

HALF YEARLY COMPLIANCE REPORT FOR GRANITE STONE QUARRY

**File No. 765/SEIAA/EC4/505/2015, EC No.09/2017 dated
16/01/2017**

M/s Kachanathu Minerals & Metals Pvt ltd

Situated At

Survey No: 135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1,
167/1-1, 167/5, 167/2-2, 167/2-13

Ezhumattoor Village, Mallappally Taluk,
Pathanamthitta District

October 2021 – March 2022

Prepared By

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To,
The Director MoEF&CC,
Regional Office (South Zone), KendriyaSadan,
IVth floor , E&F Wing ,17th main Road,
Second Block,Koramangala Bangalore .

Respected Sir,

Sub: Half Yearly Compliance Report of Granite Stone Mine Project- October 2021-March 2022

Ref: File No. 765/SEIAA/EC4/505/2015, EC. No.09/2017 dated 16/01/2017

With reference to the above we are submitting Half Yearly Compliance report (October 2021-March 2022) for the EC order, mentioned above. Also enclosed here, copy of all Licenses from Statutory Bodies and Compliance Monitoring Report.

Place:Pathanamthitta

Date:31-03-2022

K.V Mathew

(Authorised Signatory)

Copy To,

Member secretary / Chairman

SEIAA Kerala

KSRTC Complex, Thampanoor

Thiruvananthapuram, Kerala

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I. INTRODUCTION

Granite Building Stone Quarry Project of M/s Kachanathu Minerals & Metals Pvt Ltd is situated at Survey No: 135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1- 1, 167/5, 167/2-2, 167/2-13, Ezhumattoor Village, Mallappally Taluk, Pathanamthitta District, Kerala in respect of Mr.K.V Mathew.

Granite Building Stone Quarry of M/s Kachanathu Minerals & Metals Pvt Ltd was obtained with the Environmental Clearance (File No. 765/SEIAA/EC4/505/2015, EC No.09/2017 dated 16/01/2017) by State Environmental Impact Assessment Authority on 16/01/2017. As part of general condition No.37 of Environmental Clearance order and EIA Notification the half yearly compliance report needs to be submitted by the project proponent.

This report contains the compliance of conditions of Environmental Clearance for the period of October 2021- March 2022.

COMPLIANCE TO THE CONDITION STIPULATED IN THE ENVIRONMENTAL CLEARENCE ISSUED BY STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA.

2.SPECIFIC CONDITIONS

Table 1.Specific Conditions

Sl. No.	Specific Conditions	Compliance Status
1	Fencing should be provided all around the lease area	The direction contained shall be scrupulously followed. To demarcate the lease area and to prevent falling of animals/ human being / dumping of garbage etc, the project proponent has installed barbed metal wire fencing around the lease area.
2	RWH structure should be provided at the site .An old pit located on the lowest level can be used for this purpose. Clarified water from the upper slope should be channelized into it	Provided rain water harvesting pond in the project area to collect rain water and utilize in the project area itself.
3	Overburden must be stored in a designated place at a lower elevation after the restoration of existing pits	To prevent the soil erosion, the overburden are stacked in designated place within the project site. Overburden will be used for landfill and to construct haulage roads in the mining area. The excess will be stored in a designated place at a lower elevation as per the direction.

3.GENERAL CONDITIONS

Table 2. General Conditions

Sl. No	General Conditions	Compliance Status
1	Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR /KPBR,unless otherwise specified.	Provided rain water harvesting pond in the project area to collect rain water and utilize in the project area itself
2	Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.	To monitor all conditions stipulated in the Environment Clearance and environment Management Plan, the project proponent has constituted an Environment Monitoring Cell. The environmental management cell regularly report to the head of the organization.
3	Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.	Already site have a green belt, planted 105 no's of trees at the boundary (Safe Buffer zone) This shall be maintained well. Trees like Mango, Anjili, Bamboo, Passion Fruits were planted
4	Maximum possible Solar Energy generation and utilization shall be ensured as an essential part of the project	As part of energy conservation, the project proponent has installed solar street light in the project site to generate and utilize maximum renewable energy. About 4 Solar Street Lights were provided in the quarry site
5	Sprinklers shall be installed and used in the projectsite to contain dust emissions.	Sprinklers are available at the site and are using at the time of generating dust from the site and make wet the internal roads daily. About 11no's of sprinklers were provided in the quarry site and water tanker vehicles along with sprinklers for the purpose of dust suppressions at internal roads
6	Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.	It is assured that Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
7	At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumpings and overburden and planted with indigenous plant species that are eco-friendly.	At the time of closure of the mine, it shall ensure that directions contained are scrupulously followed
8	Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented	As part of inclusive growth of the community, the project proponent will carry out various activities under CSR and will follow the plan as committed.
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.	The direction contained shall be scrupulously followed. To demarcate the lease area and to prevent falling of animals/ human being / dumping of garbage etc, the project proponent has installed barbed metal wire fencing around the lease area.
10	Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive	As per the stipulation of Explosive department, the project proponent has installed siren as warning alarm in the quarry site. Siren rang before the blasting time in

	Department.	order to give warning to the workers and public. The blasting timings are displayed in the prominent area by way of caution board.
11	Control measures on noise and vibration prescribed by KSPCB should be implemented.	Limited the operation of quarry in specific time only as directed by the KSPCB and has been following the directions and complying them. The following control measures are undertaken to bring down the noise levels:- <ul style="list-style-type: none"> • Proper maintenance of machinery equipment's and improvement of design of machines. • Personal Protective Devices i.e, earmuffs helmet, and boots etc. are provided to workers. • The mining activity is only during day time Noise level at the quarry site should be checked periodically, monitored through a NABL accredited laboratory during the quarry in operation and the monitored results are attached
12	Quarrying activities should be limited to day time as per KSPCB guidelines.	Limited the operation of quarry in specific time only as directed by the KSPCB and has been following the directions and complying them
13	Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.	Blasting done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency. Obtained Explosive license and following the guideline stipulated.
14	A licensed person should supervise/control the blasting operations	The project proponent has appointed Second Class Mines Manager L. Manoharan, in the site to supervise/control exploitation of minor minerals including blasting at the project site.
15	Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.	To reduce dust emissions and for the trouble free transportation of materials, the project proponent has properly surfaced the access road to the quarry site. The project proponent is regularly maintaining the access road in good manner.
16	Overburden materials should be managed within the site and the old quarries, if any, should be reclaimed and restored.	Overburden stacked in pre-determined site specified for the purpose.
17	Height of benches should not exceed 5m and width should not be less than 5m.	The quarrying activity in the project site is progressing by creating benches of 5m width and 5m height. The formation of benches is under the direction and supervision of competent person.
18	Mats to reduce fly rock blast to a maximum of 10PPV should be provided.	The project proponent is using blasting mat to reduce fly rocks during blasting.
19	Maximum depth of mining from general ground level at site shall not exceed 10m.	The maximum depth of mining is above general ground level.
20	No mining operations should be carried out at places having a slope greater than 45°	It is ensured that no mining is carried out at places having a slope greater than 45°, if any.

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.	Scrupulously follows the directions contained.
22	The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.	The project proponent has provided adequate Personnel Protective Equipments (PPE) such as helmets, ear muffs, safety belts, glows, etc. to ensure the safety of workers in working site
23	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize Storm Water.	The proponent is very conscious to prevent all quarry waste to enter in the public drainage or stream. The project proponent has constructed Garland drains with silt traps were suitably constructed all along the periphery of the pit area. Garland Drains collect the run-off from the lease area and divert into the desiltation tanks proposed within the complex. The surface runoff from the benches will runs into desiltation tank through the garland channel and then passes through the check dam into the natural drainage. All measures were taken not to disturb the existing drainage pattern adjacent to the other property. Desiltation tank installed for silt removal. Cleaning of Desiltation tank were done periodically. Clear water is letting out.
24	The transportation of minerals should be done in covered trucks to contain dust emissions.	To avoid dust emission from the vehicle while transportation of materials the project proponent assure that the trucks are covered before leaving the site.
25	The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.	This will be considered at the time of mine closure
26	Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.	Shall be disposed through the authorized recyclers
27	Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.	Magazine keep at an isolated area located at more than 50 m from the mining area
28	A minimum buffer distance of 50 m from the boundary of the quarry to the nearest dwelling or other structures, not being any facility for mining shall be provided	Maintain the said distance from the mining boundary to the nearest structure.
29	100 m buffer distance should be maintained from forest boundaries.	Forest area is not there in this locality
30	Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating activity.	Obtained consent from KSPCB Attached as Annexure 06
31	All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.	<ul style="list-style-type: none"> • Quarrying lease • Consent from Kerala Pollution Control Board • Environment Clearance from SEIAA

		<ul style="list-style-type: none"> • NOC from Explosive Dept. • D&O License from the LSGD
32	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.	The company shall abide by the directions of SEIAA Kerala. At present the project is running as per plan submitted in Environmental Impact Assessment Authority, Govt. of India and approved mining plan. There is no change in the scope of the project. The project will seek for a new Environmental clearance in the case of any changes in the scope of the project.
33	The Authority reserves the right to add additional safeguard measures Subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	The company shall abide by the directions of SEIAA Kerala
34	The stipulations by statutory authority under different acts and notifications should be complied with including the provisions of water(Prevention and Control of Pollution) act, 1974, the Air(Prevention and Control of Pollution) Act, 1991 and Notification 2006	Scrupulously follows the directions contained.
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 Environment Impact Assessment Authority (SEIAA) office and may be seen on the website of the Authority at www.environmentalclearance.nic.in . 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 pages should be forwarded to the office of this Authority as confirmation.	<p>The project was advertised in two widely circulated local newspapers in that region.</p> <p>Mangalam(02-11-2019) Deccan Chronicle(05-11-2019)</p>
36	A copy of the clearance letter shall be sent by the proponent to concerned GramaPanchayat/ DistrictPanchayat/ Municipality/ Corporation/ UrbanLocal 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.	Copy of EC has been forwarded to the secretary of Ezhumattoor Grama Panchayat and also EC displayed in the notice board of the mining site
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	The compliance report is being submitted along with the results of monitored data to the State Environmental Impact assessment Authority, Kerala and the Regional Office of MoEF&CC, Bangalore both in hard copy as well as mail.

	stipulated EC conditions, including results of monitored data on their website. It shall sent to the Regional office of MoEF. Govt. of India and also to the State Environment Impact Assessment Authority(SEIAA) Office	
38	The details of Environmental Clearance should be prominently displayed in a metallic board of 3ft X3ft 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.	A display board shows all the details about the project and EC provided at the entrance of the quarry site
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.	An assurance in the form of affidavit was submitted to SEIAA Kerala by the project proponent.
40	No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modification in the mine shall be carried out without prior approval of the SEIAA, as applicable.	The conditions of SEIAA are strictly followed
41	The project proponent shall ensure that no natural water course 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 take.	The proponent is very conscious to prevent all quarry waste to enter in the public drainage or stream. The project proponent has constructed Garland drains with silt traps were suitably constructed all along the periphery of the pit area. Garland Drains collect the run-off from the lease area and divert into the desiltation tanks proposed within the complex. The surface runoff from the benches will runs into desiltation tank through the garland channel and then passes through the check dam into the natural drainage. All measures were taken not to disturb the existing drainage pattern adjacent to the other property. Desiltation tank installed for silt removal. Cleaning of Desiltation tank were done periodically. Clear water is letting out.
42	Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended places loading and unloading points & transfer point to reduce fugitive emissions.	The project proponent has monitored the ambient air quality as per National Ambient Air Quality Standard (NAAQS). Monitored Lab Results are attached.
43	The Top soil, if any, shall temporarily to be stored at earmarked sites, only. For the topsoil shall be used for land reclamation and plantation. The over burden generated during the mining operations shall be stacked at earmarked dump site only. The maximum height of the dumps shall not exceed 8 m and width 20m 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	The temporarily stored topsoil used only for land reclamation and plantation. It is ensured that the dump site where over burdens are stored should maintained at 45° of slope. To prevent the soil erosion, the top soil and overburden are stacked in designated place within the project site. Only topsoil will be used for plantation. Overburden will be used for landfill and to construct haulage roads in the mining area. The excess will be stored in a designated place as per the direction.

	undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.	
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 utilizing for watering the mine area. Roads, green belt development etc. the drains shall be regularly desalted particularly after monsoon and maintained properly.	The proponent is very conscious to prevent all quarry waste to enter in the public drainage or stream. The project proponent has constructed Garland drains with silt traps were suitably constructed all along the periphery of the pit area. Garland Drains collect the run-off from the lease area and divert into the desiltation tanks proposed within the complex. The surface runoff from the benches will runs into desiltation tank through the garland channel and then passes through the check dam into the natural drainage. All measures were taken not to disturb the existing drainage pattern adjacent to the other property. Desiltation tank installed for silt removal. Cleaning of Desiltation tank were done periodically. Clear water is letting out.
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.	Effective safeguard measures are adopted in critical areas that are prone to air pollution. The project proponent has placed water sprinklers in critical area to reduce the dust emission. Ambient Air Quality according to the norms of CPCB is followed in loading – unloading points and transfer points.
46	Fugitive dust emissions from all the sources should controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained	There is a regular control on dust emission sources. Water spraying arrangements are properly maintained
47	Measures should be taken for control of noise levels below 85 dBA in work environment.	The project proponent has taken appropriate steps to reduce the sound by employing possible measures. Measurements of noise levels are taken in the work environment. Noise Monitoring Lab results provided
48	A separate environmental management cell with suitable qualified personal should be set-up under the control of a senior Executive, who will report directly to the head of the organization	To monitor all conditions stipulated in the Environment Clearance and environment Management Plan, the project proponent has constituted an Environment Monitoring Cell. The environmental management cell regularly report to the head of the organization.
49	The funds earmarked for environmental protection measures and CSR activate should not be diverted for other purpose. Year wise expenditure should be reported to the state Environment Impact Assessment Authority (SEIAA) office.	As part of inclusive growth of the community, the project proponent will carry out various activities under CSR and will follow the plan as committed.
50	The Regional Office of MOEF& CC Located at Bangalore shall extend full cooperation to the officer (S) of the Regional Office by furnishing therequisite data /information /monitoring reports	The project proponent will extent all possible cooperation to the officers form regional office of MoEF&CC and can produce all data/information/reports when they are asking for.

