

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

APPEAL NO.41 OF 2024

IN THE MATTER OF:

Ushakumari. K.

...Appellant

v.

MoEF & CC
Rep. by its Deputy Director General of Forests (C),
Bangalore and Ors.

...Respondents

INDEX

Sl. No.	Description	Page No
1	Reply Statement filed by the 2 nd Respondent (SEIAA, Kerala)	1
2	Copy of the Minutes of the 144 th meeting of SEIAA, Kerala	11
3	Copy of the Field Inspection Report	13
4	Copy of the Minutes of the 146 th Meeting of the SEIAA, Kerala	20

Dated at Chennai on this 19th day of August, 2024



COUNSEL FOR 2ND RESPONDENT

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**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

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v.

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REPLY STATEMENT FILED BY THE 2ND RESPONDENT

I, Ajitha Kumari V R, aged 49 Years, D/o. Rejeswari Amma, working as Legal Officer, SEIAA at Thiruvananthapuram, do hereby solemnly affirm and sincerely state as follows:-

1. I am well acquainted with the facts of the case from the available records and I am authorized to file this reply statement on behalf of the Respondent No.2. I crave leave of the Hon'ble Tribunal to file statement as and when additional facts are available to the Respondents.

2. It is submitted that the Reply in parawise is traversed herein below:-

1. No Comments
2. True to the facts
3. Environmental Clearance for the Granite Building Stone Quarry of Sri. C. Krishna Pillai in Block No - 27, Re-Survey Nos. 283/1pt, 283/2pt, 283/4, 296/3pt of Ezhumattoor Village, Mallapally Taluk, Pathanamthitta District, was issued by SEIAA vide EC No. 53/Q/2022 on 20.07.2022, for the project life of 3 years from the date execution of mining Lease. Later, Smt. Usha Mohan vide letter dated 12.01.2023 forwarded the complaint against the EC granted to the Granite Building Stone Quarry of Sri. C. Krishna Pillai in Block No - 27, Re-Survey Nos. 283/1pt, 283/2pt, 283/4, 296/3pt of Ezhumattoor Village, Mallapally Taluk, Pathanamthitta District. The petitioner argued that the proposed area where the quarrying is being carried out is surrounded by about 200 residential buildings



Ajitha
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Assessment Authority
4th Floor, KSRTC Bus Terminal
Thiruvananthapuram - 1

within 50 - 150 m. The quarrying operation causes severe pollution and severe threat to the life of the people. Hence the petitioner requested to take appropriate action for the cancellation of the EC. Consequently, the proposal was placed in the 124th SEIAA meeting held on 27th & 28th February 2023. The Authority perused the item and noted the complaint dated 12.01.2023 received from Smt. Usha Mohan. The Authority observed that EC was issued by following the KMMCR distance criteria i.e., 50m and as per the field inspection report, the nearest residential building is at a distance of 56.3m from the project area. Authority also observed that the Ezhumattor Grama Panchayat Committee after field inspection decided to cancel the permission given to the quarry in its meeting held on 29.11.2022. Authority found that there are 63 buildings within 200 m and decided to authorize the Member, SEIAA along with a member of SEAC who conducted the field inspection for field assessment before taking a decision on the complaint.

After issuing notice to both parties, a field assessment was carried out on 19th March 2023 and their observation are as follows:

FIELD OBSERVATIONS

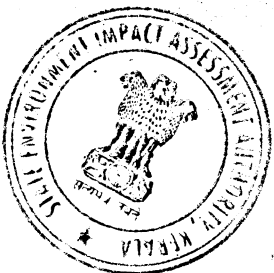
The Ezhumattor Grama Panchayat Committee after field inspection decided to cancel the permission given to the quarry in its meeting held on 29-11-2022. But the decision of Ezhumattoor Grama Panchayat Committee to cancel permission was not implemented till date and quarry is functioning.

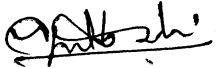
- 1) *The Project Proponent not yet furnished notarized affidavit that all the conditions stipulated in the EC shall be scrupulously followed (General Condition 1)*
- 2) *Copies of statutory clearances along with first HYCR not submitted (General Condition 2)*
- 3) *EC not yet advertised in newspapers (General Condition 3)*
- 4) *EC not uploaded in the website (General Condition 4)*
- 5) *Lease area not fenced with barbed wire. (General Condition 5)*



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**State Environment Impact
 Assessment Authority**
 4th Floor, KSRTC Bus Terminal
 Thiruvananthapuram - 1

