

**Date: 18<sup>th</sup> May 2023**

**Ref: GGIAL/MoEF&CC-EC/2023-24/1592**

To,  
**The Addl. PCCF (C)**  
**Ministry of Environment, Forest & Climate Change,**  
Regional Office (SZ),  
4<sup>th</sup> Floor, E&F Wing, Kendriya Sadan,  
Koramangala, Bengaluru - 560034

**Name of the Project: Manohar International Airport, Goa**  
**EC File No.: F.No.10-29/2011-IA.III dtd 28<sup>th</sup> Oct'15 & addendum dtd. 13<sup>th</sup> Mar'20**

**Sub: Submission of Half Yearly EC Compliance Report: Oct 2022 – Mar 2023**

Dear Sir,

As your good offices are aware, post inauguration of our 'Greenfield International Airport at Mopa, Goa' by the Hon'ble PM Shri Narendra Modi on 11<sup>th</sup> Dec'22, our 'Greenfield International Airport at Mopa, Goa' has been named as 'Manohar International Airport'. Post inauguration, we commenced our domestic operations from 5th Jan'23. We request you to kindly take note of the same.

In compliance to the provisions of EC granted to us, please find enclosed herewith the Half Yearly Environmental Clearance (EC) Compliance Report for the period of October 2022 to March 2023.

Soft copy of this signed covering letter along with said EC Compliance Report, environmental monitoring reports and other annexures are being submitted as a single document in pdf to your good offices by e-mail ([rosz.bng-mef@nic.in](mailto:rosz.bng-mef@nic.in)).

Thanking you,

Yours Sincerely,  
for **GMR Goa International Airport Limited**

  
**R V Sheshan**  
**Chief Executive Officer**



Enclosure: a/a

Copy for kind information to:

1. The Director, MoEF&CC, GOI, Indira Paryavaran Bhawan, CGO Complex, New Delhi – 110 003
2. The Member Secretary, CPCB, Parivesh Bhavan, East Arjun Nagar, New Delhi – 110 032
3. The Member Secretary, Goa State Pollution Control Board, Saligao, Goa - 403 511
4. The Director, Directorate of Civil Aviation, GoG, Secretariat, Porvorim, Goa – 403 521



# HALF YEARLY ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT

(Period: October 2022 to March 2023)



## Environmental Clearance Compliance Status Report of

### Greenfield International Airport at Mopa, Goa

With reference to

MoEF&CC's EC Letter No: F.No.10-29/2011-IA.III dated 28.10.2015

Addendum to EC Conditions dated 13.03.2020

## GMR GOA INTERNATIONAL AIRPORT LIMITED MANOHAR INTERNATIONAL AIRPORT

Mopa, Pernem Taluka, District North Goa, Goa – 403 512



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### Point-wise compliance

No.	Reference No.	Conditions	Compliance
<b>Conditions of EC dated 28/10/2015</b>			
1.	4 (A) (i)	'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981, and the Water (Prevention and Control of Pollution) Act, 1974.	<p>Complied.</p> <p>Consent to Establish was obtained from Goa State Pollution Control Board (GSPCB).</p> <p>GGIAL has declared 7<sup>th</sup> December 2022 as Non-Scheduled Commercial Operation Date (COD). Further, GGIAL has declared 5<sup>th</sup> January 2023 as a Scheduled Commercial Operation Date (COD and commenced the operation phase.</p> <p>Consent to Operate (CTO), vide letter No. 2/2022-PCB/1322094/R0008891 dated 20/10/2022, superseded by CTO vide letter No. 12/2023-PCB/1617143/R00011760 dated 13/04/2023 which is valid till 01/08/2027.</p>
2.	4 (A) (ii)	The Project Proponent shall ensure the availability of adequate land at the junction of the Mopa Airport road and Mumbai /Goa NH-17 for traffic circulation/management and to provide for all the traffic interchanges and proposed clover leaf.	As per Concession Agreement (CA), this is being addressed by the Government of Goa (GoG).



No.	Reference No.	Conditions	Compliance
3.	4 (A) (iii)	The approach and exit roads to the Airport shall be approved by the NHA and should be according to IRC norms.	As per CA, this is being addressed by GoG. The construction work is in progress and is being executed through State PWD, GoG.
4.	4 (A) (iv)	A perusal of the Topo sheet superimposed on the runway area indicates that the extreme end of the runway is covering the drainage area partly. The drainage area which is under the runway shall be channelized. The area between the parallel taxiway and runway shall be handled carefully to drain the water from the area in outfall 2.	Complied. The engineering design & drawings of the drainage system have been approved by Water Resources Department, (WRD), GoG. Channelization of storm water in-between the Runway and Parallel Taxiway is completed, which is connected to Outfall # 2.
5.	4 (A) (v)	The PP shall submit the site clearance certificate from Directorate General of Civil Aviation (DGCA), before commencement of work at the project site.	Submitted and Complied. (Refer Annex – 4 of Half yearly EC compliance submitted vide letter no. GGIAL/MoEF&CC-EC/2021-2022/0688 dated 24 <sup>th</sup> May 2021).
6.	4 (A) (vi)	Sewage and other liquid effluent generated from the airport including from the existing terminal should be treated according to the norms laid down by the State Pollution Control Board. The treated sewage shall be recycled for flushing/ gardening. Proper dual plumbing shall be provided.	Complied. The 625 KLD STP is commissioned and currently in operation. Sewage and other liquid effluent is being treated by STP and 100% treated effluent is being reused and recycled. All treated effluent parameters are within the permissible norms prescribed



No.	Reference No.	Conditions	Compliance
			by Goa State Pollution Control Board (GSPCB).
7.	4 (A) (vii)	The solid waste generated shall be properly collected, segregated, and disposed of according to the provisions of Solid Waste (Management and Handling) Rules, 2000. The project proponent shall make provisions for drinking water at convenient places for passengers and also at the cafeterias as to reduce the generation of solid wastes including PET bottles.	Complied. All solid waste is collected, segregated, and disposed of according to the provisions of Solid Waste (M&H) Rules, 2016. Integrated Solid Waste Management Facility (ISWMF) has been set up within the airport complex to handle all solid waste through a dedicated third-party Waste Management Agency. Drinking water fountains has been provided for passengers in Passenger Terminal Building (PTB).
8.	4 (A) (viii)	Installation and operation of DG sets shall comply with the guidelines of CPCB.	Complied. Installation & Operation of DG sets is in compliance with the CPCB guidelines. Standby DG Sets of 2000 KVA x 3 Nos. are installed at the airport and CTO for the Airport consists of DG Sets as well, which is valid till 01/08/2027.
9.	4 (A) (ix)	Parking provision shall be provided according to the National Building Code of India, 2005.	Complied. Parking provision has been provided within the airport premises according to the National Building Code 2005.



No.	Reference No.	Conditions	Compliance
10.	4 (A) (x)	Water conservation fixtures shall be provided and water balance shall be maintained through verifiable metering for fresh raw water, recycled as well as rain water harvesting.	Complied. Water conservation fixtures are installed. water balance is being maintained.
11.	4 (A) (xi)	Necessary permission shall be obtained for drawing of ground water from competent authority prior to construction / operation of the project.	Complied. Permission has been obtained from WRD, Goa. (Refer Annex – 4 of Half yearly EC compliance submitted vide letter no. GGIAL/MoEF&CC-EC/2021-2022/0688 dated 24 <sup>th</sup> May 2021).
12.	4 (A) (xii)	The land use around the Airport complex shall be regulated through a plan to control unauthorized development which may create problems in the operation of Airport.	Mopa Airport Development Authority (MADA), GoG is the designated regulatory body to control the unauthorized development around the Airport complex. GGIAL has communicated to MADA vide letter dated 24/02/2021 for land use regulation around the airport complex.
13.	4 (A) (xiii)	The wastewater from hangers shall be tested for presence of heavy metals, if any, and shall be treated in STP. The treated wastewater shall be used for gardening/ flushing.	Noted. Compliance will be ensured when hangers are constructed and operated in future.
14.	4 (A) (xiv)	Rain water harvesting shall be provided to recharge the ground water.	Complied.



No.	Reference No.	Conditions	Compliance
			Rainwater harvesting system, as approved by WRD, GoG is provided to recharge ground water.
15.	4 (A) (xv)	Energy conservation to the extent of at least 20% shall be incorporated including water conservation (reuse/recycle, rain water harvesting and water efficient fixtures) and other green building practices for various buildings proposed within the airport complex. The PP shall consider ECBC Guidelines 2009 to achieve energy-efficiency. The energy conservation measures shall be subject to periodic verification by the competent Energy Conservation/ Efficiency authority in the State.	<p>Complied.</p> <p>Energy conservation, water conservation (reuse / recycle, rainwater harvesting and water efficient fixtures) and other green building practices for various buildings are incorporated within the airport complex. ECBC Guidelines have been followed to achieve energy efficiency.</p> <p>Passenger Terminal Building (PTB) has been certified with Indian Green Building Council (IGBC) Platinum Rating by Confederation of Indian Industry (CII) vide IGBC Registration No. NBO 19 0084 dated 10/12/2022, which is valid for 3 years from the date of certification.</p>
16.	4 (A) (xvi)	The project proponent shall prepare a detailed traffic management plan to take care of increased vehicular traffic which should also cover/clearly delineate widening/ increasing the existing roads and associated road infrastructure approving/ installation of road safety features/pedestrian facility/FOB/under passes etc. (that can be done by carrying out road safety audits). Measures shall be taken	As per CA, this is being addressed by GoG.





No.	Reference No.	Conditions	Compliance
		to prevent encroachment along/ within the Rows on connecting/ main arterial roads.	
17.	4 (A) (xvii)	All the recommendations of the EMP shall be complied with in letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to RO, MoEF&CC along with half yearly compliance report.	Complied. Compliance to the EIA mitigation measures in Matrix Format is attached as <b>Annexure – 1A</b> for Construction Phase and <b>Annexure – 1B</b> for Operation Phase.
18.	4 (A) (xviii)	The responses / commitments made during public hearing shall be complied with in letter and spirit.	Complied. Responses / commitments made during public hearing have been addressed and complied.
19.	4 (A) (xix)	Project Proponent shall install noise level display system. Noise level shall be monitored regularly in all seasons (different meteorological conditions) within the compound as well as nearby habitations and it shall be ensured that the noise level is within the prescribed limits. During night time the noise levels measured at the boundary shall be restricted to the permissible levels to comply with the prevalent regulations.	Complied. A noise level display system has been installed within the airport premises. Scheduled commercial airport operation commenced on 5 <sup>th</sup> January 2023. Ambient noise levels monitoring is being conducted by MoEF&CC approved and NABL-accredited Environmental Laboratory. Noise level monitoring reports are enclosed in <b>Annexure-2</b> .
20.	4 (A) (xx)	The location of monitoring stations and monitoring of noise level during day and night shall be in accordance with the CPCB guidance document "Requirement and procedure for monitoring Ambient Noise Level due to aircraft" published on 25 <sup>th</sup> June, 2008.	Complied. 2 Nos. of Noise Monitoring Terminals (NMT) have been installed and commissioned at the two locations in the



No.	Reference No.	Conditions	Compliance
			approach funnel zone of airport, duly approved by DGCA and GSPCB.
21.	4 (A) (xxi)	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.	Complied. Major construction activities have been completed. An Integrated Waste Management Plan for Operation Phase has been prepared and approved by GSPCB. The same is being implemented.
22.	4 (A) (xxii)	Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approval of the SPCB.	Complied. Hazardous waste has been disposed-off to GSPCB authorized recyclers. Major construction activities have been completed and the airport is Operational.
23.	4 (A) (xxiii)	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	EC obtained from MoEF&CC on 28 <sup>th</sup> October 2015 before starting the construction and the Addendum to EC was granted on 13 <sup>th</sup> March 2020.  Consent to Operate (CTO), vide letter No. 2/2022-PCB/1322094/R0008891 dated 20/10/2022, superseded by CTO vide letter No. 12/2023-PCB/1617143/R00011760 dated 13/04/2023, which is valid till 01/08/2027.



No.	Reference No.	Conditions	Compliance
			Scheduled commercial airport operation commenced on 5 <sup>th</sup> January 2023.
24.	4 (A) (xxiv)	The project proponent will set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Complied. Environmental Management Cell has been set up under the supervision of a Senior Executive designated as Vice President & Head – EHS & Sustainability.
25.	4 (A) (xxv)	<b>Corporate Environment Responsibility:</b>	Complied.
		a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.	Environment Policy approved by Board of Directors is in place.
		b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/ deviation/violation of the environmental or forest norms/ conditions.	Complied.
		c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	Complied.
		d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/ or shareholders or stakeholders at large.	Complied.
<b>B.</b>	<b>GENERAL CONDITIONS:- EC dated 28/10/2015</b>		
26.	4 (B) (i)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such	Complied.



No.	Reference No.	Conditions	Compliance
		as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care etc. The housing may be in the form of temporary structures to be removed after the completion of the project	Major construction activities have been completed. Scheduled commercial airport operation commenced on 5 <sup>th</sup> January 2023. Labor colony, within project site, with all necessary infrastructure and facilities was provided. Labour strength has come down substantially and partly labour colony is decommissioned.
27.	4 (B) (ii)	A First Aid Room will be provided in the project both during construction and operation of the project.	Complied. First Aid Centre was provided during construction phase. Fully equipped Airport Medical Centre (AMC) with the necessary medical staff has been provided at PTB for the operation phase of the airport.
28.	4 (B) (iii)	All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.	Complied. The excavated topsoil was stored at designated locations within the site and the same has been completely utilized for landscaping and horticulture purposes within the airport premises.
29.	4 (B) (iv)	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health	Complied. All excavation and filling activities for airport project have been completed.



No.	Reference No.	Conditions	Compliance
		aspects of people, only in approved sites with the approval of competent authority.	The entire quantity of excavated earthwork has been utilized for filling & leveling within the airport project site.
30.	4 (B) (v)	The diesel generator sets to be used during construction phase should be low Sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards. The diesel required for operating DG sets shall be stored in underground tanks and if required clearance from Chief Controller of Explosives shall be taken.	Complied. Low Sulphur diesel conforming to BS VI was used in DG sets during the construction phase, for which PESO license for storage of HSD was obtained.  The same is complied with and implemented for Operation Phase also.
31.	4 (B) (vi)	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.	Complied. Major construction activities have been completed. Scheduled commercial airport operation commenced on 5 <sup>th</sup> January 2023.  Vehicles hired for bringing construction material to the site were in good condition and carried Pollution Under Control (PUC) certificate and conformed to applicable air and noise emission standards, during construction phase. (Sample is enclosed in <b>Annexure-1A</b> ).



No.	Reference No.	Conditions	Compliance
			Vehicles bringing construction materials were using National Highway (NH) and State Highway (SH) roads, to reach out to the Mopa project site. There is no restriction imposed w.r.t. peak and non-peak hours for NH and SH roads by Central Govt. & State Govt.
32.	4 (B) (vii)	Fly ash usage shall be explored as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27 <sup>th</sup> August, 2003.	Complied. Fly ash was used in Ready Mixed Concrete (RMC).
33.	4 (B) (viii)	Ready mixed concrete must be used in building construction.	Complied. Ready Mixed Concrete (RMC) was used in all building construction.
34.	4 (B) (ix)	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Complied. This has been implemented as per the approval from WRD, GoG.
35.	4 (B) (x)	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Complied. Curing agents were used. All concrete works were done with pre-mixed concrete i.e. RMC only. Major concrete work has been completed. Currently, Airport is operational.
36.	4 (B) (xi)	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	Complied. The buildings are incorporated with dual plumbing system.



No.	Reference No.	Conditions	Compliance
37.	4 (B) (xii)	Use of glass may be reduced by up to 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coating in windows.	Complied. The glazing work are installed in PTB and Air Traffic Control (ATC) tower buildings with double glass unit with reflective coating as per IGBC guidelines.
38.	4 (B) (xiii)	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfil requirement.	Complied. Roof work has been carried out as per ECBC / IGBC Guidelines with appropriate thermal insulation. PTB has been accorded with IGBC Platinum Certificate from CII.
39.	4 (B) (xiv)	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfil requirement.	Complied. The work has been executed as per ECBC / IGBC Guidelines.
40.	4 (B) (xv)	The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.	Compliance, as applicable for the safe operation of the airport as per DGCA guidelines, will be ensured.
41.	4 (B) (xvi)	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	Complied. Traffic congestion near the entry & exit points from the roads adjoining the airport is avoided with involvement of GoG authorities. Earmarked Parking has



No.	Reference No.	Conditions	Compliance
			been provided within the airport premises.
42.	4 (B) (xvii)	The construction of the structures shall be undertaken as per the plans approved by the concerned local authorities/local administration, meticulously conforming to the existing local and central rules and regulations.	Complied. Construction of the structures have been undertaken as per the plans approved by MADA, GoG.
43.	4 (B) (xviii)	The construction material shall be obtained only from approved quarries. In case new quarries are to be opened, specific approvals from the competent authority shall be obtained in this regard.	Complied. Statutory approvals of approved quarries from where construction materials were sourced are submitted, (Refer Annex – 4 of Half yearly EC compliance submitted vide letter no. GGIAL/MoEF&CC-EC/2021-2022/0688 dated 24/05/2021).
44.	4 (B) (xix)	Adequate precautions shall be taken during transportation of the construction material so that it does not affect the environment adversely.	Complied. All construction / excavation / filling activities have been completed. Currently, airport is in Operation.
45.	4 (B) (xx)	Full support shall be extended to the officers of this Ministry/Regional Office by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Noted.
46.	4 (B) (xxi)	A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry regarding the implementation of the stipulated conditions.	Complied. Six-monthly compliance report highlights the status of implementation





No.	Reference No.	Conditions	Compliance
			of the stipulated conditions submitted within stipulated timelines. Monitoring is being conducted by MoEF&CC approved and NABL accredited Environmental Laboratory. Monitoring reports of Ambient Air Quality (AAQ), Water, and Noise levels conducted during October 2022 to March 2023 are enclosed in <b>Annexure – 2.</b>
47.	4 (B) (xxii)	Ministry of Environment, Forest & Climate Change or any other competent authority may stipulate any additional conditions or modify the existing. ones, if necessary in the interest of environment and the same shall be complied with.	Noted.
48.	4 (B) (xxiii)	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	Noted.
49.	4 (B) (xxiv)	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment, Forest & Climate Change.	Noted.
50.	4 (B) (xxv)	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	<ol style="list-style-type: none"> <li>1. Financial Closure for the project has been achieved on 7<sup>th</sup> July 2017.</li> <li>2. The approval of the project was obtained from the D Civil Aviation (DGCA), GoI, New Delhi vide their letter no. AV.20024/17/00-AL dated 27<sup>th</sup> July 2017.</li> </ol>



No.	Reference No.	Conditions	Compliance
			<p>3. Land development work started and the same have been communicated to MoEF&amp;CC (Letter submitted to Regional Office of MoEF&amp;CC vide letter no. GGIAL/MoEF&amp;CC/2018/0194 dated 26<sup>th</sup> February 2018).</p> <p>The above details have been further submitted to Regional Office, MoEF&amp;CC and MoEF&amp;CC, New Delhi vide our letter No. GGIAL/MoEF&amp;CC-EC/2020-21/0519 dated 13<sup>th</sup> August 2020.</p>
51.	4 (B) (xxvi)	A copy of the clearance letter shall be marked to concerned Panchayat / local NGO, if any, from whom any suggestion/representation has been made received while processing the proposal.	Complied.
52.	4 (B) (xxvii)	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office / Tehsildar's office for 30 days.	Complied.
53.	4 (B) (xxviii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.	Being complied. Environmental expenditure for the period from October 2022 to March 2023 are enclosed as <b>Annexure – 3</b> .



No.	Reference No.	Conditions	Compliance
54.	5	These stipulations would be enforced among others under 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, including the amendments and rules made thereafter.	Relevant environmental acts and rules are being complied with.
55.	6	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Complied. Necessary approvals from the concerned authorities have been obtained as applicable. A list of various statutory clearances / permits / approvals related to the Environment, obtained or applicable to the airport project have been submitted (Refer Annexure – 4 of previous Half yearly EC compliance reports submitted earlier).  List of approval / clearances / permits obtained during October 2022 to March 2023 is enclosed as <b>Annexure-4</b> .
56.	7	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which 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 Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest &	Complied. EC was published in Tarun Bharat and Navhind Times on 31 <sup>st</sup> August 2015.



No.	Reference No.	Conditions	Compliance
		Climate Change at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> . The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry.	
57.	8	This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No .460 of 2004 as may be applicable to this project.	Noted.
58.	9	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	Complied. All stipulated environmental conditions and environmental safeguards are being compiled in Half Yearly EC Compliance Report and the same is being uploaded on company website of GGIAL.
59.	10	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.



No.	Reference No.	Conditions	Compliance
60.	11	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	Complied. For FY 2021-22, Environmental Statement for temporary construction plants viz., Hot Mix Plant, Batching Plant, Wet Mix Macadam (WMM) Plant and Crushing Plants during have been submitted to GSPCB. For FY 2022-23, Environmental Statement will be submitted by 30 <sup>th</sup> Sept 2023.
<b>Additional NGT Conditions vide NGT order dated 21/08/2018</b>			
	<b>A</b>	<b>Air Environment</b>	
61.	1	Total Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM) during construction phase. Un-burnt and Hydro Carbons (HC), Lead (Pb), CO <sub>2</sub> , SO <sub>2</sub> , CO <sub>2</sub> , SOOT and Oxides of Nitrogen (NOx) during operation phase are going to be major pollutants in this kind of project. Besides, fugitive emissions of Volatile Organic Compounds (VOC) during fuel handling can be another issue for ambient air environment. The provision of only 6 (six) Air Quality Monitoring Stations is inadequate as sampling duration has been given as 'twice a week, 4 weeks in a season as per CPCB standards for NAAQM, 1994. It would be appropriate if the Project Proponent establishes real time online continuous Air Quality Monitoring Station also which is connected to CPCB server	Complied. Environmental Quality Monitoring of Suspended Particulate Matter (SPM), PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , CO <sub>2</sub> , NOx, CO, Pb and VOC are being conducted. The AAQ Monitoring report is enclosed as <b>Annexure-2</b> .  Real-time Online Continuous Ambient Air Quality Monitoring Station (CAAQMS) has been installed and commissioned at GSPCB approved location.



No.	Reference No.	Conditions	Compliance
		and capable of monitoring all relevant and critical parameters and mitigation measures taken.	
62.	2	Although all parameters w.r.t ambient air parameters have been found to be within limits for all 6 (six) locations monitored, we feel for the purpose of giving/depicting holistic picture with regard to ambient air in the area, at least 3 (three) more locations falling in the State of Maharashtra be also monitored and documented.	Complied. Report of AAQ monitoring conducted at additional 3 locations in the State of Maharashtra is enclosed as <b>Annexure - 2.</b>
	<b>B</b>	<b>Water Environment</b>	
63.	1	Only two number of Rain Water Harvesting pits have been provided which we feel are not adequate and there is a need to place other pits at such locations so as to capture all the excess drainage for water re-charge.	Complied. The rainwater harvesting plan have been revised and also approved by WRD, GoG vide letter No. 9/3/EO/WRD/2022-23/59 dated 26-05-2022. The rainwater harvesting structure have been implemented in accordance with the WRD approved drawings.
64.	2	More frequent Water Quality Monitoring i.e. once every month may be carried out by Project Proponent at bore wells and STP discharge plants instead of 4 (four) times in a year as proposed.	Complied. Water Quality Monitoring is being carried out on monthly basis. Monitoring reports for the same are enclosed in <b>Annexure-2.</b>
	<b>C</b>	<b>Noise Environment</b>	
65.	1	It has been proposed that ambient noise levels shall be monitored around the premises of airport, near DG sets and at main	Complied.



