

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI**

O. A. No. 304 of 2019

IN THE MATTER OF:

M.HARIDASAN

...Applicant in the OA

Versus

STATE OF KERALA& ORS

...Respondents in OA

AND IN THE MATTER OF:

Quarry EC Holders' Association
Represented by its Vice President
Sri. Akkavila Satheek S/o Lekshmanan
Aged 66 years, Akkavila house,
Sree Sharavana Nagar, 200
Iravipuram P.O. Kollam, Kerala 691 011

...APPLICANT

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Quarry EC Holders' Association
Kerala State Committee
Registration No. KKD/CA/393/2019
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Chirakkulam Road
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...APPLICANT/
RESPONDENT

**OBJECTION FILED BY THE MISCELLANEOUS APPLICANT/
RESPONDENT, QUARRY EC HOLDERS' ASSOCIATION KERALA
STATE COMMITTEE TO THE REPORT DATED 02/03/2023 FILED BY
THE JOINT COMMITTEE**

1. The Quarry EC Holders Association is a stake holder in respect of the subject matter of the lis in OA 304 of 2019. The application for impleading of this association has been allowed and it also is benefitted as per the direction of the Hon'ble Apex Court through the judgment dated 25/10/2021 in C.A. NO. 6273 of 2021 and

connected cases, was pleased to grant liberty to all stakeholders to approach this Hon'ble Tribunal and to raise all contentions/ objections with regard to the Order dated 21.07.2020 passed by this Hon'ble Tribunal in O.A. No. 304 of 2019. Thereby the following aspects are placed for the consideration of this Hon'ble Tribunal and it is submitted without prejudice to the stand that the above complaint is not maintainable either in law or on facts and there is jurisdictional issue in directing for a fresh distance for mining activity which varies from location to location and mineral to mineral for various reasons:

2. **Legality of direction to re-fix distance criteria:** Actually fixing a distance as part of a rule under a Statute is within the prerogative of Executive Authority fixed and appointed by the Statute concerned. Therefore, it would be just and fair to avoid an action in furtherance of the above report and re-fixing distance rule under compulsion through orders of this Hon'ble Tribunal. The discretion is given to each state is for identifying safe distance depends on the nature of mineral, location and requirement etc.
3. The joint committee appointed in the above case as per order, dated 09/12/2023 has filed the report, dated 02/03/2023. There are various serious objections in respect of the method of

preparation and accuracy as to the contents of the report when it was deviating from the established scientific and legal principles.

4. The report dated 02/03/2023 filed by the joint committee as per the order dated 09/12/2023 in the above O.A. is unfounded and it cannot be acted upon in a pan Kerala or pan India basis. Exceptions cannot be the general conditions and the said report recognizes exception as general conditions. The measurements adopted and collected for the said report and data analysis therein were not correct. It is a bundle of mistakes and incorrect understanding.
5. If the recommendations in the said report are accepted, the same would destroy the chance of development of the State of Kerala and it will cause for a crossing the borders of living cost index. It will destroy the very existence of the State of Kerala and the ordinary people therein.
6. The socio-economic impact assessment of the implication of the recommendations were not considered by the joint committee. In other words, the said committee has failed to follow the principles of sustainable development by reckoning the basic requirement of the state and its subjects to have minimum infrastructural development out of their possible economic limits.
7. Isolated application of a component alone of sustainable development is not permissible and therefore in the absence of comprehensiveness on all the component principles of sustainable

development declared and adopted by the United Nations, the study report becomes unsustainable.

8. In other words, comparative advantage of each activity by referring to the need of the society and economy for fundamental existence should be reckoned. Therefore, each component principle has to be given comparative weightage depends on the location and situation. This is not done and therefore the study is incomplete and the report cannot be relied on for any purpose.
9. The joint committee was not authorized to make any proposal rather than placing its studies with actual measurements. Curiously the suggestions were made without reckoning the mitigation technics. Those aspects are not stated anywhere in the report. Practically the time taken in each quarry alone would show that there was no proper evaluation of the effect of working of each quarry.
10. In any case those studies did not reckon the aspect that at least for a minimum period of 55 years from 1967 onwards the minimum prohibited distance in Kerala was 50 meters and even then there was no accident or issues out of old/unscientific blasting technics which are now substituted with controlled blasting technics.
11. The said report was prepared without giving notice to the real stake holders i.e, the running quarry operators and investors in quarry sector. Moreover, that report was prepared with vague information. Practically, the scale of measurement was not referred to anywhere

in the report. Therefore, the accuracy of the report is affected seriously. There was occasion for monitoring dust etc., before suppression of dust.

12. There was no mechanism to identify background noise. Therefore, there is every chance for interference of activity and background noise. The main thread which passes throughout the report is a pre-concerted move to fix a distance more than fifty for some reasons which are known to the members of the committee alone as per the impression received from a normal reading of the said report.
13. The identification of results is suffering from vitiating elements. The Joint Committee was carried away by the representations made by some local objectors. Out of them, most of them are pseudo environmentalists against the quarries but are interested to avoid competition to the infrastructural developments made by them by using minerals. In science there is no democratic choice and this aspect has also been overlooked by the joint committee in the report.
14. The said report carries the defect of mixing up of facts/data from one quarry with another quarry. The alleged studies were not in tune with the standards prescribed for such studies. The time taken for study in respect of each aspect was not tune with the accepted general conditions for such study. The incorrect entries in the data sheet, as evident from various parts of the report themselves,

speak in volumes against the accuracy of the said report. There is no justification data analysis to outweigh the distance fixed by rules.

15. The element of "Transportation Pollution", in the absence of local quarries, for making the minerals locally available from distant places has not been referred to anywhere in the impugned report. Such a requirement for long transportation is always there in the absence of local quarries to meet the demand of local public. This aspect has not been taken care of by the Joint Committee.
16. Even as per the said report, it could be seen that other elements causing air pollution are not identified. The pollutants were present even without any blasting operations and quarry operations. It is an admitted case. That means, other than quarry activity the alleged pollutants were present in the ambience.
17. In any case, the dust and noise are matters which can be regulated. Curiously, the regulatory measures are not mentioned anywhere in the report. In most of the quarries, there is mechanism for wetting by using water sprinklers and there is mechanism for reducing noise. When mitigation is possible, non-mentioning of the same, itself makes the report unreliable.
18. Mistakes/errors in conducting the test caused for identifying the real polluting agents. The presence of PWD Road and presence of regular transportation/traffic were not taken into consideration for identifying whether such transportation was the cause of dust and

noise. This element and its effect should have been noted separately.

19. Curiously, the number of holes used for conducting blasting also was not mentioned. Therefore, the identification of Air Over Pressure, Dust and Noise etc., cannot be based on valid foundation of data. The number of trees, slope of location etc., were not specified on each location of test as per the report. Therefore, the calculation cannot be correct.
20. The method of calculations also has not been stated in the report. It is doubted that there is mistaken noting of measurements in the graph prepared by the Nodal Agency. In a normal course, the minimum time that is required for conducting a test in a unit is minimum 7 days including non-working days and working days. Then only, the Average Noise Level, Dust Level etc., could be identified.
21. Now, as per the report, it could be seen that every test is conducted by parallel monitoring and that too without minimum required number of machines. It means, there was no monitoring machines on every point. Normally it is to be presumed that the location clearance was not possible in two days especially when quarries are located on hilly tracts. That is why the scale of measurement is cropped in the report.
22. The result/value shown in the report is not in tune with the actually measured values. The topography of each location of the test

conducted were not mentioned anywhere. There was no scientific discussion and there was no publication of method/procedure that is going to be followed in each test locations. Curiously, the different categories of quarries were not opted for test.

23. Scientifically, the clarity was absent in the matter of collection of data. There is no clarity whether noise monitoring was by manual method or by machine method. In any case the basic data suffers from vagueness. As per the report, it gives a wrong impression that the project of AOP has long standing effect but actually, it is otherwise.
24. Otherwise if the same principle is applied, Railways cannot conduct any service across human settlement area because the sound and dust that would be created by running of a train is higher than the blasting activity in respect of which report is filed.
25. It is not clear why inspection and test was limited only to 9 quarries. It is not clear how much percentage of working quarries are represented by such 9 quarries. Most curiously, as per the photograph produced along with the report, it can be seen that location of monitoring machines are within the close proximity of noise/dust creating machines. That alone is sufficient to identify that there was error in data collection.
26. Moreover, in the matter of placing data in the graph, there were mistakes. It amounts to misrepresentation. If the placing of data, calculation and graph is on the same page, the above mistake

could be easily identified. In some of the locations, there is no clarity as to the PPV value with reference to the unit of heads. In other words, there is difference between the data summarized and the data plotted in the graph.

