<i>Cassia fistula</i> L.	Indian Laburnum / Kanikkonna	Fabaceae		Indo-Malesia
3	<i>Artocarpus heterophyllus</i> Lam.	Plavu	Moraceae	Evergreen and semi-evergreen forests, also widely cultivated	Widely cultivated in the tropics, origin is probably South India
4	<i>Acacia auriculiformis</i> Benth.	Acacia	Leguminosae	Native of Tropical Australia	Exotic

➤ **Condition 4**

Maximum possible solar energy generation and utilization shall done at the own cost of the project proponent.

✓ **Compliance**

**In connection with the present project, we are providing solar energy devices such as solar lights and solar water**

heater in the project area. Solar water heater and biogas plant are associated with canteen and are using for kitchen purposes. Solar lights has installed in different locations of the project area. Photograph showing the same is enclosed as Annexure 3.

➤ **Condition 5**

Sprinklers shall be installed and used in the project site to contain dust emission.

✓ **Compliance**

The road system of the project site, approached road and other connected roads has been watering daily by sprinkler system installed in tipper lorry since the starting of the project. For the dust generated during Crushing & Screening operation, company has installed fixed water sprinkling systems in the Crushing units. For the suppression of dust during drilling and blasting, we adopted wet sack method for drilling. Photographs of the sprinkling system is enclosed as Annexure 4.

➤ **Condition 6**

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

✓ **Compliance**

Ten percentage of the excavated area will be retained as water storage area after the closure of the quarry. We proposes to develop a green belt in the remaining area after reclaimed with stacked dumping and overburden. Eco-restoration comprising the mine closure plan will implement at our own cost. As part of the same, we have stored the top soil and overburden in a prefixed area.

➤ **Condition 7**

At least 10 percent out of the 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 pit is stipulated in the E.C.

✓ **Compliance**

**After the closure of the quarry, 10% of the mined out area will be maintained as water storage area. It is plan to develop a green belt in the remaining area with indigenous plant species after reclaimed with stacked dumping and overburden. Grass and Shrub species with strong root system will plant in the areas prone to erosion especially at the foot of the hill.**

➤ **Condition 8**

Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented.

✓ **Compliance**

**Regarding Corporate Social Responsibility (CSR) program, the amount agreed by the company has been spending for various social activities. The major CSR activities comprises medical aid, marriage support, material supply for house constructions/maintenance, public road maintenance, water supply etc.**

➤ **Condition 9**

The lease area shall be fenced off with barbed wires to a minimum 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.

✓ **Compliance**

**Barbed metal wire fencing around the mining area with a height of 4ft have installed to prevent falling of animals/human/belongings/dumping of garbage's etc. All the boundary indicators (boards, stores, markings, etc.) has protected. Photographs of the same is enclosed as Annexure 5.**

➤ **Condition 10**

Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulation of Explosive Department.

✓ **Compliance**

**In connection with the present project, project team has provided warning alarm in the project site and maintaining properly. A danger board indicating blasting time has also installed in the project site. The blasting time has fixed and is between 1.00pm and 2.00pm. Photograph showing the same is enclosed as Annexure 6.**

➤ **Condition 11**

Control measures on noise and vibration prescribed by KSPCB should be implemented.

✓ **Compliance**

**Noise pollution**

**Mitigation measures Implemented**

**The major noise generating source from the mining activity is working machinery, drilling, blasting and plying of vehicles. The following control measures are undertaken to bring down the noise levels:-**

- **Proper maintenance of machinery, equipment and improvement of design of machines.**

- **Personal protective devices i.e., earmuffs, ear plugs etc. are provided to workers working in high noise areas.**
- **Maintain a wide green belt of dense foliage between mine areas and residential colonies.**
- **The mining area is working only during day times.**
- **Noise quality is checking periodically. The sound levels are monitored through an NABL accredited laboratory during the quarry in operation and the monitored results are well within the permissible limits.**

#### **Blast vibrations and control measures**

- ❖ **Controlled blasting technique is adopted in this project in order to reduce blast vibrations.**
- ❖ **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.**
- ❖ **NONEL Detonators are using for blasting**

#### **➤ Condition 12**

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

#### **✓ Compliance**

**Quarrying and related activities limited to day time only as per KSPCB guidelines/specific conditions.**

#### **➤ Condition 13**

Blasting should be in a controlled manner as specified by the regulations of Explosive department or any other concerned agency.

#### **✓ Compliance**

#### **Blasting**

- ❖ **The controlled blasting is carrying out by adopting all the safety measures as per “MMR 1961” and with the permission of DGMS.**
- ❖ **Blasting is carried out for the fragmentation of the granite within the project area. Multiple blast holes of 1.0 to 1.5 m depth will be drilled with the help of 32mm drill rod, Jack Hammer and air compressor of 100 cm capacity.**
- ❖ **It is estimated about 250g of explosives per hole is required. About 30-50 holes per blast are using. Therefore the requirement of explosive will be about 10kg/ blast.**
- ❖ **NONEL Detonators are using for blasting and this will reduce the vibration and sound.**

#### **Blasting safeguard**

- ❖ **Blasting in the open cast is done only during day time at designated hours.**
- ❖ **Only competent blasters are appointed to handle explosives.**
- ❖ **Explosives are stored in approved and licensed magazine as per explosive Act/ Rules.**
- ❖ **Explosives are brought from magazine to blasting site in licensed explosive van under the care of blaster.**
- ❖ **Sufficient warning signals are given before blasting the holes.**
- ❖ **Guards are posted on all roads and paths at least 250 m distance to stop entrance to the danger zone during the blasting hour.**
- ❖ **Controlled blasting is practiced to control vibrations and flying fragments.**

- ❖ **Optimum charge is used, while blasting near office complex/ infrastructure site.**
- ❖ **Maximum charge per delay is always being less than 10kg to limit the PPV levels within the DGMS standards of 15 mm/sec.**

➤ **Condition 14**

**A licensed person should supervise/ control the blasting operations.**

✓ **Compliance**

**Licensed person is supervising the blasting operations. Copy of the certificates of licensed persons are attached as Annexure 6a**

➤ **Condition 15**

Access road to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.

✓ **Compliance**

**Access road to the Mine has tarred and maintaining appropriately to contain dust emissions that may arise during transportation of materials. The photographs showing the same is given in Annexure 7.**

➤ **Condition 16**

Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan/ specific condition.

✓ **Compliance**

**Top soil and overburden has been storing in a prefixed location for the reclamation of mine pit as per mine closure plan/EC Condition. The photographs showing the same is given in Annexure 8.**

➤ **Condition 17**

Height of the benches should not exceed 5m, and width should not be less than 5m, if there is no mention in the mining plan/ specific condition.

✓ **Compliance**

**Mining operation is performing in the form of benches and the proposed height and width of the benches are maintaining. The photograph showing the bench type mining is enclosed as Annexure 9.**

➤ **Condition 18**

Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.

✓ **Compliance**

**Blasting mats to stop fly rock during blasting has provided. Number of other safety measures are also practicing to prevent fly rocks cross the lease area. Which includes: blasting during unfavorable weather conditions has avoided, maintain optimum delay sequence and stem to column ratio to minimize the fly rock distance etc. We are also using NONEL shock tubes for blasting process.**

➤ **Condition 19**

Maximum depth of mining from general ground level at site shall not exceed 10 m.

