

ENVIRONMENT CLEARANCE COMPLIANCE REPORT

October 2019 to March 2020

for

***GRANITE BUILDING STONE QUARRY
(Minor Mineral)***

Extent: 0.7082 Ha. (1.7499 Acres)

At

Sy No.	:	156
Village	:	Puthur
Taluk	:	Thalasery
District	:	Kannur
State	:	Kerala,

'Granite Building Stone Quarry of Mr. C.G. George.'

Compliance Status of the General Conditions for Mining Projects Laid down by the State Environment Impact Assessment Authority, Kerala vide their Environment Clearance No. 04/2018 dated 23/02/2018.

SPECIFIC CONDITIONS

Sl. No	Condition	Status of Compliance
1	A Mines Manager shall be appointed to control, direct, manage and supervise Quarrying Operations as required under the Mines Act 1952.	A Mines manager is appointed to supervise Quarrying Operations.
2	Health and welfare measures for the persons employed shall be implemented.	Health and welfare measures for the employees are implemented.
3	Controlled blasting should be practiced, and blasting should be done only during day time. The mitigating measures for control of ground vibrations to arrest the fly rocks and boulders should be implemented.	All precautionary measures are adopted while blasting operations are carried out. I. No secondary blasting like Pop Shooting or Plaster Shooting are undertaken for breaking down large boulders, to avoid Air Blast and Fly Rocks. Only rock breakers will be used for breaking down bigger boulders. II. Additional precaution of controlled blasting with sand bags and wire mesh/blasting pads are used so that there are no fly rocks from the blast
4	Plantation shall be done which includes a green belt of adequate width around the Mining Lease area excluding the rocky area, along roads, overburden dumps and non-mineralized area by planting suitable native species in consultation with the local DFO/ Agriculture Department.	A green belt of a width of 7.5 mts has been made along the periphery of the Lease area by planting saplings in consultation with the local DFO/ Agriculture Department.
5.	The drains should be regularly desilted and maintained properly. Check dams and gully checks shall be constructed wherever required to arrest siltation. De siltation shall also be done every year before the onset of monsoon.	The drains will be constructed and maintained.
6	Fencing must be maintained properly all around the lease area.	The entire lease area is fenced and is well maintained. (Annexure 1)

7	The CSR should cover the felt needs of the locality with special emphasize for implementing ground water recharging techniques in and at the vicinity of the proposed site.	The CSR activities cover the needs of the locality with special emphasize for implementing ground water recharging techniques.
8	Appropriate sign boards should be displayed	Signboards have been displayed. (Photos are attached as Annexure-2)
9	The blasting time must be displayed and strictly adhered to.	Blasting time is displayed and is strictly followed.
10	Dust suppression mechanism must be in place.	Water tankers with sprinklers are in use for dust suppression.
11	A separate small plot to be maintained in the premise to preserve rare and endemic species, if any, listed in the bio diversity assessment, etc.	No rare and endemic species is present in the lease area.
12	The PPV values must be less than 10 mm/sec.	PPV values are kept below 10 mm/sec.
13	The green belt shall be provided along the periphery.	Green belt of 7.5 mts width has been provided along the periphery of the lease.
14	Where the height of the bench formed during earlier workings exceeds the maximum reach of the excavator engaged for work, such bench height shall be reduced from top to bottom.	Height of benches will be maintained as specified in the approved Mining Plan.
15	Loose or hanging rock or mineral boulder on the side wall shall be dressed down before engaging persons for work at the bottom of the bench.	Benches will be properly dressed, if any loose or hanging rocks are present by excavators before the employees enter the bottom of the benches and safety is ensured.
16	Permanent boundary pillars should be fixed by the proponent before commencing quarrying.	Permanent boundary pillars have been erected. (photos are attached as Annexure-1)
17	No quarry blasting to be undertaken and sustained till warning time limit expires and/or when continuous 48 hours rainfall exceeds 8cms and blasting shall not be resumed until 24hours of rain free situation arises in the quarry locality based on the evaluation by the revenue officials.	Agreed.
18	All waste dumps and top soil dumps shall be properly stabilized using coir mats or bio regeneration. Proper drainage system shall be provided so that water is properly diverted away from the dumps slopes with	Coir mats are used to cover waste dumps. Proper drainage system are provided for diverting the water from dump slopes.

	no disturbance to the stability of the slopes.	
19	All dump slopes shall be sufficiently stabilized by using appropriate species mix of grass, creepers, shrubs and trees. This shall be done in consultation with the Forest department and local research institutes and experts I stabilization of mine dumps.	All dump slopes are stabilized as specified with grass, creepers, shrubs and trees.
20	Garland drains of at least 2 mts width shall be provided all along 7.5 mts buffer zone to divert the water from entering the Quarry slopes. These drains shall be cleaned every year before the monsoon season	Garland drains of 2m width will be constructed.
21	The water from the garland drainage shall be directed to the silt settling ponds. The clarified overflow from the silt settling ponds shall be directed to a Rain Water Harvesting (RWH) pond before releasing the clarified water to the natural water course.	Only clear natural water is let out into the natural water course.
22	A retaining wall of stone rubble with wire (2 mt) shall be constructed at the bottom of the slope of the Quarry lease to arrest any likely mesh of sufficient width and strength (not less than roll of boulders during heavy rainfall.	Retaining Wall will be constructed.