51	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal , if preferred ,within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act,2010	There is no appeal against EC
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 the this clearance and attract action under the provisions of Environment protection Act,1986	Such a situation never come across. TheCondition is noted for compliance
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 conditions in the interest of environment protection.	The project proponent is willing to implement the conditions stipulated in the Environment Clearance order. The project can execute all possible measuresin the project site for the conservation of environment. The conditions of SEIAA are strictly followed.
54	The above conditions shall prevail not withstanding anything to the contrary in consistent ,or simplified, contained in any other permit, license on consent given by other authority for the same project .	The project proponent will give priority to the conditions stipulated in the Environment clearance Order for execution.
55	This order is valid for a period of 5 years or the expiry date of mine lease period issued by the Government of Kerala whichever is earlier.	It is noted that this Environmental clearance order is valid for a period of 5 years or the expiry date of mine lease period issued by the Govt. of Kerala, whichever is earlier.
56	The Environmental Clearance will be subject to the final order of the courts of the in any pending litigation related to the land or project, in any court of law.	There is no court cases related to the project.
57	The mining operation shall be restricted to above ground water table and it should not intersect ground water table.	The mining operation is alone above ground water table.
58	All vehicles used for transportation and within the mines shall have PUC certificate from authorized pollution talking Centre. Washing of all vehicles shall be inside the lease area.	Vehicles used within mines have PUC certificate. As part of reduce air pollution, the project proponent is monitoring the pollution level of all vehicles playing in the project site. This monitoring conducts only in authorized pollution testing center.
59	Project proponent should obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and groundwater for the project.	Scrupulously follows the directions contained
60	Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA.	The report of water quality is given to the SEIAA in every six months
61	Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and corrective measures, if needed.	A healthy surveillance program of theworkers is controlled periodically

ANNEXURE 1
Environmental Clearance



Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: Environmental Clearance for the Building stone quarry project in Sy.Nos. 135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1-1, 167/5, 167/2-2, 167/2-13 of Block 27 at Ezhumattoor Village, Mallappally Taluk, Pathanamthitta District, Kerala by Sri. K.V. Mathew, M/s Kachanathu Minerals and Metals Pvt. Ltd - EC Granted-Orders issued

State Environment Impact Assessment Authority, Kerala

No. 765/SEIAA/EC4/505/2015

dated, Thiruvananthapuram 16.01.2017

- Ref:
1. Application dated 18.02.2015 from Sri. K.V. Mathew, M/s Kachanathu Minerals and Metals Pvt. Ltd
 2. Minutes of the 45th meeting of SEAC held on 11/12-09-2015
 3. Minutes of the 52nd meeting of SEAC held on 08/09-02-2016.
 4. Minutes of the 59th meeting of SEAC held on 11/12-07-2016.
 5. Minutes of the 61st meeting of SEIAA held on 30-11-2016

ENVIRONMENTAL CLEARANCE NO.09 / 2017

Sri. K.V. Mathew, M/s Kachanathu Minerals and Metals Pvt. Ltd., Kachanathu Ebenezar Trade Center, V/114, Angadi P.O., Ranniy, Pathanamthitta vide his application received on 18-02-2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1-1, 167/5, 167/2-2, 167/2-13 of Block 27 at Ezhumattoor Village, Mallappally Taluk, Pathanamthitta District, Kerala for an area of 4.9808 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA.II(M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the O.M. No. J-13012/12/2013-IA-II (I) dt. 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

The land use classification as per revenue records is private own land with rock and bushes. The lease area consists of 4.9808 hectares, which is private land. The current proposal is for the expansion quarry with pit area of 2.1174 hectares and mineral specific. Hence no alternate site was examined. The proposed project is for quarrying of 26828 m³ per Annum of building stone. The expected life of mine will be 10 years. Forest land is not involved in the project. The project does not require approval/clearance under forest conservation act or Wild life protection act or CRZ notification, since there is no declared biosphere reserve, wild life sanctuaries, or tiger sanctuary or migrating corridor, coastal zone etc. in the core zone and 10 km buffer zone. There is no Government order relating to the proposed site. The quarry is not interlinked with a crusher unit located within the complex. As stated by the proponent, there is no litigation pending against the lease area / applicant of the lease area in any court of law. The proposed site falls in the Moderate category of Seismic Zone i.e., Zone-III. Manimala River (N) flows about 7 km away from the project site. About 7060 m³ of over burden and rejected rocks generated as waste during operation of mine. Other details of the project are as follows:

File No.		BASIC DETAILS OF THE PROJECT	
Name of project		765/SEIAA/KL/505/2015 Environmental Clearance for the Expansion of Building Stone Quarry Project by M/s. Kachanathu Minerals and Metals Private Limited	
Brief description of the project		Building stone quarry in an area of 4.98.08 Hectares at Ezhumattoor Village, Mallappally Taluk, Pathanamthitta District, Kerala State with maximum rate of production 26828 m ³ / annum.	
Category/Subcategory & Schedule		Category 'B' / Subcategory B2 & Schedule 1(a)	
Location Sy no/ district, Taluk/ village etc.		135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1-1, 167/4, 167/2, 167/2-13 of Block 27, Ezhumattoor Village, Mallappally Taluk, Pathanamthitta District, Kerala State	
GPS co-ordinates		Latitude (N)	09°25'41.43"N
		Longitude (E)	76°42'35.89"E
for Mining projects	Extent of area (in hectares)	4.98.08 Ha	
	Minimum and maximum height of excavation (MSL)	200 m & 150 m	
	Life of mine proposed	10 Years	
	Ultimate depth of mining (in MSL)	50 m MSL	
	Distance from the adjacent quarry	0.3 km	
	Capacity of production	26828 m ³ /annum (Max. rate of production)	

Details of project cost	486.70 lakhs
Financial statement including funding source and details of insurance	Own Land - 3.93.08 hectare, Lease Land - 1.05.00 hectare & funding will be taken care by M/s. Kachanathu Minerals and Metals Private Limited
CRZ recommendations	Not Applicable
Forest clearances	
Does it attract violation proceedings	No

EnviMgmt
plan / Eco
restoration
plan (brief
details)

MANAGEMENT PLAN:	
Air pollution	<ul style="list-style-type: none"> ➤ Water sprinkling will be done by water tanker fitted with water pump to reduce generation of dust during loading. ➤ Dust masks will be provided to operators and other persons near loading. ➤ Green belt will be developed around the mine lease boundary in order to reduce spread of air pollution and plantation will be done around mine office, haul road, etc to control dust pollution.
Water pollution	<ul style="list-style-type: none"> ➤ No waste water generation is envisaged during the mining process. The domestic effluent generated from the mine office, will be disposed off in soak pits via septic tanks. ➤ Water will be stored in the pit required for irrigation of plants, spraying water on roads and other miscellaneous purposes by diverting direction of the garland drain towards pit when required
Noise	<ul style="list-style-type: none"> ➤ Green belt will be developed around the mine lease boundary in order to reduce noise pollution in the surroundings. ➤ Controlled Blasting will be carried out to minimize noise generation. Blasting will be done in day time. ➤ Drilling will be done with sharp drill bits, which reduces generation of noise during drilling.
Solid Waste Management	<ul style="list-style-type: none"> ➤ Solid waste will be disposed or utilized for filling excavated areas, road construction and artificial soil for greenhouse pot trails for grass & tree growth at mining area.
Eco restoration	<ul style="list-style-type: none"> ➤ 30 Trees / annum will be planted at 5m interval in an area of 0.76.30 Ha. The lease boundary and avenues as well as over non active dumps are also used for greenbelt development. The main aim of the greenbelt development is to restore the ecosystem to its original form to a maximum possible extent.

ABOUT THE PROJECT**Environmental parameters considered****Description****WATER**

Water requirement & sources	Total water requirement - 6 KLD. (Domestic and Drinking Purpose - 2 KLD Dust Suppression and Green Belt - 4 KLD) Open Well at the site will be the source of water
RWH units proposed	Existing pit will be utilized as rain water reservoir.
Facilities for liquid waste treatment	Domestic wastewater generated will be treated through the septic tank followed by soak pit
Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No impoundment, damming, culverting, realignment or other changes to the hydrology of surface water courses
Water quality meeting requirements	Water quality in the study area is meeting the requirements prescribed by the PCB.
Does it have provisions for use of recycled water	No

LAND

Proximity to forest lands	None within the study area
Access road to the site - Width & Condition	Width of the access road to site is 8m
Storage of explosives /hazardous substances	Explosives will be stored as per the Indian Explosive Act 1958 & explosive rules 1983.
Facility for solid waste mgmt	It is proposed to stack initially along the lease boundary and will be backfilled finally within the mine lease area
Topographic features/slope	Topography of the area is hilly terrain.
Proneness of the area for landslides	Site area fall under Seismic Zone III. It is not a landslide prone area.
Significant land disturbance resulting in erosion, subsidence & instability	Due to excavation, significant land disturbance will occur.
Top soil, overburden etc.	Over burden 2000 m ³ will be generated during the mining period. It will be stacked separately & backfilled at the end of life of mine.

AIR

Air quality meeting requirements	Water sprinkling and other mitigation measures will be provided during mining activity to control the air emissions
Noise level meeting requirements	Adequate mitigation measures will be provided to control the noise emissions during blasting & mining activity.
Likely emissions affecting environment	There will not be any other major emissions

ENERGY

Energy requirement	Total power requirement of 75 KW for operations of equipment will be drawn from Diesel Generator
--------------------	--

Extent of usage of alternative energy resources	Diesel Generator																	
	No																	
BIODIVERSITY																		
Presence of any endangered species or red listed category	There are no endangered or rare species in the area																	
Loss of native species and genetic diversity	There will not be any loss of native species of genetic diversity as the already exists and continuation of the same will not affect or loss of native species in general.																	
Likely displacement of fauna	The proposed mining activity does not have any displacements of fauna																	
Any introduction of alien / invasive species	The proposed mining activity does not introduce any alien species.																	
SOCIAL ASPECTS																		
Proximity to nearest habitation	Ezhumattoor - 1 km, S																	
CSR related to the project/ allocation/ time frame (details mandatory)	Proposed common CSR Budget																	
	<table border="1"> <thead> <tr> <th>Sl.no</th><th>Particulars</th><th>Amount Rs. In lakhs</th></tr> </thead> <tbody> <tr> <td>1</td><td>Renovation of old buildings of Ezhumattoor Govt. Hr. Sec. school</td><td>2.5</td></tr> <tr> <td>2</td><td>Provision of books and Sanitary facilities (Toilets, Drinking water facilities, etc.) to Ezhumattoor Govt. Hr. Sec. school</td><td>3.5</td></tr> <tr> <td>2</td><td>Repairing of damaged Ezhumattoor-Vaipoor Road (Panchayat road)</td><td>2.5</td></tr> <tr> <td>3</td><td>Organizing Health camps</td><td>1.5</td></tr> <tr> <td colspan="2">Total</td><td>10.0</td></tr> </tbody> </table>	Sl.no	Particulars	Amount Rs. In lakhs	1	Renovation of old buildings of Ezhumattoor Govt. Hr. Sec. school	2.5	2	Provision of books and Sanitary facilities (Toilets, Drinking water facilities, etc.) to Ezhumattoor Govt. Hr. Sec. school	3.5	2	Repairing of damaged Ezhumattoor-Vaipoor Road (Panchayat road)	2.5	3	Organizing Health camps	1.5	Total	
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Total		10.0																
GENERAL																		
Does it propose environment management plan	Chapter 4 of Pre Feasibility Report.																	
Does it have eco restoration programmes	30 Trees / annum will be planted at 5m interval in an area of 0.76.30 Ha. The lease boundary and avenues as well as over non active dumps are also used for greenbelt development. The main aim of the greenbelt development is to restore the ecosystem to its original form to a maximum possible extent.																	
Biomedical waste management	Not Applicable																	
E-waste management	Not Applicable																	
Sufficiency of parking spaces/ traffic management	The existing transport facilities will be utilized for the proposed project. The proposed project does not involve any closure or diversions of existing transport routes.																	

against the project (provide details)	
Right & nature of ownership of land	Own land of 3.93.08 hectare & Lease land of 1.05.00 Hectare
Is the property forest land/govt. land/own land	Own Patta land
Details of Authorised Signatory	Mr. K.V. Mathew M/s. Kachanathu Minerals and Metals Pvt. Ltd. Kachanathu Ebenezer Trade Center, V/114, Angadi P.O., Ranny, Kerala - 689 674.