✓ **Compliance**

**In the current quarry project, the excavation of mineral is from 130-50m MSL in conceptual phase. Mining depth will not exceed beyond 10m from general ground level.**

➤ **Condition 20**

No mining operation should be carried out at places having a slope greater than 45°.

✓ **Compliance**

**Quarrying activities are not performing at regions having a slope greater than 45°.**

➤ **Condition 21**

Acoustic enclosures should have been 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.

✓ **Compliance**

**Whole mining area has covered by thick green belt and this will reduce sound amplifications produced during mining activities. The noise level is limiting within the prescribed standards given by CPCB/KSPCB. Sound monitoring report is attached as Annexure 10.**

➤ **Condition 22**

The workers on the site should be provided with the required protective equipment such as ear muffs, helmets, etc.

✓ **Compliance**

**Workers has provided with personal protective devices such as earmuffs, ear plugs, helmet etc.**

➤ **Condition 23**

Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.

✓ **Compliance**

**We provided garland drains with clarifiers in the lower slopes around the core area to channelize storm water. The photograph showing the Garland drains with clarifiers is enclosed as Annexure 11.**

➤ **Condition 24**

The transportation of minerals should be done in covered trucks to contain dust emissions.

✓ **Compliance**

**After loading, all trucks are covered with tarpaulin sheets to control dust emissions during transportation. Trucks are not overloading and the loads are maintained to the body level.**

➤ **Condition 25**

The proponent should plant at least 5 times of the loss that has been occurred while clearing the land for the project.

✓ **Compliance**

**Project team has planted trees saplings 5 times of the loss that has been occurred while clearing the land for the project. Regarding the present project the loss of trees are comparatively less since most of the EC area is already under quarrying when it is obtained.**

➤ **Condition 26**

Disposal of spent oil from diesel engines should be as specified under relevant rules/regulations.

✓ **Compliance**

**Disposal of spent oil from diesel engines is carrying out under relevant rules/regulations.**

➤ **Condition 27**

Explosive should be stored in magazines in isolated place specified and approved by the Explosive Department.

✓ **Compliance**

**Explosives are storing in magazines built in an isolated place specified and approved by the Explosives Department. Photograph showing the same is attached as Annexure 12.**

➤ **Condition 28**

A minimum 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.

✓ **Compliance**

**Distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures has provided.**

➤ **Condition 29**

100 m buffer distance should be maintained from forest boundaries.

✓ **Compliance**

**No forest boundary near to the project area**

➤ **Condition 30**

Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.

✓ **Compliance**

**Consent from Kerala State Pollution Control Board under Water and Air Act(s) has obtained. Consent Order from Kerala State Pollution Control Board is attached as Annexure 13.**

➤ **Condition 31**

All other statutory clearances should be obtained as applicable by project proponents from the respective competent authorities including that blasting and storage of explosives.

✓ **Compliance**

**All statutory approvals required for the quarrying activity is obtained for the project. The details regarding the same along with the copy of the statutory approvals are enclosed as Annexure 14 and 15. Details of statutory approvals are given below.**

Sl. No.	Annexure	Statutory approvals
1	14	License from Panchayat

2	15	License to possess: (c) for use, explosives of class1, 2, 3, 4, 5, 6 or 7.
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➤ **Condition 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 are assessed, based on which only the E.C. 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.

✓ **Compliance**

**We agreed**

➤ **Condition 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 the provisions of the Environmental (Protection) Act, 1986 to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

✓ **Compliance**

**We agreed.**

➤ **Condition 34**

The stipulation by the statutory authorities under different acts and notifications should be complied with including the 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.

✓ **Compliance**

**We are complying stipulation by the statutory authorities under different acts and notifications including the 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.**

➤ **Condition 35**

The project Proponent should advertise in at least two local 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 Environmental Clearance and copies of clearance letters are available with the State Environmental Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at [www.seiaa.kerala.org](http://www.seiaa.kerala.org). The advertisement should be made within 10 days from the date of receipt of the clearance letter and the copy of the same signed in all pages should be forwarded to the office of the Authority as confirmation.

✓ **Compliance**

**The accordance of environmental clearance to the quarrying activity has advertised in two local newspapers and the copy of the same was submitted to SEIAA Kerala. Details of the newspaper advertisements are given below.**

<b>Sl. No.</b>	<b>Annexure</b>	<b>Name of the Newspaper and edition</b>	<b>Dated</b>
1	16	New Indian Express	29/03/2018
2	17	Mathrubhumi	29/03/2018

➤ **Condition 36**

A copy of the clearance letter shall be send by the proponent to concerned Grama 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.

✓ **Compliance**

**A copy of the environmental clearance order was submitted to the Thiruvananthapuram Corporation Office. The acknowledgement received is provided at Annexure 18. There is no suggestion/representation received so far from anybody. The environmental clearance order is uploaded in the website of the company and can be seen in the website [www.msand.in](http://www.msand.in)**

➤ **Condition 37**

The proponent shall submit half yearly reports on the status of compliance of the stipulated E.C. 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 E.C. conditions, including result of monitored data on website and shall update the same periodically. It shall simultaneously be send to the respective Regional office, of MOEF, Govt. of India and also to the State Environmental Impact Assessment Authority (SEIAA) office.

✓ **Compliance**

**Seventh compliance report is being submitted to SEIAA, Department of Environment and Climate change, Govt. of Kerala and Regional Office of MoEF, Govt. of India.**

➤ **Condition 38**

The details of environmental clearance should be prominently displayed in a metallic board of 3ft 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.

✓ **Compliance**

**Details of the environmental clearance prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font has installed.**

➤ **Condition 39**

The proponent should provide notarized affidavit (indicating the number and date of environmental clearance proceedings) that all the conditions stipulated in the E.C. shall be scrupulously followed.

✓ **Compliance**

**An affidavit stating that all the conditions stipulated in the Environmental clearance will be scrupulously followed has submitted to Department of Environment and climate change. Copy of the same is enclosed as Annexure 19.**

➤ **Condition 40**

No change in mining technology and scope of work should be made without prior approval of the SEIAA, No further expansion or modifications in the mines shall be carried out without prior approval of the SEIAA, as applicable.

✓ **Compliance**

**We will not make any change in mining technology and scope of work without prior approval of the SEIAA and further expansion or modifications in the mines will not be carried out without prior approval of the SEIAA.**

➤ **Condition 41**

The project proponent shall ensure that no natural water course and/or water recourses shall be obstructed due to any mining operations. Necessary safe guard measures to protect the first order streams if any, originated from the mine lease shall be taken.

✓ **Compliance**

**We ensure that no natural water course and/or water recourses has not obstructed due to any mining operations. No first order streams originated from the mine lease.**

➤ **Condition 42**

Monitoring of Ambient Air Quality to be carried out based on the notification 2009, as amended from the time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points and transfer points to reduce fugitive emission.

✓ **Compliance**

**We installed water sprinklers at loading and unloading points and transfer points to reduce fugitive emission. We are carrying out monitoring of Ambient Air Quality based on the notification 2009, as amended from the time to time by the Central Pollution Control Board. Ambient Air Quality monitoring Report is attached as Annexure 20.**

➤ **Condition 43**

The top soil, if any, shall be temporarily be stored at earmarked site(s) only for the top soil shall be used for land reclamation and plantation. The overburden generated during the mining operation shall be stacked at earmarked dump site(s) only. The maximum height of the dump shall not exceed 8m and width 20m and overall slope of the dump shall be maintained to 45°. The O.B. dump 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 the stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated area should continue until the vegetation become self-sustaining.