- 6) *Details of EC not displayed as per specification in the entrance (General Condition*
- 7) *No gate at the entrance which may cause unauthorized entry of people and cattle and consequent accidents*
- 8) *Top soil not dumped as per approved plan and no gabion wall or geotextiles to prevent soil erosion. (General Condition 35)*
- 9) *No qualified Mining officials were seen engaged for supervising mining activities.*
- 10) *Access road not black topped*
- 11) *Buffer zone not marked properly*
- 12) *Planting of trees (Green Belt) as per EMP not started.*
- 13) *Blasting at 5 pm causes inconveniences to the people residing near the quarry*
- 14) *Top Soil and OB are more than projected in the mining plan.*
- 15) *Two small structures within 50 m distance seen demolished.*
- 16) *Transportation using heavy trucks causes traffic problem as per the petitioners*
- 17) *Sprinkling of water along roads not frequent and sufficient. (General Condition 39)*
- 18) *Garland and Drainage Canal not developed.*
- 19) *Cracks on walls and floors were observed in the houses of 1) Smt Usha Mohan, Sree Bhavan, 2) Sri. Vijayn Nair, Thamrassery Muri 3) Sri. Radhakrishna, Olikkal Melpurathu 4) Sri. Suresh O V, Olikkal Melpurathu on Chalappilly Ezhumattoor Road on the left and side of the entrance to the quarry.*
- 20) *There was a minor land slide on the down side of South eastern boundary of the quarry about six months back (in the compound of Sri. Jayaprakash, Kuruiampoikayil on Chalappilly Methanam Road). Local people apprehend that the problem may aggravate during monsoon season due to blasting.*
- 21) *Many houses around the quarry built directly on rock exposures making them more vulnerable to vibrations due to blasting. But the house of Sri D Sasi*




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 4th Floor, KSRTC Bus Terminal
 Thiruvananthapuram - 1

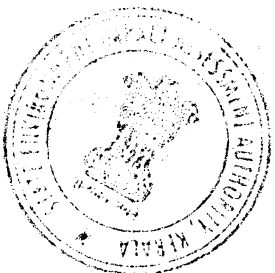
which is nearer to the project boundary is seen built on top soil and no cracks were observed on the walls of that house.

22) Most of the people living near the project area complained about inadequate dust control measures.

RECOMMENDATIONS

- 1) EC may be suspended for 3 months as major non compliances of general conditions are observed.*
- 2) Project Proponent may be directed to rectify/comply applicable EC conditions and the field observations within 3 months.*
- 3) There are 63 buildings within 200 radius of the quarry as per the Survey Map certified by the Village Officer. Some of the houses were built directly on rock exposures. So Vibration studies to evaluate the zone of influence and impact of blasting on the neighbourhood as suggested in Para (e) of OM No Z - 11013/57/2014-IA.II (M) dated 29-10-2014 of MoEF&CC by an agency of national repute has to be conducted by the Project Proponent within three months.*
- 4) SEAC after receiving the rectification/compliance report and detailed vibration study report may recommend on future functioning of the quarry. This may be done within one month after receipt of reports.*

The proposal was then placed in the 125th SEIAA meeting held on 28th & 29th March 2023. The Authority perused the item and discussed the field inspection report. The Authority decided to **Suspend** the Environmental Clearance EC No. 53/Q/2022 dated 20.07.2022 for **6 months** as major non compliances of general conditions are observed. Also, the Project Proponent was directed to rectify/comply applicable EC conditions and the field observations by furnishing the field inspection report within this period. Besides, since there are 63 buildings within 200 m radius of the quarry as per the Survey Map certified by the Village Officer and some of the houses were built directly on rock exposures, the Project Proponent was directed to conduct Vibration studies to evaluate the zone of influence and impact of blasting on the neighbourhood as suggested in Para (e) of OM No Z -



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Assessment Authority
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Thiruvananthapuram - 1**

11013/57/2014-IA.II (M) dated 29-10-2014 of MoEF&CC by an agency of national repute. It was also decided that after receiving the rectification/compliance report and detailed vibration study report SEAC shall relook the proposal and recommend on future functioning of the quarry with additional conditions if any. This has to be done within one month after receipt of reports. **The suspension order was issued vide proceedings dated 03.05.2023, and the decision was also intimated to the proponent vide Authority's letter dated 05.05.2023.**

