

Building Stone Quarry Project

**Block No. 29, Re-survey No. 120/10 at Manickal
Village, Nedumangad Taluk, Thiruvananthapuram
District**

Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020

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

Project Proponent

adani

Adani Vizhinjam Port Pvt. Ltd. (AVPPL)

May 2023



Ports and
Logistics

Ref: AVPPL/MoEF/2024-25/3037

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 Block No. 29, Re-Survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala; by M/s. Adani Vizhinjam Port Pvt. Ltd. vide **No. 1416/EC1/2019/SEIAA dated 27.02.2020**


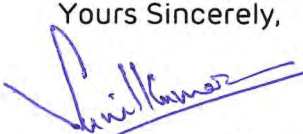
Dear Sir/Madam,

This is with reference to the Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA issued on 27th February 2020 (vide reference cited) by the State Environmental Impact Assessment Authority (SEIAA), Kerala for the building stone quarry project in Block No. 29, Re-Survey No.120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala; of M/s. Adani Vizhinjam Port Pvt. Ltd. (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,
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Kerala-695521


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CIN: U61200GJ2015PTC083954

Registered Office:
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	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
Specific Conditions		
1	The Proponent shall follow the directions given by the District Collector, Thiruvananthapuram vide his NOC No. 137/127325/18 dated 13.07.2018. The copy of the NOC may also be enclosed with the EC.	<p>Complied Adani Vizhinjam Port Pvt. Ltd. (AVPPL) are following the directions given by the District Collector; Thiruvananthapuram vide NoC No. B7-127329/18 dated 13.07.2018. Copy of the NoC was submitted along with Half Yearly Compliance Report (HYCR) for the period October 2021 to March 2022.</p> <p>The NoC was further renewed on the same terms and conditions vide NoC No. B7-127329/18 dated 04.01.2020 (Copy of the renewed NoC was submitted along with HYCR for the period October 2021 to March 2022).</p>
2	Activities relating to Corporate Environmental Responsibility amounting to Rs. 1.64 lakhs shall be carried out leading to protection and promotion of environment including waste management in the project district as per OM FNo.22-65/2017-IA-III dt.01.05.2018 of MoEF& CC as directed by Director, Directorate of Environment & Climate Change and supervised by District Collector.	<p>Complied A total amount of Rs. 2.15 Lakhs have been spent on Corporate Environment Responsibility (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. 1.64 Lakhs as stated in the EC Letter.</p>
3	The proponent shall carry out quarrying as per the approved Mining Plan and the proponent should strictly follow the Kerala Minor Mineral Concession Rules 2015 and amendments thereby.	<p>Being Complied AVPPL commenced operation on 23.03.2022. AVPPL will carry out quarrying as per the Approved Mining Plan (submitted along with HYCR for the period October 2021 to March 2022) and will strictly follow the Kerala Minor Mineral Concession Rules (KMMCR), 2015 and amendments.</p> <p>During the compliance period (October 2023 to March 2024), 0.1585 Lakh Tons of building stones have been extracted and a total</p>


	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


<p align="center">Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024</p>

S. No.	Conditions	Compliance Status as on 31.03.2024
		cumulative quantity of 1.3115 Lakh Tons of building stones have been extracted from inception of mining on 23.03.2022 till 31.03.2023.
4	In the wake of occurrence of large scale landslides in the state, as per the information provided by the Department of Mining & Geology, it is directed to use only NONEL (Non Electrical) technology for blasting to reduce the vibration of the ground, which is one of the causative factors that triggers landslides, formation of cracks in the surrounding buildings and disturbance to human and wildlife.	Complied Mining is being conducted using Non-Electric Detonator (NONEL) method of Blasting only to minimize the air blast, fly rock and ground vibration. The Ignition will be the Non-Conventional and Eco-Friendly method by NONEL.
5	As per the directions contained in the OM F.No. 22-34/2018-IA.III dated 16th January 2020 issued by MoEF &CC, in obedience to the directions of the Honourable Supreme Court the Project Proponent shall, undertake re-grassing the mining area and any other area which may have been disturbed due to his mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The compliance of this direction shall be included in the half yearly compliance report which will be monitored by SEAC at regular intervals.	Will be Complied AVPPL shall undertake plantation as per Progressive Mine Closure Plan, which is included in the Approved Mining Plan (submitted along with HYCR for the period October 2021 to March 2022) as per KMMCR, 2015. AVPPL shall also undertake re-grassing in any other area which may have been disturbed due to mining activities to restore the land to a condition fit for growth of suitable flora.
General Conditions		
1	A separate environmental management and monitoring cell with qualified personnel	Complied An Environmental Management and Monitoring Cell (EMMC) with qualified personnel has been


Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024


S. No.	Conditions	Compliance Status as on 31.03.2024
	should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	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 Organizational Structure for EMMC was submitted along with HYCR for the period October 2021 to March 2022. EMMC meetings are being held regularly to monitor the environmental issues at the quarry.
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 AVPPL has planted avenue trees of local species at suitable locations like buffer zones, etc. for greenbelt development.</p>  <p style="text-align: center;">Avenue Plantation</p> <p>At Mine Closure stage, the working pit shall be developed for water storage surrounded with local bio diversified vegetation. A total of 0.2922 Ha safety barrier area shall be used for development of greenbelt.</p>

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Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 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.	Being Complied Regular water sprinkling through water tankers is being carried out on haul roads and other dust prone areas such as loading and unloading of minerals.
4	Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent	Will be Complied Eco-restoration including Mine Closure Plan is provided in the Approved Mining Plan (submitted along with HYCR for the period October 2021 to March 2022). The same shall be implemented during the closure at the cost of AVPPL.
5	In view of the deep pits left after the excavation, stacking at maximum top level should be carried out.	Complied Stacking of materials is not being carried out as all the produced materials are used for Breakwater Construction at Vizhinjam Seaport and are being transported directly to the Port site and not stacked at the quarry site.
6	Corporate Environment Responsibility agreed upon by the proponent should be implemented.	Complied A total amount of Rs. 2.15 Lakhs has been spent on Corporate Environment Responsibility (CER) Activities with expense heads under specific activities leading to protection and promotion of environment in line with Ministry of Environment and Forests & Climate Change (MoEF&CC) Office Memorandum (OM) F.No.22-65/2017-IA.III dated 01.05.2018. Despite having exhausted the agreed-upon funds for CER activities, AVPPL, being committed to environmental responsibility has exceeded the required expenditure of Rs. 1.64 Lakhs as stated in the EC Letter.
7	The project proponent shall comply the conditions stipulated by the statutory authorities concerned.	Being Complied AVPPL is complying with all applicable conditions stipulated by respective competent statutory authorities.
8	Tarring /multiple options on the access roads shall be undertaken so as to reduce dust pollution during movement of vehicle.	Complied AVPPL has developed a tar road of around 0.8 km from the quarry project site to Pirappancode Road (which is connected to Main Central (MC) Road – State Highway (SH)-1) for movement of vehicles to reduce the air pollution.

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S. No.	Conditions	Compliance Status as on 31.03.2024
		 <p align="center">Tarred Road Developed by AVPPL</p>
9	Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions	Complied As such, the quarry had been mined earlier by another party and since this is already an open mine, there was minimal topsoil or overburden available in the quarry; all the produced materials are being used for Breakwater Construction at Vizhinjam Port and there would be no generation of waste.
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.	Complied As per the Approved Mining Plan (submitted along with HYCR for the period October 2021 to March 2022) bench height and width need to be maintained at maximum of 6.0 m also a 45° pit slope will be maintained; same is being adhered.
11	Ground level should be fixed in individual cases separately	Being Complied For every bench, ground level is fixed in MSL as individual cases separately. Surface plan with MSL levels is provided in the Approved Mining Plan (submitted along with HYCR for the period October 2021 to March 2022).


Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

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12	No mining operations should be carried out at places having a slope greater than 45.	Complied No mining operations are being carried out at places having a slope greater than a 45 degrees angle.
13	Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB. This condition is applicable only in such cases if a crusher is adjacent to the quarry	Not Applicable There is no crusher adjacent to the quarry as there will be no crushing and screening within the lease area.
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.




Worker with PPEs

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
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Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

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15	Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.	Being Complied Earthen garland drainage/garland canals have been developed in the lower slopes along periphery of mining area to channelize storm water. The water from garland drain is diverted to an earthen silt settling tanks before releasing clarified water to the natural water course.
16	The transportation of minerals should be done in covered trucks to contain dust emissions. The proponent should plant trees at least 5 'times of: the loss: that has been occurred while clearing the land for the project. SEAC should assess the number of trees in each project site before the issuance of EC so as to ensure the promptness in, planting.	Being Complied The transportation of minerals in trucks is being undertaken covered with tarpaulin cover. 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.
17	Explosives should be stored in magazines in isolated place specified and approved by Explosives Department	Complied AVPPL constructed a 500 Kgs portable explosives magazine at an area called Chappath; which is 45 km away from the quarry location. AVPPL are transporting the explosives and detonators from Chappath to Manickal quarry through two authorized explosives vans for which following licenses were obtained from PESO: <ul style="list-style-type: none"> • Explosives magazine license E/SE/KL/22/331 (E121778) dated 13.09.2021 (Copy was submitted along with HYCR for the period October 2022 to March 2023). • Explosives van-1 (KL01CP2414) license E/SE/KL/25/99 (E135886) dated 22.09.2021 (Copy was submitted along with HYCR for the period October 2022 to March 2023). • Explosives van-2 (KL01CP2472) license E/SE/KL/25/99(E135883) dated 22.09.2021 (Copy was submitted along with HYCR for the period October 2022 to March 2023).

