

H&P Granites

6/530 Mankadu,
Kummil P.O Kollam – Dist -691536

Ph.07559945903, 9447267121
Email:handpgranites@gmail.com

H&P/ENV/Compliance/2023-24/02

Date: 15.06.2024

To

1. State Environment Impact Assessment Authority (SEIAA) Kerala
K.S.R.T.C Bus Terminal Complex,
4th Floor Thampanur,
Thiruvananthapuram – 695 001
2. The Additional Principal Chief Conservator of Forests (C)
Ministry of Environment, Forests & Climate Change,
4th Floor, E & bF Wing, KendriyaSadan,
Koramangala, Bangalore -560 034
Karnataka State

Sir,

Sub: Environment Compliance report

Please find enclosed the Six Monthly Compliance report in respect of M/s. H & P Granites
(Ref. Environmental Clearance No. 75/Q/2023 dated: 24.03.2023) for the period from **October 2023**
to March 2024 for your ready reference.

Thanking you,

Yours faithfully,

For H&P GRANITES
Shrikhande

(Shrikhande Chaitanya Vinay)
Mines Manager

Encl: as above

COMPLIANCE REPORT

Of

M/s. H & P GRANITES

6/530, Kondody

Village: Kummil, Taluk: Kottarakkara

District: Kollam, State: Kerala

For the period 1st October 2023 to 31st March 2024

SPECIFIC CONDITIONS:

Sr. No.	Conditions	Precautions Taken	Remarks
1	The Project Proponent shall carry out quarrying as per the approved Mining Plan and the Specific Conditions mentioned hereafter. The Project Proponent should strictly follow the Kerala Minor Mineral Concession Rules 2015 and amendments thereby.	The quarry operations are carried out as per the approved Mining plan & follow KMMCR 2015.	
2	The depth of mining is limited to 135m above MSL considering the depth to the groundwater table and hence a revised Scheme of Mining shall be prepared as per which the total mineable reserve will be reduced to that extent. Department of mining and Geology shall rework the quantity and issue transport permits only for the reworked reduced quantity.	Considering depth of MSL 135m revised mining plan submitted to DMG office for mineable reserves and got approved.	

3	The EC shall be valid from the date of execution of permit/lease from the Department of Mining and Geology. The copy of the lease order should be provided to the SEIAA before commencing the mining activity.	-----Complied with-----	
4	The EC issued will be subject to a review by SEAC after 5 years through filed verification to ensure that mining is carried out sustainably as per the EC conditions.	Shall be complied with	
5	Monitoring of drainage water should be carried out at different seasons by an NABL accredited lab and clear water should only be discharged into the natural stream. Geo-tagged photographs of the drainage and sampling site should be submitted along with HYCR.	Monitoring of drainage water is being carried out by Poluchem Laboratories Pvt Ltd and report of such water quality is attached as Annexure IV.	
6	Adequate sanitation, waste management and rest room facilities should be provided to the workers.	Adequate sanitation, waste management and rest room facilities are provided to the workers.	
7	Adequate energy conservation measures proposed should be implemented including solar power installations for street light and office.	Adequate energy conservation measures proposed is implemented including solar power installations for street light and office at few locations.	
8	Operation of the H&P Granites and Vismaya Rocks shall be monitored regularly once in 6 months by a committee headed by an Official of the State Pollution Control Board with Project Proponents of H&P Granites and Vismaya Rocks, a representative of Kummil Grama Panchayat, and a representative from Department of mining and Geology as members. The monitoring report of the committee shall be a part of half yearly completion report and the Project proponent shall take all corrective measures as suggested by committee.	Send an official letter to respective departments regarding inspections, once they inspect and give report we will attached with HYCR. For reference attached received copy of DMG & state pollution control board department as Annexure II along with this HYCR.	

9	The height and width of the benches are not maintained uniformly as per the stipulations in the approved mine plan and it should be corrected immediately wherever there is inadequacy.	Reducing height and width of bench wherever need is going on and will be finalize soon.
10	The overburden dumping site should be protected with gabion walls to prevent erosion.	Shall be complied where needed.
11	Measures incorporated in the CER should be implemented in total during the first two years and they should be operated and maintained during the subsequent years till the mine closure plan is implemented in total.	Will be implemented
12	Impact of vibration due to blasting should be monitored in terms of Peak Particle Velocity and amplitude for maximum charge per delay and included in the Half Yearly Compliance Report.	The reports of blasting vibrations in terms of PPV and maximum charge per delay attached with HYCR as Annexure III.
13	Compensatory afforestation should be done from the 1st year itself and the coordinates of the area with geo-tagged photos should be submitted in HYCR.	-----Complied with-----
14	Garland drains along with silt traps should be provided considering the entire project area and it should be drained to the existing siltation ponds or additional ones. If necessary, the carrying capacity of the siltation ponds and outflow channel should be enhanced.	-----Complied with-----
15	The Project proponent shall carry out the recommendations made after public hearing as per the approved EIA and EMP reports.	Will be taken care
16	The garland drain, silt traps, siltation ponds and outflow channel should be cleaned and de-silted periodically and geo-tagged photographs of the process should be uploaded in the HYCR	The garland drain, silt traps, siltation ponds and outflow channel is cleaned and de-silted time to time.

17	The minutes of the meeting of the EMC along with the action taken report of the decisions of the EMC, authenticated by the Chairman and Environmental Officer of the EMC should be uploaded in the HYCR	-----Complied with-----	
18	The transportation of the mined material should be regulated as per the traffic management plan and no movement of trucks should be allowed during the peak hours in the forenoon and afternoon.	The transportation of the mined material is being regulated as per the traffic management plan and no movement of trucks allowed during the peak hours in the forenoon and afternoon.	
19	Blasting mats should be used during rock blasting to contain the blast, prevent fly rocks and suppress dust.	Blasting mats is used during rock blasting to contain the blast, prevent fly rocks and suppress dust.	
20	As per OM no F.No.22-65/2017-IA.III dated 30th September 2020, under Corporate Environmental Responsibility (CER) the Project Proponent should implement the Environment Management Plan (EMP)/CER as directed by SEAC during appraisal, covering the issues to address the environmental problems in the project region, from the beginning of the project, indicating both physical and financial targets year wise. The EMP/CER shall be implemented in consultation with Local Self Govt. Institutions. A copy of the approved EMP/CER shall be made available to the concerned Panchayat for information and implementation support. The indicated cost for implementation of CER activities shall be 2% of the project cost.	-----Complied with-----	
21	In the wake of occurrence of large scale landslides in the state, as per the information provided by the Department of Mining & Geology, it is directed to use only NONEL (Non Electrical) technology for blasting to reduce the vibration of the ground, which is 64 one of the causative factors that triggers landslides, formation of cracks in the surrounding buildings and disturbance to human and wildlife.	To reduce vibrations and other factors mentioned in EC condition NONEL blasting carried out in quarry. Also no of holes per round is also under control.	