4. It is submitted that, the Project Proponent submitted rectification/compliance report and detailed vibration study report as per the decision of the 125th SEIAA meeting and the same was placed in the 149th SEAC meeting held on 21st & 22nd August 2023. The Committee examined the vibration study report and other documents submitted by the project proponent and noted that as per the compliance report, the project proponent has complied with all the observations mentioned in the field visit report. Considering that the neighboring populations are affected, the Committee decided to hear both the Complainant & Project Proponent. Based on the decision of the 149th SEAC meeting, after prior intimation, complainants and Project Proponent were heard in its 151st SEAC meeting held on 16th to 18th October 2023. As invited, the complainants, Smt. Usha Mohan, Sri. P. K. Suresh, Sri. Praveen Chalapally attended the hearing on 18.10.2023. The complainants mentioned about dust pollution, water scarcity, difficulties due to the overland flow reaching the house compound of Smt. Usha Mohan, cracks in houses, collapse of borewell, apprehension about rockfall etc. The Project Proponent Sri. C. Krishna Pillai and the RQP, Dr. Nazar Ahammed were attended and the project proponent intimated that he had complied with all the observations made by the field inspection team and conducted the vibration study as directed by SEIAA in its 125th SEIAA meeting. **The Committee decided to direct the complainants and the project proponent to submit a detailed hearing note with all supporting documents within 7 days. The Project Proponent had submitted the hearing note on 25.10.2023 and the petitioner vide e-mail dated 13.11.2023.**

The proposal was then placed in the 155th SEAC meeting held on 18th & 19th December, 2023 and the Committee observed that the project proponent has taken corrective measures and conducted vibration study. As per the study, there is no vibration



**State Environment Impact
Assessment Authority
4th Floor, KSRTC Bus Terminal
Thiruvananthapuram - 1**



found beyond 75 m and the vibration is less than 5mm/s. It was also observed that the reason for the complaint was due to the non-compliance of EC conditions in the initial stages. Later the project proponent has done corrective measures. In this circumstance, the Committee recommended revoking the stop memo as per the reports and photographs submitted by the project proponent subject certain additional measures. Following this, the matter was placed in the 137th SEIAA meeting and the Authority decided to revoke the stop memo issued to the Project Proponent with 12 stringent additional conditions mentioned below:

1. *32-35mm diameter blast holes drilled with hand held Jackhammer drills to a maximum depth of 5feet (1.51), each hole may be charged with 375 to 500gm of explosive.*
2. *Burden x spacing pattern of 0.91 to 1.21m (3 to 4ft) based on the required fragmentation.*
3. *NONEL based shock tube 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.*
4. *If the distances between houses and the blast location is less than 150m then number of holes to be reduced gradually and should not be more than 14.*
5. *Conduct the blasts under the supervision of at least second class mines manager certificate holder. Every blast should have a completely free space, all the small rock pieces to be cleared before drilling itself and blast area to be covered completely with sand bags with mesh or blasting mats. In order to reduce the intensity of ground vibrations as far as possible the structures shouldn't be behind the blast.*
6. *Suggested blast layout may be used with the available NONEL intimation system with specific delay timing of 250/25ms.*
7. *As there are rock and top soil benches behind the houses towards the quarry the topsoil erosion may take place during rainy season irrespective of blasting also. So, it has to be observed periodically if any top soil movement towards the houses and corrective measures taken on priority.*



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Thiruvananthapuram

Suggested Blast Configuration


Sl. No.	Parameters	Suggested Value
1	Diameter of Blast hole (mm)	32 to 35
2	Burden (m)	0.91 to 1.21 (3 to 4 feet)
3	Spacing (m)	0.91 to 1.21 (3 to 4 feet)
4	Depth of Blast hole (m)	1.51 to 1.82 (5 to 6 feet)
5	No. of Blast holes	Maximum of 24
6	Explosive Charge/Hole (gun)	375 to 500
7	Maximum Charge/Delay (gm)	375 to 500
8	Total Charge/Blast (kg)	10.0
9	Initiation System	NONEL based shock tube detonators
10	Initiation Pattern	Row by row or Diagonal
11	Delay timing between any two blast holes	At least 8ms
12	No. of rows	Maximum of 3

8. *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.*
9. *Place a temporary wall of 5m height along the boundary facing the nearby houses.*
10. *Periodic de-siltation of the drainage channel and the silt traps*
11. *Enhancing the capacity of the garland drain if required*
12. *Constitute a monitoring committee comprising representative of local residents, local ward member, Project Proponent and Mine Manager to monitor the implementation of the EC conditions and blasting. The committee shall meet once in 3 months.*

Consequently, the Addendum containing the above conditions was issued on 17.02.2024 to the Project Proponent.