27. The DGMS had conducted detailed study for fixing the distance criteria and nothing has been stated as reason to ignore that study. That study has not found any place in the report as a reference document. Even as per the study report, there is no independent evaluation of each activity in a working quarry. Only cumulative reporting is done. If the noise is the condition reckoned for regulating an activity, no transportation activity could be permitted in a human settlement area. Even as per the study, 90db to 120db alone has come as the cumulative effect of quarry activity.
28. Practically, the impugned study was for identifying the impact of blasting activity. There is no isolated identification of the effect of blasting. Instead of which a table calculation was done without specifying that each activity is a started one during quarrying. The total working hours would come to 8 Hours in a quarry.
29. The blasting activity out of the 8 hours quarrying activity would take only 5 minutes in a day. That means that is only a negligible one when compared to any other activity in various walks of life. Otherwise, railway, highway and Airport authority cannot be allowed to operate as they are causing constant and report sourcing of dust and noise.

30. The machine vibration and blasting vibration are different. At present NONEL detonators are being used in quarries in the State of Kerala. It is possible to electric detonators. The mistakes in the practice cannot be reckoned as a condition to restrict the distance. The mistake in practice is to be corrected in tune with the statutory regulations. It is possible to avail of acoustic compressors. Using of breakers is inevitable, but use of the same can be reduced by using electric detonators.
31. Anyway, mechanical breakers are permitted after complying with the standards of noise as per noise regulations. Moreover, the study that was directed only to identify the impact of blasting. The recommendations in the impugned report made by the Joint Committee are unfounded and there was no authority for the same either.
32. It is unreasonable to identify the worst case scenario as the general scenario. Now, science is advanced for controlled blasting. As per the study report, it could be seen that even non-working days are shown as dust and noise. That means the quarry activity is not the reason for dust and noise.
33. In addition to the above general aspects the following specific instances (some of them only) are pointed to establish that the study conducted was not proper.

A. The Kerala State Pollution Control Board cannot conduct this Study:

- i. KSPCB is only a statutory body, whereas they are not a research organization or a well established Testing facility in state. They Have the Legal privilege to Monitor and Analyse the Legal/Statutory samples, as part of the Law/rule Enforcement as stipulated in EPA Act.
- ii. As per the NABL accreditation Certificate (Certificate No. TC8525 dtd.10.02.2023) indicates that Central Laboratory of the KSPCB, at Gandhinagar has only facility to monitor and analyse the parameters Particulate matter Less than 10 Micron size (PM10), Sulphur dioxide, Oxides of Nitrogen, and Suspended Particulate Matter (SPM) in the discipline /Group Chemical-Atmospheric Pollution and Materials or Products Tested in Ambient Air. The scope of the accreditation have not been covered for the parameters Particulate matter less than 2.5 Micron Sizes (PM2.5) and the Ambient Noise level.
- iii. Joint committee has considered the data of Sampling and Analysis about the three important parameters PM10, PM2.5 and noise levels observed by the KSPCB even though the Laboratory have not been equipped with the facility and expertise to conduct the sampling and analysis of the parameters PM2.5 and Ambient Noise Level as complied with the ISO 17025 standards , accreditation standard of Testing laboratories, stipulated by Quality Council of India, Under Science and Technology Department, GOI.

B. Reported without sampling:

In page No. 989 stated that there was no sampling station has installed at 500m distance in West direction while monitoring done at M/s Aducadu granites, Pathanamthitta. Report has pertained the reported values as table PM 10 and PM2.5 for quarrying and non quarrying days for this 500th meter distance towards West direction in page no 994. It's very clear about the sampling and analysis of entire practice for this study was at the fabricated mode, even without sampling and analysis, cooked up values had made. It must be lighted upon the approach of study that has written upon the paradoxical with totally fabricated data.

C. Sampling Locations and their Directions:

- i. Guideline for Sampling and Monitoring of Ambient Air quality has stipulated by CPCB in National Ambient Air Quality Series: NAAQMS/36/2012-13 dtd. 18th May 2012, whereas detailed about the Standard operational procedure, how to monitor and where to monitor as well explained about the quality measures to get the representative results of ambient air quality since this matrix of sampling and analysis is very complex and impacted by different climatological parameters and different phase involvement.

- ii. KSPCB has mentioned about the directions of the sampling locations as maintained 120degree angle, this has been figured here. This methodology was absolutely correct as it has recommended by the CPCB guideline NAAQMS/36/2012-13.
- iii. KSPCB has reported the locations of 50,100,200 and 500 away from the blasting zone (for entire 09 mines) in the three directions (120 degree angle) has been selected for sampling to identify the impact of the Air Pollution even though the ToR of the NGT was directed to assess the impacts at 50,75,10,150,200,300 and 500 as there is a negligible approaches to comply the said direction whereas have not derived or modelled values for the distances apart from the 04 distances.
- iv. Each Locations has marked with the GPS coordinates (Latitude and Longitude), which can be tracked universally unique positions and framed the images of the locations in the Google Earth Map has been attached with the report for the entire nine locations.
- v. Direction of the Sampling locations where mentioned in the report and the naming of the locations given has been made in wrong way as disrespect the universal laws and questions the common sense.
- vi. For Example cases of Pathanamthitta district and Kollam Districts would show the below aspects:

a. **In Pathanamthitta district (Page no. 990)** plotted three locations W,SE and NE as fig 01.Fig.03. Here in the Report the North and the South directions are marked in the same direction.(Both directions towards in Bottom direction, though this both has to be come in diametrically opposite) Also the plotted coordinates named as West (which is shown in fig 02),which all locations come in the upward direction from the blasting zone, universally this direction is North. Universally the Google earth map has been plotting the upward direction is towards North, a plotted Image is showing here Fig.04. as it marked (Highlighted in Yellow box) the north direction is towards upward (direction of the image and the scale of the image has avoided in all images throughout the report), From this both images it can be identified that North direction is upward direction and KSPCB has marked the West direction in the upward direction of Blasting zone instead of North.



LOCATION: PATHANAMTHITTA

Fig.01 KSPCB Plotted image in the report for Pathanamthitta

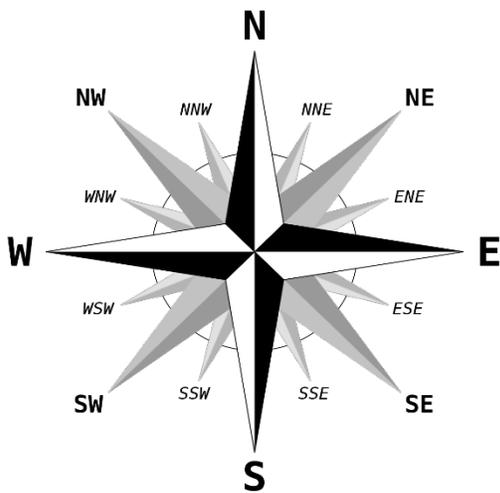


Fig.02 Universally Directions

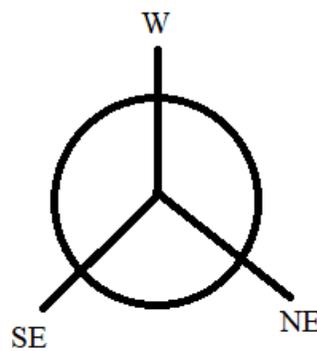


Fig 03. Directions defined by KSPCB



Fig.04 Direction and Scale of Google Earth Map has been stamped along the images for Pathanamthitta District (here highlighted with the Yellow colour box)

b. **In Kollam district (Page no. 1007)** plotted three locations W, SE and NE as fig 05. Fig.07. Also the plotted coordinates named as South East(SE)(which is shown in fig 05) ,which all locations come in the upward direction from the blasting zone, universally this direction is North. Universally the Google earth map has been plotting the upward direction is towards North, a plotted Image is showing here Fig.08. as it marked (Highlighted in Yellow

box) the north direction is towards upward(direction of the image and the scale of the image has avoided in all images throughout the report), From this both images it can be identified that North direction is upward direction and KSPCB has marked as SE direction in the upward direction of Blasting zone instead of North.