No.	Reference No.	Conditions	Compliance
		entrance/boundary of airport once a week at 7 (seven) locations which we feel are inadequate. Besides these, continuous monitoring of occupational noise exposure limits in such industrial environments would be appropriate with audible or visual alarm output capability.	Noise levels monitoring at 12 locations in and around the airport premises is being carried out by MoEF&CC approved Environmental Laboratory. Noise Monitoring reports are enclosed in the <b>Annexure-2</b> .
66.	2	Integrated Noise Model (INM) be more frequently used and mitigation undertaken during the operational phase of project at regular intervals.	Complied. Aviation Environment Design Tool (AEDT), which is an integrated Noise Model is being used for Airport Noise Zone Mapping, planning and mitigation measures.
67.	3	Although ambient noise levels have been found to be within limits at 9 (nine) locations monitored, we feel for the purpose of giving/depicting holistic picture with regard to ambient noise levels in the area, at least 3 (three) more locations falling in the State of Maharashtra be also monitored and documented.	Complied. Noise Monitoring at additional 3 locations in Maharashtra State is being carried out by MoEF&CC approved laboratory. Noise monitoring reports are enclosed in <b>Annexure-2</b> .
	<b>D</b>	<b>Land Environment</b>	
68.	1	There is a potential for impact on soil quality due to project related spills and leaks of fuel and chemicals and uncontrolled disposal of wastes and waste water. Adequate care be taken to avoid spills and leaks of hazardous substances and all project related wastes. Littering on sites and beyond the sites needs to be adequately prevented and controlled.	Complied. All major construction activities have been completed. Secondary containment of adequate capacity was provided at bulk bitumen,



No.	Reference No.	Conditions	Compliance
			HSD and LDO storage tanks during the construction phase.
69.	2	Debris and Muck Management Plan to be prepared and implemented so as to avoid spillage of muck and debris on the slopes.	Complied. All major construction activities have been completed.
70.	3	Soil conservation and stabilization measures needs to be undertaken by deploying both mechanical and bio-engineering methods.	Complied. Soil stabilization is ensured by providing geotextile materials on slopes. Gabion walls are provided as a soil retaining structures wherever required.
71.	4	Remediation, restoration and compensation needs to be integral part of policy so as to provide adequate relief for any environmental or project related disasters.	Complied. Framework for remediation, restoration and compensation for any unlikely event of environmental or project-related disasters has been prepared.
	<b>E</b>	<b>Biological Environment</b>	
72.	1	Efforts be made to transplant the trees to other locations in the same vicinity by using appropriate mechanical devices which are available these days.	Complied. Efforts have been made to successfully translocate 500 nos. of trees within airport project premises.
73.	2	Efforts be made to plant indigenous species which are tall in size rather than small saplings.	Complied. Efforts have been made to plant indigenous tree species which are tall in size, at airport landside avenue plantation areas.





No.	Reference No.	Conditions	Compliance
74.	3	Concerns have been raised by appellants with regard to plant species 'Dipcadi concanense' which has been claimed to be a threatened plant. This claim of the appellants has been negated by the respondent by producing a documentation of Botanical Survey of India, Western Regional Centre, Pune, Maharashtra titled as "A Note on Occurrence and Distribution of Dipcadi concanense". By invoking Precautionary Principle, we direct the Project Proponent to draw up a Conservancy by Plan/Scheme for 'Dipcadi concanense' in collaboration with Forest Department, State of Goa and Botanical Survey of India and ensure its implementation.	Complied. Dipcadi Concanense is conserved in a forest conservatory by Forest Department, GoG.
	<b>F</b>	<b>Socio-economic Environment</b>	
75.	1	Adequate drills with respect to implementation of Disaster Management plan needs to be carried out at regular intervals so as to ensure preparedness and rapid response to any disasters both man-made or natural.	Complied. For the construction phase of the project, 'Onsite Emergency and Disaster Management Plan' was prepared and implemented. For the operation phase of the airport, 'Airport Emergency Response Plan' has been prepared and implemented at the airport. Emergency response drills were conducted during Construction phase and Operation Phase as well.



No.	Reference No.	Conditions	Compliance
76.	2	Although 'Disaster Management Plan' as Annexure-II is part of EIA Report under the Sub head 1.2.1- National Disasters needs further elaboration especially in terms of Emergency Response Measures, Rules and Responsibility, Mitigation, etc.	Complied. For the construction phase of the project, 'Onsite Emergency and Disaster Management Plan' was prepared and implemented with adequate Emergency Response Drills. For the operation phase of the airport, comprehensive 'Airport Emergency Response Plan' has been prepared and implemented at the airport.
<b>Addendum to EC dated 23<sup>rd</sup> March 2020</b>			
	<b>I</b>	<b>Statutory compliance</b>	
77.	(i)	The project proponent shall obtain certificate from Chief Wildlife Warden (CWLW) of State through State Government that none of the area of the project falls in the notified Eco-sensitive Zone (ESZ) and no activity prohibited in the Eco-sensitive zone will be taken up.	Submitted & Complied. Obtained Certificate from Chief Wildlife Warden (CWLW), GoG, mentioning that none of the area falls in notified Eco-Sensitive Zone (ESZ). (Refer Annex – 4 of Half yearly EC compliance submitted vide letter no. GGIAL/MoEF&CC-EC/2021-2022/0688 dated 24 <sup>th</sup> May 2021).
78.	(ii)	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.	Complied. Consent to Operate has been obtained from GSPCB. The same is attached in <b>Annexure-4.</b>



No.	Reference No.	Conditions	Compliance
79.	(iii)	The project proponent shall obtain necessary permission from the competent authority for drawl of water from Tillari Irrigation Canal.	Complied. Permission has been obtained from WRD, GoG for drawl of water from the Tilarir irrigation Canal. (Refer Annex – 4 of Half yearly EC compliance submitted vide letter no. GGIAL/MoEF&CC-EC/2021-2022/0688 dated 24 <sup>th</sup> May 2021).
<b>II</b>		<b>Air quality monitoring and preservation</b>	
80.	(i)	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM <sub>10</sub> and PM <sub>2.5</sub> in reference to PM emission, and SO <sub>2</sub> and NO <sub>x</sub> in reference to SO <sub>2</sub> and NO <sub>x</sub> emissions) within and outside the airport area covering upwind and downwind directions.	Complied. Ambient Air Quality Monitoring for common / criterion parameters relevant to main pollutants released (e.g. PM <sub>10</sub> and PM <sub>2.5</sub> in reference to PM emission, and SO <sub>2</sub> and NO <sub>x</sub> in reference to SO <sub>2</sub> and NO <sub>x</sub> emissions) within and outside of the project area is being carried out through MoEF&CC approved laboratory. The AAQ Monitoring report is enclosed as <b>Annexure - 2</b> .
81.	(ii)	Notification GSR 94 (E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities shall be complied with.	Complied. Dust mitigation measures on unpaved areas are undertaken and details are enclosed in <b>Annexure-1A</b> .



No.	Reference No.	Conditions	Compliance
82.	(iii)	Soil and other construction materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet	Complied. All earthwork – cut and fill activities for Airport have been completed.
83.	(iv)	The excavation working area should be sprayed with water after operation so as to maintain the entire surface wet.	Complied. All earthwork – cut and fill activities for Airport have been completed.
84.	(v)	Excavated materials shall be handled and transported in a manner that they do not cause any air pollution.	Complied. All earthwork – cut and fill activities for Airport have been completed.
85.	(vi)	The soil/construction materials carried by the vehicle should be covered by impervious sheeting to avoid leaking of the dusty materials.	Complied. All earthwork – cut and fill activities for Airport have been completed.
	<b>III</b>	<b>Water quality monitoring and preservation</b>	
86.	(i)	Appropriate drainage channels need to be designed to take care of the water flow into the nearest water courses/rivers, etc.	Complied. Drainage channels have been provided as per approval from WRD, GoG.
87.	(ii)	It should be ensured that sustainable water flow in the various channels of watershed in the plateau is maintained.	Compliance ensured. Sustainable water flow in various channels of watershed in the plateau is maintained by providing storm water drainage system. Drainage plan have been approved by WRD, GoG vide letter No. 9/3/EO/WRD/2022-23/59 dated 26-05-2022.



No.	Reference No.	Conditions	Compliance
88.	(iii)	Storm water drains are to be built for discharging storm water from the air-field to avoid flooding/water logging in project area. Domestic and industrial waste water shall not be allowed to be discharged into the storm water drains and directed to STP for treatment.	Complied. 625 KLD Sewage Treatment Plant is installed & commissioned.
89.	(iv)	Proper drainage systems, emergency containment in the event of a major spill during monsoon season etc. shall be provided.	Complied. Proper drainage systems & Oil Water Separator (OWS) have been provided. Spillage and Contaminant Containment Plan has been prepared and approved by GSPCB.
90.	(v)	The runoff from paved structures like Aprons can be routed through drains to oil separation tanks and sedimentation basins before being discharged into rainwater harvesting structures.	Complied. Runoff from the paved structure like Apron has been routed through Oil Water Separator (OWS).
91.	(vi)	Run off from chemicals and other contaminants from aircraft maintenance and other areas within the airport shall be suitably contained and treated before disposal. A spillage and contaminant containment plan shall be drawn up and implemented to the satisfaction of the State Pollution Control Board.	Complied. Runoff from chemicals and other contaminants from aircraft maintenance and other areas has been routed through Oil Water Separator (OWS) before disposal. Spillage and Contaminant Containment Plan has been prepared and approved from GSPCB.



No.	Reference No.	Conditions	Compliance
92.	(vii)	The project activity shall conform to the General Standards for Discharge of Environmental Pollutants notified in the Environment (Protection) Rules, 1986, and amended from time to time.	Complied. General Standards for Discharge of Environmental Pollutants in the Environment (Protection) Rules, 1986 was considered in design phase itself and the same is being ensured during operation also.
93.	(viii)	Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Rain water harvesting structures shall conform to CGWA guidelines. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.	Complied. Rainwater harvesting for roof runoff and surface runoff has been implemented as per WRD, GoG approved rainwater harvesting plan.
	<b>IV</b>	<b>Noise monitoring and prevention</b>	
94.	(i)	Notification G.S.R. 568(E) dated 18.06.2018 of MoEF&CC regarding Ambient Air Quality Standards with respect to Noise in Airport Noise Zone shall be complied with.	Airport Noise Zone Mapping is under progress.
95.	(ii)	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Complied. Noise levels monitoring in and around the airport is being conducted through MoEF&CC approved laboratory. Monitoring reports are enclosed in <b>Annexure - 2</b> .
96.	(iii)	Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be	Complied. DG sets are installed with acoustic enclosures. Random workplace noise



No.	Reference No.	Conditions	Compliance
		regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.	levels monitoring is being carried out through MoEF&CC approved laboratory. Monitoring reports are enclosed in <b>Annexure-2.</b>
97.	(iv)	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	Complied. DG sets are installed with acoustic enclosures. Necessary PPEs are provided to the operating personnel.
98.	(v)	During airport operation period, noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	Complied. Noise level monitoring is being carried out at airport boundary through MoEF&CC approved laboratory. Monitoring reports are enclosed in <b>Annexure-2.</b>
99.	(vi)	Where construction activity is likely to cause noise nuisance to nearby residents, restrict it to only during day time i.e. between 7 am to 6 pm.	Complied. Major Construction activities have been completed. Currently, the Airport is operational.
	<b>V</b>	<b>Energy Conservation/climate change measures</b>	
100.	(i)	Energy conservation measures like installation of LED should be integral part of the project design and should be in place before project commissioning.	Complied. Entire lighting fixtures provided across the airport complex are of LED type only.
101.	(ii)	Initiatives such as Green Infrastructure Development program, adoption of less emission intensive technologies, renewable energy	Complied.



No.	Reference No.	Conditions	Compliance
		program, electrical vehicles and Airport Carbon Accreditation need to be adopted to reduce its impact on climate change and Green House Gas (GHG) emissions as per environmental best practices governing greenfield airports.	The requirements of Green Infrastructure Development program, adoption of less emission intensive technologies, renewable energy program and electrical vehicles are considered in the design itself and same is being implemented. PTB has been accorded with IGBC Platinum Certificate from CII.
	<b>VI</b>	<b>Waste Management</b>	
102.	(i)	Soil stockpile shall be managed in such a manner that dust emission and sediment runoff are minimized. Ensure that soil stockpiles are designed with no slope greater than 2:1 (horizontal/vertical).	Complied. Soil stockpiles were managed and properly stabilized to minimize dust emission and sediment runoff.
103.	(ii)	The project activity shall conform to the Fly Ash notification issued under the E.P. Act of 1986.	Complied. Fly Ash was used in RMC as per mix design in the construction.
104.	(iii)	The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016. Recycling of wastes such as paper, glass (produced from terminals and aircraft caterers), metal (at aircraft maintenance site), plastics (from aircrafts, terminals and offices), wood, waste oil and solvents (from maintenance and engineering operations), kitchen wastes and vegetable oils (from caterers) shall be carried out.	Complied. All solid waste collected, segregated and disposed according to the provisions of Solid Waste (M&H) Rules, 2016. Waste is handled at Integrated Solid Waste Management Facility and a dedicated Waste Management Agency is appointed to handle all wastes.





No.	Reference No.	Conditions	Compliance
105.	(iv)	Solid inert waste found on construction sites consists of building rubble, demolition material, concrete; bricks, timber, plastic, glass, metals, bitumen etc shall be reused/recycled or managed so as to strictly conform to the Solid Waste Management Rules, 2016, and Construction and Demolition Waste Management Rules, 2016.	Complied. Solid inert waste from construction site was strictly managed as per the Solid Waste Management Rules, 2016 and C&D Waste Management Rules, 2016.
106.	(v)	The project proponents shall implement a management plan duly approved by the State Pollution Control Board and obtain its permissions for the safe handling and disposal of:	Integrated Waste Management Plan has been prepared and same has been approved by GSPCB.
	a.	Trash collected in flight and disposed at the airport including segregation, collection and disposed.	a. Separate arrangement 'Airsides Waste Transfer Station' has been provided to collect the trash from flights. Same is then transferred to Integrated Solid Waste Management Facility.
	b.	Toilet wastes and sewage collected from aircrafts and disposed at the Airport.	b. Night Soil Pit has been provided to collect sewage waste from aircrafts. The same is then pumped to 625 KLD STP for treatment.
	c.	Wastes arising out of maintenance and workshops	c. All waste generated from maintenance and workshop is being collected, segregated, processed and transferred via Integrated Solid Waste Management Facility.
	d.	Wastes arising out of eateries and shops situated inside the airport complex.	d. All waste from eateries and shops is being collected, segregated, processed and transferred via
	e.	Hazardous and other wastes	



No.	Reference No.	Conditions	Compliance
			Integrated Solid Waste Management Facility. e. Hazardous waste is being disposed-off to GSPCB authorized recyclers.
	<b>VII</b>	<b>Green Belt</b>	
107.	(i)	Green belt shall be developed in area as provided in project details, with native tree species in accordance with Forest Department. The greenbelt shall inter-alia cover the entire periphery of the Air Port.	Compliance, as applicable for safe operation of airport, as per DGCA, will be ensured.
108.	(ii)	The plantation species in and around Airport site should be carefully chosen to avoid bird nesting and to improve pollution control and noise control measures. Water intensive and/or invasive species should not be used for landscaping.	Compliance, as applicable for safe operation of airport, as per DGCA, will be ensured.
109.	(iii)	Plantation activity should be taken up under the expert guidance for forest department of Goa, care should be taken that soil erosion measures should be taken up on priority so that the rich mineralized soil of forest is not washed away. The plantation activity should also have an approach of soil conservation where planting is done along the contours avoiding gully formation. As far as possible monoculture plantation should be avoided.	Noted. Compliance is being ensured.
110.	(iv)	The proposed 10 times compensatory plantation need to be monitored by the Government of Goa so that the target of planting 5.5 lakh saplings is achieved in a time bound manner, their survival rate is monitored and mortality is replenished. As major chunk of 2.5 lakh of saplings is proposed to be done by the village level Bio Diversity Committees, it is necessary to ensure that people are largely given native species and/or fruit bearing saplings so that	GoG, through Goa State Biodiversity Board (GSBB) has carried out plantation of 5 lakh tree saplings as a compensatory afforestation plantation. GGIAL has contributed INR 1 Crore for supporting the compensatory plantation.



No.	Reference No.	Conditions	Compliance
		they will be able to derive economic benefits from such fruit crops and also such trees will provide better biological environment to birds.	Currently till 27 <sup>th</sup> March 2023, GSBB has distributed 6,39,278 number of tree saplings. 50,000 trees will be planted inside the airport premises in the form of Miyawaki Plantation.
111.	(v)	Top soil shall be separately stored and used in the development of green belt.	Complied. The excavated top soil was stored at designated locations within the site and the same was utilized for the landscaping and horticulture purposes within the airport premises.
	<b>VIII</b>	<b>Public hearing and Human health issues</b>	
112.	(i)	Solution/management plan regarding redressal of all the concerns raised in the public hearing must be clearly spelt out in the EMP and shall be implemented in letter and spirit. Compliance for each mitigation plan shall be submitted to Regional Office, MoEF&CC along with half yearly compliance report.	Complied in collaboration with GoG.
113.	(ii)	Provision of Electro-mechanical doors for toilets meant for disabled passengers shall be ensured. Children nursing/feeding room shall be located conveniently near arrival and departure gates.	Complied. Electro-mechanical doors and children nursing/feeding rooms are provided in PTB.
114.	(iii)	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Complied.



No.	Reference No.	Conditions	Compliance
115.	(iv)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied. Labor colony, within project site, with all necessary infrastructure and facilities was provided. Labour strength has come done substantially and partly labour colony is decommissioned. Major construction activities have been completed. Scheduled commercial airport operation commenced on 5 <sup>th</sup> January 2023.
116.	(v)	Occupational health surveillance of the workers shall be done on a regular basis.	Being Complied. Occupational health surveillance of the workers is being carried out on regular basis.
<b>Conditions of Hon'ble Supreme Court of India (SCI) Order dated 16/01/2020</b>			
117.	(i)	Ref. No. 47: Adopt a Zero Carbon Programme during construction and operational phases of the Airport.	Compliance is being ensured. In line with our commitments submitted to SCI, infrastructure required for the Zero Carbon Program during operational phase was considered in the design itself and same has been implemented at site. Mapping of GHG emission is initiated from the date of commencement of the scheduled commercial airport operation.



<b>No.</b>	<b>Reference No.</b>	<b>Conditions</b>	<b>Compliance</b>
118.	(ii)	Ref. No. 48 : The National Environmental Engineering Research Institute (NEERI) to be appointed to oversee compliance with the directions cumulatively issued by the Supreme Court.	Complied. NEERI has been appointed. NEERI visited project site and reviewed the EC compliance on 09 <sup>th</sup> November 2022. Further, NEERI reviewed the EC compliances on 31 <sup>st</sup> March 2023.



**ANNEXURE – 1A**

**ENVIRONMENTAL MITIGATION MEASURES AS PER EIA REPORT AND COMPLIANCE STATUS**  
**(CONSTRUCTION PHASE)**  
**AS OF MARCH 2023**

S. No.	Mitigation Measures	Compliance Status
<b>Mitigation Measures for Air Environment during Construction Phase</b>		
01	Ensure preventive maintenance of vehicles and equipment.	All major construction activities (excavation, transportation, filling, grading, levelling, compaction, etc.) have been completed and airport is operational. Sample copy of Field Service Report of vehicle is enclosed as <b>Appendix-A</b> .
02	Ensure vehicles with valid Pollution Under Control certificates are used.	All major construction activities (excavation, transportation, filling, grading, levelling, compaction, etc.) have been completed and airport is operational. Sample copy of PUC is enclosed as <b>Appendix-B</b> .
03	Implement dust control activities such as water sprinkling on unpaved sites.	Being Complied. All major construction activities (excavation, transportation, filling, grading, levelling, compaction, etc.) have been completed and airport is operational. However, dust control measures are being implemented at site on the unpaved areas using water tankers. Sample photographs of implementation of dust control measures are enclosed as <b>Appendix-C</b> .



S. No.	Mitigation Measures	Compliance Status
04	Ensure vertical stacks with height sufficient for dispersion as per CPCB guideline for DG stacks.	Being Complied. All DG sets working at site are provided with sufficient vertical stack height as per the CPCB Guidelines. Photo showing DG with adequate stack height is enclosed in the <b>Appendix-D</b> .
05	Monitor water usage at construction camps to prevent wastage.	Being Complied. All major construction activities have been completed and construction camps are being dismantled. However, water usage at the construction camp is being monitored using water meters.
06	Ensure STP at construction camps/sites and the proposed facilities are properly designed to handle peak waste water load and properly maintained.	Being complied. Temporary STP of 150 KLD and 50 KLD are in operation at the construction workmen camp. The STPs are within airport project site premises and designed to handle peak waste water load and being properly maintained.
07	Ensure supply of temporary/portable toilets for construction staff.	Being Complied. All major construction activities have been completed and labour strength have also reduced. However sufficient number of temporary / portable toilets are provided for construction staff at site. Sample photo of portable toilet facility is enclosed as <b>Appendix-E</b> .



S. No.	Mitigation Measures	Compliance Status
<b>Mitigation Measures for Land Environment during Construction Phase</b>		
08	Avoiding rainy season for construction so as to avoid soil erosion.	Complied during construction phase. All major construction activities have been completed and airport is operational
09	Restricting all construction activities inside project boundary.	Complied during construction phase.
10	Ensure top soil stock pile is not contaminated with any type of spills.	Complied during construction phase. The excavated topsoil was stored at designated locations within the site away from the possible spill areas. Same was utilized for landscaping and horticulture purposes within the airport premises.
11	Ensure any material resulting from clearing and grading should not be deposited on approach roads, streams or ditches, which may hinder the passage and/or natural water drainage.	Complied during construction phase. Materials resulting from clearing and grading at construction site was strictly managed as per the Solid Waste Management Rules, 2016 and Construction & Demolition Waste Management Rules, 2016.
<b>Mitigation Measures for Noise Environment during Construction Phase</b>		
12	Ensure preventive maintenance of equipment and vehicles.	All major construction activities (excavation, transportation, filling, grading, levelling, compaction, etc.) have been completed and the project is under the Operation Phase.
13	Ensure DG sets are provided with acoustic enclosures and exhaust mufflers.	Being complied. All DG sets working at site are provided with acoustic enclosure, exhaust mufflers and sufficient vertical stack height as per the CPCB Guidelines





S. No.	Mitigation Measures	Compliance Status
		Photo showing DG with adequate stack height is enclosed in the <b>Appendix-D</b> .
14	Ensure vehicle movement is avoided at night, and close to sensitive receptors (such as schools, hospitals, place of worships).	Complied during construction phase.
<b>Mitigation Measures for Biological Environment during Construction Phase</b>		
15	Keep a tally of trees cut.	Complied. Records have been maintained.
16	Avoid cutting of trees wherever possible.	Being Complied with.
17	Closing of trenches as soon as possible after pipeline laying, if any.	Being Complied with.
<b>Mitigation Measures for Socio-economic Environment during Construction Phase</b>		
18	Prohibit use of firewood in project camps and making use of cooking gas is mandatory.	Being Complied. Labour colony have been established within site with LPG based cooking system.
19	Regulating speed limit of the vehicles	Being regulated.