22	<p>As per the directions contained in the OM F.No.22-34/2018-IA.III dated 16th January 2020 issued by MoEF & CC, in obedience to the directions of the Hon'ble Supreme Court the Project Proponent shall, undertake re-grassing the mining area and any other area which may have been disturbed due to his mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The compliance of this direction shall be included in the Half Yearly Compliance Report which will be monitored by SEAC at regular intervals.</p>	<p>-----Shall be Complied with-----</p>	
23	<p>The violation of EC condition may lead to cancellation of EC and action under The Environment (Protection) Act 1986.</p>	<p>Accepted</p>	

For H&P GRANITES
Shrikanth

(SHRIKHANDE CHAITANNA VINAY)

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-1	The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.	-----Complied with-----	
G-2	All the statutory clearances should be obtained, as applicable, by the project proponent from the respective competent authorities including that for blasting and storage of explosives. Copies of all statutory clearances shall be submitted along with First Half Yearly Compliance Report.	-----Complied with-----	
G-3	The project proponent should advertise in newspapers that the project has been accorded Environmental Clearance and copies of clearance letters are available in the Office of State Environment Impact Assessment Authority (SEIAA) and on the website of the Authority at www.seiaakerala.in . The advertisement should be in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language. The advertisement should be made within 10 days from the date of receipt of the Environmental Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.	-----Complied with-----	
G-4	The proponent shall send a copy of the EC 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 uploaded on the website of the company.	Environment Clearance letter along with the conditions stipulated is submitted to Village panchayat.	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-5	The lease area shall be fenced with barbed wire to a minimum height of 4ft around, before starting mining. All the boundary indicators (boards, markings, etc) shall be conspicuous and maintained at all times.	The entire lease boundary is properly fenced with Barbed wire with concrete pillars. All necessary sign boards are erected at suitable places.	
G-6	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 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.	Details are displayed in front of Quarry gate.	
G-7	Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department. Mats to reduce fly rock blasts to a maximum of 10 PPV should be provided.	Approved Explosive Magazine is located in the isolated place and all explosive material is kept in Magazine.	
G-8	Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged stipulated by Explosive Department.	Blasting operations are always preceded after Siren only, followed by removing all machineries & persons from blasting zone. Blasting Time board is fixed at the entrance of quarry.	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-9	Access roads to the quarry shall be black topped to contain dust emissions that may arise during transportation of materials. The transportation of minerals should be done in covered trucks to contain dust emissions.	Access roads are of interlocking bricks and are widened by same interlocking bricks. It is properly maintained besides regular watering to avoid dust generation during transport of vehicles. Water is sprinkled on the loaded trucks with pipe and Transportation trucks are provided with thick tarpaulin covers to avoid dust problem	
G-10	A separate Environmental Management Cell (EMC) with suitable qualified personnel should be set-up under the chairmanship of a Senior Executive, who will report directly to the Head of the Organization. The Cell should have representative of Biodiversity Management Committee of the Panchayath and a representative of NGO, if any active in the area. The EMC should meet at least once in six months and review the activities and minutes should be a part of the compliance report.	Environment Monitoring Cell is constituted as below: 1. Mr.Shrikhande Chaitanya Vinay as Chairmen 2. Mr.Mainikar Karan as Member 3. Mr.Saneesh Mullaackal as member and we are reporting directly to owner	
G-11	Quarrying has to be carried out as per approved mining plan with the suggestions from SEAC incorporated and following KMMC rules 2015 and the Amendments thereby.	Quarrying work is carried out as per the Mining plan.	
G-12	The quarrying operation (Blasting) shall be restricted between 7 AM and 5 PM.	Quarrying operations is restricted to 7 AM to 5 PM	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-13	Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR/KPBR, unless otherwise specified. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.	In quarrying area Rain Harvesting is implemented as all the rain water is collected in the pit.	
G-14	Maximum depth of mining shall be as per the mining plan and as per specific direction of SEAC after field inspection. The maximum depth of mining should not be deeper than the local ground water table. No mining operations should be carried out at places having a slope greater than 45°.	Maximum depth of quarry and mining operation will be followed as per the mining plan as per SEAC.	
G-15	The height of any bench shall not exceed five meters and breadth shall not be less than the height.	Height and width of the benches are maintained as stipulated in EC document	
G-16	The Project proponent shall ensure that no perennial or intermittent natural water course and/or water resources are 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.	Shall be followed but there is no stream in and around Lease area.	
G-17	A minimum buffer distance specified as per existing rules and statutory orders shall be maintained from the boundary of the quarry to the nearest dwelling unit or other structures, and from forest boundaries or any other ecologically sensitive and archeologically important areas or the specific distance specified by SEIAA in EC as per the recommendations of SEAC depending on specific local conditions.	A buffer zone is maintained all along the lease boundary.	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-18	<p>The proponent should plant seedlings at least 5 times of the loss of trees that has occurred while clearing the land for the project and follow planting measures as suggested by SEAC. Suitable avenue trees should be planted along the sides of the approach road and internal roads and open parking areas, if any. Preference should be given to endemic native and fruit bearing species. Planting in buffer areas should be taken up beforehand. Proper upkeep and maintenance of planted seedlings shall be ensured by the project proponent.</p>	<p>Plantation is being carried out as we go further in quarrying operations. As specified in EC fruit bearing species like Banana, coconut will be planted.</p>	
G-19	<p>The proponent should ensure that the vegetation in the buffer is retained, maintained and strengthened with additions of native broad leaved plants.</p>	<p>Will be followed</p>	
G-20	<p>Eco-restoration including the closure of mine as per the progressive closure plan and final closure plan shall be done at the cost of the project proponent. This eco-restoration should follow scientific standards available for restoration, full recovery of the original vegetation and improving the resilience of different ecosystems. Overburden materials should be managed within the site and used for reclamation of mined pit as per mine closure plan / specific conditions.</p>	<p>-----Shall be complied with-----</p>	
G-21	<p>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 suitable indigenous plant species, if no other specific condition on reclamation of pit is stipulated in the E.C. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.</p>	<p>As per the stipulation 10.5 of total lease area using for water storage for sprinkling and crushing purpose. Reclamation of older pit is being carried out side by side in stacked dumping.</p>	
G-22	<p>Control measures on noise and vibration prescribed by KSPCB should be implemented. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.</p>	<p>Quarrying activities is being carried out in a day time. Control measures on noise and vibration is carried out on regular basis as per KSPCB.</p>	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-23	Periodical monitoring of the vibration at specified location (preferably at a distance of 50 m and 100 m) to be conducted and records kept for inspection. This could also form a part of the compliance reports.	Blasting vibration studies carried out as per the EC stipulations. Report of such attached with compliance as annexure.	
G-24	Speed of trucks entering or leaving the mine site is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.	Speed of trucks entering or leaving the mine site is maintained moderate speed of 25 kmph to prevent undue noise. Sign board with specific speed limit also marked.	
G-25	Acoustic enclosures should be provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standard limit indicated by CPCB/KSPCB.	Thick vegetation of trees and total covering of the crusher is done to suppress sound amplifications.	
G-26	Blasting should be done in a controlled manner using NONEL technique as specified by the regulations of Petroleum and explosive safety organization (GOI) or any other concerned authorized agency. A licensed person should supervise/ control the blasting operations.	Controlled blasting is being carried out by using NONELs and also by restricting the number of holes blasted in a round. Mine Foreman/Mine Mate/Blaster (Certified by the Director General of Mines Safety) will supervise the blasting operations in the quarry.	
G-27	Measures should be taken for maintaining noise levels below 85 dBA in the work environment.	Regular monitoring of Noise level is being conducted and overall noise level is kept under permitted level.	
G-28	Project proponent should obtain necessary prior permission of the competent authorities for drawing requisite quantity of surface water and ground water for the project.	Shall be obtained whenever necessary	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-29	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 compliance reports to SE/IAA.	There is no stream in and around Lease area	
G-30	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, and for green belt development etc. The drains shall be regularly desilted and maintained properly, particularly after monsoon.	Catch drains and siltation ponds are provided to arrest the eroded material.	
G-31	Regular monitoring of ground water level and quality shall be carried out around the mine area during mining operation. If any stage, if is observed that ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.	The mining activities are restricted to the area of above general ground water table and will not intersect Ground water table.	
G-32	Garland drains and silt traps are to be provided in the slopes around the core area to channelize storm water. De-silting of Garland canal and silt traps have to be attended on a daily basis. A labour has to be specifically assigned for the purpose. The proponent shall ensure the quality of the discharging storm water as per the General Effluent Discharge Standards of CPCB.	Quarry area is provided with garland drains so that all storm water is diverted in the pit and from there it is diverted to settling pond. Other areas are provided with drains to divert the water to the main drainage.	
G-33	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 the E.C was issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority. In the case of transfer of ECs, the matter shall be intimated and get the approval from the Authority as per the existing norms.	Shall be Complied with	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-34	<p>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.</p>	<p>All stipulations are being complied with</p>	
G-35	<p>The top soil, if any, shall be temporarily stored at earmarked place (s) and 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 at 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. At critical points, use of geo textile shall be undertaken for stabilization of the dump. Protective wall or gabions should be made around the dump to prevent erosion / flow of sediments during rains. The entire excavated area shall be backfilled.</p>	<p>Topsoil is stored separately and will be using during plantation. Dump is maintained as per the Approved Mining Plan.</p>	
G-36	<p>All the mining equipment used in Mining like backhoe loaders and excavators cause pollution and hence shall be serviced regularly & maintained for their efficient functioning and for reducing pollution. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.</p>	<p>Proper maintenance of machineries/vehicles are practiced to minimize the pollutions. Spent/burnt oil released from machinery/vehicles are disposed in a specified manner of State Pollution Control Board</p>	
G-37	<p>All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution checking centre. Washing of all vehicles shall be inside the lease area. .</p>	<p>This is being strictly implemented</p>	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-38	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution such as haul road, loading and unloading points and transfer points and having high levels of PM10 and PM2.5. 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.	Two water tanker of 10 K capacity is kept in quarry area and water is sprinkled on regular basis	
G-39	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement at project site, parking area, on haul roads, loading and unloading and at transport points should be provided and properly maintained.	Haul roads and transfer points are regularly watered to avoid dust generation	
G-40	Corporate Environmental Responsibilities (CER) as prescribed by SEIAA/SEAC should be carried out leading to Environmental stability of the Project region. The activities carried out under CER should be a part of the half yearly compliance report. The certificates from the beneficiaries, if the CER part is completed should also be submitted to the State Environment Impact Assessment Authority (SEIAA) along with year wise expenditure.	Corporate Environmental Responsibilities (CER) is being carried out and details of month wise expenditure is attached as annexure.	
G-41	The project proponent is responsible for implementing all the provisions of labour laws applicable from time to time to quarrying /Mining operations. The workers on the site should be provided with on-site accommodation or facilities at a suitable boarding place, protective equipment such as ear muffs, helmet, etc.	All workers are provided with personal protective equipment's such as Helmet, safety shoes and other items as prescribed by DGMS. Accommodations and other facilities is provided to all the workers on site.	
G-42	The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.	-Shall be complied-	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-43	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. The report of health surveillance programme should be included in the half yearly compliance reports.	Occupational health surveillance will be carried out.	
G-44	The pits in the abandoned quarries and in the mined area shall be used for activities like water harvesting, aqua culture etc. in an eco-friendly manner.	The abandoned pits are used for Rain water harvesting. The water is used for water sprinkling and for crushing plant.	
G-45	If Government land is partly or fully used for mining, the area shall be returned at the end of lease period after mine closure with separate demarcation with suitable survey marks.	Shall be Complied	
G-46	Any accident occurring in the mined out area after the lease period due to negligence in carrying out safety measures and non-closure , will lead to suspension of all EC obtained for mining by the Proponent.	-Accepted-	
G-47	In case of transfer of EC the matter shall be intimated and approval from the Authority shall be obtained as per the existing norms.	Shall be Complied	
G-48	The proponent shall submit Half Yearly Compliance Reports (1 st of June & 1 st of December) 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 be simultaneously sent to the respective Regional Office of Ministry of Environment, Forests and Climate Change, Govt. of India and also to the Office of State Environment Impact Assessment Authority (SEIAA). The proponent has to submit Environmental statement in form V of Environment (Protection) Rules 1986 to SPCB on 31st March every year.	Compliance reports being sent to SEIAA – Kerala Office and Regional office of MoEF – Bangalore	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-49	The project authorities should extend full cooperation to the officer (s) from the Regional Office of MOEF & CC located at Bangalore /SEAC /SPCB /CPCB/dept of Mining and Geology, while monitoring compliance of the stipulated conditions, by furnishing the requisite data/ information/ monitoring reports.	-Shall be complied-	
G-50	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.	-Not applicable-	
G-51	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.	Will accept is case of any such violations of the provision of EC	
G-52	The EC given will be withdrawn at any time if the area is declared high hazardous by the SDMA.	-Accepted-	
G-53	The Environmental Clearance will be subject to the final order of the courts on any pending litigation related to the land or project, in any court of law.	-Will abide by the verdict -	
G-54	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.	Will comply with any outcome of NGT	