2. This application was placed before 45th meeting of SEAC held on 11/09/2015 and 12/09/2015. The Committee decided to defer the item for field visit by subcommittee concerned and to direct the proponent to submit more realistic projects under social responsibility. According to that proponent submitted the CSR.

Field visit to the Quarry project site of M/S Kachanathu Minerals and Metals Pvt Ltd, was carried out on 24.10.2015 by the sub-committee of SEAC, Kerala, comprising Dr.Keshav Mohan and Sri. John Mathai. The representatives of the proponent were present at the site at the time of site visit. This is the second visit to the site necessitated by the absence of the representatives of the proponent at the time of earlier visit. The field inspection details are given below.

"The project is located at about 0.5 km NE of Ezhumattoor. The quarry of Sri.Ravindran is located to the west within 500 m but the total area is less than 25 ha (B2 category). This quarry lease area of 4.98 ha falling in own land occupy the south facing slopes of an elevated ridge, part of which has been exploited. The elevation of the lease area ranges from 170m in the rock exposed hillock to 130 m in the lower southern part. The rock type is weakly foliated charnockite with prominent sub vertical joints. A thin dyke is also noted in the site. Pockets of weathered rock with about 1m thick over burden (OB) and top soil is seen interspersed with rock out crops in the upper part where initial benches have been formed. In the central lower part old workings with steep cuttings are seen. The OB is now used for reclamation of old pits. The entire storm water from the area flows as sheet flow to the south and collected in the pits from where it is let out into the trenches formed in the rubber plantation area of the proponent for clarification and disposal. RWH structures are also not seen excepting for old quarry pit. Manimalariver is seen at a distance of 2.5 km to the north but the stream flow from the site is to west. Rubber is the dominant land use. Dwelling units are not seen in the vicinity of 200 m. There is an associated crusher unit with the quarry. Canteen and limited accommodation is made available to the workers. The approved mine plan shown to the subcommittee did not have any date and reference to the 2015 rules.

Based on an overall evaluation of the site, the quarry operations may be recommended with following conditions:

- 1. The mine plan must have a date of approval with reference to the 2015 mineral concession rules.*
- 2. The proponent must submit the Cadastral map of the lease area with subdivisions clearly indicating the area proposed to be quarried*
- 3. Fencing should be provided all around the lease area.*
- 4. RWH structure should be provided in the site. An old pit located on the lowest level can be used for this purpose. Clarified water from the upper slope should be channelised into it.*
- 5. Ultimate depth of mine to be limited to the permissible level of deepening by benches.*
- 6. OB burden must be stored in a designated place at a lower elevation after the restoration of existing pits.*
- 7. The CSR need redrafting with inclusion of felt needs of the locality.*

Other items from general conditions like a) Appropriate sign boards should be displayed, b) The blasting time must be displayed and strictly adhered to, c) The PPV values must be less than 10 mm/sec, d) Steps to be taken to limit fly rock to within the lease area. Rock fragments should not fall anywhere outside the lease area, e) Dust suppression mechanism must be in place f) A belt of trees (Vegetation belt) should be maintained all around the quarry but must be maintained till the entire life of quarry, g) A separate small plot to be maintained in the premise to preserve rare and endemic species, if any, listed in the biodiversity assessment etc.

3. The proposal was considered in the 52nd Meeting of SEAC, held on 8th & 9th February, 2016. The Committee deferred the item for submission of Mining Plan as per KMMC Rule 2015.

4. On submission of the mining plan the proposal was again considered in 59th meeting of SEAC held on 11th & 12th July 2016. The Committee appraised the proposal based on Form 1, Pre-feasibility Report and Mining Plan and recommend to issuance of EC subject to the general conditions and the following specific conditions.

1. Fencing should be provided all around the lease area.
2. RWH structure should be provided at the site. An old pit located on the lowest level can be used for this purpose. Clarified water from the upper slope should be channelized into it.
3. Over burden must be stored in a designated place at a lower elevation after the restoration of existing pits.

The proponent agreed to set apart Rs 5 lakhs (non-recurring) and 5 lakhs per annum (recurring) for next 5 years for CSR activities for the welfare of the local community in addition to the 1% of the profit towards the KSBB. The proponent also agreed to spend this amount in consultation with the local Panchayath.

5. The Authority in its 61st Meeting held on 30/11/2016 decided to accept the recommendation of SEAC to issue Environmental Clearance on condition that valid permit should be produced to SEIAA and also that the above specific conditions are fulfilled before continuing with mining. An Affidavit to this effect should be submitted by the project proponent.

6. The proponent has submitted the valid permit certificate and Affidavit for specific conditions mentioned in para 4. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed Building Stone Quarry project of Sri. K.V. Mathew M/s Kachanathu Minerals and Metals Pvt. Ltd in Survey No. 135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1-1, 167/5, 167/2-2, 167/2-13 of Block 27, Ezhumattoor Village, Mallappally Taluk, Pathanamthitta District, Kerala for an area of 4.9808 Hectares, subject to the specific conditions as recommended by SEAC in para 4 above, all the environmental impact mitigation and management measures undertaken by the project proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. The assurances and clarifications given by the proponent will be deemed to be a part of these proceedings as if incorporated herein. Also the general conditions for projects stipulated for mining, appended hereto will be applicable and have to be strictly adhered to.

7. The clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures as assured in the Environment Management Plan and the mining features including progressive mine closure plan as submitted with the application and relied on for grant of this clearance. The above undertakings and the conditions and the undertakings in Chapter 4 (Mining), Chapter 5 (Blasting), Chapter 6 (Mine Drainage), Chapter 9 (EMP) Chapter 10 (Progressive Mine Closure Plan) of the Mining Plan as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

8. Validity of the Environmental Clearance will be five years from the date of this clearance, subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of conditions or genuine complaints from residents within the security area of the quarry.

9. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorised offices and also by the regional office of the Ministry of Environment & Forests, Govt. of India, Bangalore.

- i. Necessary assistance for entry and inspection should be provided by the project proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring.
- ii. Instances of violation if any shall be reported to the District collector, Pathanamthitta to take legal action under the Environment (Protection) Act 1986.

iii. The given address for correspondence with the authorised signatory of the project is Mr. K.V. Mathew, M/s. Kachanathu Minerals and Metals Pvt. Ltd, Kachanathu Ebenezer Trade Center, V/114, Angadi P.O., Ranny, Kerala - 689 674.

Sd/-

V.S.SENTHIL.I.A.S.,
Member Secretary (SEIAA)

To,


Sri. K.V. Mathew,
M/s Kachanathu Minerals and Metals Pvt. Ltd.,
Kachanathu Ebenezer Trade Center,
V/114, Angadi P.O., Ranny,
Pathanamthitta - 689 674

Copy to,

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.
2. The Additional Chief Secretary to Government, Environment Department, Government of Kerala.
3. Director, Mining & Geology, Thiruvananthapuram -4.
4. District Collector, Pathanamthitta
5. Secretary, Ezhumattoor Grama Panchayat, Mallappally Taluk., Pathanamthitta-689 586
6. Chairman, SEIAA.
7. Website.
8. S/f
9. O/c



Forwarded/By Order


Administrator, SEIAA

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA
GENERAL CONDITIONS (for mining projects)

1. Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified.
2. Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.
3. Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.
4. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.
5. Sprinklers shall be installed and used in the project site to contain dust emissions.
6. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
7. At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco-friendly, if no other specific condition on reclamation of pit is stipulated in the E.C.
8. Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented
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.
10. Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.
11. Control measures on noise and vibration prescribed by KSPCB should be implemented.
12. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.
13. Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.
14. A licensed person should supervise/ control the blasting operations.
15. Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.
16. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions.
17. Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention is the mining plan/specific condition.
18. Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.
19. Maximum depth of mining from general ground level at site shall not exceed 10m
20. No mining operations should be carried out at places having a slope greater than 45°.
21. Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CDEMA/KSPCB.
22. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
23. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
24. The transportation of minerals should be done in covered trucks to contain dust emissions.
25. The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.
26. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.
27. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
28. A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.
29. 100 m buffer distance should be maintained from forest boundaries.

- obtained before initiating mining activity.
31. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.
32. In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponents shall apply and get the approval of this Authority.
33. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
34. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
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 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 pages should be forwarded to the office of this Authority as confirmation.
36. A copy of the clearance letter shall be sent 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.
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 MoEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office.
38. The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft 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
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.
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.
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.
42. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.
43. The top soil, if any, shall 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 8m and width 20m 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 shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.

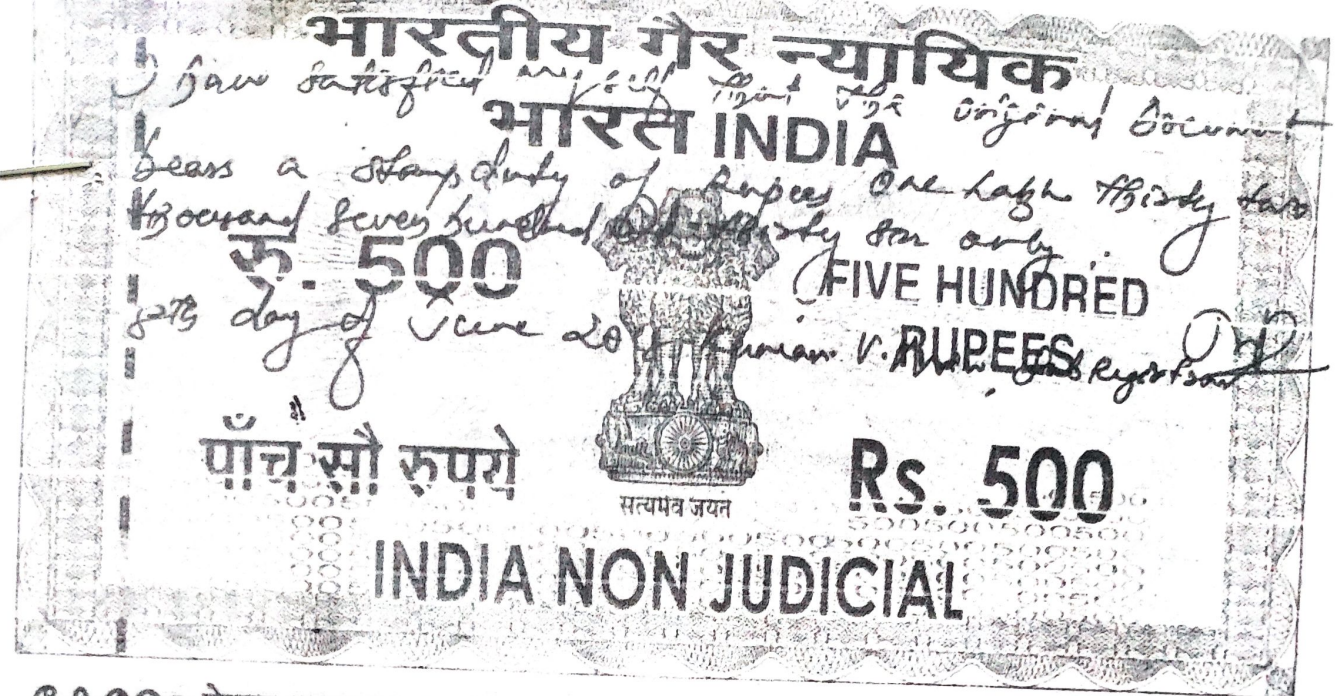
- Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
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 PM_{10} and $PM_{2.5}$ such as haul Road, loading and unloading points and transfer points - it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
46. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
47. Measures should be taken for control of noise levels below 85 dBA in the work environment.
48. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
49. The funds earmarked for environmental protection measures and CSR activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.
50. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.
51. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
52. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
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 environment protection.
54. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.
55. This order is valid for a period of 5 years or the expiry date of mine lease period issued by the Government of Kerala, whichever is earlier.
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.
57. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.
58. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution taking centre. Washing of all vehicles shall be inside the lease area.
59. Project proponent should obtain necessary prior permission of the competent authorities for drawal of requisite quantity of surface water and ground water for the project.
60. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA.
61. Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

Rajesh Kumar

For Member Secretary, SEIAA Kerala

ANNEXURE 2

Quarry Lease



കേരളം കേരल KERALA

C 498457

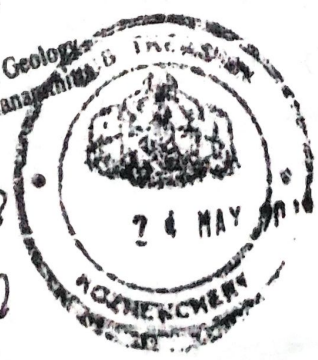
FORM H
(See rule 43)
QUARRYING LEASE

This deed of lease made on this the 1st day of June 2018 between the Governor of Kerala (hereinafter referred to as the "State Government" which expression shall, where the context so admits be deemed to include his successors and assigns) of the one part and Shri/Smt.M/s. Kachanathu Minerals & Metals Pvt. Limited, Kachanathu Ebenezer Trade Centre, Angadi Post, Ranni, Pathanamthitta District - 689 674 having branch office at Ezhumattoor P.O., Mallappally, Pathanamthitta District - 689 586 (Represented by its Managing Director Shri K.V.Abraham, aged 62 years, S/o.Late Cherian Varkey, residing at Kachanathu House, Nellickamon P.O., Angadi Village, Ranni Taluk of Pathanamthitta District (hereinafter called the "lessee/lessees" which expression shall where the context so admits, include his/their heirs, executors, administrators, representatives and permitted assigns) of the other part.