GENERAL CONDITIONS OF HEALTH

Sl. No	Conditions	Status of compliance
1	First Aid kit provided in the work site. It shall be periodically maintained properly. Some labourers shall be trained on First Aid.	First Aid kits are provided in the work site and key personnel are trained to render first aid in case of emergencies.
2	Wholesome drinking water should be provided.	Drinking water is provided.
3	Premises should be maintained as wet to suppress the dust.	Premises are maintained as wet to suppress the dust.
4	Sanitary type of latrines and urinals should be provided.	Latrines and urinals are provided.
5.	Resting place to be provided for workers	Resting place is provided to workers.
6	'No Smoking' board should be exhibited according to COTPA act.	'No Smoking' board is exhibited.
7	Work should not be done in night.	Work is done only during daytime.

8	Details of nearest hospital, shortest route to hospital and contact no. etc. should be available	Emergency contact numbers of Key persons, Hospitals, police station, etc. is prominently displayed.
9	Approach roads should be maintained properly	Approach roads are well maintained.

GENERAL CONDITIONS

Sl No	Condition	Compliance Status
1	Rainwater harvesting facility should be installed as per prevailing provisions of KMBR/KPBR, unless otherwise specified.	Rainwater harvesting facility will be installed.
2	Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.	Environmental Monitoring Cell has been formed and is headed by Mr. C.G. George
3.	Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including approach roads and internal roads.	Avenue plants will be planted along either side of tarred road and open parking areas.
4	Maximum Possible Solar Energy generation and utilization shall be ensured as an essential part of the Project.	Solar Energy generation and utilization shall be adopted.
5	Sprinklers shall be installed and used in the Project Site to contain dust emissions.	Water tankers with sprinklers are in use to control dust.
6	Eco-restoration, including the Mine Closure Plan shall be done at the own cost of the Project Proponent.	Agreed.
7	At least 10 per cent of total excavated Pit area should be retained as water storage area and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco-friendly, if no other specific condition on reclamation of the Pit is stipulated in the EC.	Agreed.
8	Corporate Social Responsibility (CSR) agreed upon by the Proponent should be implemented.	CSR activities are implemented as agreed.
9	The Lease area will be fenced off with barbed wires to a minimum height of 4 ft around, before starting of Mining. All the boundary indicators (boards, stores, markings, etc.) shall be protected at all times and shall be conspicuous.	Lease area is fenced off. Sign boards have been erected at prominent places. (Photos are attached as Annexure-1 & 2)
10	Warning alarms indicating the time of Blasting (to be done at specific timings) has	Necessary precautions while blasting is taken.

	to be arranged as per stipulations of the Explosives department.	
11	Control measures on noise and vibrations prescribed by KSPCB should be implemented	Noise and vibrations are kept within KSPCB prescribed norms. I. Use of sharp drilling, delivery of compressed air at optimal pressure. II. Proper maintenance of compressor, drilling machine, jackhammers and tipper trucks. III. Regular monitoring of noise levels are being done within the core zone and the buffer zone of the mining lease area.
12	Quarrying activities should be limited to daytime as per KSPCB guidelines/specific conditions.	Quarrying activities limited to daytime.
13	Blasting should be done in a controlled manner as specified by the regulations of the Explosives department or any other agency.	Blasting is done in a controlled manner and is done technically as prescribed by the mining statutes. Only a small diameter drill holes of 33mm diameter with 25mm cartridges slurry/ emulsion explosive are used for blasting, no large diameter holes are proposed for blasting. With optimum blast design, effective blasting techniques with delay detonators and low charges per delay, care has been taken to limit the blast vibrations and the PPV value below 10mm per second.
14	A licensed person should supervise/control the Blasting Operations	Blasting supervision and control is done by a Mining Official having DGMS Certificate.
15	Access road to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.	Access road to the Quarry is tarred.
16	Overburden materials should be managed within the site and used for reclamation of Mine Pit as per Mine closure Plan/specific conditions	Overburden material is used for road making and as a filler along the Green Belt for plantation purpose.
17	Height of Benches should not exceed 5 M and width should not be less than 5 M, if there is no mention in the Mining Plan/specific conditions	Agreed.
18	Mats to reduce fly rock blast to a maximum of 10 PPV should be provided	Controlled blasting technique is adopted. PPV is kept to a minimum.

19	Maximum depth of Mining from general ground level at site shall not exceed 10 m	Agreed
20	No Mining operations should be carried out at places having a slope greater than 45°	Agreed
21	Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow bricks envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.	Crusher unit is not installed within Mining Lease.
22	The workers on the site should be provided with the required protective equipment such as ear muffs helmet, etc.	Requisite Personal Protective equipments (PPE's) is provided to all employees.
23	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	Garland drains will be constructed.
24	The transportation of minerals should be done in covered trucks to contain dust emissions.	All trucks transporting material are covered by firmly tied tarpaulin
25	The proponent should plant trees at least 5 times the loss that has been occurred while clearing the land for the project.	Local species saplings have been procured from the Forest dept, Kannur and planted.
26	Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.	Spent oil is reused as a lubricant for drilling.
27	Explosives should be stored in magazines in isolated place specified and approved by the Explosive Department.	Explosives is stored in a Licensed Explosives Magazine, which is approved by PESO. (Copy of the Explosive license is attached as Annexure-3)
28	A minimum buffer distance of 100 M from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.(Read as 50m)	No dwellings are situated within 50m from the boundary of the quarry.
29	100 M buffer distance should be maintained from forest boundaries	Mining area is not located near any forest areas.
30	Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.	Consent from KSPCB under Air and Water Act(s) is obtained. (Copy of the consent is attached as Annexure-4)
31	All other statutory clearances should be obtained, as applicable, by project proponents from the respective competitive authorities including that for blasting and storage of explosives.	All required statutory clearances obtained. The DGMS permission is under process.