Item No.	Stipulations In EC	Status of Compliance	Remarks
G-55	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.	No data is concealed and no false/fabricated data is furnished to the authority as per our knowledge and belief	
G-56	The SEIAA may revoke or suspend the order, for non-implementation of any of the specific or any of the above conditions. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environmental protection.	Will accept is case of any such violations of the provision of EC	
G-57	As per regulation no. 106(2) of metalliferous mines regulation under Mine act, the height of any bench shall not exceed six meters and breadth shall not be less than the height.	Height and width of the benches are maintained as stipulated in EC document	

For H&P GRANITES


(SHRIKHANDE CHAITANYA MINAY)
Mines Manager

M/s. H & P GRANITES
6/530, Kondody
Village: Kummil, Taluk: Kottarakkara
District: Kollam, State: Kerala
For the period 1st October 2023 to 31st March 2024

DETAILS OF EXPENDITURE UNDER CORPORATE SOCIAL RESPONSIBILITY FROM
October 2023 to March 2024

SR. NO.	DATE	PARTICULARS	AMOUNT	REMARKS
1	09-10-2023	SV LPS THOLIKUZH	15000	
2	10-10-2023	KERALA SAMBAVA SABHA	2500	
3	16-10-2023	MJK ARTS & SPORTS CLUB , MUTHAYIL	5000	
4	18-10-2023	SREE AYIRAVILLI MAHADEVA TEMPLE , NADAPPARA KUMMIL	4000	
5	18-10-2023	KERALA PRAVASI SANGAM	3000	
6	19-10-2023	CHADAYAMANGALAM SUBDISTRICT SCHOOL SCIENCE FESTIVAL	10000	
7	25-10-2023	WEDDING DONATION	5000	
8	28-10-2023	NATIONAL ENVIRONMENT PROTECTION AGENCY	750	
9	07-11-2023	PRIVATE BUILDING CONTRACTORS ASSOCIATION , KADAKKAL	3000	
10	09-11-2023	SV LPS THOLIKUZH	15000	
11	11-11-2023	KERALA FOREST SPORTS & GAMES MEET 2023	15000	
12	14-11-2023	HUMAN RIGHT & SAVE ENVIRONMENT FORUM	1000	
13	17-11-2023	SREE AYIRAVILLI MAHADEVA TEMPLE , NADAPPARA KUMMIL	4000	
14	17-11-2023	HARITHAKARMASENA , KUMMIL GRAMPANCHAYATH	300	
15	17-11-2023	KADAKKAL PREMIER LEAGUE	10000	
16	20-11-2023	MEDICAL ASSISTANCE	15000	