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


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18	A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.	<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 (submitted along with HYCR for the period October 2021 to March 2022) 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 57.7 m from the boundary of the quarry.</p>
19	50 m buffer distance should be maintained from forest boundaries.	<p>Not Applicable</p> <p>There are no forests or forest lands in the vicinity of the project site.</p>
20	Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.	<p>Complied</p> <p>CTO has been obtained from Kerala State Pollution Control Board (KSPCB) vide Consent No. vide Consent No.: PCB/TVM-DO/ICO/NDD/QRY/29/2020 dated 16.03.2020 valid up to 26.02.2025 (A copy of the same was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 (submitted along with HYCR for the period October 2021 to March 2022).</p>
21	All other statutory clearances should be obtained, as applicable, by project	<p>Complied</p> <p>AVPPL have obtained all applicable statutory clearances from the respective competent</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	proponents from the respective competent authorities including that for blasting and storage of explosives.	<p>authorities. The following clearances have been obtained:</p> <ul style="list-style-type: none"> • Approved Mining Plan by District Geologist, Thiruvananthapuram vide Letter No. 362/DOT/ML/18 dated 24.07.2019 (Copy was submitted along with HYCR for the period October 2021 to March 2022). • No Objection Certificate (NoC) from Thiruvananthapuram District Collector vide Letter No. B7-127329/18 dated 13.07.2018 for Govt. land (Copy was submitted along with HYCR for the period October 2021 to March 2022). • The NoC was further renewed on the same terms and conditions vide NoC No. B7-127329/18 dated 04.01.2020 (Copy was submitted along with HYCR for the period October 2021 to March 2022). • Directorate of Mining and Geology, Govt. of Kerala, Thiruvananthapuram has issued a Letter of Intent (LOI) vide No. 5219/M3/2019 dated 07.06.2019. Copy was submitted along with Half Yearly Compliance Report for the period October 2021 to March 2022. • CTO has been obtained from Kerala State Pollution Control Board (KSPCB) vide Consent No.: PCB/TVM-DO/ICO/NDD/QRY/29/2020 dated 16.03.2020 valid up to 26.02.2025. A copy of the same was submitted along with HYCR for the period October 2019 to March 2020). • Purchase and Use of Explosives Approval from Petroleum & Explosives Safety Organization (PESO), Ernakulam vide Letter No. E/SE/KL/22/129(E95316) dated 18.02.2022. (submitted along with HYCR for the period October 2021 to March 2022) • Dangerous and Offensive Trade (D&O) License (Deemed as granted vide judgment dated 13.01.2021 in WP(C). No. 274 of 2021

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
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Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		<p>(submitted along with HYCR for the period October 2021 to March 2022)</p> <ul style="list-style-type: none"> • Lease Order from DMG vide Letter No. 7671/M3/2021 dated 22.01.2022 and Lease Execution from Additional Director of Mining and Geology vide Pro. Order No. 428/2021-22/5219/M3/2019/DMG dated 22.01.2022 (submitted along with HYCR for the period October 2021 to March 2022) • Quarrying Lease Registration Agreement in Form H at Thiruvananthapuram Registrar Office dated 28.01.2022 (submitted along with HYCR for the period October 2021 to March 2022) • Explosives magazine license E/SE/KL/22/331 (E121778) dated 13.09.2021 (Copy was submitted along with HYCR for the period October 2022 to March 2023). • Explosives van-1 (KL01CP2414) license E/SE/KL/25/99 (E135886) dated 22.09.2021 (Copy was submitted along with HYCR for the period October 2022 to March 2023). • Explosives van-2 (KL01CP2472) license E/SE/KL/25/99(E135883) dated 22.09.2021 (Copy was submitted along with HYCR for the period October 2022 to March 2023).
22	<p>In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority</p>	<p>Noted</p>

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23	The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted
24	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.	Noted
25	The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at	<p>Complied</p> <p>EC for the project was issued on 27.02.2020. Details of the EC were advertised in the local newspapers published on 01.03.2020 (A copy of the same was submitted along with HYCR for the period October 2019 to March 2020). The signed EC was submitted to SEIAA vide AVPPL/SEIAA/2019-20/1083 dated 04.03.2020 (A copy of the same was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 (submitted along with HYCR for the period October 2021 to March 2022).</p> <p>A 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. The copy of</p>