✓ **Compliance**

**We are storing the overburden and topsoil generated during the mining operation in an earmarked area. The maximum height of the dump are maintaining below 8m and width 20m and overall slope of the dump will be maintained to 45°. The O.B. dump is scientifically vegetating with suitable native species to prevent erosion and surface run off. In critical areas, we are using geo textiles for the stabilization of the dump. The entire excavated area will be backfilled. We will monitor and manage the rehabilitated area until the vegetation become self-sustaining.**

➤ **Condition 44**

Catch drains and siltation ponds of appropriate site shall be constructed around the mine working mineral and O.B. dumps to prevent runoff 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 desilted particularly after monsoon and maintained properly.

✓ **Compliance**

**Around the mine working, mineral and O.B. dumps, we provided the catch drains at appropriate site with checks and siltation traps to prevent runoff water and flow of sediments directly into the river and other water bodies. The water so collected are utilizing for watering the mine area, roads, green belt development etc. The drains are regularly desilting particularly after monsoon and maintained properly.**

➤ **Condition 45**

Effective safe guard measures such as regular water sprinkling shall be carried out in critical areas porn to air pollution and having high

levels of PM<sub>10</sub> and PM<sub>25</sub> such as haul road loading and unloading points and transfer points. It shall be ensure that the Ambient Air Quality Parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

✓ **Compliance**

Effective safe guard measures **such as regular water sprinkling are carrying out in critical areas porn to air pollution and having high levels of PM<sub>10</sub> and PM<sub>25</sub> such as haul road loading and unloading points and transfer points. The Company ensuring that the Ambient Air Quality Parameters follow to the norms prescribed by the Central Pollution Control Board in this regard.**

➤ **Condition 46**

Fugitive dust emission from all the sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading at transfer points. Should be provided and properly maintained.

✓ **Compliance**

**Fugitive dust emission from all the sources are controlling regularly. Water spraying on haul roads, loading and unloading at transfer points has arranged and properly maintaining.**

➤ **Condition 47**

Measures should be taken for the control of Noise level below 85 DBA in the work environment.

✓ **Compliance**

**Different measures are adopting for the control of noise level below 85 DBA in the work environment. We are also checking the Ambient Sound level periodically.**

➤ **Condition 48**

A separate Environment Management Cell with suitable qualified personal should be setup under the control of a senior executive who will directly report to the head of the organization.

✓ **Compliance**

**A separate Environment Management Cell with suitable qualified personal has formed under the control of a senior executive who will directly report to the head of the organization.**

➤ **Condition 49**

The funds earmarked for the Environmental protection measures 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 Environmental Impact Assessment Authority (SEIAA) office.

✓ **Compliance**

**The funds earmarked for the Environmental protection measures and CSR activities are do not diverted for other purpose.**

➤ **Condition 50**

The regional office of MOEF and CC located at Bangalore shall monitor compliance of the stipulated conditions. The project Authorities should extent full co-operation to the officer (s) of the regional office by furnishing the requisite data/information/monitoring reports.

✓ **Compliance**

**We will extent full co-operation to the MOEF officer (s) of the regional office by furnishing the requisite data/information/ monitoring reports.**

➤ **Condition 51**

Any appeal against the 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.

✓ **Compliance**

**There is no appeal against this Environmental Clearance with the National Green Tribunal.**

➤ **Condition 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 the withdrawal of this clearance and attract action under the provision of Environmental Protection Act, 1986.

✓ **Compliance**

**We agreed.**

➤ **Condition 53**

The SEIAA may revoke, or suspend the order for non-implementation of any of the specific or this implementation of any of the conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further conditions or stipulate any further conditions in the interest of Environmental Protection.

✓ **Compliance**

**We agreed.**

➤ **Condition 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 any other project.

✓ **Compliance**

**We agreed.**

➤ **Condition 55**

The order is valid for a period of 5 years or the expiry date of mining lease period issued by the Government of Kerala, whichever is earlier.

✓ **Compliance**

**We agreed.**

➤ **Condition 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.

✓ **Compliance**

**There is no pending litigation related to the land or project, in any court of law regarding this project.**

➤ **Condition 57**

The mining operation shall restrict to above ground water table and it should not intersect ground water table.

✓ **Compliance**

**We are carrying out mining activity above the ground water table only and it will not intersect ground water table.**

➤ **Condition 58**

All vehicles used for transportation and within the mine shall have 'PUC' certificate from authorized pollution taking center. Washing of all vehicles shall be in the lease area.

✓ **Compliance**

**All vehicles using for the transportation within the mine have obtained 'PUC' certificate from authorized pollution**

**taking center. All the vehicles will be washed within in the lease area only.**

➤ **Condition 59**

Project proponent should obtain necessary prior permission of the competent authorities for withdrawal of requisite quantity of surface water and ground water for the project.

✓ **Compliance**

**Regarding the present mining project we are using only harvested rainwater for the industrial/domestic water needs.**

➤ **Condition 60**

Regular monitoring of flow rates and water quality upstream and down streams of the spring and perennial nallahs flowing in and around the mining lease area shall be carried out and reported in the six monthly reports to the SEIAA.

✓ **Compliance**

**There is no streams and perennial nallahs flowing in and around the mining lease.**

➤ **Condition 61**

Occupational Health surveillance programme of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures if needed.

✓ **Compliance**

**The Company carrying out Occupational Health surveillance program of our workers periodically to observe any contractions due to exposure to dust and take corrective measures if needed in connection with Mines Vocational Training.**

**ANNEXURE A**



## ANNEXURE 1



**Photographs showing the rainwater harvesting system in the project area  
ANNEXURE 2**



**Photographs showing tree planted around parking areas and road sides  
ANNEXURE 3**



**Photograph showing the Solar Energy device installed within the project area**



**Photograph showing the Sprinkler system provided in the site**

**ANNEXURE 5**



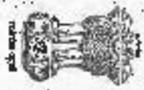
**Photograph showing the metal wire fencing and indicators boards**

### ANNEXURE 6



# Photograph showing the danger board indicating blasting time AND Warning alarm installed in the project site

## ANNEXURE 6A

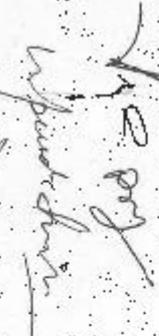

  
 राज कानून, 1952  
 THE MINES ACT 1952

**MANAGER'S FIRST CLASS CERTIFICATE OF COMPETENCY TO MANAGE A METALLIFEROUS MINE**  
 (प्रतिपत्ति प्राप्त विधि, 1961 के अन्तर्गत)  
 (Under the Metalliferous Mines Regulations 1961)  
 (केवल विद्युत शक्ति केवल के लिए ही प्रयोग)  
 (Restricted to mines having electrical workings only)  
**श्री. जी. विद्यानाथाय**

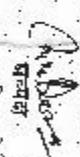
निम्नलिखित विधि O.A. No. 1964 है, जिसमें 18 के अन्तर्गत अनुसूचित कर्मों के प्रयोगिता प्रदान करने पर एवं विद्युत शक्ति, 2007 को प्रयोगिता विहित करने के लिए पर्याप्त सुरक्षा विद्युत खनिज प्रदान प्रावधानों के अन्तर्गत हेतु प्रथम श्रेणी प्रबंधक सहायक प्रशासनिक प्रदान किया जाता है। यह प्रमाण-पत्र  
 O2. O4. 2008 के अन्तर्गत प्रमाणित।

**श्री. जी. विद्यानाथाय**  
 possessing a Diploma  
 in Mining Engineering approved under Regulation 18 and having passed the prescribed examination, held on September, 2007 is hereby granted MANAGER'S FIRST CLASS CERTIFICATE OF COMPETENCY to manage a metalliferous mine having open cast workings only. This Certificate is effective from O2. O4. 2008.