- 5-6. The suspension order was issued based on the non-compliance of EC conditions as mentioned in the field inspection report of the Authority. The suspension order was issued on a condition that on receiving the rectification/compliance report and detailed




**State Environment Impact
 Assessment Authority**
 4th Floor, KSRTC Bus Terminal
 Thiruvananthapuram - 1

vibration study report, from the Project Proponent, SEAC shall relook the project proposal and recommend on future functioning of the quarry. Based on the recommendation of the SEAC after verification of the vibration study and the compliance report submitted by the Project Proponent, the Authority revoked the suspension order. Besides, it is also submitted that the SEAC also heard the complainants and the project proponent, before recommending the revocation of EC. Further, the field inspection report clearly mentioned about the cracks found on 4 houses that located on left hand side of the entrance to the quarry project. As per the vibration study submitted by the Project Proponent, there is no vibration found beyond 75 m and the recorded vibration is less than 5mm/s. Besides, the Authority also insisted to constitute a Monitoring Committee comprising representative of local residents, local ward member, Project Proponent and Mine Manager to monitor the implementation of the EC conditions and blasting and they have the liberty to monitor the compliance of EC conditions including the usage of NONEL based shock tube detonators. It was also observed that the reason for the complaint was for non-compliance of EC conditions in the initial stages, which later rectified by the project proponent and submitted the compliance report. It is also submitted that the Mining and Geology Department is the responsible agency to ensure the mining as per the Mining Plan and the conditions stipulated therein the Kerala Minor Mineral Concession Rules, 2015 (KMMC Rules). Hence the averments of the petitioner is baseless.

7. No Comments.
8. There is no distance criteria stipulated in the EIA notification for mining projects and the final order regarding the distance criteria not yet issued by the Hon'ble Principle Bench of NGT. In Kerala, SEIAA, considers the distance criteria as stipulated in KMMCR 2015. Therefore, a 50m distance has been mandated to quarries from the built structures.
9. It is true to the fact the as per NGT Act 2010, any person aggrieved by an order of the Authority may within a period of thirty days from the date on which the order or decision or direction or determination is communicated to him. Here the order date is 17.02.2024



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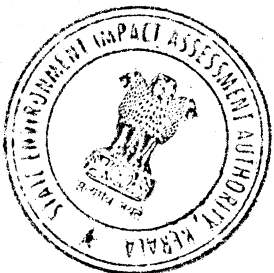
**State Environment Impact
Assessment Authority
4th Floor, KSRTC Bus Terminal
Thiruvananthapuram - 1**

and the communication received by the appellant on 23.02.2024. Therefore the applicability of the said Sn 16(g) has to be verified.

The Authority has taken appropriate and sufficient steps on the complaint received from the Smt. Usha Mohan dated 12.01.2023 and had issued the suspension order to the Project Proponent due to the non-compliance of EC conditions observed during the field inspection conducted by the Authority. The field inspection was carried out in a comprehensive way to ascertain the compliance of each of the conditions stipulated in the EC issued to the Project Proponent. The interim order in Appeal No. 41 of 2024 that received on 25.06.2024 was placed in the 144th meeting of the Authority held on 28th and 29th June 2024 and in compliance to the direction, In the above circumstances, to comply with the interim order of Hon'ble NGT, the Authority decided to entrust the Technical Team of SEIAA to conduct an inspection in the project site within 15 days. An Expert Mining Engineer shall also be invited for the inspection at the expense of Authority (*Minutes has been attached as Annexure R2(a)*). Consequently, the field inspection was conducted on 22.07.2024 by the technical team of SEIAA along with the Expert Mine Engineer (*The field Inspection Report has been attached as annexure R2(b)*). The report was placed before the 146th SEIAA meeting and based on the field inspection report and proof of documents, the Authority inferred that the Project Proponent is following NONEL technology for blasting. The Project Proponent also complied with all the EC conditions, except the following:

1. Garlands drains and the drainage channels leading to the desiltation tank (3 Nos) were found not properly constructed to contain the silt.
2. Planting of trees (Green Belt) as per EMP started; but not maintaining properly.
3. Top soil and overburden are found more than the quantity projected in the mining plan and is being stacked in the designated dumping area however the retaining boulder wall is not constructed.
4. Rainwater harvesting pond is not properly maintained.

In the above circumstances, the Authority decided to direct the Project Proponent to comply with the above observations within 1 month and submit the compliance report (*The minutes of 146th SEIAA meeting has been attached as Annexure R2(c)*). The letter was




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State Environment Impact
Assessment Authority
4th Floor, KSRTC Bus Terminal
Thiruvananthapuram - 4

forwarded to the Project Proponent vide letter dated 19/08/2024. Hence, SEIAA has complied with the interim order dated 10.05.2024 of the Hon'ble NGT in Appeal No. 41/2022.

Under the above circumstances, it is humbly prayed that this Hon'ble Tribunal may be pleased to dismiss the plea and pass such order or orders as this Hon'ble tribunal may deem fit and proper in circumstances of the case and thus render justice.

