

Building Stone Quarry Project

**Survey No. 555/2 at Nagaroor Village,
Chirayinkeezhu Taluk, Thiruvananthapuram District**

Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019

**Half Yearly Compliance Report (HYCR)
for the Period October 2023 to March 2024**

Project Proponent

The logo for Adani, featuring the word "adani" in a lowercase, sans-serif font. The letters "a", "d", and "n" are blue, while the letters "a", "n", and "i" are purple.

Adani Vizhinjam Port Pvt. Ltd. (AVPPL)

May 2024

Ref: AVPPL/MoEF/2024-25/3036

Date: 28th May 2024

To,
Ministry of Environment Forest and Climate Change (MoEF&CC),
Regional Office (Southern Zone), Kendriya Sadan,
IVth Floor, E&F Wings, 17th Main Road, IInd Block,
Koramangala, Bangalore-560034
rosz.bng-mefcc@gov.in

Subject: Submission of **Half Yearly Compliance Report (HYCR)** to Conditions of Environmental Clearance (EC) for the Period October 2023 to March 2024 - Reg.

Reference: EC for Building Stone Quarry in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala; by M/s. Adani Vizhinjam Port Pvt. Ltd. vide **No. 1200/EC2/2018/SEIAA dated 01.03.2019**

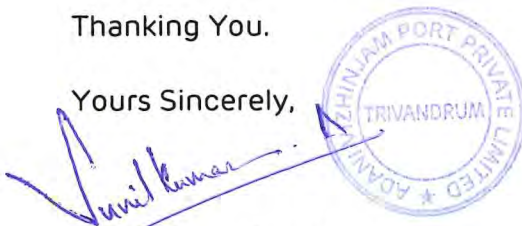
Dear Sir/Madam,

This has reference to the Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA issued on 1st March 2019 (vide reference cited) by the State Environmental Impact Assessment Authority (SEIAA), Kerala for the building stone quarry project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala; of M/s. Adani Vizhinjam Port Private Limited (AVPPL).

The Half Yearly EC Compliance Report (HYCR) of the conditions stipulated in the cited reference for the period from **October 2023 to March 2024** is enclosed herewith for record and reference. You are requested to kindly acknowledge receipt of the same.

Thanking You.

Yours Sincerely,



Sunil Kumar Ayyappan
General Manager – Projects


Enclosed: As mentioned above

Copy to: State Environment Impact Assessment Authority (SEIAA), K.S.R.T.C Bus Terminal Complex, 4th Floor, Thampanoor, Thiruvananthapuram, Kerala

Adani Vizhinjam Port Pvt Ltd
Port Operation Building,
Mulloor,
Thiruvananthapuram,
Kerala-695521


Tel +91 471 2772 100
Fax +91 471 2325 600
project.vizhinjam@adani.com
www.adani.com
CIN: U61200GJ2015PTC083954

Registered Office:
Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad-382421

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
Specific Conditions		
1	<p>The mining should be conducted with Non-Electric Detonator (NONEL) Method thereby minimizing air blast, fly rock and ground vibration.</p>	<p>Complied Mining is being conducted using Non-Electric Detonator (NONEL) method of controlled blasting only; to minimize the air blast, fly rock and ground vibration. No incident of fly rock has been recorded.</p> <p>Adani Vizhinjam Port Pvt. Ltd. (AVPPL) had engaged Anna University, Department of Mining Engineering, Chennai to conduct a scientific study on Blast Induced Ground Vibration for the Quarry. Altogether 10 experimental blast rounds were conducted, and comprehensive vibration monitoring was carried out during the blasting experiment. In all the 10 trial blasts, ground vibrations were monitored at 47 locations around the blasting sites and neighboring villages, which includes domestic houses and other prominent structures of the village.</p> <p>Based on the scientific study, it is concluded that the blast induced ground vibrations and noise levels generated by the controlled blasting carried out in the quarry are safe and well within the permissible limit as per recommendations of Directorate General of Mine Safety (DGMS) and therefore is not affecting the residential buildings and other structures. Further, it had been observed that no flying fragments or projectiles travelled beyond 10 m from the site of blast. Hence, it was inferred through the study report that controlled blasting can be carried out at the Quarry. The Anna University Study Report was submitted along with the HYCR for the period April 2021 to September 2021.</p>
2	<p>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</p>	<p>Complied In view of the additional requirement of building stone for completion of phase 1 of the Vizhinjam project, State Environmental Impact Assessment Authority (SEIAA), Kerala decided to issue EC for</p>

	<p style="text-align: center;">Adani Vizhinjam Port Private Limited (AVPPL)</p>	<p style="text-align: center;">From: October 2023 To: March 2024</p>
<p style="text-align: center;">Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala</p>		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	<p>requirement then and environmental assessment.</p>	<p>the extraction of a further 10.79 Lakh Tons granite rock for the period from 2021-22 to 2023-24 subject original EC conditions vide their order No. 1200/EC2/2018/SEIAA dated 16.11.2020 (A copy of the order was submitted along with the HYCR for the period October 2020 to March 2021). The Modified Approved Mining Plan was submitted along with the HYCR for the period April 2021 to September 2021). Therefore, permission is accorded for a total of 17.79 (7 + 10.79) Lakh Tons of building stones to be extracted from the quarry.</p> <p>During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023. A total cumulative quantity of 15.1385 Lakh Tons of building stones have been extracted from inception of mining on 02.07.2019 till 13.07.2023.</p>
3	<p>The proponent shall file an affidavit that he will expend Rs. 15 lakhs as a part of CER in consultation with Local Self Government.</p>	<p>Complied AVPPL have submitted to SEIAA an affidavit dated 08.11.2019 duly signed by the MD and CEO vide letter AVPPL/SEIAA/2019-20/945 dated 15.11.2019 that Rs. 15 Lakhs will be spent as a part of Corporate Environment Responsibility (CER) in consultation with the Local Self Government. A copy of the affidavit was submitted along with the HYCR for the period October 2019 to March 2020.</p> <p>AVPPL have spent Rs. 36.15 Lakhs for CER Activities. Despite having exhausted the agreed-upon funds for CER activities, AVPPL, being committed to environmental responsibility has exceeded the required expenditure of Rs. 15 Lakhs as stated in the affidavit.</p>
4	<p>The proponent should follow the closure plans (progressive</p>	<p>Being Complied</p>

	<p align="center">Adani Vizhinjam Port Private Limited (AVPPL)</p>	<p align="center">From: October 2023 To: March 2024</p>
<p align="center">Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala</p>		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	closure and final closure) as per KMMC Rules.	Preparation of mine closure procedures has commenced as per KMMC Rules and is being documented and the same shall be submitted.


General Conditions

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.	<p>Complied</p> <p>A separate Environmental Management and Monitoring Cell (EMMC) with qualified personnel has been set up by AVPPL. The cell is under the control of the Head of Department (HoD), Environment who reports directly to the Chief Executive Officer (CEO), AVPPL. The details of the constitution of EMMC were submitted along with HYCR for the period April 2019 to September 2019.</p>
---	--	--

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.	<p>Complied</p> <p>There is already an existing plantation along the tar road. AVPPL have planted avenue trees at suitable locations like buffer zones, etc. for greenbelt development and the saplings planted are growing well and have started to bear fruit.</p>
---	---	---




Avenue Plantation


	<p align="center">Adani Vizhinjam Port Private Limited (AVPPL)</p>	<p align="center">From: October 2023 To: March 2024</p>
<p align="center">Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala</p>		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024