**सदस्य**  
 सदन परीक्षा बोर्ड  
 Members of the Board of  
 Mining Examinations.

  
 [Signature]

**सदस्य**  
 सदन परीक्षा बोर्ड  
 Chairman of the Board of  
 Mining Examinations.

  
 [Signature]

Signed and Sealed  
 Date: 06/09/09



**ANNEXURE 7**

**Photograph showing the tarred/Brick paving access road to the quarry**

**ANNEXURE 8**

**Photographs showing top soil and Overburden storage area**

**ANNEXURE 9**

**Photograph showing the Bench Type Mining**

## ANNEXURE 10


**POLUCHEM LABORATORIES (P) LTD.**
**CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY**

PALLATH BUILDING, N. KALAMASSERY P. O., ERNAKULAM - 683104

Phone : 0484-2544030, 8281982322, 9747400085, 9747400089, www.poluchem.com, poluchem@gmail.com

ACCREDITED BY KSPCB AS "A" GRADE LABORATORY

**TEST REPORT**

Page 01 of 01

<b>Client Name &amp; Address</b>	<b>Certificate No:</b>	<b>PL/AMB/RT/1445/2021</b>
M/s Poabs Granites Pvt. Ltd Peeroorkada, Trivandrum.	Date of issue:	16/02/2021
	Date of monitoring	08/02/2021 10.00 Hrs to 09/02/2021 10.00 Hrs
	Date of sample received:	09/02/2021
	Date of analysis	10/02/2021
	Monitoring Location	M/s. Poabs Granites Pvt Ltd. Survey Nos. 459/1-1pt, 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4,6,7,8 Village - Peeroorkada, Taluk-Trivandrum, District - Trivandrum,Kerala
	Sample description	Ambient air -Near east side boundary
	Sample code given by client	Nil

SL NO	PARAMETERS	TEST METHOD	RESULTS	Limit as per NAAQS
01	Particulate Matter (PM <sub>10</sub> )	IS 5182 Part 23 2006RA2012	54.6 µg/m <sup>3</sup>	100 µg/m <sup>3</sup>
02	Particulate Matter (PM <sub>2.5</sub> )	CPCB	23.6 µg/m <sup>3</sup>	60 µg/m <sup>3</sup>
03	Sulphur dioxide	IS 5182 Part 2 2001 RA 2017	8.7 µg/m <sup>3</sup>	80 µg/m <sup>3</sup>
04	Nitrogen dioxide	IS 5182 Part 06 2006 RA2017	13.1 µg/m <sup>3</sup>	80 µg/m <sup>3</sup>

Note: NAAQS-National Ambient Air Quality Standards

\* End of the Report\*

The results are related only to the sample collected for analysis. This certificate shall not be reproduced except in full and without the written permission with authorized signatory

 For and on behalf of  
POLUCHEM LABORATORIES (P) LTD.

  
 AUTHORIZED SIGNATORY  
 SRIKANTH P. RAMESH  
 QUALITY MANAGER



## POLUCHEM LABORATORIES (P) LTD.

CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY

PALLATH BUILDING, N. KALAMASSERY P. O., ERNAKULAM - 683104

Phone : 0484-2544030, 8281982322, 9747400085, 9747400089, www.poluchem.com, poluchem@gmail.com

ACCREDITED BY KSPCB AS "A" GRADE LABORATORY

### TEST REPORT

Page 01 of 01

<b>Client Name &amp; Address</b>	<b>Certificate No:</b>	<b>PL/RT/SD/1446/2021</b>	
M/s Poabs Granites Pvt. Ltd Peeroorkada, Trivandrum.	Date of issue:	16/02/2021	
	Date of monitoring	08/02/2021 - 09/02/2021	
	Monitoring Location	M/s. Poabs Granites Pvt Ltd. Survey Nos. 459/1-1pt, 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4,6,7,8 Village - Peeroorkada, Taluk-Trivandrum, District - Trivandrum,Kerala	
	Sample Description	Ambient Sound Level -East Side	
<b>HOURLY INTERVAL</b>	<b>RESULT</b>	<b>HOURLY INTERVAL</b>	<b>RESULT</b>
06.00 AM-07.00 AM	43.6 dB (A)	11.00 PM-12.00AM	40.1 dB (A)
07.00 AM- 08.00 AM	42.5 dB (A)	12.00 AM-01.00 AM	39.5 dB (A)
08.00 AM- 09.00 AM	48.7 dB (A)	01.00 AM- 02.00 AM	38.4 dB (A)
09.00 AM -10.00 AM	50.1 dB (A)	02.00 AM-03.00 AM	37.4 dB (A)
10.00 AM-11.00 AM	52.3 dB (A)	03.00 AM-04.00 AM	36.2 dB (A)
11.00 AM-12.00 PM	53.6 dB (A)	04.00 AM -05.00 AM	35.4 dB (A)
12.00 PM-01.00 PM	53.7 dB (A)	05.00 AM-06.00AM	36.2 dB (A)
01.00 PM-02.00 PM	54.1 dB (A)		
02.00 PM-03.00 PM	52.6 dB (A)		
03.00 PM-04.00 PM	53.4 dB (A)		
04.00 PM-05.00 PM	50.1 dB (A)		
05.00 PM-06.00 PM	49.8 dB (A)		
06.00 PM-07.00 PM	48.4 dB (A)		
07.00 PM-08.00 PM	47.4 dB (A)		
08.00 PM-09.00 PM	45.2 dB (A)		
09.00 PM-10.00 PM	43.2 dB (A)		
10.00 PM-11.00 PM	42.4 dB (A)		
		LDay	53.4 dB (A)
		LNight	38.4 dB (A)

Limits: Industrial Area Day Time-75dB(A),Night Time- 70dB(A),Commercial area Day Time -65 dB(A),Night Time 55dB(A),  
Residential area Day Time -55 dB(A),Night Time -45dB(A),Silence zone day time-50dB(A),Night time-40dB(A)  
Day Time from 06.00 am to 10.00 pm & Night Time from 10.00 pm to 06.00 am

\*End of the Report \*

For PoluChem Laboratories (P) Ltd.

SREEJA RAMESH  
Authorized Signatory



## POLUCHEM LABORATORIES (P) LTD.

CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY

PALLATH BUILDING, N. KALAMASSERY P. O., ERNAKULAM - 683104

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ACCREDITED BY KSPCB AS "A" GRADE LABORATORY

Page 01 of 01

### TEST REPORT

Ref.No. PL/RT/SW/1447/2021  
Name & address of customer

Date of Issue: 16/02/2021  
: M/s Poabs Granites Pvt. Ltd  
Peeroorkada, Trivandrum.