Lessor

M.M. VAHAB
Geologist
Dept of Mining and Geology
District Office, Pathanamthitta

M 3344.29
K.V. Abraham
Managing Director
K.V. Minerals & Metals Pvt. Ltd.
Angadi P.O. Ranni



Lessee K.V. Abraham

K.V. Abraham R.V.

Managing Director
Page 1 of 2
K.V. Minerals & Metals Pvt. Ltd.
Angadi P.O. Ranni

No. 719/2018/E Daphne No. 2

Presented in the office of the Sub Registrar of
Vandavasi with its photographs and
fingerprints of the buyers, vendors, and the
presentant, affixed under Sec. 37A and a fee of
Rs. 33684/- paid at 2 hours 20 minutes
on the 23 day of June year 2018

K. V. ABRAHAM

Abraham K.V.

residing at Karanadu House

8th day of June 2018

Execution Admitted by

KUMARI. V. MINI
SUB REGISTRAR

For and on behalf of Karanadu Minerals &
Metals (Pvt) Limited represented by its managing Director

K. V. ABRAHAM

Abraham K.V.

Son of Cheriyan Varghese residing at
Karanadu House, Vandavasi.

I have satisfied myself that the execution of this
instrument by M. M. Varghese, Geologist, Dept. of
Mining & Geology, District office, Pattanam Bika
for and ~~on behalf~~ on behalf of the Governor of
Kerala who is exempted from personal appearance
under section 37A of the Indian Registration Act.

2018

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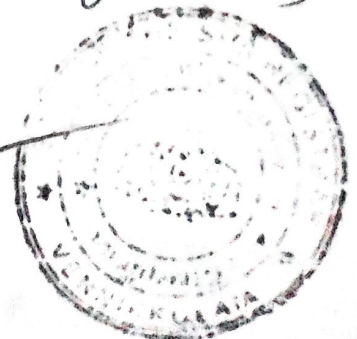
of

Book No.

8

Shops

Shops



Witnesseth that in consideration of the rents and royalties and lessee's/Lessee's covenants, hereinafter reserved and contained the State Government hereby give on lease to the lessee/lessees the land measuring **4.4298 hectares** described in the schedule hereunder and delineated on the plan hereto annexed and therein coloured red (hereinafter called the "said lands") to hold the same for a period of **9(Nine) years** commencing from **01.06.2018** and ending on **31.05.2027** for the purposes of extracting minor mineral/minerals and subject to the terms and conditions contained in the Kerala Minor Mineral Concession Rules, 2015 (hereinafter referred to as "the Rules") and to the terms and conditions hereinafter appearing.

1. The lessee/lessees shall have the right in and upon the said lands to extract **Granite Building Stone** (hereinafter called the said mineral/minerals) and to do all acts necessary for the extraction of the said mineral/minerals including the erection on the said lands, buildings and plant required for the purposes and also to take lead and carry away over the said lands and to dispose of the said minerals extracted as aforesaid.
2. The lessee/lessees shall during the subsistence of this lease have the liberty to work the said mineral/minerals and remove the same from the leasehold on permits issued by the State Government/competent authority or any other officer authorised by him in this regard. The permits shall be issued only on the basis of pre-paid royalty at the rates specified in schedule I to these Rules. The royalty rates shall be subject to revision from time to time as the State Government may order.
3. The lessee/lessees shall pay to the State Government a yearly surface rent equal to the land revenue if any, assessable under the rules for the time being in force, or if the land be the property of Government or in reserve forest then equal to the land revenue plus cess, if any, per hectare of the land the surface whereof shall be occupied or used by the lessee/lessees for any of the purposes of this deed and so in proportion for any area less than one hectare. The said surface rent shall be paid by yearly payments; the first of such payments to be made on or before the last day of the first year of occupation provided always that no such rent shall be paid or demanded in respect of any roads or ways now in existence.
4. The lessee/lessees shall at all times during the currency of this lease keep correct and intelligible books of account showing accurately the quantity of the said minerals extracted and the weight and value of the said mineral sold or exported together with the names of the purchasers or consignees. The lessee shall also maintain a register of employees showing therein separately men, women employed daily and shall at reasonable times allow the competent authority appointed under the rules(hereinafter referred to as "competent authority") or the officer authorised by him to examine the said books of account and the register of employees and to take copies and extracts therefrom. The lessee/lessees shall submit reports in Forms F and G on the specified dates.

Lessor

M.M. VAHAB
Geologist
Dept. of Mining and Geology
District Office, Pathanamthitta

Lessee K.V. Mohan
K.V. Mohan
Page 2 of 7
Managing Director
KACHANATHU
Minerals & Metals Pvt. Ltd.

Identified by: the respondent by
Anilkumar V.B. - Son of
Balakrishnan. Residing at Valiyathur
Bisalees Kanganthar P.O.

K.V. Mathu Inds s/o Chand Vaidy.
Kallumthi to Buri Angali Rm.

873 day of June 2012 and

415-428
1020

Registered as no. 719
Page 415 Volume 1020 on
Sheets 8 to 428
Sheet 2

KUMARI V. MINI
SUB REGISTRAR

873

day of June 2012

and
KUMARI V. MINI
SUB REGISTRAR



5. All sums found due under or by virtue of this deed from the lessee/lessees may be recovered from him jointly and severally from them and his / their properties movable and immovable under the provisions of the Revenue Recovery Act for the time being in force as though such sums are arrears of land revenue or in any other manner as the State Government may deem fit.
6. The lessee/lessees shall at the lessee's/lessees' own expense erect and at all times maintain and keep in repair boundary marks and pillars along the boundaries of the said lands according to the demarcation shown in the plan hereto annexed.
7. The lessee shall not carry on or allow to be carried on any quarrying operations at or to any points within a distance of 100 metres from any railway line except with the previous written permission of the railway administration concerned and any bridge on National Highway or 50 metres from any reservoir, tanks, canals, rivers, bridges, public roads, other public works, residential buildings, the boundary walls of places of worship, burial grounds, burning ghats or one kilometer from the boundaries of National Park or Wildlife Sanctuaries except with the previous permission of the authorities concerned or the Government or competent authority.
8. The sides of open workings shall be sloped, stepped or secured by the lessee in such a manner as to prevent slope failure, when an open working is worked in steps, steps shall be of sufficient breadth in relation to their height to secure safety. In open workings trees liable to fall and all loose ground and material shall be removed by the lessee sufficiently far from the edge or otherwise made source in order to prevent danger to persons employed in the quarry.
9. If a working place is found to be unsafe all persons shall be withdrawn by the lessee/lessees immediately from the dangerous area and all access to such working place except for the purpose of removing the danger of saving life shall be prevented by securely fencing the full width of all entrances to the place.
10. The lessee/lessees shall at all reasonable times allow any officer authorised by the Central Government or by the State Government in that behalf to inspect the said lands and the buildings and plants erected thereon and the lessee/lessees shall assist such persons in conducting the inspection and afford them all information they may reasonably require, and shall conform to and observe all orders which the Central and State Governments as the result of such inspection or otherwise, may from time to time pass.

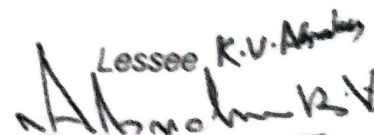
Lessor



M.M. VAHAB

• Geologist

Dept. of Mining and Geology
District Office, Palaniamthitta

Lessee R.V. Abraham


Page 3 of 7

Managing Director

IKAC (Minerals & Metals)

Minerals & Metals Division

11. The lessee shall be responsible for implementing the provisions of the various labour laws applicable, from time to time, to the quarry.
12. The lessee/lessees shall not assign or underlet the said lands or any part thereof or the rights or privileges, therein hereby granted or any of them without the previous permission in writing of the State Government / competent authority:
13. Where the lease or any right, title or interest therein has been assigned, sublet or transferred as provided in rule 45 read with condition 12, then the person in whose favour such assignment, sublease or transfer has been made shall be responsible for implementing the provisions of the various labour laws applicable, from time to time, to the quarry.
14. The lease may be surrendered by the lessee/lessees at any time after 3 months notice in writing to the State Government/competent authority: Provided that the lessee/lessees has/have paid all sums due on account of the lease. Provided that if the lessee/lessees elects/elect to determine this lease before the expiry of the term of the lease, shall pay in addition to other dues a sum equal to the dead rent payable for the remaining part of the term of the lease deed.
15. If the lessee/lessees shall be desirous of taking a further lease of the said lands he/they shall give three months' previous notice in writing of such desire to the State Government/Competent authority and if the lessee/lessees has/have duly observed all the conditions of this lease, the State Government/competent authority may agree to renew the lease for such further term and on such terms and conditions as the State Government/Competent authority may determine which shall be in accordance with the provisions of these rules.
16. If the lessee/lessees shall at any time during the said term use the said lands or any part thereof in any manner other than as authorised by this lease or fail to carry on quarrying operations continuously without sufficient cause of which the State Government/Competent authority shall be the judge or shall commit a breach of any of the conditions of this lease it shall be lawful for the State Government/Competent authority to cancel this lease and take possession of the said lands or the alternative to receive from the lessee/lessees such penalty not exceeding Rs. 25000/- (Rupees Twenty five thousand only) for the breach as the State Government/Competent authority may fix.

Lesser

M.M. Vahab

M.M. VAHAB

Geologist

Dept. of Mining and Geology
District Office, Puthanambitha

K. V. Aravind
Lessee
K. V. Aravind
Page 4 of 7
Managing Director
KACHANATHU
Minerals & Metals Pvt. Ltd.

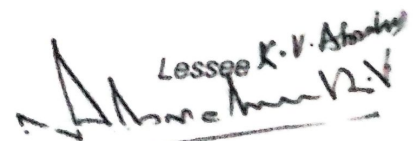
17. If at the expiration of three calendar months after the expiry of the lease or its sooner determination, there shall remain in or the said lands, any engines, machinery, plant buildings, structures and other works erections and conveniences the said minerals or other property which the lessee is/lessees are entitled to remove from the said lands, the same shall, if not removed by the lessee/lessees within one calendar month after notice in writing requiring their removal be given to the lessee/lessees by the State Government/Competent authority be deemed to become the property of the State Government in such manner as they may deem fit without liability to pay any compensation or to account to the lessee/lessees in respect thereof.
18. This lease subject to all rules and regulations which may from time to time be issued by the State Government regulating the working of the quarries and other matters affecting safety, health and convenience of the lessee's/lessees' employees or of the public, whether under the Indian Mines Act or otherwise.
19. The lessee/lessees shall without delay send to the District Collector and the competent authority or the officer authorised by him in this regard report of any accident causing loss of life or serious bodily injuries or seriously affecting or endangering life or property which may at any time occur at or in the said lands in the course of operations under this lease.
20. The lessee/lessees shall furnish such reports and returns relating to output, labourers employed and other matters as the State Government may prescribe.
21. The lessee/lessees shall make and pay such reasonable compensation as may be assessed by lawful authority in accordance with the law in force on the subject for all damage, injury or disturbance which may be done by him/them in exercise of the powers granted by this lease and shall indemnify and shall keep indemnified fully and completely the State Government against all claims which may be made by any person or persons in respect of any such damage, injury or disturbance and all costs and expenses in connection therewith.

Lessor



M.M. VAIHAB
Geologist

Dept. of Mining and Geology
District Office, Pathanamthitta



Page 5 of 7

Managing Director
KACHANATHU
Minerals & Metals Pvt. Ltd.

22. Any condition prescribed in the Kerala Minor Mineral Concession Rules, 2015 but left out in this lease which may be found applicable to the lessee/lessees shall be treated as binding on the lessee/lessees.
23. In this case anticipated royalty for the mineral at rate of Rs.24/- (Rupees Twenty four only) per tone for a period of one year is **Rs.16,09,680/-** (Rupees Sixteen lakh nine thousand six hundred and eighty only)
24. Dead rent realized at the rate of 1st year - NIL, 2nd year Rs.300/- (Rupees three hundred only) and 3rd year onwards Rs.1200/- (Rupees one thousand two hundred only) per hectare subject to revision from time to time. Surface rent at the rate of Rs.200/- (Rupees two hundred only) per hectare for one year is **Rs.200/-** (Rupees Two hundred only) and security deposit is **Rs.44,298/-** (Forty four thousand two hundred and ninety eight only)

Schedule of description of land

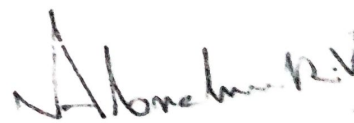
District	: Pathanamthitta
Taluk	: Mallappally
Village or Amsom	: Ezhumattoor
Survey Nos. of the Area	: 135/2, 135/2-2, 135/2-1, 135/2-3, 135/6, 135/7, 135/7-1, 167/1, 167/1-1, 167/5
Area in hectares	: 4.4298 Hectares

Bounded by Sy.Nos.