Dated at Chennai on this the 19th day of August, 2024.



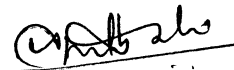
2ND RESPONDENT

**State Environment Impact
Assessment Authority**
4th Floor, KSRTC Bus Terminal
Thiruvananthapuram - 1

VERIFICATION

I, Ajitha Kumari V R, aged 49 Years, D/o. Rejeswari Amma, working as Legal Officer, SEIAA at Thiruvananthapuram, do hereby verify that the contents of paras are true to the best of my personal knowledge and paras believed to be true on legal advice and that I have not suppressed any material fact.

Verified at Chennai on this the 19th day of August, 2024.



2ND RESPONDENT

**State Environment Impact
Assessment Authority**
4th Floor, KSRTC Bus Terminal
Thiruvananthapuram - 1



**MINUTES OF THE 144th MEETING OF THE STATE LEVEL
ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA)
KERALA,
HELD ON 28th and 29th JUNE 2024**

Present:

- 1. Dr H Nagesh Prabhu IFS (Retd), Chairman, SEIAA, Kerala**
- 2. Sri. K Krishna Panicker, Member, SEIAA**
- 3. Dr Rathan U. Kelkar IAS, Member Secretary, SEIAA**

Item No. 144.27 **Environmental Clearance issued to the Granite Building Stone Quarry of Sri. C. Krishna Pillai for an area of 0.9705 Ha at Block No - 27, Re-Sy Nos. 283/1pt, 283/2pt, 283/4, 296/3pt in Ezhumattoor Village, Mallapally Taluk, Pathanamthitta – Complaint received from Smt. Usha Mohan**
(SIA/KL/MIN/165625/2020, 1440/EC1/2019/SEIAA)

The Authority deliberated the item and noted the decisions of SEIAA/SEAC in its various meetings, the Appeal No. 41 of 2024 filed by Sri. Ushakumari K., before the Hon'ble NGT, challenging the revocation of the suspension order of the Environmental Clearance (EC) which was originally granted on 20.07.2022 and the Interim Order in Appeal No. 41 of 2024 dated 10.05.2024, received on 25.06.2024. The Authority noticed that the Hon'ble NGT vide the interim order dated 10.05.2024 directed the SEIAA, Kerala (Respondent No. 2) to inspect the unit and if the project proponent is not using the NONEL technology, appropriate action may be taken. The SEIAA – Kerala is also directed to address the complaint of the appellant received earlier addressing the damages caused to her house.

The Authority noticed that the 124th meeting of SEIAA deliberated the complaint of the appellant and entrusted the Expert Member, SEIAA and the SEAC Member to inspect the site to assess the ground reality before taking a decision on the complaint. Accordingly, the SEIAA Expert Team inspected the project area on 19th March 2023, after intimating both the parties.

Based on the report of the Expert Team, the 125th SEIAA suspended the EC for 6 months and directed the project proponent to rectify /comply the EC conditions. It was also directed that the Project Proponent to conduct the vibration study to evaluate the zone of influence and impact of blasting on the neighbourhood. Based on the decision of the 125th SEIAA meeting, suspension of the EC was issued vide order dated 03.05.2023.

The Project Proponent submitted rectification/compliance report and detailed vibration study report as per the decision of the 125th SEIAA meeting. The 149th SEAC examined the vibration study report and other documents submitted by the project proponent. The SEAC noted that as per the compliance report the project proponent has complied with all the observations mentioned in the field visit report and decided to hear both the Appellant and Project Proponent. The 151st SEAC meeting heard the complainants, Smt. Usha Mohan, Sri. P.K. Suresh, Sri. Praveen Chalapally and the Project Proponent on 18.10.2023. The 155th SEAC recommended revoking the stop memo as per the reports and photographs submitted by the project proponent subject to the adoption of the additional measures.

Subsequently, the Authority in its 137th meeting, decided to revoke the stop memo issued to the quarry project and the modified the EC conditions by including 12 additional conditions as a mitigation to the averments raised in the complaint. The Authority noticed that the project proponent is directed to comply with NONEL blasting techniques and also suggested a detailed blast configuration.