**Appendix – A**  
**Preventative Maintenance of Vehicles**

**ACC CONCRETE**

**Transit Mixer Daily Inspection Sheet**

\* Remark  
Mark √ or X in ○  
√ = Good/Proper to use  
X = Defect

Side Mirror L <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/>	Steering Horn <input checked="" type="checkbox"/> Gear <input checked="" type="checkbox"/> Brake <input checked="" type="checkbox"/> Handbrake <input checked="" type="checkbox"/> Seatbelt <input checked="" type="checkbox"/> Door <input checked="" type="checkbox"/> Fire Ext. <input checked="" type="checkbox"/> Brakes <input checked="" type="checkbox"/>	Mixer Drum <input checked="" type="checkbox"/> Engine Motor <input checked="" type="checkbox"/> Engine Guard <input checked="" type="checkbox"/> Water Tank <input checked="" type="checkbox"/>	Ladder <input checked="" type="checkbox"/> Roll Guard <input checked="" type="checkbox"/> Drum Guard <input checked="" type="checkbox"/>
Front Glass <input checked="" type="checkbox"/> Wiper <input checked="" type="checkbox"/>	Engine Lubricant <input checked="" type="checkbox"/> Fuel <input checked="" type="checkbox"/> Brake Oil <input checked="" type="checkbox"/> Side Guard <input checked="" type="checkbox"/>	Rear Wheel R 1/2/3/4 Tire <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Nut <input checked="" type="checkbox"/>	Reverse horn <input checked="" type="checkbox"/> Reverse Signal <input checked="" type="checkbox"/> Rear under guard <input checked="" type="checkbox"/>
Head Light -L <input checked="" type="checkbox"/> -R <input checked="" type="checkbox"/>	Front Wheel L / R -Tire <input checked="" type="checkbox"/> -Nut <input checked="" type="checkbox"/>	Rear Wheel L 1/2/3/4 Tire <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Nut <input checked="" type="checkbox"/>	Rear Signal Light L <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/>
Front Signal light -L <input checked="" type="checkbox"/> -R <input checked="" type="checkbox"/>			

Findings: 1) \_\_\_\_\_ Target Date: 1) \_\_\_\_\_  
2) \_\_\_\_\_  
3) \_\_\_\_\_

Truck No. _____	Inspection Date <u>22/02/23</u>	Inspection By Supervisor <u>[Signature]</u>
Driver Name <u>GAOFL 7130</u>		
License No <u>[Signature]</u>		

**Field Survey Report for Vehicle**



**Appendix - B**  
**PUC Certificate**

Form 59  
(See rules 115 (2))

**Pollution Under Control Certificate**  
Authorised by: Directorate of Transport, Government of Goa

Date: 04/04/2023 Time: 10:22:59 AM Validity upto: 03/04/2024

Certificate SL. No.: GAPUC20231483102 Emission Norms: Bharat Stage IV  
 Registration No.: GA07F7631 Fuel: DIESEL  
 Date of registration: 11/11/2018 PUC Code: PUC/30/2011  
 Month & Year of Manufacturing: 11 / 2018 GSTIN: NA  
 Valid Mobile Number: 90000X0540 Fees: Rs.268/-  
 MIL observation: No

Sr. No	Pollutant	Units	Emission limits	Measured Value
1	2	3	4	5
Idling Emission	Carbon Monoxide (CO)	percentage (%)	N/A	
	Hydrocarbon, (THC/HC)	ppm	N/A	
High idling emissions	CO	percentage (%)	N/A	
	RPM	RPM	N/A	
	Lambda	-	N/A	
Smoke Density	Light absorption coefficient	1/metre	1.62	0.160

This PUC certificate is system generated through the national register of motor vehicles.  
 Note:1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://vahan.gov.in>




**PUC Certificate**



**Appendix – C**

**Dust Control Measures Implemented at Site**



**Water Sprinkling on Unpaved Haul Roads**



6/

**Appendix - D**

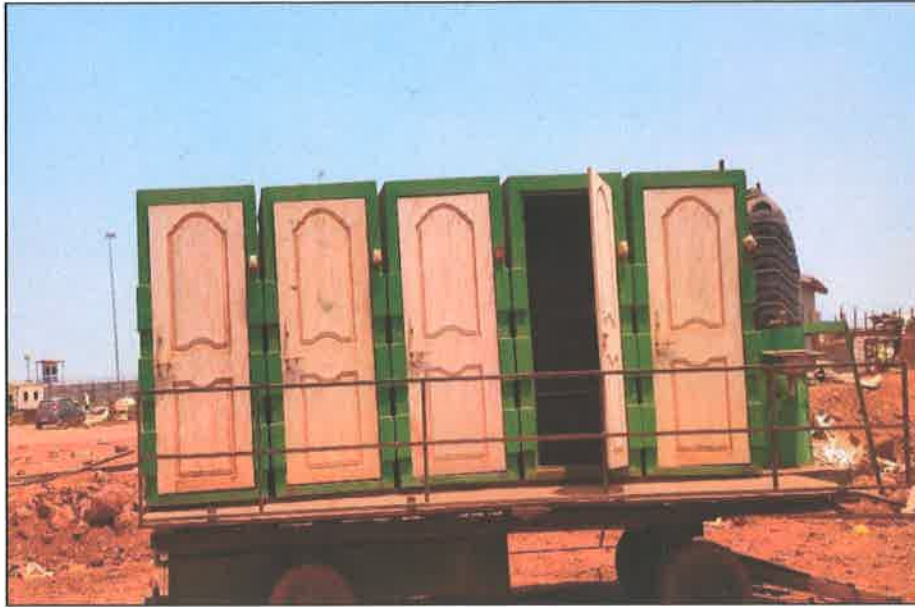
**Diesel Generators with Adequate Stack Height & Acoustic Enclosure**



**DG Set with Sufficient Stack Height**

**Appendix – E**

**Portable Toilet Facilities**



**Portable Toilet at Site**



**ANNEXURE – 1B**

**ENVIRONMENTAL MITIGATION MEASURES AS PER EIA REPORT AND COMPLIANCE STATUS**  
**(OPERATION PHASE)**  
**AS OF MARCH 2023**

S. No.	Mitigation Measures	Compliance Status
<b>Mitigation Measures for Air Environment during Operation Phase</b>		
01	Develop peripheral green belt in the proposed Airport premises.	Noted. Compliance, as applicable for safe operation of airport, will be ensured.
02	Ensure preventive maintenance of vehicles and equipment	Being Complied. Vehicles and equipment in the operation phase are going through periodical preventive maintenance. The sample service / maintenance report is attached in <b>Appendix-A</b> .
<b>Mitigation Measures for Water Environment during Operation Phase</b>		
03	Tracking of raw water consumption through water meters	Being Complied. Raw water is being sourced from Tillari Irrigation Canal under existing MoU/approval from Water Resources Department, GoG. The raw water being pumped is measured through installed water flow meters. Details are provided in <b>Appendix-B</b> .



S. No.	Mitigation Measures	Compliance Status
04	Installation of rainwater harvesting structures	Complied. Rainwater harvesting structures have been installed in airside and landside as per the approval of WRD, GoG. Details are provided in <b>Appendix-C</b> .
05	Explore opportunities for drip irrigation system for greenbelt development	Noted. Compliance to greenbelt development, as applicable for safe operation of airport, will be ensured.
<b>Mitigation Measures for Land Environment during Operation Phase</b>		
06	Develop and maintain dedicated waste storage areas	Being Complied. Integrated Waste Management Facility (IWMMF) has been developed. All bio-degradable and non-biodegradable wastes' collection, transportation, segregation, treatment and disposal activities are being conducted via IWMMF only. Reports are attached in <b>Appendix-D</b> .
07	Ensure hazardous waste storage areas are provided with secondary containment	Noted. Secondary containment system has been provided at hazardous waste storage areas. Reports are attached in <b>Appendix-E</b> .
<b>Mitigation Measures for Noise Environment during Operation Phase</b>		
08	On top of quota system, there is also an absolute limit on the number of flights permitted at the airport	Airport Noise Zone Mapping Study as per GSR-568 (E) dated 18 <sup>th</sup> June 2018 is in progress. Compliance will be made as per the said notification.





S. No.	Mitigation Measures	Compliance Status
09	The noisiest aircraft use 16 points of the quota and they are called QC16s (QC = Quota Count). The next noisiest have eight points - QC8s. As planes get quieter, their points get smaller until the quietest planes have just half a point or are exempt together.	Airport Noise Zone Mapping Study as per GSR-568 (E) dated 18 <sup>th</sup> June 2018 is in progress. Compliance will be ensure as per the said notification.
10	During the night quota period the noisiest types of planes are not permitted to be scheduled. Because there is a limit on the airport's total quota of points for night time flying, this system encourages airlines who want to fly at night to use the quietest aircraft.	Airport Noise Zone Mapping Study as per GSR-568 (E) dated 18 <sup>th</sup> June 2018 is in progress. Compliance will be ensure as per the said notification.
11	Pilots are encouraged not to use reverse thrust between 23:00 and 6:00 except in the interest of safety.	Being Complied. As of now there are no landings between 23:00 and 6:00. However, not to use reverse thrust is communicated to Airlines, taking safety consideration.
<b>Mitigation Measures for Biological Environment during Operation Phase</b>		
12	Proper maintenance of green belt developed	Noted. Compliance for greenbelt development, as applicable for safe operation of airport, will be ensured.
13	Regulating speeding of vehicles on approach road of Airport	Noted. Speed limit boards are displayed.
<b>Mitigation Measures for Socio-economic Environment during Operation Phase</b>		
14	Ensure implementation of disaster management plan	Noted. 'Airport Emergency Response Plan' has been prepared and this is being implementation.



## Appendix-A

### Preventive Maintenance of Vehicle and Equipment

**GMR Goa International Airport Limited**  
 Manohar International Airport, Goa-401517  
 T. No. 2, Disputant

**Job Card**      Date: 06/04/23

Job No.: TMT-0423-02      Make & Type: Hyundai crata (EM-1)

Vehicle No.: GAH-02-R-9926      Dist. Code: GAH-02

Chassis No.: 06102123      Dist. Name: ITF 4184

in. Chassis: ITF 4184      Type of Work: Subcontractor

Name of Driver/Attendant: \_\_\_\_\_      Name of Supervisor: Milendra Kaul Desai

S.no	Date	PM/Defects	Work Done	Sign
1	06/03	Check for TFS Lights	Type pressure sensor is working as we have replaced the sensor & checked the sensor output	<i>[Signature]</i>
2		check for both front tyre wearouts.	Wheel balancing is done & level alignment is done	

SPRINGER *[Signature]*

**Repair Order (Customer Copy)**

**HYUNDAI**

Go Motors Pvt. Ltd. (W462)      TMS NUMBER: 02 0140 0140 0140 0140  
 Go Borealis      TG: 20100000      Fax: 91999999  
 GST No.: 30AAIC2594JC      Email:

Customer Information	Vehicle Information	Service Information
Name: <u>Go Motors Pvt. Ltd.</u>	Reg. No.: <u>GAH02R11</u>	Work Type: <u>Running Repair</u>
Address: <u>Go Motors Pvt. Ltd.</u>	Year: <u>2011</u>	EO Code: <u>040101</u>
Phone No.: <u>02010000</u>	Plate No.: <u>GAH02R11</u>	EO Number: <u>02110101</u>
E-mail: <u>gmr@goemotors.com</u>	Model: <u>New Cars</u>	Printing Date: <u>06/07/2023</u>
Contact No.: <u>02010000</u>	Seat No.: <u>0401</u>	Est. No.: <u>New Car</u>
Business No.: _____	Sale Date: <u>16/04/2023</u>	Special Manager:
GSTIN: <u>30AAIC2594JC</u>	Manager: <u>1234</u>	Est. City: <u>GOA</u>
Unit No.: _____	Color: <u>Polar White</u>	Est. State: <u>GOA</u>

Description	Narrative	Type	Priority Job
Check for TFS Lights	Pressure sensor is working as we have replaced the sensor & checked the sensor output	Running Repair	Priority Job
check for both front tyre wearouts.	Wheel balancing is done & level alignment is done	Running Repair	Priority Job

Terms of payment are cash. Cheque or Digital Payment including. Charge to be made in favor of: Go Motors Pvt. Ltd.

Customer's Details	Vehicle's Details	Inspection Points																																																
Delivery Date: <u>06/04/2023 09:00</u>	Delivery Time: _____	<table border="1"> <tr> <td>Oil Level</td> <td>Yes/No</td> <td>Brake Fluid</td> <td>Yes/No</td> </tr> <tr> <td>Spark Plug</td> <td>Yes/No</td> <td>Water Level</td> <td>Yes/No</td> </tr> <tr> <td>Jack</td> <td>Yes/No</td> <td>Wheel Care</td> <td>Yes/No</td> </tr> <tr> <td>Wash</td> <td>Yes/No</td> <td>Wax</td> <td>Yes/No</td> </tr> <tr> <td>Car Wash</td> <td>Yes/No</td> <td>Body Art</td> <td>Yes/No</td> </tr> <tr> <td>Check</td> <td>Yes/No</td> <td>Frontal CB</td> <td>Yes/No</td> </tr> <tr> <td>Steer</td> <td>Yes/No</td> <td>Frontal PD</td> <td>Yes/No</td> </tr> <tr> <td>CD Filter</td> <td>Yes/No</td> <td>Lenses</td> <td>Yes/No</td> </tr> <tr> <td>Shock Abs</td> <td>Yes/No</td> <td>Oil Change</td> <td>Yes/No</td> </tr> <tr> <td>Engine Light</td> <td>Yes/No</td> <td>Antenna</td> <td>Yes/No</td> </tr> <tr> <td>Interior Wash</td> <td>Yes/No</td> <td>Body Scrub</td> <td>Yes/No</td> </tr> <tr> <td>Tire Wash</td> <td>Yes/No</td> <td>Tire Seal</td> <td>Yes/No</td> </tr> </table>	Oil Level	Yes/No	Brake Fluid	Yes/No	Spark Plug	Yes/No	Water Level	Yes/No	Jack	Yes/No	Wheel Care	Yes/No	Wash	Yes/No	Wax	Yes/No	Car Wash	Yes/No	Body Art	Yes/No	Check	Yes/No	Frontal CB	Yes/No	Steer	Yes/No	Frontal PD	Yes/No	CD Filter	Yes/No	Lenses	Yes/No	Shock Abs	Yes/No	Oil Change	Yes/No	Engine Light	Yes/No	Antenna	Yes/No	Interior Wash	Yes/No	Body Scrub	Yes/No	Tire Wash	Yes/No	Tire Seal	Yes/No
Oil Level	Yes/No	Brake Fluid	Yes/No																																															
Spark Plug	Yes/No	Water Level	Yes/No																																															
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Check	Yes/No	Frontal CB	Yes/No																																															
Steer	Yes/No	Frontal PD	Yes/No																																															
CD Filter	Yes/No	Lenses	Yes/No																																															
Shock Abs	Yes/No	Oil Change	Yes/No																																															
Engine Light	Yes/No	Antenna	Yes/No																																															
Interior Wash	Yes/No	Body Scrub	Yes/No																																															
Tire Wash	Yes/No	Tire Seal	Yes/No																																															

Remarks and action for customer: if any

Delivered By: \_\_\_\_\_      Final Inspection: OK/NOT OK

Name: \_\_\_\_\_      Date: \_\_\_\_\_      Name: \_\_\_\_\_      Date: \_\_\_\_\_

Signature: \_\_\_\_\_      Signature: \_\_\_\_\_

Last Valid: 2023-04-01      1400      Go, Aravalli      98888, 82810001      20713

Print Car Number

Sample of Job Card and Repair Order for Vehicle



UPS Do More... Business Services		Runway sweeper - Periodic Schedule Chart (WEEKLY)		GAR Goa International Airport	
MODEL NO: <u>Pulsar Sweeper</u>		DATE: <u>07 May 2023</u>		START TIME: <u>11:20 AM</u>	
DIESEL LEVEL: <u>From 80% Full</u>				END TIME: <u>12:27 PM</u>	
VEHICLE MRS: <u>626-5 326-2B</u>				TECHNICIAN NAME: <u>WASEEM</u>	
VEHICLE KM: <u>4951</u>					
SR. NO	CHECK POINTS / WORK DESCRIPTION	OBSERVATIONS	ACTION	REMARKS IF ANY:	
1	Clean Air Filter element (outer)	Need to clean the Air filter element	Air filter element has been cleaned		
2	Check Resonation Nuts	checked foundation bolts			
3	Check air cleaner Flanges Mountings bolt tighten if found loose	checked and clean all mountings bolts found loose	checked and flush mounting bolts tighten		
4	Check Air hoses clamps	Air hoses clamps found OK			
5	Check cleanliness of radiator	radiator is clean			
6	Check water hose	checked water hose	found OK		
7	Check fuel pipe connections	checked fuel pipe connections	fuel connection found OK		
8	Check exhaust piping connections	checked exhaust piping connection	exhaust pipe connection found OK		
9	Check engine to drive unit coupling	checked engine to drive unit coupling found OK			
10	Check engine cover and gap between fan & rowl	checked engine cover and gap between fan & rowl	found OK		
11	Check leakage's from fuel piping & injector high pressure lines	checked there is 5 pipe in fuel return line from joints	Need to replace fuel return pipe		
12	Check leakage from exhaust manifold	checked for exhaust manifold leakage	No leakage found		
13	Check engine oil leakage	checked for engine oil leakage	No leakage of engine oil found		
14	Check mounting bolts of pumps and motors	checked mounting bolts of pumps and motors	found OK		
15	Greasing of all hinges	Greasing of all hinges Done			
16	Greasing of plunger block	Greasing of plunger block Done			
17	Clean oil cooler	checked and clean oil cooler found OK			
18	Check battery terminals	checked battery terminals found OK			
19	Check hydraulic valves operation	check hydraulic valves operation	operation of valves		
20	Check condition of all brushes	left side and center wear weak condition	need to replace the brushes		
Technician Signature: <u>Waseem</u>		In Charge Signature: <u>As per</u>	Counter Signed by: <u>As per</u> (Name and Signature)		

**Periodical Checklist for Vehicle Maintenance**



### Appendix-B

### Raw Water Consumption

**GOVERNMENT OF GOA,  
OFFICE OF THE ASSISTANT ENGINEER,  
SDIV, WATER RESOURCES DEPARTMENT,  
WORKS DIVISION VII, DHARGAL,  
PERNEM GOA**

**RAW WATER BILL FOR NAGZAR LI SCHEME TO PUMP RAW WATER TO MOPA INTERNATIONAL AIRPORT**

<b>CLIENT</b>	GMR, Porvorim Goa	<b>Date of commissioning</b>	24.12.2020
<b>No of pumps</b>	4 nos (2 standby)	<b>Type of meter</b>	Flow meter
<b>Capacity of pumps</b>	115 KW each	<b>Bill no</b>	4
<b>Discharge of pumps</b>	100 lps (50 lps each pump)	<b>Bill date</b>	31-12-2022
<b>Reading for Month</b>	1.10.2022 to 31.12.2022	<b>Payment due date</b>	31-04-2023
<b>Serial no. of Flow meter</b>	120407158	<b>Previous Reading Billed in Cumecs.. (A)</b>	592953.593
		<b>Current Reading in cumecs.. (B)</b>	720994.557

S no	Month For which bill is raised	Billed discharge in cumecs	Rate per cu m	Total bill
1	31.08.2022 to 30.9.2022	128040.964	20.00	2560819.28
			Total	2560819.28
			Say	₹ 25,60,819.00

(Rupees Twenty Five Lakh Sixty Thousand Eight hundred Nineteen only)

*(Signature)*  
(Assistant Engineer)

### Raw Water Consumption through Water Meter (Oct-2022 to Dec-2022)

**GOVERNMENT OF GOA,  
OFFICE OF THE ASSISTANT ENGINEER,  
SDIV, WATER RESOURCES DEPARTMENT,  
WORKS DIVISION VII, DHARGAL,  
PERNEM GOA**

**RAW WATER BILL FOR NAGZAR LI SCHEME TO PUMP RAW WATER TO MOPA INTERNATIONAL AIRPORT**

<b>CLIENT</b>	GMR, Porvorim Goa	<b>Date of commissioning</b>	24.12.2020
<b>No of pumps</b>	4 nos (2 standby)	<b>Type of meter</b>	Flow meter
<b>Capacity of pumps</b>	115 KW each	<b>Bill no</b>	4
<b>Discharge of pumps</b>	100 lps (50 lps each pump)	<b>Bill date</b>	01.08.2023
<b>Reading for Month</b>	01.01.2023 to 01.03.2023	<b>Payment due date</b>	31-04-2023
<b>Serial no. of Flow meter</b>	120407158	<b>Previous Reading Billed in Cumecs.. (A)</b>	720994.557
		<b>Current Reading in cumecs.. (B)</b>	818324.59

S no	Month For which bill is raised	Billed discharge in cumecs	Rate per cu m	Total bill
1	31.08.2022 to 30.9.2022	97330.083	20.00	1946600.66
			Total	1946600.66
			Say	₹ 19,46,601.00

(Rupees Nineteen Lakh Forty Six Thousand Six Hundred One only)

*(Signature)*  
(Assistant Engineer)

### Raw Water Consumption through Water Meter (Jan-2023 to Mar-2023)



**Appendix-C**  
**Rainwater Harvesting Structures**

In-line Rainwater Harvesting pits have been provided as per the Water Resource Department (WRD), GoG, approved drainage plan and drawings. Water holding pits, baffle walls & bore wells have been provided in landside as well as airside drains with proper filtration system.



**In-line Rainwater Harvesting Pits**



**Appendix-D**  
**Integrated Solid Waste Management Facility**

Integrated Waste Management Facility has been provided within the airport site. All bio-degradable and non-biodegradable waste are being collected, transported, segregated, treated and disposed via this facility only.



**Waste Management Activities**



**Appendix-E**  
**Secondary Containment at Hazardous Waste Storage Area**



**Provision of Secondary Containment at Hazardous Waste Storage Area**

**ANNEXURE – 2**

**ENVIRONMENTAL QUALITY MONITORING REPORTS FOR THE PERIOD OF  
OCTOBER 2022 TO MARCH 2023**

**Sadekar Enviro Engineers Pvt. Ltd.**

B-306/307, Plot No. 61, Patol Estate, Reis Magos, Vasin, Alka, Old Bolim Road, Bardez, Porvora Panaj-Goa-403 101  
Goa State, India ☎ (0832) 2411322 / 2411325 • E-mail : starlabgoa@rediffmail.com

Lab accredited by MoEF & CC Valid up to 03.11.2023 ★ Certified by ISO 9001:2015 & ISO 45001 : 2018

**AMBIENT AIR QUALITY MONITORING REPORT**

Report Date	03/11/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited
Address of Client	Mopa, Goa
Sampling Plan	SEEPL/LD/FMT- 54 [ Sampling Procedure No. ] SEEPL/QSP-10
Sample Collected By	SEEPL Representative
Month of Sampling	October 2022

**AMBIENT AIR LOCATION**

Location of ambient air station	Mopa Boundary (Goa State) (G-A1)				
Average Ambient Temperature (°C)	30.2	Average Humidity (%)	67	Latitude	N 15°45'51.1"
Average Wind Speed (km/hr)	1.8	Average Wind direction (Deg)	238	Longitude	E 73°56'32.4"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0068	28.49	5.24	<3.00	<6.00	0.03	34.29
2	06/10/2022	SEE/AR/10/2022/0161	52.83	12.27	5.08	<6.00	0.05	66.26
3	10/10/2022	SEE/AR/10/2022/0213	32.14	10.60	<3.00	<6.00	0.02	43.44
4	13/10/2022	SEE/AR/10/2022/0286	42.88	14.26	3.94	<6.00	0.06	61.62
5	17/10/2022	SEE/AR/10/2022/0396	23.11	8.94	<3.00	<6.00	0.03	32.73
6	20/10/2022	SEE/AR/10/2022/0461	35.57	9.65	<3.00	<6.00	0.05	46.80
7	25/10/2022	SEE/AR/10/2022/0489	28.16	8.69	<3.00	<6.00	0.02	37.72
8	28/10/2022	SEE/AR/10/2022/0535	56.59	19.75	4.40	<6.00	0.07	82.69
9	31/10/2022	SEE/AR/10/2022/0595	67.92	12.89	5.33	6.49	0.09	88.92
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	
<b>Units</b>			<b>µg/ m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO.: SEE/LD/SQP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182( Part 10)	IS 5182( Part IV)

\*NATIONAL AMBIENT AIR STANDARDS (2009)

Note : Test results related only to the sample tested.

- : Test results relate only to the condition prevailing at the time of sampling
- : This certificate may not be reproduced in part, without the permission of this laboratory.
- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.
- : Test methods of analyzed parameters are back side of analysis report.

1)Aditya Naik  
2)Dipali Sawant  
Analyzed by

Varsha Pole  
Reviewed by



Arundeeep Sawant  
Authorized Signatory



Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2881-DTH-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 991-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



# Sadekar Enviro Engineers Pvt. Ltd.

B-300307, Plot No. 61, Patel Estate, Bala Magas, Vasem, Aha, Old Belim Road, Bredas, Porvorim, Panaji-Goa-403 101  
 Goa State, India ☎ (0832) 2411322 / 2411323 • E-mail: sate@seeepl.com  
 Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

SEEPL  
 SEEPL

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Shemecheadvan Boundary(Goa State) (G-A2)				
Average Ambient Temperature (°C)	30.6	Average Humidity (%)	65	Latitude	N 15°42'06.1"
Average Wind Speed (km/hr)	1.2	Average Wind direction (Deg)	228	Longitude	E 73°49'21.5"
Instruments Used	FPS(APM-550), RDS(APM-460) &GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0069	21.87	9.65	<3.00	<6.00	0.02	32.32
2	06/10/2022	SEE/AR/10/2022/0162	25.88	7.15	<3.00	<6.00	0.03	33.78
3	10/10/2022	SEE/AR/10/2022/0214	19.76	6.11	<3.00	<6.00	0.02	26.39
4	13/10/2022	SEE/AR/10/2022/0287	22.34	7.94	<3.00	<6.00	0.03	31.24
5	17/10/2022	SEE/AR/10/2022/0397	21.06	6.86	<3.00	<6.00	0.02	28.45
6	20/10/2022	SEE/AR/10/2022/0462	26.87	8.73	<3.00	<6.00	0.03	36.13
7	25/10/2022	SEE/AR/10/2022/0490	22.85	7.73	<3.00	<6.00	0.02	31.34
8	28/10/2022	SEE/AR/10/2022/0536	51.90	12.52	3.06	<6.00	0.06	70.37
9	31/10/2022	SEE/AR/10/2022/0596	62.58	14.10	4.20	<6.00	0.05	82.14
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182( Part 10)	IS 5182( Part IV)

\*NATIONAL AMBIENT AIR STANDARDS (2009)

Note : Test results related only to the sample tested.

- : Test results relate only to the condition prevailing at the time of sampling
- : This certificate may not be reproduced in part, without the permission of this laboratory.
- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.
- : Test methods of analyzed parameters are back side of analysis report.

1)Aditya Naik *Naik*  
 2)Dipali Sawant *Sawant*  
 Analyzed by

*Varsha Pole*  
 Varsha Pole  
 Reviewed by



*Ananddeep Sawant*  
 Ananddeep Sawant  
 Authorized Signatory

HEAD OFF. & LAB : Plot No. A-55, Road No. 18, Khan Nagar Road, M/D C. Wagle Industrial Area, Thane - 400 604 Maharashtra State, India  
 ☎ (01-20) 2560 1921 / 2560 3322 / 2560 3323 / 2560 3324 • E-mail : jps@sadekarenviro.com / sadekar5@gmail.com  
 Governed By Ministry of Environment, Forest & Climate Change, Govt Of India. S. D. 857 (E).