On the North by	: Sy. No.140/1, 143, 165, 166
On the East by	: Sy.No. 166, 167/2, 167/6, 167/9
On the South by	: Sy.No. 167/4, 12, 14, 135/3, 135/3-1, 135/5, 135/7-1pt
On the West by	: Sy.No. 135/1, 135/3, 134



M.M. PARTHAB
Geologist
Dept. of Mining and Geology
District Office, Pathanamthitta



Lessee
Managing Director
KACHANATHU
Minerals & Metals Pvt. Ltd.
Page 6 of 7

In witness whereof the parties hereto have set their hands hereunto on the day and year first above written.

Signed by M.M. VAHAB
Lessor,

for and on behalf of the Government of Kerala.
In the presence of M.M. VAHAB
Geologist
Dept. of Mining and Geology
District Office, Pathanamthitta

(1) S. Pushpakumari Anna
Senior Grade Tapist, Mining & Geology
Dist. office, Pathanamthitta

(2) Priyanka, clerk
Dept. of Mining & Geology
District office, Pathanamthitta

Signed by Abraham K.V.
for and on behalf of the lessee/lessees

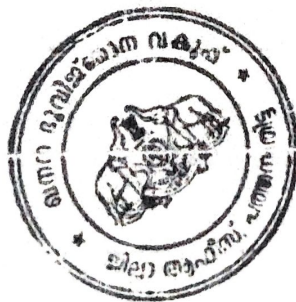
(851286546898 Aadhar No. is
.....)

In the presence of:

(1) Aquillanathan V B Valiyathakudiyil (H) Edappurichiperyta. PO
Kangashtan. 686541 Seget

(2) K.V. Mathi Kachanathu Nalukkenan. PO Mathi

M.M. VAHAB
Lessor
Geologist
Dept. of Mining and Geology
District Office, Pathanamthitta



Abraham K.V.
Lessee
K.V. Abraham
Managing Director
KACHANATHU
Minerals & Metals Pvt Ltd
Page 7 of 7

ANNEXURE 3

Explosive License



भारत सरकार | Government of India

वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो) | Petroleum & Explosives Safety Organisation (PESO)

पूर्व नाम- विस्फोटक विभाग | Formerly- Department of Explosives

केन्द्रीय भवन, ब्लॉक सी-2, तीसरी मंजिल | Kendriya Bhavan, Block C-2, 3rd Floor

CSEZ पी.ओ.कक्कनाड कोच्ची | CSEZ PO Kakkanaad Dist. Ernakulam Ernakulam 682037

फोन (Phone):- 2427286 | फैक्स (Fax):- 2427276

ई-मेल Email: dycceernakulam@explosives.gov.in

संख्या (No.): E/SC/KL/22/803(E37080)

दिनांक (Date): 04/02/2021

सेवा में | To,

K.VARKEY ABRAHAM, Kanchanathu minerals and Metals Private Limited,
Kanchanathu House Nellikamon post, Angadi, Ranni., Town/Village - ANGADI
District-PATHANAMTHITTA, State-Kerala, Pincode - 689395

विषय : Survey No(s).130/4, Block No.27, ग्राम Ezhamattoor, Mallapally taluk, जिला PATHANAMTHITTA, राज्य Kerala में विस्फोटक के मैगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञप्ति सं E/SC/KL/22/803(E37080) के नवीनीकरण संदर्भ में।

Subject: Possession for Use of of Explosives from magazine situated at Survey No(s):130/4, Block No.27, Ezhamattoor, Mallapally taluk, Dist. PATHANAMTHITTA, Kerala -Licence No.: E/SC/KL/22/803(E37080) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding

महोदय | Sir,

आपका उपर्युक्त विषय पर पत्र संख्या Nil दिनांक 28/01/2021 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्ररूप LE-3 में जारी अनुज्ञप्ति दिनांक 31/3/2026 तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।

Reference to your letter No.: Nil dated: 28/01/2021, the subject licence duly renewed upto 31/3/2026 and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.

Conditions:

1)EXPLOSIVES SHALL BE USED ONLY AFTER HAVING A VALID QUARRYING LEASE FROM THE DIRECTOR OF MINING & GEOLOGY . PLEASE NOTE THAT THE USE OF EXPLOSIVES IN THE QUARRIES SHALL BE AS PER THE DIRECTION OF DGMS, BANGALORE AS REQUIRED UNDER MINES ACT 1952 AND METALIFEROUS MINES REGULATIONS 1961.

अनुज्ञप्ति के आगामी नवीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक 31/03/ 2026 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 31/3/2026.

- प्ररूप आरई-1 में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।
Application in Form RE-1 duly filled in and signed.
- एक से पाँच वर्ष के अनुज्ञप्ति शुल्को का, विस्फोटक नियम, 2008 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से लाइसेंस शुल्क ऑनलाइन जमा किया जाना है।
Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2008.
- अनुमोदित प्लान के साथ मूल अनुज्ञप्ति।
Original licence with approved plan.
- कृपया इस संबंध में विस्फोटक नियम, 2008 के नियम 112 का भी संदर्भ ग्रहण करें।
In this connection, please also refer to Rule 112 of Explosives Rules, 2008.
- विस्फोटकों के क्रय हेतु आरई-11 में मांगपत्र (इंडेंट) आपूर्तिकर्ता को दिया जाए और उसी की एक प्रति इस कार्यालय को भेजी 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 त्रैमासीक 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)।
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

अनुज्ञापि 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 अनुज्ञापि

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

अनुज्ञापि सं. (Licence No.) : E/SC/KL/22/803(E37080)

वार्षिक फीस रुपए (Annual Fee Rs): 1800/-



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K.VARKEY ABRAHAM .Kanchanathu minerals and Metals Private Limited (अधिभागी / Occupier : Shri K.Varkey Abraham), Kanchanathu House Nellikamon post, Angadi, Ranni., Town/Village - ANGADI, District-PATHANAMTHITTA, State-Kerala, Pincode - 689395

1. Licence is hereby granted to

को अनुज्ञापि अनुदत्त की जाती है।

2. अनुज्ञापिधारी की प्रास्थिति | Status of licensee : **Company**

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

4. अनुज्ञापि विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमान्य है।

Licence is valid for the following kinds and quantity of explosives: -- (क) (a)

क्र Sr. No.	नाम और विवरण Name and Description	वर्ग और प्रभाग Class & Division	उप-प्रभाग Sub-division	मात्रा किसी एक समय में Quantity at any one time
1.	Nitrate Mixture	2,0	0	150 Kg.
2.	Electric and/or Ordinary Detonators	6,3	0	6000 Nos.

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

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

**20 times
as above.**

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

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

रेखाचित्र क्र. (Drawing No.) E/SC/KL/22/803
(E37080)
दिनांक (Dated) 22/10/2001

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

Survey No(s). 130/4, Block No.27 , ग्राम (Town/Village) : Ezhamattom, Mallanally taluk, पुलिस थाना (Police Station) : PERUMPATTI
जिला (District) **PATHANAMTHITTA** राज्य (State) **Kerala** पिनकोड (Pincode) **689674**
दूरभाष (Phone) **9961225167** ई. मेल (E-Mail) **फैक्स (Fax)**

7. अनुज्ञापि परिसर में निम्नलिखित सुविधाएं अंतर्विष्ट हैं।

The licensed premises consist of following facilities.

**PORTABLE MAGAZINES of G & T type & D TYPE
823**

8. अनुज्ञापि समय - समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबद्धों 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.
- अनुज्ञापि प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञापि की शर्तें और अतिरिक्त शर्तें।
Conditions and Additional Conditions of this licence signed by the licensing authority.
- दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञापि तारीख **31 मार्च 2003** तक विधिमान्य रहेगी। This licence shall remain valid till **31st day of March 2003.**

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

उपवर्णित इस अनुज्ञप्ति की शर्तों का अधिक्रमण करने या यदि अनुज्ञप्त परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिसंहत की जा सकती है, जहां वह लागू हो।
This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख | The Date - 22/10/2001

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

Sd/-

Amendments :

- Amendment in Drawings/Facilities/Premises dated : 20/05/2014
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 08/01/2015
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 19/09/2017

Transfers :

- Change in Licensee Name/Address/Status dated : 12/10/2012

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
04/02/2021	31/03/2026	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 दांडिक अपराध होगा।

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

(सेट VIII | Set VIII)

मैगजीन में वर्ग 1,2,3,4,5,6, और 7 के विस्फोटकों को बिक्री या प्रयोग हेतु रखने के लिए प्ररूप एल.ई. 3 | अनुच्छेद 3 (ख) से (ग) में मुख्य विस्फोटक नियंत्रक या विस्फोटक नियंत्रक द्वारा प्रदान किए जाने वाले अनुज्ञप्ति सं. E/SC/KL/22/803(E37080) की शर्तें निम्नलिखित हैं।

The following are the conditions of licence number E/SC/KL/22/803(E37080) to possess for sale or use, explosives of Class 1,2,3, 4, 5, 6 and 7 in a magazine in Form LE-3 (articles 3(b) to (c)) granted by Chief controller of Explosives or Controller of Explosives.

1. परिसर में किसी भी समय विस्फोटकों की मात्रा अनुज्ञापन योग्य सामर्थ्य से अधिक नहीं होगी।
The quantity of explosives on the premises at any one time shall not exceed the licensable capacity.
2. विस्फोटकों के भंडारण के लिए प्रयुक्त होने वाली मैगजीन अनुसूची III और अनुज्ञप्ति के उपाबंध में विनिर्दिष्ट सुरक्षा दूरी बनाए रखना होगा।
The magazine used for storage of explosives shall maintain safety distance specified in Schedule III and annexure to the licence.
3. मैगजीन का प्रयोग उन सभी विस्फोटकों के, जो इस अनुज्ञप्ति में विनिर्दिष्ट है, रखे जाने के लिए और ऐसे रखे जाने से संबद्ध आधान या औजार या उपकरणों के रखे जाने के लिए ही किया जाएगा; अन्यथा नहीं।
The magazine shall be used only for keeping all explosives specified in this licence and of receptacles for, or tools or implements for work connected with the keeping of such explosives.
4. पैकजों को खोलने का कार्य और विस्फोटकों को तौलने तथा पैक करने का कार्य मैगजीन में नहीं किया जाएगा।
The opening of packages and the weighing and packing of explosives shall not be carried on in the magazine.
5. दो या दो से अधिक वर्णन के विस्फोटकों को, जिन्हें मैगजीन में रखे जाने की अनुज्ञा दी जा सकती है, मैगजीन में तभी रखे जाएंगे जब उनमें से प्रत्येक को, ऐसे पदार्थ या स्वरूप का कोई मध्यवर्ती विभाजक लगाकर या उनके बीच ऐसा मध्यवर्ती स्थान छोड़कर, परस्पर पृथक कर दिया जाए कि किसी वजह से विस्फोटक में लगने वाली आग या होने वाला विस्फोट किसी अन्य वर्णन के विस्फोटक तक न पहुंच सके : परंतु -
(घ) 2 (नाइट्रेट मिश्रण), वर्ग 3 (नाइट्रो योगिक) के विभिन्न विस्फोटक, वर्ग 6 प्रथम प्रभाग के अंतर्गत आने वाले सुरक्षा पलीते और वर्ग 6 प्रभाग 2 के अंतर्गत आनेवाले विस्फोटक प्रेरक पलीते, जिनमें कोई खुला लोहा या इस्पात नहीं है, एक दूसरे के साथ बिना किसी मध्यवर्ती विभाजक या स्थायन के रखे जा सकते हैं।
(ङ) वर्ग 6 प्रभाग 3 के अंतर्गत आनेवाले विस्फोटक प्रेरक अलग रखे जाएंगे।
(च) वर्ग 1 के अंतर्गत आने वाले बारूद को अलग रखा जाएगा।
Two or more description or explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening space, as will effectually prevent explosion or fire in the one communicating with the other; Provided that—
(d) the various explosives of Class 2 (nitrate-mixture), Class 3 (nitro-compound), safety fuses belonging to Class 6 Division 1 and detonating fuses belonging to Class 6 Division 2 as do not contain any exposed iron or steel, may be kept with each other without any intervening partition or space ;
(e) Detonators belonging to Class 6 Division 3 shall be kept separately.
(f) Gun powder belonging to Class 1 shall be kept separately.
6. वर्ग 3 (नाइट्रो योगिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के पश्चात सिवाय अनुज्ञापन प्राधिकारी की विशेष मंजूरी के मैगजीन में नहीं रखा जाएगा।
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of licensing authority.
7. वर्ग 3 (नाइट्रो योगिक) के विस्फोटकों को, उनके विनिर्माण की तारीख से एक वर्ष बीत जाने के पश्चात मैगजीन में तभी रखा जाएगा जब कि किसी विस्फोटक नियंत्रक ने इसके लिए विशेष मंजूरी दे दी हो।
(i) जब ऐसी मंजूरी दे दी गई हो तो प्रत्येक निरीक्षण पर किसी विस्फोटक नियंत्रक से ऐसा लिखित प्रमाणपत्र अभिप्राप्त कर लिया जाए जिसमें दी गई मंजूरी के अंतर्गत आनेवाली अवधि दर्शित की गई हो और ऐसे प्रमाणपत्र के अनुज्ञप्तिधारी अपने पास रखेगा और मांग की जाने पर प्रस्तुत करेगा।
(ii) जब कोई विस्फोटक मानक शुद्धता का न रह जाने के कारण या द्रवणीकरण या नाइट्रो ग्लाइसरीन या द्रव नाइट्रो योगिक के निकल जाने के चिन्ह प्रकट होने के कारण मैगजीन में भण्डारित किए जाने के उपयुक्त नहीं रह जाता है तो अनुज्ञप्तिधारी अपने ही व्यय पर ऐसे विस्फोटक के निपटारे के लिए ऐसे निदेशों का अनुपालन करेगा जो मुख्य नियंत्रक या विस्फोटक नियंत्रक जारी करें।
Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of the Controller of Explosives.
(i) When such sanction has been given, a written certificate showing the period covered by the sanction shall be obtained from the Controller of Explosives at each inspection, and shall be kept by the licensee and produced on demand.
(ii) When an explosive owing to its being no longer of standard purity or owing to signs of liquefaction or of exuded nitro-glycerin or liquid nitro-glycerin or liquid nitrocompound is no longer fit for storage in the magazine or store house the licensee shall comply, at his own expense, with such directions as to its disposal as the Chief Controller or Controller of Explosives may issue.
8. मैगजीन के भीतरी भाग या उसमें लगी बेंचों, शेल्फों और उसकी फिटिंग का इस प्रकार सन्निर्माण किया जाएगा या उन्हें इस प्रकार अंतरित या अवतरित किया जाएगा कि विस्फोटक का किसी लोहे या इस्पात के साथ संपर्क रोका जा सके। भीतरी भाग में लगी बेंचे, शेल्फें और फिटिंग यथासाध्य ग्रिट से मुक्त एवं साफ रखे जाएंगे तथा ऐसे विस्फोटक, जो जल से खतरनाक रूप में प्रभावित हो सकते हैं, इस बाबत साम्यक सावधानी बरती जाएगी कि वहां कोई जल मौजूद न रहे : परंतु किसी लोहे या इस्पात के खुले होने के विरुद्ध सावधानी से संबंधित इस शर्त का वह भाग ऐसे किसी भवन में बाधेकर नहीं होगा जिसमें वर्ग 6 (गोला बारूद) के प्रथम के विस्फोटक से भिन्न कोई विस्फोटक रखा गया है।

