

**IN THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH AT NEW DELHI**

**M.A. Nos. 80 to 83, 85 to 88, 95 and 96/2021**

**in**

**O.A. No. 304 OF 2019**

**IN THE MATTER OF:**

M. Haridasan

...Applicant

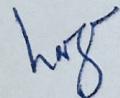
Versus

State of Kerala & Ors.

...Respondents

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(Nazimuddin)  
Scientist-F

Central Pollution Control Board  
Parivesh Bhawan, East Arjun Nagar  
Delhi- 110032

Place: Delhi  
Date: 28.10.2022

## **2<sup>nd</sup> INTERIM STATUS REPORT OF THE JOINT COMMITTEE CONSTITUTED BY HONOURABLE NATIONAL GREEN TRIBUNAL IN THE MATTER OF OA 304/2019**

### **1.0 Background**

Honourable National Green Tribunal (NGT) in the matter of OA 304/ 2019, directed to maintain longer distances for siting stone quarries as per the order dated 21<sup>st</sup> July, 2020; relying on the report submitted by Central Pollution Control Board (CPCB), following precautionary principle considering the right of the inhabitants, who are affected by air and noise pollution generated in the course of mining. As per the order, it was mandated to have 100 and 200m distance for stone quarry operations without and with blasting respectively. Subsequently, the aggrieved mining/ quarry lessees (project proponents) in Kerala filed appeals (MA Nos. 80, 83, 85, 88 to 95 of 2021) in the OA 304/2019 seeking impleadment with specific prayer of '*not to interfere*' with the distance criteria already laid down by the mining department and Kerala State Pollution Control Board (KSPCB). After examining the project proponents' contentions in details, Honourable NGT directed for an expert study by a joint committee comprising representatives from IIT (ISM), Dhanbad, CSIR-CIMFR, Dhanbad, CSIR-CBRI, Roorkee, IIT, Roorkee, Wadia Institute of Himalayan Geology, Dehradun, Directorate General of Mine Safety (DGMS) and CPCB on the subject of safe distance for stone quarry mining from habitations vide order dated 09<sup>th</sup> December, 2021 and relevant portion of the directions are reproduced herewith:

***"The Committee may inter-alia study the impact of blasting with NONEL Detonation technology at distances of 50m, 75m, 100m, 125m, 150m, 200m and 250m. The study will include the impact caused by vibrations on different soil strata /earth profile in the area and on-site noise and air levels, on building and human and wildlife. The study may be completed within three months and report will be furnished within four months. Any stakeholder will be at liberty to give their respective view point to the***

***Committee. State of Kerala and Kerala State PCB will facilitate undertaking of above study”.***

A copy of the Honourable NGT order dated 09<sup>th</sup> December, 2021 is annexed as **Annexure I.**

## **2.0 Joint Committee deliberations & activities**

In compliance with the Honourable NGT directions, a joint committee was constituted vide CPCB office memorandum dated 18<sup>th</sup> January, 2022 (**Annexure II**) with members/ representatives as per nominations received from respective institutes/ organizations. A representative of the Kerala State Pollution Control Board (KSPCB) was included in the joint committee as special invitee to attend all committee meetings as coordinator/ nodal officer for facilitating the expert study in Kerala. After the constitution of the joint committee, KSPCB coordinator was requested to pool/ compile relevant first order data/ information for the joint committee meetings/ deliberations. KSPCB was also instructed to constitute a State level facilitation committee for facilitating field studies in Kerala and to take stock of the monitoring infrastructure/ facilities available for the expert study. A detailed letter was forwarded to the Chairman, KSPCB in this regard on 8<sup>th</sup> March, 2022 (**Annexure III**).

Subsequently, several virtual joint committee meetings were carried out with KSPCB Coordinator as special invitee to the committee. Though it took considerable time to get important first order information, data sets on granite stone quarries and other relevant details necessary for mapping all quarries on the geological map of Kerala, the committee could map all working granite quarries with valid mining permits on the GIS platform for selecting locations for expert study. Since Kerala has myriad geological/ lithological/ tectonic profiles, it is important to select sites representing different geological profiles for assessing vibration under varying geological profiles.

### **3.0 Hearing of stakeholders and online survey**

The joint committee conducted physical hearings of stakeholders at Kozhikode, Ernakulam and Thiruvananthapuram. The venues for the physical hearing were arranged in the northern zone (Kozhikode), central zone (Ernakulam) and southern zone (Thiruvananthapuram). Public notice regarding hearing was published in leading Malayalam and English dailies in Kerala and was also published in the Kerala PCB website. As per the arrangements done by the KSPCB Coordinator, hearing was conducted from 23<sup>rd</sup>, 24<sup>th</sup> and 25<sup>th</sup> August, 2022 at Kozhikode, Ernakulam and Thiruvananthapuram respectively. During the hearings, 48 (Kozhikode), 53 (Ernakulam), and 61 (Thiruvananthapuram) persons orally presented their viewpoints/ issues/ complaints/ suggestions on stone quarries before the joint committee members. All the presentations/ dispositions were recorded live and the summary of the presentations were made in the form of minutes of hearing. During the hearing participants submitted written submissions on stone quarries before the joint committee and a total of 209, 71 and 90 submissions were received at Kozhikode, Ernakulam and Thiruvananthapuram respectively. All the written submissions received by the joint committee were comprehended and summarized in the form of spreadsheets. The joint committee also decided during the hearing that the suggestions/ recommendations provided by the quarry proponents, representatives of NGOs and the public shall be reviewed, considered for planning the expert study and for the final study report. The specific complaints/ grievances raised during the hearing also shall be reviewed and will be one of the rationale for site selection for the expert study. Apart from the physical hearing an online survey was also conducted by the joint committee. The online survey was hosted from 09-08-2022 to 26-08-2022 so that stakeholders can record their viewpoints on the granite stone quarries in Kerala. In the online survey, the joint committee received 6734 responses and the opinion received through online survey has been summarized and reviewed. The joint committee reviewed the outcome of physical hearing and online survey and decided to incorporate the public complaint/ grievances as one of the rationale for the site selection to carry out expert study. Joint committee also carried out a site visit to a stone quarry in Thiruvananthapuram district on 25th August, 2022.

#### 4.0 Present status of expert study

As per the joint committee decisions, scientific site selection is the foremost step in the expert study to assess the effect of stone quarry operations and now the committee mapped all the working stone quarries with valid mining permits on geological map of Kerala State and have shortlisted potential sites based on geology, tectonic elements, and dimension of the quarry area to carry out the expert study. Additionally, the quantum of public complaints/ grievances also has to be incorporated as one of the rationale for the site selection and the committee is currently working on it. Upon completion of the above task, the committee will be undertaking site visits to finalize the study locations in the month of November, 2022.