BRANCH OFF. : 210, Durgam Towers, EDC Palis, Panaji-403 001, Goa State, India ☎ (0832) 2437046 / 2437154  
 E-mail : sadekarenviro@rediffmail.com • Website : www.sadekarenviro.com • CIN - U46200MH1998PTC-11857

Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2871-DTG-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 992-DT1-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



# Sadekar Enviro Engineers Pvt. Ltd.

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ISO 9001  
ISO 14001

Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 14001:2015

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Nagzar(Goa State) (G-A3)					
Average Ambient Temperature (°C)	31.3	Average Humidity (%)	68	Latitude	N 15°45'37.3"	
Average Wind Speed (km/hr)	1.9	Average Wind direction (Deg)	232	Longitude	E 73°53'14.22"	
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)					

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0070	18.66	8.73	<3.00	<6.00	0.03	28.02
2	06/10/2022	SEE/AR/10/2022/0163	13.72	5.49	<3.00	<6.00	0.02	19.91
3	10/10/2022	SEE/AR/10/2022/0215	28.94	5.36	<3.00	<6.00	0.03	35.26
4	13/10/2022	SEE/AR/10/2022/0288	69.45	11.39	6.05	12.58	0.07	83.92
5	17/10/2022	SEE/AR/10/2022/0398	17.15	5.20	<3.00	<6.00	0.02	22.80
6	20/10/2022	SEE/AR/10/2022/0463	24.60	7.03	<3.00	<6.00	0.03	31.91
7	25/10/2022	SEE/AR/10/2022/0491	31.80	7.40	<3.00	<6.00	0.02	40.14
8	28/10/2022	SEE/AR/10/2022/0537	36.99	12.48	6.23	<6.00	0.05	52.35
9	31/10/2022	SEE/AR/10/2022/0597	80.34	33.77	3.30	6.64	0.10	138.66
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182( Part 10)	IS 5182( Part IV)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

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 : Test methods of analyzed parameters are back side of analysis report.

1) Aditya Naik  
2) Dipali Sawant  
Analyzed by

*Naik*  
*Sawant*

*Vehopdekar*  
Varsha Pole  
Reviewed by



*Arundev*  
Arundev Sawant  
Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1719-DTI-2012)	LES-CCL/FF/MF/SC/1716	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 1114 L 21)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEPL/2021-22/FLOW/3683	07/01/2022	07/01/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



# Sadekar Enviro Engineers Pvt. Ltd.

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SPAN-118715  
DWA-1187

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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Purva Casarvarnem (Goa State)(G-A4)			
Average Ambient Temperature (°C)	30.4	Average Humidity (%)	68	
Average Wind Speed (km/hr)	1.7	Average Wind direction (Deg)	229	
Instruments Used	FPS(APM-550), RDS(APM-460) &GPS (APM - 411)			
Latitude	N 15°41'41.9"		Longitude	E 73°50'16.6"

### PARAMETERS

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0071	46.95	17.34	<3.00	<6.00	0.05	65.53
2	06/10/2022	SEE/AR/10/2022/0164	40.04	11.39	3.97	<6.00	0.07	52.32
3	10/10/2022	SEE/AR/10/2022/0216	22.34	7.44	<3.00	<6.00	0.02	30.44
4	13/10/2022	SEE/AR/10/2022/0289	19.93	6.86	<3.00	<6.00	0.03	26.91
5	17/10/2022	SEE/AR/10/2022/0399	23.12	7.49	<3.00	<6.00	0.02	30.65
6	20/10/2022	SEE/AR/10/2022/0464	25.83	6.11	<3.00	<6.00	0.03	32.44
7	25/10/2022	SEE/AR/10/2022/0492	18.28	8.86	<3.00	<6.00	0.02	27.52
8	28/10/2022	SEE/AR/10/2022/0538	30.62	7.42	<3.00	<6.00	0.03	39.11
9	31/10/2022	SEE/AR/10/2022/0598	37.59	19.01	4.83	<6.00	0.05	59.23
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO:- SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182( Part 10)	IS 5182( Part IV)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

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 : Test methods of analyzed parameters are back side of analysis report.

1) Aditya Naik  
2) Dipali Sawant  
Analyzed by

Varsha Pole  
Reviewed by



Ajandeep Sawant  
Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis  
Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2893-OTJ-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 983-CYI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Khajne Amere Porscodem (Goa State) (G-A5)				
Average Ambient Temperature (°C)	31.1	Average Humidity (%)	67	Latitude	N 15°40'38.0"
Average Wind Speed (km/hr)	2.1	Average Wind direction (Deg)	251	Longitude	E 73°46'21.2"
Instruments Used	FPS(APM-550), RDS(APM-460) &GPS (APM - 411)				

### PARAMETERS

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0072	19.89	5.61	<3.00	<6.00	0.03	25.71
2	06/10/2022	SEE/AR/10/2022/0165	18.69	8.73	<3.00	<6.00	0.02	29.43
3	10/10/2022	SEE/AR/10/2022/0217	23.77	7.73	<3.00	<6.00	0.02	31.28
4	13/10/2022	SEE/AR/10/2022/0290	13.54	6.74	<3.00	<6.00	0.03	20.57
5	17/10/2022	SEE/AR/10/2022/0400	21.06	7.36	<3.00	<6.00	0.03	28.98
6	20/10/2022	SEE/AR/10/2022/0465	26.78	9.36	<3.00	<6.00	0.02	37.02
7	25/10/2022	SEE/AR/10/2022/0493	19.55	6.86	<3.00	<6.00	0.03	27.71
8	28/10/2022	SEE/AR/10/2022/0539	28.16	10.74	<3.00	<6.00	0.03	40.08
9	31/10/2022	SEE/AR/10/2022/0599	36.26	12.26	<3.00	<6.00	0.05	50.17
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>
<b>Units</b>			µg/ m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182( Part 10)	IS 5182( Part IV)

**\*NATIONAL AMBIENT AIR STANDARDS (2009)**  
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 : Test methods of analyzed parameters are back side of analysis report.

1) Aditya Naik  
 2) Dipali Sawant  
 Analyzed by

Varsha Pole  
 Reviewed by



Authorized Signatory



Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2892-DTJ-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 1119 A 22)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEPL/2021-22/FLOW/3682	07/01/2022	07/01/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



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SWA-148765

30m-016

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Rajvil Wada Torxem (Goa State)(G-A6)				
Average Ambient Temperature (°C)	30.2	Average Humidity (%)	66	Latitude	N 15°48'40.0"
Average Wind Speed (km/hr)	1.4	Average Wind direction (Deg)	230	Longitude	E 73°52'50.2"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0073	13.83	8.61	<3.00	<6.00	0.02	23.14
2	06/10/2022	SEE/AR/10/2022/0166	16.80	5.24	<3.00	<6.00	0.03	22.08
3	10/10/2022	SEE/AR/10/2022/0218	19.32	6.45	<3.00	<6.00	0.03	26.07
4	13/10/2022	SEE/AR/10/2022/0291	23.35	7.69	<3.00	<6.00	0.05	31.17
5	17/10/2022	SEE/AR/10/2022/0401	24.54	6.82	<3.00	<6.00	0.02	31.94
6	20/10/2022	SEE/AR/10/2022/0466	30.99	10.52	<3.00	<6.00	0.03	41.86
7	25/10/2022	SEE/AR/10/2022/0494	26.35	5.45	<3.00	<6.00	0.03	32.56
8	28/10/2022	SEE/AR/10/2022/0540	42.79	19.79	4.93	<6.00	0.05	63.60
9	31/10/2022	SEE/AR/10/2022/0600	49.04	17.88	5.06	7.37	0.06	68.94
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	-
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182( Part 10)	IS 5182( Part IV)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

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- : Test methods of analyzed parameters are back side of analysis report.

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2) Dipali Sawant *Dipali Sawant*  
Analyzed by

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Varsha Pole  
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*Anandheep Sawant*  
Anandheep Sawant  
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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2891-DTJ-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 298-DTJ-2014)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	EI/FF/3539	18/02/2022	17/02/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



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ISO 9001  
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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Satarda(Maharashtra State)(M-A1)				
Average Ambient Temperature (°C)	31.1	Average Humidity (%)	68	Latitude	N15°43'01.3"
Average Wind Speed (km/hr)	2.1	Average Wind direction (Deg)	247	Longitude	E 73°46'00.2"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0074	21.31	8.48	<3.00	<6.00	0.03	29.89
2	06/10/2022	SEE/AR/10/2022/0167	19.17	9.73	<3.00	<6.00	0.02	29.41
3	10/10/2022	SEE/AR/10/2022/0219	15.82	5.86	<3.00	<6.00	0.02	21.85
4	13/10/2022	SEE/AR/10/2022/0292	14.99	6.24	<3.00	<6.00	0.03	21.43
5	17/10/2022	SEE/AR/10/2022/0402	27.15	6.86	<3.00	<6.00	0.02	34.44
6	20/10/2022	SEE/AR/10/2022/0467	21.15	9.11	<3.00	<6.00	0.03	31.30
7	25/10/2022	SEE/AR/10/2022/0495	26.13	5.99	<3.00	<6.00	0.02	33.73
8	28/10/2022	SEE/AR/10/2022/0541	22.68	8.24	<3.00	<6.00	0.03	31.16
9	31/10/2022	SEE/AR/10/2022/0601	34.64	13.47	<3.00	<6.00	0.06	59.81
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	-
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182( Part 10)	IS 5182( Part IV)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

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: Test results relate only to the condition prevailing at the time of sampling

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: Test methods of analyzed parameters are back side of analysis report.

1)Aditya Naik  
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Analyzed by

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Calibration details of Equipment used for Sampling & Analysis

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1461-DTD-2009)	LES-CCL/FF/MF/SC/1715	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 980-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



# Sadekar Enviro Engineers Pvt. Ltd.

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 Lab accredited by MoEF & CG Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

SWA/11/19/1  
 03/11/22

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Dingna(Maharashtra State)(M-A2)						
Average Ambient Temperature (°C)	31.4	Average Humidity (%)	65	Latitude	N 15°46'12.3"		
Average Wind Speed (km/hr)	1.2	Average Wind direction (Deg)	226	Longitude	E 73°49'20.5"		
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)						

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0075	18.76	7.73	<3.00	<6.00	0.02	26.96
2	06/10/2022	SEE/AR/10/2022/0168	20.08	6.18	<3.00	<6.00	0.03	27.24
3	10/10/2022	SEE/AR/10/2022/0220	17.29	5.24	<3.00	<6.00	0.02	22.91
4	13/10/2022	SEE/AR/10/2022/0293	25.93	5.66	<3.00	<6.00	0.03	32.09
5	17/10/2022	SEE/AR/10/2022/0403	15.30	5.16	<3.00	<6.00	0.03	21.30
6	20/10/2022	SEE/AR/10/2022/0468	17.47	6.24	<3.00	<6.00	0.02	24.82
7	25/10/2022	SEE/AR/10/2022/0496	14.61	5.82	<3.00	<6.00	0.02	20.97
8	28/10/2022	SEE/AR/10/2022/0542	33.37	13.74	<3.00	<6.00	0.06	48.23
9	31/10/2022	SEE/AR/10/2022/0602	42.85	11.14	5.05	6.02	0.05	60.30
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182(Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 05)	IS 5182(Part 10)	IS 5182(Part IV)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling  
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 : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.  
 : Test methods of analyzed parameters are back side of analysis report.

1)Aditya Naik  
 2)Dipali Sawant  
 Analyzed by

*Aditya Naik*  
*Dipali Sawant*

*Varsha Pole*  
 Varsha Pole  
 Reviewed by



*Anandeeep Sawant*  
 Anandeeep Sawant  
 Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 138 L 21)	ECL/SEEPL/202122/FLOW/3668	07/01/2022	07/01/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 01-DTK-2011)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 LC	EI/FF/3543	18/02/2022	17/02/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



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SWA-UNEP  
STAR-LIFE

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	October 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Netarde(Maharashtra State)(M-A3)				
Average Ambient Temperature (°C)	30.9	Average Humidity (%)	63	Latitude	N 15°46'11.7"
Average Wind Speed (km/hr)	1.8	Average Wind direction (Deg)	245	Longitude	E 73°50'48.0"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS					
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM
1	03/10/2022	SEE/AR/10/2022/0076	19.55	7.53	<3.00	<6.00	0.02	27.72
2	06/10/2022	SEE/AR/10/2022/0169	22.86	9.20	<3.00	<6.00	0.03	30.16
3	10/10/2022	SEE/AR/10/2022/0221	16.13	6.32	<3.00	<6.00	0.02	22.52
4	13/10/2022	SEE/AR/10/2022/0294	13.03	5.90	<3.00	<6.00	0.03	19.01
5	17/10/2022	SEE/AR/10/2022/0404	17.53	5.03	<3.00	<6.00	0.02	23.33
6	20/10/2022	SEE/AR/10/2022/0469	18.15	8.23	<3.00	<6.00	0.03	27.01
7	25/10/2022	SEE/AR/10/2022/0497	20.08	5.36	<3.00	<6.00	0.03	26.15
8	28/10/2022	SEE/AR/10/2022/0543	32.31	9.81	<3.00	<6.00	0.02	43.62
9	31/10/2022	SEE/AR/10/2022/0603	36.66	9.56	<3.00	<6.00	0.06	46.76
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>
<b>Units</b>			<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>mg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note :** Test results related only to the sample tested.

- : Test results relate only to the condition prevailing at the time of sampling
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- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.
- : Test methods of analyzed parameters are back side of analysis report.

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2) Dipali Sawant  
Analyzed by

V. Chogadekar  
Varsha Pole  
Reviewed by



Arundeep Sawant  
Authorized Signatory



Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1901-DTJ-2014)	LES-CCL/FF/MF/SC/1718	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 977-DT1-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022



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ISO 9001:2015  
Sadekar

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## AIR QUALITY MONITORING REPORT

Report No.	SEE/AR/10/2022/0222	Date of Issue	14/10/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of Lab			
Date of Sampling	10/10/2022	Temperature(°C)	27.9	Humidity (%)	64
Analysis Started On	13/10/2022	Analysis Completed On		14/10/2022	

Location of ambient air station	Mopa Boundary (Goa State)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling.  
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 : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Susmita Kapdoskar  
Analyzed by

Varsha Pole  
Reviewed by



Ananddeep Sawant  
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Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	101-DTD-2014	EI/FF/3523	18/02/2022	17/02/2023



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## AIR QUALITY MONITORING REPORT

Report No.	SEE/AR/10/2022/0223	Date of Issue	14/10/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of Lab			
Date of Sampling	10/10/2022	Temperature(°C)	27.9	Humidity (%)	64
Analysis Started On	13/10/2022	Analysis Completed On		14/10/2022	

Location of ambient air station	HSD Bunk (Inside Mopa Airport Premises)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
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Susmita Kapdoskar  
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Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	24-DTD-2016	EI/FF/3524	18/02/2022	17/02/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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AIR QUALITY MONITORING REPORT			
Report No.	SEE/AR/10/2022/0224	Date of Issue	14/10/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sample Collected By	SEEPL Representative	Environmental condition of Lab	
Date of Sampling	10/10/2022	Temperature(°C)	27.9
		Humidity (%)	64
Analysis Started On	13/10/2022	Analysis Completed On	14/10/2022

Location of ambient air station	Shemeheadvan Boundary (Goa State)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling.  
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Susmita Kapdoskar  
 Analyzed by

Varsha Pole  
 Reviewed by



Ananddeep Sawant  
 Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	101-DTD-2014	EI/FF/3523	18/02/2022	17/02/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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ISO 9001:2015  
ISO 45001

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## WORKPLACE NOISE LEVEL MONITORING REPORT

Report No.	SEE/AR/10/2022/0295-0300	Date of Issue	15/10/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Date of Sampling	13/10/2022		

### Chemical Testing – Atmospheric Pollution

Sr. No.	Report No.	Sampling Location (From 1.0 meter off)	Noise in dB (A)
			Day Time
01.	SEE/AR/10/2022/0295	AMPL Batching Plant	72.4
02.	SEE/AR/10/2022/0296	KMV HMP & WMM Plant	79.2
03.	SEE/AR/10/2022/0297	Ultratech Batching Plant	70.1
04.	SEE/AR/10/2022/0298	PTB L1- Immigration Area	82.9
05.	SEE/AR/10/2022/0299	PTB Forecourt Area	79.4
06.	SEE/AR/10/2022/0300	MRSS Building	62.2

- Occupational Exposure Limit for noise as per OSHA is 90dB (A) TWA (8hrly).
- \*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A "decibel" is a unit in which noise is measured.
- "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
- Leq: It is the energy mean of the noise level over a specified period.

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling  
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 : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Sangvan Gawas  
Monitored by

Varsha Pole  
Reviewed by



Anandeeep Sawant  
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Calibration Details of Equipment used for Sampling

Noise Level Meter No.3 (HE:002221H)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	LES-CCL/MECH/SLM/564	23/07/2022	22/07/2023



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## NOISE LEVEL MONITORING REPORT

Report No.	SEE/AR/10/2022/0470-0471, 0388-0389, 0386, 0346, 0385, 0454, 0455, 0347, 0426-0427	Date of Issue	27/10/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sample Collected By	SEEPL Representative		
Sampling Plan	SEEPL/D/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10

### Chemical Testing - Atmospheric Pollution

Sr. No	Date of Monitoring	Report No.	Station ID	Zone	Sampling Location	Day Time Noise in dB(A)			Night Time Noise in dB(A)		
						Lmin	Lmax	Leq	Lmin	Lmax	Leq
1.	20/10/2022	SEE/AR/10/2022/0470	G-N1	I	Mopa Boundary	32.2	74.6	61.6	30.1	62.9	49.5
2.	20/10/2022	SEE/AR/10/2022/0471	G-N2	I	Shamecheadvan Boundary	35.8	71.8	55.7	30.1	67.3	52.4
3.	16/10/2022	SEE/AR/10/2022/0388	G-N3	C	Nagzar	31.9	77.9	57.8	30.0	65.1	49.4
4.	16/10/2022	SEE/AR/10/2022/0389	G-N4	R	Purva Casarvament	30.0	71.4	49.9	30.0	61.3	39.3
5.	15/10/2022	SEE/AR/10/2022/0386	G-N5	R	Chandal	30.0	66.0	49.8	30.0	66.3	38.1
6.	14/10/2022	SEE/AR/10/2022/0346	G-N6	R	Khajne Amere Porscodem	30.0	59.9	49.5	30.0	52.3	39.7
7.	15/10/2022	SEE/AR/10/2022/0385	G-N7	R	Warkhand	38.8	66.5	48.4	30.1	61.4	38.0
8.	19/10/2022	SEE/AR/10/2022/0454	G-N8	C	Rajvil Wada Torxem	37.8	70.5	57.7	30.0	70.7	49.4
9.	19/10/2022	SEE/AR/10/2022/0455	G-N9	C	Village Panchayat Tamboxem -Mopa- Ugvem	39.0	66.3	55.8	30.0	62.0	45.9
10.	14/10/2022	SEE/AR/10/2022/0347	M-N1	R	Salarda	30.0	66.6	49.4	30.0	60.8	38.3
11.	18/10/2022	SEE/AR/10/2022/0426	M-N2	R	Dingna	33.0	62.1	48.9	30.0	64.0	39.1
12.	18/10/2022	SEE/AR/10/2022/0427	M-N3	R	Netarde	30.0	69.9	49.5	30.0	58.1	39.8

I - Industrial Zone, C - Commercial Zone, R - Residential Zone

> Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows:

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial Area ( I )	75	70
(B)	Commercial Area ( C )	65	55
(C)	Residential Area ( R )	55	45
(D)	Silence Zone ( S )	50	40

> Day time is reckoned in between 6.00am to 10.00pm and night time is reckoned in between 10.00pm to 6.00am.

> \*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A 'decibel' is a unit in which noise is measured.

> \*A, in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

> Leq: It is the energy mean of the noise level over a specified period

**Note** : Monitoring has been done as per GPCB protocol for Ambient Level Noise Monitoring 2015.

: Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

: This certificate may not be reproduced in part, without the permission of this laboratory.

: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Sahyvan Gawas  
Monitored by

Vandana Pole  
Reviewed by

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Authorized Signatory

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Calibration Details of Equipment used for Sampling

Noise Level Meter No.1(A0913-1393)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	LES-CCL/MECH/SLM/563	23/07/2022	22/07/2023

Noise Level Meter No.2 (A0114-1408)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	LES-CCL/MECH/SLM/561	23/07/2022	22/07/2023



# Sadekar Enviro Engineers Pvt. Ltd.

B-308/007, Plot No. 61, Patel Estate, Road Margol, Verem, Altis, Old Balem Road, Sandoz, Purovoni, Panaji-Goa-403 101  
Goa State, India. ☎ : (0832) 2411322 / 2411323 • E-mail : sadekar@seelabgoa.com

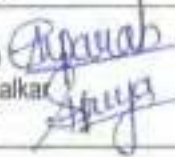
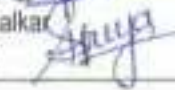
ISO 9001  
ISO 14001

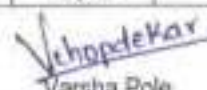
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ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	SEE/10/2022/67	Issue Date	08/10/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 03/10/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	WTP-Treated			
Sample details	Treated Water sample	Date of collection	03/10/2022	
Sample Collected by	SEEPL Representative	Sample Received On	03/10/2022	
Analysis Started On	03/10/2022	Analysis Completed On	08/10/2022	
Sample Container	Glass bottle	Sample Quantity	5000 ml	


### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	6.95	-	6.5 - 8.5	IS 3025 (Part 11)
2.	Turbidity	0.84	NTU	1.00	IS 3025 (Part 5)
3.	Taste	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2160 B
4.	Color	<1.00	Hazen unit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2120 B
5.	Odour	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2150 B
6.	Total Alkalinity	16.00	mg/lit	200.00	IS 3025 (Part 23)
7.	Total Dissolved Solids	35.00	mg/lit	500.00	IS 3025 (Part 16)
8.	Chlorides as Cl <sup>-</sup>	17.51	mg/lit	250.00	IS 3025 (Part 32)
9.	Sulphate as SO <sub>4</sub> <sup>-</sup>	<5.00	mg/lit	200.00	IS 3025 (Part 24)
10.	Sulfides	<2.00	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 S <sup>2</sup> F
11.	Total Hardness as CaCO <sub>3</sub>	18.00	mg/lit	200.00	IS 3025 (Part 21)
12.	Ammonia	<0.50	mg/lit	0.50	IS- 3025 (Part 34)
13.	Mineral oil	<0.1	mg/lit	0.50	Clause 6 of IS 3025 (Part 39) : 1991

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by  

  
Reviewed By Varsha Pole

  
Authorized Signatory Anandjeep Sawant



Report No.	SEE/10/2022/67	Issue Date	08/10/2022
Order / Reference	As per dated 03/10/2022	Sample Received On	03/10/2022
Analysis Started On	08/03/10/2022	Analysis Completed On	08/10/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

#### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	<0.20	mg/lit	0.20	IS 3025 (Part 26)
15.	Nitrate as NO <sub>3</sub>	<1.00	mg/lit	45.00	IS 3025 (Part 34)
16.	Fluoride as F <sup>-</sup>	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 F D
17.	Phenolic compound	<0.02	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5530-B,C
18.	Cyanide	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5540 - C

#### Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	IS 3025 (Part 2)
21.	Arsenic as As	<0.01	mg/lit	0.01	IS 3025 (Part 2)
22.	Boron as B	<0.01	mg/lit	0.50	IS 3025 (Part 2)
23.	Calcium as Ca	5.61	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	IS 3025 (Part 2)
25.	Iron as Fe	0.09	mg/lit	1.00	IS 3025 (Part 2)
26.	Lead as Pb	<0.01	mg/lit	0.01	IS 3025 (Part 2)
27.	Magnesium as Mg	<1.00	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Mg B
28.	Chromium as Cr	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	IS 3025 (Part 2)
30.	Zinc as Zn	0.02	mg/lit	5.00	IS 3025 (Part 2)
31.	Sodium as Na	1.40	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
32.	Potassium as K	0.50	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
33.	Copper as Cu	<0.01	mg/lit	0.05	IS 3025 (Part 2)

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

Varsha Pole  
Reviewed By

Ananddeep Sawant  
Authorized Signatory

Report No.	SEE/10/2022/67	Issue Date	08/10/2022
Order / Reference	As per dated 03/10/2022	Sample Received On	03/10/2022
Analysis Started On	03/10/2022	Analysis Completed On	08/10/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

**Microbiological Parameters**

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34.	Total coliforms at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
35.	E.coli at 44.5°C for 24hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*V. Chopdekar*  
Varsha Pole  
Reviewed By



*Anandip*  
Anandip Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/168	T2022/04/020	18/04/2022	18/04/2023
02.	Hot Air Oven	Q/009	T2021/11/006	11/11/2021	11/11/2022
03.	U V Spectrophotometer	Q/0166	-	Inhouse Calibration	
04.	ICP- OES	Q/162	-	Inhouse Calibration	
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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ISO 9001  
ISO 14001

