

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

ORIGINAL APPLICATION NO. 304 OF 2019

IN THE MATTER OF:

M. Haridasan ...Applicant

VERSUS

State of Kerala & Ors. ... Respondent(s)

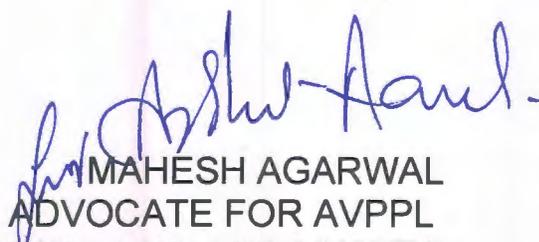
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DATED: 23.02.2024

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ORIGINAL APPLICATION NO. 304 OF 2019

IN THE MATTER OF:

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**ADDITIONAL REPLY ON BEHALF OF ADANI VIZHINJAM PORT
PRIVATE LIMITED TO THE ORIGINAL APPLICATION NO. 304
OF 2019**

MOST RESPECTFULLY SHOWETH:-

1. Adani Vizhinjam Port Private Limited ("AVPPL or Answering Respondent") who has been (impleaded as a Respondent by this Hon'ble Tribunal vide order dt. 05.10.2023) is filing the present reply to the main Original Application No. 304 of 2019.
2. The present reply is being filed pursuant to the order dt. 03.01.2024 passed by this Hon'ble Tribunal. The relevant extract of the said order reads as under:
 1. *In this original application registered in suo-moto exercise of power the issue of providing safeguards against operation of stone quarries close to the residences and public roads in State of Kerala is involved.*
 2. *The tribunal had earlier passed a detailed order in the matter which was subject matter of challenge by the aggrieved parties before the Hon'ble Supreme Court in Civil Appeal No. 6273/2021 and other Civil Appeals. The matter has been relegated by the Hon'ble Supreme Court permitting the parties to raise all permissible contentions before the tribunal.*
 3. *In the previous proceedings the application for impleadment made by the different parties were allowed and a liberty was*



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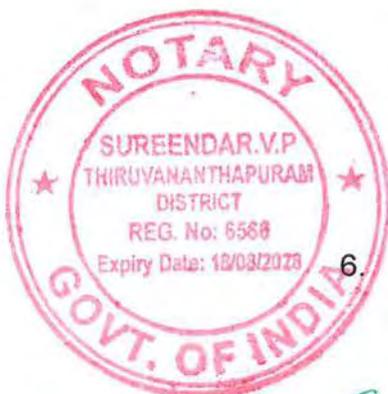
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granted to all the newly added parties to file objections and reply. Certain objections and replies have been filed but grievance of some of the parties is that they have not received copies thereof. Hence we permit the parties to exchange the pleadings within a period of three weeks. The concerned parties who are yet to file their replies/objections may file the same within this period.

A copy of the order dt. 03.01.2024 passed by this Hon'ble Tribunal in Original Application No. 304 of 2019 (Principal Bench) is annexed herewith and marked as **ANNEXURE R-1**.

3. That Kerala being having a unique geography since it is a long strip of land flanked by the Arabian Sea to the west and the Western ghats to the East, therefore, the strip of the land in the middle, which includes inhabited areas, is the only limited area available for economic activities, including quarrying.
4. Hence, the State of Kerala after detailed study and application of advanced mining methods of controlled blasting has prescribed distance criteria of 50 m for stone quarries by the mining/ quarry lessees (project proponents) in the State of Kerala.
5. That this Hon'ble Tribunal, vide order dt. 06.05.2019, on a written complaint filed by one resident being M. Haridasan residing in State of Kerala, *suo-moto* treated the above representation as an Original Application (OA No. 304/2019 - M. Haridasan & Ors. v. State of Kerala).

6. It is submitted that this Hon'ble Tribunal vide its order dated 09.10.2019 observed that State prescribed distance criteria of 50 m is highly inadequate and can have deleterious effects on noise pollution, air pollution, general environment and public



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health and consequently directed the KSPCB to revisit the existing criteria based on an appropriate study. Further, even the CPCB was asked to forward their views on the matter.

7. That the KSPCB submitted a Report reiterating the distance criterion of 50 meters and stating that the existing distance criterion can be maintained if quarry operators comply with the 14 conditions mentioned therein. It was also noted that the CPCB has not conducted any expert studies on the matter.
8. That this Hon'ble Tribunal vide its order dated 28.02.2020, observed that the distance of 50 mtrs for stone quarries, particularly where blasts are involved is highly inadequate and sought a report from the Central Pollution Control Board (CPCB) on the distance criteria for stone quarries and to prescribe more stringent conditions and appropriately longer distance. A copy of the Order dated 28.2.2020 passed by this Hon'ble Tribunal in OA No. 304/2019 is annexed herewith and marked as **ANNEXURE R-2.**
9. It is submitted that relying on the report dated 09.07.2020 submitted by CPCB, this Hon'ble Tribunal vide its order dated 21.07.2020 mandated to have 100m and 200m distance for stone quarry operations without and with blasting, respectively. A copy of the Order dated 21.7.2020 passed by this Hon'ble Tribunal in OA No. 304/2019 is annexed herewith and marked as **ANNEXURE R-3.**
10. That aggrieved by the order dated 21.07.2020 passed by this Hon'ble Tribunal, the mining/ quarry lessees (project proponents) in the State of Kerala filed appeals (MA Nos. 80, 83, 85, 88 to 95 of 2021) in the OA 304 of 2019 seeking impleadment with specific prayer '*not to interfere*' with the



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distance criteria already laid down by the State Mining Department and KSPCB. The appeals filed by the project proponents also raised the question of whether NGT has jurisdiction to initiate '*Suo Motu*' action against violation of environmental norms.

11. Meanwhile, this new distance criterion came to be challenged by several parties before the Kerala High Court including the Petitioner vide Writ Petition being Writ Petition (C) No. 16455/2020 on 09.08.2020. Also, the State of Kerala filed W.P (C) No. 16367 of 2020 stating that if order dated 21.07.2020 is given effect to without considering the peculiar geographical nature of the State, all the stone quarries in the State have to be closed down and that the same would adversely affect the development activities taking place in the State.
12. That the Single Judge disposed of all Petitions by way of a Common Order dated 21.12.2020. wherein it was held that the Order of the NGT dt. 21.07.2020 be set-aside on the ground that the affected parties were not given an opportunity of hearing. Thus, the matter was remanded to this Hon'ble Tribunal for fresh consideration, after giving notice to the affected parties.
13. That the division bench of Kerala High Court vide its order dated 16.3.2021 upheld the Order dated 21.12.2020 passed by the Single Judge in in W.A. No. 294 of 2021 and connected matters. That AVPPL had challenged the said order before the Hon'ble Supreme Court by filing the Special Leave Petition (Civil) No.12699 OF 2021.
14. That the Hon'ble Supreme Court vide its order dated 07.10.2021 in Special Leave Petition (Civil) No.12699 OF



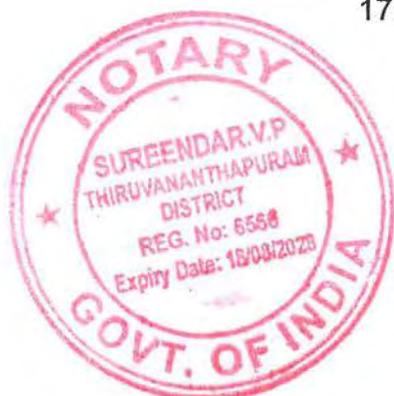

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2021 reported at **2021 SCC Online SC 897** upheld the Hon'ble High Court order and permitted the party likely to be affected in the *suo-moto* proceedings to be afforded due opportunity to present their side, before suffering any adverse orders.

15. In light of the directions and holding of the Hon'ble Supreme Court in the Judgment dated 07.10.2021 as well as the Order dated 25.10.2021, AVPPL had filed intervention in the present proceedings. That this Hon'ble Tribunal vide its Order dated 05.10.2023 while allowing AVPPL to implead in the present proceedings also gave liberty to AVPPL to file reply/objections to the report dated 28.02.2023 submitted by Joint Committee constituted by this Hon'ble Tribunal.
16. It is submitted that this Hon'ble Tribunal in view of the Hon'ble Supreme Court Order after considering the submissions made by project proponents passed an order dated 9.12.2021 out of abundant caution after examining the prayers in the original application and project proponent's contentions in detail, this Hon'ble Tribunal directed for an expert study about safe distance for stone quarry from habitations by a joint committee 7 members.
17. It is submitted that the recommendation of the Joint Committee to this Hon'ble Tribunal has irrationally and arbitrarily recommended a safety distance of 150m in building stone quarry operations. It is pertinent to mention here that no quarry site inspection was carried out by the Joint Committee qua the quarrying sites of AVPPL. The Report of the Joint Committee dated on 28.02.2023 submitted to Hon'ble Tribunal is fraught with factual mistakes and inconsistent results/findings, and based on complete misappreciation and



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misrepresentation of facts, the Committee has irrationally recommended a safety distance of 150m in building stone quarry operations.