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NGT OA 304/2019: Site report

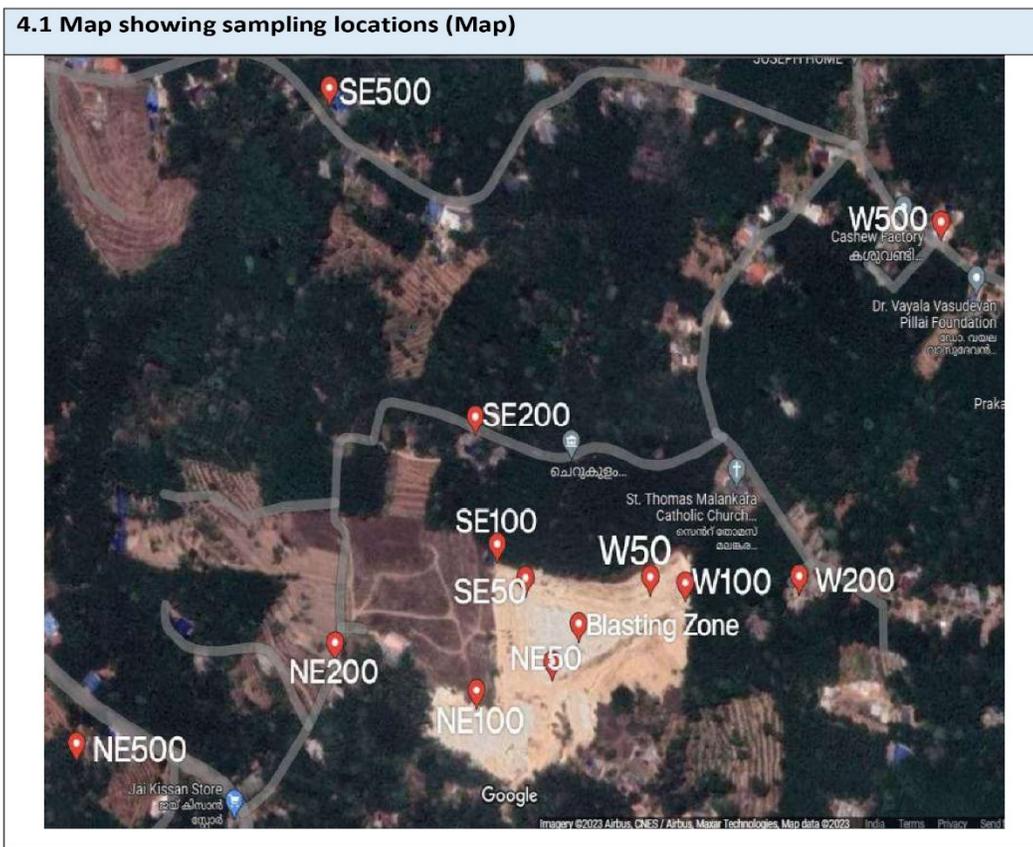


Fig.05 KSPCB Plotted image in the report for Kollam District

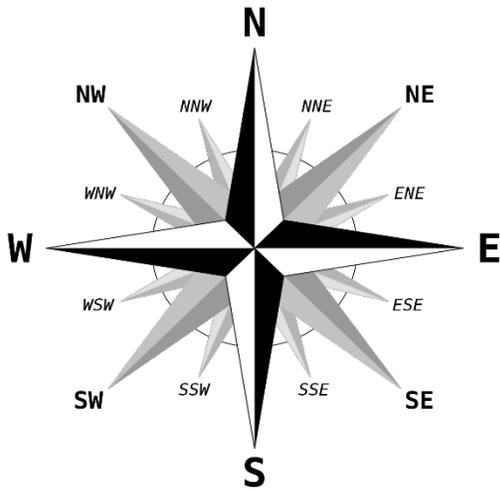


Fig 06. Universally Directions

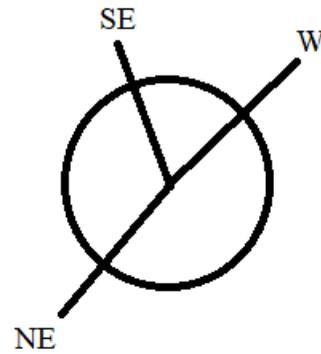


Fig.07 Directions defined by KSPCB



Fig.08 Direction and Scale of Google Earth Map has been stamped along the images for Kollam District (here highlighted with the Yellow colour box)

- c. Irrespective of observations and recommendations of the Joint committee and KSPCB, it would be an embarrassing

aspect that the members of the joint committee did not follow any step to identify direction regarding location..

- d. Apart from the utter negligence of the committee, report must be lack of approaches towards the climatological conditions such as Wind velocity and Wind direction for the site selection of the monitoring stations, normally Keeps two locations in Upwind directions and one in Downwind directions (As per the CPCB guideline for Monitoring)

D. Distance towards the Monitoring stations:

- i. CIMFR has mentioned about the exact distances to the monitoring locations since each meter has its applicability in the case of Air quality and Noise levels as it suppressed by it.
- ii. Distance dispersed : As distance covers the dust shall be settled down due to the gravity and depends the generation concentration, height of the generation scenario, wind velocity, humidity, wind direction...etc
- iii. Effectiveness of the Mitigation Measures: Suppression of dust concentration may occurs by the Sprinkling activity during blasting, Suppression by Green belt across the 7.5 m Buffer zone (which is mandatorily implied through the KMMCR 2015) around the quarry, Wetting of Roads, water jet drilling machines, Blasting Mats...etc

- iv. KSPCB has selected the locations and named that at 50,100,200,500 along with the Directions, and made a impression that the data has derived from the sampling and analysis belongs to that distance along that directions. Actual distances are possessing much differences with the indicated distances.
- v. For example, Pathanamthitta locations can be analysed with the reported image itself, refer Fig.01. Even though the directions named in wrong manner, the scaled image has indicated a smaller distance between SE200 and SE500, but the distance between the NE200 and NE500 is indicated in the scaled image at doubled size as compare with the earlier one (for the same distance of $500-200=300\text{m}$ has been marked in the significant size difference).It is indicating that selection of the monitoring locations are not in scientific and in standard manner.
- vi. As GPS coordinates has shared in the report, we also plotted the locations for all the cases, above 95% of the actual distances (Measured using the inbuilt tool with the google earth map) has not been poses the resemblances as reasonable.
- vii. The above aspects are Explained here as per a few examples:



Fig09. KSPCB Plotted image in the report for Pathanamthitta District,
actual distance towards SE100 from blasting zone is 90 m



Fig10. KSPCB Plotted image in the report for Pathanamthitta District,
actual distance towards SE200 from blasting zone is 139 m



Fig11. KSPCB Plotted image in the report for Pathanamthitta District, actual distance towards SE500 from blasting zone is 222 m

viii. Other few important distances which have been considered for the decision making and recommendation by the committee as it was monitored at far distant also given a wrong impression are given here.

District : Pathanamthitta			
Location	Actual Distance	Location	Actual Distance
NE200	189.06m	W200	193.51m
NE500	408.84m		

District: Palakkad			
Location	Actual Distance	Location	Actual Distance
SE500	374.33m	NE200	105.32m
NE500	423.70m	W200	169.10m
W500	350.32m		

District: Kottayam			
Location	Actual Distance	Location	Actual Distance
SE500	456.13m	NE200	301.39m
W200	247.84m	W500	483.14m

District: Eranakulam			
Location	Actual Distance	Location	Actual Distance
SE50	36.65m	SE200	178.64m
SE 100	68.31m	SE500	584.76m
NE50	33.22m	NE100	60.80m
W500	337.09m		

District: Idukki			
Location	Actual Distance	Location	Actual Distance
NE50	108.22m	NE100	180.48m
W500	429.45m		

District: Wayanad			
Location	Actual Distance	Location	Actual Distance
SE500	413.73m	SE 100	92.78m

ix. It clearly define here that Data obtained and interpreted observations are done at wrong distances and given irrelevant data.

E. Lack of Standard procedure(Height of the sampler and locations of samplers placed):

- i. As per the Guideline for Sampling and Monitoring of Ambient Air quality by CPCB in National Ambient Air Quality Series: NAAQMS/36/2012-13 dtd. 18th May 2012, Monitoring has to be done with minimum requirement of certain critical measures as the samplers has to be placed at the location stated along the site and parameter selection criteria as follows:
 - Always from the source and other interferences (Inlet 15m away from the source /Traffic Artery)
 - Hight of inlet >03m)preferably 03-10 m), Double the height of the nearby wall or obstructed
 - Free flowing well mixed
 - Elevation angle <30 (from the inlet to top of the building
 - Collocated Samplers should be 02 m apart
- ii. A few of the sampling photographs attached with the Submitted report shall be lighted upon the compliance of the standard procedure to be maintained which all reflect in the sampling and reported values, as well its become most

significant where as the said monitoring guideline was issued by one of the member of the joint committee (CPCB).