Project Site

: M/s. Poabs Granites Pvt Ltd.  
Survey Nos. 459/1-1pt, 459/2, 460/10, 12,  
460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt.,  
462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5,  
461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt.,  
452/5pt., 452/4,6,7,8  
Village - Peeroorkada,  
Taluk-Trivandrum,  
District - Trivandrum,Kerala

Sample drawn by  
Sample description  
Location of sampling  
Date of sample collected  
Date of analysis started  
Date of completion of analysis

: PoluChem Laboratory Sample Collector  
: Water Sample  
: Pond Water  
: 09/02/2021  
: 10/02/2021  
: 15/02/2021

Parameters tested	Test method	Results	Acceptable Limit As Per IS 10500-2012
Color	IS 3025 (P) 04 – 1983 RA2017	8 Hazen Unit	5 Hazen Unit
Odour	IS 3025 (P) 05 – 1983 RA2017	Agreeable	Agreeable
Turbidity	IS 3025 (P) 10 – 1984 RA2017	2 NTU	1 NTU
pH	IS 3025 (P) 11 – 1983 RA 2017	6.07	6.5 – 8.5
Total Dissolved Solids	IS 3025 (P) 16 – 1984 RA2017	84 mg/l	500 mg/l
Total Hardness as CaCO <sub>3</sub>	IS 3025 (P) 21 – 1983 RA2014	36.5 mg/l	200 mg/l
Total Alkalinity as CaCO <sub>3</sub>	IS 3025 (P) 23 – 1986 RA2014	10.4 mg/l	200 mg/l
Residual Chlorine	IS 3025 (P) 26 – 1986 RA2014	BDL	0.2 mg/l
Chloride as Cl <sup>-</sup>	IS 3025 (P) 32 – 1988 RA2014	22.1 mg/l	250 mg/l
Calcium as Ca	IS 3025 (P) 40 – 1991 RA2014	9.45 mg/l	75 mg/l
Magnesium as Mg	IS 3025 (P) 46 – 1994 RA2014	3.4 mg/l	30 mg/l
Total Iron as Fe	IS 3025 (P) 53 – 2003 RA2014	0.64 mg/l	1 mg/l
Sulphate as SO <sub>4</sub>	IS 3025 (P) 24 – 1986 RA2009	12.6mg/l	200 mg/l
Fluoride as F	IS 3025 (P) 60 -2008 RA 2013	BDL	1.0 mg/l
Biochemical Oxygen Demand (3 days at 27 <sup>o</sup> C)	IS 3025 (P) 44 – 1993RA 2014	1.8mg/l	--
Chemical Oxygen Demand	IS 3025 (P) 58 – 2006 RA2017	10 mg/l	--
Dissolved Oxygen	IS 3025 (P) 44 – 1989RA 2014	5.1 mg/l	--
Zinc as Zn	IS 3025 (P)49 – 1994 RA2014	BDL	5 mg/l
Manganese as Mn	IS 3025(P) 59– 2006 RA2017	BDL	0.1 mg/l
Cadmium as Cd	IS 3025(P) 41– 1992 RA2014	BDL	0.003 mg/l
Lead as Pb	IS 3025(P) 47– 1994 RA2014	BDL	0.01 mg/l
Coliforms(MPN/100ml)	IS 1622: 1981 RA 2009	70	Absent
Ecoli (Present or Absent/100ml)	IS 1622: 1981 RA 2009	Absent	Absent

Note : BDL – Below Detection Level

For PoluChem Laboratories (P) Ltd.

Authorized signatory  
**SREEJA RAMESH**  
QUALITY MANAGER

\* End of the report\*

The above results are related only to the sample submitted for analysis. This test report shall not be reproduced except

**ANNEXURE 11****Photographs showing garland drains**

**ANNEXURE 12**

**Photograph showing the Explosives magazines built in an isolated area**

**ANNEXURE 13**



**KERALA STATE POLLUTION CONTROL BOARD**

FILE NO. :PCB/TVM-DO/ICE/GEA/97/2009  
Date of issue :11/10/2019

**INTEGRATED CONSENT TO OPERATE - RENEWAL**

Consent No : PCB/TVM-DO/ICO(R)/CRU/666/2019

Ref : 1.Your Application No.11292914 Date:24-07-2019  
2.Consent No.PCB/RO/TVM/ICO-R/24/2016 Date:08/11/2016  
3.Consent No. PCB/TVM-DO/ICO-EXP/CRU-430/18 dated 26.09.2018

The 'Integrated Consent to Operate' issued as per reference above to M/s Poabs Granites Pvt Ltd,Kuthirakulam P.O Vellanadu Trivandrum is hereby renewed up to 31/10/2024 and issued to M/s Poabs Granites Pvt Ltd,Kuthirakulam P.O Vellanadu Trivandrum The consent(s)/ variation order(s) cited under reference are integral part of this renewal order and this order is subject to the conditions stipulated therein and the following modifications/ additions.

**I. GENERAL**

S.No.	Items	Description
1	Category	Orange
2	Capital Investment	Rs.1386 Lakhs
3	Annual Fee	Rs.76580/-
4	Validity	31/10/2024
5	Fee Remitted	Rs.382900/-
6	Power required	Super Primary Crusher 100 HP- 1 No's, Primary Crusher 40 HP- 2 No's, Secondary Crusher 30 HP- 3 No's, VSI 400 HP- 1 No's
7		Vibrators, Conveyors, Sirens- 240 HP, Air Clarifies 175 HP- 2 No's, Cone Crusher 300 HP- 1 No's, Total- 1560 HP
8	Product Details	Same as previous consent

**II. Stack Details**

Stack No.	Source of	Emission	Stack Height above	Control

Page 1

## Consent Order from Kerala State Pollution Control Board

## ANNEXURE 14



**തിരുവനന്തപുരം കോർപ്പറേഷൻ**  
**[Thiruvananthapuram Corporation]**  
 1994-ലെ കേരള മുനിസിപ്പാലിറ്റി ആക്റ്റിലെ (1994-ലെ 20-ാം ആക്ട്) 447 വകുപ്പ് പ്രകാരം നൽകുന്നത്  
 [Issued under Section 447 of the Kerala Municipality Act 1994 (20th Act of 1994)]

**അനുമതിപത്രം**  
**[LICENCE]**

1. അനുമതി നമ്പർ : **140167112100130**      2. തീയതി : **22-03-2021**  
 [Licence Number]      [Date]

3. അനുമതി എടുത്തിട്ടുള്ള വ്യക്തിയുടെ പേരും താമസ വിലാസവും :  
**ABY MATHWU  
 MANAGING DIRECTOR,  
 POABS GRANITES PVT LTD,  
 PEROORKKADA VILLAGE  
 BLOCK -23 SY NO 461/4  
 461/1 462/1PT 462/2 462/3  
 446/4 446/7PT 446/8PT 462/5  
 461/2 461/3, TRIVANDRUM  
 695013**

[Name and address of the Licensee]

4. അനുമതി എന്തൊരു ഉദ്ദേശത്തിനായി :  
 [Purpose of Licence]

കോഡ്	ഉദ്ദേശവിവരം
10.1	വിവിധ വ്യവസായങ്ങൾക്കുവേണ്ടിയുള്ള പൊതുവായ അനുമതികൾ - അനുമതി ചെലവുകൾ ഉൾക്കൊള്ളുന്നവർ - ട്രാക്ടറുകൾ, ബാൾ മിൻസ് പോലെയുള്ളവ

5. അനുമതി കാലാവധി :      **01-04-2021** മുതൽ      **31-03-2022** വരെ  
 [Period of Licence]      [From]      [To]

സംരംഭത്തിന്റെ / സ്ഥാപനത്തിന്റെ / കടയുടെ പേര് :      **POABS GRANITES PVT LTD (QUARRY UNIT),  
 malamukal**  
 [Name of Project / Institution / Shop]

വടമ്പു വാർഡ് നമ്പർ :      **6**      സർവ്വേ നമ്പർ :      **461/4 461/1 462/2 462/3  
 446/4 446/7PT 446/8PT 462/5 461/2 461/3**  
 [Ward No.]      [Survey No.]