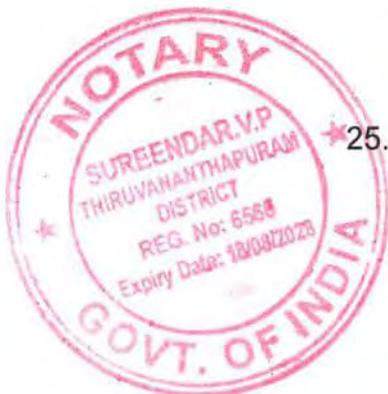
18. The assessment study carried out by the Joint Committee constituted by this Hon'ble Tribunal was done only in nine quarries among total of approximately 650 quarries which are currently operating in the State of Kerala. Therefore, the Joint Committee Report represents a meagre amount of data set which does not represent accurate experimental data set for all the quarries and cannot be generalized for the whole State of Kerala. In fact, there has been no comprehensive study carried out by the Joint Committee and hence the Report ought to be rejected by this Hon'ble Tribunal.
19. The site study/inspection carried out by the Joint Committee is inadequate to arrive at any logical conclusion in respect of its recommendations.
20. That the extrapolation/ modelling predictions made using the 9 site specific data, may not result in an accurate prediction/ extrapolation. Even as per the minutes of the joint committee dt. 16.02.2023, Dr. D P Kanungo (member of the committee) commented that the vibration study was done only in 9 quarries among the several hundreds of quarries operating in Kerala, which is a small data set which may not be a representative experimental data set for all the quarries and cannot be generalised for the whole State of Kerala. He has further stated that the report of CIMFR is excellent but the committee should also see the operational level in which the recommendations are to be implemented.
21. Further, on the detailed objections to the Joint Committee Report, the Answering Respondent/AVPPL craves liberty to



rely on the detailed objections to the Joint Committee Report dt. 28.02.2023 filed before this Hon'ble Tribunal.

PRELIMINARY SUBMISSIONS:

22. It is submitted that Kerala being a densely populated state and a long agglomerate of small and medium towns, construction material (aggregate) needs of the State for its development projects can never be fulfilled with such unreasonable distance criteria of 150 meters.
23. Moreover, since the issue is being considered by this Hon'ble Tribunal's principal bench, a holistic view of the matter has to be taken by keeping in view other states and stakeholders which are involved outside the State of Kerala since it will have ramifications PAN India and the issue should not be dealt only restricted to the State of Kerala.
24. At the outset the answering respondent herein submits that it is always open towards providing safeguards against operation of stone quarries close to the residences and public roads in State of Kerala is involved. The same should be considered on case-to-case basis and on the basis of the compliances being carried out by the respective quarry mine operator like the answering Respondent herein.
- A. **The Minimum Distance Criteria must be at 50 meters and be subject to the compliance of the EC Conditions and not uniformly :**
25. That no uniform blanket distance should apply on the quarry mine given the population constrains and space for quarry mining in the entire State. In the present case, the mine of the AVVPL has not even been inspected by the Joint Committee appointed by this Hon'ble Tribunal.



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26. AVPPL has all the requisite clearances/ NOCs/ authorizations for the construction of the Strategic Port as well as the for the carrying out of its captive quarry mining activities. A copy of the Chart demonstrating all statutory clearances is annexed herewith and marked as **ANNEXURE R-4.**
27. AVPPL has complied with all the EC conditions mentioned in Environment clearance Letter dated 01.03.2019. It is submitted that as per the "Sub Para (ii)" of "Para 10" of EIA Notification 2006, it is stated that "*It shall be mandatory for the project management to submit six monthly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year*" and as per compliance of condition mentioned in Environment Clearance Letter, Six monthly compliance reports should be submitted to the Regulatory Authority of Central and State Government. A copy of the Environment Clearance dated 01.03.2019 is annexed herewith and marked as **ANNEXURE R-5.**
28. The Environmental assessment is carried out to verify:
- 1) That the proposed project has not any adverse effect on the project site as well as its surrounding.
 - 2) That there is compliance with the conditions stipulated in the Environmental Clearance Letter of the Project.
 - 3) That the Project proponent is implementing the environmental safeguards and environmental pollution mitigative measures as suggested in approved Form-1 and Environmental Management Plan with true spirit.



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- 4) The non-conformity in the project with respect to the environmental implication of the project.
29. It is submitted that various scheduled site visits were conducted by a team of Experts to Monitor Pollution related parameters as defined by CPCB / KPCB at the quarry of AVPPL. It is submitted that based on the report submitted by AVPPL, State Environment Impact Assessment Authority Kerala (SEIAA) has submitted its recommendations, which were also complied by AVPPL.
30. The entire study carried out by the Joint Committee consists of 9 mining sites in which the site of AVPPL has not been included which uses State of Art NONEL Technology while carrying out the quarry mining operations. Therefore, a distinction needs to be made between those quarry sites which are using the State of Art Advance Technology and those sites which are carrying out generalised mining operations.
31. AVPPL uses State of Art NONEL Technology which produces minimal vibration, noise and nil flying rocks compared to conventional blasting methods technology. Hence, a distinction needs to be drawn between the quarry sites which are carrying out stone quarry mining activity and the impact of blasting with and without NONEL Technology while determining the distance of 150 meters.

Dust and air ambient quality measures adopted by AVPPL:

32. For dust control and air ambient quality, AVPPL conducted a study through NABL accredited laboratory/s M/s. Standards Environmental & Analytical Laboratories, at its quarry in the range of 50 m to 1000m from the project site, and found that



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in the AVPPL Quarry site the dust range is within permissible limits of NAAQM. Further, AVPPL, as part of its Environment Clearance condition no. 34, uses following measures for dust suppression at its quarrying site and for which half-yearly compliance report is sent regularly to the State Environment Impact Assessment Authority (“SEIAA”). The dust pollution control/ suppression measures already employed by AVPPL in its Quarry sites are as follows:

- A. AVPPL has developed a tar road of around 0.9 km from Kadavila junction to the quarry project site gate for movement of vehicles, thereby reducing the dust pollution.
- B. Regular water sprinkling through water tankers on haul road and other dust prone areas such as loading and unloading of minerals is being carried out.
- C. For Drilling in the Quarry, the wet drilling method is used to avoid dust emission.
- D. Environment Monitoring at the site has been carried out by NABL accredited laboratory/s M/s. Standards Environmental & Analytical Laboratories. The Certificate of Accreditation by NABL is annexed as **ANNEXURE R-6**. Summary of the Ambient Quality Monitoring (AAQM) during the compliance period has been within the limit. The same is elaborated in the half yearly compliance report of EC Conditions. The test results of PM 2.5 and PM 10 were found within limits in the range of 50 m to 1000m from the project site for the sample test carried out on 10.10.2023. Ambient Air Quality Monitoring Reports submitted by M/s. Standards Environmental & Analytical Laboratories forms part of



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the half - yearly Compliance Report. A copy of the Air Quality Monitoring Reports for a period between 03.10.2023-07.10.2023 at the Quarry Project Site is annexed herewith and marked as **ANNEXURE R-7**. A copy of the Air Quality Monitoring Reports for a period between 03.10.2023-07.10.2023 from distance of 1 Km from Quarry Site is annexed herewith and marked as **ANNEXURE R-8**. A copy of the Air Quality Monitoring Reports for a period between 03.10.2023-07.10.2023 from distance of 850 meters from Quarry Site is annexed herewith and marked as **ANNEXURE R-9**. A copy of the Air Quality Monitoring Reports for a period between 03.10.2023 - 07.10.2023 from distance of 650 meters from Quarry Site is annexed herewith and marked as **ANNEXURE R-10**. A copy of the Air Quality Monitoring Reports for a period between 03.10.2023-07.10.2023 from distance of 250 meters from Quarry Site is annexed herewith and marked as **ANNEXURE R-11**.

Noise Control measures adopted by AVPPL:

33. As per EC condition no. 36, AVPPL has to take measures for control of noise below 85 dBA in the quarry environment. It is submitted that following measures are taken for control of noise levels by AVPPL:

- a. **For drilling:** Good captive silencers are being used in drilling equipment.
- b. **For blasting:** AVPPL uses the NONEL method-bottom initiation with MS CONNECTORS to reduce the noise and Vibration while of blasting.



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- c. **Machinery and Tippers:** It is ensured that equipment is fitted with effective silencers, mufflers, acoustic linings, or shields, as necessary.
- d. **Vehicles:** Vehicles transporting the materials follow the speed limit to maintain the noise level.
- e. Vehicles are serviced regularly and maintained properly to avoid any unwanted generation of noise or vibration from them.
- f. Further, Ambient Noise is being monitored by NABL accredited laboratory; Standards Environmental & Analytical Laboratories as per Noise Pollution (Regulation & Control) Rules, 2003 (Rule 3 (1) and 4 (1)) at 5 locations. The summary of the noise levels have also been annexed by AVPPL in its regular half yearly EC Conditions compliance report submitted to SEIAA. As per the noise control report dt. 20.11.2023 the noise emitted from the project have been found within the permissible limits at different time frames at AVPPL's site. A copy of the Noise Level Test Report dated 20.11.2023 of Standard Environmental and Analytical Laboratories is annexed herewith and marked as **ANNEXURE R-12 (Colly).**

34. That Rock blasting is even conducted at the closed distances of 20-50m in Metro Rail Projects by controlling all the above blast effects of Vibration, Air-overpressure and Fly rock. Similarly, it can be conducted at 50-100 m distances as per the Government of Kerala Rules by adopting controlled blasting measures suggested by scientific institutes. A copy of the Blasting induced noise and vibration study report of Anna,



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University for period 16.03.2021-17.03.2021 is annexed herewith and marked as ANNEXURE R-13.