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/10/2022/68	Issue Date	08/10/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 03/10/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	Borewell No. 2			
Sample details	Ground Water	Date of collection	03/10/2022	
Sample Collected by	SEEPL Representative	Sample Received On	03/10/2022	
Analysis Started On	03/10/2022	Analysis Completed On	08/10/2022	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	6.72	-	6.5 - 8.5	IS 3025 (Part 11)
2.	Turbidity	0.98	NTU	1.00	IS 3025 (Part 5)
3.	Taste	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2160 B
4.	Color	<1.00	Hazen unit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2120 B
5.	Odour	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2150 B
6.	Total Alkalinity	20.00	mg/lit	200.00	IS 3025 (Part 23)
7.	Total Dissolved Solids	36.00	mg/lit	500.00	IS 3025 (Part 16)
8.	Chlorides as Cl <sup>-</sup>	14.51	mg/lit	250.00	IS 3025 (Part 32)
9.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	<5.00	mg/lit	200.00	IS 3025 (Part 24)
10.	Sulfides	<2.00	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 S <sup>2-</sup> F
11.	Total Hardness as CaCO <sub>3</sub>	24.00	mg/lit	200.00	IS 3025 (Part 21)
12.	Ammonia	<0.50	mg/lit	0.50	IS- 3025 (Part 34)
13.	Mineral oil	<0.1	mg/lit	0.50	Clause 6 of IS 3025 (Part 39)

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Vishopdekar*  
Varsha Pole  
Reviewed By

*Anand*  
Ananddeep Sawant  
Authorized Signatory



Report No.	SEE/10/2022/68	Issue Date	08/10/2022
Order / Reference	As per dated 03/10/2022	Sample Received On	03/10/2022
Analysis Started On	03/10/2022	Analysis Completed On	08/10/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

#### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	<0.20	mg/lit	0.20	IS 3025 (Part 26)
15.	Nitrate as NO <sub>3</sub>	<1.00	mg/lit	45.00	IS 3025 (Part 34)
16.	Fluoride as F <sup>-</sup>	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 F D
17.	Phenolic compound	<0.02	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5530-B,C
18.	Cyanide	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5540 - C

#### Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	IS 3025 (Part 2)
21.	Arsenic as As	<0.01	mg/lit	0.01	IS 3025 (Part 2)
22.	Boron as B	<0.01	mg/lit	0.50	IS 3025 (Part 2)
23.	Calcium as Ca	6.41	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	IS 3025 (Part 2)
25.	Iron as Fe	0.05	mg/lit	1.00	IS 3025 (Part 2)
26.	Lead as Pb	<0.01	mg/lit	0.01	IS 3025 (Part 2)
27.	Magnesium as Mg	1.94	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Mg B
28.	Chromium as Cr	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	IS 3025 (Part 2)
30.	Zinc as Zn	0.02	mg/lit	5.00	IS 3025 (Part 2)
31.	Sodium as Na	1.52	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
32.	Potassium as K	0.47	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
33.	Copper as Cu	<0.01	mg/lit	0.05	IS 3025 (Part 2)

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*Vehopadekar*  
Varsha Pole  
Reviewed By



*Ananddeep Sawant*  
Ananddeep Sawant  
Authorized Signatory

Report No.	SEE/10/2022/68	Issue Date	08/10/2022
Order / Reference	As per dated 03/10/2022	Sample Received On	03/10/2022
Analysis Started On	03/10/2022	Analysis Completed On	08/10/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

**Microbiological Parameters**

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34.	Total coliforms at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
35.	E.coli at 44.5°C for 24hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

1. Anisha Parab  
2. Shreya Harmakar  
Analyzed by

*Anisha Parab*  
*Shreya Harmakar*

*Varsha Pole*  
Reviewed By



*Anand Deep Sawant*  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/168	T2022/04/020	18/04/2022	18/04/2023
02.	Hot Air Oven	Q/009	T2021/11/006	11/11/2021	11/11/2022
03.	U V Spectrophotometer	Q/0166	-	Inhouse Calibration	
04.	ICP- OES	Q/162	-	Inhouse Calibration	
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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SPNE (L1751)  
SMA-L1E

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/10/2022/70	Issue Date	07/10/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 03/10/2022	Environmental Condition of Lab	Temp °C 28.1	Humidity % 68
Sampling point	L.S.C			
Sample details	Drinking Water	Date of collection	03/10/2022	
Sample Collected by	SEEPL Representative	Sample Received On	03/10/2022	
Analysis Started On	03/10/2022	Analysis Completed On	07/10/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

*Anisha Parab*  
Anisha Parab  
Analyzed by

*Varsha Pole*  
Varsha Pole  
Reviewed By



*Ananddeep Sawant*  
Ananddeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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S/M: 141701  
S/PA: 141

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/10/2022/71	Issue Date	07/10/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 03/10/2022	Environmental Condition of Lab	Temp °C 28.1	Humidity % 68
Sampling point	P.T.B			
Sample details	Drinking Water	Date of collection	03/10/2022	
Sample Collected by	SEEPL Representative	Sample Received On	03/10/2022	
Analysis Started On	03/10/2022	Analysis Completed On	07/10/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Anisha Parab  
Analyzed by

Varsha Pole  
Reviewed By



Anandeeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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 SWA LIFE

## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/10/2022/72	Issue Date	07/10/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 03/10/2022	Environmental Condition of Lab	Temp °C 28.1	Humidity % 68
Sampling point	Megawide Labor Colony			
Sample details	Drinking Water	Date of collection	03/10/2022	
Sample Collected by	SEEPL Representative	Sample Received On	03/10/2022	
Analysis Started On	03/10/2022	Analysis Completed On	07/10/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B.
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

: This certificate may not be reproduced in part, without the permission of this laboratory.

: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

*Anisha Parab*

Anisha Parab  
Analyzed by

*Varsha Pole*

Varsha Pole  
Reviewed By



*Ananddeep Sawant*  
Ananddeep Sawant  
Authorized Signatory



### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03..	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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ISO 9001  
ISO 45001

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/10/2022/73	Issue Date	07/10/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 03/10/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling point	KMV			
Sample details	Drinking Water	Date of collection	03/10/2022	
Sample Collected by	SEEPL Representative	Sample Received On	03/10/2022	
Analysis Started On	03/10/2022	Analysis Completed On	07/10/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

Note: Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

*Anisha Parab*

Anisha Parab  
Analyzed by

*Varsha Pole*

Varsha Pole  
Reviewed By



*Anandeep Sawant*

Anandeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C)	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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SPN/11/15

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/10/2022/74	Issue Date	07/10/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited.			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 03/10/2022	Environmental Condition of Lab	Temp °C 28.1	Humidity % 68
Sampling point	VNC Colony			
Sample details	Drinking Water	Date of collection	03/10/2022	
Sample Collected by	SEEPL Representative	Sample Received On	03/10/2022	
Analysis Started On	03/10/2022	Analysis Completed On	07/10/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

Note: Test results related only to the sample tested.

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Anisha Parab  
Analyzed by

Varsha Pole  
Reviewed By



Ananddeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03..	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL, Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Mopa Boundary (Goa State) (G-A1)				
Average Ambient Temperature (°C)	30.2	Average Humidity (%)	65	Latitude	N 15°45'51.1"
Average Wind Speed (km/hr)	1.4	Average Wind direction (Deg)	212	Longitude	E 73°56'32.4"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	P <sub>3</sub>
1	03/11/2022	SEE/AR/11/2022/0090	59.30	15.76	6.03	10.09	0.07	75.89	<0.10
2	07/11/2022	SEE/AR/11/2022/0198	55.71	21.00	4.42	10.92	0.08	82.75	<0.10
3	10/11/2022	SEE/AR/11/2022/0275	61.89	19.09	5.03	8.42	0.05	81.81	<0.10
4	14/11/2022	SEE/AR/11/2022/0374	34.60	10.21	<3.00	<6.00	0.06	48.78	<0.10
5	17/11/2022	SEE/AR/11/2022/0516	78.23	14.51	4.27	<6.00	0.10	104.76	<0.10
6	21/11/2022	SEE/AR/11/2022/0607	88.11	32.12	6.42	12.72	0.14	133.62	<0.10
7	24/11/2022	SEE/AR/11/2022/0651	51.09	11.68	6.20	10.76	0.07	63.86	<0.10
8	28/11/2022	SEE/AR/11/2022/0685	44.11	8.28	<3.00	<6.00	0.03	53.13	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note :** Test results related only to the sample tested.

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- : Test methods of analyzed parameters are back side of analysis report.

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2) Pandurang Gawas  
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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2881-DTH-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 991-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT-54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Shemecheadvan Boundary(Goa State) (G-A2)				
Average Ambient Temperature (°C)	31.8	Average Humidity (%)	64	Latitude	N 15°42'06.1"
Average Wind Speed (km/hr)	1.5	Average Wind direction (Deg)	232	Longitude	E 73°49'21.5"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0091	47.41	11.85	4.16	8.49	0.06	59.80	<0.10
2	07/11/2022	SEE/AR/11/2022/0199	52.85	12.97	5.76	9.45	0.07	67.23	<0.10
3	10/11/2022	SEE/AR/11/2022/0276	71.72	14.93	5.99	7.78	0.08	87.70	<0.10
4	14/11/2022	SEE/AR/11/2022/0375	30.16	8.29	<3.00	<6.00	0.05	40.11	<0.10
5	17/11/2022	SEE/AR/11/2022/0517	40.53	10.77	5.48	<6.00	0.09	61.19	<0.10
6	21/11/2022	SEE/AR/11/2022/0608	70.81	23.25	6.23	10.40	0.08	102.66	<0.10
7	24/11/2022	SEE/AR/11/2022/0652	60.50	12.72	8.32	8.10	0.05	73.74	<0.10
8	28/11/2022	SEE/AR/11/2022/0686	49.22	12.43	<3.00	<6.00	0.03	62.56	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO. SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

\*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note** : Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

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: Test methods of analyzed parameters are back side of analysis report.

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2) Pandurang Gawas  
Analyzed by

Varsha Pole  
Reviewed by

Amrutesh Sawant  
Authorized Signatory



Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2871-DTG-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 992-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001:2015

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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Nagzar(Goa State) (G-A3)				
Average Ambient Temperature (°C)	30.9	Average Humidity (%)	65	Latitude	N 15°45'37.3"
Average Wind Speed (km/hr)	1.6	Average Wind direction (Deg)	211	Longitude	E 73°53'14.22"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0092	87.10	26.67	7.79	12.02	0.14	137.35	<0.10
2	07/11/2022	SEE/AR/11/2022/0200	75.62	32.89	6.37	7.92	0.11	119.79	<0.10
3	10/11/2022	SEE/AR/11/2022/0277	84.31	38.70	7.09	9.25	0.10	138.39	<0.10
4	14/11/2022	SEE/AR/11/2022/0376	41.68	12.23	5.28	<6.00	0.07	55.20	<0.10
5	17/11/2022	SEE/AR/11/2022/0518	85.14	39.65	4.74	7.52	0.13	131.28	<0.10
6	21/11/2022	SEE/AR/11/2022/0609	81.63	25.66	4.50	9.05	0.06	123.46	<0.10
7	24/11/2022	SEE/AR/11/2022/0653	88.03	38.08	5.68	11.20	0.05	139.71	<0.10
8	28/11/2022	SEE/AR/11/2022/0687	69.24	24.05	10.03	8.91	0.08	100.61	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

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: Test methods of analyzed parameters are back side of analysis report.

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1719-DTI-2012)	LE5-CCL/FF/MF/SC/1716	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 1114 L 21)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEPL/2021-22/FLOW/3683	07/01/2022	07/01/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001:2015

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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Purva Casarvarnem (Goa State)(G-A4)				
Average Ambient Temperature (°C)	30.8	Average Humidity (%)	64	Latitude	N 15°41'41.9"
Average Wind Speed (km/hr)	1.7	Average Wind direction (Deg)	243	Longitude	E 73°50'16.6"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0093	51.31	15.76	4.37	7.05	0.05	68.28	<0.10
2	07/11/2022	SEE/AR/11/2022/0201	54.78	28.19	4.31	8.05	0.08	85.02	<0.10
3	10/11/2022	SEE/AR/11/2022/0278	64.72	19.55	3.90	11.36	0.07	91.00	<0.10
4	14/11/2022	SEE/AR/11/2022/0377	36.18	12.30	<3.00	<6.00	0.05	41.38	<0.10
5	17/11/2022	SEE/AR/11/2022/0519	69.98	16.78	<3.00	6.47	0.05	91.89	<0.10
6	21/11/2022	SEE/AR/11/2022/0610	75.62	13.21	9.53	9.21	0.10	96.75	<0.10
7	24/11/2022	SEE/AR/11/2022/0654	74.44	20.91	5.82	8.67	0.07	102.13	<0.10
8	28/11/2022	SEE/AR/11/2022/0688	42.47	10.30	3.48	<6.00	0.05	56.04	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

- Note :** Test results related only to the sample tested.  
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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2893-DTJ-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 983-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

STATE OF GOA

SRW 10/18

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Khajne Amere Porscodem (Goa State) (G-A5)				
Average Ambient Temperature (°C)	30.8	Average Humidity (%)	63	Latitude	N 15°40'38.0"
Average Wind Speed (km/hr)	1.3	Average Wind direction (Deg)	280	Longitude	E 73°46'21.2"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0094	33.48	10.60	<3.00	<6.00	0.05	44.99	<0.10
2	07/11/2022	SEE/AR/11/2022/0202	39.92	19.13	5.17	<6.00	0.06	60.34	<0.10
3	10/11/2022	SEE/AR/11/2022/0279	44.82	20.96	<3.00	<6.00	0.05	67.55	<0.10
4	14/11/2022	SEE/AR/11/2022/0378	25.61	8.40	<3.00	<6.00	0.03	34.05	<0.10
5	17/11/2022	SEE/AR/11/2022/0520	44.07	8.98	4.23	7.94	0.08	66.42	<0.10
6	21/11/2022	SEE/AR/11/2022/0611	42.99	7.70	7.76	<6.00	0.06	53.41	<0.10
7	24/11/2022	SEE/AR/11/2022/0655	40.39	12.83	6.09	<6.00	0.06	59.18	<0.10
8	28/11/2022	SEE/AR/11/2022/0689	37.64	8.13	<3.00	<6.00	0.02	46.49	<0.10
<b>NAAQs Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>		<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note** : Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

: Test methods of analyzed parameters are back side of analysis report.

1) Aditya Naik

2) Pandurang Gawas

Analyzed by

*V. Chopdekar*

Varsha Pole

Reviewed by



*Arundeep Sawant*

Authorized Signatory

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2892-DTJ-2020)	-	23/09/2022	22/09/2023

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 2024-DTD-2016)	LES-CCL/FF/MF/5C/1722	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 1119 A 22)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEPL/2021-22/FLOW/3682	07/01/2022	07/01/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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SPR-2017/11

5466/188

Lab accredited by MoEF & CC Walk up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Rajvil Wada Torxem (Goa State)(G-A6)						
Average Ambient Temperature (°C)	31.2	Average Humidity (%)	67	Latitude	N 15°48'40.0"		
Average Wind Speed (km/hr)	1.6	Average Wind direction (Deg)	231	Longitude	E 73°52'50.2"		
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)						

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0095	50.79	22.74	4.20	6.15	0.06	74.62	<0.10
2	07/11/2022	SEE/AR/11/2022/0203	41.87	16.47	3.38	7.13	0.05	58.82	<0.10
3	10/11/2022	SEE/AR/11/2022/0280	57.22	11.35	5.22	10.26	0.07	69.44	<0.10
4	14/11/2022	SEE/AR/11/2022/0379	30.19	6.11	<3.00	<6.00	0.03	36.80	<0.10
5	17/11/2022	SEE/AR/11/2022/0521	75.23	15.80	<3.00	6.53	0.11	104.90	<0.10
6	21/11/2022	SEE/AR/11/2022/0612	70.64	13.43	7.67	8.19	0.06	84.63	<0.10
7	24/11/2022	SEE/AR/11/2022/0656	80.91	16.92	4.85	7.74	0.09	101.08	<0.10
8	28/11/2022	SEE/AR/11/2022/0690	55.28	11.67	3.67	<6.00	0.05	67.23	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note :** Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

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: Test methods of analyzed parameters are back side of analysis report.

1)Aditya Naik

2)Pandurang Gawas

Analyzed by

V. Chopdekar

Varsha Pole

Reviewed by

Ananddeep Sawant

Authorized Signatory

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2891-DTJ-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 298-DTJ-2014)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	EI/FF/3539	18/02/2022	17/02/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001

ISO 14001

Lab accredited by MoEF & CC Valid up to 03.11.2023 \* Certified by ISO 9001:2015 & ISO 45001 : 2018

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Satarda(Maharashtra State)(M-A1)				
Average Ambient Temperature (°C)	31.0	Average Humidity (%)	65	Latitude	N15°43'01.3"
Average Wind Speed (km/hr)	1.2	Average Wind direction (Deg)	223	Longitude	E 73°46'00.2"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0096	36.79	17.84	3.19	<6.00	0.05	55.19	<0.10
2	07/11/2022	SEE/AR/11/2022/0204	60.01	12.60	3.03	9.76	0.07	75.93	<0.10
3	10/11/2022	SEE/AR/11/2022/0281	69.52	24.52	<3.00	7.16	0.06	96.51	<0.10
4	14/11/2022	SEE/AR/11/2022/0380	24.87	7.21	<3.00	<6.00	0.03	32.46	<0.10
5	17/11/2022	SEE/AR/11/2022/0522	57.16	26.57	3.44	7.52	0.09	88.94	<0.10
6	21/11/2022	SEE/AR/11/2022/0613	51.09	18.46	7.38	<6.00	0.06	73.31	<0.10
7	24/11/2022	SEE/AR/11/2022/0657	52.78	26.55	6.82	13.27	0.08	81.70	<0.10
8	28/11/2022	SEE/AR/11/2022/0691	48.44	14.80	4.93	6.93	0.06	63.80	<0.10
NAAQS Limits*			100	60	80	80	4	-	1
Units			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling  
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 : Test methods of analyzed parameters are back side of analysis report.

1) Aditya Naik  
 2) Pandurang Gawas  
 Analyzed by

*V. Chopdekar*  
 Varsha Pole  
 Reviewed by



*Ananddeep*  
 Ananddeep Sawant  
 Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1461-DTD-2009)	LES-CCL/FF/MF/SC/1715	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 980-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001:2015  
ISO 14001

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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Dingna(Maharashtra State)(M-A2)				
Average Ambient Temperature (°C)	30.6	Average Humidity (%)	67	Latitude	N 15°46'12.3"
Average Wind Speed (km/hr)	1.5	Average Wind direction (Deg)	246	Longitude	E 73°49'20.5"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0097	33.47	6.36	<3.00	<6.00	0.03	40.57	<0.10
2	07/11/2022	SEE/AR/11/2022/0205	45.08	13.97	4.01	7.33	0.05	60.18	<0.10
3	10/11/2022	SEE/AR/11/2022/0282	35.25	9.61	4.67	7.52	0.07	47.13	<0.10
4	14/11/2022	SEE/AR/11/2022/0381	26.16	8.29	<3.00	<6.00	0.02	31.20	<0.10
5	17/11/2022	SEE/AR/11/2022/0523	39.88	12.48	4.28	7.33	0.06	54.54	<0.10
6	21/11/2022	SEE/AR/11/2022/0614	56.90	20.79	3.67	10.18	0.07	78.51	<0.10
7	24/11/2022	SEE/AR/11/2022/0658	60.17	16.13	5.19	11.33	0.05	77.02	<0.10
8	28/11/2022	SEE/AR/11/2022/0692	40.30	18.05	4.90	<6.00	0.06	58.90	<0.10
NAAQS Limits*			100	60	80	80	4	-	1
Units			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method			IS 5182 (Part 23)	Lab SOP NO : SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note :** Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

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1) Aditya Naik  
2) Pandurang Gawas  
Analyzed by

Varsha Pole  
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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 138 L 21)	ECL/SEEPL/202122/FLOW/3668	07/01/2022	07/01/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 01-DTK-2011)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 LC	EI/FF/3543	18/02/2022	17/02/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	01/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	November 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Netarde(Maharashtra State)(M-A3)				
Average Ambient Temperature (°C)	30.9	Average Humidity (%)	63	Latitude	N 15°46'11.7"
Average Wind Speed (km/hr)	1.2	Average Wind direction (Deg)	215	Longitude	E 73°50'48.0"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	03/11/2022	SEE/AR/11/2022/0098	25.18	5.20	<3.00	<6.00	0.03	30.90	<0.10
2	07/11/2022	SEE/AR/11/2022/0206	49.78	27.11	5.46	7.39	0.06	78.31	<0.10
3	10/11/2022	SEE/AR/11/2022/0283	58.94	25.45	5.11	7.85	0.08	84.91	<0.10
4	14/11/2022	SEE/AR/11/2022/0382	31.08	6.40	<3.00	<6.00	0.02	38.26	<0.10
5	17/11/2022	SEE/AR/11/2022/0524	51.09	10.81	4.49	6.06	0.09	63.80	<0.10
6	21/11/2022	SEE/AR/11/2022/0615	66.95	12.48	8.15	6.38	0.06	79.77	<0.10
7	24/11/2022	SEE/AR/11/2022/0659	71.66	29.61	<3.00	6.52	0.05	102.18	<0.10
8	28/11/2022	SEE/AR/11/2022/0693	49.09	11.23	<3.00	<6.00	0.03	61.13	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note** : Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

: Test methods of analyzed parameters are back side of analysis report.

1) Aditya Naik  
2) Pandurang Gawas  
Analyzed by

**V Chopdekar**  
Varsha Pole  
Reviewed by



**Anandkesh Sawant**  
Authorized Signatory

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1901-DTJ-2014)	LES-CCL/FF/MF/SC/1718	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 977-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	20/11/2021	19/11/2022

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001  
ISO 14001

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## NOISE LEVEL MONITORING REPORT

Report No.	SEE/AR/11/2022/0383-0384, 0572-0573, 0571, 0449, 0570, 0638, 0637, 0450, 0630-0631	Date of Issue	29/11/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sample Collected By	SEEPL Representative		
Sampling Plan	SEEPL/D/FMT- 54	Sampling Procedure No	SEEPL/QSP-10

### Chemical Testing - Atmospheric Pollution

Sr. No	Date of Monitoring	Report No.	Station ID	Zone	Sampling Location	Day Time Noise in dB(A)			Night Time Noise in dB(A)		
						Lmin	Lmax	Leq	Lmin	Lmax	Leq
1.	14/11/2022	SEE/AR/11/2022/0383	G-N1	I	Mopa Boundary	30.0	77.4	59.0	30.0	67.0	47.7
2.	14/11/2022	SEE/AR/11/2022/0384	G-N2	I	Shemecheadvan Boundary	30.0	78.4	61.2	35.8	69.8	56.4
3.	20/11/2022	SEE/AR/11/2022/0572	G-N3	C	Nagzar	38.3	73.5	54.7	30.0	69.9	47.1
4.	20/11/2022	SEE/AR/11/2022/0573	G-N4	R	Purva Casarvarnem	30.0	65.9	48.9	30.0	58.3	39.5
5.	19/11/2022	SEE/AR/11/2022/0571	G-N5	R	Chandel	37.6	66.6	49.2	30.0	55.0	38.9
6.	16/11/2022	SEE/AR/11/2022/0449	G-N6	R	Khajne Amere Porcodem	36.5	62.5	47.9	30.1	52.9	37.9
7.	19/11/2022	SEE/AR/11/2022/0570	G-N7	R	Warkhand	31.2	68.6	49.7	30.0	55.1	38.5
8.	23/11/2022	SEE/AR/11/2022/0638	G-N8	C	Rajvil Wada Torxem	30.1	77.0	55.7	31.4	64.3	50.9
9.	23/11/2022	SEE/AR/11/2022/0637	G-N9	C	Village Panchayat Tamboxem -Mopa- Ugvem	30.0	75.0	54.4	30.5	61.8	46.9
10.	16/11/2022	SEE/AR/11/2022/0450	M-N1	R	Saiarda	30.6	63.9	47.5	30.0	61.4	38.9
11.	22/11/2022	SEE/AR/11/2022/0630	M-N2	R	Dingna	30.9	67.3	48.4	30.0	58.0	38.4
12.	22/11/2022	SEE/AR/11/2022/0631	M-N3	R	Netarde	30.2	62.8	48.7	30.0	60.2	39.1

I – Industrial Zone, C – Commercial Zone, R – Residential Zone

➤ Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows:

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial Area ( I )	75	70
(B)	Commercial Area ( C )	65	55
(C)	Residential Area ( R )	55	45
(D)	Silence Zone ( S )	50	40

- Day time is reckoned in between 6.00am to 10.00pm and night time is reckoned in between 10.00pm to 6.00am.
- \*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A "decibel" is a unit in which noise is measured.
- "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
- Leq: It is the energy mean of the noise level over a specified period

Note : Monitoring has been done as per GPCB protocol for Ambient Level Noise Monitoring 2015.