ANNEXURE - 1

17	23-11-2023	KERALA FOREST PROTECTIVE STAFF ASSOCIATION	5000	
18	25-11-2023	LAKSHYA ARTS AND SPORTS CLUB , MARAVOORKKONAM	5000	
19	06-12-2023	THE SILENCE BROTHERHOOD ALL INDIA ASSOCIATION	250	
20	08-12-2023	SANKHAVEDHI ARTS AND SPORTS CLUB , THULASIMUKKU	5000	
21	08-12-2023	HANUMAN SENA	500	
22	09-12-2023	SV LPS THOLIKUZH	15000	
23	18-12-2023	HARITHAKARMA SENA , KUMMIL GRAMAPANCHAYATH	300	
24	18-12-2023	SREE DHARAMA SHASTHA TEMPLE , KUMMIL	35000	
25	21-12-2023	KARUNYA DEEPAM CHARITABLE SOCIETY , KUMARAPURAM	300	
26	21-12-2023	YEMVEES PROSTHETIC & ORTHOTIC CENTRE	15750	
27	27-12-2023	SREE AYIRAVILLI MAHADEVA TEMPLE , NADAPPARA KUMMIL	15000	
28	03-01-2024	MATHIRA THIRUVATHIRA , KIZHAKKEKARA COMMITTEE	3500	
29	03-01-2024	KADAKKAL THIRUVATHIRA	5000	
30	08-01-2024	THAIPOOYAM , VELLATHANKONAM SREE SUBHRAMANYA SWAMI TEMPLE	5000	
31	12-01-2024	SREE MAHAGANAPATHI NADA BHADRADEVI TEMPLE , PANGALUKADU	5000	
32	14-01-2024	REPPUBLIC DINAKOSHAM , KOTTARAKKARA THALUK	25000	
33	15-01-2024	SREE AYIRAVILLI MAHADEVA TEMPLE , NADAPPARA KUMMIL	4000	
34	15-01-2024	HARITHAKARMA SENA , KUMMIL GRAMAPANCHAYATH	300	
35	16-01-2024	AKHILABHARATHA HINDU AIKYAVEDHI	500	
36	17-01-2024	WE ONE , MATHIRA	2500	
37	17-01-2024	MOTOR OWNERS & WORKERS , PANGALUKADU	2000	
38	22-01-2024	MATHIRA THIRUVATHIRA , EDUPPUKUTHIRA (2)	2000	
39	22-01-2024	KAVIL BROTHERS , PULLIPACHA	5000	

ANNEXURE - 1

40	22-01-2024	MATHIRA THIRUVATHIRA , EDUPPUKUTHIRA (1)	4000	
41	22-01-2024	MATHIRA THIRUVATHIRA , EDUPPUKUTHIRA (3)	2000	
42	22-01-2024	MOTORS OWNERS & WORKERS , KADAKKAL	3500	
43	23-01-2024	JANAYUGAM	15000	
44	23-01-2024	MATHIRA THIRUVATHIRA , (DEEPALANGARAM) , THOTTUMUKKU JUNCTION	1000	
45	23-01-2024	MATHIRA THIRUVATHIRA , (DEEPALANGARAM) , CHEKKITTAMUKKU JUNCTION	2000	
46	23-01-2024	TROOPS ARTS & SPORTS CLUB , MATHIRA	1000	
47	23-01-2024	PRANAVAM VAYANASHALA , THETTIMUKKU	500	
48	26-01-2024	SAMANWOYA GRANDHASHALA ARTS AND SPORTS CLUB , KUMMIL	5000	
49	30-01-2024	THRIKKANNAPURAM SREE MAHAVISHNU TEMPLE	20000	
50	07-02-2024	THALAVARAMBU MUSLIM JAMATH	4000	
51	13-02-2024	KADAKKAL THIRUVATHIRA , Cherukara	4000	
52	14-02-2024	SREE AYIRAVILLI TEMPLE , MULLAKKARA	4000	
53	14-02-2024	SREE AYIRAVILLI MAHADEVA TEMPLE , NADAPPARA KUMMIL	4000	
54	17-02-2024	AKSHARA GRANDHASHALA , ARTS AND SPORTS CLUB , THACHONAM	5000	
55	17-02-2024	SV LPS THOLIKUZH	15000	
56	22-02-2024	KUMMIL KIZHAKKEKKARA NIVASIKAL - KETTUKAZHCHA	2500	
57	27-02-2024	HARITHAKARMASENA , KUMMIL GRAMAPANCHAYATH	300	
58	28-02-2024	MUSLIM JAMATH CORDINATION COUNCIL , DISTRICT COMMITTEE	1200	
59	29-02-2024	RAMARASSERY SREE SIVAPARVATHY TEMPLE TRUST , MOONNUMUKKU	500	

ANNEXURE - 1

60	02-03-2024	SAMANWOYA GRANDHASHALA ARTS AND SPORTS CLUB , KUMMIL (SIVARATHRI ARATTU)	15000	
61	04-03-2024	MANKADU SCHOOL (NO RECEIPT)	20000	
62	07-03-2024	SANKHAVEDHI ARTS AND SPORTS CLUB , THULASIMUKKU	20500	
63	07-03-2024	NEW TEAM MANKADU	10000	
64	07-03-2024	SREE AYIRAVILLI MAHADEVA TEMPLE , NADAPPARA KUMMIL	10000	
65	13-03-2024	SV LPS THOLIKUZH	15000	
66	14-03-2024	SREE AYIRAVILLI MAHADEVA TEMPLE , NADAPPARA KUMMIL	4000	
67	21-03-2024	HARITHAKARMASENA , KUMMIL GRAMPANCHAYATH	300	
68	23-03-2024	MOTOR OWNERS & WORKERS , KIZHAKKUMBAGAM	1000	
TOTAL			440750	

For H&P GRANITES
G. S. Michande
Mines Manager

ANNEXURE - 1**MATERIAL SUPPLY**

	DATE	PARTY	AMOUNT	
1	12-10-2023	SUNIL , KADAKKAL	4347	
2	16-10-2023	SHAMEER , PUTHUCODE	6279	
3	17-10-2023	JAMATH FEDERATION , NILAMEL	18354	
4	17-10-2023	DONATION FOR ROAD WORK	4500	
5	18-10-2023	KL 81 9072 , KONDODY WAITING SHED	1380	
6	19-10-2023	JAYAKUMAR , PUTHEYAM	6907	
7	19-10-2023	KL 25 F 5341 , SHUKKOOR	1150	
8	19-10-2023	KL 25 F 5341 , SHUKKOOR	2438	
9	19-10-2023	SALI , KUMMIL	2560	
10	24-10-2023	SUBALAL , EEYAKODE	6300	
11	24-10-2023	SUBALAL , EEYAKODE	6300	
12	01-11-2023	SUBALAL , EEYAKODE	6300	
13	01-11-2023	SUBALAL , EEYAKODE	6300	
14	07-11-2023	ANILAL , KADAKKAL	4347	
15	23-11-2023	SHIVA TEMPLE , KUMMIL	966	
16	02-12-2023	AJAYAN , KUMMIL	6279	
17	02-12-2023	AJAYAN , KUMMIL	6279	
18	02-12-2023	AJAYAN , KUMMIL	6279	
19	02-12-2023	AJAYAN , KUMMIL	6279	
20	02-12-2023	AJAYAN , KUMMIL	6279	
21	02-12-2023	AJAYAN , KUMMIL	6279	
22	02-12-2023	AJAYAN , KUMMIL	6279	

ANNEXURE - 1

23	12-12-2023	SREEDHARMA SHASTHA TEMPLE , KATTUMPURAM	6762	
24	19-12-2023	KL 21 L 9828 , KUMMIL JUMA MAZIID	6090	
25	03-01-2024	SEENATH , OONNENKALLU , KL 25 G 4139	2560	
26	09-01-2024	KL 24 F 8058 , IRSHAD KUNNILKKADA	7245	
27	13-01-2024	HUMAYOON KABEER , KL 25 D 340	2174	
28	22-01-2024	AJMAL , NELLIVILA KL 02 N 5022	2657	
29	30-01-2024	MANOJ JOYMUKKU , KL 82 8732	8791	
30	13-03-2024	DEEPU S KUMAR , KUNNILKKADA - KL 14 N 822	6521	
TOTAL			165181	

For H&P GRANITES
G. M. Chandale
Mines Manager

ANNEXURE - 1

CER Details

Sl. No.	Area of Intervention	Expenses (in Rs.)
1	Promotion of education in School, college in Kummil, Thulasimukku village (Smart Classroom, Maintenance work of urinal block, Sports Equipment's, Children's park & Maintenance)	<u>2,00,000</u>
2	Drinking water supply in ward No.6 & 22 of Kummil G P.	<u>3,24,000</u>

For H&P GRANITES
Sankhande
Mines Manager

H&P Granites

6/530 Mankadu.