35. Nowhere in world, the safe distance criteria is based on the 'Noise' as it is not a significant parameter which can cause structural damage. Moreover, the local public grievances are not related to 'Noise' levels.
36. It is submitted that merely because the Joint Committee has found PM 2.5 and PM 10 limit violations at 4 out of 9 quarries at 100 meters distance, does not mean that all other quarries operating in the State are at default. It is further submitted that every quarry has its own Environment Clearance and has to be comply with the mandated EC Conditions including the condition of maintain the dust pollution within the stipulated limits. If any quarry is found violative of the aforementioned EC. Condition then there will always be remedy in form of penalty and notices by the concerned State Pollution Control Board who act against such violators as per law. Hence, no straight jacket formula can be prescribed for maintaining the safe distance on account of dust pollution.
37. Moreover, the State has been following its own distance criteria of 50 meter after detailed study and application of advanced mining methods of controlled blasting. If such unreasonable distance criteria of 150 meters is imposed upon minor minerals such as mine quarries, then it will lead to a situation of holding of more land for quarrying and due to the requirement to keep longer buffer area, valuable minor minerals cannot be resourced optimally for the development projects of the State.



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B. The quarrying operation of AVPPL is captive and linked to the construction of Strategic Sea Port of the Country:

38. AVPPL is not doing the quarry mining for selling the stones/boulders in the open market and make any commercial gain at the cost of environment. AVPPL is carrying out the quarry mining operations due to captive linkage with the construction of strategic sea port which is of national importance. The quarry mining is necessary for meeting the construction requirement of rock boulders and stones. Once, the construction is complete the AVPPL will not be engaged with the requirement of stone quarrying as such. Therefore, a balance needs to be struck between the protection of environment and Sustainable Development. A distinction has to be drawn by those who are environmentally compliant by virtue of EC Conditions compliance and those who are the actual violators of the EC Conditions and use generalised way of quarry mining.
39. The AVPPL is currently constructing a port at Vizhinjam in Kerala and needs stones/boulders for construction of breakwater. That AVPPL requires 130 Lakh MT of rock boulders for construction of the breakwater at the Vizhinjam Port, of which another 55 Lakh MT is yet to be arranged/procured.
40. It is submitted that the Vizhinjam International Transshipment Port ("**Seaport Project**") is a major infrastructure project by the Government of Kerala which is developed in the Public Private Partnership model. That it is an ambitious step forward on the path to prosperity of our country and will be India's first Mega Transshipment Container Terminal in the Indian

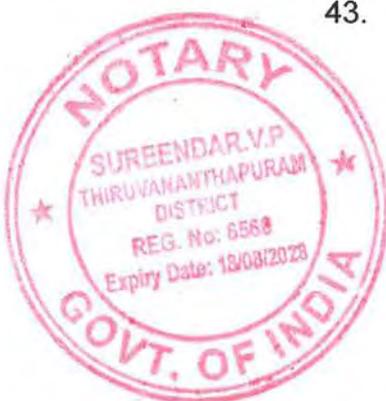


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subcontinent, closest to the international shipping routes, and is centrally located on the Indian coastline.

41. It is further submitted that this Sea Port Project has its own strategic importance, resulting from closeness to International Shipping Routes and geographical advantage, resulting from deep natural draught. That this Sea Port Project is one of the major infrastructure projects of the state and the country. Considering the importance of the project, Government of Kerala since 1995 had made multiple attempts to develop the port.
42. With the commissioning of Sea Port Project, the current transshipment of Indian cargo handled by Colombo, Salalah and Singapore will get shifted to Vizhinjam, owing to its closeness to International Shipping Route. This will result in large savings of Transshipment cost as well as foreign exchange. The savings will generate large consumer savings. There will also be considerable savings in transshipment time of goods, resulting in cost competitiveness. Resulting from the cost competitiveness induced by the port, the port will be ushering high industry growth in the country and the region. The port and resultant industry growth will be boosting employment generation in the country.
43. Considering the importance of this Sea Port Project, Vision document of Government of India "Maritime Amritkaal Vision 2047" published by Ministry of Ports, Shipping and Waterways, have already prioritized Development of Sea Port Project on immediate short-term basis. The Vision Document points out that about Indian Ports annually handle about 17.23 million TEUs, of which 4.30 million TEUs (25%) of the Indian origin and destined containers were transhipped. Out of 4.3



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million TEUs India's transshipped containers, 2.93 million TEUs (~ 68%) are handled outside India, at hubs such as Colombo, Singapore and Port Kelang. Indian Ports lose up to Rs. 1800 crore of potential revenue each year on transshipment of Indian origin and destined containers at foreign ports. There is also the lost opportunity in handling transshipment of non-India related cargo due to the absence of an Indian Hub. Considering the economic and national significance of the project and the priority accorded to it by Government of India and Government of Kerala, commissioning of the project in immediate short term is extremely crucial. Considering the requirement of increase capacity in immediate term, Government of Kerala vide GO (Ms) No. 2/2024/F&PD dated 15 February 2024 has already mandated AVPPL to develop phase 2, phase 3 and phase 4 of the Port Project before December 2028. The key engineering structure which forms part of the entire project is a 4080 meters long Boulders Mounted Breakwater providing tranquil berthing operations to large ships visiting the port. One of the key imperatives for completing the construction of the Breakwater is supply of boulders from Mines located in the project vicinity. The GO (Ms) No. 2/2024/F&PD dated 15 February 2024 is annexed herewith and marked as **ANNEXURE R-14**.

44. That in 2015, AVPPL was selected as the Concessionaire on the Design, Build, Finance, Operate and Transfer (DBOFT) basis of Seaport Project. That the work involves construction of breakwater and a fishing harbor, which requires quarried rock boulders.
45. AVPPL only after receiving the following requisite clearances/NOCs/authorization/permission for quarrying was



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issued by the Government of Kerala for the purpose of conducting quarrying in Government land for which the Government has absolute title and ownership has started the quarrying:

- i) That AVPPL got NOC from the District Collector, Thiruvananthapuram for conducting quarrying operations in the Government land of Puramboke land in Nagaroor Village, Chirayinkeezhu Taluk, which is having optimum rock deposit as per the EIA Report for the Vizhinjam Project.
- ii) AVPPL was also permitted to conduct quarrying on government lands available in Thiruvananthapuram, Kollam and Pathanamthitta districts.
- iii) Further, on 01.03.2019, AVVPL received an Environmental Clearance ("EC") from State Environment Impact Assessment Authority ("SEIAA") for the Nagaroor quarry Project in Thiruvananthapuram District.
- iv) Thereafter, on 05.03.2019, the Kerala State Pollution Control Board ("KSPCB") issued Consent to operate for the Nagaroor Quarry Project by way of Consent No. PCV/TVM-DO/ICO/QRY/103/2019.
- v) On 11.03.2019, the AVPPL obtained a D&O license from the Nagaroor Village Panchayat for the quarry Project.
- vi) On 20.05.2019, the Department of Mining and Geology accepted the AVPPL's Application for approval of



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 Roll No. K/1114/1999
 VANCHIYOOR

Rajesh

mining plan by way of letter bearing No. 1716/DOT/ML/18 for the Nagaroor Quarry Project.

- vii) AVPPL was also granted the quarrying license over an area in Nagaroor Village, Chirayinkeezhu Taluk for a period of five years.
- viii) On 22.05.2019, AVPPL also entered into a lease agreement with the State Government as per Form-H, as per Rule 43 of the 2015 Rules for the Nagaroor Quarry Project.

- 46. It is submitted that in case this Hon'ble Tribunal decides to increase the distance for stone quarry operations, it will adversely impact AVPPL in constructing the national strategic port because no stones/boulders will be available for construction activities.
- 47. It is submitted that at the time when the AVVPL bid for the said Seaport Project, the prescribed distance criteria for stone quarries by the mining/ quarry lessees (project proponents) in the State of Kerala was 50 m. That change in the distance criteria will impact the costs, expenses, or expected income by AVPPL and other quarriers.
- 48. It is submitted that AVPPL is currently constructing a port at Vizhinjam in Kerala and needs stones/boulders for construction of breakwater. That AVPPL requires 130 Lakh MT of rock boulders for construction of the breakwater at the Vizhinjam Port.
- 49. The construction of the Seaport Project, Infrastructural Projects and NHAI Projects will be severely impacted if this



23-2-2021
 SURENDAR V.P. B.A., LL.B
 ADVOCATE & NOTARY
 Roll No. K/1114/1999
 VANCHIYOOR
 THIRUVANANTHAPURAM

Rajesh

Hon'ble Tribunal decides to increase the distance for stone quarry operations.

C. THIS HON'BLE TRIBUNAL CANNOT INTERFERE WITH LEGISLATIVE MANDATE:

50. It is a settled legal proposition that the court and Tribunals can neither legislate nor issue a direction to the legislature to enact in a particular manner. It is most respectfully submitted that this Hon'ble Tribunal has no power even indirectly to require the executive to exercise its law-making power. That the Tribunals cannot usurp the functions assigned to the legislature under the Constitution and cannot even indirectly require the executive to exercise its law-making power in any manner. The courts/ Tribunals cannot assume to themselves a supervisory role over the rule-making power of the executive under Article 309 of the Constitution. That the Hon'ble Supreme Court in the matter of Narinder Chand Hem Raj v. UT, H.P. [(1971) 2 SCC 747, held that legislative power can be exercised only by the legislature or its delegate and none else.

51. It is submitted that the new distance criterion under consideration by this Tribunal would lead to amendment of the Kerala Minor Mineral Concession Rules, 2017 as laid down by the State of Kerela.

52. That Section 15 of the MMDR Act empowers the State Governments for making rules for regulating the grant of quarry leases, mining leases or other mineral concessions in respect of minor minerals and for purposes connected therewith.