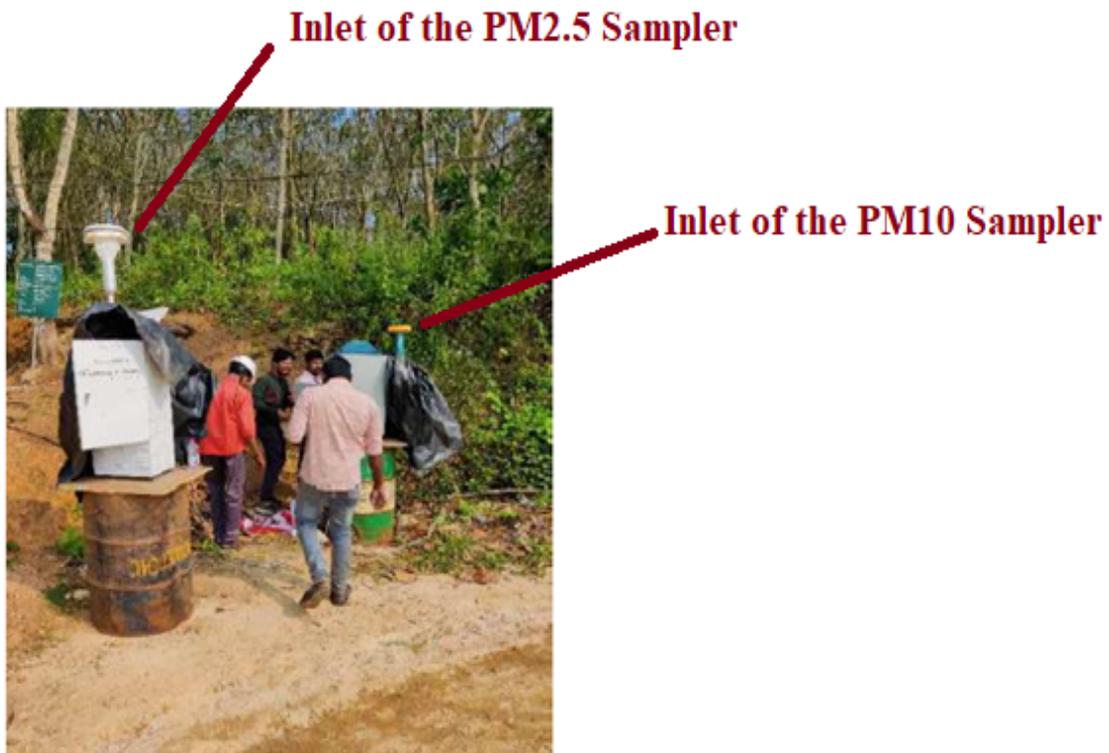


Fig12.Sampler inlet has placed at a height of maximum 02 m Instead of minimum height at 03 m from the ground level



Fig13.Sampler inlet has placed at a height of maximum 02 m Instead of minimum height at 03 m from the ground level. Also Samplers placed very near to a obstruction and a source

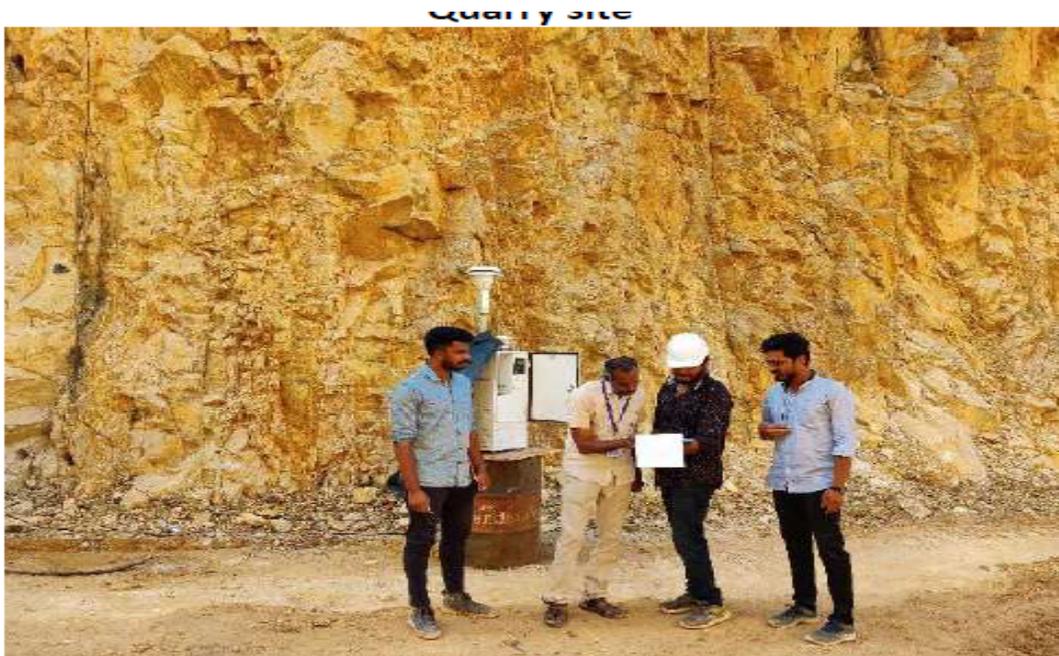


Fig14. Sampler inlet has placed at a height of maximum 02 m Instead of minimum height at 03 m from the ground level. Also Samplers placed very near to a obstruction and a source



Fig15. Sampler inlet has placed at a height of maximum 1.5 m Instead of minimum height at 03 m from the ground level.

- iii. In all Photographs which has attached with the report about the sampling, it has been clearly seen that monitoring equipments placed upon the 200 L Barrels instead of the standard stands for the equipments. Hence the inlet of the samplers are placed at a man height only, which may reach about 2.0 m maximum.
- iv. The Height of the sampler's inlet has been put it in the standard as it has a relevant impact in the measuring values /reporting values since the inlet has to be placed at a representative height, whereas have different level of interferences attached with the monitoring viz. wind velocity, ground contributions, incremental values of ground level concentrations ...etc
- v. Also most of the sampling has done at the very close to any building, Rock wall or Soil wall, which is strongly affect the sampling as stipulated in guideline that min.15 m has to be maintained from road, obstruct or source. Whereas these walls of rock(Fig 13) and soil (Fig 14)should be a classic source since the samplers have an artificial vacuum and placed very close to an obstruct.

F.Data of Quarrying and Non quarrying days:

- i. As part of the study KSPCB has conducted monitoring in working any of the quarry and the Non working day of the quarry. Report

itself highlighted that most of the reported values of non working days for the both parameters are found at the lower side as compared with the non-working day data.

XXX Total No. of Samples collected for PM10	108	Total No. of Samples collected for PM2.5	108
No. of samples reported non working day reported value is higher than the working day reported value for PM10	34	No. of samples reported non working day reported value is higher than the working day reported value for PM2.5	62
No. of samples reported working day reported value is higher than the Non working day reported value for PM10	74	No. of samples reported working day reported value is higher than the Non working day reported value for PM2.5	46
% of No. of samples reported non working day reported value is higher than the working day reported value for PM10	31.4%	% of No. of samples reported non working day reported value is higher than the working day reported value for PM2.5	57.4%

- ii. It indicates the majority reported values are possessing the nature that Non working day having the higher pollutants as compared to the working day. For this in the report itself having the justification that quarry owners had made the control measures such as the wetting of road and sprinklers are using to suppress the pollutants. Hence this indicates that engineered control measures could suppress the impacts of the dust generation or any kind of the activities related to the mining.
- iii. Usually in the mines such mitigation measures are enforced by the various agencies such as SEIAA, KSPCB, DMG. Whereas the measures like green belt in the 7.5 meter bufferzone around the lease area (As per KMMCR 2015 rule lease area included the Buffer zone) and sprinklers around the quarry.
- iv. Committee has ensured and reported that all quarries are doing extensive suppression measure during the quarrying activities. But it may be doing at the boundary of the lease owners (That is only regulations ensured), same has been designed as per the Approved mining Plan. All 50m and 100 m distance locations from the blasting zone are with in this lease area itself, and even these locations are locates with in the Buffer zone. Hence effective suppression has not been activated at these locations since the major suppression happening at the buffer zone by the green belt area and water sprinkling at the boundaries.

- v. The majority 200m distance locations also possess by the Project owners. These critical points are deliberately hide before this court as made a suppression of fact. About 500 m distances and 200m distances report itself explains about the impacts of the local impacts rather the quarrying activities and its contribution to the pollutant concentration.
- vi. Report has been figured in few area that few locations are found at more than the stipulated standard (PM10-100microgram/m³, PM2.5-60microgram/m³) without considered the facts that:
 - a. The effective suppression has not been subjected at the location due to the location is within the Buffer zone
 - b. Even if the location is at very close to any source or Road (Vehicular transportation in the public roads make heavy source of both parameters.

G. Impact of Diesel Generators Used for Sampling:

- i. For the monitoring at all sampling station Diesel Generators were used as power source while all the time duration of the sampling, that was arranged by the project owners at all stations monitored.
- ii. These Diesel Generators are a major source of particulate matter especially PM10 and PM2.5 as it has mentioned in various research papers. At every locations the DG set was located at a distance of less than 10 m from the sampler. One of the evidence has been submitting here, Fig.16.

- iii. It is very clear that monitoring station kept for Wayanad district had fixed at a distance of less than 10 m from the DG set. Date and time as well the GPs coordinates also tagged along this snap.
- iv. Noise level monitoring equipment also seen in the photo graphs which might be located 25 m from a big sized DG set, it must have significant noise level affects the reading abruptly.



Fig.16. DG SET is possessed very near to the sampling station

H. General No-Compliances of the report:

- i. Report are not attached with Test Procedure and SOP of the sampling and Analysis as indicate which test procedure has been adopted.
- ii. It was not mentioned about the involvement of any laboratory where these samples were said to have been analyzed and calculated the data said to have been collected.
- iii. The time to be taken for analysis data was not mentioned with this report and that would be a basic error makes the values defective and unreliable for all purposes.
- iv. List of equipment (with specific details) used for sampling and for analysis including their calibration details and its traceability has not been stated anywhere.
- v. There is no details of any authorized/competent person or analyst responsible for the sampling and analysing
- vi. Details of basic/Raw data for the sampling and analysis is not discernible from the report.
- vii. Logged data of the samplers using for Noise and PM2.5 cannot be found from the report for a cross checking later.