Kummil P.O Kollam - Dist -691536

Ph.07559945903, 9447267121

Email:handpgranites@gmail.com

No. H&P/EC/KSPCB-DMG/ 01

Date: 07.04.2024

To

The Department head
District Mining and Geology
Kollam Kerala - 691 008

Sir,

Sub: Monitoring of Environmental activities.

We have received the Environmental Clearance for our H&P Granites by the State level Environmental Impact Assessment Authority -Kerala State for conducting the Quarry operations. It has been mentioned under the Specific Conditions, item No. 8 which states as:

“Operation of the H&P Granites and Vismaya Rocks shall be monitored regularly once in 6 months by a committee headed by an Official of the State Pollution Control Board with Project Proponents of H&P Granites and Vismaya Rocks, a representative of Kummil Grama Panchayat, and a representative from Department of mining and Geology as members. The monitoring report of the committee shall be a part of half yearly completion report and the Project proponent shall take all corrective measures as suggested by committee”.

In this regard we request you to depute your representative to our quarry to witness the Environmental protection activities that are being carried out at our quarry and give a report to that extent which will be forwarded to SEIAA along with our Six Monthly Compliance report.

Hope you will do the needful.

Thanking you,

Yours faithfully


Chaitanya Shrikhande



Received
by
10/6/2024



H&P Granites

6/530 Mankadu,
Kummil P.O Kollam - Dist -691536

Ph.07559945903, 9447267121
Email:handpgranites@gmail.com

No. H&P/EC/KSPCB-DMG/ 01

Date: 07.04.2024

To

The Environmental Engineer,
Kollam District Office,
Kerala State Pollution Control Board
Ushus Building,
Big Bazar Kollam - 691 001

Sir,

Sub: Monitoring of Environmental activities.

We have received the Environmental Clearance for our H&P Granites by the State level Environmental Impact Assessment Authority –Kerala State for conducting the Quarry operations. It has been mentioned under the Specific Conditions, item No. 8 which states as:

“Operation of the H&P Granites and Vismaya Rocks shall be monitored regularly once in 6 months by a committee headed by an Official of the State Pollution Control Board with Project Proponents of H&P Granites and Vismaya Rocks, a representative of Kummil Grama Panchayat, and a representative from Department of mining and Geology as members. The monitoring report of the committee shall be a part of half yearly completion report and the Project proponent shall take all corrective measures as suggested by committee”.

In this regard we request you to depute your representative to our quarry to witness the Environmental protection activities that are being carried out at our quarry and give a report to that extent which will be forwarded to SEIAA along with our Six Monthly Compliance report.

With the copy of this letter we are also requesting the Geologist, Dept. of Mining & Geology, Govt. of Kerala – Kollam for deputing their representative for the same purpose.

Hope you will do the needful.

Thanking you.

Yours faithfully


(MINING MANAGER)



കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ് ജില്ലാ ഓഫീസ് : കൊല്ലം

നമ്പർ: 1561

തീയതി: 10/06/2024

Handy Granites, 6/530 Mankadu,
Kummil p.o Kollam

താങ്കളുടെ 10/06/2024 തീയതിയിലെ ~~പത്രിക~~ letter വിവരണം/അപേക്ഷ കൈപ്പറ്റിയിരിക്കുന്നു. ആയതിന്മേലുള്ള തീരുമാനം എത്രയും വേഗം താങ്കളെ അറിയിക്കുന്നതാണ്. ഇതിന്മേൽ തുടർന്നുള്ള എഴുത്തുകുത്തുകളിൽ ഈ രസീതിലെ നമ്പറും തീയതിയും ഒഴുവാക്കി സൂചിപ്പിക്കുക.

ഒപ്പ്:
പേര്:
തസ്തിക:

Prof. Ram Chandar Karra, Dept. of Mining Engineering, NITK-Surathkal (Govt. of India)

ABSTRACT

M/s. H&P Granites Products is operating a Building Stone Quarry in Survey No. 6/530, Kondody Village, Kummil- Post, Kottarakaara- Taluk, Kollam District of Kerala. Mr. Harish G Nair- Managing Partner of M/s. H&P Granites has approached National Institute of Technology Karnataka (NITK) Surathkal (under Ministry of Education, Govt. of India) with a request to conduct the blast vibration study to assess the impact of blasting on the surroundings. In view of this, the study is taken up with the following objectives.

Entire quarry area and surroundings were inspected. Except crusher unit at a distance of 30m and office building at a distance of 180m from the lease boundary, there are no other structure within 300m from the lease area. As per Director General of Mines Safety (DGMS) guidelines (Circular No: 07 of 1997), the crusher unit can be assigned a permissible Peak Particle Velocity (PPV) of 15 mm/s, 10mm/s for office building, if any other structure which do not belong to the owner may be assigned a PPV of 5 mm/s, irrespective of frequency.

Blastholes of 32mm diameter drilled by hand held Jack hammer drills. Depth of Blastholes was 2 to 2.5m with varied burden and spacing. Number of blastholes per round varied from 14 to 50, covering different locations in the quarry lease area. 25mm diameter cartridge explosives are used as explosive charge. Explosive charge per hole varied from 625 to 750gm. NONEL based shocktube detonators are used for inhole as well as surface initiation. Maximum charge per delay is same is charge per hole as each hole is provided with individual delay. Total explosive charge varied from 9.375kg to 37.5kg during the scientific study.



In total, 6 blasts were conducted and ground vibrations & noise levels were recorded for all the blasts using 4 instruments covering 24 locations. The highest Peak Particle Velocity (PPV) recorded was 5.2mm/s at a distance of 45m in Blast No. 5, second highest PPV was 3.63mm/s at a distance of 65m in Blast No. 5 and the third highest PPV was 2.64mm/s at a distance of 75m in Blast No. 1. Infact, all the PPV values are less than 2mm/s beyond 100m. No vibration was recorded at the crusher unit.

The highest noise level recorded is 130.5dB at a distance of 75m in Blast No. 1, the second highest was 122.3dB in Blast No. 6 at a distance of 70m from blast location and the next highest is 120.6dB at a distance of 85m in Blast No. 1. All other noise levels are less than 120dB and at many locations the noise level was less than 100dB, which is insignificant. Wind direction is one of the major factors influences the noise levels. Fly Rock is observed upto a distance of 30 to 40m from blast site within quarry area only and it was within the blast vicinity of 10m with muffling arrangement using sand bags. Fragmentation was also found to be uniform, no excessive breakage of the rock mass and no damage to the rock mass beyond planned blast location.

The study revealed that there is no effect of blasting on the existing structures around the quarry.