Surendar V.P.
23.2.2024
SUREENDAR V.P. B.A., LL.B
ADVOCATE & NOTARY
Roll No. K/1114/1999
VANCHIYOOR
THIRUVANANTHAPURAM-35

Rajesh

53. In pursuance to Section-15 of the Mines and Minerals (Development Regulations) Act ("MMDR Act") as enacted by the Parliament of India, the State of Kerala by way of delegated legislation has promulgated Kerala Minor Mineral Concession Rules, 2015 which was subsequently amended with Kerala Minor Mineral Concession (Amendment) Rules, 2017 ("2017 Rules"). The said 2017 amended rules already lay down a distance criterion in Rules 10(f) and 40(1)(i) which is reproduced herein below:

"10.[...] (f) the permit holder shall not carry on or allow to be carried on any quarrying operations at or to any points within a distance of 100 meters from any railway line except with the previous written permission of the Railway Administration concerned and any bridge on National Highway or 50 meters from any reservoir, tanks, canals, rivers, bridges, other public works, residential buildings, the boundary walls of places of worship, burial grounds, burning ghats or village roads or one kilometer from the boundaries of National Park or Wildlife Sanctuaries except with the previous permission of the authorities concerned or the Government or the competent authority."

54. That the aforementioned rules [10(f) and 40] were amended by the notification dated 22.6.2017 issued by KSPCB vide SRO No.346 of 2017, wherein the KSPCB revised the earlier circulars and laid down the minimum distance requirement for stone quarrying from residential buildings and human inhabited sites to 50 metres in tune with the requirement in Section 10(f) of the 2017 Rules. A copy of the amended



SURENDAR V.P. B.A., LLB
 ADVOCATE & NOTARY
 Roll No. K/1114/1999



Rajesh

Kerala Minor Mineral Concession (Amendment) Rules, 2017 is annexed herewith and marked as **ANNEXURE R-15.**

A copy of EC Compliance Report for Oct-05-2022 to March-2023 is annexed herewith as marked as **ANNEXURE R-16.**

55. In the said notification, the rationale for adopting the distance criterion was given and is reproduced herein below: -

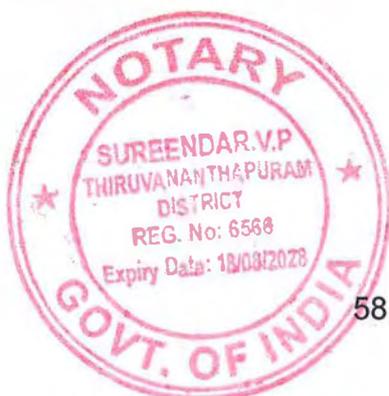
“In the Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016 for major minerals, the distance criteria adopted for mining activities were retained as stipulated in the earlier Mineral Concession Rules. Hence a different criterion cannot be adopted in the case of minor minerals. In such circumstances, in order to make it in tune with the Minerals (Other than Atomic Hydro Carbons Energy Minerals) Concession Rules, 2016, it is decided to incorporate the same distance criterion in Rules 10 and 40 as well as Form H”

56. Therefore, the decision to specify the criteria of 50 meters in Rule 40 and 10(f) was based on sound reasoning of the legislature and can not be simply amended by this Tribunal.

57. That the Hon'ble Supreme Court in Union of India v. Deoki Nandan Aggarwal AIR 1992 SC 96 observed:

“14. ... It is not the duty of the court either to enlarge the scope of the legislation.... The court cannot rewrite, recast or reframe the legislation for the very good reason that it has no power to legislate. The power to legislate has not been conferred on the courts.”

58. In State of U.P. v. Jeet S. Bisht [(2007) 6 SCC 586], the Hon'ble Supreme Court held that issuing any such direction may amount to amendment of law which falls exclusively



within the domain of the executive/legislature and the court cannot amend the law.

59. The Hon'ble Supreme Court in Civil Appeal Nos. 5348 of 2019 in the matter of "The State Of Himachal Pradesh And Others Versus Yogendera Mohan Sengupta and Anr." held as under:

"70. In that view of the matter, we find that the first order of NGT is liable to be set aside on the short ground that it has transgressed its limitations and attempted to encroach upon the field reserved for the delegatee to enact a piece of delegated legislation. We are of the considered view that when the TCP Act empowers the State Government and the Director to exercise the powers to enact a piece of delegated legislation, the NGT could not have imposed fetters on such powers and directed it to exercise its powers in a particular manner."

60. Thus, it is crystal clear that if the High Courts and the Supreme Court, in their extra-ordinary powers under Articles 226 and 32 of the Constitution cannot do so, then a Tribunal constituted under a statute, having a limited jurisdiction, cannot do so. That the Tribunal has a very limited role and in exercise of that, it is not open to have judicial legislation. Neither the Tribunal can legislate, nor has it any competence to issue directions to the legislature to amend the law in a particular manner. Therefore, it is most respectfully submitted that no interference should be carried out by this Hon'ble Tribunal in re-determining the distance of quarry mining in the State of Kerala as already prescribed in the State Rules framed under the MMDR, Act.



Surendar
23.2.2024

SUREENDAR V.P. B.A., LL.B.
ADVOCATE & NOTARY
Roll No. K/1114/1999
VANCHIYOOR



Rajesh

61. It is submitted that at the time when the AVVPL bid for the said Seaport Project, the prescribed distance criteria for stone quarries by the mining/ quarry lessees (project proponents) in the State of Kerala was 50 m. That change in the distance criteria will impact the costs, expenses, or expected income by AVPPL and other quarriers.
62. It is submitted that in case this Hon'ble Tribunal decides to increase the distance for stone quarry operations, it will adversely impact AVPPL in constructing the national strategic port because no stones/boulders will be available for construction activities.
63. The construction of the Seaport Project, Infrastructural Projects and NHAI Projects will be severely impacted if this Hon'ble Tribunal decides to increase the distance for stone quarry operations
64. Hence, it is clear that the State has laid down the distance criteria for quarrying only after considering the unique geographical location of the port and therefore, any change/amendment in the existing distance criteria will lead to interference in legislative law making power of the State.

AVVPL HINJAM PORT PRIVATE LTD



Rajesh
BY

**Rajesh Kumar Jha
MD & CEO**

**MAHESH AGARWAL
ADVOCATE FOR AVPPL
AGARWAL LAW ASSOCIATES
19, BABAR ROAD, BENGALI MAKRET
NEW DELHI - 110 00
(M) 9910 483 62
EMAIL: mail@aglaw.in**

**PLACE: NEW DELHI
DATED:**

ATTESTED

SV
**SURENDAR V.P. B.A., LL.B
ADVOCATE & NOTARY
Roll No. K/1114/1999
VANCHIYOOR
KERALA**



BEFORE THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI ORIGINAL APPLICATION NO. 304 OF 2019

IN THE MATTER OF:

M. Haridasan ...Applicant

VERSUS

State of Kerala & Ors. Respondent(s)

AFFIDAVIT

I, Mr. Rajesh Kumar Jha, S/o. Krishna Chandra Jha aged about 59 years, being the authorized signatory of the Respondent Company- Adani Vizhinjam Port Private Limited (AVPPL) in the abovementioned Original Application, having its office at No.1, Port Office Building, Mullur Road, Mullur, Thiruvananthapuram Dt, Kerala - 695521 , do hereby solemnly affirm and state as under:

- 1. That I am the authorized signatory of the Respondent Company in the aforesaid matter and I am well acquainted with all the facts and circumstances of the case and as such I am duly authorized to swear this affidavit.
2. I say that I have read and understood the facts and contents as stated in the reply to the Original Application and say that the facts stated therein are true and correct to my knowledge and belief and no part of it is false.
3. I state that the documents annexed to the reply are true copies of their respective originals.

For ADANI VIZHINJAM PORT PRIVATE LTD

Rajesh

Rajesh Kumar Jha MD & CEO

DEPONENT

VERIFICATION:

I, Rajesh Kumar Jha, the above named deponent do hereby verify that the averments of the facts stated herein above are true to my knowledge and belief and no part of it is false and no material fact has been concealed therefrom.

Verified on this 23rd day of February, 2024 at Thiruvananthapuram.

Solemnly affirmed and signed before me by the deponent, who is known to me on this the 23rd day of February, 2024 at my office at Vanchiyoor, Tvpm-35

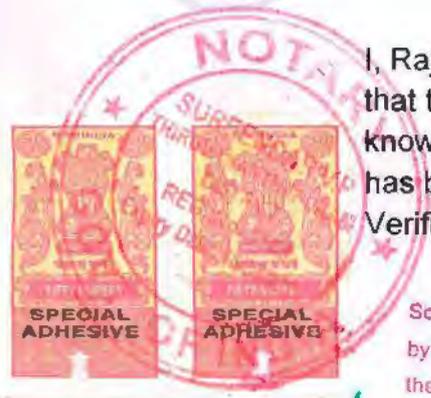
SURENDAR V.P. B.A., LL.B. ADVOCATE & NOTARY

For ADANI VIZHINJAM PORT PRIVATE LTD

Rajesh

Rajesh Kumar Jha MD & CEO

DEPONENT



ANNEXURE-R-1

Item No.06

Court No. 1

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

Original Application No. 304/2019
(M.A. No. 81/2021, M.A. No. 83/2021, M.A. No. 96/2021,
I. A. No. 184/2022, I. A. No. 440/2023, I. A. No. 441/2023,
I. A. No. 443/2023 & I. A. No. 444/2023)

M. Haridasan

Applicant

Versus

State of Kerala & Ors.

Respondent(s)

Poabs Granites (Pvt.) Ltd. & Anr.

Applicant in MA 81/2021

And

M/s. Panachayil Industries

Applicant in MA 83/2021

And

Crystal Granites Ltd. & Anr.