S. No.	Conditions	Compliance Status as on 31.03.2024
3	Sprinklers shall be installed and used in the project site to contain dust emissions.	<p>Complied During quarrying operations, regular water sprinkling through water tankers is carried out on haul roads and other dust prone areas such as loading and unloading of minerals.</p>
4	Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent	<p>Being Complied Preparation of mine closure procedures has commenced including Eco-restoration. The same is being implemented at the cost of AVPPL.</p>
5	In view of the deep pits left after the excavation, stacking at maximum top level should be carried out.	<p>Not Applicable The stacking of materials is not being carried out, as all the produced materials are used for Breakwater Construction at Vizhinjam Port. They are being transported directly to the Port site and not stacked at the quarry site.</p> <p>As per the mine closure plan the pit will be utilized for storing water as a rainwater harvesting method and will also be induced to sustain the groundwater table. As for the post mining land use, an area of 0.9540 Ha will be used for water pond for storage of water</p>
6	Corporate Environment Responsibility agreed upon by the proponent should be implemented.	<p>Complied AVPPL have spent Rs. 36.15 Lakhs for CER Activities. Despite having exhausted the agreed-upon funds for CER activities, AVPPL, being committed to environmental responsibility has exceeded the required expenditure of Rs. 15 Lakhs as stated in the affidavit.</p>
7	The project proponent shall comply the conditions stipulated by the statutory authorities concerned.	<p>Being Complied AVPPL is complying with all applicable conditions stipulated by respective competent statutory authorities.</p>
8	Tarring /multiple options on the access roads shall be undertaken so as to reduce dust pollution during movement of vehicle.	<p>Complied AVPPL has developed a tar road of around 0.9 km from the quarry project site gate to Kadavilla Junction (which is connected to SH46 and onto NH66) for movement of vehicles; thereby reducing the dust pollution.</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		 <p align="center">Tar Road at Project Site</p>
9	<p>Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions</p>	<p>Being Complied</p> <p>As such, the quarry had been mined earlier by another party and since this is already an open mine, there was no topsoil or overburden available in the quarry; all the produced materials are being used for Breakwater Construction at Vizhinjam Port.</p> <p>However, due to certain geological disturbances in the formation, some overburden has been found in between the rock formation after attaining 6 m on the western slope between p3 and p4 pillars. AVPPL have shifted the topsoil and overburden on the western slope to an area of land in the lower portions of the quarry along with 150 m gabion wall protection.</p> <p>Preparation of mine closure procedures has commenced, and overburden materials will be managed within the site and used for reclamation of mine pit.</p>


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		 <p style="text-align: center;">Gabion Wall</p>
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.	<p>Noted As per the Modified Approved Mining Plan, bench height and width need to be maintained at maximum of 6.0 m. However, due to the urgent requirement of stones and boulders for the completion of the Vizhinjam Port breakwater and berth construction, the bench height has been made to 7.0 m.</p>
11	Ground level should be fixed in individual cases separately	<p>Complied For every bench, ground level is fixed in MSL as individual cases separately. Surface plan with MSL levels is provided in the Modified Approved Mining Plan (Submitted along with the HYCR for the period April 2021 to September 2021).</p>
12	No mining operations should be carried out at places having a slope greater than 45.	<p>Being Complied No mining operations are being carried out at places having a slope greater than a 45 degrees angle.</p>
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	<p>Not Applicable There is no crusher adjacent to the quarry and the same is not proposed.</p>


Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	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.	Complied All employees are provided with relevant Personal Protective Equipment (PPEs) like Helmets, Shoes, Fluorescent Reflective Jackets, etc.
15	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	<p>Complied Garland drainage/garland canals of 60 m have been developed in the lower slopes to channelize storm water.</p>  <p style="text-align: center;">Garland Drain</p> <p>A siltation pond has been created by constructing a check dam (up to 10m X 1.5m size) at the bottom of the quarry area to prevent run-off of water and flow of sediments. The water collected is being utilized for watering the mine area, roads, greenbelt development, etc.</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		 <p align="center">Check Dam</p>
16	<p>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.</p>	<p>Complied During quarrying operations, the transportation of minerals has been undertaken with tarpaulin covered trucks. During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023.</p> <p>Since this is an existing quarry which was already mined earlier, the quarry is in open condition. There was no clearing of land for the project and no trees have been cut down as there are no trees inside the lease area.</p>
17	<p>Explosives should be stored in magazines in isolated place specified and approved by Explosives Department</p>	<p>Complied AVPPL constructed a 500 Kgs portable explosives magazine at an area called Chappath; which is 65 km away from the quarry location. During quarrying operations, AVPPL are transporting the explosives and detonators from Chappath to Kadavilla quarry through two authorized explosives vans for which following licenses were obtained from PESO:</p> <ul style="list-style-type: none"> • Explosives magazine license E/SE/KL/22/331(E121778) dated 13.09.2021. • Explosives van-1 (KL01CP2414) license E/SE/KL/25/99(E135886) dated 22.09.2021. • Explosives van-2 (KL01CP2472) license E/SE/KL/25/99(E135883) dated 22.09.2021.

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		<p>Copies of the above-mentioned licenses were submitted along with the HYCR for the period April 2021 to September 2021. Operations at Explosives Storage at Chappath began in October 2021.</p> <p>During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023.</p>
18	<p>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.</p>	<p>Complied</p> <p>As per the Government of Kerala (GoK) State Gazette Notification G.O. (P) No. 25/2017/ID dated 22.06.2017, permit holder shall not carry on or allow to be carried on any quarrying operations at or to any points within 50 m from any residential buildings or from the nearest dwelling unit or other structures.</p> <p>Also, as per the Consent to Operate (CTO) obtained from KSPCB, quarrying activities are restricted to a distance more than 50 m from the nearby residential buildings.</p> <p>Further, DMG had communicated to SEIAA vide its letter No. 9363/M3/2018 dated 23.03.2019 (A copy of the letter was submitted along with the HYCR for the period October 2019 to March 2020) that as per Rule 40 1(i) of the KMMC Rules, the lessee is permitted to carry out mining at 50 m from the residential houses.</p> <p>As per the map prepared by the village officer, the nearest house is approximately 60 m from the boundary of the quarry.</p>
19	<p>50 m buffer distance should be maintained from forest boundaries.</p>	<p>Not Applicable</p> <p>There are no forests in the vicinity of the project site.</p>
20	<p>Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be</p>	<p>Complied</p> <p>CTO has been obtained from Kerala State Pollution Control Board (KSPCB) vide Consent</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	<p>obtained before initiating mining activity.</p>	<p>No. PCB/TVM-DO/ICO/QRY/103/2019 dated 05.03.2019 valid up to 27.02.2021. A copy of the same was submitted along with HYCR for the period April 2019 to September 2019.</p> <p>Further, The CTO was renewed vide Consent No. PCB/TVM-DO/CHZ/ICO(R)/QRY/128/2020 dated 18.12.2020 valid up to 28.02.2024. Copy of the renewed CTO was submitted along with HYCR for the period October 2020 to March 2021.</p> <p>The CTO expired on 28.02.2024 and mining operations at Kadavilla-1 quarry were halted on 13.07.2023. during the compliance period (October 2023 to March 2024), no building stones have been extracted.</p>
21	<p>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.</p>	<p>Complied</p> <p>AVPPL have obtained all applicable statutory clearances from the respective competent authorities. The following clearances have been obtained:</p> <ul style="list-style-type: none"> • No Objection Certificate (NoC) from Trivandrum District Collector vide Letter No. B7-40269/2017 dated 30.04.2018 for Govt. land. • Letter of Intent from DMG vide Letter No. 9363/M3/2018 dated 04.09.2018. • CTO has been obtained from KSPCB vide Consent No. PCB/TVM-DO/ICO/QRY/103/2019 dated 05.03.2019 valid up to 27.02.2021. Further, The CTO was renewed vide Consent No. PCB/TVM-DO/CHZ/ICO(R)/QRY/128/2020 dated 18.12.2020 valid up to 28.02.2024. • Purchase and Use of Explosives Approval from Petroleum & Explosives Safety Organization (PESO), Ernakulam vide Letter No. E/Misc/Expl dated 27.03.2019. • Dangerous and Offensive Trade (D&O) License from Nagaroor Gram Panchayat vide License Number A2.1836\2019 dated 01.04.2019.