In the above circumstances, to comply with the interim order of Hon'ble NGT, **the Authority decided to entrust the Technical Team of SEIAA to conduct an inspection in the project site within 15 days. An Expert Mining Engineer shall also be invited for the inspection at the expense of Authority. The Standing Counsel, NGT shall be intimated to file an extension petition for two months by explaining the action taken so far.**

Sd/-

Dr. H Nagesh Prabhu IFS (Retd)
Chairman, SEIAA

Sd/-

Sri K Krishna Panicker
Expert Member, SEIAA

Sd/-

Dr Rathan U. Kelkar IAS
Member Secretary, SEIAA

INSPECTION REPORT

Introduction

Environmental Clearance was issued for the Granite Building Stone Quarry of Sri. C. Krishna Pillai in Block No - 27, Re-Survey Nos. 283/1pt, 283/2pt, 283/4, 296/3pt, Ezhumattoor Village, Mallapally Taluk, Pathanamthitta, Kerala for an area of 0.9705 Ha vide EC No. 53/Q/2022 dated 20.07.2022 for the project life of 3 years from the date of execution of mining lease/permit

As per the complaint dated 12.01.2023 of Smt. Usha Mohan, Sree Bhavan, Chalappally P O, Pathanamthitta, the Sub-Committee of the Authority inspected the project site on 19th March 2023. Based on the field inspection report, the Authority suspended the Environmental Clearance EC No. 53/Q/2022 dated 20.07.2022 for 6 months for major non compliances of general conditions and directed the project proponent to rectify/comply applicable EC conditions and the field observations within this period. Besides, due to the presence of the 63 buildings within 200 m radius of the quarry as per the Survey Map certified by the Village Officer, the Project Proponent also directed to conduct vibration studies to evaluate the zone of influence and impact of blasting on the neighbourhood as suggested in Para (e) of OM No Z -11013/57/2014-IA.II (M) dated 29-10-2014 of MoEF&CC by an agency of national repute.

On receipt of the compliance report and the vibration study, the SEAC in its 149th SEAC meeting held on 21st & 22nd August 2023, decided to hear both the Complainant & Project Proponent.

In the 151st SEAC meeting held on 16th to 18th October 2023, the Appraisal Committee heard the complainants, Smt. Usha Mohan, Sri. P. K. Suresh, Sri. Praveen Chalappally on 18.10.2023. The complainants mentioned about dust pollution, water scarcity, difficulties due to the overland flow reaching the house compound of Smt. Usha Mohan, cracks in houses, collapse of bore well, apprehension about rock fall etc. Subsequently, the Committee heard the Project Proponent Sri. C. Krishna Pillai and he reiterated that he had complied with all the observations made by the SEIAA and requested to revoke the suspension of Environmental Clearance.

The 155th SEAC meeting held on 18th & 19th December, 2023 observed that the project proponent has taken corrective measures and conducted vibration study. As per the study there

is no vibration beyond 75 m and the vibration is less than 5mm/s up to 75m. Besides, the reason for the complaint was due to the non-compliance of EC conditions in the initial stages. On deliberation, the Appraisal Committee recommended revoking the stop memo as per the reports and photographs submitted by the project proponent subject to the adoption of the following additional measures:

1. Place a temporary wall of 5m height along the boundary facing the nearby houses.
2. Periodic de-siltation of the drainage channel and the silt traps
3. Enhancing the capacity of the garland drain, if required

The Authority in its 137th meeting held on 29th & 30th January, 2024, considered the recommendation of the 155th SEAC and the vibration study report submitted by the project proponent. The Authority decided to revoke the stop memo issued to the quarry project and the EC is amended with the following additional conditions:

1. *32-35mm diameter blast holes drilled with hand held Jackhammer drills to a maximum depth of 5feet (1.51), each hole may be charged with 375 to 500gm of explosive.*
2. *Burden x spacing pattern of 0.91 to 1.21m (3 to 4ft) based on the required fragmentation.*
3. *NONEL based shock tube 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.*
4. *If the distances between houses and the blast location is less than 150m then number of holes to be reduced gradually and should not be more than 24 per round of blast.*
5. *Conduct the blasts under the supervision of at least second class mines manager certificate holder. Every blast should have a completely free space, all the small rock pieces to be cleared before drilling itself and blast area to be covered completely with sand bags with mesh or blasting mats. In order to reduce the intensity of ground vibrations as far as possible the structures shouldn't be behind the blast.*
6. *Suggested blast layout may be used with the available NONEL intimation system with specific delay timing of 250/25ms.*
7. *As there are rock and top soil benches behind the houses towards the quarry the topsoil erosion may take place during rainy season irrespective of blasting also. So, it has to be observed periodically if any top soil movement towards the houses and corrective measures taken on priority.*