32	In the case of any change(s) in the scope of the Project, extent, quantity, process of mining technology involved or in any way affecting the environment parameters/impacts as assessed, based on which only the EC is issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority.	There is no change in the scope of mining .
33	The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the Environmental Clearance under provisions of the Environment (Protection) Act,1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Agreed.
34	The stipulations by the Statutory Authorities under different Acts and Notifications should be complied with including the provisions of 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	Agreed
35	The project proponent should advertise in at least 2 newspapers widely circulated in the region, one of which(both the advertisement and the newspaper) shall be in the vernacular language informing that the Project has been accorded Environment Clearance and the copies of the Clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at www.seiaakerala.org The advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same signed in all the pages should be forwarded to the Office of this Authority as confirmation	Advertisements informing EC accordance to the Project is done in 2 newspapers and was submitted in earlier reports.
36	A copy of the clearance letter shall be sent by the proponent to the concerned Gram Panchayat/District Panchayat/Municipality/Corporation/Urban	A copy of the Clearance is submitted to the Kunnothparamba Grama Panchayat.

	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.	
37	The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional office of the MOEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office	Half yearly reports are submitted as stipulated.
38	The details of Environment Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times Roman font of size not less than 40. Sign board with extent of Lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public	Details of Environmental Clearances are prominently displayed at the entrance to the Mine. (photo of the sign board is Attached as Annexure-2)
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.	Provided
40	No change in mining technology and scope of working should be made without prior approval of the SEIAA. No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.	Prior approval from the SEIAA will be sought in case of change of mining technology.
41	The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.	No natural water course is obstructed. Necessary safeguard measures will be taken to protect first order streams if originating from the mining lease in the future.
42	Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling	Monitoring of Ambient Air Quality will be carried out. Water sprinkling will be done at all places appropriately. (photos and

	should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.	monitoring reports have been attached as Annexure-5 &6)
43	The top soil, if any, shall be temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The Over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8 m and the width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo-textiles shall be undertaken for stabilization of the dump. The entire excavated area should continue until the vegetation becomes self-sustaining	Available top soil will be used at the Green belt for plantation. OB generated is used for plantation purposes along the Green/Safety zone.
44	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development, etc. The drains shall be regularly de silted particularly after monsoons and maintained properly	Catch drains are made along the periphery of the mining lease.
45	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading points and transfer points-it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Regular water sprinkling is done on haul roads with water tankers.
46	Fugitive dust emissions from all sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and transfer points should be provided and properly maintained.	Fugitive dust emissions are controlled. Water spraying is regularly done at haul roads, loading and unloading and transfer points.
47	Measures should be taken for control of noise levels below 85 dB(A) in the work environment.	Adequate measures for noise control is adopted.

48	A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior executive, who will report directly to the head of the Organization.	An Environment Management Cell is set up under the control of the Mines Manager.
49	The funds earmarked for environment protection measures and CSR activities should be kept in a separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.	The funds earmarked for environment protection measures and CSR activities are kept in a separate account and is not diverted for any other purpose
50	The Regional Office of MOEF and CC located in Bangalore shall monitor compliance of the stipulated conditions. The Project authorities should extend full cooperation to the Officer(s) if the Regional Office by furnishing the requisite data/information/monitoring reports.	We will extend full cooperation to any officer(s) from the Regional Office during his/their visit. All available data will be provided.
51	Any appeal against the Environment Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Agreed.
52	Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under provisions of the Environment (Protection) Act, 1986.	Factual and true data will be submitted.
53	The SEIAA may revoke or suspend the order for non-implementation of any of the specific or this implementation 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 the environment protection	Agreed
54	The above conditions shall prevail notwithstanding anything to the contrary, inconsistent or simplified, contained in any other permit, license or consent given by any other authority for the same project.	Agreed
55	The order is valid for a period of 5 years of the expiry date of Mine lease period issued by the Government of Kerala, whichever is earlier	Agreed.

56	The Environment Clearance will be subject to the final order of the courts in any pending litigation related to the land or the project, in any court of law.	Agreed.
57	The Mining operations shall be restricted to above ground water table and it should not intersect ground water table.	Mining operations will be restricted to above ground water table and due care will be taken so as not to intersect ground water.
58	All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution checking center. Washing of all vehicles shall be inside the Lease area	Will ensure that all transportation vehicles have PUC issued by an authorized Pollution checking center.
59	Project proponent should obtain necessary prior permission of the competent authorities for drawl of necessary quantity of surface and ground water for the project.	Agreed.
60	Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six-monthly reports	No perennial nallah flows through the lease or exist around the Mine Lease.
61	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Occupational health surveillance program for the employees will be undertaken

For 'Granite Building Stone Quarry Mr. C.G. George'.