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		<ul style="list-style-type: none"> • NoC for Use of Explosives from District Collector, Thiruvananthapuram vide File No. DCTVM/2436/2019-A17 dated 09.05.2019. • Approved Mining Plan by District Geologist, Trivandrum vide Letter No. 1716/DOT/ML/18 dated 20.05.2019. • Lease Order from DMG vide Letter No. 9363/M3/2018 dated 20.05.2019. • Lease Execution from Additional Director of Mining and Geology vide Letter No. 79/2019-20/9363/M3/2018/DMG dated 20.05.2019. • Quarrying Lease Registration Agreement in Form H at Chirayinkeezhu Register Office dated 22.05.2019. • Explosives magazine license E/SE/KL/22/331(E121778) dated 13.09.2021. • Explosives van-1 (KL01CP2414) license E/SE/KL/25/99(E135886) dated 22.09.2021. • Explosives van-2 (KL01CP2472) license E/SE/KL/25/99(E135883) dated 22.09.2021. • Modified Approved Mining Plan by District Geologist, Trivandrum vide Letter No. 2436/DOT/ML/2020 dated 16.11.2020. <p>Copies of the above-mentioned approvals were submitted along with HYCR for the period April 2019 to September 2019. Copy of the renewed CTO was submitted along with HYCR for the period October 2020 to March 2021. Copies of the explosives vans and magazine licenses and Modified Approved Mining Plan was submitted along with the HYCR for the period April 2021 to September 2021.</p>
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	<p>Complied</p> <p>In view of the additional requirement of building stone for completion of phase 1 of the Vizhinjam project, SEIAA decided to issue EC for the extraction of a further 10.79 Lakh Tons granite rock for the period from 2021-22 to 2023-24 subject original EC conditions vide their order No. 1200/EC2/2018/SEIAA dated 16.11.2020 (A copy</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	<p>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</p>	<p>of the order was submitted along with the HYCR for the period October 2020 to March 2021). Therefore, permission is accorded for a total of 17.79 (7.00 + 10.79) Lakh Tons of building stones to be extracted from the quarry.</p> <p>During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023. A total cumulative quantity of 15.1385 Lakh Tons of building stones have been extracted from inception of mining on 02.07.2019 till 13.07.2023.</p>
23	<p>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.</p>	<p>Noted</p>
24	<p>The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.</p>	<p>Noted</p>
25	<p>The project proponent should advertise in at least two local</p>	<p>Complied</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	<p>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.</p>	<p>EC for the project was issued on 01.03.2019. Advertisements, that the project has been accorded EC were published within Ten days in two widely circulated local newspapers: The Hindu (English) on 09.03.2019 and Mathrubhumi (Malayalam - vernacular language) on 10.03.2019. Also, copy of the EC is available with the SEIAA office and it is also available on the website of the Authority at www.seiaakerala.in. Screenshot of the website showing the details of the EC was submitted along with HYCR for the period October 2019 to March 2020.</p> <p>Extracts of these newspaper clippings with the advertisements were submitted along with HYCR for the period April 2019 to September 2019.</p> <p>Copy of the advertisements signed on all pages were submitted to SEIAA vide Letter No. AVPPL/SEIAA/2019-20/731 dated 01.04.2019 was submitted along with HYCR for the period April 2019 to September 2019.</p> <p>The copy of EC is uploaded to the company website: https://www.adaniports.com/Downloads. Screenshot of the same was submitted along with HYCR for the period April 2019 to September 2019.</p>
26	The Environmental Clearance shall be put on the website of the company by the proponent.	<p>Complied</p> <p>The copy of EC is uploaded to the company website: https://www.adaniports.com/Downloads. Screenshot of the same was submitted along with HYCR for the period April 2019 to September 2019.</p>
27	Proponent shall submit half yearly reports in soft copy and SEIAA will upload it on the website.	<p>Being Complied</p> <p>HYCRs on the status of compliance of the stipulated clearance conditions are being submitted to all the concerned agencies. As per the Notification of Ministry of Environment and</p>

	<p style="text-align: center;">Adani Vizhinjam Port Private Limited (AVPPL)</p>	<p style="text-align: center;">From: October 2023 To: March 2024</p>
<p style="text-align: center;">Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala</p>		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		<p>Forests & Climate Change (MoEF&CC) dated 26.11.2018, wherein submission of HYCRs by email/soft copy is declared acceptable, soft copy of HYCR for the period October 2022 to March 2023 has been submitted vide email dated 23.11.2023 (a copy of the email is enclosed as Annexure 1).</p>
28	<p>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</p>	<p>Complied The details of EC have been displayed at the site next to the entrance of the quarry, visible to the public.</p>
29	<p>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.</p>	<p>Complied AVPPL has submitted a Notarized Affidavit dated 03.04.2019 to SEIAA stating that all the conditions stipulated in the EC shall be scrupulously followed. Copy of the affidavit and the cover letter vide No. AVPPL/SEIAA/2019-20/731 dated 01.04.2019 have been submitted along with HYCR for the period April 2019 to September 2019.</p>
30	<p>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</p>	<p>Noted</p>
31	<p>The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary</p>	<p>Not Applicable There are no natural water courses and/or water resources of first order streams in and around the mine lease area.</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	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. 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.	<p>Being Complied</p> <p>As such, the quarry had been mined earlier by another party and since this is already an open mine, there was no topsoil or overburden available in the quarry; all the produced materials are being used for Breakwater Construction at Vizhinjam Port.</p> <p>However, due to certain geological disturbances in the formation, some overburden has been found in between the rock formation after attaining 6 m on the western slope between p3 and p4 pillars. AVPPL have shifted the topsoil and overburden on the western slope to an area of land in the lower portions of the quarry along with 150 m gabion wall protection. It will be ensured that the maximum height of the dumps shall not exceed dimensions specified and overall slope of the dumps shall be maintained to 37.5 degrees. Preparation of mine closure procedures has commenced, and overburden materials will be managed within the site and used for reclamation of mine pit.</p>
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.	<p>Complied</p> <p>The quarry has been mined earlier by other parties and is an already open mine and hence there is no topsoil or overburden available in the quarry. Also, there are no mineral dumps since all the produced materials are used for Breakwater Construction at Vizhinjam Port. Therefore, catch drains for prevention of run-off is not required at the project site.</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024																																			
	The drains shall be regularly desilted particularly after monsoon and maintained properly.	A siltation pond has been created by constructing a check dam (up to 10m X 1.5m size) at the bottom of the quarry area to prevent run-off of water and flow of sediments.																																			
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 PM 10, 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	<p>Being Complied</p> <p>During quarrying operations, 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.</p> <p>Environment Monitoring at the site has been carried out by NABL accredited laboratory; M/s. Chennai Testing laboratory Pvt Ltd. Summary of the Ambient Air Quality Monitoring (AAQM) during the compliance period at 5 monitoring locations is mentioned below.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Parameter</th> <th style="text-align: center;">Unit</th> <th style="text-align: center;">Max</th> <th style="text-align: center;">Min</th> <th style="text-align: center;">Perm. Limit</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">PM₁₀</td> <td style="text-align: center;">µg/m³</td> <td style="text-align: center;">70.0</td> <td style="text-align: center;">55.0</td> <td style="text-align: center;">100</td> </tr> <tr> <td style="text-align: center;">PM_{2.5}</td> <td style="text-align: center;">µg/m³</td> <td style="text-align: center;">33.0</td> <td style="text-align: center;">24.0</td> <td style="text-align: center;">60</td> </tr> <tr> <td style="text-align: center;">SO₂</td> <td style="text-align: center;">µg/m³</td> <td style="text-align: center;">13.9</td> <td style="text-align: center;">8.6</td> <td style="text-align: center;">80</td> </tr> <tr> <td style="text-align: center;">NO₂</td> <td style="text-align: center;">µg/m³</td> <td style="text-align: center;">30.0</td> <td style="text-align: center;">15.2</td> <td style="text-align: center;">80</td> </tr> <tr> <td style="text-align: center;">CO</td> <td style="text-align: center;">µg/m³</td> <td style="text-align: center;">BDL</td> <td style="text-align: center;">-</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">HC</td> <td style="text-align: center;">µg/m³</td> <td style="text-align: center;">BDL</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> </tbody> </table> <p>*BDL: Below Detectable Limit</p> <p>The Ambient Air Quality Monitoring Reports are enclosed in Annexure 2. All the monitored parameters were found within the prescribed limits.</p>	Parameter	Unit	Max	Min	Perm. Limit	PM ₁₀	µg/m ³	70.0	55.0	100	PM _{2.5}	µg/m ³	33.0	24.0	60	SO ₂	µg/m ³	13.9	8.6	80	NO ₂	µg/m ³	30.0	15.2	80	CO	µg/m ³	BDL	-	4	HC	µg/m ³	BDL	-	-
Parameter	Unit	Max	Min	Perm. Limit																																	
PM ₁₀	µg/m ³	70.0	55.0	100																																	
PM _{2.5}	µg/m ³	33.0	24.0	60																																	
SO ₂	µg/m ³	13.9	8.6	80																																	
NO ₂	µg/m ³	30.0	15.2	80																																	
CO	µg/m ³	BDL	-	4																																	
HC	µg/m ³	BDL	-	-																																	
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	<p>Complied</p> <p>AVPPL have developed a tar road of around 0.9 km from Kadavilla Junction to the quarry project site gate for movement of vehicles; thereby reducing the dust pollution.</p> <p>Dring quarrying operations, regular water sprinkling through water tankers on haul road and other dust prone areas such as loading and</p>																																			