Applicant in MA 96/2021

Date of hearing: 03.01.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE MR. ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. AFROZ AHMAD, EXPERT MEMBER**

Applicant: Ms. Nishtha Kumar, Adv. (Through VC)

Respondent: Mr. Pallav Sisodia, Senior Advocate with Mr. Nishe Rajen Shonker, Adv.
for the State of Kerala
Mr. Jogy Scaria & Ms. Beena Victor, Advs. for KSPCB
Mr. Atmaram N.S. Nadkarni, Senior Advocate with Mr. Mahesh Agarwal &
Mr. Arshit Anand, Advs. for Adani Vizhinjam Port Pvt. Ltd.
Mr. Alex M. Scaria & Mr. John Thomas Arakkal, Advs. in I.A 440-
441/2023
Mr. Anshuman Shrivastava, Mr. Abhijeet Shrivastava & Ms. Usha
Nandini Advs. in I.A 442-444/2023
Mr. Abhilash M.R & Mr. Sayooj Mohandas, Advs.in M.A 85 to 88/2021
Mr. E.M.S. Anam & Mr. Vishnu Shankar, Advs. in M.A 81 to 83/2022
Mr. Abu John Mathew, Adv. for Rockfield Estates Pvt. Ltd. (Through VC)

ORDER

1. In this original application registered in *suo-moto* exercise of power the issue of providing safeguards against operation of stone quarries close to the residences and public roads in State of Kerala is involved.

2. The tribunal had earlier passed a detailed order in the matter which was subject matter of challenge by the aggrieved parties before the Hon'ble Supreme Court in Civil Appeal No. 6273/2021 and other Civil Appeals. The matter has been relegated by the Hon'ble Supreme Court permitting the parties to raise all permissible contentions before the tribunal.

3. In the previous proceedings the application for impleadment made by the different parties were allowed and a liberty was granted to all the newly added parties to file objections and reply. Certain objections and replies have been filed but grievance of some of the parties is that they have not received copies thereof. Hence we permit the parties to exchange the pleadings within a period of three weeks. The concerned parties who are yet to file their replies/objections may file the same within this period.

4. Considering the nature of controversy involved in this matter we deem it proper to appoint Mr. Raj Panjwani, Senior Advocate as the amicus in the matter who will be paid remuneration amounting to Rs. 25,000/- per hearing from the ring fenced account by the state of Kerla.

5. Ms. Nishtha Kumar, Advocate who was appearing for the applicant in original application has submitted that she has no instruction in the matter and she wants to withdraw from this case. The prayer is allowed.

6. List on 29.02.2024.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Arun Kumar Tyagi, JM

Dr. Afroz Ahmad, EM

January 03, 2024

Original Application No. 304/2019

(M.A. No. 81/2021, M.A. No. 83/2021, M.A. No. 96/2021,
I. A. No. 184/2022, I. A. No. 440/2023, I. A. No. 441/2023,
I. A. No. 443/2023 & I. A. No. 444/2023)

AS.

ANNEXURE-R-2

Item No.04

Court No. 1

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

Original Application No. 304/2019

(With report dated 17.12.2019)

M. Haridasan&Ors.

Applicant(s)

Versus

State of Kerala

Respondent(s)

Date of hearing: 28.02.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER
HON'BLE MR. SIDDHANTA DAS, EXPERT MEMBER**

For Respondent(s): Mr. Jogy Scaria, Advocate and Mr. Keerthipriyan, Advocate for Kerala SPCB
Mr. Nishe Rajen Shonker, Advocate for State of Kerala
Mr. Rajkumar, Advocate for CPCB

ORDER

1. Issue for consideration is the safeguards in operation of stone quarries close to residence and public roads. At present, the Kerala State PCB has permitted the stone quarry beyond 50 mtrs. from residence and public roads. This Tribunal vide order dated 09.10.2019 considered the matter and observed:

“3. We find that the environmental norms require assessment of impact of such activities and mere distance of 50 mtrs. By itself is not enough to dispense with such norms. In absence of any study, any stone quarry near the residence and public road is bound to cause air and noise pollution even beyond 50 mtrs. In this regard, reference may be made of observations in the judgments of the Hon'ble Supreme Court in *M.C. Mehta v. Union of India*, (1996) 8 SCC 496 and *Mohammed Haroon Ansari v. District Collector, Ranga Reddy District*, (2004) 1 SCC 491. In granting EC, this

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consideration has to be kept in mind in view of the fact that clean and safe environment is a part of right to life.

4. *Accordingly, we direct State PCB to revisit the existing criteria based on an appropriate study. CPCB may give its view in the matter to the State PCB within two weeks in light of available expert studies on the subject. The State PCB may furnish its action taken report in the matter by e-mail at judigical-ngt@gov.in before the next date."*

2. Accordingly, a report has been filed by the Kerala State PCB on 17.12.2019 retreating the distance criteria of 50 mtrs. and mentioning that no study is available with the CPCB.

3. We are of the view, as earlier observed that the distance of 50 mtrs. for stone quarry, particularly when blasts are involved, is highly inadequate and can have deleterious effect on noise and air pollution, environment and public health.

4. In view of above, we direct the CPCB to examine and lay down more stringent conditions and appropriately longer distance within one month and convey the same to the State Boards. The State Board may take further action accordingly. Compliance reports be filed before the next date by email at judicial-ngt@gov.in.

List again on 08.05. 2020.

Adarsh Kumar Goel, CP

Dr.Nagin Nanda, EM

Siddhanta Das, EM

February 28, 2020
Original Application No. 304/2019
AK

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ANNEXURE-R-3

Item No. 09

Court No. 1

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

(By Video Conferencing)

Original Application No. 304/2019

(With report dated 09.07.2020)

M. Haridasan & Ors.

Applicant(s)

Versus

State of Kerala

Respondent(s)

Date of hearing: 21.07.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S. P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**Respondent(s): Ms. Soni Singh, Advocate for CPCB
Mr. Jogy Scaria, Advocate for KSPCB**ORDER**

1. The Issue for consideration is the safeguards in operation of stone quarries close to residences and public roads. At present, the Kerala State PCB has permitted the stone quarry beyond 50 mtrs. from residences and public roads.

2. The Tribunal considered the matter on 28.02.2020. Finding the distance to be inadequate, CPCB was required to consider the matter and report. It was observed:

"2. Accordingly, a report has been filed by the Kerala State PCB on 17.12.2019 retreating the distance criteria of 50 mtrs. and mentioning that no study is available with the CPCB.

3. We are of the view, as earlier observed that the **distance of 50 mtrs. for stone quarry, particularly when blasts are involved, is highly inadequate and can have deleterious effect on noise and air pollution, environment and public health.**
4. In view of above, we direct the **CPCB to examine and lay down more stringent conditions and appropriately longer distance within one month and convey the same to the State Boards.** The State Board may take further action accordingly. Compliance reports be filed before the next date by email at [judicial-ngt@gov.in.](mailto:judicial-ngt@gov.in)”

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:

Mining Type		Minimum Distance	Locations
A.	When Blasting is not involved	100 m	<i>Residential/Public buildings, Inhabited sites, locations to be considered by States.</i>
B.	When Blasting is involved	200 m **	

****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.

A copy of this order be sent to the CPCB and all the State PCBs/PCCs by email for compliance.

The application is disposed of.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Dr. Nagin Nanda, EM

July 21, 2020
Original Application No. 304/2019
AK

ANNEXURE R-4

KADAVILA-1 STONE QUARRY		
NOC	B7-40269/2017	
LOI	9363/M3/2018	
Mine Plan Approval Letter	2436/DOT/ML/2020	
EC	02/2019	
CTO	PCB/TVM-DO/ICE/10171298/2019	
Panchayat License	1/2021-2022/A-2/150/21-22	
Explosives	E/SE/KL/22/331(E121778)	
Execution	10026/M3/2020	
Proceedings	490/2020-21/10026/M3/2020/DMG	
Notice of Opening Form D	Dated:	06.06.2019

KADAVILA-2&3 STONE QUARRY		
NOC	B7-17779/2018	
LOI	DMG/2879/2022-M3	
Mine Plan Approval Letter	2304/DOT/ML/18	
EC	92/Q/2022	
CTO	KSPCB/TV/ICO/10005087/2022	
Panchayat License	232/2022-2023/A-2/RPTL19/2139	
Explosives	E/SE/KL/22/331(E121778)	
Execution	DMG/2879/2022-M3	
Proceedings	30/2023-24/2879/M3/2022/DMG	
Notice of Opening Form D	Dated:	14.07.2023

MANICKAL STONE QUARRY		
NOC	B7-127329/2018	
LOI	5219/M3/2019	
Mine Plan Approval Letter	362/DOT/ML/18	
EC	29/2020	
CTO	PCB/TVM-DO/ICO/NDD-12806757/2020	
Panchayat License		
Explosives	E/SE/KL/22/331(E121778)	
Execution	7671/M3/2021	
Proceedings	428/2021-22/5219/M3/2019/DMG	
Notice of Opening Form D	Dated:	09.03.2022

KOODAL STONE QUARRY		
NOC	B7-186960/2018	
LOI	6676/M3/2019	
Mine Plan Approval Letter	1210/DOPTA/M/2019	
EC	88/Q/2022	
CTO	KSPCB/PT/ICO/10005066/2022	
Panchayat License	2359/22	
Explosives	E/SE/KL/22/331(E121778)	
Execution	DMG/3903/2022-M3	
Proceedings	125/2023-24/DMG/3903/2022-M3	
Notice of Opening Form D	Dated:	Not Yet Started

ARYANAD STONE QUARRY	
NOC	B7-14936/2018
LOI	5350/M3/2019
Mine Plan Approval Letter	360/DOT/ML/2019
EC	80/Q/2022
CTO	KSPCB/TV/ICO/10005098/2022
Panchayat License	JC-3/83/2023
Explosives	E/SE/KL/22/331(E121778)
Execution	DMG/301/2023-M1
Proceedings	85/2023-24/DMG/301/2023-M1
Notice of Opening Form D	Dated: Not Yet Started



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Validity expires on 28.02.2024

ANNEXURE-R-5

Proceedings of the State Environment Impact Assessment Authority Kerala

*Present: Dr.H.Nagesh Prabhu, IFS (Rtd.), Chairman, Dr. K.Jayachandran, Member &
Dr.Usha Titus I.A.S Member Secretary.*

Sub: SEIAA- Environmental Clearance for the proposed building stone quarry project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala by Mr.Rajesh Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Private Limited - Granted – Orders issued.