7. അനുമതി ഫീസ് അടച്ച വിവരങ്ങൾ :  
 [Licence Fees Details]

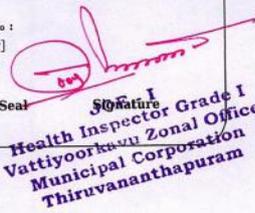
രസീത് നമ്പർ [Receipt No]	തീയതി [Date]	അനുമതി ഫീസ് [Licence Fees]
120070111578	23-02-2021	15000

അനുമതി നൽകിയ അധികാരിയുടെ അനുമതിയിൽ പ്രകാരം :  
 [Signed and Sealed as authorised by Licencing Authority]

Date



Name and Designation Seal



**Signature**  
**Health Inspector Grade I**  
**Vattiyoorkkalam Zonal Office**  
**Municipal Corporation**  
**Thiruvananthapuram**

### Panchayat Licence

## ANNEXURE 15



**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.कक्कनाड कोच्ची | CSEZ PO Kakkanad Dist. Ernakulam Ernakulam 682037  
फोन (Phone):- 2427286 | फैक्स (Fax):- 2427276  
ई-मेल Email: dycceernakulam@explosives.gov.in

संख्या (No): E/SC/KL/22/2(E8469) दिनांक (Date): 21/03/2019

सेवा में / To,  
M/S. POABS GRANITES PVT. LTD.,  
M/S. POABS GRANITES PVT. LTD., KUTOOR P.O., THIRUVALLA, PATHANAMTHITTA, KERALA., Town/Village - Kutoor  
District-PATHANAMTHITTA, State-Kerala, Pincode - 689106

**26 MAR 2019**

**विषय :** Survey No(s).1469/3/5 & 1469/2, ग्राम VELLANAD, जिला THIRUVANANTHAPURAM, राज्य Kerala में विस्फोटक के मैगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञति सं E/SC/KL/22/2(E8469) के नवीनीकरण संदर्भ में।

**Subject:** Possession for Use of Explosives from magazine situated at Survey No(s).:1469/3/5 & 1469/2, VELLANAD, Dist. THIRUVANANTHAPURAM, Kerala -Licence No.: E/SC/KL/22/2(E8469) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding

**महोदय | Sir,**

आपका उपर्युक्त विषय पर पत्र संख्या Nil दिनांक 15/03/2019 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्ररूप LE-3 में जारी अनुज्ञति दिनांक 31/3/2024 तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।  
Reference to your letter No.: Nil dated: 15/03/2019, the subject licence duly renewed upto 31/3/2024 and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.

अनुज्ञति के आगामी नवीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक 31/03/2024 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 31/3/2024.

- प्ररूप आरई-1 में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।  
Application in Form RE-1 duly filled in and signed.
- एक से पाँच वर्ष के अनुज्ञति शुल्क का बैंक ड्राफ्ट। बैंक ड्राफ्ट किसी भी राष्ट्रीयकृत बैंक के नाम आहरित, संयुक्त मुख्य विस्फोटक नियंत्रक, चेन्नई के पक्ष में चेन्नई में देय हो।  
Licence fees for one to five years in the form of demand draft drawn on any Nationalized Bank in favour of **Jt. Chief Controller of Explosives, Chennai payable at Chennai.**
- अनुमोदित प्लान के साथ मूल अनुज्ञति।  
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 जाए (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 त्रैमासिक विवरणी हर तिमाही के अंत में आरई-7 में प्रस्तुत की जाए। 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.

आपके खाते में रूप 28300/- की राशि शेष है जो इस संदर्भ को उद्धृत करते हुए भविष्य के संव्यवहार में समायोजित की जा सकती है।  
An amount of ₹.s. 28300/- balance is in your credit, which may be utilized for future transaction by quoting this reference.

भवदीय | Your's faithfully

(आर.वेणुगोपाल | Dr. R. Venugopal)

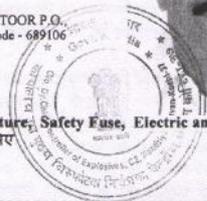
उप मुख्य विस्फोटक नियंत्रक | Deputy Chief Controller of Explosives  
कोच्ची | Ernakulam  
Deputy Chief Controller of Explosives  
एरनाकुलम Ernakulam

प्रतिलिपि प्रेषित | Copy Forwarded to:  
1. जिला मजिस्ट्रेट (District Magistrate), THIRUVANANTHAPURAM (Kerala)- सूचना के लिए (for information.)  
उप मुख्य विस्फोटक नियंत्रक | Deputy Chief Controller of Explosives  
कोच्ची | Ernakulam

**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/22/2(E8469)  
वार्षिक फीस रूप (Annual Fee Rs): 2400/-

1. Licence is hereby granted to  
M/S. POABS GRANITES PVT. LTD. (अधिभागी / Occupier : Mr. Aby Mathew), M/S. POABS GRANITES PVT. LTD.,KUTOOR P.O.,  
THIRUVALLA, PATHANAMTHITTA,KERALA, Town/Village - Kutoor, District-PATHANAMTHITTA, State-Kerala, Pincode - 689106

2. अनुज्ञप्ति अनुदत्त की जाती है।  
अनुज्ञप्तिधारी की प्राप्ति | Status of licensee : Company

3. अनुज्ञप्ति निम्नलिखित प्रयोजनों के लिए विधिमान्य है।  
Licence is valid only for the following purpose.  
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. 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	250 Kg.
2.	Safety Fuse	6, 1	0	4000 Mtrs
3.	Electric and/or Ordinary Detonators	6, 3	0	10000 Nos.

(ख) किसी एक कैलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा [अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञप्ति के लिए] : 10 times  
(b) Quantity of explosives to be purchased in a calendar month[applicable for licence under article 3(b) and (c)] : as above.

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञप्ति परिसर की पुष्टि होती है।  
The licensed premises shall conform to the following drawing(s):  
रेखाचित्र क्र. (Drawing No.) E/SC/KL/22/2(E8469)  
दिनांक (Dated) 22/12/1999

6. अनुज्ञप्ति परिसर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address:  
Survey No(s). 1469/3/5 & 1469/2, ग्राम (Town/Village) : VELLANAD  
जिला (District) THIRUVANANTHAPURAM राज्य (State) Kerala  
दूरभाष (Phone) पुलिस थाना (Police Station) : ARLANADU  
ई.मेल (E-Mail) पिनकोड (Pincode)  
फैक्स (Fax)

7. अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।  
The licensed premises consist of following facilities. : B & S TYPE PORTABLE MAGAZINE

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.