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		unloading of minerals is being carried out. During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023.
36	Measures should be taken for control of noise levels below 85 dBA in the work environment.	<p>Complied</p> <p>During quarrying operations, the following measures were being taken for the control of noise levels:</p> <ul style="list-style-type: none"> • Drilling: Good captive silencers are being used in drilling equipment. • Blasting: AVPPL uses the NONEL method - bottom initiation to reduce the noise of blasting. • Machinery & Tippers: It is ensured that equipment is fitted with effective silencers, mufflers, acoustic linings, or shields, as necessary. • It is ensured that vehicles transporting the materials follow the speed limit to maintain the noise level. • Vehicles are serviced regularly and maintained properly to avoid any unwanted generation of noise or vibration from them. <p>During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023.</p> <p>Ambient Noise is being monitored by NABL accredited laboratory; Chennai Testing laboratory Pvt Ltd as per Noise Pollution (Regulation & Control) Rules, 2000 (Rules 3 (1) and 4(1)) at 5 locations.</p> <p>Summary of the Ambient Noise Monitoring during the compliance period at 5 monitoring locations is mentioned below:</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

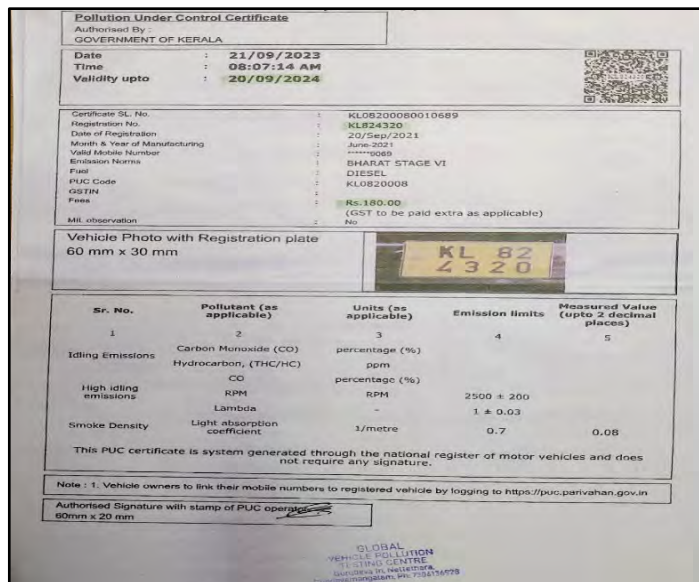
S. No.	Conditions	Compliance Status as on 31.03.2024		
		Location	L_{eq} Day time	L_{eq} Night time
		Quarry Area (Project Site)	63.0	54.5
		Near Operators Rest Room (North Side)	64.5	57.1
		Vanchiyoor UP School (West Side)	62.7	53.8
		St. Joseph of Cluny Public School (South Side)	55.3	47.2
		Viswanadhapuram Shiva Temple (East Side)	53.1	49.0
		<p>The results obtained were compared with Noise Pollution (Regulation & Control) Rule, 2000 (Rule 3(1) and 4(1)) and it is observed that the noise readings were within limits at all monitoring locations. The Noise Monitoring reports is enclosed as Annexure 2.</p>		
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.	<p>Complied AVPPL have spent Rs. 36.15 Lakhs for CER Activities. Despite having exhausted the agreed-upon funds for CER activities, AVPPL, being committed to environmental responsibility has exceeded the required expenditure of Rs. 15 Lakhs as stated in the affidavit. The final expenditure statement for CER and environmental protection measures was submitted along with HYCR for the period April 2023 to September 2023.</p>		
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.	<p>Noted All necessary support will be extended to the Regional Office of MoEF&CC located at Bangalore for the monitoring of the compliance of the stipulated conditions Office by furnishing the requisite data/information/monitoring reports.</p>		

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
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.	Noted
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.	Noted
41	The SEIAA may revoke or suspend the order, for non-implementation of any of the specific or this implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection	Noted
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.	Noted
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.	Noted

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024																																																											
44	The mining operation shall be restricted to above ground water table and it should not intersect ground water table	<p>Complied</p> <p>Based on observations made in and around the quarry area, it was found that the general ground level in the area is 32 m above MSL and the general groundwater table is 8 m below the general ground level i.e., 24 m above MSL. During monsoons the ground water table will rise by 2-3 m. The lease area is situated on an isolated hillock where the topmost working level is about 106 m above MSL, and the lowest working level is 70 m above MSL. The total depth will be 36 m. Therefore, mining operations were restricted to workings at a higher level at the quarry and did not touch the ground water table.</p> <p>During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023.</p>																																																											
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	<p>Complied</p> <p>During quarrying operations, it was ensured that all vehicles used for transportation have valid Pollution Under Control (PuC) certificate from authorized testing centers.</p> <div data-bbox="721 1449 1422 2029" data-label="Image">  <table border="1"> <caption>Pollution Under Control Certificate Details</caption> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Certificate SL. No.</td> <td>KLO8200080010689</td> </tr> <tr> <td>Registration No.</td> <td>KL824320</td> </tr> <tr> <td>Date of Registration</td> <td>20/09/2021</td> </tr> <tr> <td>Month & Year of Manufacturing</td> <td>June-2021</td> </tr> <tr> <td>Valid Mobile Number</td> <td>9999999999</td> </tr> <tr> <td>Emission Norms</td> <td>BHARAT STAGE VI</td> </tr> <tr> <td>Fuel</td> <td>DIESEL</td> </tr> <tr> <td>PUC Code</td> <td>KLO820008</td> </tr> <tr> <td>GSTIN</td> <td></td> </tr> <tr> <td>Fees</td> <td>Rs.180.00 (GST to be paid extra as applicable)</td> </tr> <tr> <td>MH observation</td> <td>No</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Pollutant (as applicable)</th> <th>Units (as applicable)</th> <th>Emission limits</th> <th>Measured Value (upto 2 decimal places)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Carbon Monoxide (CO)</td> <td>percentage (%)</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Hydrocarbon, (THC/HC)</td> <td>ppm</td> <td></td> <td></td> </tr> <tr> <td></td> <td>CO</td> <td>percentage (%)</td> <td></td> <td></td> </tr> <tr> <td>High idling emissions</td> <td>RPM</td> <td>RPM</td> <td>2500 ± 200</td> <td></td> </tr> <tr> <td></td> <td>Lambda</td> <td>-</td> <td>1 ± 0.03</td> <td></td> </tr> <tr> <td>Smoke Density</td> <td>Light absorption coefficient</td> <td>1/metre</td> <td>0.7</td> <td>0.08</td> </tr> </tbody> </table> </div>	Field	Value	Certificate SL. No.	KLO8200080010689	Registration No.	KL824320	Date of Registration	20/09/2021	Month & Year of Manufacturing	June-2021	Valid Mobile Number	9999999999	Emission Norms	BHARAT STAGE VI	Fuel	DIESEL	PUC Code	KLO820008	GSTIN		Fees	Rs.180.00 (GST to be paid extra as applicable)	MH observation	No	Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)	1	Carbon Monoxide (CO)	percentage (%)				Hydrocarbon, (THC/HC)	ppm				CO	percentage (%)			High idling emissions	RPM	RPM	2500 ± 200			Lambda	-	1 ± 0.03		Smoke Density	Light absorption coefficient	1/metre	0.7	0.08
Field	Value																																																												
Certificate SL. No.	KLO8200080010689																																																												
Registration No.	KL824320																																																												
Date of Registration	20/09/2021																																																												
Month & Year of Manufacturing	June-2021																																																												
Valid Mobile Number	9999999999																																																												
Emission Norms	BHARAT STAGE VI																																																												
Fuel	DIESEL																																																												
PUC Code	KLO820008																																																												
GSTIN																																																													
Fees	Rs.180.00 (GST to be paid extra as applicable)																																																												
MH observation	No																																																												
Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)																																																									
1	Carbon Monoxide (CO)	percentage (%)																																																											
	Hydrocarbon, (THC/HC)	ppm																																																											
	CO	percentage (%)																																																											
High idling emissions	RPM	RPM	2500 ± 200																																																										
	Lambda	-	1 ± 0.03																																																										
Smoke Density	Light absorption coefficient	1/metre	0.7	0.08																																																									