- : Test results related only to the sample tested.
- : Test results relate only to the condition prevailing at the time of sampling
- : This certificate may not be reproduced in part, without the permission of this laboratory.
- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Sanjwan Gawas  
Monitored by

V. Chopdekar  
Parsha Pola  
Reviewed by

Anandpa Sawant  
Authorized Signatory

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Calibration Details of Equipment used for Sampling

Noise Level Meter No.1(A0913-1393)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	LES-CCL/MECH/SLM/563	23/07/2022	22/07/2023

Noise Level Meter No.2 (A0114-1408)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	LES-CCL/MECH/SLM/561	23/07/2022	22/07/2023



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AIR QUALITY MONITORING REPORT				
Report No.	SEE/AR/11/2022/0660	Date of Issue	29/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited			
Address of Client	Mopa, Goa			
Sample Collected By	SEEPL Representative	Environmental condition of Lab		
Date of Sampling	24/11/2022	Temperature(°C)	28.0	Humidity (%) 65
Analysis Started On	28/11/2022	Analysis Completed On	29/11/2022	

Location of ambient air station	Mopa Boundary (Goa State)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling.  
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 : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

*Aditya Naik*  
Aditya Naik  
Analyzed by

*V Chopdekar*  
Varsha Pole  
Reviewed by



*Ananddeep Sawant*  
Ananddeep Sawant  
Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	101-DTD-2014	EI/FF/3523	18/02/2022	17/02/2023



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SP/11/2022

SP/11/2022

## AIR QUALITY MONITORING REPORT

Report No.	SEE/AR/11/2022/0661	Date of Issue	29/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of Lab			
Date of Sampling	24/11/2022	Temperature(°C)	28.0	Humidity (%)	65
Analysis Started On	28/11/2022	Analysis Completed On	29/11/2022		

Location of ambient air station	HSD Bunk (Inside Mopa Airport Premises)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling.  
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*Aditya Naik*  
Aditya Naik  
Analyzed by

*Varsha Pole*  
Varsha Pole  
Reviewed by



*Anandeeep Sawant*  
Anandeeep Sawant  
Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	24-DTD-2016	EI/FF/3524	18/02/2022	17/02/2023



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## AIR QUALITY MONITORING REPORT

Report No.	SEE/AR/11/2022/0662	Date of Issue	29/11/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of Lab			
Date of Sampling	24/11/2022	Temperature(°C)	28.0	Humidity (%)	65
Analysis Started On	28/11/2022	Analysis Completed On		29/11/2022	

Location of ambient air station	Shemecheadvan Boundary (Goa State)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
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*Aditya Naik*  
Analyzed by

*Varsha Pole*  
Reviewed by



*Arandeep Sawant*  
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Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	101-DTD-2014	EI/FF/3523	18/02/2022	17/02/2023



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ISO 14001

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/332	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28	68
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	Borewell No. 2			
Sample details	Ground Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	7.16	-	6.5 - 8.5	IS 3025 (Part 11)
2.	Turbidity	0.89	NTU	1.00	IS 3025 (Part 5)
3.	Taste	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2160 B
4.	Color	<1.00	Hazen unit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2120 B
5.	Odour	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2150 B
6.	Total Alkalinity	22.00	mg/lit	200.00	IS 3025 (Part 23)
7.	Total Dissolved Solids	59.00	mg/lit	500.00	IS 3025 (Part 16)
8.	Chlorides as Cl <sup>-</sup>	12.51	mg/lit	250.00	IS 3025 (Part 32)
9.	Sulphate as SO <sub>4</sub> <sup>-2</sup>	<5.00	mg/lit	200.00	IS 3025 (Part 24)
10.	Sulfides	<2.00	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 S <sup>2</sup> F
11.	Total Hardness as CaCO <sub>3</sub>	26.00	mg/lit	200.00	IS 3025 (Part 21)
12.	Ammonia	<0.50	mg/lit	0.50	IS- 3025 (Part 34)
13.	Mineral oil	<0.1	mg/lit	0.50	Clause 6 of IS 3025 (Part 39)

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

Varsha Pole  
Reviewed By



Arundeeep Sawant  
Authorized Signatory



Report No.	SEE/11/2022/332	Issue Date	18/11/2022
Order / Reference	As per dated 14/11/2022	Sample Received On	14/11/2022
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

#### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	<0.20	mg/lit	0.20	IS 3025 (Part 26)
15.	Nitrate as NO <sub>3</sub>	<1.00	mg/lit	45.00	IS 3025 (Part 34)
16.	Fluoride as F	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 F D
17.	Phenolic compound	<0.02	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5530-B,C
18.	Cyanide	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5540 - C

#### Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	IS 3025 (Part 2)
21.	Arsenic as As	<0.01	mg/lit	0.01	IS 3025 (Part 2)
22.	Boron as B	<0.01	mg/lit	0.50	IS 3025 (Part 2)
23.	Calcium as Ca	7.21	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	IS 3025 (Part 2)
25.	Iron as Fe	0.08	mg/lit	1.00	IS 3025 (Part 2)
26.	Lead as Pb	<0.01	mg/lit	0.01	IS 3025 (Part 2)
27.	Magnesium as Mg	1.45	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Mg B
28.	Chromium as Cr	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	IS 3025 (Part 2)
30.	Zinc as Zn	0.03	mg/lit	5.00	IS 3025 (Part 2)
31.	Sodium as Na	1.92	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
32.	Potassium as K	0.88	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
33.	Copper as Cu	<0.01	mg/lit	0.05	IS 3025 (Part 2)

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*Varsha Pole*  
Reviewed By





*Anandeeep Sawant*  
Authorized Signatory

Report No.	SEE/11/2022/332	Issue Date	18/11/2022
Order / Reference	As per dated 14/11/2022.	Sample Received On	14/11/2022
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

**Microbiological Parameters**

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34.	Total coliforms at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
35.	E.coli at 44.5°C for 24hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.  
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1. Anisha Parab   
 2. Shreya Harmaikar   
 Analyzed by

  
 Varsha Pole  
 Reviewed By



  
 Anandjeep Sawant  
 Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/168	T2022/04/020	18/04/2022	18/04/2023
02.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023
03.	U V Spectrophotometer	Q/0166	-	Inhouse Calibration	
04.	ICP- OES	Q/162	-	Inhouse Calibration	
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/331	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C 28	Humidity % 66
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	WTP-Treated			
Sample details	Treated Water sample	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass bottle	Sample Quantity	5000 ml	

### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	6.87	-	6.5 - 8.5	IS 3025 (Part 11)
2.	Turbidity	0.85	NTU	1.00	IS 3025 (Part 5)
3.	Taste	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2160 B
4.	Color	<1.00	Hazen unit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2120 B
5.	Odour	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2150 B
6.	Total Alkalinity	24.00	mg/lit	200.00	IS 3025 (Part 23)
7.	Total Dissolved Solids	62.00	mg/lit	500.00	IS 3025 (Part 16)
8.	Chlorides as Cl <sup>-</sup>	13.51	mg/lit	250.00	IS 3025 (Part 32)
9.	Sulphate as SO <sub>4</sub> <sup>2-</sup>	<5.00	mg/lit	200.00	IS 3025 (Part 24)
10.	Sulfides	<2.00	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 S/F
11.	Total Hardness as CaCO <sub>3</sub>	32.00	mg/lit	200.00	IS 3025 (Part 21)
12.	Ammonia	<0.50	mg/lit	0.50	IS- 3025 (Part 34)
13.	Mineral oil	<0.1	mg/lit	0.50	Clause 6 of IS 3025 (Part 39) : 1991

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

Varsha Pole  
Reviewed By



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E-mail : sadekarenviro@rediffmail.com • Website : www.sadekarenviro.com • CN - U45205MH11001PTC-110117

Report No.	SEE/11/2022/331	Issue Date	18/11/2022
Order / Reference	As per dated 14/11/2022	Sample Received On	14/11/2022
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

#### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	<0.20	mg/lit	0.20	IS 3025 (Part 26)
15.	Nitrate as NO <sub>3</sub>	<1.00	mg/lit	45.00	IS 3025 (Part 34)
16.	Fluoride as F <sup>-</sup>	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 F D
17.	Phenolic compound	<0.02	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5530-B,C
18.	Cyanide	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5540 - C

#### Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	IS 3025 (Part 2)
21.	Arsenic as As	<0.01	mg/lit	0.01	IS 3025 (Part 2)
22.	Boron as B	<0.01	mg/lit	0.50	IS 3025 (Part 2)
23.	Calcium as Ca	6.41	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	IS 3025 (Part 2)
25.	Iron as Fe	0.10	mg/lit	1.00	IS 3025 (Part 2)
26.	Lead as Pb	<0.01	mg/lit	0.01	IS 3025 (Part 2)
27.	Magnesium as Mg	3.88	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Mg B
28.	Chromium as Cr	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	IS 3025 (Part 2)
30.	Zinc as Zn	0.04	mg/lit	5.00	IS 3025 (Part 2)
31.	Sodium as Na	1.75	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
32.	Potassium as K	0.84	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
33.	Copper as Cu	<0.01	mg/lit	0.05	IS 3025 (Part 2)

1. Anisha Parab  
2. Shreya Harmaikar  
Analyzed by

Varsha Pole  
Reviewed By



Anandep Sawant  
Authorized Signatory

Report No.	SEE/11/2022/331	Issue Date	18/11/2022
Order / Reference	As per dated 14/11/2022	Sample Received On	14/11/2022
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

**Microbiological Parameters**

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34.	Total coliforms at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
35.	E.coli at 44.5°C for 24hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*Varsha Pole*  
Reviewed By



*Ana Deep Sewant*  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/168	T2022/04/020	18/04/2022	18/04/2023
02.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023
03.	U V Spectrophotometer	Q/0166	-	Inhouse Calibration	
04.	ICP- OES	Q/162	-	Inhouse Calibration	
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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ISO 9001:2015  
ISO 14001

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/333	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C 28	Humidity % 68
Sampling point	P.T.B			
Sample details	Drinking Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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Anisha Parab  
Analyzed by

Varsha Pole  
Reviewed By



Anandeeep Sawant  
Authorized Signatory



### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/09/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C)	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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GEN. ID: 0001  
SPN: 001

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No	SEE/11/2022/334	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C 28	Humidity % 68
Sampling point	Megawide Labor Colony			
Sample details	Drinking Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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*Anisha*  
Anisha Parab  
Analyzed by

*Varsha Pole*  
Varsha Pole  
Reviewed By



*Apurva*  
Apurva Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/335	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C 28	Humidity % 68
Sampling point	L.S.C			
Sample details	Drinking Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNindex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNindex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

Note: Test results related only to the sample tested.

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*Anisha Parab*

Anisha Parab  
Analyzed by

*Varsha Pole*

Varsha Pole  
Reviewed By



*Anandeeep Sawant*  
Anandeeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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SRM: 10011  
SRM: 1001

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/336	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C 28	Humidity % 68
Sampling point	KMV			
Sample details	Drinking Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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Anisha Parab  
Analyzed by

Varsha Pole  
Reviewed By



Anandeeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C)	Q/004	T2022/08/003	13/08/2022	13/08/2023
03..	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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 5246329721

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	SEE/11/2022/337	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C 28	Humidity % 66
Sampling point	VNC Colony			
Sample details	Drinking Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNindex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNindex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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Anisha Parab  
 Analyzed by

Varsha Pole  
 Reviewed By



Anandeeep Sawant  
 Authorized Signatory



### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/327	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28	66
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	STP (150 KLD)			
Sample details	Inlet Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	Method
1.	pH	6.24	-	APHA( 23 <sup>rd</sup> Edition ) 4500 H+-B
2.	Chemical Oxygen Demand (COD)	760.00	mg/lit.	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	260.00	mg/lit	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	147.00	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	13.20	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 5520-O &G

**Note:** Test results related only to the sample tested.

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Ravi Ghogale  
Analyzed By

Varsha Pole  
Reviewed By



Anandeeep Sawant  
Authorized Signatory

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### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
03.	BCD incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
04.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	SEE/11/2022/328	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28	66
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	STP(150 KLD)			
Sample details	Outlet Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	*Limits	Method
1.	pH	6.77	-	5.5 - 9.0	APHA( 23 <sup>rd</sup> Edition ) 4500 H+-B
2.	Chemical Oxygen Demand (COD)	80.00	mg/lit	250.00	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	17.00	mg/lit	30.00	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	55.00	mg/lit	100.00	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	3.00	mg/lit	10.00	APHA( 23 <sup>rd</sup> Edition ) 5520-O &G

**Note:** Test results related only to the sample tested.

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Rahul Ghogale  
Analyzed By

Varsha Pole  
Reviewed By



Anandeeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
03.	BOD incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
04.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/329	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mapa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28	66
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No	SEEPL/QSP-10	
Sampling point	STP (KMV)			
Sample details	Inlet Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	Method
1.	pH	6.47	-	APHA( 23 <sup>rd</sup> Edition ) 4500 H+-B
2.	Chemical Oxygen Demand (COD)	480.00	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	137.50	mg/lit	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	110.00	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	6.80	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 5520-O & G

Note: Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Mugdha Gawade  
Analyzed By

Varsha Pole  
Reviewed By



Anandeeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
03.	BOD incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
04.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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 Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 - 2018

5780-123511-1  
 5700 LIFE

## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/11/2022/330	Issue Date	18/11/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 14/11/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28	66
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	STP (KMV)			
Sample details	Outlet Water	Date of collection	14/11/2022	
Sample Collected by	SEEPL Representative	Sample Received On	14/11/2022	
Analysis Started On	14/11/2022	Analysis Completed On	18/11/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	*Limits	Method
1.	pH	6.40	-	5.5 - 9.0	APHA( 23 <sup>rd</sup> Edition ) 4500 H+-B
2.	Chemical Oxygen Demand (COD)	32.00	mg/lit	50.00	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	6.00	mg/lit	10.00	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	12.00	mg/lit	20.00	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	2.00	mg/lit	10.00	APHA( 23 <sup>rd</sup> Edition ) 5520-O & G
6.	Ammonia	1.68	mg/lit	5.00	APHA( 23 <sup>rd</sup> Edition ) 4500 NH3B C
7.	Total Nitrogen ( as N)	8.75	mg/lit	10.00	APHA( 23 <sup>rd</sup> Edition ) 4500 N-B

### Microbiological Parameters

8.	Fecal coliforms at 44.5°C for 24 hrs.	36	MPN Index/100ml	100	APHA ( 23 <sup>rd</sup> Edition ) 9221-E
----	---------------------------------------	----	-----------------	-----	--

**Note:** Test results related only to the sample tested.

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1. Mugdha Gawade  
 2. Anisha Parab  
 Analyzed By

*Mugdha Gawade*  
*Anisha Parab*

*Vishal Kar*  
 Varsha Pole  
 Reviewed By



*Anandeev Sawant*  
 Anandeev Sawant  
 Authorized Signatory



### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023
03.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
04.	BOD incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

SPVC 44/P/11/11

SPVC 1/EE

## STACK EMISSION REPORT

Report No.	SEE/AR/12/2022/0656	Date of Issue	03/01/2023		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited				
Address of Client	Mopa, Goa				
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10		
Sample Collected By	SEEPL Representative	Environmental condition of lab			
Date of Sampling	29/12/2022	Temperature(°C)	28.1	Humidity (%)	67
Analysis Started On	29/12/2022	Analysis Completed On	03/01/2023		

## STACK DETAILS

Attached To	Diesel Generator (2000 KVA) ( Sr. No. C220025)
Shape	Round
Diameter	0.40 Mtr
Height from Ground Level	30.0 Mtr
Material of Construction	M.S.
Temperature	443 °C
Velocity of Flue Gases	15.45 m/sec
Volumetric Flue Gas Flow Rate	6991.43 m <sup>3</sup> /hour
Volumetric Flue Gas Flow Rate	2907.48 Nm <sup>3</sup> /hour
Type of Fuel	H.S.D.
Fuel Consumption	350.00 lit/hr
Load	1600.00 KVA (80%)

## Chemical Testing - Atmospheric Pollution

Sr. No.	Parameter	Result	Limits**	Unit	Method
01.	Particulate Matter (at 15 % O <sub>2</sub> )	61.39	75.00	mg/Nm <sup>3</sup>	IS 11255 (part I)
02.	SO <sub>2</sub>	1.54	-	Kg/hour	IS 11255(Part II)
03.	NO <sub>x</sub> (at 15 % O <sub>2</sub> )	283.35	710.00	ppmv	IS 11255(Part VII)
04.	CO (at 15 % O <sub>2</sub> )	55.34	150.00	mg/Nm <sup>3</sup>	By Flue Gas Analyzer
05.	NMHC as C (at 15 %O <sub>2</sub> )	48.70	100.00	mg/Nm <sup>3</sup>	EPA Method 25

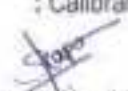
\*\* As per Sr. No. 94, 95, & 96 of Schedule I of "The Environment (Protection) Rules, 1986".

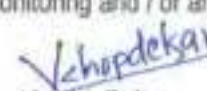
Note : Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling.

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Susmita Kapdoskar  
Analyzed by

  
Varsha Pole  
Reviewed by



  
Anand Deep Sawant  
Authorized Signatory

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Calibration details of Equipment used for Sampling & Analysis

Stack Kit (SR No.458-DTH-15)

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	Vayubodhan (VSS-1 )	18/02/2022	17/02/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

BHOOMI GAS ANALYSERS

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	Bhoomi Flexi (SI NO.5000391)	13/06/2022	12/06/2023



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ISO 9001:2015  
SHAW-115

Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

## NOISE LEVEL MONITORING REPORT

Report No.	SEE/AR/12/2022/0382,0322, 0439-0440, 0343, 0423, 344 0693-0694, 0424, 0566-0567	Date of Issue	03/01/2023
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sample Collected By	SEEPL Representative		
Sampling Plan	SEEPL/D/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10

### Chemical Testing - Atmospheric Pollution

Sr. No	Date of Monitoring	Report No.	Station ID	Zone	Sampling Location	Day Time Noise in dB(A)			Night Time Noise in dB(A)		
						Lmin	Lmax	Leq	Lmin	Lmax	Leq
1.	15/12/2022	SEE/AR/12/2022/0382	G-N1	I	Mopa Boundary	30.0	78.9	62.1	30.0	69.4	53.4
2.	12/12/2022	SEE/AR/12/2022/0322	G-N2	I	Shemecheadvan Boundary	30.0	75.2	60.8	31.2	71.4	54.3
3.	18/12/2022	SEE/AR/12/2022/0439	G-N3	C	Nagzar	32.5	71.2	56.3	30.4	64.3	49.8
4.	18/12/2022	SEE/AR/12/2022/0440	G-N4	R	Purva Casarvarnem	30.2	68.4	49.3	30.0	62.5	41.3
5.	14/12/2022	SEE/AR/12/2022/0343	G-N5	R	Chandel	31.6	69.5	47.7	30.3	67.4	39.8
6.	16/12/2022	SEE/AR/12/2022/0423	G-N6	R	Khajne Amere Porsoodem	32.8	68.4	46.1	30.0	56.3	38.7
7.	14/12/2022	SEE/AR/12/2022/0344	G-N7	R	Warkhand	30.5	69.4	48.3	30.1	62.4	39.1
8.	30/12/2022	SEE/AR/12/2022/0693	G-N8	C	Rajvil Wada Torxam	30.0	74.5	53.2	30.2	67.2	51.3
9.	30/12/2022	SEE/AR/12/2022/0694	G-N9	C	Village Panchayat Tamboxem -Mopa- Ugvem	30.4	72.5	52.1	30.2	62.5	48.9
10.	16/12/2022	SEE/AR/12/2022/0424	M-N1	R	Satarda	30.0	67.4	45.1	30.1	67.3	38.7
11.	26/12/2022	SEE/AR/12/2022/0566	M-N2	R	Dingna	30.3	69.3	46.3	30.9	66.2	40.4
12.	26/12/2022	SEE/AR/12/2022/0567	M-N3	R	Netarde	30.8	70.4	48.4	30.3	65.3	39.9

I – Industrial Zone, C – Commercial Zone, R – Residential Zone

➤ Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows:

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial Area ( I )	75	70
(B)	Commercial Area ( C )	65	55
(C)	Residential Area ( R )	55	45
(D)	Silence Zone ( S )	50	40

- Day time is reckoned in between 6.00am to 10.00pm and night time is reckoned in between 10.00pm to 6.00am.
- \*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A "decibel" is a unit in which noise is measured.
- \*A\*, in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
- Leq: It is the energy mean of the noise level over a specified period

**Note :** Monitoring has been done as per GPCB protocol for Ambient Level Noise Monitoring 2015.

- : Test results related only to the sample tested.
- : Test results relate only to the condition prevailing at the time of sampling
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- : Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Sanjivan Gawas  
Monitored by

Varsha Pole  
Reviewed by



Anandeeep  
Authorized Signatory

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Calibration Details of Equipment used for Sampling

Noise Level Meter No.1(A0913-1393 )

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	LES-CCL/MECH/SLM/563	17/07/2022	16/07/2023

Noise Level Meter No.2 (A0114-1408)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	LES-CCL/MECH/SLM/561	23/07/2022	22/07/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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ISO 9001  
ISO 45001

Lab accredited by MEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Mopa Boundary (Goa State) (G-A1)				
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	65	Latitude	N 15°45'51.1"
Average Wind Speed (km/hr)	1.6	Average Wind direction (Deg)	213	Longitude	E 73°56'32.4"
Instruments Used	FPS(APM-550), RDS(APM-460) &GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0030	76.54	15.76	5.87	9.54	0.06	95.84	<0.10
2	05/12/2022	SEE/AR/12/2022/0116	37.29	13.18	<3.00	<6.00	0.05	58.42	<0.10
3	08/12/2022	SEE/AR/12/2022/0232	73.35	18.13	5.40	9.35	0.07	98.92	<0.10
4	12/12/2022	SEE/AR/12/2022/0312	68.15	12.20	3.40	6.12	0.05	85.40	<0.10
5	15/12/2022	SEE/AR/12/2022/0373	68.18	20.16	3.60	6.08	0.07	86.87	<0.10
6	19/12/2022	SEE/AR/12/2022/0441	62.30	15.21	4.46	6.48	0.06	80.24	<0.10
7	22/12/2022	SEE/AR/12/2022/0507	70.11	16.33	5.21	8.24	0.07	88.36	<0.10
8	26/12/2022	SEE/AR/12/2022/0557	78.06	20.10	4.61	<6.00	0.05	101.26	<0.10
9	29/12/2022	SEE/AR/12/2022/0657	72.35	16.18	7.43	<6.00	0.08	91.24	<0.10

### NAAQS Limits\*

	100	60	80	80	4	-	1
Units	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method	IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 05)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

Note : Test results related only to the sample tested.

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- : Test methods of analyzed parameters are back side of analysis report.

1) Akash Pattad  
2) Dipali Sawant  
Analyzed by

Varsha Pole  
Reviewed by



Ananddeep  
Authorized Signatory

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E-mail : sadekarenviro@rediffmail.com • Website : www.sadekarenviro.com • CIN : U45209MH1989PTC-111111

Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2881-DTH-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 991-DT1-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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SEVA (11991)  
SVA/04

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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Shemeheadvan Boundary(Goa State) (G-A2)				
Average Ambient Temperature (°C)	31.8	Average Humidity (%)	67	Latitude	N 15°42'06.1"
Average Wind Speed (km/hr)	1.8	Average Wind direction (Deg)	232	Longitude	E 73°49'21.5"
Instruments Used	FPS(APM-550), RDS(APM-460) &GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0031	64.21	18.91	<3.00	9.79	0.05	85.76	<0.10
2	05/12/2022	SEE/AR/12/2022/0117	70.69	*22.50	4.49	8.69	0.07	98.43	<0.10
3	08/12/2022	SEE/AR/12/2022/0233	71.24	23.54	3.30	8.95	0.05	100.39	<0.10
4	12/12/2022	SEE/AR/12/2022/0313	49.90	19.13	<3.00	6.28	0.06	69.78	<0.10
5	15/12/2022	SEE/AR/12/2022/0374	40.55	11.89	<3.00	<6.00	0.07	52.48	<0.10
6	19/12/2022	SEE/AR/12/2022/0442	62.48	16.63	4.30	9.59	0.08	81.87	<0.10
7	22/12/2022	SEE/AR/12/2022/0508	71.05	17.34	5.54	10.51	0.06	93.13	<0.10
8	26/12/2022	SEE/AR/12/2022/0558	65.92	13.76	5.12	<6.00	0.05	85.79	<0.10
9	29/12/2022	SEE/AR/12/2022/0658	81.46	25.82	6.50	10.23	0.09	114.82	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO : SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling  
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 : Test methods of analyzed parameters are back side of analysis report.