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. 1200/EC2/2018/SEIAA

Dated, Thiruvananthapuram 01.03.2019

- Ref: 1. Application received on 31.12.2018 from Mr.Rajesh Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Private Limited, 2nd floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014
2. Minutes of the 90th meeting of SEAC held on 4th January, 2019
3. Minutes of the 92nd meeting of SEAC held on 22.01.2019
4. Minutes of the 89th meeting of SEIAA held on 27th February 2019.
5. Affidavit received on 28.02.2019 from Sri.Manoranjan Tripathy, Deputy General Manager- Projects, Adani Vizhinjam Port Pvt.Ltd.

ENVIRONMENTAL CLEARANCE NO.02/2019

Mr.Rajesh Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Private Limited, 2nd floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014, vide the hardcopy of application received on 31.12.2018, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala for an area of 3.6630 Ha. The project comes under Category B2, Activity 1(a), (i) as per the Schedule of EIA Notification 2006.

2. The proposed project site falls within Latitude 8^o43'42.88" N to 8^o33'51.74" N Longitude 76^o50'15.26" E to 76^o50'23.24" E . The lease area consists of 3.6630 hectares,

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which belongs to Government (Purambooke) land. The proposed project is for quarrying of 5,12,500 tonnes per annum. The daily water demand will be about 4 KLD, in which 2 KLD for domestic, 1KLD for plantation and 1KLD for dust suppression. The total project cost is 750 lakhs.

3. The proposal was placed in the 90th meeting of SEAC held on 4th January, 2019 and in the 92nd meeting of SEAC held on 22.01.2019. The Committee decided to recommend to issue EC subject to the following observations and conditions in addition to the general conditions.

1. *The NE and SW portion of the proposed quarry area is already mined to the localized baseline. Therefore, the area remaining to be mined out is the eastern portion of the proposed land.*
2. *On completion of the proposed mining activity, one quarter of the hillock under government land will vanish.*
3. *The geological reserve estimated is 51,96,250 tons out of which the mineable reserve is 17,78,750 tone (up to the bench level of 28m AMSL) and blocked reserve is 34,17,500 tons. The mineable reserve up to 40m AMSL is 15,07,500 tons. It means that if the total mineable quantity is allowed to be extracted, the mine will go below the present ground level of 40m AMSL by a depth of 12m creating a pit.*
4. *The reclamation and rehabilitation plan indicates that after the extraction over five years, there will a pit of 3 Ha out of which 0.95 Ha will be converted as a water pond and balance area of 2.05 Ha will be retained as pit.*
5. *The proposal for year-wise mining indicates that the extraction will be to the tune of 1,52,500 tons (1st year), 4,99,375 tons (2nd year), 5,12,500 tons (3rd year), 5,11,875 tons (4th year) and 1,02,500 tons (5th year). However, the proposal does not mention about the requirement for the next two years, during which it is understood that the breakwater construction will be over.*
6. *If we consider that the breakwater construction will be completed in two years and the quantity of stone projected for extraction in the first two years is the actual requirement for the proponent, then the quantity extracted will be 6,51,875 tons, i.e., 37% of the mineable reserve. If the mining is allowed upto the bench level of 70m as per the mine plan, the quantity extractable is 7,51,875 tons, i.e. 15% more than the requirement.*

7. Kerala experiences intermittent micro earthquakes such as the ones in Nedumkandam in 1988 with 4.5 magnitude, Vadakkencherry in 1994 with 4.3 magnitude, Erattupetta in 2000 and 2001 with magnitudes 5 and 4.8 respectively, off the coast of Thiruvananthapuram in 2001 with magnitude 4.5 etc. Based on the studies on the causative factors of micro tremors in Kerala, it is understood that variation in hydraulic pressure in the near-surface joints and fractures, increased pore-pressure and its uncertain variations etc lead to disturbance in the subsurface rock formations. Studies also indicated that from among the micro-tremors recorded in the seismograph installed in Peechi between 2000 and 2008, 45% occurred between July and October and 29% between November and January when there is significant rainfall and groundwater recharge. It indicates that the landuse changes, hydraulic pressure build up, pore-pressure variations etc. could influence occurrence of micro-tremors. There have been micro-tremors centered around Vamanapuram in September 1988, Parippalli in December 1994, Kilimanur in August 2006 and Attingal in January 2008. It is suspected that the subsurface rock formations do not have adequate strength to absorb the high magnitude variations in the landuse pattern, landform changes, hydraulic pressure variations etc.. Therefore, there need to be utmost restraints in disturbing the natural landforms of the region.
8. The earlier quarrying of the hillock has left a vertical fall of 70m which is very dangerously poised. If mining is allowed as per mining rules, the vertical fall will become a bench cut which will improve the safety aspect of the frontal portion of the quarry.
9. Since the proposal is to extract stone from one portion of the hillock, there will not be complete removal of the hillock, thus overcoming the implications on micro-climate of the region.
10. There are other quarries in the vicinity of the proposed quarry, but not within 500m as per a document produced by the proponent. It may be verified whether the proponent has submitted the relevant documents along with the application for EC, so as to ensure that there are no quarries within the radius of 500m.
11. The mining is proposed with Non-electric detonator (NONEL) method thereby minimizing air blast, fly rock and ground vibration.
12. The proponent should be directed to constitute a Local Area Monitoring Committee, involving the Grama Panchayat.

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13. *No environmental management intervention could adequately mitigate the impacts caused due to the activities linked to quarrying/mining. However, the demand for building stones for essential developmental activities need to be met. Therefore, it is desirable to restrict mining to the minimum essential requirement so as to minimize the environmental impact as well as to protect the resource for future demand of development activities. Hence, mining should not be allowed for extracting the whole of mineable quantity but be permitted to meet the essential requirement. This approach will also minimize the change in landform.*
14. *The proponent may be permitted to extract a maximum of 7 lakh tons of building stone within a period of two years. Further permission for mining may be considered based on the requirement then and environmental assessment.*
15. *The proponent should be asked to comply with all mandatory environmental management conditions that are stipulated while giving EC for such mining projects.*
16. *The social and environmental needs of the locality should be assessed in consultation with the Local Governments based on which the Corporate Social & Environmental Responsibility should be exercised.*

4. The proposal was placed in the 89th meeting of SEIAA held on 27th February 2019. Authority decided to recommend for issuance of EC with general conditions in tune with KMMC Rules 2015 and its amendments and subject to the following specific conditions.

1. *The mining should be conducted with Non-electric detonator (NONEL) method thereby minimizing air blast, fly rock and ground vibration.*
2. *Extract a maximum of 7 lakh tons of building stone within a period of two years. Further permission for mining may be considered based on the requirement then and environmental assessment.*
3. *The proponent shall file an affidavit that he will expend Rs.15 lakhs as part of CER in consultation with Local Self Government.*
4. *The proponent should follow the closure plans (progressive closure and final closure) as per KMMC Rules.*

The proponent has submitted notarised affidavit committing the CSR activities vide reference 5th cited.

5. Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the quarry project of Mr.Rajesh Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Private

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Limited, 2nd floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014 in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala for an area of 3.6630 Ha, subject to the specific conditions as in para 4th above, all the environmental impact mitigation and management measures undertaken by the project proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. The assurances and clarifications given by the proponent will be deemed to be a part of these proceedings as if incorporated herein. Also the general conditions for projects stipulated for mining (items 1 to 48), appended hereto will be applicable and have to be strictly adhered to.

6. The Clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures as assured in the Environment Management Plan and the mining features including progressive mine closure plan as submitted with the application and relied on for grant of this clearance. The above undertakings and the conditions and the undertakings in Chapter 2 (Mining) & (Blasting), Chapter 3 (Mines Drainage), Chapter 4 (Stacking of Mineral rejects and Disposal of waste) Chapter 8 (Progressive Mine Closure Plan) & EMP of the Mining Plan as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

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

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

1. Necessary assistance for entry and inspection should be provided by the project proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring.
- ii. Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram.

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111. The given address for correspondence with the authorised signatory of the project is Mr.Rajesh Jha, Chief Executive Officer, M/s Adani Vizhinjam Port Private Limited, 2nd floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014.