PUC Certificate

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village, Chirayinkeezhu Taluk, Thiruvananthapuram District, Kerala		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA dated 01.03.2019 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
46	Project proponent should obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and ground water for the project	Not Applicable AVPPL is not withdrawing the surface water or ground water from the project area for any purposes.
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	Not Applicable There are no springs and perennial nallahs flowing upstream and downstream of the mine lease area as there are no water courses and/or water resources of first order streams in and around the mine lease area.
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	Complied During quarrying operations, medical health test checkup of the employees, workers, and laborers as per Director General of Mines (DGM) prescribed statutory format were taken up periodically by the contractor involved in the mining operations to observe any contractions due to exposure to dust and take corrective measures. During the compliance period (October 2023 to March 2024), no building stones have been extracted. Mining operations at Kadavilla-1 quarry were halted on 13.07.2023.

Enclosures:

Annexure Number	Details of Annexure
Annexure 1:	Email Submission of HYCR for the period April 2023 to September 2023
Annexure 2:	Environmental Monitoring Reports

Annexure 1

**Email Submission of HYCR for the
period April 2023 to September 2023**

From: [Hebin Chenthamarakshan](mailto:Hebin.Chenthamarakshan)
To: rosz.bng-mefcc@gov.in
Cc: [Rajesh Kumar Jha](mailto:Rajesh.Kumar.Jha@seacseiaakerala@gmail.com); seacseiaakerala@gmail.com; [Jesse Benjamin Fullonton](mailto:Jesse.Benjamin.Fullonton); [Palanivelu Kumar](mailto:Palanivelu.Kumar); [Environment Avppl](mailto:Environment.Avppl)
Subject: EC No. 1200/EC2/2018/SEIAA dated 01.03.2019 - HYCR - Apr 2023 to Sep 2023 - Kadavilla-1 - Reg.
Date: Thursday, November 23, 2023 5:46:42 PM
Attachments: [EC No.1200_EC2_2018_SEIAA dated 01.03.2019-HYCR-Apr23-Sep23_21.11.2023.pdf](#)
Importance: High

Dear Sir/Madam,

This has reference to the Environmental Clearance (EC) Order No. 1200/EC2/2018/SEIAA issued on 01.03.2019 by State Environmental Impact Assessment Authority (SEIAA), Kerala to Adani Vizhinjam Port Private Limited (AVPPL) for our Building Stone Quarry Project in Survey No. 555/2 at Nagaroor Village (Kadavilla-1), Chirayinkeezhu Taluk, Thiruvananthapuram District.

The Half Yearly Compliance Report (HYCR) of the conditions stipulated in the EC for the period April 2023 to September 2023 is attached vide reference AVPPL/MoEF/2023-24/2710 dated 21.11.2023; for record and reference please.

You are requested to kindly acknowledge the receipt of the same.

Thanks & Regards,

Hebin C.

Head Environment

Adani Vizhinjam Port Pvt Limited

Mullor Post, Vizhinjam

Trivandrum -695521

EXT. No : 91-47127-68852

Mob +91 9099056757/9048404798 | Hebin.C@adani.com | www.adani.com

Annexure 2
Environmental Monitoring Reports

TEST REPORT

Test Report No & Date	CTL/CH/N-19296/2023-24 & 15.03.2024
Sample Number	N-19296/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	Project Site
GPS Reading	8°43'48.11" N & 76°50'23.12"E
Sample Drawn on	01.03.2024 - 24Hrs
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Equipment used for Sampling	Respirable Dust Sampler :2938-DTL-2020
Analysis Completed on	15.03.2024

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	IS 5182 Part 24 - 2019	µg/m ³	33.0	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	70.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	13.9	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	30.0	80
5	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)


Verified by

TEST REPORT

Test Report No & Date	CTL/CH/N-19296/2023-24 & 15.03.2024
----------------------------------	--

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
6	HYDROCARBONS	IS 5182 Part 17 - 1979 (R.2019)	ppm	BDL(DL:0.1)	-


*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Gazette Notification G.S.R. 826(E) dated 18.11.2009.
BDL - Below Detection Limit(D.L - Detection Limit) NA - Not Available

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt Ltd



Verified by



Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

TEST REPORT

Test Report No & Date	CTL/CH/N-19297/2023-24 & 15.03.2024
Sample Number	N-19297/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	Near Operators Rest Room North Side (300 m away from Project Site)
GPS Reading	8°43'48.63" N & 76°50'12.46"E
Sample Drawn on	01.03.2024 - 24Hrs
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Equipment used for Sampling	Respirable Dust Sampler :2937-DTL-2020
Analysis Completed on	15.03.2024

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	IS 5182 Part 24 - 2019	µg/m ³	32.0	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	60.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	10.9	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	24.2	80
5	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)


Verified by

TEST REPORT

Test Report No & Date	CTL/CH/N-19297/2023-24 & 15.03.2024
----------------------------------	--

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
6	HYDROCARBONS	IS 5182 Part 17 - 1979 (R.2019)	ppm	BDL(DL:0.1)	-


*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Gazette Notification G.S.R. 826(E) dated 18.11.2009.
BDL - Below Detection Limit(D.L - Detection Limit) NA - Not Available

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt Ltd



Verified by



Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

TEST REPORT

Test Report No & Date CTL/CH/N-19298/2023-24 & 15.03.2024
Sample Number N-19298/23-24
Name of the Customer M/s. Adani Vizhinjam Port Private Limited,
Address 01, Port Operation Building, Mullur Road,
Mullur, Thiruvananthapuram, Kerala - 695 521.
Project Quarry Site At Kadavila

Sample Drawn by Laboratory
Sample Name Ambient Air
Sample Description Ambient Air Quality
Sampling Location Vanchiyoor UP School West Side(1.5km away from Project Site)
GPS Reading 8°43'16.56" N & 76°50'10.91"E
Sample Drawn on 01.03.2024 - 24Hrs
Sampling Plan & Procedure CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Equipment used for Sampling Respirable Dust Sampler :2937-DTL-2020
Analysis Completed on 15.03.2024

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	IS 5182 Part 24 - 2019	µg/m ³	23.1	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	55.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	8.6	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	15.2	80
5	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)


Verified by

TEST REPORT

Test Report No & Date	CTL/CH/N-19298/2023-24 & 15.03.2024
----------------------------------	--

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
6	HYDROCARBONS	IS 5182 Part 17 - 1979 (R.2019)	ppm	BDL(DL:0.1)	-