Mr. C.G. George
(Owner)

Date: 24.07.2020



Boundary Pillars and Fencing



Sign Boards





भारत सरकार

GOVERNMENT OF INDIA

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)

PETROLEUM AND EXPLOSIVES SAFETY ORGANISATION (PESO)

कार्यालय उप-मुख्य विस्फोटक नियंत्रक

OFFICE OF THE DEPUTY CHIEF CONTROLLER OF EXPLOSIVES

केन्द्रीय भवन, काकनाड, एरनाकुलम, कोची, (केरल) - 682037

Kendriya Bhavan, Kakkanad, Ernakulam, Kochi, (KERALA) - 682037

Fax: (0484)2427276, Ph: 2427286, 2427296

No. E/SC/KL/22/746(E32353)

Dated: 11.01.2010

To

Shri C.G. George
Chitteth House
Koothuparamba P.O.
Kannur Dist

Sub: Explosive Magazine at Sy.88/1, Kolavallur, Thalassery, Kannur Dist. Licence No. E/SC/KL/22/746(E32353) in Form LE-3- your request for permission to use Explosives for extraction of Building Stone/ Granite - Reg.

Dear Sir,

It is noted that you have been issued quarrying lease Nos. 503/2009-2010/9867/M3/2009 and 504/2009-10/9868/M3/2009 dated 05.1.2010 by the Director of Mining and Geology, Trivandrum for extraction of Minor Minerals from Sy. No. 156 and 151/1 of Puthur Village, Thalassery Tk., Kannur District respectively under Kerala Minor Mineral Concession Rules, 1967.

The extraction of building stone/granite using explosives comes under the purview of Mines Act, 1952 and the use of explosives in areas coming under Mines Act is governed by Metaliferous Mines Regulations, 1961. The competent authority for the administration of the above Act and regulations framed there under for the State of Kerala is Director of Mines Safety, Chennai. The applicability of Explosives Rules, 1983 is limited to that the explosives used in blasting operations in areas coming under Mines Act shall be of a class and make authorized by Chief Controller of Explosives, Nagpur and such explosives shall be stored in an explosive magazine duly licensed under Explosives Rules, 1983.

You may obtain necessary licenses/ clearance from various statutory bodies for extraction of minor minerals as mentioned below:

1. The Quarrying permits/lease under Kerala Minor Mineral Concession Rules, 1967 revalidated from time to time.
2. Permission/clearance from State Pollution Control Board under Environment (Protection) Act, 1986.
3. Licence from local Panchayat under Panchayat Act.
4. Permission/clearance under Mines Act, 1952.

Subject to the compliance of the above requirements as far as this office is concerned there would be no objection to the use of explosives from the subject magazine for extraction of minor minerals

This permission may be deemed to be withdrawn if any of the conditions subject to which the permission has been granted, has not been complied with/ violated. You may submit the copies of permissions/ licenses obtained under the above statutes for reference and record of this office.

Yours faithfully,

(C.R. Sreendranathan)

Dy. Chief Controller of Explosives.

Copy to:

1. The Jt. Chief Controller of Explosives, South Circle, Chennai.
2. The District Magistrate/ Addl. District Magistrate, Kannur Dist.



Annexure 3

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, ब्लॉक सी-2, तीसरी मंजिल | Kendriya Bhavan, Block C-2, 3rd Floor
 CSEZ पी.ओ.कक्कनाड कोच्चि | CSEZ PO Kakkanad Dist. Ernakulam Ernakulam 682037
 फोन (Phone):- 2427286 | फैक्स (Fax):- 2427276
 ई-मेल Email: dyceerernakulam@explosives.gov.in

संख्या (No.): E/SC/KL/22/746(E32353)

दिनांक (Date): 07/02/2019

प्रेषण में | To,

Shri C.G.George,
 Cheluth House Kuthuparamba post, Town/Village - Kuthuparamba
 District-KANNUR, State-Kerala, Pincode - 670643

8 FEB 2019

विषय :

Survey No(s).88/1, ग्राम Kolavallur, Thalassery Tk., जिला KANNUR, राज्य Kerala में विस्फोटक के मैगजीन में उपयोग के लिए कदम हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुमति सं E/SC/KL/22/746(E32353) के नवीनीकरण संदर्भ में।

Subject:

Possession for Use of Explosives from magazine situated at Survey No(s).88/1, Kolavallur, Thalassery Tk., Dist. KANNUR, Kerala - Licence No.: E/SC/KL/22/746(E32353) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding

महोदय | Sir,

आपका उपर्युक्त विषय पर पत्र संख्या Nil दिनांक 30/01/2019 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्ररूप LE-3 में जारी अनुमति दिनांक 31/3/2024 तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।

Reference to your letter No.: Nil dated: 30/01/2019, the subject licence duly renewed upto 31/3/2024 and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.

अनुमति 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 अनुमति 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 अनुमति।
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 ऑपरेशन 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 ऑपरेशन 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 रुपये 1840/- की राशि शेष है जो इस संदर्भ को उद्धृत करते हुए भविष्य के संव्यवहार में सनायोजित की जा सकती है।

An amount of Rs. 1840/- 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

कोच्चि | Ernakulam विस्फोटक नियंत्रक

Deputy Chief Controller of Explosives

एरनाकुलम Ernakulam

प्रतिलिपि प्रेषित | Copy Forwarded to:

1. जिला मजिस्ट्रेट (District Magistrate), KANNUR (Kerala)- सूचना के लिए (for information.)