The interior of the magazine and the benches, shelves and fittings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel contact with the explosives. Such interior, benches, shelves and fittings shall so far as is reasonably practicable, be kept free from grit and shall otherwise be clean; and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water there from; Provided that so much of this condition as relates to precautions against the exposure of any iron or steel shall not be obligatory in a building in which no explosive other than explosive of the 1st Division 6th (Ammunition) Class is kept.


9. यदि तडित चालक का परीक्षण विस्फोटक नियंत्रक करता है तो अनुज्ञापिधारी ऐसे परीक्षण के लिए विहित फीस का संदाय करेगा यदि परीक्षण असमाधानकारी साबित होता है तो उतनी ही फीस अनुज्ञापिधारी द्वारा पश्चात्कर्ती प्रत्येक परीक्षण के लिए तब तक दी जाती रहेगी जब तक कि परीक्षण अधिकारी तडित चालक को समाधानप्रद घोषित नहीं कर देता :
परंतु किसी एक परीक्षण के लिए देय फीस किसी एक दिन के दौरान किसी चालक के किए गए सभी परीक्षणों के लिए प्रभावी होगा :
परंतु यह और कि यदि दो या अधिक तडित चालक एक ही मैगजीन से संबद्ध हैं तो ऐसे सभी चालकों के परीक्षण के लिए फीस ऐसी किसी फीस से अधिक नहीं होगी जो किसी एक तडित चालक के परीक्षण के लिए हर स्थिति में विहित की गई है ।
If the lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for test. In the even of the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lighting conductor is passed by the testing officer as satisfactory:
Provided that the fees payable for a single test shall be charged for all tests made on a conductor during any one day :
Provided further that where two or more lighting conductors are attached to one and the same magazine, the fee for the testing of all such conductors shall not exceed the fee prescribed in this condition for testing a single lighting conductor.
10. उपयुक्त तथा जेब रहित कार्यकरण वस्त्रों, उपयुक्त जूतों के प्रयोग द्वारा तथा तलाशी लेकर या अन्यथा अथवा ऐसे किन्हीं साधनों द्वारा इस बाबत सम्यक उपबंध किया जाएगा कि फैक्ट्री परिसर में अग्नि, दियासलाई अथवा ऐसी कोई वस्तुएं या पदार्थ, जिससे विस्फोट हो सकता है या आग लग सकती हो, किन्तु इस शर्त के कारण ऐसी संरचना, स्थिति या स्वरूप में किसी कृत्रिम बत्ती का प्रवेश वर्जित नहीं है जिससे आग लगने या विस्फोट होने का खतरा न हो :
परंतु इस शर्त का वह भाग, जो लोहे या इस्पात के अपवर्जन को लागू होता है, ऐसे किसी भवन के संबंध में बाध्य कर नहीं होगा जिससे भिन्न कोई विस्फोटक नहीं रखा गया है ।
Due provisions shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of fire, Lucifer matches or any substance or article likely to cause explosion or fire, but this condition shall not prevent the introduction of an artificial light of such construction, position or character as not to cause any danger of fire or explosion:
Provided that so much of this condition as applies to the exclusion of iron or steel, shall not be obligatory in a building in which no explosive other than an explosive of the 1st Division of the 6th (Ammunition) Class is kept.
11. अनुज्ञापिधारी प्ररूप आर.ई.-3 और आर.ई.-4 या आर.ई.-5, जैसी स्थिति हो, में सभी विस्फोटकों का अभिलेख और लेखा रखेगा और विस्फोटक नियम, 2008 के अधीन प्राधिकृत किसी भी अधिकारी के समक्ष उसके द्वारा ऐसा करने की मांग की जाने पर स्टॉक पुस्तक और अभिलेख प्रस्तुत करेगा । स्टॉक पुस्तक विहित प्रोफार्मा में पृष्ठ संख्यांकित होगी ।
The licensee shall keep records and accounts of all explosives in Forms RE-3 and RE-4 or RE-5, as the case may be, and exhibit the stock books and records to any of the officers authorised under the Explosives Rules, 2008 whenever such officer may call upon him to do so. The stock books in the prescribed proforma shall be page numbered.
12. परिसरों में कोई परिवर्तन या तबदीली अनुज्ञापन प्राधिकारी के पूर्वानुमोदन बिना नहीं की जाएगी और अनुज्ञापिधारी ऐसी किसी शर्त का अनुपालन करेगा जो इस निमित्त अनुज्ञापन प्राधिकारी विनिर्दिष्ट करें ।
No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf.
13. मैगजीन सभी समयों पर अच्छी मरम्मत की स्थिति में बनाई रखी जाएगी (या अच्छी हालत में बनाई रखी जाएगी) यदि किसी कारणवश किसी विस्फोटक के भण्डारण के लिए मैगजीन अनुपयुक्त हो जाती है तो अनुज्ञापिधारी इस बात की सूचना अनुज्ञापन प्राधिकारी को तुरंत देगा ।
Magazine shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority forthwith, if the magazine becomes unfit for storage of any explosives for any reason whatsoever.
मैगजीन का अनुज्ञापिधारी इन नियमों के नियम 24 के उप-नियम 3 के अनुसार त्रैमासिक विवरणी प्रस्तुत करेगा ।
The licensee of the magazine shall submit quarterly return as per sub-rules (3) and (4) of rule 24 of these rules.
14. यदि सुरक्षा दूरी का कोई अधिक्रमण होता है तो उसकी सूचना अनुज्ञापन प्राधिकारी को आवश्यक सलाह और कार्यवाही के लिए तुरंत दी जाएगी ।
Any encroachment of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.
15. यदि कोई विस्फोटक विनष्ट हुआ अथवा अनुपयोगी जाया जाता है तो उसकी सूचना अनुज्ञापन प्राधिकारी को, सलाह प्राप्त करने के लिए, तुरंत दी जाएगी ।
The licensing authority shall be immediately informed for advice if any explosive is found deteriorated or unserviceable.
16. विस्फोटकों के पैकेटों के चट्टे इस प्रकार लगाए जाएंगे कि कम से कम एक व्यक्ति भण्डार किए गए सभी पैकजों की हालत की जांच करने और प्रत्येक पैकेज की विनिर्माण विशिष्टियों को पढ़ने के लिए उनके बीच से होकर आ जा सके ।
The explosive packages shall be stocked in such a way so as to allow movement of at least one person to check the condition of all packages stored and to read the manufacture particulars of each package.
तडित चालकों की भूमि के लिए प्रतिरोध यथासंभव न्यूनतम होगा और किसी भी दशा में 10 ओहम से अधिक नहीं होगा ।
The resistance of the lightning conductor to earth shall be as low as possible and in no case be more than 10 ohms.
17. मैगजीन के चारों ओर 15 मीटर की दूरी के अंतर्गत कोई शुल्क घास या झाड़ी या ज्वलनशील सामग्री नहीं रहने दी जाएगी ।

A distance of 15 meters surrounding the magazine or store house shall be kept clear of dried grass or bush or flammable materials.

18. विस्फोटकों के प्रत्येक पैकेट की, जब उसे मैगजीन के भीतर लिया जा रहा हो, ठीक दशा जानने के लिए परीक्षा की जाएगी।
Every package of explosive at the time of bringing inside the magazine shall be examined for its sound condition.
19. किसी मैगजीन / भंडारगृह में किसी एक समय में चार व्यक्तियों से अधिक को नहीं रहने दिया जाएगा।
Not more than 4 persons shall be allowed inside the magazine or store house at any one time.
20. विस्फोटकों के खाली पैकेजों को शीघ्रतिशीघ्र वहां से हटा दिया जाएगा और नष्ट कर दिया जाएगा।
Empty packages of the explosives shall be removed at the earliest and destroyed.
21. अनुज्ञप्तिधारी और कर्मचारी को परिसर के भीतर आपातकाल के दौरान की जाने वाली प्रक्रियाओं से अवगत होना चाहिए।
The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
22. निरीक्षण या नमूना अधिकारी को सभी युक्तियुक्त समयों पर अनुज्ञत परिसर में अबाध रूप से पहुंचने दिया जाएगा और यह सुनिश्चित करने के लिए कि अधिनियम और इन नियमों के उपबंधों और सुरक्षा स्थितियों को सम्मकत अनुपालन किया जा रहा है, अधिकारी को प्रत्येक सुविधा प्रदान की जाएगी।
Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
23. यदि अनुज्ञापन प्राधिकारी या विस्फोटक नियंत्रक अनुज्ञप्तिधारक को अनुज्ञत परिसरों या मशीनरी, टूल या उपकरण में ऐसी कोई मरम्मत या परिवर्धन या परिवर्तन करने या सिफारिशों को लागू करने को लिखित रूप में सूचित करता है जो परिसर के अंदर या बाहर या व्यक्तियों की सुरक्षा के लिए आवश्यक है, अनुज्ञप्तिधारक सिफारिशों को निष्पादित करेगा और विनिर्दिष्ट अवधि के भीतर अनुपालन रिपोर्ट ऐसे प्राधिकारी को देगा।
If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
24. अनुज्ञप्तिधारी मैगजीन में रखने और बिक्री के लिए प्राधिकृत विस्फोटक सूची में उल्लिखित अनुज्ञत फैक्टरी या कंपनी से प्राधिकृत विस्फोटक / आतिशबाजी या सुरक्षा पलीते खरीदेगा।
The licensee shall purchase authorised explosives/ fireworks or safety fuse as mentioned in the list authorised explosives from a licensed factory or company for possession and sale from the magazine.
25. निम्न से अधिक ध्वनि स्तर उत्पादित करने वाले आतिशबाजियों पटाखों की बिक्री और रखने के लिए –
(क) जो फटने की जगह से चार मीटर की दूरी पर है, 125 डी.बी.(ए1) या 145 डी.बी.(सी)पी.के. प्रतिबंधित होंगे;
(ख) श्रृंखला (जुड़े हुए पटाख) को गठन करने वाले व्यक्तिगत पटाखों के लिए उपर्युक्त उल्लिखित सीमा 5 लॉग.10(एन) डी.बी. (सी) पी के प्रतिबंधित होंगे;
The possession and sale of fire-crackers generating noise level exceeding;
a) 125 dB(A) or 145 dB(C)pk at 4 meters distance from the point of bursting shall be prohibited,
b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by 5 log10 (N) dB, where N = number of crackers joined together.
26. आग या विस्फोट द्वारा दुर्घटना या नुकसान पटाखों की कमी या चोरी, तुरंत पास के पुलिस थाने और अनुज्ञापन प्राधिकारी और अनुज्ञापन प्राधिकारी के स्थानीय कार्यालय को रिपोर्ट की जाएगी।
Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

अतिरिक्त शर्तें / Additional Conditions :

1. अनुज्ञप्तिधारी विदेशी मूल के आतिशबाजी को ना प्रदर्शित करेगा, ना रखेगा और ना ही उसकी बिक्री करेगा
I The licensee shall not exhibit, possess and sell fireworks of foreign origin.