For the blasting trails and vibration assessments, KSPCB Coordinator was entrusted to call for techno-economic proposals from various agencies having expertise in blasting studies/ vibration assessment. Committee has already decided on the technical terms of reference for the vibration assessment and based on this KSPCB has called for proposals from short listed agencies to submit technical and financial proposals. Three agencies responded to the call and two of them submitted technical and financial bids. Based on the review of technical proposals, the committee recommended award of work to CSIR-CIMFR and financial bid was opened in the joint committee meeting held on 20-10-2022 (Minutes of the meeting annexed as **Annexure IV**). Committee suggested KSPCB to issue a work order to CSIR-CIMFR. A letter of intent of award of work dated 20-10-2022 (**Annexure V**) was issued to CSIR-CIMFR to carry out the blasting/ vibration assessment in minimum 9 stone quarries in Kerala. Representatives of CSIR-CIMFR accepted the letter of intent and Kerala PCB is in the process of awarding the work to CSIR-CIMFR. However, CSIR-CIMFR has demanded 3 months' time to complete the blasting trails/ vibration assessment in 9 stone quarries in Kerala. Committee has requested Dr. Siddharth Singh, member from CSIR-CIMFR to persuade the CIMFR team to take up the study on war footing and to complete the whole process in 2 months' time.

Joint committee also suggested Kerala PCB to take up mock/ trial monitoring of dust and noise in stone quarries to get acquainted with field conditions and to gain preparedness for the actual expert study to be carried out along with blasting trials/ vibration assessment. Accordingly, Kerala PCB formulated a field team and conducted a trial monitoring at a medium sized stone quarry in Ernakulam District on 18-10-2022.

KSPCB Coordinator informed the committee that the mock/ trial monitoring was a useful exercise as a run-in to the actual expert studies. The team also could identify a few issues and will help them mobilize the resources effectively during the actual expert study. Summary of the expert study components and progress achieved are given in Table: 1.

**Table 1: Expert study components**

<b>Study component</b>	<b>Methodology &amp; Implementing Agency</b>	<b>Progress</b>
Blast induced vibration, air over pressure, fly rock and study on the blast influence zone.	Blast induced ground vibration, air over pressure assessment using seismographs or digital geophones at various parameters up to 500m from the blast point. High speed cameras shall be used to study the fly rock distance zone during the blasting trials. The study shall be able to suggest site specific safe blasting protocols. Study will be carried out by the Rock Excavation Engineering Division, CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad.	Letter of intent of award of work issued to CSIR-CIMFR. Kerala PCB in the process of awarding work. CSIR-CIMFR requires 2-3 months' time to complete the work. Locations for the expert study were shortlisted and final selection of site to be done based on the site visit by the committee and representative of CIMFR blasting team.
Surface, Groundwater Noise and Air	Noise monitoring shall be carried out using class 1, noise level meters as per the CPCB noise monitoring	Mock/ trial monitoring of dust and noise completed in a medium sized stone

pollution monitoring.	protocols. Air pollution shall be assessed for PM 10, PM 2.5 parameters. Monitoring shall be done at various perimeters around the blast point. Kerala State Pollution Control Board and Central Pollution Control Board shall be carrying out the above exercise.	quarry as a run up to the study and to check preparedness of the monitoring team/ instruments. Team is now ready and equipped to carry out monitoring simultaneously with the CSIR-CIMFR blasting team.
Hearing stakeholders	Physical hearing and online survey in English/ vernacular language on the impacts of stone quarries conducted under the coordination of KSPCB/ State of Kerala.	Completed.

### 5.0 Request for time extension

The joint committee is currently at the penultimate stages of the assignment entrusted by the honourable NGT. As per the directives, stakeholders are to be given the opportunity to put forth their views and accordingly, the committee conducted hearings of stakeholders through physical means and online tools. Stakeholders' opinions/ suggestions/ grievances were recorded, reviewed and certain aspects are incorporated in the expert study to be conducted.

Committee also mapped all the working stone quarries with valid mining leases/ permits on the geological map of Kerala. From the map, probable study sites are shortlisted based on scientific rationale. As an input garnered from the hearing, quantum of public issues/ grievances was also made one of the rationale for the final site selection. From the hearing, it was also suggested that few of the scientifically managed stone quarries should also be included in the expert study as reference locations and the committee decided to include one or two such reference locations in the study. Committee along with representatives of CIMFR blasting team shall be visiting the shortlisted sites and based on the field

reconnaissance final sites shall be selected for the expert study. Site selection shall be completed in the month of November, 2022 and the expert study shall begin parallelly as north-west monsoon in Kerala declines. The vibration assessment studies have to be conducted when soil is not damp and the intermittent rainfall in Kerala may delay the study further.

Central Institute of Mining and Fuel Research (CIMFR) shall carry out blasting trials and blast induced vibration assessment at various perimeters up to 500m around the blast point. CIMFR has indicated 2-3 months' time for completing the study. Simultaneously, noise and dust monitoring shall be carried out around the blast point by Kerala PCB with the help of CPCB, RD, Bengaluru.

In view of the above, the joint committee prays for extension of time up to January 2023 to complete the expert study in compliance to the directions of the Honourable Tribunal.

Dated: 25th October, 2022

**Prof. Manish  
Shrikhande**

**Dr. D P Kanungo**

**Dr. B S Choudhary**

**Dr. Siddharth Singh**

**Dr. R J Perumal**

**Shri. Venugopal  
Swamy Kadem**

**Dr. Ritesh Kumar**

**Dr. Deepesh V**

**ANNEXURE - I**

Item No. 01

(Court No. 1)

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

M.A. Nos. 80 to 83, 85 to 88, 95 and 96/2021

IN

Original Application No. 304/2019

M. Haridasan

Applicant

Versus

State of Kerala &amp; Ors.

Respondent(s)

Poabs Granites (Pvt.) Ltd. & Anr.  
Kuthirakulam P.O., Vellanand,  
Thiruvanthapuram District,  
Kerala State

Applicants in M.A.  
Nos. 80 & 81/2021

M/s. Panachayil Industries  
West Othara P.O.,  
Thiruvalla Taluk,  
Pathanamthitta District  
Kerala State

Applicant in M.A.  
Nos. 82 & 83/2021

Crystal Granites Ltd. & Anr.  
Chulli P.O., Thathupara,  
Ernakulam,  
Kerala State-683581

Applicants in M.A.  
Nos. 95 & 96/2021

Raju K. Thomas & Ors.  
Vadasserikkara Post,  
Pathanamthitta District,  
Kerala-689662

Applicants in M.A.  
No. 85/2021

Reji Joseph & Anr.  
Narikkattu House,  
Chamampathal Post,  
Vazhoor, Kottayam District  
Kerala-686517

Applicants in M.A.  
No. 86/2021

Thomsun Aggregates  
Kuttipparambil (H),  
Vadaathoor P.O., Kottayam District  
Kerala State-686010

Applicants in M.A.  
No. 87/2021

Michael Granites & Ors.  
Kanjirathumkunnu House,  
Ramapuram Bazar Post,  
Kottayam District,  
Kerala State-686576

Applicants in M.A.  
No. 88/2021

Date of hearing: 09.12.2021

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Applicant: Ms. Nishtha Kumar Advocate for original applicant

Respondent(s): Mr. Krishnan Venugopal, Senior Advocate with  
Mr. E.M.S. Anam, Advocate for Applicant in M.A 80-81/2021  
Mr. E.M.S. Anam, Advocate for Applicant in  
M.A. 82,83,95&96/2021  
Mr. Abhilash M.R., Advocate for Applicant in M.A 85 to 88/2021  
Mr. Jogy Scaria, Advocate for KSPCB

### **ORDER**

1. These applications have been filed by mining lessees (project proponents) undertaking quarry mining at various locations in Kerala, which also involves blasting. Mining is beyond 50 meters while according to the original applicant longer distance has to be maintained, following precautionary principle having regard to the right of inhabitants, who are affected by air and noise pollution generated in the course of mining operations. This Tribunal earlier passed order dated 21.7.2020 laying down longer distance in the light of report of the CPCB by which the present PPs are aggrieved.