Prof. Ram Chandar Karra, Dept. of Mining Engineering, NITK-Surathkal (Govt. of India)

5. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The scientific study carried out in the Building Stone Quarry of M/s. H&P Granites in Survey No. 6/530, Kondody Village, Kummil- Post, Kottarakara- Taluk, Kollam District of Kerala., led to draw the following conclusions:

- ✓ Initially, a field visit was made and Quarry area, surroundings and other structures were inspected before starting the blasting operations as part of pre-blast survey.
 - ✓ In total, 6 blasts were conducted at different locations of the quarry.
 - ✓ Blast holes of 32mm diameter were used in the studies.
 - ✓ Depth of blast holes was 2 to 2.5m with 1.2m burden and 1.2 to 1.5m spacing.
 - ✓ Number of blastholes during the study varied from 14 to 50.
 - ✓ Explosive in the form of 25mm diameter cartridges, each weighing 125gm was used for charging the blastholes.
 - ✓ Explosive Charge per hole was 625 to 750gm and Maximum charge per delay is also same as each individual hole was provided with delay.
 - ✓ Total explosive charge per round varied from 9.375kg to 37.5kg during the scientific study.
 - ✓ Ground vibration levels are recorded for all the blasts using one unit of Micromate and one unit of Minimate-Plus- InstanTel Canada, one unit of Real Wave Analyser- SV Corporation- South Korea and one unit of SViB1 Vibrometer. Full event sheets are downloaded using the softwares supplied by the respective manufacturers.
 - ✓ Monitoring distances varied from 45 to 170m from blast locations.
 - ✓ During the studies, it was found that the nearest structure is crusher unit and office building both are belonging to owner. There are no other structures within 300m from lease boundary.
- As per Director General of Mines Safety (DGMS) guidelines (Circular No; 07 of 1997), the



crusher unit can be assigned a permissible Peak Particle Velocity (PPV) of 15 mm/s, 10mm/s for office building, if any other structure which do not belong to the owner may be assigned a PPV of 5 mm/s, irrespective of frequency

- ✓ The highest Peak Particle Velocity (PPV) recorded was 5.2mm/s at a distance of 45m in Blast No. 5, second highest PPV was 3.63mm/s at a distance of 65m in Blast No. 5 and the third highest PPV was 2.64mm/s at a distance of 75m in Blast No. 1. Infact, all the PPV values are less than 2mm/s beyond 100m. No vibration was recorded at the crusher unit.
- ✓ Intensity of ground vibrations mainly depends upon the maximum charge per delay and the distance between the blast location and monitoring point. Further, the level difference between the blast location and monitoring point, direction of propagation, direction of monitoring location w.r.t blast face etc., also will influence the blast vibration levels. PPV values of Blast No. 5 are slightly higher than the other blasts, because the blast location and monitoring points are almost at same level and also the instruments are in the directions of ground vibration propagation.
- ✓ The highest noise level recorded is 130.5dB at a distance of 75m in Blast No. 1, the second highest was 122.3dB in Blast No. 6 at a distance of 70m from blast location and the next highest is 120.6dB at a distance of 85m in Blast No. 1. All other noise levels are less than 120dB and at many locations the noise level was less than 100dB, which is insignificant. Wind direction is one of the major factors influence the noise levels.
- ✓ Fly Rock is observed upto a distance of 30 to 40m from blast site within quarry area only and it was within the blast vicinity of 10m with muffling arrangement using sand bags.
- ✓ Fragmentation was also found to be uniform, no excessive breakage of the rock mass and no damage to the rock mass beyond planned blast location.



It may, therefore, be concluded that the intensity of ground vibrations, noise and fly rock caused due to blasting operations carried out in the Building Stone Quarry of M/s. H&P Granites in Survey No. 6/530, Kondody Village, Kummil- Post, Kottarakaara- Taluk, Kollam District of Kerala, are within permissible limits and such levels will not cause any damage to any existing structures around the quarry.

Recommendations

Blasting operations may be conducted in the building stone quarry of M/s. H&P Granites in Survey No. 6/530, Kondody Village, Kummil- Post, Kottarakaara- Taluk, Kollam District of Kerala, with the following recommendations:

- Blasts may be conducted with the blast geometry suggested in Table-5.1.
- NONEL based shocktube detonators may be used for initiation. Hole to hole delay can be 17ms or 25ms and accordingly row to row delay shall be 25 or 42ms respectively.
- Blast layouts suggested in Fig. 5.1& 5.2 may be used with the NONEL based shocktube initiation system with specific delay timing of 200/25ms(or 250/25ms).Blast layouts may be modified based on number of holes.
- Muffling with blasting mats and sand bags is advised especially while blasting the top bench.
- Blasts to be conducted following all the rules and regulations stipulated by Director General of Mines Safety (DGMS) and other regulating agencies.
- All other rules and regulations imposed by various agencies like DGMS/ Dept. of Mines & Geology/ any other relevant organization to be followed from time to time.



TABLE-5.1. SUGGESTED BLAST CONFIGURATION

Sl. No.	Parameters	Suggested Value
1	Diameter of Blasthole (mm)	32
2	Burden (m)	0.91 to 1.22 for 1.5m depth 1.22 to for 2 to 2.5m depth
3	Spacing (m)	0.91 to 1.22 for 1.5m depth 1.22 to 1.5m for 2 to 2.5m depth
4	Depth of Blasthole (m)	Maximum of 2.5
5	No. of Blastholes	Maximum of 40 with 1.5m hole depth Maximum of 30 if depth is more than 1.5m
6	Explosive Charge / Hole (gm)	250 to 750 based on blast geometry
7	Maximum Charge / Delay (gm)	750
8	Total Charge / Blast (kg)	20.0
9	Initiation System	NONEL based shocktube detonators
10	Initiation Pattern	Row by row or Diagonal
11	Delay timing between any two blastholes	At least 8ms
12	No. of rows	Maximum of 3

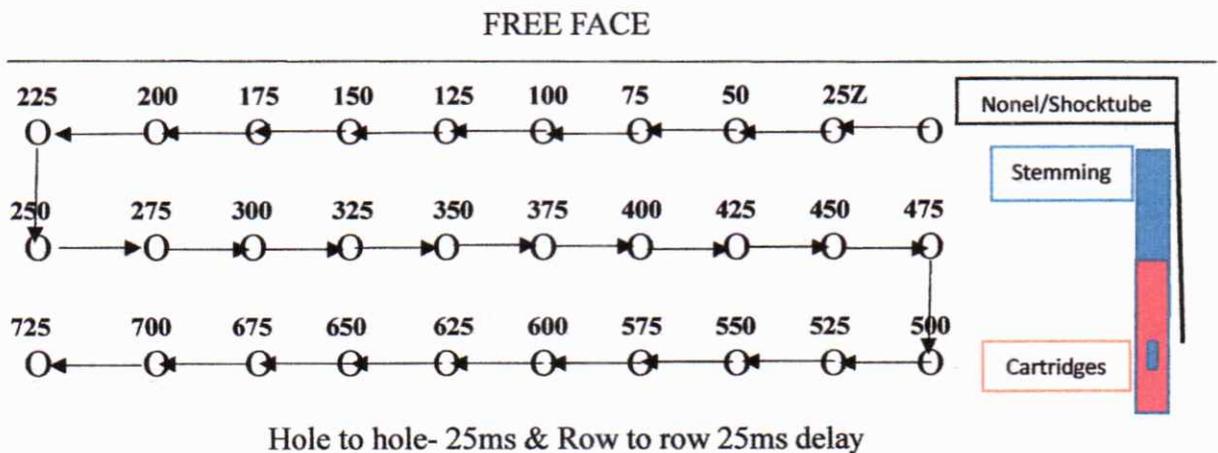
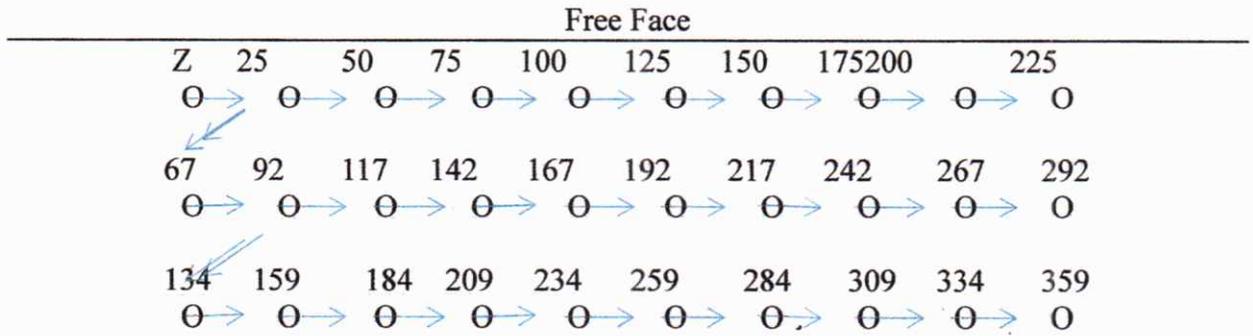