*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Gazette Notification G.S.R. 826(E) dated 18.11.2009.
BDL - Below Detection Limit(D.L - Detection Limit) NA - Not Available

*****END OF REPORT*****



Verified by

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

Page 2 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19299/2023-24 & 15.03.2024
Sample Number	N-19299/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	St. Joseph of Cluny Public School - South side(1.0km away from Project Site)
GPS Reading	8°43'37.63" N & 76°50'49.33"E
Sample Drawn on	01.03.2024 - 24Hrs
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Equipment used for Sampling	Respirable Dust Sampler :2937-DTL-2020
Analysis Completed on	15.03.2024

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	IS 5182 Part 24 - 2019	µg/m ³	29.7	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	60.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	11.1	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	23.5	80
5	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)


Verified by

TEST REPORT

Test Report No & Date	CTL/CH/N-19299/2023-24 & 15.03.2024
----------------------------------	--

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
6	HYDROCARBONS	IS 5182 Part 17 - 1979 (R.2019)	ppm	BDL(DL:0.1)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Gazette Notification G.S.R. 826(E) dated 18.11.2009.
BDL - Below Detection Limit(D.L - Detection Limit) NA - Not Available

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt Ltd



Verified by



Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

TEST REPORT

Test Report No & Date CTL/CH/N-19300/2023-24 & 15.03.2024
Sample Number N-19300/23-24
Name of the Customer M/s. Adani Vizhinjam Port Private Limited,
Address 01, Port Operation Building, Mullur Road,
Mullur, Thiruvananthapuram, Kerala - 695 521.
Project Quarry Site At Kadavila

Sample Drawn by Laboratory
Sample Name Ambient Air
Sample Description Ambient Air Quality
Sampling Location Viswanadhapuram Shiva Temple East Side (1.2km away from Project Site)
GPS Reading 8°44'09.02" N & 76°50'18.82"E
Sample Drawn on 01.03.2024 - 24Hrs
Sampling Plan & Procedure CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Equipment used for Sampling Respirable Dust Sampler :2937-DTL-2020
Analysis Completed on 15.03.2024

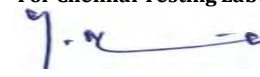
Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	IS 5182 Part 24 - 2019	µg/m ³	24.0	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	56.2	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	9.0	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	20.0	80
5	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4

For Chennai Testing Laboratory Pvt Ltd


Verified by


Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

TEST REPORT

Test Report No & Date CTL/CH/N-19310/2023-24 & 15.03.2024
Sample Number N-19310/23-24
Name of the Customer M/s. Adani Vizhinjam Port Private Limited,
Address 01, Port Operation Building, Mullur Road,
Mullur, Thiruvananthapuram, Kerala - 695 521.
Project Quarry Site At Kadavila

Sample Drawn by Laboratory
Sample Name Noise
Sample Description AMBIENT NOISE
Sample Drawn on 01.03.2024
Sampling Plan & Procedure CTL/QSP/F-89 & IS 9989
Equipment used for Sampling Sound Level Meter S.No:554062

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	LOCATION	GPS READING	NOISE LEVEL dB (A)			LIMITS	NOISE LEVEL dB (A)			LIMITS
			Day Noise				Night Noise			
			Min	Max	Leq		Min	Max	Leq	
1	Project Site	8°43'48.11" N & 76°50'23.12"E	60.8	64.8	63.0	75.0	50.5	58.1	54.5	70.0
2	Near Operators Rest Room North Side (300m away from Project Site)	8°43'48.63" N & 76°50'12.46"E	60.5	68.2	64.5	75.0	52.6	59.2	57.1	70.0
3	Vanchiyoor UP School West Side (1.5km away from Project Site)	8°43'16.56" N & 76°50'10.91"E	60.6	65.0	62.7	65.0	51.6	56.0	53.8	60.0
4	St. Joseph of Cluny Public School - South side (1.1km away from Project Site)	8°43'37.63" N & 76°50'49.33"E	53.0	57.0	55.3	65.0	45.0	49.0	47.2	60.0
5	Viswanadhapuram Shiva Temple East Side(1.2km away from Project Site)	8°44'09.02" N & 76°50'18.82"E	50.6	56.0	53.1	55.0	46.5	52.1	49.0	50.0

NOTE : CPCB Limits Day Time(6.00 a.m. to 10 p.m.)& Night Time(10.00 p.m. to 6 a.m.)

The Noise Pollution (Regulation & Control) Rules 2000

AMBIENT NOISE-CPCB NORMS	Day Time Leq dB(A)	Night Time Leq dB(A)
Industrial area	75	70
Commercial area	65	60
Residential area	55	50

END OF REPORT


Verified by

For Chennai Testing Laboratory Pvt Ltd


Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

CIN: U93000TN2000PTC043869

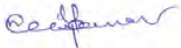
TEST REPORT

Test Report No & Date	CTL/CH/N-19196/2023-24 & 18.03.2024
Sample Number	N-19196/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Surface Water
Sample Description	Surface Water
Sampling Location	Out Side Project Site (900 m away from Project Site)
GPS Reading	8°43'49.31" N & 76°50'12.02"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	5 Litres + 100ml (Sterile Container)
Sample Condition	Good & Received in Plastic container
Analysis Completed on	18.03.2024

Test Results:

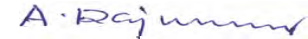
The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	pH @ 25°C	IS 3025 (Part 11)-1983 (R.2017)	-	7.9
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	330
5	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	71
6	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	4
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	42
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	19
9	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.06
10	Sulphate as SO ₄	IS 3025 (Part 24/Sec -1) - 2022	mg/l	150
11	Total Hardness as CaCO ₃	IS 3025 (Part 21)-2009 (R.2019)	mg/l	194
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	4.7
13	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.12
14	Zinc as Zn	IS 3025 (Part 49)-1994 (R.2019)	mg/l	BDL(DL:0.08)
15	Copper as Cu	IS 3025 (Part 42)-1992 (R.2019)	mg/l	BDL(DL:0.02)



Verified by

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 1 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19196/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
16	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	BDL(DL:2.0)
17	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	BDL(DL:4.0)
18	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (R.2019)	mg/l	6.6
19	Total Suspended Solids	IS 3025 (Part 17) -1984 (R.2021)	mg/l	BDL(DL:2.0)
20	Flow Rate	Floating Method (Manual)/ Water Current Meter	m/mts	0.12

A. Rajkumar

Verified by

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 2 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19196/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
Microbiology:				
21	Total Coliform	IS 15185 : 2016 (R.2021)	Per 100ml	Absent
22	<i>E.coli</i>		Per 100ml	Absent

BDL - Below Detection Limit; DL - Detection Limit

Note: The tested parameters are within the IS 10500:2012 Permissible limit.

*****END OF REPORT*****



Verified by

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

TEST REPORT

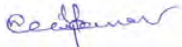
Test Report No & Date	CTL/CH/N-19197/2023-24 & 18.03.2024
Sample Number	N-19197/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Surface Water
Sample Description	Surface Water
Sampling Location	Inside Project Site
GPS Reading	8°43'47.96" N & 76°50'16.33"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	5 Litres + 100ml (Sterile Container)
Sample Condition	Good & Received in Plastic container
Analysis Completed on	18.03.2024

Test Results:

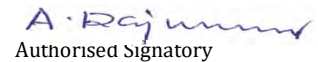
The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	pH @ 25°C	IS 3025 (Part 11)-1983 (R.2017)	-	7.5
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	50
5	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	9
6	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	1
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	28
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	8
9	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	BDL(DL:0.01)
10	Sulphate as SO ₄	IS 3025 (Part 24/Sec -1) - 2022	mg/l	1
11	Total Hardness as CaCO ₃	IS 3025 (Part 21)-2009 (R.2019)	mg/l	27
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	3.1
13	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	BDL(DL:0.1)
14	Zinc as Zn	IS 3025 (Part 49)-1994 (R.2019)	mg/l	BDL(DL:0.08)
15	Copper as Cu	IS 3025 (Part 42)-1992 (R.2019)	mg/l	BDL(DL:0.02)

For Chennai Testing Laboratory Pvt Ltd



Verified by


Authorised signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 1 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19197/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
16	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	BDL(DL:2.0)
17	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	BDL(DL:4.0)
18	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (R.2019)	mg/l	6.9
19	Total Suspended Solids	IS 3025 (Part 17) -1984 (R.2021)	mg/l	BDL(DL:2.0)
20	Flow Rate	Floating Method (Manual)/ Water Current Meter	m/mts	0.08

A. Rajkumar

Verified by

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 2 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19197/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
Microbiology:				
21	Total Coliform	IS 15185 : 2016 (R.2021)	Per 100ml	Absent
22	<i>E.coli</i>		Per 100ml	Absent

BDL - Below Detection Limit; DL - Detection Limit

Note: The tested parameters are within the IS 10500:2012 Permissible limit.