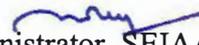
Sd/-

Dr.Usha Titus I.A.S
Member Secretary, SEIAA

To,

Mr.Rajesh Jha,
Chief Executive Officer,
M/s Adani Vizhinjam Port Private Limited,
2nd floor, Vipanchika Tower, Thycaud,
Thiruvananthapuram – 695014

Forwarded/By order


Administrator, SEIAA

Copy to,

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.
2. The Principal Secretary to Government, Environment Department, Government of Kerala.
3. District Collector, Thiruvananthapuram
4. Director, Mining & Geology, Thiruvananthapuram -4.
5. The Member Secretary, Kerala State Pollution Control Board
6. District Geologist, Thiruvananthapuram
7. Tahsildhar, Chirayinkeezhu Taluk, Thiruvananthapuram district
8. Village Officer, Nagaroor Village (Kadavila), Thiruvananthapuram
9. Chairman, SEIAA.
10. Website.
11. S/f
12. O/c



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

1. A separate environmental management and monitoring cell with qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
2. Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.
3. Sprinklers shall be installed and used in the project site to contain dust emissions.
4. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
5. In view of the deep pits left after the excavation, stacking at maximum top level should be carried out.
6. Corporate Environment Responsibility agreed upon by the proponent should be implemented.
7. The project proponent shall comply the conditions stipulated by the statutory authorities concerned.
8. Tarring /multiple options on the access roads shall be undertaken so as to reduce dust pollution during movement of vehicle.
9. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions.
10. Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention in the mining plan/specific condition.
11. Ground level should be fixed in individual cases separately
12. No mining operations should be carried out at places having a slope greater than 45°.
13. Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB. This condition is applicable only in such cases if a crusher is adjacent to the quarry.
14. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
15. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
16. The transportation of minerals should be done in covered trucks to contain dust emissions. The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project. SEAC should assess the number of trees in each project site before the issuance of EC so as to ensure the promptness in planting.
17. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
18. A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.
19. 50 m buffer distance should be maintained from forest boundaries.
20. Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.
21. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.
22. In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority.
23. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
24. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the p
1974, the Air (Prevention and c
1986, the Public Liability (Insura
tion and Control of Pollution) Act,
, the Environment (Protection) Act,
otification, 2006.

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25. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at www.seiaakerala.org. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.
26. The Environmental Clearance shall be put on the website of the company by the proponent.
27. Proponent shall submit half yearly reports in soft copy and SEIAA will upload it on the website.
28. The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40. Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public
29. The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.
30. No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.
31. The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.
32. The top soil, if any, shall temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45^o. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.
33. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
34. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM₁₀ and PM_{2.5} such as haul Road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
35. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
36. Measures should be taken for control of noise levels below 85 dBA in the work environment.
37. The funds earmarked for environmental protection measures and CER activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.
38. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.
39. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
40. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
41. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or this implementation of any of th
 right to alter/modify the above environment protection. further condition in the interest of

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42. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.
43. The Environmental Clearance will be subject to the final order of the courts in any pending litigation related to the land or project, in any court of law.
44. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.
45. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution taking centre. Washing of all vehicles shall be inside the lease area'
46. Project proponent should obtain necessary prior permission of the competent authorities for drawal of requisite quantity of surface water and ground water for the project.
47. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA.
48. Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.



For Member Secretary, SEIAA Kerala



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National Accreditation Board for
Testing and Calibration Laboratories
ANNEXURE-R6

CERTIFICATE OF ACCREDITATION

**STANDARDS ENVIRONMENTAL & ANALYTICAL
LABORATORIES**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

"STANDARDS", BUILDING NO. 338/A, B, C, D, E, EDAYAR, MUPPATHADAM P.O., KOCHI, ERNAKULAM,
KERALA, INDIA

in the field of

TESTING

Certificate Number: TC-12191

Issue Date: 05/09/2023

Valid Until:

20/11/2023

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: STANDARDS ENVIRONMENTAL & ANALYTICAL LABORATORIES

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer

**TEST REPORT**

ULR No: TC1219123000002256F		
LRI No.: SEAAL23100422A	Date: 10-10-2023	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 28-09-2023

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN23091096
Sample Name	Ambient Air	Sample Received on	29-09-2023
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	03-10-2023
Sampled by	Lab Authorized Sampler	Test Completed on	07-10-2023

DETAILS OF SAMPLING			
Sampling Location	Project Site	Date of Sampling	28-09-2023
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	65 %
Latitude	8° 43'48.11" N	Longitude	76° 50'23.12" E

INFORMATION PROVIDED BY CUSTOMER - SAMPLING SITE DETAILS			
Re - Survey No	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE					
SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
1	Particulate matter, PM ₁₀	IS 5182 (Part 23): 2006	µg/m ³	69.4	100 (Max)
2	Particulate matter, PM _{2.5}	IS 5182 (Part 24): 2019	µg/m ³	37.8	60.0 (Max)
3	Sulphur dioxide as SO ₂	IS 5182 (Part 2): 2001	µg/m ³	BDL (LOD 4.00)	80.0 (Max)
4	Oxides of Nitrogen as NO ₂	IS 5182 (Part 6): 2006	µg/m ³	BDL (LOD 4.00)	80.0 (Max)

Note: BDL- Below Detection Limit

Remarks:

End of Report

Nesny A.K.
Chemist
Checked by



Laiju P.N.
Laboratory Head
Authorized Signatory

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

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vide Certificate No. TC - 12191 & "A" Grade Laboratory approved by KSPCB.

'Standards' Bldg. No: 338/A,B,C,D,E (Behind BPCL Petrol Pump), Edayar, Muppathadam P.O., Ernakulam Dist. - 683 110

Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT**

ULR No: TC1219123000002258F		
LRI No.: SEAAL23100424A	Date: 10-10-2023	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 28-09-2023

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN23091098
Sample Name	Ambient Air	Sample Received on	29-09-2023
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	03-10-2023
Sampled by	Lab Authorized Sampler	Test Completed on	07-10-2023

DETAILS OF SAMPLING			
Sampling Location	Vanchiyoor UP School West Side (1 Km away from Project Site)	Date of Sampling	28-09-2023
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	65 %
Latitude	8° 43'42.7" N	Longitude	76° 50'16.1" E

INFORMATION PROVIDED BY CUSTOMER - SAMPLING SITE DETAILS			
Re - Survey No	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE					
SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
1	Particulate matter, PM ₁₀	IS 5182 (Part 23): 2006	µg/m ³	60.7	100 (Max)
2	Particulate matter, PM _{2.5}	IS 5182 (Part 24): 2019	µg/m ³	26.9	60.0 (Max)
3	Sulphur dioxide as SO ₂	IS 5182 (Part 2): 2001	µg/m ³	BDL (LOD 4.00)	80.0 (Max)
4	Oxides of Nitrogen as NO ₂	IS 5182 (Part 6): 2006	µg/m ³	BDL (LOD 4.00)	80.0 (Max)

Note: BDL- Below Detection Limit
Remarks:

End of Report

Nesny A.K.

Nesny A.K.
Chemist
Checked by



Laiju P.N.

Laiju P.N.
Laboratory Head
Authorized Signatory

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Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

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ANNEXURE R-9



TEST REPORT

ULR No: TC1219123000002259F		
LRI No.: SEAAL23100425A	Date: 10-10-2023	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 28-09-2023

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN23091099
Sample Name	Ambient Air	Sample Received on	29-09-2023
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	03-10-2023
Sampled by	Lab Authorized Sampler	Test Completed on	07-10-2023

DETAILS OF SAMPLING			
Sampling Location	St. Joseph of Cluny Public School - South side (850 m away from Project Site)	Date of Sampling	28-09-2023
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	65 %
Latitude	8° 43'37.63" N	Longitude	76° 50'49.33" E

INFORMATION PROVIDED BY CUSTOMER - SAMPLING SITE DETAILS			
Re - Survey No	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE					
SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
1	Particulate matter, PM ₁₀	IS 5182 (Part 23): 2006	µg/m ³	72.5	100 (Max)
2	Particulate matter, PM _{2.5}	IS 5182 (Part 24): 2019	µg/m ³	37.5	60.0 (Max)
3	Sulphur dioxide as SO ₂	IS 5182 (Part 2): 2001	µg/m ³	BDL (LOD 4.00)	80.0 (Max)
4	Oxides of Nitrogen as NO ₂	IS 5182 (Part 6): 2006	µg/m ³	BDL (LOD 4.00)	80.0 (Max)

Note: BDL- Below Detection Limit

Remarks:

End of Report

Nesny A.K.

Nesny A.K.
Chemist
Checked by



Laiju P.N.

Laiju P.N.
Laboratory Head
Authorized Signatory

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Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

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TEST REPORT

ULR No: TC1219123000002260F		
LRI No.: SEAAL23100426A	Date: 10-10-2023	Page 1 of 1

CUSTOMER DETAILS	
Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 28-09-2023

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN23091100
Sample Name	Ambient Air	Sample Received on	29-09-2023
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	03-10-2023
Sampled by	Lab Authorized Sampler	Test Completed on	07-10-2023

DETAILS OF SAMPLING			
Sampling Location	Viswanadhapuram Shiva Temple East Side (650 m away from Project Site)	Date of Sampling	28-09-2023
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	65 %
Latitude	8° 44'9.02" N	Longitude	76° 50'18.82" E

INFORMATION PROVIDED BY CUSTOMER - SAMPLING SITE DETAILS			
Re - Survey No	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE					
SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
1	Particulate matter, PM ₁₀	IS 5182 (Part 23): 2006	µg/m ³	58.4	100 (Max)
2	Particulate matter, PM _{2.5}	IS 5182 (Part 24): 2019	µg/m ³	27.3	60.0 (Max)
3	Sulphur dioxide as SO ₂	IS 5182 (Part 2): 2001	µg/m ³	BDL (LOD 4.00)	80.0 (Max)
4	Oxides of Nitrogen as NO ₂	IS 5182 (Part 6): 2006	µg/m ³	BDL (LOD 4.00)	80.0 (Max)

Note: BDL- Below Detection Limit
Remarks:

End of Report

Nesny

Nesny A.K.
Chemist
Checked by



Laiju

Laiju P.N.
Laboratory Head
Authorized Signatory

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Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

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TEST REPORT

ULR No: TC1219123000002257F		
LRI No.: SEAAL23100423A	Date: 10-10-2023	Page 1 of 2

CUSTOMER DETAILS	
Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 28-09-2023

SAMPLE DETAILS			
Product Category	Atmospheric Pollution	Sample Code	EN23091097
Sample Name	Ambient Air	Sample Received on	29-09-2023
Sample Conditions at Receipt	Fit for Analysis	Test Commenced on	03-10-2023
Sampled by	Lab Authorized Sampler	Test Completed on	07-10-2023

DETAILS OF SAMPLING			
Sampling Location	Near Operators Rest Room North Side (250 m away from Project Site)	Date of Sampling	28-09-2023
Sampling Procedure	SEAAL/ENL/GEN/SOP/02	Humidity	65 %
Latitude	8° 43'48.63" N	Longitude	76° 50'12.46" E

INFORMATION PROVIDED BY CUSTOMER - SAMPLING SITE DETAILS			
Re - Survey No	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE					
SL NO	PARAMETERS	TEST METHOD	UNIT	RESULT	NAAQ STANDARD
1	Particulate matter, PM ₁₀	IS 5182 (Part 23): 2006	µg/m ³	64.5	100 (Max)
2	Particulate matter, PM _{2.5}	IS 5182 (Part 24): 2019	µg/m ³	35.3	60.0 (Max)
3	Sulphur dioxide as SO ₂	IS 5182 (Part 2): 2001	µg/m ³	BDL (LOD 4.00)	80.0 (Max)
4	Oxides of Nitrogen as NO ₂	IS 5182 (Part 6): 2006	µg/m ³	BDL (LOD 4.00)	80.0 (Max)

Note: BDL- Below Detection Limit

Remarks:

End of Report

Nesny A.K.