FIG. 5.1 SUGGESTED BLAST LAYOUT -1





Hole to hole- 25ms & Row to row 42ms delay

FIG. 5.2 SUGGESTED BLAST LAYOUT -2

Ram Chandar Karra

Prof. Ram Chandar Karra

Principal Investigator

Consultancy Project Code: NITK/MN/2023-24/0028

Dr. K. RAM CHANDAR

Professor

Dept. of Mining Engineering

National Institute of Technology Karnataka

Surathkal, P.O. Srinivasnagar

MANGALORE - 575 025, INDIA



POLUCHEM LABORATORIES PVT LTD

CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY

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ACCREDITED BY KSPCB AS "A" GRADE LABORATORY

TEST REPORT

Page 01 of 01

Ref.No. PL/RT/BW/4072/2024

Date of Issue: 16/05/2024

Name & address of customer

: M/s.H and P Granites

Re.Survey. No.s-465/04pt,465/05,481/01-1,

481/01-2,482/02,482/02-2,482/02-3,482/04,482/05,482/06,483/04

Village-Kummil

Panchayath: Kummil

Taluk- Kottarakkara

District- Kollam, Kerala

Sample drawn by

: PoluChem Laboratory Sample Collector

Sample description

: Drinking Water

Location of sampling

: Borewell Water –South East Side

Date of sample collected

: 10/05/2024

Date of analysis started

: 11/05/2024

Date of completion of analysis

: 15/05/2024

Parameters tested	Test method	Results	Acceptable Limit As Per IS 10500-2012
Color	IS 3025 (P) 04 – 1983 RA2017	6 Hazen Unit	5 Hazen Unit
Odour	IS 3025 (P) 05 – 1983 RA2017	Agreeable	Agreeable
Turbidity	IS 3025 (P) 10 – 1984 RA2017	0.8 NTU	1 NTU
pH	IS 3025 (P) 11 – 1983 RA 2017	6.87	6.5 – 8.5
Total Dissolved Solids	IS 3025 (P) 16 – 1984 RA2017	187 mg/l	500 mg/l
Total Hardness as CaCO ₃	IS 3025 (P) 21 – 1983 RA2014	121.4 mg/l	200 mg/l
Total Alkalinity as CaCO ₃	IS 3025 (P) 23 – 1986 RA2014	98.5 mg/l	200 mg/l
Residual Chlorine	IS 3025 (P) 26 – 1986 RA2014	BDL	0.2 mg/l
Chloride as Cl ⁻	IS 3025 (P) 32 – 1988 RA2014	22.3 mg/l	250 mg/l
Calcium as Ca	IS 3025 (P) 40 – 1991 RA2014	18.5 mg/l	75 mg/l
Magnesium as Mg	IS 3025 (P) 46 – 1994 RA2014	16.2 mg/l	30 mg/l
Total Iron as Fe	IS 3025 (P) 53 – 2003 RA2014	0.58 mg/l	0.3 mg/l
Sulphate as SO ₄	IS 3025 (P) 24 – 1986 RA2009	9.6 mg/l	200 mg/l
Fluoride as F	IS 3025 (P) 60 -2008 RA 2013	BDL	1.0 mg/l
Zinc as Zn	IS 3025 (P)49 – 1994 RA2014	BDL	5 mg/l
Manganese as Mn	IS 3025(P) 59– 2006 RA2017	BDL	0.1 mg/l
Cadmium as Cd	IS 3025(P) 41– 1992 RA2014	BDL	0.003 mg/l
Lead as Pb	IS 3025(P) 47– 1994 RA2014	BDL	0.01 mg/l
Coliforms(MPN/100ml)	IS 1622: 1981 RA 2009	Absent	Absent
Ecoli (Present or Absent/100ml)	IS 1622: 1981 RA 2009	Absent	Absent

Note : BDL – Below Detection Level

For PoluChem Laboratories (P) Ltd.

Authorized Signatory

* End of the report*

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

SREEJA RAMESH
QUALITY MANAGER
POLUCHEM LABORATORIES PVT LTD



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CHEMICAL, ENVIRONMENTAL AND MICROBIOLOGY LABORATORY
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ACCREDITED BY KSPCB AS "A" GRADE LABORATORY

TEST REPORT

Page 01 of 01

Ref.No. PL/RT/OW/4075/2024

Date of Issue: 16/05/2024

Name & address of customer

: M/s.H and P Granites
 Re.Survey. No.s-465/04pt,465/05,481/01-1,
 481/01-2,482/02,482/02-2,482/02-3,482/04,482/05,482/06,483/04
 Village-Kummil
 Panchayath: Kummil
 Taluk- Kottarakkara
 District- Kollam, Kerala

Sample drawn by

: PoluChem Laboratory Sample Collector

Sample description

: Drinking Water

Location of sampling

: Openwell Water –Out Side-South East Side

Date of sample collected

: 10/05/2024

Date of analysis started

: 10/05/2024

Date of completion of analysis

: 15/05/2024

Parameters tested	Test method	Results	Acceptable Limit As Per IS 10500-2012
Color	IS 3025 (P) 04 – 1983 RA2017	5 Hazen Unit	5 Hazen Unit
Odour	IS 3025 (P) 05 – 1983 RA2017	Agreeable	Agreeable
Turbidity	IS 3025 (P) 10 – 1984 RA2017	0.3 NTU	1 NTU
pH	IS 3025 (P) 11 – 1983 RA 2017	6.58	6.5 – 8.5
Total Dissolved Solids	IS 3025 (P) 16 – 1984 RA2017	98 mg/l	500 mg/l
Total Hardness as CaCO ₃	IS 3025 (P) 21 – 1983 RA2014	36.5mg/l	200 mg/l
Total Alkalinity as CaCO ₃	IS 3025 (P) 23 – 1986 RA2014	25.4 mg/l	200 mg/l
Residual Chlorine	IS 3025 (P) 26 – 1986 RA2014	BDL	0.2 mg/l
Chloride as Cl ⁻	IS 3025 (P) 32 – 1988 RA2014	20.3 mg/l	250 mg/l
Calcium as Ca	IS 3025 (P) 40 – 1991 RA2014	12.2 mg/l	75 mg/l
Magnesium as Mg	IS 3025 (P) 46 – 1994 RA2014	4.12 mg/l	30 mg/l
Total Iron as Fe	IS 3025 (P) 53 – 2003 RA2014	0.18 mg/l	0.3 mg/l
Sulphate as SO ₄	IS 3025 (P) 24 – 1986 RA2009	7.42 mg/l	200 mg/l
Fluoride as F	IS 3025 (P) 60 -2008 RA 2013	BDL	1.0 mg/l
Zinc as Zn	IS 3025 (P)49 – 1994 RA2014	BDL	5 mg/l
Manganese as Mn	IS 3025(P) 59– 2006 RA2017	BDL	0.1 mg/l
Cadmium as Cd	IS 3025(P) 41– 1992 RA2014	BDL	0.003 mg/l
Lead as Pb	IS 3025(P) 47– 1994 RA2014	BDL	0.01 mg/l
Coliforms(MPN/100ml)	IS 1622: 1981 RA 2009	23	Absent
Ecoli (Present or Absent/100ml)	IS 1622: 1981 RA 2009	Absent	Absent

Note : BDL – Below Detection Level

For PoluChem Laboratories (P) Ltd.