- viii. The whole reports neither mentioned about the quality procedure of the sampling and analysis
- ix. All the google earth map images are attached without scale of the image and the direction mark. Therefore, the same cannot be used for identifying the real points.
- x. Specific applicability of the locations as it covers within the buffer zone or not, any control measures impacted the monitored values, any additional impacts associated like public vehicular movement, DG set, House hold activities...etc have not been discussed/considered. Therefore, it cannot see how the conclusions and observations were raised for the recommendations made.

I. Issues of Vibration Impact Study (CIMFR report):

- i. Committee had conducted blasting study at 09 quarries at different locations with definite charge. Totally 91 no of blasting has done and measured at 08 different locations at various distances from the blasting zone, totally obtained about 718 readings.
- ii. Recommendation of the committee has made based upon a journal (Dhar.et.al) stated that vibration level, as Peak Particle Velocity(PPV) greater than 05 mm/s should be noticeable.
- iii. This paper/Journal is not available in the public forum, and the committee report had intimated this in a single word 'Dhar.et.al1998, it might be an author. Even though an important decision had made from that journal, there is nothing

about the name of the paper in the report or any annexures was not attached about the paper.

iv. This independent reporting itself would show that there was no synchronization of data collection and compilation and analysis. Thereby it is evident that there is no joint report either as directed by this Hon'ble Tribunal.

v. Since one of the members in the joint committee - the DGMS issued circular in 1998, had recommended about the PPV levels applicable to mining activities in a different way, the report should have given a reasonable explanation outweighing the said circular which reads as below:

TYPES OF STRUCTURES	DOMINANT EXCITAATION FREQUENCY, HZ		
	<8 Hz	8 – 25 Hz	>25 Hz
(A) Buildings/ Structures not belong to owner			
1. Domestic houses / structures	5	10	15
2. Industrial building (RCC and Framed Structures)	10	20	25
3. Objects of historical importance & sensitive structures	2	5	10
(B) Buildings belong to the owner with limited life span			

1. Domestic houses / structures	10	15	20
2. Industrial building (RCC and Framed Structures)	15	25	50

vi. As per this circular not even a single reading is not exceeding the limit specified by the DGMS as compare the PPV values according to the Dominant Excitation frequency.

Site	Total No of Blasting	No of Recorded PPV Values	No. of Recorded PPV Above 05 mm/s	No. of Recorded PPV 04-05 mm/s	No. of Recorded PPV 03-04 mm/s	No. of Recorded PPV 02-03 mm/s	No. of Recorded PPV 01-02 mm/s
PTA	10	80	0	2	1	5	6
QLN	10	80	0	0	0	3	5
TVM	11	88	2	0	1	4	18
EKM	10	80	3	3	3	7	13
IDK	10	80	0	2	2	3	13
KTYM	10	80	3	3	1	2	8
PKD	10	80	0	2	0	5	17
WND	10	70	0	0	0	2	3
KSD	10	80	0	2	1	3	15
	91	718	8	14	9	34	98

- vii. Number of readings fall in different PPV level from 01 to 10 mm/s. Out of 718 readings, 163 are above 1.0 mm/s ppv with varying Dominant Excitation frequency. Remaining 555 readings are at less than 01 mm/s ppv. Only 18 nos of the reading has reported Dominant Excitation frequency with less than 25 Hz and lowest is 14.2 Hz. The reported values are :

SI No	Location Code	Distance of monitoring point from the blasting face(m)	Peak Particle Velocity	Dominant Frequency	AOP
1	EKM 1	129	0.813	24	104.9
2	EKM 2	111	1.198	23.38	106.5
3	EKM 3	130	1.212	24.63	109.2
4	EKM 5	107	1.611	23.88	111.2
5	EKM 6	106	1.576	25	104.9
6	EKM 7	98	1.867	22.88	109.2
7	EKM 8	104	1.845	24.88	111.8
8	EKM 9	97	2.495	23.5	103.5
9	EKM 9	143	1.077	23.25	
10	EKM 10	103	1.576	23.38	105.5
11	PKD 1	202	0.73	14.5	<88.0
12	PKD 2	125	1.715	22.13	100

13	PKD 2	200	0.73	20	91.48
14	PKD 6	150	1.143	18	100
15	PKD 8	154	0.524	22.88	102.8
16	PKD 9	110	0.886	18.75	NR
17	WND 4	190	0.524	14.2	103.5
18	WND 9	112	0.596	17.38	102.8

Out of 718 readings 18 no. of Readings are found less than 25 Hz

Dominant Excitation Frequency

- viii. The highest value for the ppv reported for the class of the readings which having the Dominant Excitation frequency with less than 25 Hz is 1.867mm/s. The class of values with the range of Dominant Excitation frequency 25-8 Hz and Greater than 25Hz considered there is not even a single reading, exceeding the values recommended by the DGMS, that is 10mm/s.

Sl No	Location of Blast	Distance of monitoring point from the blasting face(m)	Peak Particle Velocity	Dominant Frequency	AOP	Total Explosives Fired in The round
1	TVM 5	50	8.21	230	120.3	16
2	TVM 6	63	5.68	248.1	121.1	15
3	TVM 9	45	6.85	249.5	124.8	24
4	EKM 5	51	5.882	150.6	123.4	17
5	EKM 5	77	5.585	81.88	117.9	17
6	EKM 9	67	5.042	117.5	117.1	7.375
7	KTYM 2	34	5.145	209.9	116.9	4
8	KTYM 9	28	10.42	170.3	126.8	14.375
9	KTYM 10	26	6.185	198.6	119	5.875

ix. PPV values reported more than 05mm/s (Out of 728 readings only 09 values are reported more than 05mm/s). The highest PPV value reported during the study at a distance of 28m from the blasting zone is 10.42mm/s, same reported value is found within the limit as per the DGMS circular (that is 15mm/s) since the reading have the Dominant Excitation frequency more than 25 Hz.

x. Even though less than 03 % of the readings found in the Dominant Excitation frequency range of 08-25 Hz, total scenario can be considered for same class and the limit for PPV stipulated by the DGMS for the said class is 10mm/s. As analysing the above table figured the highest values observed greater than 05 mm/s ppv at a distance of the 50 meter itself vibration level found in very far with in the limit of DGMS for the particular applicable frequency classification.

34. From the points stated in paragraph 33 herein, it could be safe to conclude that the 50 meter is a safe distance for all purposes. However, only as an abundant caution the 150 meter is recommended. Actually rather than an advice for safety, there is no mention that the 50-meter distance is insufficient. As per the points noted in the report under discussion here, there is no statement that distance at 50 meter is dangerous in respect of the small scale activities in the State of Kerala. That means, if the study report was limited to study report alone without proceeding further for advice on assumptions, this Hon'ble Tribunal could confirm that the existing distance of 50 meter is more than enough. This aspect gets support from the aspect that at least from 1967, the distance followed in Kerala is 50 meters but no untoward incident is reported due to such a distance. This vital aspect has a bearing

when the erstwhile unscientific blasting prior to the present era of controlled blasting, had not caused for any trouble. Therefore, in an analysis, omission to take care of historical/statistical aspects mentioned above should have been found a place and unfortunately for an apprehension without any scientific basis, this point was not considered in the said report.

35. It is worthwhile to mention that the miscellaneous applicant herein had already submitted a detailed representation against valid acknowledgement before the joint committee. The reasonable and scientific request made therein was not looked into at all by the joint committee.

36. Otherwise, the inherent and material defects in the study report could have been avoided. Whatever it is the said report cannot be acted upon for accepting the recommendations therein. The same is liable to be set aside. The said report is liable to be discarded and it is liable to be set aside.

37. Things being so, some special factors relating to the situation in State of Kerala are pointed out:

- a. The state of Kerala is a narrow strip of land, tucked away in the southwest corner of India. Though it covers only 1.18% of the total area of India, it supports about 3.43% of the total population of the country.