2. The PPs have drawn attention to the order of the Hon'ble Supreme Court dated 25.10.2021 in a batch of matters permitting filing of

applications before this Tribunal by the parties affected by the order of this Tribunal. The said batch of matters involved *inter-alia* the issue whether this Tribunal has jurisdiction to initiate *suo motu* action against violation of environmental norms which stands concluded by the judgment reported in *Municipal Corporation of Gr. Mumbai Vs. Ankita Sinha & Ors.*, 2021 (12) SCALE 184. Therein, it was held that the affected parties are entitled to be heard and they had not been heard in the present matter. The operative part of the order is reproduced below:

*“In light of the issue answered by this Court in Civil Appeal Nos. 12122-12123 of 2018 and connected cases titled as "Municipal Corporation of Gr. Mumbai Vs. Ankita Sinha & Ors." reported in 2021(12) SCALE 184, it would be appropriate to permit the appellant(s) to raise all contentions/objections as may be available and permissible in law before the National Green Tribunal (In short "the Tribunal") in the first place. The Tribunal may consider those contentions/objections and record reasons for accepting or rejecting the same, so that the appellant(s) if dis-satisfied may have further remedy of appeal(s) before this Court.*

*In other words, all contentions raised in the present appeal(s) on these aspects, including on merits are left open, to be considered by the Tribunal afresh.*

*We say so because the judgment rendered by this Court predicates that even if the Tribunal intends to initiate suo motu action, must give opportunity to the parties likely to be affected before passing any adverse order against them. Viewed thus, the ex-parte preemptory order(s) passed by the Tribunal without giving opportunity to the person(s) likely to be affected by such order(s), be treated as effaced from the record.*

*Keeping that principle in mind, we deem it appropriate to relegate the appellant(s) before the Tribunal with liberty to raise all contentions as may be permissible in law, to be decided by the Tribunal afresh on its own merits.*

*Notably, the decision of the High Court assailed in these appeal(s) also gives that liberty to the appellant(s). However, we expressly grant such liberty to the appellant(s), as aforesaid, in terms of this order.*

*The appellant(s) may, therefore, file a formal application to take up all contentions before the Tribunal which may be considered by the Tribunal afresh on its own merits and in accordance with law, including raised in this appeal(s) and in respect of matters, referred to by the Tribunal in the earlier order. The Tribunal to decide the proposed application expeditiously.*

*Learned counsel for the appellant(s) submits that before the Tribunal finally answers the issues raised by the appellant(s), the Tribunal may consider of issuing appropriate interim order to enable the appellant(s) to give effect to the contract/lease agreement in respect of the project in question. We accede to this prayer.”*

3. All the Applications are identical and relief sought is impleadment and directions not to interfere with the distance presently being followed as per rules laid down by the mining department and Kerala PCB.

4. We have heard learned Counsel for the parties.

5. As far as impleadment is concerned, the said prayer is granted, as the applicant has no objection to such a course being adopted in the light of order of the Hon’ble Supreme Court.

6. On merits also, stand in all the applications is almost same. The PPs claim to be carrying on quarry mining, using blasting at various locations under leases granted by the Mines Department of Kerala under the Kerala Minor Mineral Concession Rules, 1967. Minimum safety distance of 50m is maintained from nearest dwelling units. Grievance of the original applicant that 50m distance is not enough and reliance on observations of the Hon’ble Supreme Court in *M.C. Mehta v. Union of India*, (1996) 8 SCC 462 and *Mohammaed Haroon Ansari v. District Collector, Ranga Reddy District*, (2004) 1 SCC 491 is uncalled for.

7. To complete the narration, we may record that the Tribunal sought a report from CPCB and as per report dated 09.07.2020, it was suggested

that minimum distance should be 100m where blasting is not involved and 200m where blasting is involved. The Tribunal accepted the said view and, vide order dated 21.07.2020, issued directions in terms thereof which are reproduced for ready reference, as follows:

*“3. Accordingly, the CPCB has filed its report on 09.07.2020 concluding as follows:*

**“6.0 Conclusion:**

*In view of available information, following minimum distance criteria may be considered for permitting stone quarrying by SPCBs:*

<b>Mining Type</b>		<b>Minimum Distance</b>	<b>Locations</b>
<b>A.</b>	<b>When Blasting is not involved</b>	<b>100 m</b>	<i>Residential/Public buildings, Inhabited sites, Protected monuments, Heritage sites, National / State Highway, District roads, Public roads, Railway line/area, Ropeway or Ropeway trestle or station, Bridges, Dams, Reservoirs, River, Canals, Lakes or Tanks, or any other locations to be considered by States.</i>
<b>B.</b>	<b>When Blasting is involved</b>	<b>200 m **</b>	

**\*\*Note: The regulations for danger zone (500 m) prescribed by Directorate General of Mines Safety also have to be complied compulsorily and necessary measures should be taken to minimise the impact on environment. However, if any states is already having stringent criteria than the above for minor mineral mining (i.e. more prescribed distances than the above), the same shall be applicable.”**

*4. In view of the above, the said criteria be followed throughout India. The CPCB may monitor compliance.”*

8. In view of rival submissions, question is whether there is any scope for interference by this Tribunal.

9. Original applicant has opposed the applications of the PPs and submitted that minimum distance of 200m must be maintained in the interest of safety of the inhabitants as well as flora and fauna in the area. The Tribunal must follow the ‘Precautionary’ principle and, if any, further

study is undertaken, mining may not be allowed within 200m pending such study. It was also submitted that mining is continuing illegally in violation of orders of Hon'ble Supreme Court and on that aspect the matter is being further raised before the Hon'ble Supreme Court by the applicant.

10. Stand of learned Counsel for the PPs is that distance of 50m is laid down under the Mines and Mineral Rules as well as under the orders of the State PCB. Any longer distance is beyond the jurisdiction of this Tribunal. CPCB also has no jurisdiction as powers under the EP Act are only with MoEF&CC.

11. Further submission is that due to topography of the State of Kerala, longer distance will obstruct the legitimate mining activities in violation of sustainable development principle. With the use of Nonel Detonation technology, 50m distance is adequate and does not cause any adverse impact.