Authorized Signatory

* End of the report*

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SREEJA RAMESH
 QUALITY MANAGER
 POLUCHEM LABORATORIES PVT. LTD



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TEST REPORT

Page 01 of 01

Client Name & Address	Certificate No:	PL/RT/SD/4074/2024			
M/s.H and P Granites 6/530,Mankada Kummil P.O.	Date of issue:	16/05/2024			
	Date of monitoring	10/05/2024			
	Monitoring Location	M/s.H and P Granites Re.Survey. No.s-465/04pt,465/05,481/01-1, 481/01-2,482/02,482/02-2,482/02- 3,482/04,482/05,482/06,483/04 Village-Kummil Panchayath: Kummil Taluk- Kottarakkara District- Kollam, Kerala			
	Sample Description	Ambient Sound Level –East Side			
HOURLY INTERVAL	RESULT	HOURLY INTERVAL	RESULT		
06.00 Hrs	49.8 dB (A)	23.00 Hrs	40.1 dB (A)		
07.00 Hrs	50.2 dB (A)	00.00 Hrs	41.2 dB (A)		
08.00 Hrs	53.6 dB (A)	01.00 Hrs	39.8 dB (A)		
09.00 Hrs	51.3 dB (A)	02.00 Hrs	38.7 dB (A)		
10.00 Hrs	49.8 dB (A)	03.00 Hrs	36.5 dB (A)		
11.00 Hrs	51.4 dB (A)	04.00 Hrs	38.4 dB (A)		
12.00 Hrs	49.6 dB (A)	05.00 Hrs	37.5 dB (A)		
13.00 Hrs	47.5 dB (A)				
14.00 Hrs	50.2 dB (A)				
15.00 Hrs	48.6 dB (A)				
16.00 Hrs	47.6 dB (A)				
17.00 Hrs	46.3 dB (A)				
18.00 Hrs	45.4 dB (A)				
19.00 Hrs	46.3 dB (A)				
20.00 Hrs	45.4 dB (A)				
21.00 Hrs	46.3 dB (A)			LeqDay	49.7 dB (A)
22.00 Hrs	44.7 dB (A)			LeqNight	38.5 dB (A)

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

*End of the Report *

For PoluChem Laboratories, (P) Ltd.

Authorized Signatory

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TEST REPORT

Client Name & Address	Certificate No:	PL/RT/SO/4073/2024
M/s.H and P Granites 6/530,Mankada Kummil P.O.	Date of issue:	16/05/2024
	Date of monitoring	10/05/2024
	Monitoring Location	M/s.H and P Granites Re.Survey. No.s- 465/04pt,465/05,481/01-1, 481/01-2,482/02,482/02-2,482/02- 3,482/04,482/05,482/06,483/04 Village-Kummil Panchayath: Kummil Taluk- Kottarakkara District- Kollam, Kerala
	Sample Description	Soil
Parameter	Test Method	Results
pH	IS 2720(Part25)-1973	6.87
Electrical Conductivity	IS 14767:2000RA2016	68 μ S/cm
Potassium as K	EPA 3050 B	58 mg/kg
Phosphorus as P	IS 10158 :1982 RA 2014	39 mg/kg
Nitrogen as N	IS 14684: 1999 RA 2014	135 mg/kg
Organic Carbon	IS2720(Part 22)-1972	0.74 %
Calcium	EPA 3050 B	94 mg/kg
Magnesium	EPA 3050 B	39 mg/kg
Chloride	UEPA9212	123 mg/kg
Sulphate	IS 2720 Part27:1977	164 mg/kg

For PoluChem Laboratories (P) Ltd.

Authorized Signatory.

End of the Report

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TEST REPORT

Page 01 of 01

Client Name & Address	Certificate No:	PL/AMB/RT/4071/2024
M/s. H and P Granites 6/530, Mankada Kummil P.O.	Date of issue:	16/05/2024
	Date of monitoring	10/05/2024
	Date of sample received:	11/05/2024
	Date of analysis	11/05/2024
	Monitoring Location	M/s.H and P Granites Re. Survey. No.s-465/04pt,465/05,481/01-1, 481/01-2,482/02,482/02-2,482/02- 3,482/04,482/05,482/06,483/04 Village-Kummil Panchayath: Kummil Taluk- Kottarakkara District- Kollam, Kerala
	Sample description	Ambient air – Near East side boundary
	Sample code given by client	Nil

SL NO	PARAMETERS	TEST METHOD	RESULTS	Limit as per NAAQS
01	Particulate Matter (PM ₁₀)	IS 5182 Part 23 2006 RA 2012	74.2 µg/m ³	100 µg/m ³
02	Particulate Matter (PM _{2.5})	CPCB	36.5 µg/m ³	60 µg/m ³
03	Sulphur dioxide	IS 5182 Part 2 2001 RA 2017	5.4 µg/m ³	80 µg/m ³
04	Nitrogen dioxide	IS 5182 Part 06 2006 RA2017	6.9 µg/m ³	80 µg/m ³

Note: NAAQS-National Ambient Air Quality Standards

* End of the Report*

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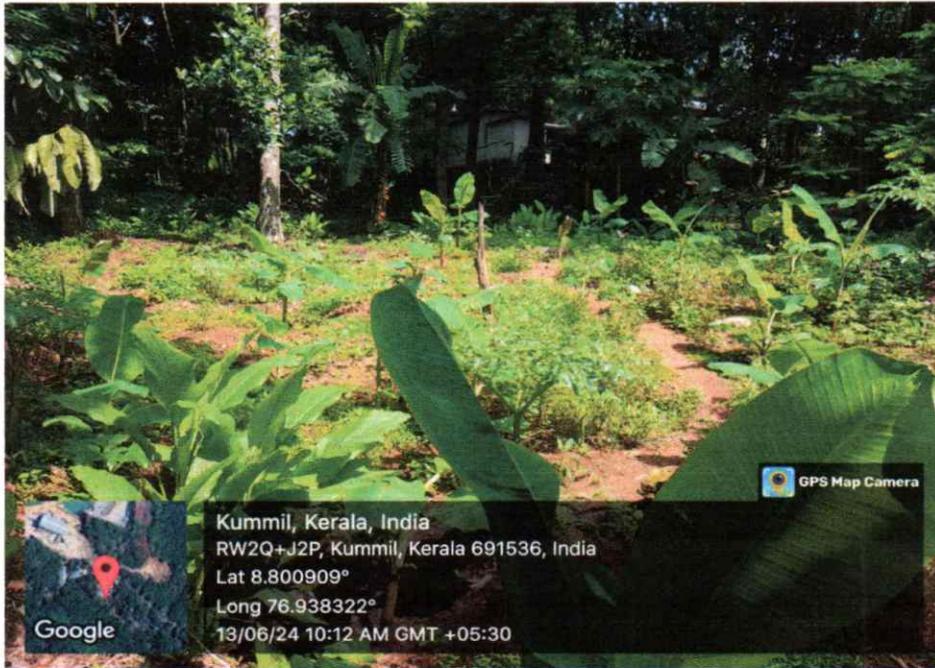
For and on behalf of
POLUCHEM LABORATORIES (P) LTD.

AUTHORIZED SIGNATORY

SREEJA RAMESH
QUALITY MANAGER
POLUCHEM LABORATORIES PVT. LTD



Coconut Plantation near Mine Boundary



Banana Plantation near Mine Office



Banana Plantation near Canteen



De-Siltation Pond near Crushing Plant