- b. 0.003% of the total land area of the State of Kerala alone is used for mining activities.
- c. At present there are only 543 quarrying permissions in this state. However, only 70% of them are functional and the balance have been stopped working or yet to commence working. Around 90% of such total sanctioned quarries are very small scale quarries less than 10 hectares.
- d. There are only open cast blasting mines in Charnokite (hard rock). This is minor mineral which is inevitable for the day-to-day life of ordinary people through infrastructure development. In Kerala, the mining is mainly in 3 Sectors:
 - a. Granite building stone.
 - b. Laterite stone and
 - c. Red Earth.
- e. The other categories of mining for major and minor minerals are negligible activities when compared to National level in respect of the quantity of mining in the State of Kerala.
- f. The State of Kerala is a thickly populated State. The total area of the State is the 1.18 percentage only of the entire India. Out of the total area of the State, around 33% is forest land. On the entire side (west), it is full of coastal area of the Arabian Sea. In the mid plain, there are

Ramsur site like marshy lands and wet lands. **In that circumstance, there is considerable importance for Granite Building Stone for safe and durable buildings, roads, bridges etc and even for agricultural activities in the hilly terrains for leveling lands with retaining walls so far as the State of Kerala is concerned. The scarcity of such an inevitable mineral would affect the quality of life of public and it will reflect in the Living Cost Index too.**

- g. Due to the presence of the Land Reforms Act, 1963, there is a ceiling limit up to 15 Acres for individual/family holding of immovable property. As per the decision of the High Court of Kerala in **K.H. Nazar v. Mathew K. Jacob (2020) 14 SCC 126** plantation lands cannot be utilized for quarrying activities.
- h. As per the common judgment, dated 25/05/2022 in **Raphy John v. Land Revenue Commissioner, Thiruvananthapuram reported in 2022 (3) KLT 679**, the High Court of Kerala has categorically held that mining activity is not possible in lands assigned by the Government.
- i. As per the provisions of the **Disaster Management Act, 2005**, Mining activities are not permitted in High Hazard zones. In Medium Hazard Zones also there are restrictions.

Such zones are identified and notified the Kerala State Disaster Management Authority as per the Disaster Management Plan, 2016.

- j. There is a well-controlled Regulatory authority in the matter of mining activities from 1956-57, i.e., from the formation of the State of Kerala. There was a valid and effective Minor Mineral Concession Rules had been in force from 1967 to 2015.
- k. The Kerala Minor Mineral Concession Rules, 1967 was replaced by Kerala Minor Mineral Concession rules, 2015 in 2015. It contains various conditions for scientific mining. There is a comprehensive mechanism for preventing any kind of violation of such conditions. No transport pass would be issued from the centralized site regulated by the Department of Mining & Geology in case of any violation. The other departments like Police, Revenue and Legal Metrology are effectively intervening in this matter. Moreover, Keralites are more environmentally sensitive and in case of any violation, the same would be reported immediately.
- l. In the State of Kerala on its entire east, the Western Ghats remain. There is Ecologically Sensitive Area Notification as per Draft Notification dated 06/07/2022, (which was originally notified from 2012 onwards) bearing No. SO

3072(E) by which actual Ecological Sensitive Areas are identified. Likewise there are several Ecologically Sensitive Zone Notifications in respect of protected forests like Wildlife Sanctuaries. There are Ecologically Fragile Land Notifications in respect of various identified lands from 2000 onwards. No mining permissions would be given in those areas. In such a circumstance, the entire conditions for mining in the State of Kerala is more comprehensive and effective and it has not been mentioned in the impugned report.

m. Moreover, after deducting the extent of lands of coastal area, forest areas and government controlled lands, there is only a limited extent of lands for being used by the public of Kerala. The total area of the State of Kerala is only 38863 Sq. km. For an easy reference a calculation in a table is given below:

SL No.	Nature of Land	Extent of area in Sq. km	Remarks
1	Forest area	11265.00	
2	Coastal Zone	5,829.45	
3.	River and Lakes	3610.00	
4	Paddy Field and Wet Land	1279.00	
5	National Highway	81.540	(widening goes

			on)
6	State Highway	65.130	
7	Major District Roads	274.040	
8	Urban Roads	232.407	
9	Railway	18.855	
10	Plantation	7502.279	Tea, coffee, Rubber, cashew etc
11	Thus the total land that cannot be used for Granite Building Stone quarrying would come to	30157.701	
12	Total Land area of Kerala	38863	
	The balance land available is only (However, Area for Residential Building, Educational institutions, Government Institutions, Commercial Buildings,	8705.299	However, there is no assurance that Granite Building Stone would be available in all these areas.

	parks, stadia is not reckoned here to be deducted from total land		
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n.

- o. It is submitted that for showing the tip of iceberg of the Developmental Blight in the State of Kerala, from which Brain Drain occurs due to massive migration of Youth to foreign countries, the following aspects alone are pointed out: The most important infrastructure project in Kerala which is currently in progress is the widening of NH 66. The development of 678 km into 45 m wide road requires nearly 472 lakhs Metric Tonnes of quarried stone in next 3 years . Another prestigious project proposal is Hill way Highway which is 1251km long. It connects 13 districts in Kerala. It starts from Nandarappadavu in Kasaragod and ends at Parassala in Thiruvananthapuram district. This project requires 193 lakhs Metric Tonnes of quarried stone. There is also a proposal of coastal high way which could connect all the 9 coastal districts of Kerala. The length of this highway would be 656 km. this proposed highway will also have a requirement of nearly 102 lakhs MT of stone products.

p. Apart from the above ongoing works, new projects are on the anvil like:

1. Widening the existing state Highway Angamali to Thiruvananthapuram developing into four lanes which would be protected by NHAI
2. New highway from Navaikulam to Thenmala projected by NHAI
3. Armour stone required for completing the ongoing VIZHINJAM project
4. maintenance road of state highway under PWD
5. Maintenance road of Main
6. District Road (MDR) under PWD
7. Maintenance road of LSGD.... all these are the Central and state project.
8. Various private construction project of building works etc.... etc.....are not accounted here

38. In addition to the above, it is most humbly submitted that this is the era of controlled blasting. Qualified Mines Mate and Mines Manager are appointed by every project proponent as the same is a requirement for getting licence from local authority as a normal course. The blasting activities are being undertaken only by experts in every quarry. Only small scale activities are present in Kerala. Due to transportation issues and stocking hurdles only

limited blasting happens. The removal of blasted boulders could be done slowly and therefore, unlike other states there is only limited activities in the State of Kerala.

39. Some vital aspects have been gone unnoticed in the impugned report. Such omissions may cause for misconceptions of relevant scientific aspects in this matter, if some third parties are using this report before some other authorities. In Kerala blasting is based on the conditions in the approved mining plan. Therefore, the following scientific aspects regarding the blasting operations are also submitted for kind consideration of this Hon'ble Tribunal:

A. Basic characteristics of blasting Methodology: The blasting pattern entirely depends on the situation of the joints present in the rocks. The drilling is done as per the requirement of the rock fragmentation with desired production of mineral. Only class 2 and class 6 explosive is proposed for use as given below:

B. TYPE OF EXPLOSIVE TO BE USED: Only class 2 and class 6 explosive is proposed for use as given below: -

Booster (20%)	Slurry explosive
Explosive (Column charge) (80%)	Nitrate Fuel oil (NFO). The NFO mixture can be readily produced at a site by mixing

	nitrate (94.5 %) with diesel oil (5.5 %).
Initiator	NONEL

C. NONEL Initiation System: The invention of NONEL by Dyno Nobel's Swedish organization in the 1970's revolutionized the blasting industry. Instead of electric wires, a hollow plastic shock tube delivers the firing impulse to the detonator, making it immune to most of the hazards associated with stray electrical current. NONEL shock tube is a small diameter, three-layer plastic tube coated on the innermost wall with a reactive explosive compound, which, when initiated, propagates a low energy signal, similar to a dust explosion, at approximately 6,500 ft/sec (2,000 m/sec) along the length of the tubing with minimal disturbance outside of the tube. The design of NONEL detonators incorporates patented technology, including the Cushion Disk (CD) and Delay Ignition Buffer (DIB) to provide reliability and accuracy in all blasting applications.

D. Surface NONEL Blasting Patterns: The most commonly used NONEL products in surface blasting operations are a combination of the NONEL MS Series and the NONEL Snap line Series. This combination offers an unlimited number of delay times that can be used to design different types of

initiation patterns. It also offers a reduction in noise levels compared to the use of detonating cord for surface hook up. The principle for all patterns is that one delay time from the NONEL MS Series is chosen as the in-hole delay. One or several delay times from the NONEL Snap line Series are chosen to provide the surface delay pattern. To get the best blast performance and use the explosive in a blast hole in the most efficient way, bottom initiation is practiced in most blasting operations. For a variety of reasons a blast hole may require a second detonator. This back-up detonator is generally placed in the upper part of the explosives column. In order to retain control over bottom initiation of the holes a suitable combination of bottom and top detonator delay times is chosen. If the top and bottom detonators in a hole are located at a distance greater than 25 meters apart it is recommended to increase the difference in delay time between the detonators, due to the additional time taken for the signal to travel the length of the NONEL tube (1 millisecond for every 2 meters of tube).