उप मुख्य विस्फोटक नियंत्रक | Deputy Chief Controller of Explosives

कोच्चि | Ernakulam

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)

(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

(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 अनुज्ञति

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

अनुज्ञति सं. (Licence No.) : E/SC/KL/22/746(E32353)

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



1. Licence is hereby granted to

Shri C.G. George (अधिभोगी / Occupier : C G George), Chittath House, Kuthuparamba post, Town/Village - Kuthuparambu, District-KANNUR, State-Kerala, Pincode - 670643

को अनुज्ञति अनुदत्त की जाती है।

2. अनुज्ञतिधारी की प्रस्थिति | Status of licensee : Individual

3. अनुज्ञति निम्नलिखित प्रयोजनों के लिए विधिमाम्य है।

possess for use of Nitrate Mixture, Safety Fuse, Electric Detonators, Ordinary Detonator, के उपयोग के लिए

Licence is valid only for the following purpose.

4. अनुज्ञति 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	150 Kg.
2.	Safety Fuse	6, 1	0	2000 Mtrs
3.	Electric Detonators	6, 3	0	2500 Nos.
4.	Ordinary Detonator	6, 3	0	5000 Nos.

(ख) किसी एक कलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा [अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञति के लिए]

26 times as above.

(b) Quantity of explosives to be purchased in a calendar month [applicable for licence under article 3(b) and (c)] :

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञति परिसर की पुष्टि होती है।

रेखाचित्र क्र. (Drawing No.) E/SC/KL/22/746(E32353)

The licensed premises shall conform to the following drawing(s) :

दिनांक (Dated) 16/12/2005

6. अनुज्ञति परिसर निम्नलिखित पते पर स्थित हैं। The licensed premises are situated at following address:

Survey No(s). 88/1, ग्राम (Town/Village) : Kolavallur, Thalassery Tk.

जिला (District)

KANNUR

राज्य (State)

Kerala

पुलिस थाना (Police Station) : Kolavallur

दूरभाष (Phone)

ई. मेल (E-Mail)

पिनकोड (Pincode)

फैक्स (Fax)

7. अनुज्ञति परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।

: One Mini Explosives Magazine & Detonator Room

The licensed premises consist of following facilities.

8. अनुज्ञति समय - समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपायधर्मा 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. अनुज्ञति प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञति की शर्तें और अतिरिक्त शर्तें।

Conditions and Additional Conditions of this licence signed by the licensing authority.

3. दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञति तारीख 31 मार्च 2007 तक विधिमाम्य रहेगी। This licence shall remain valid till 31st day of March 2007.

यह अनुज्ञति, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट-VII के अधीन तथा

उपवर्णित इस अनुज्ञति की शर्तों का अधिक्रमण करने या यदि अनुज्ञति परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निर्र्थक 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.

Sd/-

तारीख | The Date - 16/12/2005

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

Amendments :

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 23/08/2012
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 22/07/2014
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 13/01/2015
- Amendment in Drawings/Facilities/Premises dated : 23/08/2016
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 22/12/2017

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

07/02/2019

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.



നമ്പർ: 264/2019-2020/A-5/4986/19

തീയതി: 29/10/2019

കുന്നോത്തുപറമ്പ് ഗ്രാമപഞ്ചായത്ത്

തൂവക്കുന്ന് പി.ഒ., കണ്ണൂർ (ജില്ല)

പിൻ: 670693, ഫോൺ: 4902391430, ഇ-മെയിൽ: secretaryknp@gmail.com

വ്യവസായം, വാണിജ്യം, സംരഭകത്വം, മറ്റ് സേവനങ്ങൾക്കുള്ള ലൈസൻസ്

(കെ.പി.ആർ ആക്ട് സെക്ഷൻ 232, FACTEOS ലൈസൻസ് ചട്ടങ്ങൾ 1996)

ലൈസൻസിയുടെപേര്	സി. ജി ജോർജ്ജ്		
ലൈസൻസിയുടെ മേൽവിലാസം	ചിറ്റേത്ത് ഹൗസ് , കുത്തുപറമ്പ് -670643 , 8113041110		
സ്ഥാപനത്തിന്റെ പേരും, സ്ഥലനാമവും	M/s QUARRY OWNED BY SRI GEORGE, CHENDAYAD, PANOOR , KANNUR DIST		
ലൈസൻസ് നൽകിയിട്ടുള്ള പ്രവർത്തനങ്ങൾ	കരിങ്കൽ ഖനനം നടത്തുന്നതിന്		
വാർഡ് നമ്പർ/കെട്ടിട നമ്പർ	II/RS NO 156		
ലൈസൻസ് കാലാവധി	01/11/2019 മുതൽ	31/03/2020 വരെ	
ലൈസൻസ് ഫീസ് മോട്ടോർ ഫീസ് തൊഴിൽ നികുതി	തുക	രസീത് നമ്പർ	തീയതി
	5000 /- രൂപ	118040110153	18/03/2019
		118040110153	18/03/2019
<p>ലൈസൻസ് അനുവദിക്കുന്നതിന് ഹാജരാക്കിയ നിരാക്ഷേപ പത്രങ്ങളുടെ വിശദാംശങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽകിയ അധികാര സ്ഥാപനം)</p> <ol style="list-style-type: none"> പൊലുഷൻ കൺട്രോൾ ബോർഡിന്റെ 23/09/2019 ലെ PCB/RO/KNR/CO/673/2010 നമ്പർ നിരാക്ഷേപ പത്രം, (VALIDITY 31/01/2023) ചീഫ് കൺട്രോളർ ഓഫ് എക്സ്പ്ലോസിവ് ലൈസൻസ് (No. E/SC/KL/22/746(E32353) Renewed upto 31/03/2024), Quarrying Lease Validity 27/12/2028 			