Nesny A.K.
Chemist
Checked by



Laiju P.N.

Laiju P.N.
Laboratory Head
Authorized Signatory

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Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

Annexure R12 (COLLY)

Standards

**TEST REPORT**

ULR No: TC121912300005063F

LRI No.: SEAAL23111526A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110781
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	10.45 am to 10.47 am
Latitude	8° 43'48.0" N	Longitude	76° 50'12.6" E
Monitoring Location	Kukku House (231 m away from the Blasting Area)	Instrument Serial No	685810

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	73.8

End of Report

Nesny A.K.
Chemist
Checked by



Laiju P.N.
Laboratory Head
Authorized Signatory

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TEST REPORT**ULR No: TC1219123000005062F**

LRI No.: SEAAL23111525A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110780
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	10.45 am to 10.47 am
Latitude	8° 43'44.6" N	Longitude	76° 50'18.4" E
Monitoring Location	50 m Radius (50 m away from the Blasting Area)	Instrument Serial No	670501

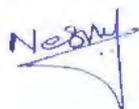
SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	76.3

End of Report



Nesny A.K.
Chemist
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Laboratory Head
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**TEST REPORT****ULR No: TC121912300005063F**

LRI No.: SEAAL23111526A

Date:

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110781
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	10.45 am to 10.47 am
Latitude	8° 43'48.0" N	Longitude	76° 50'12.6" E
Monitoring Location	Kukku House (231 m away from the Blasting Area)	Instrument Serial No	685810

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	73.8

End of Report

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**TEST REPORT****ULR No.: TC121912300005064F**

LRI No.: SEAAL23111527A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110782
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	10.45 am to 10.47 am
Latitude	8° 43'48.12" N	Longitude	76° 50'17.27" E
Monitoring Location	Boundary Pillar (B.P)-2 (111 m away from the Blasting Area)	Instrument Serial No	21389

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	66.5

End of Report

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**TEST REPORT****ULR No: TC121912300005065F**

LRI No.: SEAAL23111528A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110783
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	11.01 am to 11.03 am
Latitude	8° 43'52.6" N	Longitude	76° 50'18.6" E
Monitoring Location	Ajay House (222 m away from the Blasting Area)	Instrument Serial No	21389

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	65.5

End of Report

Nesny A.K.
Chemist
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**TEST REPORT****ULR No: TC121912300005066F**

LRI No.: SEAAL23111529A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110784
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	11.01 am to 11.03 am
Latitude	8° 43'51.74" N	Longitude	76° 50'17.27" E
Monitoring Location	Boundary Piller-3 (198 m away from the Blasting Area)	Instrument Serial No	670501

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	74.6

End of Report

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**TEST REPORT****ULR No: TC121912300005067F**

LRI No.: SEAAL23111530A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110785
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	11.01 am to 11.03 am
Latitude	8° 43'38.5" N	Longitude	76° 50'15.9" E
Monitoring Location	Babu House (245 m away from the Blasting Area)	Instrument Serial No	685810

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	70.8

End of Report

Nesny A.K.
Chemist
Checked by



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Laboratory Head
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TEST REPORT

ULR No: TC121912300005068F

LRI No.: SEAAL23111531A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110786
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	1.57 pm to 1.59 pm
Latitude	8° 43'46.8" N	Longitude	76° 50'26.9" E
Monitoring Location	Trissulam Area (214 m away from the Blasting Area)	Instrument Serial No	670501

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	69.1

End of Report

Nesny A.K.
Chemist
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**TEST REPORT****ULR No.: TC121912300005069F**

LRI No.: SEAAL23111532A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110787
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	1.57 pm to 1.59 pm
Latitude	8° 43'45.2" N	Longitude	76° 50'31.2" E
Monitoring Location	Temple (343 m away from the Blasting Area)	Instrument Serial No	21389

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	71.2

End of Report

Nesny A.K.
Chemist
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TEST REPORT**ULR No.: TC1219123000005070F**

LRI No.: SEAAL23111533A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110788
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	1.57 pm to 1.59 pm
Latitude	8° 43'44.0" N	Longitude	76° 50'29.7" E
Monitoring Location	Temple Shed (301 m away from the Blasting Area)	Instrument Serial No	685810

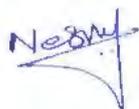
SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

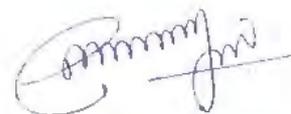
TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	66.2

End of Report



Nesny A.K.
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**TEST REPORT****ULR No.: TC121912300005071F**

LRI No.: SEAAL23111534A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110789
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	2.11 pm to 2.12 pm
Latitude	8° 43'41.70" N	Longitude	76° 50'24.14" E
Monitoring Location	175 m Radius (175 m away from the Blasting Area)	Instrument Serial No	685810

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	71.9

End of Report

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Chemist
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**TEST REPORT****ULR No: TC121912300005072F**

LRI No.: SEAAL23111535A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110790
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	2.11 pm to 2.12 pm
Latitude	8° 43'27.9" N	Longitude	76° 50'22.3" E
Monitoring Location	Kadavila Junction (553 m away from the Blasting Area)	Instrument Serial No	670501

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	72.9

End of Report

Nesny A.K.
Chemist
Checked by



Laiju P.N.
Laboratory Head
Authorized Signatory

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

Standards Environmental & Analytical Laboratories

Accreditation & Approval: NABL accredited Testing Laboratory as per ISO/IEC 17025:2017

vide Certificate No. TC - 12191 & "A" Grade Laboratory approved by KSPCB.

'Standards' Bldg. No: 338/A,B,C,D,E (Behind BPCL Petrol Pump), Edayar, Muppathadam P.O., Ernakulam Dist. - 683 110

Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No.: TC121912300005074F**

LRI No.: SEAAL23111537A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110792
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	2.25 pm to 2.26 pm
Latitude	8° 43'44.83" N	Longitude	76° 50'23.24" E
Monitoring Location	Boundary pillar (B.P)-4 (103 m away from the Blasting Area)	Instrument Serial No	685810

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	71.6

End of Report

Nesny A.K.
Chemist
Checked by



Laiju P.N.
Laboratory Head
Authorized Signatory

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Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

TEST REPORT**ULR No.: TC121912300005075F**

LRI No.: SEAAL23111538A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110793
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	2.25 pm to 2.26 pm
Latitude	8° 43'41.7" N	Longitude	76° 50'17.3" E
Monitoring Location	Rest Shelter (146 m away from the Blasting Area)	Instrument Serial No	670501

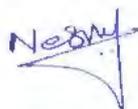
SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	70.5

End of Report



Nesny A.K.
Chemist
Checked by




Laiju P.N.
Laboratory Head
Authorized Signatory

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Tel. 0484-2546660, 93872 72402, 90743 41443, Web: www.sealabs.in, E-mail: seaalab@gmail.com

**TEST REPORT****ULR No.: TC121912300005076F**

LRI No.: SEAAL23111539A

Date: 20-11-2023

Page 1 of 1

CUSTOMER DETAILS

Customer Name & Address	M/s Adani Vizhinjam Port Pvt Ltd Nagaroor, Chirayinkeezhu, Thiruvananthapuram District.
Customer Reference	Test Request date: 20-11-2023

SAMPLE DETAILS

Product Category	Atmospheric Pollution	Sample Code	EN23110794
Sample Name	Noise Level	Monitoring Commenced on	20-11-2023
Test Method	IS 9989:1981 RA:2008	Monitoring Completed on	20-11-2023
Sampled by	Lab Authorized Sampler	Blasting Time	2.25 pm to 2.26 pm
Latitude	8° 43'53.5" N	Longitude	76° 50'24.0" E
Monitoring Location	Muralidharan House (272 m away from the Blasting Area)	Instrument Serial No	21389

SAMPLING SITE DETAILS

Survey No.	555/2, Block No.37		
Village	Nagaroor	Taluk	Chirayinkeezhu
District	Thiruvananthapuram	State	Kerala

TEST RESULTS-CHEMICAL DISCIPLINE

SL NO	SOURCE	UNIT	RESULT
1	Ambient Sound Level (Leq)	dB (A)	69.0

End of Report

Nesny A.K.
Chemist
Checked by



Laiju P.N.
Laboratory Head
Authorized Signatory

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