E. DEVELOPMENT OF A BLAST OPTIMISATION MODE: Rock breaking by drilling and blasting is the first phase of the production cycle in most of the mining operations. Optimization of this operation is very important as the fragmentation obtained thereby affects the cost of the entire

gamut of interrelated mining activities, such as drilling, blasting, loading, hauling, crushing and to some extent grinding. Optimization of rock breaking by drilling and blasting is sometimes understood to mean minimum cost in the implementation of these two individual operations. However, a minimum cost for breaking rock may not be in the best interest of the overall mining system. A little more money spent in the rock-breaking operation can be recovered later from the system and the aim of the coordinator of the mining work should be to achieve a minimum combined cost of drilling, blasting, loading, hauling, crushing and grinding. Only a "balance sheet" of total cost of the full gamut of mining operations vis-à-vis production achieved can establish whether the very first phase- rock breaking- was "optimum" financially; leaving aside factors of human safety. An optimum blast is also associated with the most efficient utilization of blasting energy in the rock-breaking process, reducing blasting cost through less explosive consumption and less wastage of explosive energy in blasting, less throw of materials, and reduction of blast vibration resulting in greater degrees of safety and stability to the nearby structures. Important and highly controllable blast parameters include:

- (i) diameter and length of blast holes;
- (ii) type and configuration of charges;

- (iii) shape, condition and development of effective faces;
- (iv) available expansion volume of broken rock;
- (v) type and dimension of the blasthole pattern;
- (vi) initiation sequence and delay timing.

F. Ground vibration from mine blasting may be expressed by three important characteristics. They are amplitude, frequency and duration of the blast. The variables which influence ground vibration parameters may be divided in to two groups:

- (i) Non-controllable, and
- (ii) Controllable

G. Controllable variables are those, which can be manipulated or changed by trial and error depending on the characteristics of ground vibration. On the other, non-controllable variables are those, over which the blasting engineer has no control. Non-controllable variables are:

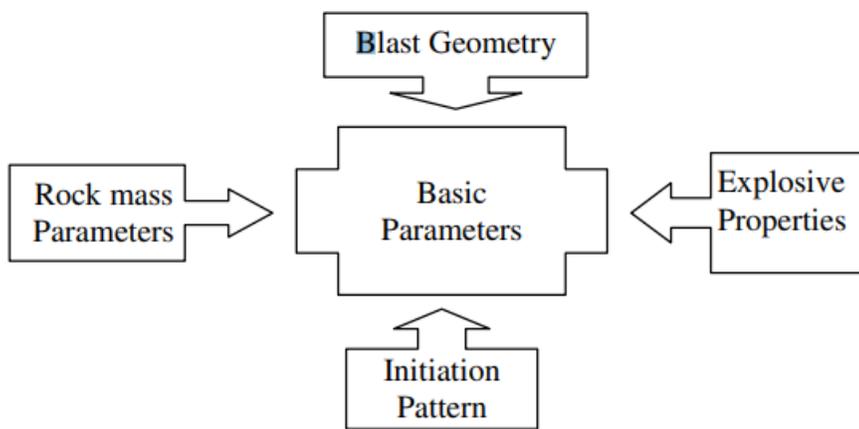
- (i) General surface terrain;
- (ii) Type and depth of overburden; and
- (iii) Wind

The important controllable variables associated with the characteristics of ground vibration are:

- (i) Type of explosive
- (ii) Charge per delay

- (iii) Delay interval
- (iv) Direction of blast progression
- (v) Burden
- (vi) Spacing and specific charge

Most of these variables are interrelated. A change in one variable in the operating system can change the others. The net change in the magnitude, frequency and duration of ground movement is the combined influence of all variables rather than anyone of them independently. It is of course a very difficult task to quantify the measures or extent of the effect of each variable individually. Basic parameters involved in the process of optimum blasting may be classified as follows:



H. PARAMETERS AFFECTING EXPLOSIVE PERFORMANCE:.

Further basic parameters include;

- i. Selection of Proper Explosive;
- ii. Velocity of Detonation (VOD) of explosive (m/s);
- iii. Density (g/cc);

- iv. Characteristic impedance;
- v. Energy output (cal/gm); and
- vi. Explosive type (Nitroglycerin (NG), Ammonium Nitrate–Fuel Oil (ANFO), Slurry, Emulsion etc.).

a. SELECTION OF PROPER EXPLOSIVE: Selection of proper explosive in any blasting round is an important aspect of Optimum Blast Design (OBD). A number of different types of explosives are presently available in the market today and hence it is rather difficult to select the right type for a specific purpose. Some of the explosives extensively used today are:

1. Special Gelatine;
2. NG –(Nitro Glycerin) based;
3. Gun powder;
4. Slurry explosives (both cartridge and site –mixed;
5. ANFO (ammonium nitrate prills mixed with fuel oil Emulsion (both cartridge and site-mixed)

b. Blasting can be controlled at any level as designed the Maximum Charge per Delay (MCD). A feasible MCD design as getting the vibration less than 02 mm/s beyond 50 m from the blasting zone is here as follows:

Blasthole diameter: 32 to 35mm

Burden: 0.9 to 1.2m (3 to 4 feet)

Spacing: 0.9 to 1.2m (3 to 4 feet)

Depth of the hole: 1.21 to 1.5 (4 to 5 feet)

Drilling pattern: Staggered

Explosive Charge / Hole: 250 to 500gm (cartridged explosives of each 125gm)

Maximum Charge / Delay: 500gm (only one hole per delay)

Number of holes / Blast: Maximum of

Total Charge/ Blast: 12kg

No. of rows: Maximum of 3

Type of Initiation: NONEL based shocktube initiation

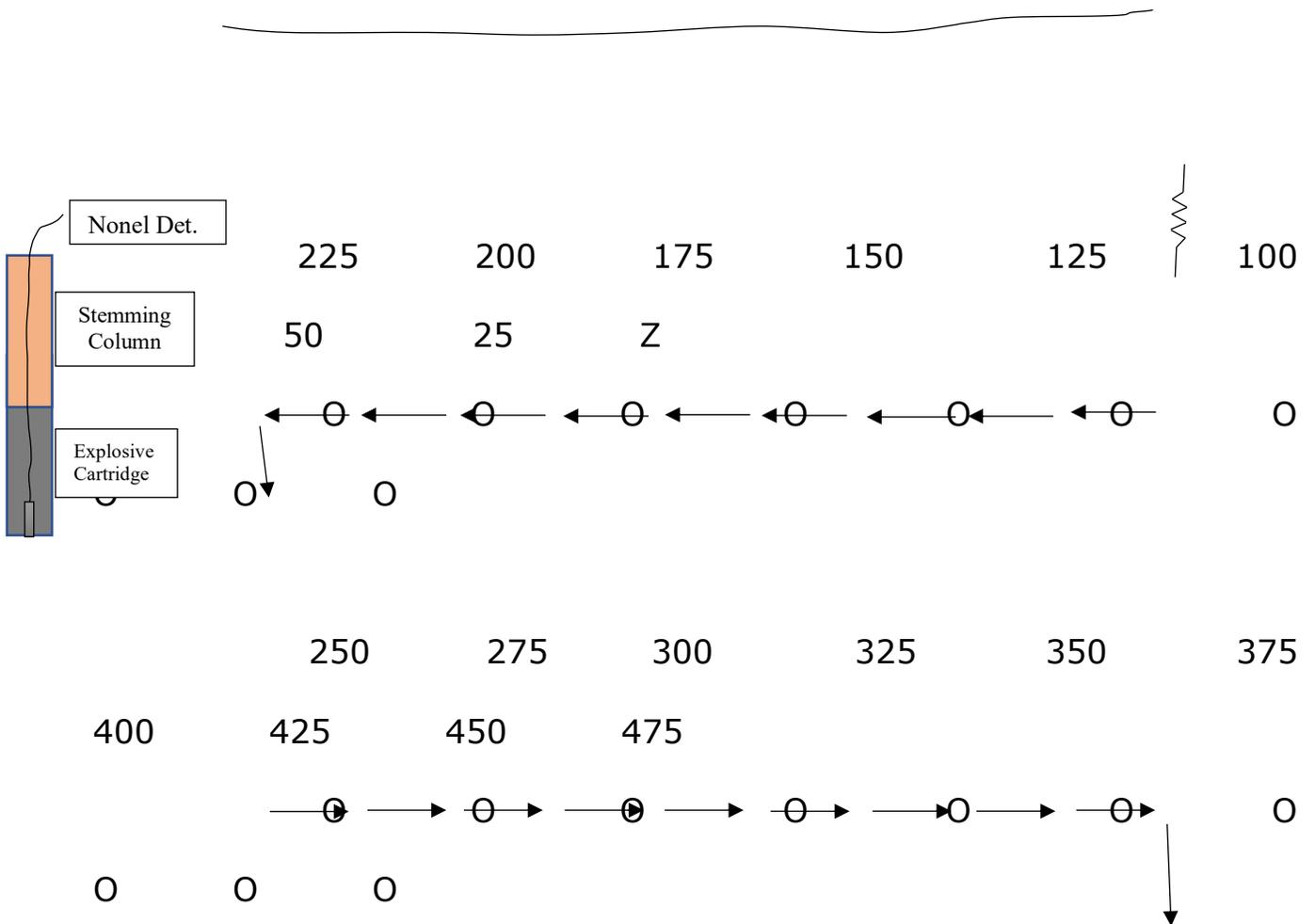
Whenever the blast face is opposite to a house (house is behind the blast location) muffling arrangement is advised to control fly rock.