12. Reliance has also been placed on a CSIR-Central Institute of Mining & Fuel Research study conducted in June 2021 on "SCIENTIFIC STUDIES FOR DESIGN OF SAFE BLAST PARAMETERS AT PEROORKADA STONE MINE, KUTHIRAKALAM P.O. VELLANADU, THIRUVANANTHAPURAM, KERALA" concluding and recommending as follows:

## **"8. CONCLUSIONS AND RECOMMENDATIONS**

### **8.1 Conclusions:**

*The following conclusions can be drawn from the results of the study on blast vibration analysis:*

- i) From the blasting trials, with the designed blast patterns, it was observed that blast induced ground vibrations; air overpressure and fly rock were within safe limits*
- ii) The use of bottom hole-initiation systems like shock tubes in conjunction with noiseless trunk line delays (NTLD) during trial blasts kept the vibration and air over-pressure to the allowable limits.*

- iii) *Proper stemming with coarse grained sand reduced the chances of flyrock and limited to bare minimum within the quarry area.*
- iv) *The throw of the muck was found to be favourable for easy removal and handling by machines*
- v) *The maximum value of blast induced ground vibration (PPV) level recorded at the south eastern boundary from where the closest civil structure (water tank), is 1.024 mm/s with dominant excitation frequency as 82.25 Hz at a distance of 125 m.*
- vi) *The maximum projectiles range of flyrock was observed as 10-15 m from the blast site and the air overpressure levels recorded were within the safe limits (<128 dB).*
- vii) *This clearly indicates that the blast design parameters followed during the studies at the mine are quite safe to the nearby habitats and structures.*

## **8.2 Recommendations:**

*On the basis of data analysis and results of the study the following points are recommended for consideration and strict adherence for controlled blasting and safety of structures:*

1. *It is recommended to practice the blast design parameters as burden = 1 m spacing = 1.2m, hole depth = 1.8 m to 3m and specific charge = 0.35 kg/m<sup>3</sup>.*
2. *Maximum hole depth can be upto 3m. Holes of lesser depth may have a tendency of generating more flyrock.*
3. *In case of varying hole depth, charge per holes should be calculated on the basis of specific charge (0.35 kg/m<sup>3</sup>)*
4. *The hole diameter should be kept at 32mm and there should be no variation in diameter of the drilled holes.*
5. *Typical blast designs shown in the figure 6 and 7 should be followed for safe blasting practice*
6. *The safe maximum charge per delay for the distances of 45m and above, from the dwellings/structures is mentioned in Table-5, and Figure 16, which should be followed to contain the ground vibrations and flyrock within the limits.*
7. *Although, the nearest house not belonging to quarry owner, is towards South-east direction of the mine at a distance of 250 m and the safe maximum charge per blast for that distance, as per the Table-4, is 8.29 kg*
8. *Prilled Ammonium Nitrate Fuel Oil (ANFO) and Cartridge emulsion explosive of 25mm diameter to be used for all production blast rounds. Care should be taken to ensure utilization of explosive within the prescribed shelf-life period.*
9. *Blast rounds should be planned in such a manner that at least one free face is available*
10. *Maximum four rows are to be fired in each blast round to avoid cumulative confinement and flyrock problem.*
11. *Top of the face should be cleaned for any debris. The face should be cleared of muck of the previous blast as it creates flyrock.*
12. *The free face direction should be, as far as possible, opposite from the hutments/ structures (temporary or*

*permanent). The propagation of the initiation should be opposite to the structures/ habitats.”*

13. We have duly considered the above submissions. We do not find any merit in the objection of the PPs that this Tribunal has no jurisdiction in view of distance laid down under the Mines and Mineral Rules. in view of law laid down *inter-alia* in *Mantri Techzone Pvt. Ltd. v. Forward Foundation and Ors.*,<sup>1</sup> and *the Director General (Road Development) NHAI v. Aam Aadmi Lok Manch.*<sup>2</sup> There is also no merit in the contention that CPCB has no jurisdiction under the EP Act. CPCB has jurisdiction under EP Act, as per delegation under section 23 of the said Act as well statutory powers under the Air and Water Acts and also under directions of this Tribunal. Plea of the PPs that the study relied upon clinches the matter in their favour is also not born out from the said study. There is also no merit in the contention that even at the cost of environment mining must be allowed having regard to peculiar topography of Kerala.

14. Thus, while the stand of the PPs cannot be accepted, out of abundant caution, we are inclined to consider further expert study on the subject of safe distance for mining from habitations.

15. Accordingly, we constitute a seven-member joint Committee comprising CPCB, Indian Institute of Mines/ IIT, Dhanbad, CSIR - Central Institute of Mining & Fuel Research (CIMFR), Dhanbad, CSIR-Central Building Research Institute (CBRI), Roorkee, IIT Roorkee, Wadia Institute of Himalayan Geology, Dehradun and Directorate General of Mines Safety, GoI. The nodal agency will be CPCB for coordination and compliance. The cost of the study will be initially borne by CPCB and thereafter as may be decided by this Tribunal. The Committee may undertake visit to the

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<sup>1</sup> 2019 SCC online SC 322, Para 43-47

<sup>2</sup> AIR 2020 (SC) 3471, Para 75

relevant sites and except for such visits, conduct proceedings online, if necessary. The Committee will be at liberty to take assistance from any other expert/institution. The Committee may inter-alia study the impact of blasting with Nonel Detonation technology at distances of 50m, 75m, 100m, 125m, 150m, 200m and 250m. The study will include the impact caused by vibrations on different soil strata /earth profile in the area and on noise and air levels, on building and human and wildlife. The study may be completed within three months and report furnished within four months. Any stakeholder will be at liberty to give their respective view point to the Committee. State of Kerala and Kerala State PCB will facilitate undertaking of above study. The report may be furnished to this Tribunal within four months by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF and also upload the same on website of CPCB simultaneously so that the concerned parties/Departments can access the same for further course of action.

M.A. Nos. 80/2021, 82/2021, 95/2021 stand disposed of.

List OA 304/2019 for further consideration on 11.05.2022.