PRASAD. V. V.
Secretary

Kunnothparamba Grama Panchayat
P. O. Thuvakkudi

കുന്നോത്തുപറമ്പ് ഗ്രാമപഞ്ചായത്ത്
Ph. 670693
Ph. 9496049130



KERALA STATE POLLUTION CONTROL BOARD

FILE NO. :PCB/KNR/ICO/673/2010

Date of issue :23/09/2019

INTEGRATED CONSENT TO OPERATE - RENEWAL

Consent No : PCB/KNR/ICO-R/1071/2019

Ref : 1. Consent No.PCB/KNR/ICO-R/889/2016 dated 17/01/2017

2. Consent No.PCB/KNR/ICO/RI-343/2013 DATED 31/08/2013

3. Consent No.PCB/KNR/ICO/94/2010 DATED 10/08/2010

The ' Integrated Consent to Operate' issued as per reference above to M/s QUARRY OWNED BY SRI. C.G. GEORGE,ARAMKULAM, PANOOR, KANNUR DT - 670693 is hereby renewed up to 31/01/2023 and issued to M/s QUARRY OWNED BY SRI. C.G. GEORGE,ARAMKULAM, PANOOR, KANNUR DT - 670693 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	CAPITAL INVESTMENT	25.00 Rs in Lakhs
2	SURVEY NUMBER	R.S.NO. 156
3	VILLAGE	PUTHOOR
4	ACTIVITY	Quarry project for an area of 0.7082 Ha at Sy. No. 156, Puthur Village, Thalassery Taluk, Kannur District
5	TOTAL FEE REMITTED	25960/-
6	ANNUAL FEE	5800/-
7	VALIDITY	31/01/2023

II. Stack Details

Stack No.	Source of Emission	Emission Rate(Nm ³ /Hr)	Stack Height above		Control Equipment
			Ground Level(In Meters)	Roof Level(In Meters)	

III. CONDITIONS

- 3.1 Application for the renewal shall be submitted before 31/11/2022
- 3.2 If any statement in the affidavit furnished along with the renewal application is found false, the consent issued will be revoked and further prosecution will be launched against the unit.
- 3.3 There shall be a minimum distance of 50 m from the boundary of the quarry to the nearest residence, places of worship, railway line, bridge, river, lake, public building and road having public transport system.
- 3.4 This consent is issued subjected to Environmental Clearance 4/2018 by State Environment Impact Assessment Authority letter No.218/KNR/2017/DEIAA Dated 23/02/2018
- 3.5 Permanent fence made of wire mesh shall be provided and maintained along boundary of the approved quarry area.
- 3.6 Location and extent of quarry shall be as per the approved site plan attached.
- 3.7 The concentration of particulate matter PM 10 and PM 2.5 at the boundary of the premise shall not exceed 100 microgram/m³ and 60 microgram/m³ respectively.

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

DATE :23/09/2019

SIGNATURE & SEAL OF ISSUING AUTHORITY
ENVIRONMENTAL ENGINEER



ANITA
KOYAN

Digitally signed
by ANITA
KOYAN
Date: 2019.10.10
12:32:55 +05'30'

To

C.G. GEORGE, CHITTETH HOUSE, KOOTHUPARAMBA, KANNUR DT - 670643

1. This digitally signed document is legally valid as per the Information Technology Act 2000
2. For verifying this document please go to krocmms.nic.in and search using date of issue/name of the unit/Application Number in "Consent Granted Applications" link in the home page of the Board's Online Consent Management and Monitoring System.

Annexure 5



Annexure 5





GEMS

**GLOBAL Environment & Mining Services**

(Consulting Engineers, Mine designers, Geologists & Surveyors)

3rd Main Road, Basaveswara Badavane,**HOSPET - 583201**, Dist. Bellary (Karnataka)

Ph : +91 8391 229133 & 295018

e-mail : gems_hpt@yahoo.com,

Website : www.globalmining.in

GEMS-LD/TF/11/01

Date: 22.02.2020

Analysis Report of Ambient Air Quality Monitoring

- Granite Building Stone Quarry of
Mr. C. G. George
- 1 Name of the Customer/Address : Extent: 0.7082 Ha. (1.7500 Acres)
Sy. Nos: 156, Puthur Village, Thalassery Taluk
Kannur District, Kerala State.
- 2 Sample Description : **Ambient Air Quality Monitoring**
- 3 Sample Collected By : GLOBAL Environment & Mining Services
- 4 Duration of the Monitoring : 24 Hour of Sampling
- 5 Location of Monitoring : **(A1) Core zone**
- 6 Report No : ULR-TC53232000000069F

Result

Sl No.	Date	Parameters in $\mu\text{g}/\text{m}^3$				
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Lead in PM
1	17.02.2020	56.1	24.6	15.4	14.8	BDL
NAAQ Standards 2009		100	60	80	80	1.0

PM₁₀ - IS 5182 (Part 23): 2006 (RA 2017)PM_{2.5} - USEPA 2001SO₂ - IS 5182 (Part 2): 2001 (RA 2017) BDL (<3.0)NO₂ - IS 5182 (Part 6): 2006 (RA 2017) BDL (<5.0)

Lead - IS 5182 (Part 22): 2004 (RA 2014)

BDL - Below Detectable Limit.