1) Akash Pattade  
 2) Dipali Sawant  
 Analyzed by

Varsha Pole  
 Reviewed by



Ananddeep Sawant  
 Authorized Signatory



Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2871-DTG-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 992-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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CREATED BY  
DATE: 18/12/2022

Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022								
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited								
Address of Client	Mopa, Goa								
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.			SEEPL/QSP-10				
Sample Collected By	SEEPL Representative								
Month of Sampling	December 2022								
<b>AMBIENT AIR LOCATION</b>									
Location of ambient air station	Nagzar(Goa State) (G-A3)								
Average Ambient Temperature (°C)	31.7	Average Humidity (%)	67	Latitude	N 15°45'37.3"				
Average Wind Speed (km/hr)	1.5	Average Wind direction (Deg)	227	Longitude	E 73°53'14.22"				
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)								
Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0032	86.14	30.81	5.70	12.06	0.10	123.07	<0.10
2	05/12/2022	SEE/AR/12/2022/0118	80.11	25.31	6.58	12.80	0.08	115.09	<0.10
3	08/12/2022	SEE/AR/12/2022/0234	81.37	44.48	7.11	14.81	0.09	140.67	<0.10
4	12/12/2022	SEE/AR/12/2022/0314	55.86	26.46	3.97	<6.00	0.06	96.88	<0.10
5	15/12/2022	SEE/AR/12/2022/0375	64.58	21.60	4.28	8.24	0.08	90.43	<0.10
6	19/12/2022	SEE/AR/12/2022/0443	81.46	27.39	5.30	14.70	0.10	104.91	<0.10
7	22/12/2022	SEE/AR/12/2022/0509	83.75	21.09	4.38	7.34	0.07	111.31	<0.10
8	26/12/2022	SEE/AR/12/2022/0559	75.89	24.68	4.25	7.86	0.06	101.40	<0.10
9	29/12/2022	SEE/AR/12/2022/0659	84.16	27.90	7.15	10.97	0.08	114.58	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/ m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

**\*NATIONAL AMBIENT AIR STANDARDS (2009)**

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- : Test methods of analyzed parameters are back side of analysis report.

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2) Dipali Sawant  
Analyzed by

Varsha Pole  
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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1719-DTI-2012)	LES-CCL/FF/MF/SC/1716	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 1114 L 21)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEPL/2021-22/FLOW/3683	07/01/2022	07/01/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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ISO 14001

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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Purva Casarvarnem (Goa State)(G-A4)				
Average Ambient Temperature (°C)	30.8	Average Humidity (%)	64	Latitude	N 15°41'41.9"
Average Wind Speed (km/hr)	1.5	Average Wind direction (Deg)	225	Longitude	E 73°50'16.6"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0033	72.11	14.64	5.38	11.47	0.06	89.23	<0.10
2	05/12/2022	SEE/AR/12/2022/0119	69.47	22.68	6.15	11.16	0.05	98.33	<0.10
3	08/12/2022	SEE/AR/12/2022/0235	78.58	31.84	7.47	14.58	0.08	116.57	<0.10
4	12/12/2022	SEE/AR/12/2022/0315	33.23	15.97	<3.00	<6.00	0.03	50.34	<0.10
5	15/12/2022	SEE/AR/12/2022/0376	52.81	16.03	<3.00	6.64	0.06	68.32	<0.10
6	19/12/2022	SEE/AR/12/2022/0444	62.94	11.66	7.64	10.30	0.08	75.19	<0.10
7	22/12/2022	SEE/AR/12/2022/0510	84.96	18.01	8.38	11.48	0.07	108.82	<0.10
8	26/12/2022	SEE/AR/12/2022/0560	59.64	11.93	3.85	9.44	0.06	71.67	<0.10
9	29/12/2022	SEE/AR/12/2022/0660	38.34	7.85	<3.00	<6.00	0.05	51.79	<0.10
NAAQS Limits*			100	60	80	80	4	-	1
Units			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

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: Test methods of analyzed parameters are back side of analysis report.

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2) Dipali Sawant  
Analyzed by

Varsha Pole  
Reviewed by



Ananddeep Sawant  
Authorized Signatory

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E-mail : sadekarenviro@rediffmail.com • Website : www.sadekarenviro.com • CIN - U45209MH1988PTC-116117

Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2893-DTJ-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 983-DTJ-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Khajne Amere Porscodem (Goa State) (G-A5)				
Average Ambient Temperature (°C)	31.2	Average Humidity (%)	66	Latitude	N 15°40'38.0"
Average Wind Speed (km/hr)	1.3	Average Wind direction (Deg)	243	Longitude	E 73°46'21.2"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0034	54.18	20.11	4.01	12.20	0.05	75.49	<0.10
2	05/12/2022	SEE/AR/12/2022/0120	42.28	17.80	<3.00	8.96	0.05	65.89	<0.10
3	08/12/2022	SEE/AR/12/2022/0236	52.26	22.67	<3.00	<6.00	0.03	76.89	<0.10
4	12/12/2022	SEE/AR/12/2022/0316	37.40	6.99	<3.00	<6.00	0.05	47.94	<0.10
5	15/12/2022	SEE/AR/12/2022/0377	30.44	8.15	<3.00	<6.00	0.03	42.68	<0.10
6	19/12/2022	SEE/AR/12/2022/0445	41.44	16.34	4.23	<6.00	0.06	62.28	<0.10
7	22/12/2022	SEE/AR/12/2022/0511	59.33	19.46	<3.00	6.67	0.08	80.85	<0.10
8	26/12/2022	SEE/AR/12/2022/0561	36.29	10.27	<3.00	<6.00	0.03	47.60	<0.10
9	29/12/2022	SEE/AR/12/2022/0661	52.30	20.29	<3.00	11.02	0.05	73.92	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			<b>µg/ m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>mg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note :** Test results related only to the sample tested.

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: Test methods of analyzed parameters are back side of analysis report.

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2) Dipali Sawant  
Analyzed by

Varsha Pole  
Reviewed by



Arandeep Sawant  
Authorized Signatory

Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 2024-DTD-2016)	LES-CCL/FF/MF/SC/1722	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 1119 A 22)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEP/2021-22/FLOW/3682	07/01/2022	07/01/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Rajvil Wada Torxem (Goa State)(G-A6)				
Average Ambient Temperature (°C)	30.9	Average Humidity (%)	65	Latitude	N 15°48'40.0"
Average Wind Speed (km/hr)	1.7	Average Wind direction (Deg)	234	Longitude	E 73°52'50.2"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0035	74.34	19.02	5.86	8.80	0.08	98.77	<0.10
2	05/12/2022	SEE/AR/12/2022/0121	53.07	30.48	5.18	<6.00	0.05	94.06	<0.10
3	08/12/2022	SEE/AR/12/2022/0237	87.35	24.20	8.95	10.86	0.09	121.77	<0.10
4	12/12/2022	SEE/AR/12/2022/0317	32.40	10.69	<3.00	<6.00	0.03	43.25	<0.10
5	15/12/2022	SEE/AR/12/2022/0378	38.14	12.52	<3.00	<6.00	0.05	46.70	<0.10
6	19/12/2022	SEE/AR/12/2022/0446	61.76	17.38	6.65	9.76	0.07	80.04	<0.10
7	22/12/2022	SEE/AR/12/2022/0512	69.42	13.60	5.18	8.07	0.05	84.82	<0.10
8	26/12/2022	SEE/AR/12/2022/0562	61.89	16.30	<3.00	<6.00	0.05	83.14	<0.10
9	29/12/2022	SEE/AR/12/2022/0662	50.98	17.17	6.17	8.92	0.06	68.33	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>mg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

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Analyzed by

Varsha Pole  
Reviewed by



Ananddeep Sawant  
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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO.2891-DTJ-2020)	-	23/09/2022	22/09/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 298-DTJ 2014)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	EI/FF/3539	18/02/2022	17/02/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001  
ISO 45001

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Satarda(Maharashtra State)(M-A1)				
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	68	Latitude	N15°43'01.3"
Average Wind Speed (km/hr)	1.3	Average Wind direction (Deg)	207	Longitude	E 73°46'00.2"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0036	48.12	10.56	4.67	<6.00	0.05	60.31	<0.10
2	05/12/2022	SEE/AR/12/2022/0122	58.00	9.48	<3.00	<6.00	0.06	69.18	<0.10
3	08/12/2022	SEE/AR/12/2022/0238	43.44	7.58	<3.00	<6.00	0.03	53.12	<0.10
4	12/12/2022	SEE/AR/12/2022/0318	42.18	12.57	<3.00	<6.00	0.05	55.00	<0.10
5	15/12/2022	SEE/AR/12/2022/0379	36.87	9.54	<3.00	<6.00	0.03	53.80	<0.10
6	19/12/2022	SEE/AR/12/2022/0447	58.06	17.47	8.80	<6.00	0.06	76.80	<0.10
7	22/12/2022	SEE/AR/12/2022/0513	52.13	13.97	<3.00	<6.00	0.05	66.44	<0.10
8	26/12/2022	SEE/AR/12/2022/0563	36.76	9.81	<3.00	<6.00	0.05	52.85	<0.10
9	29/12/2022	SEE/AR/12/2022/0663	51.33	16.80	<3.00	6.24	0.06	70.89	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			µg/ m <sup>3</sup>	µg/ m <sup>3</sup>	µg/ m <sup>3</sup>	µg/ m <sup>3</sup>	mg/ m <sup>3</sup>	µg/ m <sup>3</sup>	µg/ m <sup>3</sup>
<b>Method</b>			IS 5182( Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 ( Part 10)	IS 5182 ( Part IV)	IS 5182 (Part 22)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

Note : Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

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: Test methods of analyzed parameters are back side of analysis report.

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Calibration details of Equipment used for Sampling & Analysis

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1461-DTD-2009)	LES-CCL/FF/MF/SC/1715	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 980-DT1-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001:2015

ISO 45001

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Dingna(Maharashtra State)(M-A2)				
Average Ambient Temperature (°C)	31.4	Average Humidity (%)	66	Latitude	N 15°46'12.3"
Average Wind Speed (km/hr)	1.5	Average Wind direction (Deg)	234	Longitude	E 73°49'20.5"
Instruments Used	FPS(APM-550), RDS(APM-460) & GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0037	61.83	15.40	<3.00	9.86	0.06	79.33	<0.10
2	05/12/2022	SEE/AR/12/2022/0123	47.10	26.86	<3.00	9.11	0.05	76.28	<0.10
3	08/12/2022	SEE/AR/12/2022/0239	64.12	8.03	7.06	7.60	0.06	75.64	<0.10
4	12/12/2022	SEE/AR/12/2022/0319	45.65	19.00	6.30	<6.00	0.07	66.73	<0.10
5	15/12/2022	SEE/AR/12/2022/0380	58.04	14.78	4.20	7.21	0.05	70.56	<0.10
6	19/12/2022	SEE/AR/12/2022/0448	54.63	11.10	5.22	9.23	0.06	68.39	<0.10
7	22/12/2022	SEE/AR/12/2022/0514	49.40	15.14	3.65	7.77	0.05	74.83	<0.10
8	26/12/2022	SEE/AR/12/2022/0564	39.96	7.86	5.96	<6.00	0.03	53.02	<0.10
9	29/12/2022	SEE/AR/12/2022/0664	49.14	8.69	6.79	<6.00	0.05	58.95	<0.10

#### NAAQS Limits\*

	100	60	80	80	4	-	1
Units	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method	IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

#### \*NATIONAL AMBIENT AIR STANDARDS (2009)

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 138 L 21)	ECL/SEEPL/202122/FLOW/3668	07/01/2022	07/01/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 01-DTK-2011)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 LC	EI/FF/3543	18/02/2022	17/02/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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ISO 9001

## AMBIENT AIR QUALITY MONITORING REPORT

Report Date	31/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10
Sample Collected By	SEEPL Representative		
Month of Sampling	December 2022		

### AMBIENT AIR LOCATION

Location of ambient air station	Netarde(Maharashtra State)(M-A3)				
Average Ambient Temperature (°C)	31.4	Average Humidity (%)	65	Latitude	N 15°46'11.7"
Average Wind Speed (km/hr)	1.4	Average Wind direction (Deg)	218	Longitude	E 73°50'48.0"
Instruments Used	FPS(APM-550), RDS(APM-460) &GPS (APM - 411)				

Sr. No	Date of Sampling	Report No.	PARAMETERS						
			PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	SPM	Pb
1	01/12/2022	SEE/AR/12/2022/0038	69.32	18.88	5.49	7.89	0.08	91.28	<0.10
2	05/12/2022	SEE/AR/12/2022/0124	57.59	17.01	5.91	<6.00	0.06	75.91	<0.10
3	08/12/2022	SEE/AR/12/2022/0240	79.14	37.43	7.97	11.60	0.07	118.42	<0.10
4	12/12/2022	SEE/AR/12/2022/0320	68.69	16.30	6.79	6.21	0.05	91.96	<0.10
5	15/12/2022	SEE/AR/12/2022/0381	51.76	11.52	5.07	<6.00	0.06	63.68	<0.10
6	19/12/2022	SEE/AR/12/2022/0449	50.49	15.55	6.05	8.30	0.07	67.24	<0.10
7	22/12/2022	SEE/AR/12/2022/0515	63.67	19.05	3.57	7.26	0.08	89.63	<0.10
8	26/12/2022	SEE/AR/12/2022/0565	68.02	11.64	<3.00	7.32	0.06	84.81	<0.10
9	29/12/2022	SEE/AR/12/2022/0665	66.08	12.52	6.95	8.65	0.05	79.30	<0.10
<b>NAAQS Limits*</b>			<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>4</b>	<b>-</b>	<b>1</b>
<b>Units</b>			<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>mg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>
<b>Method</b>			IS 5182 (Part 23)	Lab SOP NO.: SEE/LD/SOP-AA-04	IS 5182 (Part 02)	IS 5182 (Part 06)	IS 5182 (Part 10)	IS 5182 (Part IV)	IS 5182 (Part 22)

### \*NATIONAL AMBIENT AIR STANDARDS (2009)

**Note :** Test results related only to the sample tested.

: Test results relate only to the condition prevailing at the time of sampling

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 (SR NO. 1901-DTJ-2014)	LES-CCL/FF/MF/SC/1718	13/07/2022	12/07/2023

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 977-DTI-2020)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	-	23/09/2022	22/09/2023

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (SR No. 01 DT L14)	18/11/2022	17/11/2023



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AIR QUALITY MONITORING REPORT					
Report No.	SEE/AR/12/2022/0358	Date of Issue	21/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of Lab			
Date of Sampling	15/12/2022	Temperature(°C)	28.0	Humidity (%)	66
Analysis Started On	17/12/2022	Analysis Completed On	21/12/2022		

Location of ambient air station	Mopa Boundary (Goa State)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
 : Test results relate only to the condition prevailing at the time of sampling.  
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Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	101-DTD-2014	EI/FF/3523	18/02/2022	17/02/2023



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AIR QUALITY MONITORING REPORT					
Report No.	SEE/AR/12/2022/0359	Date of Issue	21/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of Lab			
Date of Sampling	15/12/2022	Temperature(°C)	28.0	Humidity (%)	66
Analysis Started On	17/12/2022	Analysis Completed On	21/12/2022		

Location of ambient air station	HSD Bunk (Inside Mopa Airport Premises)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
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Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	24-DTD-2016	EI/FF/3524	18/02/2022	17/02/2023



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SEE/AR/12

21/12

AIR QUALITY MONITORING REPORT					
Report No.	SEE/AR/12/2022/0360	Date of Issue	21/12/2022		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of Lab			
Date of Sampling	15/12/2022	Temperature(°C)	28.0	Humidity (%)	66
Analysis Started On	17/12/2022	Analysis Completed On	21/12/2022		

Location of ambient air station	Shemecheadvan Boundary (Goa State)
Instruments Used	Organic Vapour Sampler

### Chemical Testing - Atmospheric Pollution

Sr. No.	Parameters	Result	Unit	Method
01.	Total VOC	<1.0	ppm	Method 18

- Note :** Test results related only to the sample tested.  
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Calibration details of Equipment used for Sampling & Analysis

Organic Vapour Sampler

Sr No.	Equipment Name	Sr. No.	Certificate No.	Calibrated on	Calibration due date
01	OVS Sampler	101-DTD-2014	EI/FF/3523	18/02/2022	17/02/2023



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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/192	Issue Date	14/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPL/D/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	STP (KMV)			
Sample details	Inlet Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	Method
1.	pH	6.84	-	APHA( 23 <sup>rd</sup> Edition ) 4500 H+B
2.	Chemical Oxygen Demand (COD)	540.00	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	149.94	mg/lit	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	121.00	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	6.60	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 5520-O & G

**Note:** Test results related only to the sample tested.

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Reviewed By



Anandheep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
03.	BOD Incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
04.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023



# Sadekar Enviro Engineers Pvt. Ltd.

B-306/307, Plot No. 01, Patel Estate, Reis Margos, Verem, Ato, Old Belim Road, Bandra, Porvorn, Panaji-Goa-403 101, Goa State, India. ☎ (0832) 2411322 / 2411323 • E-mail: satekar@rediffmail.com

SINE OFFER

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ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	SEE/12/2022/193	Issue Date	14/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	STP (KMV)			
Sample details	Outlet Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	*Limits	Method
1.	pH	6.93	-	5.5 – 9.0	APHA( 23 <sup>rd</sup> Edition ) 4500 H+B
2.	Chemical Oxygen Demand (COD)	40.00	mg/lit	50.00	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	7.50	mg/lit	10.00	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	17.00	mg/lit	20.00	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	2.60	mg/lit	10.00	APHA( 23 <sup>rd</sup> Edition ) 5520-O & G
6.	Ammonia	3.36	mg/lit	5.00	APHA( 23 <sup>rd</sup> Edition ) 4500 NH3B C
7.	Total Nitrogen ( as N)	7.00	mg/lit	10.00	APHA( 23 <sup>rd</sup> Edition ) 4500 N-B

### Microbiological Parameters

B.	Fecal coliforms at 44.5°C for 24 hrs.	31	MPN Index/100ml	100	APHA ( 23 <sup>rd</sup> Edition ) 9221-E
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**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is on each side of analysis report.

1. Asmita Sawant

2. Anisha Parab

Analyzed By

*Asmita Sawant*  
*Anisha Parab*

*Vinoddekar*  
Varsha Pola  
Reviewed By



*Ananddeep Sawant*  
Authorized Signatory

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Gasfied By Ministry of Environment, Forest & Climate Change, Govt Of India, S. O. 657 (E)

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### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	Hol Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023
03.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
04.	BOD incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

B-306/307, Plot No. 01, Patel Estate, Reis Magos, Verem, Als, Old Beten Road, Bandol, Porvur, Panaji-Goa-403 101.  
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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/194	Issue Date	14/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPLLD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	STP (150 KLD)			
Sample details	Inlet Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	Method
1.	pH	6.86	-	APHA( 23 <sup>rd</sup> Edition ) 4500 H+B
2.	Chemical Oxygen Demand (COD)	712.00	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	218.16	mg/lit	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	128.00	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	14.60	mg/lit	APHA( 23 <sup>rd</sup> Edition ) 5520-O &G

**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Asmita Sawant  
Analyzed By

Varsha Pole  
Reviewed By



Anandjeep Sawant  
Authorized Signatory

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### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
03.	BOD incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
04.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	SEE/12/2022/195	Issue Date	14/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPL/D/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	STP(150 KLD)			
Sample details	Outlet Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022	
Sample Container	Glass Bottle + PVC Can	Sample Quantity	1000 ml + 1000ml	

### Chemical Parameters

Sr. No.	Parameters	Results	Unit	*Limits	Method
1.	pH	5.67	-	5.5 – 9.0	APHA( 23 <sup>rd</sup> Edition ) 4500 H+B
2.	Chemical Oxygen Demand (COD)	72.00	mg/lit	250.00	APHA( 23 <sup>rd</sup> Edition ) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	16.20	mg/lit	30.00	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	51.00	mg/lit	100.00	APHA( 23 <sup>rd</sup> Edition ) 2540-D
5.	Oil & Grease (O & G)	2.80	mg/lit	10.00	APHA( 23 <sup>rd</sup> Edition ) 5520-O & G

**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Asmita Sawant  
Analyzed By

Varsha Pole  
Reviewed By



Ananddeep Sawant  
Authorized Signatory

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### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Date
01.	pH Meter	Q/062	2022/08/277	13/08/2022	13/08/2023
02.	COD Digester	Q/019	E2022/04/024	18/04/2022	18/04/2023
03.	BOD incubator	Q/002	E2022/04/023	18/04/2022	18/04/2023
04.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/201	Issue Date	12/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling point	L.S.C			
Sample details	Drinking Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	12/12/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNindex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNindex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

*Anisha Parab*

Anisha Parab  
Analyzed by

*Varsha Pole*

Varsha Pole  
Reviewed By



*Anand Deep Sawant*

Anand Deep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C)	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/202	Issue Date	12/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling point	VNC Colony			
Sample details	Drinking Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	12/12/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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Anisha Parab  
Analyzed by

Varsha Pois  
Reviewed By



Apurdeep Sawant  
Authorized Signatory



### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/203	Issue Date	12/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling point	P.T.B			
Sample details	Drinking Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	12/12/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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Anisha Parab  
Analyzed by

Varsha Pole  
Reviewed By



Ajaydeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/204	Issue Date	12/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling point	Megawide Labor Colony			
Sample details	Drinking Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	12/12/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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*Anisha Parab*  
Anisha Parab  
Analyzed by

*Varsha Pole*  
Varsha Pole  
Reviewed By



*Anandhep Sawant*  
Anandhep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/206	Issue Date	12/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling point	KMV			
Sample details	Drinking Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	12/12/2022	
Sample Container	Glass bottle	Sample Quantity	1000 ml	

### Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	MPN	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
2.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Anisha Parab  
Analyzed by

Versha Pole  
Reviewed By



Anandjeep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
02.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
03.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
04.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

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S/W/L/11/11/22

S/W/L/11

## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/205	Issue Date	14/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPL/D/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	Borewell No. 2			
Sample details	Ground Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	7.30	-	6.5 - 8.5	IS 3025 (Part 11)
2.	Turbidity	0.64	NTU	1.00	IS 3025 (Part 10)
3.	Taste	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2160 B
4.	Color	<1.00	Hazen unit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2120 B
5.	Odour	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2150 B
6.	Total Alkalinity	28.00	mg/lit	200.00	IS 3025 (Part 23)
7.	Total Dissolved Solids	63.00	mg/lit	500.00	IS 3025 (Part 16)
8.	Chlorides as Cl <sup>-</sup>	14.01	mg/lit	250.00	IS 3025 (Part 32)
9.	Sulphate as SO <sub>4</sub> <sup>-</sup>	<5.00	mg/lit	200.00	IS 3025 (Part 24)
10.	Sulfides	<2.00	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 S <sup>2</sup> F
11.	Total Hardness as CaCO <sub>3</sub>	30.00	mg/lit	200.00	IS 3025 (Part 21)
12.	Ammonia	<0.50	mg/lit	0.50	IS- 3025 (Part 34)
13.	Mineral oil	<0.1	mg/lit	0.50	Clause 6 of IS 3025 (Part 39)

1. Anisha Parab

2. Shreya Harmalkar

Analyzed by

Varsha Pole  
Reviewed By



Apardeep Sawant  
Authorized Signatory



Report No.	SEE/12/2022/205	Issue Date	14/12/2022
Order / Reference	As per dated 08/12/2022	Sample Received On	08/12/2022
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

#### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	<0.20	mg/lit	0.20	IS 3025 (Part 26)
15.	Nitrate as NO <sub>3</sub>	<1.00	mg/lit	45.00	IS 3025 (Part 34)
16.	Fluoride as F <sup>-</sup>	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 F D
17.	Phenolic compound	<0.02	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5530-B,C
18.	Cyanide	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5540 - C

#### Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	IS 3025 (Part 2)
21.	Arsenic as As	<0.01	mg/lit	0.01	IS 3025 (Part 2)
22.	Boron as B	<0.01	mg/lit	0.50	IS 3025 (Part 2)
23.	Calcium as Ca	8.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	IS 3025 (Part 2)
25.	Iron as Fe	0.11	mg/lit	1.00	IS 3025 (Part 2)
26.	Lead as Pb	<0.01	mg/lit	0.01	IS 3025 (Part 2)
27.	Magnesium as Mg	2.42	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Mg B
28.	Chromium as Cr	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	IS 3025 (Part 2)
30.	Zinc as Zn	0.05	mg/lit	5.00	IS 3025 (Part 2)
31.	Sodium as Na	2.16	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
32.	Potassium as K	1.22	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
33.	Copper as Cu	<0.01	mg/lit	0.05	IS 3025 (Part 2)

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*Vishopdekar*  
Varsha Pola  
Reviewed By



*Agan Deep Sawant*  
Agan Deep Sawant  
Authorized Signatory

Report No.	SEE/12/2022/205	Issue Date	14/12/2022
Order / Reference	As per dated 08/12/2022	Sample Received On	08/12/2022
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

**Microbiological Parameters**

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34.	Total coliforms at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
35.	E.coli at 44.5°C for 24hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

1. Anisha Parab

2. Shreya Harmalkar

Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*Varsha Pole*  
Reviewed By



*Angadheep Sawant*  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/168	T2022/04/020	18/04/2022	18/04/2023
02.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023
03.	U V Spectrophotometer	Q/0166	-	Inhouse Calibration	
04.	ICP- OES	Q/162	-	Inhouse Calibration	
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# Sadekar Enviro Engineers Pvt. Ltd.