A copy of this order be forwarded to CPCB, Indian Institute of Mines/ IIT, Dhanbad, CSIR - Central Institute of Mining & Fuel Research (CIMFR), Dhanbad, CSIR-Central Building Research Institute (CBRI), Roorkee, IIT Roorkee, Wadia Institute of Himalayan Geology, Dehradun, Directorate General of Mines Safety, GoI, State of Kerala and Kerala State PCB by e-mail for compliance.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Dr. Nagin Nanda, EM

December 09, 2021  
M.A. No. 80/2021 to M.A. No. 83/2021,  
M.A. No. 95/2021, M.A. No. 96/2021,  
M.A. No. 85/2021 to M.A. No. 88/2021  
DV

## ANNEXURE-II



**CENTRAL POLLUTION CONTROL BOARD  
REGIONAL DIRECTORATE “NISARGA BHAWAN”, 1<sup>ST</sup> FLOOR  
THIMMAIAH ROAD, 7 ‘D’ CROSS, SHIVANAGAR  
BENGALURU-560 079**

**Phone: 080-23233739, 080-23233827, Fax: 080-23234059**

**Email: zobangalore.cpcb@nic.in**

Tech/39/RDS/NGT/2021-22/741

18<sup>th</sup> January, 2022

**OFFICE MEMORANDUM**

**Sub: Constitution of Joint Committee as per the directions of Honourable National Green Tribunal (NGT), Principal Bench order dated 09-12-2021 in the matters of MA Nos. 80, 83, 85, 88, 89, 90, 91, 92, 93, 94, and 94 of 2021 in OA No. 304/2019.**

Honourable NGT in the above matter of OA 304/ 2019, by an order dated 21-07-2020, directed to maintain longer distances for siting stone quarries in the light of Central Pollution Control Board (CPCB) report following precautionary principle considering the right of the inhabitants, who are affected by air and noise pollution generated in the course of mining. Subsequent, to the NGT order, the aggrieved mining lessees (project proponents) filed appeals (MA 80, 83, 85, 88 to 95 of 2021) in the OA 304/2019. All the MAs sought impleadment in the matter with specific prayer of not to interfere with the distance laid down by mining department and Kerala Sate Pollution Control Board (KSPCB).

After examining the project proponents' contentions in details, Honourable NGT is inclined to consider an expert study afresh by a joint committee on the impact of blasting using NONEL Detonator Technology in stone quarries. The study includes impacts on vibrations on different soil strata/ earth profile, on noise levels, on air pollution levels, on buildings, humans and wildlife. In compliance of the NGT directions, a joint committee is constituted with following members as per nominations received from respective institutes/organisations.

*S. Suresh*  
18/1/2022

*Members of Joint Committee*

<i>No</i>	<i>Name &amp; Designation</i>	<i>Institute/ Organization</i>
1	Prof. B S Choudhary, Associate Professor	Dept. of Mining Engineering, IIT (ISM), Dhanbad-826004. <a href="mailto:bhanwarschoudhary@iitism.ac.in">bhanwarschoudhary@iitism.ac.in</a> , 91-326-223-5735
2	Dr. Siddharth Singh, Sr. Principal Scientist	CSIR-CIMFR, Barwa Road, Dhanbad-826001. <a href="mailto:ss@cimfr.nic.in">ss@cimfr.nic.in</a> , <a href="mailto:ssgcmri@yahoo.com">ssgcmri@yahoo.com</a> , 9431122769
3	Dr. D P Kanungo, Chief Scientist	CSIR-CBRI, Roorkee-247667. <a href="mailto:dpkanungo@cbri.res.in">dpkanungo@cbri.res.in</a> , 9412073009
4	Prof. Manish Shrikhande, Professor	Dept. of Earth Quake Engineering, IIT, Roorkee-247667. <a href="mailto:manish.shrikhande@eq.iitr.ac.in">manish.shrikhande@eq.iitr.ac.in</a> , 91-1332-285437
5	Prof. Ritesh Kumar, Assistant Professor	Dept. of Earth Quake Engineering, IIT, Roorkee-247667. <a href="mailto:ritesh.kumar@eq.iitr.ac.in">ritesh.kumar@eq.iitr.ac.in</a> , 91-01332-284981
6	Dr. R J Perumal, Scientist F	Wadia Institute of Himalayan Geology, Dehradun-248171. <a href="mailto:ramperu@wihg.res.in">ramperu@wihg.res.in</a> , 91-135-2525142
7	Shri. Venugopal Swamy Kadem, Dy. Director (Mining)	Directorate General of Mine Safety (DGMS), Bangalore Region, Bengaluru, Karnataka-560071. <a href="mailto:kademvenugopaldaswamy@gmail.com">kademvenugopaldaswamy@gmail.com</a> , 9434738698
8	Dr. Deepesh V, Scientist C ( <b>Member convener/ Nodal officer</b> )	Central Pollution Control Board, Regional Directorate, Bengaluru, Karnataka-560079. <a href="mailto:deepesh.cpcb@nic.in">deepesh.cpcb@nic.in</a> , 9611128895

In compliance to NGT order, the joint committee shall formulate a methodology for the expert study. The impact assessment shall be conducted at various radial distances from the blasting point and committee shall recommend a safe distance to be maintained from the mines/ quarries. The committee may undertake visit to the relevant sites in Kerala and interact with the stakeholders. The scope of the joint committee may be amended from time to time based on NGT's interim orders, committee deliberations or any other issues highlighted by any of the stake holders.

CPCB shall technically coordinate the entire activity in organizing meetings with committee members, coordinating site visits, compilation of technical inputs, report finalization and filing of final report as nodal agency.

S. Suresh  
18/11/2022

The joint committee will be free to coordinate with other concerned authorities and take assistance of any individual/ institution if required. In this connection, at any point of time if committee feels that any additional assistance from institution/ individual is required, same may be included as special invitee for considering the views but not as committee member. The committee may also consider other relevant issues related to the study based on the interactions with stakeholders. After finalization of the report by the joint committee, latest by 9<sup>th</sup> April, 2022, the report shall be sent to CPCB, Delhi for filing it in NGT, Principal Bench, Delhi after obtaining concurrence from Competent Authority. The time frame shall be strictly followed considering the date fixed for filing the report as per the NGT order.

Honourable NGT made KSPCB and other relevant Kerala State Departments responsible for the coordination/ arrangements for conducting field studies. Relevant field sites for the study shall be finalized in consultation with the KSPCB. As per the nomination of KSPCB, details of official nominated as Coordinator/ Nodal Officer for this purpose is given below.

Shri. Krishnan M N, Environmental Engineer (Coordinator/ Nodal officer)	Kerala State Pollution Control Board, District Office, Palakkad, Kerala. <a href="mailto:kspcbpalakkad@gmail.com">kspcbpalakkad@gmail.com</a> , 9447975719
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Coordinator/ Nodal Officer from KSPCB shall be responsible for facilitating field studies and coordinating the functioning of joint committee in Kerala. The nodal officer from KSPCB shall participate in the joint committee meetings as a special invitee. KSPCB will arrange entire logistics, arrangement for field visits and meetings for all committee members till the report is accepted by NGT. KSPCB shall interact with State Departments responsible for mining/ minor mineral quarry activities for further arrangements to conduct the expert study, finalization of field visits, hearing of parties and meeting with other stake holders as per the NGT directions. The related monitoring shall also be arranged/ conducted by KSPCB as and when desired by the Joint Committee.

From time to time CPCB shall circulate minutes of the meetings and draft reports to all members through email and also through online messenger/ chat group, to be created exclusively for the purpose.

S. Suresh  
18.11.2022

Committee members are requested to share their mobile numbers for this purpose. It is the primary responsibility of all committee members to respond immediately and to provide suggestion/ concurrence to the minutes/ reports and in case of non-response from any members within the time frame, it will be considered as concurrence to the report. Individual correspondence may not be preferred and all views shall be posted in the group so that all committee members will have the track of the issues.