Suggested Blast Configuration

Sl. No.	Parameters	Suggested Value
1	Diameter of Blast hole (mm)	32 to 35
2	Burden (m)	0.91 to 1.21 (3 to 4 feet)
3	Spacing (m)	0.91 to 1.21 (3 to 4 feet)
4	Depth of Blast hole (m)	1.51 to 1.82 (5 to 6 feet)
5	No. of Blast holes	Maximum of 24
6	Explosive Charge/Hole (gun)	375 to 500
7	Maximum Charge/Delay (gm)	375 to 500
8	Total Charge/Blast (kg)	10.0
9	Initiation System	NONEL based shock tube detonators
10	Initiation Pattern	Row by row or Diagonal
11	Delay timing between any two blast holes	At least 8ms
12	No. of rows	Maximum of 3

8. *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.*
9. *Place a temporary wall of 5m height along the boundary facing the nearby houses.*
10. *Periodic de-siltation of the drainage channel and the silt traps*
11. *Enhancing the capacity of the garland drain if required*
12. *Constitute a monitoring committee comprising representative of local residents, local ward member, Project Proponent and Mine Manager to monitor the implementation of the EC conditions and optimum blasting parameters. The committee shall meet once in 3 months.*

Background

Smt. Ushakumari K., filed an Appeal No. 41 of 2024 before the Hon'ble National Green Tribunal, challenging the revocation of the suspension order of the Environmental Clearance (EC). The Hon'ble NGT vide interim order dated 10.05.2024 directed the SEIAA – Kerala to inspect the unit and if the project proponent is not using the NONEL technology, appropriate action may be taken. The SEIAA – Kerala is also directed to address the complaint of the appellant received earlier addressing the damages caused to her house.

The Technical Team of SEIAA, Kerala along with the Expert Mine Engineer visited the project site on 22.07.2024 and observed the following:

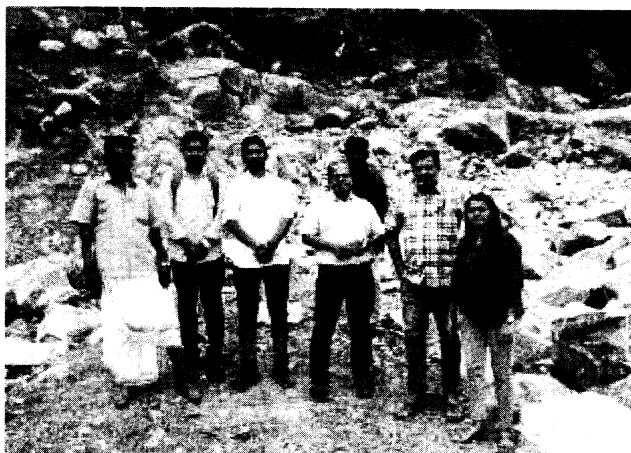
Field Observations

- 1) The quarry was not functioning at the time of the field visit.
- 2) The remnants of NONEL blasting, the hollow flexible plastic tube with NONEL Detonators are seen in the project site (photographs annexed)
- 3) The SHO, Perumpetty certified Form RE-3 – Form of Account to be maintained by a Licensee Accounts of Receipt of Explosive (Other than Fire Works) is maintained in the office, also clarifies that the 5th Respondent uses NONEL for blasting.
- 4) The payment voucher and invoice also indicates the purchase of NONEL for blasting.
- 5) An average of 70 – 80 blast holes per day are seen used for blasting from the daily usage records.
- 6) Maximum three blasting rounds are being followed per day.
- 7) Sand bags are observed in the site for the prevention of intensity of blasting.
- 8) Temporary wall of metal sheets are erected along the boundary facing the nearby houses including the house of Appellant.
- 9) Garland drains and drainage channels leading to the desiltation tanks (3 Nos) are not properly constructed to contain the silts.
- 10) During the site visit, the II Class Mines Manager was present and explained the scientific mining activities in the project area particularly with regards to safe and environmental friendly working.
- 11) Planting of trees (Green Belt) as per EMP started; but not maintaining properly.
- 12) Lease area is fenced with barbed wire and the Buffer zones are marked properly with stone pillars but lacked precautionary signboards.
- 13) Since, the mining commenced recently, the proper benches are being formed.