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	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.	EC is also uploaded to the company website: www.adaniports.com/Downloads .
26	The Environmental Clearance shall be put on the website of the company by the proponent.	Complied The copy of EC is uploaded to the company website: www.adaniports.com/Downloads . Screenshot of the same was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 (submitted along with HYCR for the period October 2021 to March 2022).
27	Proponent shall submit half yearly reports in soft copy and SEIAA will upload it on the website.	Being Complied 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 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 April 2023 to September 2023 has been submitted vide email dated 23.11.2023 (a copy of the email is enclosed as Annexure 1).
28	The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40. Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public	Complied The details of EC have been displayed at the site next to the entrance of the quarry, visible to the public.

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Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

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		 <p style="text-align: center;">EC Details Displayed on Board at Site</p>
29	The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.	Complied AVPPL has submitted Notarized Affidavit stating that all the conditions stipulated in the EC shall be scrupulously followed was submitted to SEIAA vide SEIAA vide AVPPL/SEIAA/2019-20/1083 dated 04.03.2020. A copy of the affidavit was submitted along with Letter No. AVPPL/MOEF/2020-21/1127 dated 13.05.2020 (submitted along with HYCR for the period October 2021 to March 2022).
30	No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable	Noted
31	The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect	Not Applicable There are no natural water courses and/or water resources of first order streams in and around the mine lease area.

	<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 Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District</p>		

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S. No.	Conditions	Compliance Status as on 31.03.2024
	<p>the first order streams, if any, originating from the mine lease shall be taken.</p>	
32	<p>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>	<p>Being Complied 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>
33	<p>Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies: 'The water so-collected should be utilized for watering the mine area, roads, green belt development. etc. The drains shall be regularly desilted</p>	<p>Being Complied The mining operators have developed an earthen siltation pond at the bottom of the quarry area to prevent run-off of water and flow of sediments. The water collected will be utilized for greenbelt development, etc. The drains are being regularly desilted particularly after monsoon.</p>

Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024																																			
	particularly after monsoon and maintained properly.																																				
34	Effective safeguard measures such as- regular water sprinkling shall be carried out in critical areas prone to air pollution and having' high levels. 'of 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>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"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Max</th> <th>Min</th> <th>Perm. Limit</th> </tr> </thead> <tbody> <tr> <td>PM₁₀</td> <td>µg/m³</td> <td>75.0</td> <td>41.5</td> <td>100</td> </tr> <tr> <td>PM_{2.5}</td> <td>µg/m³</td> <td>36.0</td> <td>18.2</td> <td>60</td> </tr> <tr> <td>SO₂</td> <td>µg/m³</td> <td>15.0</td> <td>7.0</td> <td>80</td> </tr> <tr> <td>NO₂</td> <td>µg/m³</td> <td>28.0</td> <td>13.6</td> <td>80</td> </tr> <tr> <td>CO</td> <td>µg/m³</td> <td>BDL</td> <td>-</td> <td>4</td> </tr> <tr> <td>HC</td> <td>µg/m³</td> <td>BDL</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <p>*BDL: Below Detectable Limit</p> <p>The Ambient Air Quality Monitoring Report is enclosed as Annexure 2. All the monitored parameters were found within the prescribed limits.</p>	Parameter	Unit	Max	Min	Perm. Limit	PM ₁₀	µg/m ³	75.0	41.5	100	PM _{2.5}	µg/m ³	36.0	18.2	60	SO ₂	µg/m ³	15.0	7.0	80	NO ₂	µg/m ³	28.0	13.6	80	CO	µg/m ³	BDL	-	4	HC	µg/m ³	BDL	-	-
Parameter	Unit	Max	Min	Perm. Limit																																	
PM ₁₀	µg/m ³	75.0	41.5	100																																	
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SO ₂	µg/m ³	15.0	7.0	80																																	
NO ₂	µg/m ³	28.0	13.6	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>Being Complied</p> <p>AVPPL has developed a tar road of around 0.8 km from the quarry project site to Pirappanacode Road (which is connected to MC Road) for movement of vehicles; thereby reducing the dust pollution.</p> <p>Also, 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>																																			

Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024																									
36	Measures should be taken for control of noise levels below 85 dBA in the work environment.	<p>Being Complied</p> <p>The following measures are being taken for the control of noise levels:</p> <ul style="list-style-type: none"> • Drilling: 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>Ambient Noise is being monitored by NABL and MoEF&CC accredited laboratory; M/s. Chennai Testing Laboratory Pvt Ltd as per Noise Pollution (Regulation & Control) Rules, 2000 (Rules 3 (1) and 4(1)) at 5 locations. Summary of the Ambient Noise Monitoring during the compliance period at 5 monitoring locations is mentioned below:</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Leq Day time</th> <th>Perm. Limit</th> <th>Leq Night time</th> <th>Perm. Limit</th> </tr> </thead> <tbody> <tr> <td>Project Site</td> <td>64.9</td> <td>75.0</td> <td>55.2</td> <td>70.0</td> </tr> <tr> <td>St. Johns Hospital, Manikkal</td> <td>55.7</td> <td>65.0</td> <td>43.7</td> <td>60.0</td> </tr> <tr> <td>Govt. L P School, Perumala</td> <td>57.4</td> <td>65.0</td> <td>50.8</td> <td>60.0</td> </tr> <tr> <td>Kovilvila Sree Mahavishnu Temple</td> <td>52.7</td> <td>55.0</td> <td>43.0</td> <td>50.0</td> </tr> </tbody> </table>	Location	Leq Day time	Perm. Limit	Leq Night time	Perm. Limit	Project Site	64.9	75.0	55.2	70.0	St. Johns Hospital, Manikkal	55.7	65.0	43.7	60.0	Govt. L P School, Perumala	57.4	65.0	50.8	60.0	Kovilvila Sree Mahavishnu Temple	52.7	55.0	43.0	50.0
Location	Leq Day time	Perm. Limit	Leq Night time	Perm. Limit																							
Project Site	64.9	75.0	55.2	70.0																							
St. Johns Hospital, Manikkal	55.7	65.0	43.7	60.0																							
Govt. L P School, Perumala	57.4	65.0	50.8	60.0																							
Kovilvila Sree Mahavishnu Temple	52.7	55.0	43.0	50.0																							

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024				
		Operators Rest Room	55.9	75.0	46.6	70.0
		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 report is enclosed as Annexure 2 .				
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.	Complied A total amount of Rs. 2.15 Lakhs has been spent on Corporate Environment Responsibility (CER) Activities. Despite having exhausted the agreed-upon funds for CER activities, AVPPL being committed to environmental responsibility have exceeded the required expenditure of Rs. 1.64 Lakhs as stated in the EC Letter.				
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.	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 by furnishing the requisite data/information/monitoring reports.				
39	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted				
40	Concealing the factual data or submission of false/fabricated	Noted				


	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		


Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	<p>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.</p>	
41	<p>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</p>	Noted
42	<p>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.</p>	Noted
43	<p>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.</p>	Noted
44	<p>The mining operation shall be restricted to above ground water table and it should not intersect ground water table</p>	<p>Complied Mining operations will be restricted to workings at a higher level at the quarry and will not touch the ground water table. The mine is located at a higher elevation on a hill and the water table in the mine is much below the general surface. However, a few perched aquifers have been observed at about 130 m from the boundary of the mine. Here the observed water level to be about 10 m below the surface. The expected</p>

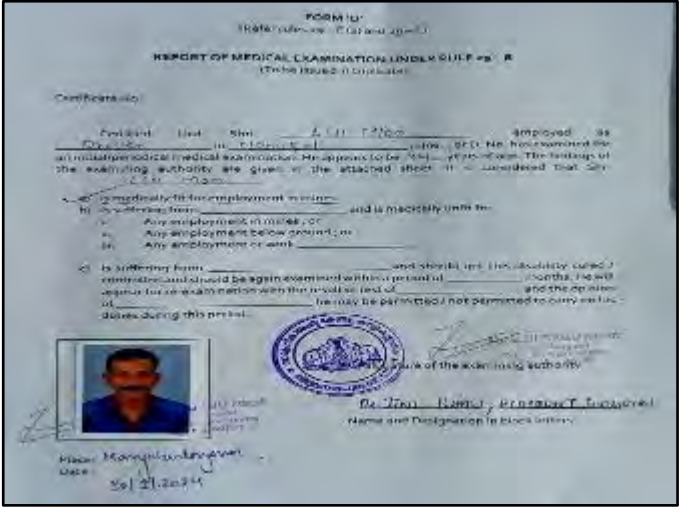
	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangal Taluk, Thiruvananthapuram District		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
		deepest mining operation during this mining period shall be about 66 m above MSL; which will be much above the ground water table. No ground water is expected to be encountered during mining.
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>Being Complied</p> <p>It is ensured that all vehicles used for transportation have valid Pollution Under Control (PuC) certificate from authorized centers.</p> <div style="text-align: center;">  </div> <p style="text-align: center;">PUC Certificate</p>
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	<p>Not Applicable</p> <p>AVPPL are not withdrawing the surface water or ground water from the project area for any purposes.</p>
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	<p>Not Applicable</p> <p>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.</p>