First joint committee meetings shall be conducted through online wherein, further dates for joint committee proceedings could be finalized considering the time frame set by NGT.

S. Suresh  
18/11/2022  
(S. Suresh)

**Regional Director**  
**9480672128**

[ssuresh.cpcb@nic.in](mailto:ssuresh.cpcb@nic.in)

To:

1. Prof. B S Choudhary, Associate Professor, Dept. of Mining Engineering, IIT (ISM), Dhanbad-826004. [bhanwarschoudhary@iitism.ac.in](mailto:bhanwarschoudhary@iitism.ac.in)
2. Dr. Siddharth Singh, Sr. Principal Scientist, CSIR-CIMFR, Barwa Road, Dhanbad-826001. [ss@cimfr.nic.in](mailto:ss@cimfr.nic.in), [ssgcmri@yahoo.com](mailto:ssgcmri@yahoo.com)
3. Dr. D P Kanungo, Chief Scientist, CSIR-CBRI, Roorkee-247667. [dpskanungo@cbri.res.in](mailto:dpskanungo@cbri.res.in)
4. Prof. Manish Shrikhande, Professor, Dept. of Earth Quake Engineering, IIT, Roorkee-247667. [manish.shrikhande@eq.iitr.ac.in](mailto:manish.shrikhande@eq.iitr.ac.in)
5. Prof. Ritesh Kumar, Assistant Professor, Dept. of Earth Quake Engineering, IIT, Roorkee-247667. [ritesh.kumar@eq.iitr.ac.in](mailto:ritesh.kumar@eq.iitr.ac.in)
6. Dr. R J Perumal, Scientist F, Wadia Institute of Himalayan Geology, Dehradun-248171. [ramperu@wihg.res.in](mailto:ramperu@wihg.res.in)
7. Shri. Venugopal Swamy Kadem, Dy. Director (Mining), Directorate General of Mine Safety (DGMS), Bangalore Region, Bengaluru, Karnataka-560071. [kademvenugopalaswamy@gmail.com](mailto:kademvenugopalaswamy@gmail.com)
8. Dr. Deepesh V, Scientist C (Member convener/ Nodal officer), Central Pollution Control Board, Regional Directorate, Bengaluru, Karnataka-560079. [deepesh.cpcb@nic.in](mailto:deepesh.cpcb@nic.in)
9. Shri Krishnan M N, Environmental Engineer, (Coordinator/ Nodal officer) District Office, KSPCB, Palakkad, Kerala. [kspcbpalakkad@gmail.com](mailto:kspcbpalakkad@gmail.com)
10. MS, Kerala State Pollution Control Board, Thiruvananthapuram, Kerala.
11. Director, Directorate of Mining & Geology, Thiruvananthapuram, Kerala.
12. DH, IPC-II, CPCB, Delhi.
13. Admin Section, CPCB, Bengaluru
14. Accounts Section, CPCB, Bengaluru

S. Suresh  
18/11/2022  
(S. Suresh)

**Regional Director**





NGT MATTER/ TOP PRIORITY

Tech/39/RDS/NGT/2021-22/ 885

8<sup>th</sup> March, 2022

To

The Chairman  
Kerala State Pollution Control Board,  
Head Office, Plamoodu Junction, Pattom P.O.  
Thiruvananthapuram – 695004

Sub: Honourable National Green Tribunal (NGT), Principal Bench order dated 09-12-2021 in the matters of MA Nos. 80, 83, 85, 88, 89, 90, 91, 92, 93, 94, and 95 of 2021 in OA No. 304/2019: Information/ details sought for the expert study/ joint committee meeting.

Ref: CPCB, OM: Tech/39/RDS/NGT/2021-22/741, dated 18-01-2022.

Sir,

As per the Honourable NGT order dated 09-12-2021, it is directed to carry out expert study by a joint committee on the impact of blasting using NONEL Detonator Technology in stone quarries in Kerala. The study includes assessing impact of vibrations on different soil strata/ earth profile, noise levels, air pollution levels, impact on buildings, humans and wildlife. In compliance of the NGT directions, a joint committee is constituted as per the reference and Honourable NGT made KSPCB and other relevant Kerala State Departments responsible for the coordination/ arrangements for conducting field studies. Preliminary discussions with the nodal officers/ coordinators from CPCB and KSPCB were carried out and following preliminary requirements were delineated for the expert study.

- To formulate a facilitation committee with representatives from the Departments of Mining and Geology, Industry, Forest, organizations like PESO, KFRI and other concerned stake holders to facilitate field studies in Kerala. The facilitation committee and KSPCB shall make arrangements for the expert studies and specific role for each of the stake holders in the facilitation committee may be assigned by KSPCB.

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क्षेत्रीय निदेशालय (दक्षिण) : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिम्मय्या रोड, 7-डी मैन, शिवनगर, बेंगलूरु - ५६० ०७९.

Regional Directorate (South) : " Nisarga Bhawan ", A-Block, 1<sup>st</sup> & 2<sup>nd</sup> Floors, Thimmaiah Road, 7<sup>th</sup> D - Main, Shivanagar, Bengaluru - 560 079.

दूरभाष / Telephone : 080-23233739, 23233827, 23233996, 23233600, 23232559, 23226002, 23222539, Fax : 080-23234059

ई-मेल / E-mail : cpcbszo@yahoo.com, zobangalore.cpcb@nic.in

प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

Head Office : Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.

दूरभाष / Telephone : 011-43102030, Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल / E-mail : cpcb@nic.in वेबसाइट / Website : www.cpcb.nic.in

- To provide data/ information on the stone quarries operating in Kerala, including those operating in high hazard locations (earthquake/ landslide prone areas as per the hazard map of Kerala) and those operating in ecologically sensitive areas. KSPCB may also identify stone quarries where the expert studies can be considered.
- Details of facilities/ competency available with KSPCB/ other stake holder organizations/ R&D institutes that can be utilized for the expert study to assess the impact of blasting in terms of vibrations, noise, air pollutants and effects on buildings, humans & wildlife.

Since, the matter pertains to the stone quarries in Kerala, it would be a difficult task for CPCB to coordinate the field activities and logistics arrangements for the joint committee. In this scenario, it is requested that KSPCB may coordinate the field activities and logistic arrangements in Kerala. The expenditure/ cost involved with the expert study /logistic arrangements for the joint committee shall be re-appropriated once the study is completed as per the final verdict of Honourable NGT in this matter.

It is requested to update the actions plans and provide the data/ information sought preferably before the joint committee meeting fixed on 14<sup>th</sup> March, 2022.

Yours faithfully

*S. Suresh*  
(S. Suresh)

8/3/2022

Regional Director

9480672128

cpcbsuresh@gmail.com

Copy to:

1. The Member Secretary, KSPCB, H.O., Pattom P.O., Thiruvananthapuram – 695004.
2. Shri. M N Krishnan, Coordinator/ Nodal Officer, KSPCB, Palakkad.
3. The DH, Legal Division, CPCB, HO, Delhi.
4. The DH, IPC-II, CPCB, HO, Delhi.