- 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.
- अनुज्ञप्ति प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञप्ति की शर्तों और अतिरिक्त शर्तों।  
Conditions and Additional Conditions of this licence signed by the licensing authority.
- दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञप्ति तारीख 31 मार्च 2005 तक विधिमान्य रहेगी। This licence shall remain valid till 31st day of March 2005.  
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 अधिग्रहण करने या यदि अनुज्ञप्ति परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिसंहत की जा सकती है, जहां यह लागू हो।  
This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख | The Date - 22/12/1999 संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives  
South Circle, Chennai

Amendments :  
● Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 20/05/2011  
● Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 14/12/2011  
Transfers :  
● Change in Licensee Name/Address/Status dated : 26/09/2017

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
21/03/2019	31/03/2024	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 दुरुपयोग विधि के अधीन गंभीर दंडित अपराध होगा।  
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

## Explosive License

## ANNEXURE 16







Validity expires on 14.03.2023

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

*Present: Prof. (Dr.) K.P. Jay, Chairman; Dr. J. Subhashini, Member &  
Sri. P.H.Kurian, I.A.S., Member Secretary.*

Sub: SEIAA- Environmental Clearance for the proposed stone quarry project in Survey No. 459/1-1pt., 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4 pt., 446/7 pt., 446/8 pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4, 6, 7, 8 of Perookada Village, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala by Mr. Jabu K. Abraham, Managing Partner, M/s POABS Granites Pvt. Ltd. - Granted - Orders issued.

**STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA**

**No. 10710A/VECI/2016/SEIAA**

**Dated, Thiruvananthapuram 15.03.2018**

- Ref: 1. Application received on 02.11.2016 from Mr. Jabu K. Abraham, Managing Director, M/s Poabs Granites Pvt. Ltd. Kattoor P.O., Thiruvalla, Kerala-689106  
2. Minutes of the 69<sup>th</sup> meeting of SEAC held on 09<sup>th</sup> & 10<sup>th</sup> March 2017  
3. Minutes of the 71<sup>st</sup> meeting of SEAC held on 20<sup>th</sup> & 21<sup>st</sup> April 2017  
4. Minutes of the 74<sup>th</sup> meeting of SEAC held on 14<sup>th</sup> & 15<sup>th</sup> June 2017  
5. Minutes of the 72<sup>nd</sup> meeting of SEAC held on 01<sup>st</sup> August 2017  
6. Minutes of the 76<sup>th</sup> meeting of SEAC held on 16<sup>th</sup> November 2017  
7. Affidavit dt.02.10.2017 from Mr. Jabu K. Abraham

**ENVIRONMENTAL CLEARANCE NO.32/2018**

Mr. Jabu K. Abraham, Managing Director M/s Poabs Granites Pvt. Ltd. Kattoor P.O., Thiruvalla, Kerala-689106, vide his application received on 02.11.2016 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Survey No. 459/1-1pt., 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4 pt., 446/7 pt., 446/8 pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4, 6, 7, 8 of Perookada Village, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala State for an area of 14.5687 hectares. The project comes under Category D, Activity 1(a), (c) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per G.M. No. J-11011/47/2011-IV/II(M) dated 13<sup>th</sup> May 2012 of Ministry of

*Prinist. Sridhar*  
4/4/18  
**SINDHU L.**  
Charge Officer  
Vantiyorkavu Zonal  
Municipal Corporation  
Thiruvananthapuram

Page 1 of 13

ANNEXURE 5

भारतीय गैर न्यायिक

एक सौ रुपये      Rs. 100

रु. 100      ONE HUNDRED RUPEES



सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

केरल KERALA B 126323

**AFFIDAVIT**

I, Jabu K Abraham, Director & Authorized Signatory of M/s Poabs Granites Pvt. Ltd. having its correspondence office at Kuttoor P.O. Thiruvalla, Pathanamthitta, Kerala - 689106, do hereby affirm and confirm as follows:-

1 That, M/s Poabs Granites Pvt. Ltd. propose to develop a Quarry Project at Survey Nos. 459/1-1pt, 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4,6,7,8 of Peroorkada Village, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala.



A.P. Gokula Chandran  
Area : Thiruvalla  
Municipality  
Reg.No: 597/PTA  
Expiry Date:  
18.05.2020




A.P. Gokula Chandran, B.A.L.L.B.  
Advocate & Notary  
Roll No-X/26/71 Thiruvalla.



കേരളം കേരल KERALA

AW 723618

2. That, the Environment Clearance proceedings number and date are Order No. 1071(A)/EC1/2016/SEIAA dt. 15-03-2018.
3. That, all the conditions stipulated in the Environment Clearance would be scrupulously followed.

*J. K. 18*  
DEPONENT

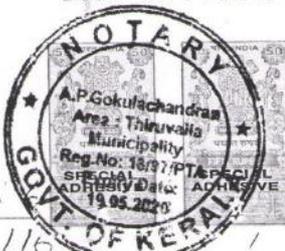
Verification:

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

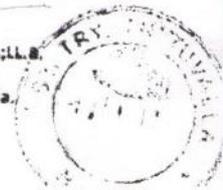
*J. K. 18*  
DEPONENT

Place: Thiruvananthapuram  
Date: 03-04-2018

*Solemnly affirmed and signed before me by the deponent who is personally known to me in my office at Thiruvalla on this the 3rd day of April 2018.*



*A.P. Gokulachandran*  
A.P. Gokula Chandran, B.A.;LL.B.  
Advocate & Notary  
Roll No:K/86/71 Thiruvalla.



10.  
1/116

*abs Granite: pvt. Ltd*

## ANNEXURE 20


**POLUCHEM LABORATORIES (P) LTD.**
**CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY**
**PALLATH BUILDING, N. KALAMASSERY P. O., ERNAKULAM - 683104**

Phone : 0484-2544030, 8281982322, 9747400085, 9747400089, www.poluchem.com, poluchem@gmail.com

ACCREDITED BY KSPCB AS "A" GRADE LABORATORY

**TEST REPORT**

Page 01 of 01

<b>Client Name &amp; Address</b>	<b>Certificate No:</b>	<b>PL/AMB/RT/1445/2021</b>
M/s Poabs Granites Pvt. Ltd Peeroorkada, Trivandrum.	Date of issue:	16/02/2021
	Date of monitoring	08/02/2021 10.00 Hrs to 09/02/2021 10.00 Hrs
	Date of sample received:	09/02/2021
	Date of analysis	10/02/2021
	Monitoring Location	M/s. Poabs Granites Pvt Ltd. Survey Nos. 459/1-1pt, 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4,6,7,8 Village - Peeroorkada, Taluk-Trivandrum, District - Trivandrum,Kerala
	Sample description	Ambient air -Near east side boundary
	Sample code given by client	Nil

SL NO	PARAMETERS	TEST METHOD	RESULTS	Limit as per NAAQS
01	Particulate Matter (PM <sub>10</sub> )	I S 5182 Part 23 2006RA2012	54.6µg/m <sup>3</sup>	100 µg/m <sup>3</sup>
02	Particulate Matter (PM <sub>2.5</sub> )	CPCB	23.6 µg/m <sup>3</sup>	60 µg/m <sup>3</sup>
03	Sulphur dioxide	I S 5182 Part 2 2001 RA 2017	8.7 µg/m <sup>3</sup>	80 µg/m <sup>3</sup>
04	Nitrogen dioxide	IS 5182 Part 06 2006 RA2017	13.1µg/m <sup>3</sup>	80 µg/m <sup>3</sup>

Note: NAAQS-National Ambient Air Quality Standards

\* End of the Report\*

The results are related only to the sample collected for analysis. This certificate shall not be reproduced except in full and without the written permission with authorized signatory	For and on behalf of <b>POLUCHEM LABORATORIES (P) LTD.</b>   <b>AUSRIKANTH</b> <b>QUALITY MANAGER</b>
---	---

## MONITORING REPORTS



### POLUCHEM LABORATORIES (P) LTD.

CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY

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#### TEST REPORT

Page 01 of 01

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Note: NAAQS-National Ambient Air Quality Standards

\* End of the Report\*

The results are related only to the sample collected for analysis. This certificate shall not be reproduced except in full and without the written permission with authorized signatory

For and on behalf of  
POLUCHEM LABORATORIES (P) LTD.