	Adani Vizhinjam Port Private Limited (AVPPL)	From: October 2023 To: March 2024
Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at Manickal Village, Nedumangad Taluk, Thiruvananthapuram District		

Half Yearly Compliance Report (HYCR) on Conditions Stipulated in Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 for the Period October 2023 to March 2024

S. No.	Conditions	Compliance Status as on 31.03.2024
	carried out and reported in the six monthly reports to SEIAA	
48	Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed	<p>Complied</p> <p>Occupational health surveillance programs of the workers are undertaken periodically to observe any contractions due to exposure to dust and take corrective measures. Statutory norms are being followed during mining to ensure the proper health and safety of workers. All the health and safety aspects as per the requirement and standards of the DGMS are being followed to ensure the health and safety of all persons employed at the mine.</p> <div style="text-align: center;">  <p>Medical Examination Report (Form O)</p> </div>

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](#)
To: rosz.bng-mefcc@gov.in
Cc: [Rajesh Kumar Jha](#); seacseiaakerala@gmail.com; [Jesse Benjamin Fullonton](#); [Palanivelu Kumar](#); [Environment Avppl](#)
Subject: EC No. 1416/EC1/2019/SEIAA dated 27.02.2020 - HYCR - Apr 2023 to Sep 2023 - Manickal - Reg.
Date: Thursday, November 23, 2023 5:58:35 PM
Attachments: [EC No. 1416 EC1 2019 SEIAA dated 27.02.2020 HYCR-Apr23-Sep23-21.11.2023.pdf](#)

Dear Sir/Madam,

This is with reference to the Environmental Clearance (EC) Order No. 1416/EC1/2019/SEIAA dated 27.02.2020 issued by State Environment Impact Assessment Authority (SEIAA), Kerala to Adani Vizhinjam Port Private Limited (AVPPL) for our Granite Building Stone Quarry Project in Block No.29, Re-Survey No.120/10 in Manickal Village, Nedumangad Taluk, Thiruvananthapuram District, Kerala.

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/2023-24/2711 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-19301/2023-24 & 15.03.2024
Sample Number	N-19301/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	Project Site
GPS Reading	8°39'35.19" N & 76°55'42.78"E
Sample Drawn on	29.02.2024 - 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	36.0	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	75.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	15.0	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	28.0	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-19301/2023-24 & 15.03.2024
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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)

Page 2 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19302/2023-24 & 15.03.2024
Sample Number	N-19302/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	St. John's Hospital, Manikkal, (1.4 km away from Project Site)
GPS Reading	8°39'45.82" N & 76°54'53.35"E
Sample Drawn on	29.02.2024 - 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:

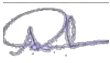
SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	IS 5182 Part 24 - 2019	µg/m ³	27.0	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	58.5	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	11.4	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	25.1	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-19302/2023-24 & 15.03.2024
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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)

Page 2 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19303/2023-24 & 15.03.2024
Sample Number	N-19303/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	Govt.L P School, Perumala, (3.36 km away from Project Site)
GPS Reading	8°40'48.59" N & 76°55'55.74"E
Sample Drawn on	29.02.2024 - 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	20.5	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	46.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	7.6	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	15.1	80
5	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 - 2016	mg/m ³	BDL(DL:1.15)	4

For Chennai Testing Laboratory Pvt Ltd

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

Verified by

TEST REPORT

Test Report No & Date	CTL/CH/N-19303/2023-24 & 15.03.2024
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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)

Page 2 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19304/2023-24 & 15.03.2024
Sample Number	N-19304/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	Kovilvila Sree Mahavishnu Temple (2.34 km away from Project Site)
GPS Reading	8°39'41.44" N & 76°56'36.67"E
Sample Drawn on	29.02.2024 - 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:

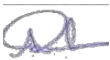
SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER (PM _{2.5})	IS 5182 Part 24 - 2019	µg/m ³	18.2	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	41.5	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	7.0	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	13.6	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-19304/2023-24 & 15.03.2024
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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-19305/2023-24 & 15.03.2024
Sample Number	N-19305/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	Ambient Air Quality
Sampling Location	Operators Rest Room (0.47 km away from Project Site)
GPS Reading	8°39'35.78" N & 76°55'40.344"E
Sample Drawn on	29.02.2024 - 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	27.0	60
2	PARTICULATE MATTER (PM ₁₀)	IS 5182 Part 23 - 2006 (R.2017)	µg/m ³	54.0	100
3	SULPHUR DIOXIDE (SO ₂)	IS 5182 Part 2 - 2001 (R.2017)	µg/m ³	9.5	80
4	OXIDES OF NITROGEN (NO ₂)	IS 5182 Part 6 - 2006 (R.2017)	µg/m ³	17.0	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-19311/2023-24 & 15.03.2024
Sample Number N-19311/23-24
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 Manickal