**MEETING MINUTES (20-10-2022)**

Meeting title	<i>Meeting of the Joint Committee constituted as per the directions of Honourable National Green Tribunal (NGT), Principal Bench, Delhi's order dated 09-12-2021 in the matter of OA No. 304/2019.</i>
Sequence	Meeting # 09
Date	20 <sup>th</sup> October, 2022
Time	15.12 to 16.12 hrs. IST
Platform/ Venue	Online meeting via 'Google Meet'
Meeting link (online)	<a href="https://meet.google.com/xj-xtvt-brs">meet.google.com/xj-xtvt-brs</a>
Meeting facilitator	CPCB, Regional Directorate, Bengaluru, Karnataka.
List of attendees/ absentees	See ANNEXURE

Honourable NGT in the matter of OA 304/ 2019, directed (order dated 21-07-2020) to maintain longer distances for siting stone quarries in the light of a report submitted by Central Pollution Control Board (CPCB) following precautionary principle considering the right of the inhabitants, who are affected by air and noise pollution generated in the course of mining. Subsequent, to the above NGT order, the aggrieved mining lessees (project proponents) filed appeals (MA Nos. 80, 83, 85, 88 to 95 of 2021) in the OA 304/2019. All the MAs sought impleadment in the matter with specific prayer of not to interfere with the distance laid down by the mining department and Kerala State Pollution Control Board (KSPCB). After examining the project proponents' contentions in detail, Honourable NGT directed for an expert study by a joint committee on the subject of safe distance for mining from habitations. Specific directions were given to study the impact of blasting using NONEL detonator technology in stone quarries. The study includes impacts on vibrations on different soil strata/ earth profile, on noise levels, on air pollution levels, on buildings, humans and wildlife.

The joint committee had a virtual meeting to discuss the following agendas:

- Award of blast trials and vibration assessment work to CSIR-CIMFR
- Site selection for the expert studies
- Mobilizing other resources for the expert study
- Interim status report to be submitted to honourable NGT, PB before next hearing (02-11-2022).

- To discuss the outcome of the mock/ trial monitoring conducted by KSPCB.

The available quorum of the joint committee had a detailed discussion on the site selection from the map prepared by Dr. R J Perumal. It was explained that from the map site selection can be made based on the quarry data obtained from the Dept. of Mining & Geology, geological attributes and area/ magnitude of the quarries. However, it was opined that, as decided in the physical hearing held during 23-25<sup>th</sup> August, 2022; the quantum of public complaints/ grievances against stone quarries also has to be one of the rationale for site selection. Other committee members supported this view point and Shri. Krishnan M N, Coordinator presented a compilation of public complaints listed against stone quarries in Kerala. He also clarified that, though there are several public complaints against stone quarrying in Kerala, grievances specific to quarries are less compared to the generalized complaints against stone quarrying activities in Kerala. The committee decided that the KSPCB coordinator may work on the map shared in geodatabase file format to incorporate another layer based on the prevailing complaint/ grievances against stone quarries. Thus it was decided that a minimum of 9 stone quarries shall be selected from the short listed location based on the field reconnaissance to be carried out by the joint committee members. It was also suggested that few scientifically managed/ disciplined quarries could be included in the expert study as reference locations.

The committee then discussed the award of work to CSIR-CIMFR to carry out blasting trials/ vibration assessment. As decided in the previous meeting, the comparative statement of technical terms of references received from CSIR-CIMFR and NIT-Surathkal was shared with all committee members. A panel of subject experts from the joint committee (Dr. D P Kanungo, Dr. B S Choudhary and Shri. Venugopal Swamy Kadem) were asked to review the comparative statement prepared by KSPCB coordinator and the member convener. The panel members reviewed the statement and opined that as per the technical terms of references CSIR-CIMFR is meeting all the requirements. The available committee members agreed to this and decided to open the financial bid. As instructed by the Regional Director, KSPCB Coordinator opened the price bid and informed that CSIR-CIMFR quoted Rs. 4.5 Lakhs per quarry to carry out blasting/ vibration assessment. Logistics and accommodation of the CIMFR team within Kerala State has been excluded and has to be borne by the sponsor during the study. Committee suggested to the KSPCB Coordinator to initiate award of work to CSIR-CIMFR and in reply it was informed that the award of work shall be done at the level of Chairman, Kerala PCB and a Letter of Intent (LoI) of award of work can be issued to CIMFR immediately. Committee

members agreed to this and instructed to issue LoI immediately and to follow up with the competent authority in Kerala PCB for issuing work order on war footing.

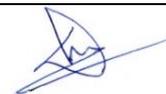
Committee had a detailed discussion on the second interim status report to be filed before the Honourable NGT before the next date of consideration (02-11-2022). Shri J Chandra Babu, Regional Director (RD), CPCB, Bengaluru informed that he had a discussion with the dealing advocate and an interim status report to be filed before NGT. Committee informed that the blast induced vibration and site selection needs to be done meticulously and it takes time. It was also discussed that the erratic north east monsoon in Kerala also may play spoilsport during the expert studies. Dr. Siddharth Singh informed that he can persuade the CIMFR team to take up the work on war footing and to complete the studies within 2 months' time provided full cooperation from Kerala.

Committee members in general opined that once 15 sites are shortlisted, site visits shall be carried out to finalize the site selection and this exercise to be completed in the month of November, 2022. For this purpose, Dr. R J Perumal shall forward the map in the form of geodatabase file to KSPCB Coordinator. Shri. Krishnan M N presented briefly on the outcome of the mock/ trial monitoring conducted at a stone quarry in Ernakulam. He summed up that the exercise was useful for the KSPCB monitoring team to optimise the logistics and could acquaint well with the field preparedness.

The meeting ended with a vote of thanks to all the joint committee members and other officials who participated in the meeting. The meeting concluded by 16.12 hrs.

Prepared by	Dr. Deepesh V, Member Convener
Date/ Version	27 <sup>th</sup> October, 2022, Version 1.0
Approved by the joint committee members.	<ol style="list-style-type: none"> <li>1. Dr. Siddharth Singh, Committee Member</li> <li>2. Dr. R J Perumal, Committee Member</li> <li>3. Dr. D P Kanungo, Committee Member</li> <li>4. Dr. B S Choudhary, Committee Member</li> <li>5. Dr. Deepesh V, Committee Member/ Convener</li> <li>6. Shri. M N Krishnan, Special Invitee</li> </ol>