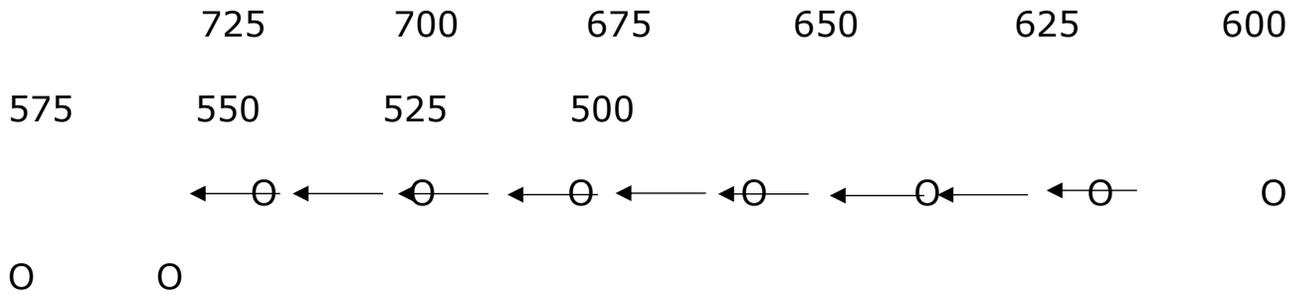
Blast pattern: As shown in Fig. (Layouts may be modified based on the number of holes). Surface delay timing of 17/25, 25/42, 42/67 and inhole delay of 250ms may be used. Delay time duration between any two holes/delays should be atleast 8ms.

- i. Blast parameters can be optimised after commencement of the quarry operations based on required fragmentation, ground vibrations generated due to blasting and after analysis of the blasts performance in various aspects.

- ii. NONEL based shock tube initiation is expected to reduce the noise levels considerably.
- iii. Proper alarm/siren system and other safety aspects to be followed to alert the surrounding habitats while blasting.
- iv. It is advised to conduct trial blasts, after getting the required permissions, and clearing off the vegetation and top soil by following all rules and regulations stipulated by different regulating bodies.

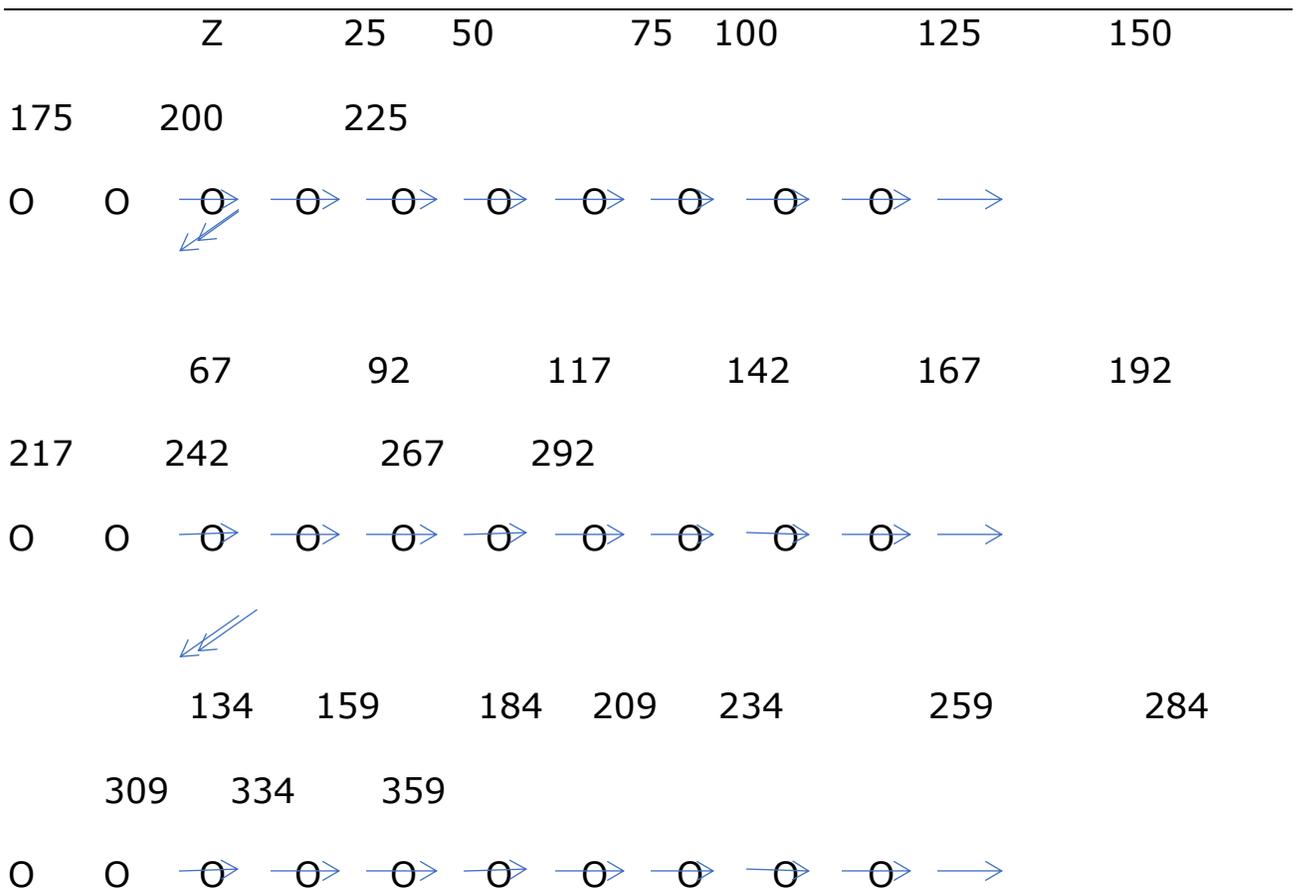
FREE FACE





← - 25 ms hole-to-hole

Free Face



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

the above are the SUGGESTED PATTERN OF BLAST LAYOUTS

c. STORAGE OF EXPLOSIVE:

Considering low consumption, a 250 kg magazine is existing for storing the explosive. The

Controlled blasting is proposed by adopting all the safety measures as per "MMR 1961" and with the permission of DGMS. Blasting will be performed as per requirement on the face. The explosive by authorized. Blasting party himself and the blasting will be carried out by registered blasting contractor

as per present practices.

d. PRECAUTIONS:

- i. Proper and safe storage of explosives in approved and Licensed Magazine;
- ii. Proper, safe and careful handling and use of explosives by competent Blasters having Blaster's Certificate of Competency issued by DGMS:
- iii. Proper security system to prevent theft/ pilferage, unauthorized entry into Magazine area and checking authorized persons to prevent carrying of match box, lights, mobile phones, cigarette etc.

- iv. The explosives of class 2 will be used in their original cartridge packing and such cartridge shall not be cut to remove explosive for making cartridge of different size;
- v. Detonators will be conveyed in special containers. These will not be carried with other explosives;
- vi. The holes which have been charged with explosives will not be left unattended till blasting is completed;
- vii. Before starting charging, clear audible warning signals by sirens will be given so that people nearby can take shelter;
- viii. Blasting operations will be carried out in day times only. However, in this project the mining operations are proposed to be carried out in day times.

40. Every blasting operation in open cast blasting quarries in the State of Kerala are undertaken as per the conditions fixed in the approved mining plan which has been recognized for Environmental Clearance by SEIAA. Therefore, there is correct following of the same by each and every project proponent. Therefore, scientifically and otherwise, the existing distance criteria in the State of Kerala is just and convenient and safe for all purposes.

41. In the circumstance, the above objections are placed for consideration of this Hon'ble Tribunal.

AND FOR WHICH ACT OF KINDNESS THE APPLICANT AS IN DUTY BOUND SHALL EVER PRAY.



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**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI**

O. A. No. 304 of 2019

IN THE MATTER OF:

M.HARIDASAN

.....Applicant in the OA

Versus

STATE OF KERALA & ORS

.....Respondents in OA

AND IN THE MATTER OF:

Quarry EC Holders' Association

.....APPLICANT/Respondent

AFFIDAVIT

I, Satheek, aged 67 years, S/o Lekshmanan, residing at Akkavila house, Sree Sharavana Nagar, 200, Iravipuram P.O. Kollam, Kerala 691 011 presently at New Delhi do hereby solemnly affirm and state as under:

1. That I am one of the Respondents in the aforesaid Original Application. That I am the Vice President of the Applicant Association and I am conversant with the facts of the case and am competent to swear to this affidavit.
2. That the contents stated in the Accompanying objection to the report of the Joint Committee are true and correct to the best of my knowledge and belief and nothing material has been concealed thereof. I have not filed any other similar application before this Hon'ble Tribunal.

That the annexures appended to the above objection are true copies of their respective originals.


DEPONENT

VERIFICATION:

I, the above named deponent, do hereby verify that the contents of the above affidavit are true and correct. No part of it is false and nothing material has been concealed there from.

Verified at New Delhi on this the 28th day of February, 2024.


DEPONENT

ATTESTED

A.N. Singh, Adv.
Notary Public
Govt. of India, New Delhi

28 FEB 2024