Analyzed By
J.M. Thippeswamy
Chemist

Authorized Signatory
K. Ramakrishna Reddy
Technical Manager

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

Note:

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



GEMS



NABL

GLOBAL Environment & Mining Services

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Bodavane,

HOSPET - 583201, Dist., Bellary (Karnataka)

Ph : +91 8394 229433 & 295018

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in

GEMS-LD/TF/11/01

Date: 22.02.2020

Analysis Report of Ambient Air Quality Monitoring

- 1 Name of the Customer/Address : Granite Building Stone Quarry of
Mr. C. G. George
: Extent: 0.7082 Ha. (1.7500 Acres)
Sy. Nos: 156, Puthur Village, Thalassery Taluk
Kannur District, Kerala State.
- 2 Sample Description : **Ambient Air Quality Monitoring**
- 3 Sample Collected By : GLOBAL Environment & Mining Services
- 4 Duration of the Monitoring : 24 Hour of Sampling
- 5 Location of Monitoring : **(A2) Buffer Zone**
- 6 Report No : ULR-TC532320000000070F

Result

Sl No.	Date	Parameters in $\mu\text{g}/\text{m}^3$				
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	Lead in PM
1	18.02.2020	41.3	15.6	12.7	11.2	BDL
NAAQ Standards 2009		100	60	80	80	1.0

PM₁₀ - IS 5182 (Part 23): 2006 (RA 2017)PM_{2.5} - USEPA 2001SO₂ - IS 5182 (Part 2): 2001 (RA 2017) BDL (<3.0)NO₂ - IS 5182 (Part 6): 2006 (RA 2017) BDL (<5.0)

Lead - IS 5182 (Part 22): 2004 (RA 2014)

BDL - Below Detectable Limit.

J.M. Thippeswamy
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Chemist

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Technical Manager

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GEMS



NABL

GLOBAL Environment & Mining Services

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,

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Ph : +91 8304 229433 & 295018

e-mail : gems_hpt@yahoo.com,

Website : www.globalmining.in

GEMS-LD/TF/11/01

Date: 22.02.2020

TEST REPORT OF AMBIENT NOISE LEVEL MONITORING

- 1 Name of the Customer/Address : Granite Building Stone Quarry of
Mr. C. G. George
: Extent: 0.7082 Ha. (1.7500 Acres)
Sy. Nos: 156, Puthur Village, Thalassery Taluk
Kannur District, Kerala State.
- 2 Sample Description : **Ambient Noise Level monitoring**
- 3 Sample Collected By : GLOBAL Environment & Mining Services
- 4 Particulars of Sample Collected : Noise Level Meter (Equinox-107)
- 5 Duration of the Monitoring : 24 Hours Sampling
- 6 Date of Analysis Completion : 22.02.2020
- 7 Report No : ULR-TC532320000000071F

Result

Date	17.02.2020	18.02.2020
Name of the Location	Core Zone	Buffer zone
Time (hrs)	N1	N2
6.00	37.2	41.4
7.00	39.2	42.5
8.00	41.2	44.7
9.00	50.2	45.4
10.00	52.8	49.2
11.00	53.1	40.4
12.00	54.1	47.2
13.00	55.3	50.4
14.00	57.3	49.0
15.00	52.0	50.2
16.00	54.3	50.2
17.00	51.2	48.3
18.00	49.4	46.1
19.00	47.7	47.3
20.00	43.9	49.4
21.00	36.0	46.2
22.00	35.0	45.2
23.00	37.6	39.4
00.00	38.0	38.0
01.00	35.2	37.0
02.00	37.0	36.3
03.00	35.2	37.5
04.00	34.6	37.6
05.00	34.8	38.7

- Approved by NABL & Recognized by Ministry of Environment, Forest and Climate Change for Laboratory
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ULR-TC53232000000070F		
L max	57.3	50.4
L min	34.6	36.3
Ld	52.0	47.7
Ln	36.1	41.1
Ldn	50.6	49.4

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

Note	Day time shall mean from 6:00 am and 10:00 pm
	Night time shall mean from in between 10:00 pm and 5:00 am
	Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority
	Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority
	"dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relative to human hearing
	A "decibel" is a unit in which noise is measured
	"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
Leq: It is energy mean of the noise level over a specified period.	