कृते संयुक्त मुख्य विस्फोटक नियंत्रक
For Joint Chief Controller of Explosives
दक्षिण चक्र, चेन्नै | South Circle, Chennai
Deputy Chief Controller of Explosives
एरनाकुलम Ernakulam

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

Safety distances required to be kept clear around magazine for high explosives or fire works or factory licence number E/SC/KL/22/803(E37080) in form LE-3 granted to K.VARKEY ABRAHAM .Kanchanathu minerals and Metals Private Limited, Kanchanathu House Nellikamon post,Angadi,Ranni., Kerala-689674 .

Type of Structure(s)		Safety distances meters	
Inside Safety Distances(ISD)		M	UM
1	Room or Workshop used in Connection with the Magazine	13	19
2	Any other Explosives Magazine or store House or Factory of the Applicant		
3	Magazine Office		
Middle Safety Distances(MSD)			
4	Magazine Keeper's or Chowkidar's Dwelling house		
5	Railway including Minerals and Private Railways		
6	Canal (in active use) or other navigable water		
7	Dock or Pier or Jetty		
8	Public Highway or Public Road		40
9	Private Road which is PRINCIPAL means of access to a Temple, Mosque, Church, Gurudwara or other places of worships, Hospital, College, School or Factory		
10	River Embankment or Sea Embankment or Public Well		
11	Reservoir or Bounded tank/rope way		
12	Windmillor or Solar panel for Power Generation		
Outside Safety Distances(OSD)			
13	Dwelling House		
14	Govt. and Public Building		
15	Temple, Mosque, Church or Gurudwara or other Places of Worships		
16	Shops, Market place, Public recreation and Sports Ground, College, School, Hospital, Theater, Cinema or other Building where the public are accustomed to assemble		
17	Factory		
18	Buildings or Works used for the Storage in Bulk of Petroleum, Sprit, gas, or other inflammable or hazardous substances		45
19	Building or Works used for Storage and Manufacture of Explosives or of articles which contain Explosives		
20	Aerodrome		
21	Furnace, Kiln or Chimney		
22	Quarry or mine pit head		
23	Power House or Electric Substation		
24	Wireless Station		
25	Warehouse or other Storage Building		
26	Any other Protected works		
Overhead Electric lines			
27	Electric Power over head Transmission Lines above 440V		45
28	Electric Power over head Transmission Lines upto 440V		15

The Date : 22/10/2001

For Joint Chief Controller of Explosives
South Circle, Chennai
Deputy Chief Controller of Explosives
Ernakulam

Amendments :

- Amendment in Drawings/Facilities/Premises dated : 20/05/2014
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 08/01/2015
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 19/09/2017

Transfers :

- Change in Licensee Name/Address/Status dated : 12/10/2012

ANNEXURE 4
Mines Manager Certificate



खान अधिनियम 1952
THE MINES ACT 1952

द्वितीय श्रेणी प्रबंधक सक्षमता प्रमाण-पत्र धातुउत्पादक खान के प्रबंध हेतु
MANAGER'S SECOND CLASS CERTIFICATE OF COMPETENCY TO MANAGE A METALLIFEROUS MINE

(धातुउत्पादक खान विनियम, 1961 के अन्तर्गत)
(Under the Metalliferous Mines Regulations 1961)

(केवल विवृत खनित युक्त खानों तक ही सीमित)
(Restricted to mines having opencast workings only)

एल. मनोहरण

जिनकी जन्म तिथि 09.06.1980 है, विनियम 18 के अन्तर्गत अनुमोदित खनन अभियांत्रिकी में डिप्लोमा प्राप्त करने पर एवं दिनांक सितम्बर, 2006 को आयोजित विहित परीक्षा में उत्तीर्ण होते पर एतद्वारा केवल विवृत खनित युक्त धातुउत्पादक खान के प्रबंध हेतु द्वितीय श्रेणी प्रबंधक सक्षमता प्रमाण-पत्र प्रदान किया जाता है। यह प्रमाण-पत्र 07.03.2007 से प्रभावी समझा जाएगा।

L. Manoharan

born on 09th June, 1980

possessing a Diploma in Mining Engineering approved under Regulation 18 and having passed the prescribed examination held on September, 2006 is hereby granted MANAGER'S SECOND CLASS CERTIFICATE OF COMPETENCY to manage a metalliferous mine having opencast workings only. This Certificate is effective from 07.03.2007



सदस्य

खनन परीक्षा बोर्ड

Members of the Board of
Mining Examinations.

Signed and Sealed

Date: 19

02.04.2008

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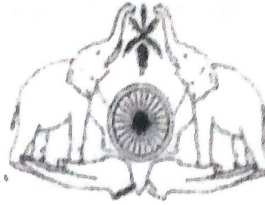
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अध्यक्ष

खनन परीक्षा बोर्ड

Chairman of the Board of
Mining Examinations

ANNEXURE 5

Panchayat License



ലൈസൻസ് നമ്പർ : സി7 - 1852/2021

തീയതി: 06.03.2021

എഴുമറ്റൂർ ഗ്രാമപഞ്ചായത്തിൽ നിന്നും

1994 ലെ കേരള പഞ്ചായത്ത് രാജ് ആക്ട് (1994 ലെ 13) 232, 233, 234, 254 എന്നീ വകുപ്പുകളും അതെ തുടർനുള്ള ചട്ടങ്ങളും അനുസരിച്ച്

ഫാക്ടറികൾ, വ്യാപാരങ്ങൾ, സംരംഭങ്ങൾ, മറ്റു സേവനങ്ങൾ എന്നിവയ്ക്കായി നൽകുന്ന

ലൈസൻസ്

ലൈസൻസിയുടെ പേരും മേൽവിലാസവും	കെ വർക്കി എബ്രഹാം, കാച്ചാണത്ത് മിനറൽസ് & മെറ്റൽസ് പ്രൈവറ്റ് ലിമിറ്റഡ്, എഴുമറ്റൂർ പി.ഒ	
സ്ഥാപനത്തിന്റെ പേരും സ്ഥാലനാമവും	കാച്ചാണത്ത് മിനറൽസ് & മെറ്റൽസ് പ്രൈവറ്റ് ലിമിറ്റഡ്	
ലൈസൻസ് നൽകിയിട്ടുള്ള പ്രവർത്തനങ്ങൾ	കാറി പ്രവർത്തനം	
സർവ്വേ നം.	135/2, 135/2-2, 135/2-1, 135/2-3, 135/6, 135/7, 135/7-1, 167/1, 167/1-1, 167/5.	
ലൈസൻസ് കാലയളവ്	01.04.2021 മുതൽ 15.01.2022 വരെ.	
ഈടാക്കിയ ലൈസൻസ് ഫീസ്	₹ 10000/- (D&O) (2021-22) 505 HP Motor- ₹ 5050/- (2021-22)	രസീത് നമ്പർ : 120020103007, തീയതി : 03.03.2021
	തൊഴിൽക്കരം	₹ 2500/- (2021-22)
ലൈസൻസ് അനുവദിക്കുന്നതിനായി ഹാജരാക്കിയ നിരാക്ഷേപപത്രങ്ങളുടെ വിശദാംശങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽകിയ അധികാരസ്ഥാനം)	1. State Environment Impact Assessment Authority Kerala's Environment Clearance No. 09/2017 Dated 16.01.2017 valid up to 15.01.2022. 2. Quarrying Lease No779/2018/1 of Vennikulam SRO 08/06/2018 ending on 31.05.2027. 3. Petroleum & Explosives Safety Organisation (PESO) Licnese No. E/SC/KL/22/803(E37080) Dated 04.02.2021. valid up to 31/03/2026. 4. കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡിന്റെ 16/05/2018 തീയതിയിലെ 15/01/2022 തീയതി വരെ കാലാവധിയുള്ള QCO/PTA/227/2018 നം. ഇൻസ്പെക്ടർ കൺസെന്റ് ടു ഓപ്പറേറ്റ്.	

(ഓഫീസ് മുദ്ര)

സെക്രട്ടറി
എഴുമറ്റൂർ ഗ്രാമ പഞ്ചായത്ത്



ലൈസൻസ് നമ്പർ :

തീയതി: 01/04/2019

എഴുമറ്റൂർ ഗ്രാമപഞ്ചായത്തിൽനിന്നും

1994ലെ കേരള പഞ്ചായത്ത് രാജ് ആക്ട് (1994ലെ 13, 232, 233, 234, 251 എന്നിവകൾ പ്രകാരം)

അതേ ആക്റ്റിന്റെ ചട്ടങ്ങളും അനുസരിച്ച്

പാർട്ടികൾ, വ്യവസായങ്ങൾ, സംരംഭങ്ങൾ, മറ്റു സേവനങ്ങൾ എൻഡോർസ്മെന്റുകൾ

ലൈസൻസ്

ലൈസൻസിയുടെ പേരും മേൽവിലാസവും	കെ.വർക്കി ഏബ്രഹാം, കാച്ചണത്ത് വീട്, ഇഴട്ടിച്ചവട് പി.ഒ, റാന്നി	
സ്ഥാപനത്തിന്റെ പേരും സ്ഥലനാമവും	കാച്ചണത്ത് മിനറൽസ് & മെറ്റൽസ് പ്രൈവറ്റ് ലിമിറ്റഡ്, എഴുമറ്റൂർ	
ലൈസൻസ് നൽകിയിട്ടുള്ള പ്രവർത്തനങ്ങൾ	500 എച്ച്.പി. ഉപയോഗിച്ച് ക്രഷർ യൂണിറ്റ് നടത്തുന്നതിന്	
ചട്ടിടത്തിന്റെ നമ്പരും വാർഡ് നമ്പരും	1/39 സർവ്വേ നം. 135/4-1	
ലൈസൻസ് കാലയളവ്	01-04-2019 മുതൽ 15.01.2022 വരെ	
ഈടാക്കിയ ലൈസൻസ് ഫീസ്	300000/- രൂപ	രജിസ്റ്റർ നമ്പർ 115020104241 തീയതി 28/03/2019
	തൊഴിൽക്കരം	7500/- (2019-2020 to 2021-2022)
ലൈസൻസ് അനുവദിക്കുന്നതിനായി ഹാജരാക്കിയ നിരാക്ഷേപപത്രങ്ങളുടെ വിശദാംശങ്ങൾ (നമ്പർ, തീയതി, കാലയളവ്, നൽകിയ അധികാരസ്ഥാനം)	1.27.03.2019 ലെ 6(1) നമ്പർ തീരുമാനപ്രകാരം ലൈസൻസ് 2023-2024 കാലയളവിലേക്ക് നൽകാൻ തീരുമാനിച്ചിട്ടുള്ളതാണ്. എന്നാൽ ലഭ്യമായ രേഖകളുടെ കാലാവധി പ്രകാരം 15.01.2022 വരെ ലൈസൻസ് അനുവദിക്കുന്ന കാലാവധി കഴിഞ്ഞ നിരാക്ഷേപ പത്രവും പുതുക്കുന്നമുമ്പ് ലൈസൻസ് കാലാവധി നീട്ടി അനുവദിക്കുന്നതാണ്. 2.PCB-Report Consent to Operate Valid Up to 30.06.2023	

(ഓഫീസ് മുദ്ര)



ബന്ധിത
എഴുമറ്റൂർ ഗ്രാമപഞ്ചായത്ത്
01.04.2019

ANNEXURE 6
Consent from KSPCB



KERALA STATE POLLUTION CONTROL BOARD

FILE NO. : PCB/PTA/ICO/QR/164/2013

Date of issue : 16/05/2018

INTEGRATED CONSENT TO OPERATE - RENEWAL

Consent No : QCO/PTA/227/2018 VALID UPTO-15.01.2022

Ref: 1. CONSENT NO: PCB/RO/PTA/ICOR/3/2017, DATE OF ISSUE: 23/03/2017, VALID UP TO: 06/06/2018
2. APPLICATION NO: 7739514, SUBMITTED ON: 09/05/2018

The 'Integrated Consent to Operate' issued as per reference above to M/s KACHANATHU MINARALS & METALS (Pvt.) Ltd. (QUARRY), EZHUMATTOR P.O, MALLAPPALLY, PATHANAMTHITTA. is hereby renewed up to 15/01/2022 and issued to M/s KACHANATHU MINARALS & METALS (Pvt.) Ltd. (QUARRY), EZHUMATTOR P.O, MALLAPPALLY, PATHANAMTHITTA. 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	1.1. Validity	15.01.2022
2	1.1.a. Month and year of renewal	15.10.2021
3	1.10. Category	RED
4	1.12. Annual fee/Fee remitted	Rs. 44904/ Year Rs. 252500/-
5	1.13. Capital investment	498.08 LAKHS
6	1.15. Survey no.	135/2, 135/2-2, 135/2-1, 135/2-3, 135/6, 135/7, 135/7-1, 167/1, 167/1-1, 167/5 (MINING AREA- 4.4298 HECTARES)
7	1.16. Machinery Details	EXCAVATOR WITH BREAKER - (2nos)- 110 HP EACH, EXCAVATOR WITH BUCKET-(2 Nos)-110 HP, COMPRESSOR with Three JACK HAMMER-65 HP-1 no.

II. Stack Details

sound level (Leq) at 1m outside the boundary of the site and near residential locations should not be the ambient noise standard applicable to the adjoining areas.