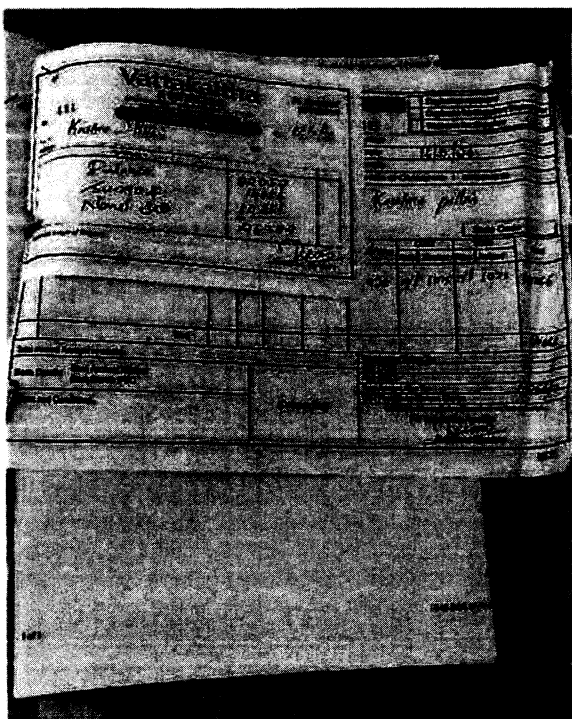
- 14) Top soil and overburden are found more than the quantity projected in the mining plan and is being stacked in the designated dumping area however the retaining boulder wall is not constructed.
- 15) Gates are provided at the entrance to prevent the unauthorized entry of people and cattle.
- 16) Access road to the project area seems concreted.
- 17) Sign boards showing the EC, the blast time, the danger zone, and other information are erected.
- 18) Monitoring Committee was constituted and the minutes of the meeting are documented.

Inferences

- 1) From the available records and observations, the Project Proponent has been adopting NONEL for blasting.
- 2) Sand bags are used for reducing the impact vibration due to muffle blasting.
- 3) To reduce the dust pollution, the metal sheets are provided along the boundary of the project area.
- 4) If the project proponent follows the specifications for blasting as suggested in the EC, the maximum vibration may be up to 35m from the blasting locations and may not cause any damage to the houses which are at more than 50m from the project boundary.
- 5) The project proponent needs to be more cautious to comply with all the EC conditions and should submit the compliance report with all necessary documentary evidence as per norms.







Smt. Sreeja Raj S. R.
Environmental Officer

Er. Joby Sebastian
Mine Engineer

Dr Jude Emmanuel
Environmental Scientist

**MINUTES OF THE 146th MEETING OF THE STATE LEVEL
ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA)
KERALA,
HELD ON 29th and 30th JULY 2024**

Present:

- 1. Dr H Nagesh Prabhu IFS (Retd), Chairman, SEIAA, Kerala**
- 2. Sri. K Krishna Panicker, Member, SEIAA**
- 3. Dr Rathan U. Kelkar IAS, Member Secretary, SEIAA**

Item No. 146.34 **Environmental Clearance issued to the Granite Building Stone Quarry of Sri. C. Krishna Pillai for an area of 0.9705 Ha at Block No - 27, Re-Sy Nos. 283/1pt, 283/2pt, 283/4, 296/3pt in Ezhumattoor Village, Mallapally Taluk, Pathanamthitta – Complaint received from Smt. Usha Mohan**
(SIA/KL/MIN/165625/2020, 1440/EC1/2019/SEIAA)

The Authority deliberated the item and noted the decisions of SEIAA/SEAC in its various meetings, the Interim Order in Appeal No. 41 of 2024 dated 10.05.2024, received on 25.06.2024 and the field inspection report of the Technical Team of SEIAA. The Authority noticed that the Hon'ble NGT vide the interim order dated 10.05.2024 directed the SEIAA, Kerala (Respondent No. 2) to inspect the unit and if the Project Proponent is not using the NONEL technology, appropriate action may be taken. The SEIAA – Kerala is also directed to address the complaint of the appellant received earlier addressing the damages caused to her house.

The Authority noticed that the Technical Team of SEIAA along with the Expert Mine Engineer conducted the field inspection on 22nd July 2024. Based on the field inspection report and proof of documents, the Authority inferred that the Project Proponent is following NONEL technology for blasting. The Project Proponent also complied with all the EC conditions, except the following:

1. Garlands drains and the drainage channels leading to the desiltation tank (3 Nos) were found not properly constructed to contain the silt.
2. Planting of trees (Green Belt) as per EMP started; but not maintaining properly.
3. Top soil and overburden are found more than the quantity projected in the mining plan and is being stacked in the designated dumping area however the retaining boulder wall is not constructed.
4. Rainwater harvesting pond is not properly maintained.

In the above circumstances, the Authority decided to direct the Project Proponent to comply with the above observations within 1 month and submit the compliance report. The Authority also decided to accept the field inspection report and submit the same to Hon'ble NGT.

Sd/-

**Dr. H Nagesh Prabhu IFS (Retd)
Chairman, SEIAA**

Sd/-

**Sri K Krishna Panicker
Expert Member, SEIAA**

Sd/-

**Dr Rathan U. Kelkar IAS
Member Secretary, SEIAA**