Sample Drawn by Laboratory
Sample Name Noise
Sample Description AMBIENT NOISE
Sample Drawn on 29.02.2024
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°39'35.19" N & 76°55'42.78"E	60.3	68.0	64.9	75.0	53.0	57.0	55.2	70.0
2	St. John's Hospital, Manikkal, (1.4 km away from Project Site)	8°39'45.82" N & 76°54'53.35"E	52.6	58.5	55.7	65.0	41.0	46.0	43.7	60.0
3	Govt.L P School, Perumala, (3.36 km away from Project Site)	8°40'48.59" N & 76°55'55.74"E	51.0	62.0	57.4	65.0	46.0	54.0	50.8	60.0
4	Kovilvila Sree Mahavishnu Temple (2.34 km away from Project Site)	8°39'41.44" N & 76°56'36.67"E	49.0	56.6	52.7	55.0	40.2	45.0	43.0	50.0
5	Operators Rest Room (0.47 km away from Project Site)	8°39'35.78" N & 76°55'40.34"E	53.0	58.0	55.9	75.0	42.0	50.0	46.6	70.0

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)

TEST REPORT

Test Report No & Date	CTL/CH/N-19205/2023-24 & 18.03.2024
Sample Number	N-19205/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	Ground Water
Sampling Location	90m Away Project Site
GPS Reading	8°39'34.10" N & 76°55'39.92"E
Sample Drawn on	29.02.2024
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)	-	6.5
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	40
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	< 1
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	7
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	15
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	5
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	1.5
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)

Recd

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-19205/2023-24 & 18.03.2024
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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	7.1
19	Total Suspended Solids	IS 3025 (Part 17) -1984 (R.2021)	mg/l	BDL(DL:2.0)

For Chennai Testing Laboratory Pvt Ltd

A. Rajkumar

Verified by

A. Rajkumar

Authorised Signatory

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

Page 2 of 3

TEST REPORT

Test Report No & Date	CTL/CH/N-19205/2023-24 & 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

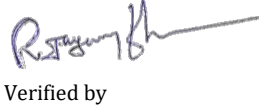


Authorised Signatory

N. RAJENDRAKUMAR

Head - Quality & Microbiology Division
(MICROBIOLOGY)

Page 3 of 3



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TEST REPORT

Test Report No & Date	CTL/CH/N-19206/2023-24 & 18.03.2024
Sample Number	N-19206/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	Ground Water
Sampling Location	150m Away Project Site
GPS Reading	8°39'15.34" N & 76°55'24.60"E
Sample Drawn on	29.02.2024
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	36
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	< 1
7	Total Alkalinity as CaCO ₃	IS 3025 (Part 23)-1986 (R.2019)	mg/l	12
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	11
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	5
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	1.8
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)

Rajkumar

Verified by

TEST REPORT

Test Report No & Date	CTL/CH/N-19206/2023-24 & 18.03.2024
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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)

Rajkumar

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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-19206/2023-24 & 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-19207/2023-24 & 18.03.2024
Sample Number	N-19207/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	Ground Water
Sampling Location	Govt.L P School, Perumala, (3.36 km away from Project Site)
GPS Reading	8°40'49.20" N & 76°55'40.34"E
Sample Drawn on	29.02.2024
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)	-	7.0
3	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
4	Total Dissolved Solids	IS 3025 (Part 16)-1984 (R.2017)	mg/l	124
5	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	3
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	5
8	Chloride as Cl ⁻	IS 3025 (Part 32)-1988 (R.2019)	mg/l	60
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	16
12	Nitrate as NO ₃	IS 3025 (Part 34)-1988 (R.2019)	mg/l	8.4
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-19207/2023-24 & 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	7.0
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)

CIN: U93000TN2000PTC043869

TEST REPORT


Test Report No & Date	CTL/CH/N-19207/2023-24 & 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-19202/2023-24 & 18.03.2024
Sample Number	N-19202/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Soil
Sample Description	Soil
Sampling Location	Project Site
GPS Reading	8°39'35.19" N & 76°55'42.78"E
Sample Drawn on	29.02.2024
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	-	6.9
2	Moisture	IS:2720(Part - 2)-1973 (RA.: 2020)	%	3.3
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)	%	0.19
5	Conductivity	FAO Method(Page No-43)2007 (Electrical Conductivity Method)	µs/cm	151
6	Total Kjeldahl Nitrogen as N	IS 10158-1982 (RA.2003)	mg/kg	316