*****END OF REPORT*****



Verified by

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

TEST REPORT

Test Report No & Date	CTL/CH/N-19198/2023-24 & 18.03.2024
Sample Number	N-19198/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	Ground Water
Sampling Location	Near Operators Rest Room North Side (400m Away Project Site)
GPS Reading	8°43'47.98" N & 76°50'12.73"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	5 Litres + 100ml (Sterile Container)
Sample Condition	Good & Received in Plastic container
Analysis Completed on	18.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	pH @ 25°C	IS 3025 (Part 11)-1983 (R.2017)	-	6.9
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	64
5	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	2
6	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	2
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	4
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	25
9	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	BDL(DL:0.01)
10	Sulphate as SO ₄	IS 3025 (Part 24/Sec -1) - 2022	mg/l	< 1
11	Total Hardness as CaCO ₃	IS 3025 (Part 21)-2009 (R.2019)	mg/l	13
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	6.1
13	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	BDL(DL:0.1)
14	Zinc as Zn	IS 3025 (Part 49)-1994 (R.2019)	mg/l	BDL(DL:0.08)
15	Copper as Cu	IS 3025 (Part 42)-1992 (R.2019)	mg/l	BDL(DL:0.02)

Verified by

Verified by

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 1 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19198/2023-24 & 18.03.2024
----------------------------------	--

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
16	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	BDL(DL:2.0)
17	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	BDL(DL:4.0)
18	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (R.2019)	mg/l	6.7
19	Total Suspended Solids	IS 3025 (Part 17) -1984 (R.2021)	mg/l	BDL(DL:2.0)

A. Rajkumar

Verified by

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

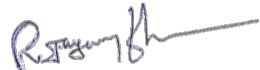
Test Report No & Date	CTL/CH/N-19198/2023-24 & 18.03.2024
----------------------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
Microbiology:				
20	Total Coliform	IS 15185 : 2016 (R.2021)	Per 100ml	Absent
21	<i>E.coli</i>		Per 100ml	Absent

BDL - Below Detection Limit; DL - Detection Limit

Note: The tested parameters are within the IS 10500:2012 Permissible limit.

*****END OF REPORT*****



Verified by

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

TEST REPORT

Test Report No & Date	CTL/CH/N-19199/2023-24 & 18.03.2024
Sample Number	N-19199/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	Ground Water
Sampling Location	St. Joseph of Cluny Public School - South side (1.2km Away Project Site)
GPS Reading	8°43'36.42" N & 76°50'49.36"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	5 Litres + 100ml (Sterile Container)
Sample Condition	Good & Received in Plastic container
Analysis Completed on	18.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	pH @ 25°C	IS 3025 (Part 11)-1983 (R.2017)	-	7.3
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	94
5	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	11
6	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	2
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	25
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	20
9	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	BDL(DL:0.01)
10	Sulphate as SO ₄	IS 3025 (Part 24/Sec -1) - 2022	mg/l	1
11	Total Hardness as CaCO ₃	IS 3025 (Part 21)-2009 (R.2019)	mg/l	36
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	8.9
13	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	BDL(DL:0.1)
14	Zinc as Zn	IS 3025 (Part 49)-1994 (R.2019)	mg/l	BDL(DL:0.08)
15	Copper as Cu	IS 3025 (Part 42)-1992 (R.2019)	mg/l	BDL(DL:0.02)

For Chennai Testing Laboratory Pvt Ltd

Verified by

Verified by

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 1 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19199/2023-24 & 18.03.2024
----------------------------------	--

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
16	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	BDL(DL:2.0)
17	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	BDL(DL:4.0)
18	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (R.2019)	mg/l	6.9
19	Total Suspended Solids	IS 3025 (Part 17) -1984 (R.2021)	mg/l	BDL(DL:2.0)

[Handwritten Signature]

Verified by

For Chennai Testing Laboratory Pvt Ltd

[Handwritten Signature]

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 2 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19199/2023-24 & 18.03.2024
----------------------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
Microbiology:				
20	Total Coliform	IS 15185 : 2016 (R.2021)	Per 100ml	Absent
21	<i>E.coli</i>		Per 100ml	Absent

BDL - Below Detection Limit; DL - Detection Limit

Note: The tested parameters are within the IS 10500:2012 Permissible limit.

*****END OF REPORT*****



Verified by

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

Page 3 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19200/2023-24 & 18.03.2024
Sample Number	N-19200/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	Ground Water
Sampling Location	Vanchiyoor UP School West Side (1.5km Away Project Site)
GPS Reading	8°43'36.42" N & 76°50'49.36"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	5 Litres + 100ml (Sterile Container)
Sample Condition	Good & Received in Plastic container
Analysis Completed on	18.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	pH @ 25°C	IS 3025 (Part 11)-1983 (R.2017)	-	6.8
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	64
5	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	5
6	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	2
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	16
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	14
9	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	BDL(DL:0.01)
10	Sulphate as SO ₄	IS 3025 (Part 24/Sec -1) - 2022	mg/l	< 1
11	Total Hardness as CaCO ₃	IS 3025 (Part 21)-2009 (R.2019)	mg/l	21
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	4.8
13	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	BDL(DL:0.1)
14	Zinc as Zn	IS 3025 (Part 49)-1994 (R.2019)	mg/l	BDL(DL:0.08)
15	Copper as Cu	IS 3025 (Part 42)-1992 (R.2019)	mg/l	BDL(DL:0.02)

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

Test Report No & Date	CTL/CH/N-19200/2023-24 & 18.03.2024
----------------------------------	--

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
16	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	BDL(DL:2.0)
17	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	BDL(DL:4.0)
18	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (R.2019)	mg/l	6.8
19	Total Suspended Solids	IS 3025 (Part 17) -1984 (R.2021)	mg/l	BDL(DL:2.0)

A. Rajkumar

Verified by

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 2 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19200/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
Microbiology:				
20	Total Coliform	IS 15185 : 2016 (R.2021)	Per 100ml	Absent
21	<i>E.coli</i>		Per 100ml	Absent

BDL - Below Detection Limit; DL - Detection Limit

Note: The tested parameters are within the IS 10500:2012 Permissible limit.

*****END OF REPORT*****



Verified by

For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	CTL/CH/N-19201/2023-24 & 18.03.2024
Sample Number	N-19201/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	Ground Water
Sampling Location	Workers Mess (300m Away Project Site)
GPS Reading	8°43'29.226" N & 76°50'21.84"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	5 Litres + 100ml (Sterile Container)
Sample Condition	Good & Received in Plastic container
Analysis Completed on	18.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	pH @ 25°C	IS 3025 (Part 11)-1983 (R.2017)	-	7.3
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	52
5	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	9
6	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	1
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	29
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	9
9	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	BDL(DL:0.01)
10	Sulphate as SO ₄	IS 3025 (Part 24/Sec -1) - 2022	mg/l	< 1
11	Total Hardness as CaCO ₃	IS 3025 (Part 21)-2009 (R.2019)	mg/l	27
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	2.7
13	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	BDL(DL:0.1)
14	Zinc as Zn	IS 3025 (Part 49)-1994 (R.2019)	mg/l	BDL(DL:0.08)
15	Copper as Cu	IS 3025 (Part 42)-1992 (R.2019)	mg/l	BDL(DL:0.02)

For Chennai Testing Laboratory Pvt Ltd

Rajkumar

Verified by

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 1 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19201/2023-24 & 18.03.2024
----------------------------------	--

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
16	Biochemical Oxygen Demand (BOD) 3 days @ 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	BDL(DL:2.0)
17	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	BDL(DL:4.0)
18	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (R.2019)	mg/l	6.7
19	Total Suspended Solids	IS 3025 (Part 17) -1984 (R.2021)	mg/l	BDL(DL:2.0)

A. Rajkumar

Verified by

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

Test Report No & Date	CTL/CH/N-19201/2023-24 & 18.03.2024
----------------------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
Microbiology:				
20	Total Coliform	IS 15185 : 2016 (R.2021)	Per 100ml	Absent
21	<i>E.coli</i>		Per 100ml	Absent

BDL - Below Detection Limit; DL - Detection Limit

Note: The tested parameters are within the IS 10500:2012 Permissible limit.