Date: 28-10-2022



(Dr. Deepesh V)  
Member Convener

## ANNEXURE

<b>Attendees/ Participants list</b>	
<b><i>Joint Committee Members</i></b>	
1	Dr. R J Perumal, Scientist F, Wadia Institute of Himalayan Geology, Dehradun.
2	Dr. D P Kanungo, Chief Scientist, CSIR-CBRI, Roorkee.
3	Dr. Siddharth Singh, Sr. Principal Scientist, CSIR-CIMFR, Barwa Road, Dhanbad.
4	Dr. Deepesh V, Scientist C, Central Pollution Control Board, Regional Directorate, Bengaluru, Karnataka. ( <i>Member convener</i> )
5	Shri. Krishnan M N, Environmental Engineer, Kerala State Pollution Control Board (KSPCB), District Office, Palakkad, Kerala. ( <i>Special invitee/ Coordinator-KSPCB</i> )
<b><i>Central Pollution Control Board officials</i></b>	
6	Shri. J Chandra Babu, Regional Director, Central Pollution Control Board, Regional Directorate, Bengaluru, Karnataka.
<b><i>Members of State level facilitation committee</i></b>	
7	Shri. Shiju M A, Environmental Engineer, Kerala State Pollution Control Board (KSPCB), District Office, Wayanad, Kerala.
8	Smt. Pravithamol T N, Asst. Environmental Engineer, Kerala State Pollution Control Board (KSPCB), District Office, Pathanamthitta, Kerala.
9	Asst. Engineer, Kerala State Pollution Control Board (KSPCB), District Office, Palakkad, Kerala.
<b>Absent list</b>	
1	Dr. B S Choudhary, Associate Professor, Dept. of Mining Engineering, IIT (ISM), Dhanbad.
2	Prof. Manish Shrikhande, Professor, Dept. of Earthquake Engineering, IIT, Roorkee.
3	Shri. Venugopal Swamy Kadem, Dy. Director (Mining), Directorate General of Mine Safety (DGMS), Bangalore Region, Bengaluru, Karnataka..
4	Dr. Ritesh Kumar, Assistant Professor, Dept. of Earthquake Engineering, IIT, Roorkee.



**KERALA STATE POLLUTION CONTROL BOARD**  
DISTRICT OFFICE, PALAKKAD  
NEAR DISTRICT PANCHAYATH OFFICE, PALAKKAD – 678 001  
[www.keralapcb.nic.in](http://www.keralapcb.nic.in)

**28**  
**ANNEXURE V**

In reply please refer to: PCB/PLKD/TG-304/2019

Date: 21-10-2022

From

Environmental Engineer

To

Dr. C. Sawmliana,  
Chief Scientist & HoS,  
Rock Excavation Engineering Division,  
CSIR - Central Institute of Mining and Fuel Research (CIMFR),  
Barwa Road, Dhanbad, JHARKHAND- 826015, INDIA.  
E-mail: [csawmliana@cimfr.nic.in](mailto:csawmliana@cimfr.nic.in), [clsa\\_cimfr@yahoo.com](mailto:clsa_cimfr@yahoo.com)

**Sub:** Letter of Intent- Award of Work- Study Ordered by National Green Tribunal in OA 304 of 2019- Blasting-Vibration Study in Granite Quarries of Kerala

**Ref:** i) This office letter of even no. dated 20-9-22  
ii) Your letter and proposal dated 27-9-22  
iii) Decision of the meeting of the Joint Committee held on 20-10-22

Sir,

In OA 304 of 2019 before the National Green Tribunal (NGT), the Tribunal had ordered a study to fix safe distance to habitations, etc. for granite quarrying. The Joint Committee constituted by the Tribunal vide its Order to conduct the study had instructed the Kerala State Pollution Control Board (KSPCB) to invite proposals from institutions of national repute, having capability to conduct the study. Proposals were invited seven institutions of national repute having expertise in the field of blasting-vibration studies vide letter (1). The proposal received from Central Institute of Mining and Fuel Research (CIMFR) vide letter (2) has been adjudged by the Joint

Committee, in the meeting referred (3) held on 20-10-22, to be the only proposal which qualifies technically. The price bid sent by CIMFR along with proposal was opened and the Joint Committee instructed the KSPCB to accept the price bid as per which the basic cost of blasting-vibration study for one quarry site, as per the Scope of Work prescribed, is Rs.4,50,000 (Four lakhs and fifty thousand only) with 18 percent GST additionally. The financial proposal vide (2) is accepted by the KSPCB with its exclusions as such. The study have to be conducted in a minimum of nine quarries. Hence KSPCB is pleased to inform you by this letter of intent that the work will be awarded to CIMFR. Formal order of award of work will be issued by Chairman or Member Secretary of KSPCB after the terms of payment is fixed satisfying your requirement and the set practices of KSPCB, with formal approval of the Joint Committee as well.

You are requested to accept the intent to award the work and give a letter of acceptance at the earliest. You may include the required terms of payment in detail in your reply.

Yours faithfully,  
**Krishnan M N** Digitally signed by Krishnan M N  
Date: 2022.10.21 13:49:21 +05'30'  
Environmental Engineer



# सीएसआईआर- केन्द्रीय खनन एवं ईंधन अनुसंधान संस्थान 30 CSIR-Central Institute of Mining and Fuel Research

( वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद / Council of Scientific & Industrial Research )

( अंतर्गत वैज्ञानिक तथा औद्योगिक अनुसंधान विभाग, विज्ञान और प्रौद्योगिकी मंत्रालय, भारत सरकार )

(Under the Department of Scientific & Industrial Research, Ministry of Science & Technology, Govt. of India)

बरवा रोड, धनबाद - 826015, झारखण्ड, भारत / Barwa Road, Dhanbad - 826015, Jharkhand, India

(आई एस ओ 9001 प्रमाणित संस्थान / ISO 9001 Certified Institute)



To:  
Sri Krishnan M N  
Environmental Engineer  
Kerala State Pollution Control Board,  
District Office, Palakkad,  
Kerala, Pin-678 001

Ref. CSIR-CIMFR/REE/KSPCB/2022/

Date: October 21, 2022

**Subject:** Acceptance of Letter of Intent-Award of Work to carry out scientific studies for the assessment of influence zones due to blasting at granite quarries in the state of Kerala as per the order of Hon'ble NGT OA 304/2019

Reference: Your Letter No. PCB/PLKD/TG-304/2019 dated 21.10.2022

Dear Sir,

We thankfully acknowledge the receipt of your letter No. PCB/PLKD/TG-304/2019 dated 21.10.2022 regarding Letter of Intent-Award of Work to carry out scientific studies for the assessment of influence zones due to blasting at granite quarries in the state of Kerala as per the order of Hon'ble NGT OA 304/2019.

We, hereby, expressed our acceptance of your Letter of Intent-Award of Work to carry the above mentioned studies. Regarding the payment terms, 50% of the total scientific study cost should be paid in advance before the commencement of the field investigation. The balance 50% amount should be paid after completion of the field investigation works.

The scientific study cost should be paid through e-transfer system. The details of bank for e-payment are as follows.

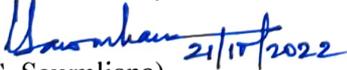
Bank Name: State Bank of India, Hirapur (Code – 1670), Dhanbad

Bank a/c No. 30256736794, MICR code: 826002007, IFS Code/ NEFT Code: SBIN0001670

Vender/customer Bank e-mail id: sbi.01670@sbi.co.in

Thanking you,

Yours faithfully,

  
(C. Sawmliana)

Chief Scientist & HoS

Rock Excavation Engineering Research Group

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