For Chennai Testing Laboratory Pvt Ltd

Rajkumar

Verified by

A. Rajkumar

Authorised Signatory

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

Page 1 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19202/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	
7	Available Nitrogen as N	FAO Method	mg/kg	162	
8	Available Potassium as K		mg/kg	14	
9	Soil Type	Physical Observation	-	Silty loam	
10	Particle Size Distribution:			Retained	Passed
	1.70 mm	FAO Method	%	35.27	64.73
	0.850 mm		%	18.24	46.49
	0.710 mm		%	13.89	32.60
	0.600 mm		%	6.03	26.57
	0.355 mm		%	9.45	17.12
	0.180 mm		%	10.22	6.90

BDL - Below Detection Limit; DL - Detection limit.

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

(Signature)

Verified by

(Signature)

Authorised Signatory

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

TEST REPORT

Test Report No & Date CTL/CH/N-19203/2023-24 & 18.03.2024
Sample Number N-19203/23-24
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 Manickal

Sample Drawn by Laboratory
Sample Name Soil
Sample Description Soil
Sampling Location Operators Rest Room (0.47 km away from Project Site)
GPS Reading 8°39'35.78" N & 76°55'40.344"E
Sample Drawn on 29.02.2024
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	-	8.7
2	Moisture	IS:2720(Part - 2)-1973 (RA.: 2020)	%	1.18
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)	%	0.21
5	Conductivity	FAO Method(Page No-43)2007 (Electrical Conductivity Method)	µs/cm	175
6	Total Kjeldahl Nitrogen as N	IS 10158-1982 (RA.2003)	mg/kg	410

For Chennai Testing Laboratory Pvt Ltd

Rajkumar

Verified by

A. Rajkumar

Authorised Signatory

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

Page 1 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19203/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	
7	Available Nitrogen as N	FAO Method	mg/kg	194	
8	Available Potassium as K		mg/kg	31	
9	Soil Type	Physical Observation	-	Silty loam	
10	Particle Size Distribution:			Retained	Passed
	1.70 mm	FAO Method	%	32.56	67.44
	0.850 mm		%	21.45	45.99
	0.710 mm		%	8.24	37.75
	0.600 mm		%	6.29	31.46
	0.355 mm		%	12.07	19.39
	0.180 mm		%	14.05	5.34

BDL - Below Detection Limit; DL - Detection limit.

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

For Chennai Testing Laboratory Pvt Ltd

(Signature)

Verified by

(Signature)

Authorised Signatory

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

TEST REPORT

Test Report No & Date	CTL/CH/N-19204/2023-24 & 18.03.2024
Sample Number	N-19204/23-24
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 Manickal
Sample Drawn by	Laboratory
Sample Name	Soil
Sample Description	Soil
Sampling Location	100m Away Project Site
GPS Reading	8°39'37.22" N & 76°55'40.34"E
Sample Drawn on	29.02.2024
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	-	8.0
2	Moisture	IS:2720(Part - 2)-1973 (RA.: 2020)	%	1.02
3	Available Phosphorus as P	FAO Method (Pg. No.75) 2007 (Olsen's method)	mg/kg	6
4	Total Organic Matter	FAO Method (Pg. No.61) 2007 (walkley Black wet combustion method)	%	0.10
5	Conductivity	FAO Method(Page No-43)2007 (Electrical Conductivity Method)	µs/cm	168
6	Total Kjeldahl Nitrogen as N	IS 10158-1982 (RA.2003)	mg/kg	316

For Chennai Testing Laboratory Pvt Ltd

(Signature)

Verified by

(Signature)

Authorised Signatory

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

Page 1 of 2

TEST REPORT

Test Report No & Date	CTL/CH/N-19204/2023-24 & 18.03.2024
-----------------------	-------------------------------------

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	
7	Available Nitrogen as N	FAO Method	mg/kg	124	
8	Available Potassium as K		mg/kg	15	
9	Soil Type	Physical Observation	-	Silty loam	
10	Particle Size Distribution:			Retained	Passed
	1.70 mm	FAO Method	%	43.85	56.15
	0.850 mm		%	24.51	31.64
	0.710 mm		%	6.49	25.15
	0.600 mm		%	4.01	21.14
	0.355 mm		%	7.46	13.68
	0.180 mm		%	6.23	7.45

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)

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

**Building Stone Quarry Project in Block No. 29, Re-survey No. 120/10 at
Manickal Village, Nedumangad Taluk, Thiruvananthapuram District**



Adani Vizhinjam Port Pvt. Ltd. (AVPPL)