Authorized Signatory
Technical Manager



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EMS-LD/TF/11/01

Date: 22.02.2020

ANALYSIS REPORT OF WATER QUALITY DATA

- 1 Name of the Customer/Address : 'Granite Building Stone Quarry of Mr. C. G. George'
 2 Sample Collected By : Extent: 0.7082 Ha. (1.7500 Acres)
 3 Sampling Method : Sy. Nos: 156, Puthur Village, Thalassery Taluk, Kannur District, Kerala State.
 4 Date of sample collection : GLOBAL Environment & Mining Services
 5 Date of sample Received : Grab Sample
 6 Date of sample Analyzed : 19.02.2020
 7 Report Number : 21.02.2020
 : 22.02.2020
 : ULR-TC53232000000072F

Result

Sl. No.	Parameters	Unit	Result	Test Protocol	Requirement/Limit IS : 10500 : 2012	
					Acceptable	Permissible
1.	pH	-	7.6	APHA 22 nd Edition 2012 4500 B (Pg No. 4-92 to 4-96)	6.5	8.5
2.	Colour*	Hazen	<5	IS: 3025 (PART 14)- 1984, RA- 2012 Platinum cobalt Method	5	15
3.	Taste*	-	Ag	IS 3025 Part 8 1984	Ag	Ag
4.	Odour*	-	Ag	IS: 3025 (Part 5) - 1983, Rn-2012, True Odour	Ag	Ag
5.	Turbidity	NTU	0.31	APHA 22 nd Edition 2012 2130 B (Pg No. 2-14)	1	5
6.	Conductivity	µS/cm	182	APHA 22 nd Edition 2012 2510 B (Pg No. 2-54)	-	-
7.	Total Dissolved Solids	mg/L	158	APHA 22 nd Edition 2012 2540 B (Pg No. 2-65)	500	2000
8.	Total Alkalinity as CaCO ₃	mg/L	51	APHA 22 nd Edition 2320 B (Pg No. 2-35)	200	600
9.	Total Hardness as CaCO ₃	mg/L	141	APHA 22 nd Edition 2012 2340 C (Pg No. 2-46)	200	600
10.	Calcium as Ca	mg/L	24	APHA 22 nd Edition 2012 3500 Ca B (Pg No. 3-84)	75	200
11.	Magnesium as Mg	mg/L	8.1	APHA 22 nd Edition 2012 3500 B-Mg By Calculation	30	100
12.	Chloride as Cl	mg/L	21.2	APHA 22 nd Edition 2012 4500 Cl (Pg No. 4-72)	250	1000
13.	Sulphate as SO ₄	mg/L	91	APHA 22 nd Edition 2012 4500 SO42 - E (Pg No. 4-190)	200	400
14.	Nitrites as NO ₂	mg/L	4.10	APHA 23 rd Edition - 4500 NO ₂ - E (Pg No. 4-131 to 4-132)	45	NR
14.	Nitrate Nitrogen as NO ₃	mg/L	14	APHA 22 nd Edition 2012 4500 NO3 E (Pg No. 4-125 to 4-127)	45	No relaxation

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15.	Fluoride as F	mg/L	0.69	APHA 23 rd Edition 2017 4500 F-D (Pg No. 4-90 to 4-91)	1.0	1.5
16.	Iron as Fe	mg/L	0.25	APHA 23 rd Edition - 3500 Fe-B (Pg No. 3-80 to 3-82)	0.3	NR
17.	Sodium as Na	mg/L	7.68	APHA 23 rd Edition 2017 Na 3500 B (Pg No. 3-99 to 3-100)	-	-
18.	Potassium as K	mg/L	0.61	APHA 23 rd Edition 3500 K B (Pg No. 3-89 to 3-90)	-	-
19.	BOD 3 days at 27° C	mg/L	NIL	IS 3025 (P 44) - 1993, RA-2014,	-	-
20.	COD as O2	mg/L	NIL	APHA 23 rd Edition 5220 C (Pg No. 5-18 to 5-19)	-	-
21.	Oil & Grease	mg/L	NIL	APHA 23 rd Edition 5520 B (Pg No. 5-41 to 5-42)	0.5	NR
22.	Cadmium as Cd*	mg/L	<0.001	APHA 23 rd Edition-3111 -B (Pg No. 3-20 to 3-21)	0.003	NR
23.	Copper as Cu	mg/L	<0.001	APHA-23 rd Edition 3111-B (Pg No. 3-20 to 3-21)	0.02	1.5
24.	Nickel as Ni	mg/L	<0.001	APHA-23 rd Edition-3111 -B (Pg No. 3-20 to 3-21)	0.02	NR
25.	Zinc as Zn	mg/L	<0.1	APHA-23 rd Edition-3111-B (Pg No. 3-20 to 3-21)	5	15
26.	Salinity*	PPT	NIL	APHA-23 rd Edition-3111-B (Pg No. 3-20 to 3-21)	-	-
27.	Total Phosphorous	mg/L	<0.01	APHA-23 rd Edition 4500-D (Pg No. 4-154)	-	-
28.	Total Coliforms*	MPN/ 100ml	Ab	APHA 22 nd Edition 9222 B (Pg No.9-78)	-	-
29.	Faecal Coliforms	MPN/ 100ml	Ab	APHA 22 nd Edition 9222 D (Pg No.9-85)	-	-
30.	Phyto Plankton*	Unit/L	Ab	APHA 23 rd Edition 10200 F (Pg No.10-17)	-	-

Note: BDL Below Detectable Limit

Ag: Agreeable

NR: No Relaxation

RA: re-affirmed

Ab: Absent.

End of report

T.M. Lewis
Analyzed By
 Chemist

D.K.R.
Authorized Signatory
 Technical Manager



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