  
**SRIKANTH RAMESH**  
 AUTHORIZED SIGNATORY  
 QUALITY MANAGER



## POLUCHEM LABORATORIES (P) LTD.

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### TEST REPORT

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<b>Client Name &amp; Address</b>	<b>Certificate No:</b>	<b>PL/RT/SD/1446/2021</b>	
M/s Poabs Granites Pvt. Ltd Peeroorkada, Trivandrum.	Date of issue:	16/02/2021	
	Date of monitoring	08/02/2021 - 09/02/2021	
	Monitoring Location	M/s. Poabs Granites Pvt Ltd. Survey Nos. 459/1-1pt, 459/2, 460/10, 12, 460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt., 462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5, 461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt., 452/5pt., 452/4,6,7,8 Village - Peeroorkada, Taluk-Trivandrum, District - Trivandrum,Kerala	
	Sample Description	Ambient Sound Level -East Side	
<b>HOURLY INTERVAL</b>	<b>RESULT</b>	<b>HOURLY INTERVAL</b>	<b>RESULT</b>
06.00 AM-07.00 AM	43.6 dB (A)	11.00 PM-12.00AM	40.1 dB (A)
07.00 AM- 08.00 AM	42.5 dB (A)	12.00 AM-01.00 AM	39.5 dB (A)
08.00 AM- 09.00 AM	48.7 dB (A)	01.00 AM- 02.00 AM	38.4 dB (A)
09.00 AM -10.00 AM	50.1 dB (A)	02.00 AM-03.00 AM	37.4 dB (A)
10.00 AM-11.00 AM	52.3 dB (A)	03.00 AM-04.00 AM	36.2 dB (A)
11.00 AM-12.00 PM	53.6 dB (A)	04.00 AM -05.00 AM	35.4 dB (A)
12.00 PM-01.00 PM	53.7 dB (A)	05.00 AM-06.00AM	36.2 dB (A)
01.00 PM-02.00 PM	54.1 dB (A)		
02.00 PM-03.00 PM	52.6 dB (A)		
03.00 PM-04.00 PM	53.4 dB (A)		
04.00 PM-05.00 PM	50.1 dB (A)		
05.00 PM-06.00 PM	49.8 dB (A)		
06.00 PM-07.00 PM	48.4 dB (A)		
07.00 PM-08.00 PM	47.4 dB (A)		
08.00 PM-09.00 PM	45.2 dB (A)		
09.00 PM-10.00 PM	43.2 dB (A)		
10.00 PM-11.00 PM	42.4 dB (A)		
		LDay	53.4 dB (A)
		LNight	38.4 dB (A)

Limits: Industrial Area Day Time-75dB(A),Night Time- 70dB(A),Commercial area Day Time -65 dB(A),Night Time 55dB(A),  
Residential area Day Time -55 dB(A),Night Time -45dB(A),Silence zone day time-50dB(A),Night time-40dB(A)  
Day Time from 06.00 am to 10.00 pm & Night Time from 10.00 pm to 06.00 am

\*End of the Report \*

For PoluChem Laboratories (P) Ltd.

SREEJA RAMESH  
Authorized Signatory



## POLUCHEM LABORATORIES (P) LTD.

CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY

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### TEST REPORT

Ref.No. PL/RT/SW/1447/2021  
Name & address of customer

Date of Issue: 16/02/2021  
: M/s Poabs Granites Pvt. Ltd  
Peeroorkada, Trivandrum.

Project Site

: M/s. Poabs Granites Pvt Ltd.  
Survey Nos. 459/1-1pt, 459/2, 460/10, 12,  
460/2-1pt., 460/2-2, 461/4, 461/1, 462/1pt.,  
462/2, 462/3, 446/4pt., 446/7pt., 446/8pt., 462/5,  
461/2, 461/3, 447/3, 2pt., 448/3pt., 2, 1pt.,  
452/5pt., 452/4,6,7,8  
Village - Peeroorkada,  
Taluk-Trivandrum,  
District - Trivandrum,Kerala

Sample drawn by  
Sample description  
Location of sampling  
Date of sample collected  
Date of analysis started  
Date of completion of analysis

: PoluChem Laboratory Sample Collector  
: Water Sample  
: Pond Water  
: 09/02/2021  
: 10/02/2021  
: 15/02/2021

Parameters tested	Test method	Results	Acceptable Limit As Per IS 10500-2012
Color	IS 3025 (P) 04 – 1983 RA2017	8 Hazen Unit	5 Hazen Unit
Odour	IS 3025 (P) 05 – 1983 RA2017	Agreeable	Agreeable
Turbidity	IS 3025 (P) 10 – 1984 RA2017	2 NTU	1 NTU
pH	IS 3025 (P) 11 – 1983 RA 2017	6.07	6.5 – 8.5
Total Dissolved Solids	IS 3025 (P) 16 – 1984 RA2017	84 mg/l	500 mg/l
Total Hardness as CaCO <sub>3</sub>	IS 3025 (P) 21 – 1983 RA2014	36.5 mg/l	200 mg/l
Total Alkalinity as CaCO <sub>3</sub>	IS 3025 (P) 23 – 1986 RA2014	10.4 mg/l	200 mg/l
Residual Chlorine	IS 3025 (P) 26 – 1986 RA2014	BDL	0.2 mg/l
Chloride as Cl <sup>-</sup>	IS 3025 (P) 32 – 1988 RA2014	22.1 mg/l	250 mg/l
Calcium as Ca	IS 3025 (P) 40 – 1991 RA2014	9.45 mg/l	75 mg/l
Magnesium as Mg	IS 3025 (P) 46 – 1994 RA2014	3.4 mg/l	30 mg/l
Total Iron as Fe	IS 3025 (P) 53 – 2003 RA2014	0.64 mg/l	1 mg/l
Sulphate as SO <sub>4</sub>	IS 3025 (P) 24 – 1986 RA2009	12.6mg/l	200 mg/l
Fluoride as F	IS 3025 (P) 60 -2008 RA 2013	BDL	1.0 mg/l
Biochemical Oxygen Demand (3 days at 27 <sup>o</sup> C)	IS 3025 (P) 44 – 1993RA 2014	1.8mg/l	--
Chemical Oxygen Demand	IS 3025 (P) 58 – 2006 RA2017	10 mg/l	--
Dissolved Oxygen	IS 3025 (P) 44 – 1989RA 2014	5.1 mg/l	--
Zinc as Zn	IS 3025 (P)49 – 1994 RA2014	BDL	5 mg/l
Manganese as Mn	IS 3025(P) 59– 2006 RA2017	BDL	0.1 mg/l
Cadmium as Cd	IS 3025(P) 41– 1992 RA2014	BDL	0.003 mg/l
Lead as Pb	IS 3025(P) 47– 1994 RA2014	BDL	0.01 mg/l
Coliforms(MPN/100ml)	IS 1622: 1981 RA 2009	70	Absent
Ecoli (Present or Absent/100ml)	IS 1622: 1981 RA 2009	Absent	Absent

Note : BDL – Below Detection Level

For PoluChem Laboratories (P) Ltd.

Authorized signatory  
**SREEJA RAMESH**  
QUALITY MANAGER

\* End of the report\*

The above results are related only to the sample submitted for analysis. This test report shall not be reproduced except