3.16. "The consent issued from the Board will be valid only for a period during the period when all other statutory or necessary clearances from other concerned authorities are valid. The consent issued from the Board is only with respect to the powers vested under the Water Act, 1974, Air Act 1981 and Rules there under. The operation of the unit shall be commenced only after obtaining clearances from all concerned authorities". The consent unless withdrawn earlier and subject to condition no. 5.1 & 5.2 shall be valid up to 15/01/2022. For renewal of consent, application may be submitted online 3 months in advance of expiry of validity date, along with the re validated Environmental Clearance Certificate.

3.17. No other machinery other than that in 1.16 shall be operated without prior Consent of the Board.

3.18. Quarrying operations shall be started only after obtaining Mining permit/lease from Mining & Geology Department and D & O License under the Kerala Panchayat Raj Act from the concerned Local Self government.

3.19. The applicant shall submit copies of all relevant permits/lease/certificate/licenses periodically to this office to ensure the validity of this consent.

3.20. Condition no.II of this consent is deleted.

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

ALEXANDER GEORGE

Digitally signed by ALEXANDER
GEORGE
Date: 2018.05.16 12:31:14 +05'30'

DATE :16/05/2018

SIGNATURE & SEAL OF ISSUING AUTHORITY

ENVIRONMENTAL ENGINEER, District Office,
Pathanamthitta



To

Sri K.V.ABRAHAM
KACHANATHU HOUSE
NELLIKKAMON.P.O

ANNEXURE 7

Environmental Monitoring Cell

Minutes of the Directors Board of Kachanathu Minerals and Metals Pvt. Ltd. Held on: 11.12.2021

Attendees:

1. Kachanathu Vasey Abraham. Abraham K.V.
2. Valsamma Abraham : Valsamma
3. Prejo K. Abraham : Prejo K. Abraham

ദിഗ്ഭാഗത്തിൽ അനുബന്ധ രേഖകൾ ഉൾക്കൊള്ളുന്ന
Directors Board മീറ്റിംഗ് 11.12.2021 രാവിലെ 4 PM-ന്
ശ്രീ ദിഗ്ഭാഗത്തിൽ വർത്തിച്ചു. അതിൽ പങ്കെടുത്തവർ
ഇ.ടി. വിജയകുമാർ, വാസമ്മ, പ്രജോ. സീറ്റ് നമ്പർ
20 ഉൾക്കൊള്ളുന്ന കമ്പ്യൂട്ടർ പ്രസ്താവന.

അനുബന്ധ രേഖകളിൽ ഉൾക്കൊള്ളുന്ന
ഇ.ടി.ഒ. 20 നമ്പർ പ്രസ്താവനയ്ക്ക് അനുബന്ധമായി
അനുബന്ധ രേഖകളിൽ ഉൾക്കൊള്ളുന്ന ഇ.ടി.ഒ. 20 നമ്പർ
അനുബന്ധ രേഖകളിൽ ഉൾക്കൊള്ളുന്ന ഇ.ടി.ഒ. 20 നമ്പർ
അനുബന്ധ രേഖകളിൽ ഉൾക്കൊള്ളുന്ന ഇ.ടി.ഒ. 20 നമ്പർ
അനുബന്ധ രേഖകളിൽ ഉൾക്കൊള്ളുന്ന ഇ.ടി.ഒ. 20 നമ്പർ
അനുബന്ധ രേഖകളിൽ ഉൾക്കൊള്ളുന്ന ഇ.ടി.ഒ. 20 നമ്പർ

1. Blasting Alarm ന്റെ വിവരങ്ങൾ അനുബന്ധ
2. Blasting Time Boarding - വിവരങ്ങൾ അനുബന്ധ
രേഖകളിൽ
3. Sprinkler ന്റെ വിവരങ്ങൾ അനുബന്ധ
രേഖകളിൽ
4. Blasting മോഡൽ Mat ഉൾക്കൊള്ളുന്ന
ഇ.ടി.ഒ. 20 നമ്പർ അനുബന്ധ രേഖകളിൽ
5. Blasting മോഡൽ Crusher ഉൾക്കൊള്ളുന്ന

മുദ്രാങ്കുലം ഉൾക്കൊള്ളുന്ന വസ്തുക്കൾക്കായി നൽകുന്ന
പ്രതി നിലവിലുള്ള പ്രസ്താവനകൾ ഉൾക്കൊള്ളുന്ന
വസ്തുക്കൾക്ക് പ്രതി (Testificate) കൈമാറുന്നതിനായി
നോക്കുക.

കോളനിയുടെ, Mines Manager, Quarry
Supervisor, Crusher Manager എന്നിവർ
വിലയിൽ വരുന്നു. നിലവിലുള്ള നിലവിലുള്ള
വസ്തുക്കൾക്കായി പ്രതി (Testificate) കൈമാറുന്നതിനായി
നോക്കുക. Report നൽകുന്നതിനായി പ്രതി (Testificate) കൈമാറുന്നതിനായി.

കോളനിയുടെ, Sri Prejo K. Abraham ന്റെ
വിലയിൽ വരുന്നു.

5.45 pm - ന് കോളനിയുടെ വിലയിൽ വരുന്നു.

Recording Secretary: Pajo Abraham

Minutes Passed by,
(Managing Director)
Kachanathu Vistey Abraham: Abachmut V.

ANNEXURE 8

Environmental Monitoring Results

TEST REPORT

ULR No:TC540222000002296F		
LRI No:SEAAL22030945A	Date: 30-03-2022	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	M/s Kachanathu Minerals & Metals Private Limited Kachanathu Ebenezer Trade Centre V/114, Angadi P.O Ranni, Pathanamthitta District.
Customer Reference	Test Request dt : 23-03-2022

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN22030377
Sample Name	Ambient Air	Sample Received on	25-03-2022
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	25-03-2022
Sampled by	Lab Authorized Sampler	Test Completed on	30-03-2022

DETAILS OF SAMPLING			
Sampling Location	Project Site	Date of Sampling	23-03-2022
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	72 %

SAMPLING SITE DETAILS			
Survey No	135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1-1, 167/5, 167/2-2, 167/2-13,		
Village	Ezhumattoor	Taluk	Mallappally
District	Pathanamthitta	State	Kerala

TEST RESULTS- CHEMICAL PARAMETERS					
Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ Standards
1	Particulate Matter, PM ₁₀	IS 5182 (Part 23):2006	µg/m ³	56.6	Max 100
2	Particulate Matter, PM _{2.5}	EPA 40 CFR (Part 50) Appendix - L	µg/m ³	28.3	Max 60
3	Sulphur Dioxide as SO ₂	IS 5182 (Part 2): 2001	µg/m ³	< 2.00	Max 80
4	Oxides of Nitrogen as NO ₂	IS 5182 (Part 6): 2006	µg/m ³	< 2.00	Max 80

Remarks:

End of Report



Shency Joy
Dy.TM-Chemical
Checked by:




Laiju P.N.
Laboratory Head
Authorized Signatory

The results are related only to the samples submitted for analysis and this test report shall not be reproduced except in full, without the written approval of the laboratory.

Standard^S Environmental & Analytical Laboratories

Accreditation & Approval: NABL accredited Testing Laboratory as per ISO/IEC 17025:2017
vide Certificate No. TC - 5402 & "A" Grade Laboratory approved by KSPCB.

K.J. Tower, Pathalam, Udyogamandal P.O., Ernakulam-683 501, Tel. 0484-2546660, 93 87 27 24 02, 90 74 34 14 43
Web: www.sealabs.in, E-mail: seaalab@gmail.com

TEST REPORT

ULR No: TC540222000002297F

LRI No:SEAAL22030946A

Date: 30-03-2022

Page 1 of 2

CUSTOMER DETAILS

Customer Name & Address	M/s Kachanathu Minerals & Metals Private Limited Kachanathu Ebenezer Trade Centre V/114, Angadi P.O Ranni, Pathanamthitta District.
Customer Reference	Test Request dt : 23-03-2022

DETAILS OF MONITORING

Product Category	Atmospheric Pollution	Sample Code	EN22030378
Sample Name	Ambient Noise	Monitoring Commenced on	23-03-2022/ 06:00
Monitoring Location	Project Site	Monitoring Completed on	24-03-2022/ 06:00
Test Method	IS 9989:1981	Monitored by	Lab Authorized Sampler

MONITORING SITE DETAILS

Survey No	135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1-1, 167/5, 167/2-2, 167/2-13,		
Village	Ezhumattoor	Taluk	Mallappally
District	Pathanamthitta	State	Kerala

MONITORING RESULTS - Leq

TIME	RESULTS dB(A)	TIME	RESULTS dB(A)	TIME	RESULTS dB(A)
06:00	38.7	14:00	51.9	22:00	37.5
07:00	41.5	15:00	52.3	23:00	38.0
08:00	45.9	16:00	53.5	24:00	40.8
09:00	49.5	17:00	53.9	01:00	41.6
10:00	51.9	18:00	48.3	02:00	41.2
11:00	55.1	19:00	44.7	03:00	41.9
12:00	52.3	20:00	40.7	04:00	40.8
13:00	51.5	21:00	40.2	05:00	42.7



Shency Joy
Dy.TM-Chemical
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TEST REPORT

ULR No: TC540222000002297F

LRI No:SEAAL22030946A

Date: 30-03-2022

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TEST RESULTS

Sl. No.	PARAMETERS	UNIT	RESULT
1	Ambient Sound Level (Leq) Day Time (06:00 to 22:00)	dB(A)	50.4
2	Ambient Sound Level (Leq) Night Time (22:00 to 06:00)	dB(A)	41.2

Remarks:

End of Report

Standards



Shency Joy
Dy.TM-Chemical
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TEST REPORT

ULR No:TC540222000002298F

LRI No: SEAAL22030947A

Date:30-03-2022

Page 1 of 2

CUSTOMER DETAILS

Customer Name & Address	M/s Kachanathu Minerals & Metals Private Limited Kachanathu Ebenezer Trade Centre V/114,Angadi P.O Ranni,Pathanamthitta District.
Customer Reference	Test Request dt : 23-03-2022

SAMPLE DETAILS

Product Category	Water	Sample Code	WT22030230
Sample Name	Ground Water	Sample Received on	25-03-2022
Sample Conditions at Receipt	Fit for Analysis	Temperature @ Receipt	4°C
Sample Quantity& Packing	2L & 125ml Plastic Bottles	Test Commenced on	25-03-2022
Sampled by	Lab Authorized Sampler	Test Completed on	29-03-2022

DETAILS OF SAMPLING

Sample Source	Open Well	Date of Sampling	23-03-2022
Sampling Procedure	SEAAL/ENL/GEN/SOP/01 & SEAAL/MBL/SOP/06	Sample Temperature	27 °C

SAMPLING SITE DETAILS

Survey No	135/2-3, 135/7, 135/7-1, 135/6, 135/2-2, 135/2, 135/2-1, 167/1, 167/1- 1, 167/5, 167/2-2, 167/2-13,		
Village	Ezhumattoor	Taluk	Mallappally
District	Pathanamthitta	State	Kerala

TEST RESULTS- CHEMICAL PARAMETERS

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	Requirement as per Acceptable Limit of IS 10500 : 2012
1	Colour	IS 3025 (Part 4):1983	Hazen	1	Max 5
2	Odour	IS 3025 (Part 5):2018	---	Agreeable	Agreeable
3	Turbidity	IS 3025 (Part 10):1984	NTU	<0.10	Max 1



Shency Joy
Dy.TM-Chemical
Checked by




Salini T.S.
Microbiologist
Authorized Signatory



Laiju P.N.
Laboratory Head
Authorized Signatory

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TEST REPORT

ULR No:TC540222000002298F

LRI No: SEAAL22030947A

Date:30-03-2022

Page 2 of 2

TEST RESULTS- CHEMICAL PARAMETERS

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	Requirement as per Acceptable Limit of IS 10500 : 2012
4	pH	IS 3025 (Part 11):1983	---	6.95	6.50 – 8.50
5	Conductivity	IS 3025 (Part 14):1984	μS/cm	54.0	---
6	Total Dissolved Solids	IS 3025 (Part 16):1984	mg/L	35.0	Max 500
7	Total Hardness as CaCO ₃	IS 3025 (Part 21):2009	mg/L	12.2	Max 200
8	Calcium as Ca	IS 3025 (Part 40):1991	mg/L	3.20	Max 75
9	Magnesium as Mg	IS 3025 (Part 46):1994	mg/L	<1.00	Max 30
10	Chloride as Cl	IS 3025 (Part 32):1988	mg/L	8.99	Max 250
11	Total Alkalinity as CaCO ₃	IS 3025 (Part 23):1986	mg/L	10.1	Max 200
12	Iron as Fe	IS 3025 (Part 53):2003	mg/L	<0.10	Max 1
13	Sulphate as SO ₄	IS 3025 (Part 24):1986	mg/L	<1.00	Max 200

TEST RESULTS - BIOLOGICAL PARAMETERS

Sl. No.	PARAMETERS	TEST METHOD	UNIT	RESULT	Requirement as per Acceptable Limit of IS 10500 : 2012
1	Total Coliform Bacteria	IS 15185 : 2016	----	Absent/100 ml	Absent/100 ml
2	E coli	IS 15185 : 2016	----	Absent/100 ml	Absent/100 ml

Remarks:

End of Report



Shency Joy
Dy.TM-Chemical

Checked by




Salini T.S.
Microbiologist

Authorized Signatory



Laiju P.N.
Laboratory Head

Authorized Signatory

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