*****END OF REPORT*****

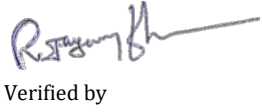
For Chennai Testing Laboratory Pvt Ltd



Authorised Signatory

N. RAJENDRAKUMAR
Head - Quality & Microbiology Division
(MICROBIOLOGY)

Page 3 of 3



Verified by

TEST REPORT

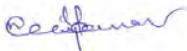
Test Report No & Date	CTL/CH/N-19193/2023-24 & 18.03.2024
Sample Number	N-19193/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Soil
Sample Description	Soil
Sampling Location	Project Site
GPS Reading	8°43'48.60" N & 76°50'23.35"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/10
Sample Quantity	1 kg
Sample Condition	Good & Received in Packed Condition
Analysis Completed on	11.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH	EPA Method-9045 D rev 4,2004	-	6.4
2	Moisture	IS:2720(Part - 2)-1973 (RA.: 2020)	%	3.24
3	Available Phosphorus as P	FAO Method (Pg. No.75) 2007 (Olsen's method)	mg/kg	8
4	Total Organic Matter	FAO Method (Pg. No.61) 2007 (walkley Black wet combustion method)	%	0.27
5	Conductivity	FAO Method(Page No-43)2007 (Electrical Conductivity Method)	µs/cm	153
6	Total Kjeldahl Nitrogen as N	IS 10158-1982 (RA.2003)	mg/kg	534

For Chennai Testing Laboratory Pvt Ltd



Verified by



Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Page 1 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19193/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	
7	Available Nitrogen as N	FAO Method	mg/kg	224	
8	Available Potassium as K		mg/kg	35	
9	Soil Type	Physical Observation	-	Silty loam	
10	Particle Size Distribution:			Retained	Passed
	1.70 mm	FAO Method	%	39.26	60.74
	0.850 mm		%	19.16	41.58
	0.710 mm		%	8.63	32.95
	0.600 mm		%	6.88	26.07
	0.355 mm		%	10.96	15.11
	0.180 mm		%	6.44	8.67

BDL - Below Detection Limit; DL - Detection limit.

*****END OF REPORT*****

(Signature)
Verified by

For Chennai Testing Laboratory Pvt Ltd

(Signature)
A. Rajkumar
Authorised Signatory
A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

Test Report No & Date	CTL/CH/N-19194/2023-24 & 18.03.2024
Sample Number	N-19194/23-24
Name of the Customer	M/s. Adani Vizhinjam Port Private Limited,
Address	01, Port Operation Building, Mullur Road, Mullur, Thiruvananthapuram, Kerala - 695 521.
Project	Quarry Site At Kadavila
Sample Drawn by	Laboratory
Sample Name	Soil
Sample Description	Soil
Sampling Location	Viswanadhapuram Shiva Temple East Side (1.2km away from Project Site)
GPS Reading	8°44'10.28" N & 76°50'18.37"E
Sample Drawn on	01.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/10
Sample Quantity	1 kg
Sample Condition	Good & Received in Packed Condition
Analysis Completed on	11.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH	EPA Method-9045 D rev 4,2004	-	6.3
2	Moisture	IS:2720(Part - 2)-1973 (RA.: 2020)	%	0.33
3	Available Phosphorus as P	FAO Method (Pg. No.75) 2007 (Olsen's method)	mg/kg	11
4	Total Organic Matter	FAO Method (Pg. No.61) 2007 (walkley Black wet combustion method)	%	0.32
5	Conductivity	FAO Method(Page No-43)2007 (Electrical Conductivity Method)	µs/cm	124
6	Total Kjeldahl Nitrogen as N	IS 10158-1982 (RA.2003)	mg/kg	492

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Verified by

A. Rajkumar

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

Test Report No & Date	CTL/CH/N-19194/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	
7	Available Nitrogen as N	FAO Method	mg/kg	246	
8	Available Potassium as K		mg/kg	29	
9	Soil Type	Physical Observation	-	Silty loam	
10	Particle Size Distribution:			Retained	Passed
	1.70 mm	FAO Method	%	22.86	77.14
	0.850 mm		%	13.78	63.36
	0.710 mm		%	15.43	47.93
	0.600 mm		%	18.63	29.30
	0.355 mm		%	15.72	13.58
	0.180 mm		%	7.42	6.16

BDL - Below Detection Limit; DL - Detection limit.

*****END OF REPORT*****

Rajkumar
Verified by

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar
Authorised Signatory
A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

Test Report No & Date CTL/CH/N-19195/2023-24 & 18.03.2024
Sample Number N-19195/23-24
Name of the Customer M/s. Adani Vizhinjam Port Private Limited,
Address 01, Port Operation Building, Mullur Road,
Mullur, Thiruvananthapuram, Kerala - 695 521.
Project Quarry Site At Kadavila

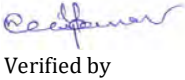
Sample Drawn by Laboratory
Sample Name Soil
Sample Description Soil
Sampling Location Premises of Nearby Home(2.5 km away from Project Site)
GPS Reading 8°43'46.02" N & 76°50'12.27"E
Sample Drawn on 01.03.2024
Sampling Plan & Procedure Grab Sample & CTL/QSP/10
Sample Quantity 1 kg
Sample Condition Good & Received in Packed Condition
Analysis Completed on 11.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH	EPA Method-9045 D rev 4,2004	-	6.5
2	Moisture	IS:2720(Part - 2)-1973 (RA.: 2020)	%	0.85
3	Available Phosphorus as P	FAO Method (Pg. No.75) 2007 (Olsen's method)	mg/kg	7
4	Total Organic Matter	FAO Method (Pg. No.61) 2007 (walkley Black wet combustion method)	%	0.18
5	Conductivity	FAO Method(Page No-43)2007 (Electrical Conductivity Method)	µs/cm	172
6	Total Kjeldahl Nitrogen as N	IS 10158-1982 (RA.2003)	mg/kg	270

For Chennai Testing Laboratory Pvt Ltd


Verified by


Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

Test Report No & Date	CTL/CH/N-19195/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	
7	Available Nitrogen as N	FAO Method	mg/kg	158	
8	Available Potassium as K		mg/kg	46	
9	Soil Type	Physical Observation	-	Silty loam	
10	Particle Size Distribution:			Retained	Passed
	1.70 mm	FAO Method	%	16.85	83.15
	0.850 mm		%	12.56	70.59
	0.710 mm		%	11.26	59.33
	0.600 mm		%	13.96	45.37
	0.355 mm		%	16.85	28.52
	0.180 mm		%	20.36	8.16

BDL - Below Detection Limit; DL - Detection limit.

*****END OF REPORT*****

[Signature]
Verified by

For Chennai Testing Laboratory Pvt Ltd
[Signature]
Authorised Signatory
A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

**Half Yearly Compliance Report (HYCR)
October 2023 to March 2024**

**Building Stone Quarry Project: Survey No. 555/2 at Nagaroor Village,
Chirayinkeezhu Taluk, Thiruvananthapuram District**



Adani Vizhinjam Port Pvt. Ltd. (AVPPL)