B-305207, Plot No. 81, Palm Estate, Reis Margot, Verem, Aha, Old Belim Road, Bantol, Porvair, Panaji-Goa-403 101  
Goa State, India. ☎ : (0832) 2411322 / 2411323 • E-mail : [sadekar@rediffmail.com](mailto:sadekar@rediffmail.com)

SFM: (10/17/1)  
SFA/LEF

Lab accredited by MoEF & CC Valid up to 03.11.2023 • Certified by ISO 9001:2015 & ISO 45001 : 2018

## ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/12/2022/199	Issue Date	14/12/2022	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 08/12/2022	Environmental Condition of Lab	Temp °C	Humidity %
			28.1	68
Sampling Plan	SEEPL/LD/FMT- 54	Sampling Procedure No.	SEEPL/QSP-10	
Sampling point	WTP - Treated			
Sample details	UG tank Water	Date of collection	08/12/2022	
Sample Collected by	SEEPL Representative	Sample Received On	08/12/2022	
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	7.24	-	6.5 - 8.5	IS 3025 (Part 11)
2.	Turbidity	0.81	NTU	1.00	IS 3025 (Part 10)
3.	Taste	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2160 B
4.	Color	<1.00	Hazen unit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2120 B
5.	Odour	Agreeable	-	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 2150 B
6.	Total Alkalinity	34.00	mg/lit	200.00	IS 3025 (Part 23)
7.	Total Dissolved Solids	75.00	mg/lit	500.00	IS 3025 (Part 16)
8.	Chlorides as Cl <sup>-</sup>	16.51	mg/lit	250.00	IS 3025 (Part 32)
9.	Sulphate as SO <sub>4</sub> <sup>-</sup>	<5.00	mg/lit	200.00	IS 3025 (Part 24)
10.	Sulfides	<2.00	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 S <sup>2</sup> F
11.	Total Hardness as CaCO <sub>3</sub>	36.00	mg/lit	200.00	IS 3025 (Part 21)
12.	Ammonia	<0.50	mg/lit	0.50	IS- 3025 (Part 34)
13.	Mineral oil	<0.1	mg/lit	0.50	Clause 6 of IS.3025 (Part 39)

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*V Chopdekar*  
Varsha Pole  
Reviewed By



*Anandheep Sawant*  
Anandheep Sawant  
Authorized Signatory


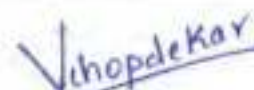

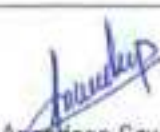
Report No.	SEE/12/2022/199	Issue Date	14/12/2022
Order / Reference	As per dated 08/12/2022	Sample Received On	08/12/2022
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

#### Chemical Testing

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	<0.20	mg/lit	0.20	IS 3025 (Part 26)
15.	Nitrate as NO <sub>3</sub>	<1.00	mg/lit	45.00	IS 3025 (Part 34)
16.	Fluoride as F <sup>-</sup>	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 F D
17.	Phenolic compound	<0.02	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5530-B,C
18.	Cyanide	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 5540 - C

#### Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	IS 3025 (Part 2)
21.	Arsenic as As	<0.01	mg/lit	0.01	IS 3025 (Part 2)
22.	Boron as B	<0.01	mg/lit	0.50	IS 3025 (Part 2)
23.	Calcium as Ca	8.81	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	IS 3025 (Part 2)
25.	Iron as Fe	0.07	mg/lit	1.00	IS 3025 (Part 2)
26.	Lead as Pb	<0.01	mg/lit	0.01	IS 3025 (Part 2)
27.	Magnesium as Mg	3.40	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3500Mg B
28.	Chromium as Cr	<0.01	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	IS 3025 (Part 2)
30.	Zinc as Zn	0.04	mg/lit	5.00	IS 3025 (Part 2)
31.	Sodium as Na	1.66	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
32.	Potassium as K	0.57	mg/lit	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 3120 B
33.	Copper as Cu	<0.01	mg/lit	0.05	IS 3025 (Part 2)

1. Anisha Parab 2. Shreya Harmalkar Analyzed by		 Varsha Pole Reviewed By		 Anand Deep Sawant Authorized Signatory
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Report No.	SEE/12/2022/199	Issue Date	14/12/2022
Order / Reference	As per dated 08/12/2022	Sample Received On	08/12/2022
Analysis Started On	08/12/2022	Analysis Completed On	14/12/2022
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

**Microbiological Parameters**

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34.	Total coliforms at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-B
35.	E.coli at 44.5°C for 24hrs.	Absent	MPN Index/100ml	Not Specified	APHA( 23 <sup>rd</sup> Edition ) 9221-G

**Note:** Test results related only to the sample tested.

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: Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

1. Anisha Parab  
2. Shreya Harmalkar  
Analyzed by

*Anisha Parab*  
*Shreya Harmalkar*

*V. Chopdekar*  
Varsha Pole  
Reviewed By



*Anandhep Sawant*  
Anandhep Sawant  
Authorized Signatory

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	Q/168	T2022/04/020	18/04/2022	18/04/2023
02.	Hot Air Oven	Q/039	T2022/06/014	09/06/2022	09/06/2023
03.	U V Spectrophotometer	Q/0166	-	Inhouse Calibration	
04.	ICP- OES	Q/162	-	Inhouse Calibration	
05.	Microbiological Incubator ( 37 °C )	Q/003	T2022/08/004	13/08/2022	13/08/2023
06.	Microbiological Incubator (44.5 °C )	Q/004	T2022/08/003	13/08/2022	13/08/2023
07.	Laminar Air Flow	Q/001	2022/08/322	13/08/2022	13/08/2023
08.	Autoclave	Q/010	M2022/04/031	18/04/2022	18/04/2023



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

OFF: 15, Hindustan Kohinor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.  
Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	62
Average Wind Speed (km/hr)	12.4	Average Wind direction (Deg)	221
Latitude	N 15°45'51.1"	Longitude	E 73°56'32.4"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

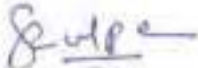
Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0031A	98.20	70.31	15.28	< 6.0	< 9.0	0.9	0.07	< 1.0
2	05/01/2023	GA/23/0038A	102.40	65.95	19.89	< 6.0	< 9.0	0.84	0.04	< 1.0
3	09/01/2023	GA/23/0053A	99.60	59.78	20.65	< 6.0	< 9.0	1.08	0.05	< 1.0
4	12/01/2023	GA/23/0064A	96.10	64.56	17.72	< 6.0	< 9.0	0.79	0.03	< 1.0
5	16/01/2023	GA/23/0077	95.40	73.94	14.84	< 6.0	< 9.0	1.33	0.06	< 1.0
6	19/01/2023	GA/23/0090	97.30	64.71	19.67	< 6.0	< 9.0	0.71	0.01	< 1.0
7	23/01/2023	GA/23/0118	88.10	63.35	12.77	< 6.0	< 9.0	1.3	0.05	< 1.0
8	27/01/2023	GA/23/0140	81.70	65.05	14.43	< 6.0	< 9.0	0.84	0.07	< 1.0
	30/01/2023	GA/23/0157	72.50	60.74	11.23	< 6.0	< 9.0	0.39	0.06	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

#### \*N.A.A.Q.S. - National Ambient Air Quality Standards

##### Note :

- The results relate only to the samples tested.
- Test Report shall not be reproduced except in full, without written approval of the laboratory.
- Samples will be preserved for a period 15 days from the delivery of Test Report.
- Test Results relate only to the conditions prevailing at the time of sampling.
- Customer complaint register is available at laboratory.
- Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
CHECKED BY



**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 9	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 934-DTA-2020	07/03/2022	07/03/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	09/03/2022	09/03/2023
Gaseous Sampler Sr. No. 6896-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 6091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Shemecheadvan Goa State (G-A2)		
Average Ambient Temperature (°C)	31.8	Average Humidity (%)	67
Average Wind Speed (km/hr)	18.2	Average Wind direction (Deg)	235
Latitude	N 15°42'06.1"	Longitude	E 73°49'21.5"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

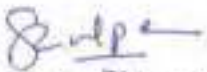
Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0030A	115.30	65.9	13.98	< 6.0	< 9.0	0.95	0.04	< 1.0
2	05/01/2023	GA/23/0037A	122.10	69.76	15.87	< 6.0	< 9.0	1.05	0.02	< 1.0
3	09/01/2023	GA/23/0053	147.40	76.81	16.59	< 6.0	< 9.0	1.17	0.03	< 1.0
4	12/01/2023	GA/23/0064	115.10	70.22	17.92	< 6.0	< 9.0	0.85	0.02	< 1.0
5	16/01/2023	GA/23/0076	88.30	52.35	11.35	< 6.0	< 9.0	0.47	0.04	< 1.0
6	19/01/2023	GA/23/0089	105.60	58.66	29.98	< 6.0	< 9.0	0.62	0.03	< 1.0
7	23/01/2023	GA/23/0117	86.20	60.67	11.27	< 6.0	< 9.0	0.61	0.04	< 1.0
8	27/01/2023	GA/23/0139	77.30	55.26	10.23	< 6.0	< 9.0	1.05	0.06	< 1.0
9	30/01/2023	GA/23/0156	69.10	53.69	14.51	< 6.0	< 9.0	0.38	0.03	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 80, Appendix-L 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

#### \*N.A.A.Q.S. – National Ambient Air Quality Standards


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- Samples will be preserved for a period 15 days from the delivery of Test Report.
- Test Results relate only to the conditions prevailing at the time of sampling.
- Customer complaint register is available at laboratory.
- Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

For **GADARK LAB PVT. LTD.**

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
CHECKED BY

**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 8	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 916-DTA-2020	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 1329-R-273-DTG-2015	05/03/2022	05/03/2023
Gaseous Sampler Sr. No. 6787-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 800	17/01/2023	16/01/2024



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
Tel.: (02362) 223519 • E-mail: info@gadark.in • Website: www.gadark.in

OFF.: 15, Hindustan Kothanor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	31.6	Average Humidity (%)	58
Average Wind Speed (km/hr)	15.1	Average Wind direction (Deg)	218
Latitude	N 15°45'37.3"	Longitude	E 73°53'14.22"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0023	247.10	74.14	25.74	< 6.0	< 9.0	0.69	0.05	< 1.0
2	05/01/2023	GA/23/0030	180.40	74.92	22.41	< 6.0	< 9.0	0.63	0.01	< 1.0
3	09/01/2023	GA/23/0046	190.30	73.80	22.95	< 6.0	< 9.0	1.24	0.04	< 1.0
4	12/01/2023	GA/23/0057	164.70	71.68	20.29	< 6.0	< 9.0	1.22	0.02	< 1.0
5	16/01/2023	GA/23/0069	133.00	72.82	17.84	< 6.0	< 9.0	0.97	0.03	< 1.0
6	19/01/2023	GA/23/0082	127.50	70.49	21.79	< 6.0	< 9.0	1.12	0.04	< 1.0
7	23/01/2023	GA/23/0110	137.90	73.82	16.63	< 6.0	< 9.0	0.95	0.03	< 1.0
8	27/01/2023	GA/23/0132	146.70	75.32	19.63	< 6.0	< 9.0	0.78	0.06	< 1.0
9	30/01/2023	GA/23/0149	136.8	76.86	16.84	< 6.0	< 9.0	1.1	0.03	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

#### \*N.A.A.Q.S. – National Ambient Air Quality Standards

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 1	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 301-DTK-2015	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 2823-DTB-2020	05/03/2022	05/03/2023
Gaseoue Sampler Sr. No. 6771-DTH-2020	05/03/2022	05/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Purva Casarvarnem - Goa State (G-A4)		
Average Ambient Temperature (°C)	31.8	Average Humidity (%)	68
Average Wind Speed (km/hr)	13	Average Wind direction (Deg)	232
Latitude	N 15°41'41.9"	Longitude	E 73°50'16.6"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0024	107.40	65.47	18.01	< 6.0	< 9.0	0.57	0.03	< 1.0
2	05/01/2023	GA/23/0031	112.20	64.5	15.59	< 6.0	< 9.0	1.21	0.05	< 1.0
3	09/01/2023	GA/23/0047	178.20	67.22	14.26	< 6.0	< 9.0	1.03	0.03	< 1.0
4	12/01/2023	GA/23/0058	100.70	65.06	11.27	< 6.0	< 9.0	1	0.01	< 1.0
5	16/01/2023	GA/23/0070	101.10	65.61	19.21	< 6.0	< 9.0	1.04	0.03	< 1.0
6	19/01/2023	GA/23/0083	121.30	68.5	19.92	< 6.0	< 9.0	0.44	0.02	< 1.0
7	23/01/2023	GA/23/0111	108.50	75.23	13.31	< 6.0	< 9.0	0.79	0.05	< 1.0
8	27/01/2023	GA/23/0133	119.20	66.74	17.42	< 6.0	< 9.0	1.07	0.04	< 1.0
9	30/01/2023	GA/23/0150	109.70	62.72	14.35	< 6.0	< 9.0	0.55	0.08	< 1.0
<b>NAAQS LIMITS *</b>			--	100	60	80	80	2	1	--
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

**AUTHORISED SIGNATORY**  
[SANTOSH V. ZULPE]



**CHECKED BY**

**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 2	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 336-DTK-2015	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 2832-DTB-2020	09/03/2022	09/03/2023
Gaseoue Sampler Sr. No. 6888-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	68
Average Wind Speed (km/hr)	9.2	Average Wind direction (Deg)	240
Latitude	N 15°40'38.0"	Longitude	E 73°46'21.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0025	93.50	60.21	10.23	< 6.0	< 9.0	0.67	0.03	< 1.0
2	05/01/2023	GA/23/0032	100.10	64.77	12.27	< 6.0	< 9.0	0.64	0.06	< 1.0
3	09/01/2023	GA/23/0048	114.10	57.81	11.56	< 6.0	< 9.0	1.57	0.05	< 1.0
4	12/01/2023	GA/23/0059	88.80	59.56	12.14	< 6.0	< 9.0	0.82	0.02	< 1.0
5	16/01/2023	GA/23/0071	55.50	49.24	11.44	< 6.0	< 9.0	1.26	0.04	< 1.0
6	19/01/2023	GA/23/0084	81.40	56.83	14.6	< 6.0	< 9.0	0.87	0.03	< 1.0
7	23/01/2023	GA/23/0112	60.40	50.42	9.15	< 6.0	< 9.0	1.04	0.06	< 1.0
8	27/01/2023	GA/23/0134	54.20	44.48	10.23	< 6.0	< 9.0	1.28	0.06	< 1.0
9	30/01/2023	GA/23/0151	43.60	52.75	11.73	< 6.0	< 9.0	0.6	0.03	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2008	USEPA FEM, 40 CFR Part 50, Appendix-L 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18


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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 3	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 919-DTA-2020	07/03/2022	07/03/2023
Respirable Dust Sampler Sr. No. 2841-DTB-2020	09/03/2022	09/03/2023
Gaseoue Sampler Sr. No. 6904-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	31.9	Average Humidity (%)	67
Average Wind Speed (km/hr)	5.2	Average Wind direction (Deg)	220
Latitude	N 15°48'40.0"	Longitude	E 73°52'50.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0028	97.00	55.59	11.39	< 6.0	< 9.0	0.81	0.02	< 1.0
2	05/01/2023	GA/23/0035	106.30	59.19	10.77	< 6.0	< 9.0	0.65	0.04	< 1.0
3	09/01/2023	GA/23/0051	146.00	57.83	14.1	< 6.0	< 9.0	1.55	0.04	< 1.0
4	12/01/2023	GA/23/0062	94.40	54.27	11.6	< 6.0	< 9.0	0.26	0.03	< 1.0
5	16/01/2023	GA/23/0074	80.60	66.06	12.35	< 6.0	< 9.0	1.2	0.05	< 1.0
6	19/01/2023	GA/23/0087	89.20	63.93	12.77	< 6.0	< 9.0	0.95	0.05	< 1.0
7	23/01/2023	GA/23/0115	85.00	66.5	16.51	< 6.0	< 9.0	0.47	0.06	< 1.0
8	27/01/2023	GA/23/0137	74.30	70.82	12.39	< 6.0	< 9.0	0.41	0.09	< 1.0
9	30/01/2023	GA/23/0154	63.00	68.54	15.22	< 6.0	< 9.0	0.36	0.06	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

*Santosh V. Zulpe*

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 6	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 335-DTF-2015	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2022	16/05/2023
Gaseoue Sampler Sr. No. 262-D-22	16/05/2022	16/05/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	30.7	Average Humidity (%)	63
Average Wind Speed (km/hr)	7.8	Average Wind direction (Deg)	192
Latitude	N 15°43'01.3"	Longitude	E 73°46'00.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)


Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0026	99.20	65.09	11.56	< 6.0	< 9.0	0.52	0.02	< 1.0
2	05/01/2023	GA/23/0033	89.60	59.71	12.02	< 6.0	< 9.0	0.47	0.05	< 1.0
3	09/01/2023	GA/23/0049	109.00	64.29	10.19	< 6.0	< 9.0	0.7	0.04	< 1.0
4	12/01/2023	GA/23/0060	97.10	64.34	12.97	< 6.0	< 9.0	0.56	0.01	< 1.0
5	16/01/2023	GA/23/0072	52.40	58.2	9.69	< 6.0	< 9.0	0.54	0.05	< 1.0
6	19/01/2023	GA/23/0085	86.60	61.28	14.22	< 6.0	< 9.0	1.24	0.03	< 1.0
7	23/01/2023	GA/23/0113	69.30	61.42	12.85	< 6.0	< 9.0	0.52	0.06	< 1.0
8	27/01/2023	GA/23/0135	80.50	53.23	15.09	< 6.0	< 9.0	0.83	0.07	< 1.0
9	30/01/2023	GA/23/0152	70.20	59.7	13.72	< 6.0	< 9.0	0.69	0.05	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 4	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 1957-DTA-2020	17/03/2022	17/03/2023
Respirable Dust Sampler Sr. No. 2827-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	31.3	Average Humidity (%)	69
Average Wind Speed (km/hr)	11.4	Average Wind direction (Deg)	228
Latitude	N 15°46'12.3"	Longitude	E 73°49'20.5"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0029	87.50	56.67	12.02	< 6.0	< 9.0	1.07	0.01	< 1.0
2	05/01/2023	GA/23/0036	92.60	63.95	13.1	< 6.0	< 9.0	0.7	0.02	< 1.0
3	09/01/2023	GA/23/0052	120.00	45.21	15.97	< 6.0	< 9.0	1.83	0.01	< 1.0
4	12/01/2023	GA/23/0063	80.40	53.83	10.15	< 6.0	< 9.0	1.19	0.01	< 1.0
5	16/01/2023	GA/23/0075	60.10	60.42	10.77	< 6.0	< 9.0	0.79	0.03	< 1.0
6	19/01/2023	GA/23/0088	72.50	57.2	21.37	< 6.0	< 9.0	0.68	0.04	< 1.0
7	23/01/2023	GA/23/0116	60.70	71.77	13.68	< 6.0	< 9.0	0.34	0.04	< 1.0
8	27/01/2023	GA/23/0138	88.80	65.21	18.96	< 6.0	< 9.0	0.55	0.07	< 1.0
9	30/01/2023	GA/23/0155	79.40	59.03	13.97	< 6.0	< 9.0	1.05	0.05	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2008	USEPA FEM, 40 CFR Part 60, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

#### \*N.A.A.Q.S. – National Ambient Air Quality Standards

Note :

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- Customer complaint register is available at laboratory.
- Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

For GADARK LAB PVT. LTD.

*Santosh V. Zulpe*

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



*K. S. Jayaram*

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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 7	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 1955-DTA-2020	17/03/2022	17/03/2023
Respirable Dust Sampler Sr. No. 1284-R-228-DTK-2014	05/03/2022	05/03/2023
Gaseoue Sampler Sr. No. 1440-DTJ-2014	05/03/2022	05/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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## INDUSTRIAL ANALYSTS & CONSULTANTS

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### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/02/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	January 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	30.6	Average Humidity (%)	4
Average Wind Speed (km/hr)	4.7	Average Wind direction (Deg)	214
Latitude	N 15°46'11.7"	Longitude	E 73°53'47.0"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

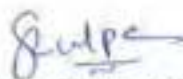
Sr. No.	Date of Sampling	Report No.	PARAMETERS							
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	Lead	VOC
1	02/01/2023	GA/23/0027	50.60	48.93	12.77	< 6.0	< 9.0	0.49	0.03	< 1.0
2	05/01/2023	GA/23/0034	55.20	49.32	12.18	< 6.0	< 9.0	0.53	0.01	< 1.0
3	09/01/2023	GA/23/0050	99.80	43.17	11.88	< 6.0	< 9.0	0.78	0.01	< 1.0
4	12/01/2023	GA/23/0061	66.90	46.4	14.06	< 6.0	< 9.0	0.51	0.01	< 1.0
5	16/01/2023	GA/23/0073	31.90	45.56	8.9	< 6.0	< 9.0	0.57	0.02	< 1.0
6	19/01/2023	GA/23/0086	43.50	62.71	12.81	< 6.0	< 9.0	0.75	0.05	< 1.0
7	23/01/2023	GA/23/0114	26.70	42.59	9.07	< 6.0	< 9.0	0.92	0.03	< 1.0
8	27/01/2023	GA/23/0136	35.00	44.74	12.56	< 6.0	< 9.0	1.04	0.04	< 1.0
9	30/01/2023	GA/23/0153	31.10	49.26	10.69	< 6.0	< 9.0	0.56	0.05	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2008	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1999	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 5	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 917-DTA-2020	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 1328-R-272-DTG-2015	05/03/2022	05/03/2023
Gaseoue Sampler Sr. No. 1445-DTJ-2014	05/03/2022	05/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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### TEST REPORT

NOISE LEVEL MONITORING REPORT											
Date of Issue		04/02/2023									
Name of Client		M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED									
Address of Client		ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.									
Sampling Plan		GLPL/QF/7.3/06			Sampling Procedure No.				GLPL/SOP/AA/17		
Sample Collected By		GLPL Representative									
AMBIENT AIR NOISE POLLUTION MONITORING											
Sr. No.	Date of Sampling	Report No.	Station ID	Zone	Sampling Location	Day Time Noise in dB(A)			Night Time Noise in dB(A)		
						L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>eq</sub>
1	20/01/2023	GA/23/0092	G-N1	I	Mopa Boundary	31.7	90.6	57.0	30.1	89.6	53.4
2	27/01/2023	GA/23/0142	G-N2	I	Shemecheadvan	35	89.4	66.8	33.4	74.9	53.3
3	22/01/2023	GA/23/00106	G-N3	C	Nagzar	47.4	83.1	61.7	38.7	77.4	53.5
4	20/01/2023	GA/23/0091	G-N4	R	Purva Casarvamem	36.2	82.2	50.2	32.9	69.0	42.6
5	23/01/2023	GA/23/0119	G-N5	R	Chandel	30.3	77.8	50.5	30.6	72.1	41.3
6	22/01/2023	GA/23/0109	G-N6	R	Khajne Amare Porscodem	31.6	87.3	51.6	30.9	106	40.7
7	27/01/2023	GA/23/0141	G-N7	R	Warkhand	30.8	78.7	53.0	32.6	72.7	41.9
8	24/01/2023	GA/23/0121	G-N8	C	Rajvil Wada Torxem	35	97.6	59.7	30.5	71.8	46.6
9	30/01/2023	GA/23/0158	G-N9	C	Village Panchayam Tamboxem - Mopa - Ugvam	39.4	82.6	54.7	37.8	70.3	46.0
10	24/01/2023	GA/23/0120	M-N1	R	Satarda	30.2	79.8	52.5	30.1	69.4	39.5
11	17/01/2023	GA/23/0078	M-N2	R	Dingane	31.8	88.1	51.9	30.2	58.6	40.8
12	17/01/2023	GA/23/0079	M-N3	R	Netarde	36.8	79.5	52.5	37.0	75.3	41.7
I – Industrial Zone, C – Commercial Zone, R – Residential Zone											
1] Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows											
Area Code		Category of Area			Limits in dB(A) Leq						
					Day Time		Night Time				
(A)		Industrial Area (I)			75		70				
(B)		Commercial Area (C)			65		55				
(C)		Residential Area (R)			55		45				
(D)		Silence Zone (S)			50		40				
2] Day time to reckoned in between 6:00 am to 10 pm and night time is reckoned in between 10:00 pm to 06:00 am											
3] *dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A "decibel" is a unit in which noise is measured.											
4] *A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.											
5] Leq : It is the energy mean of the noise level over a specified period.											
Note :											
1. The results relate only to the samples tested.											
2. Test Report shall not be reproduced except in full, without written approval of the laboratory.											
3. Test Results relate only to the conditions prevailing at the time of sampling.											
4. Customer complaint register is available at laboratory.											
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For GADARK LAB PVT. LTD.											
 AUTHORISED SIGNATORY [SANTOSH V. ZULPE]								 CHECKED BY			

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 554067	16/05/2022	16/05/2023

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 546176	24/06/2022	24/06/2023



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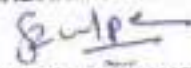
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE					
Report No.	GW/23/0094		Report Date	25/01/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512				
Order / Reference	As Per Dated 20/01/2023	Environmental Condition of Lab	Temp °C	Humidity %	
			25.2	49.0	
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060		
Sampling Point	WTP RO				
Sampling Details	WTP RO Inlet Water Sample	Date of Collection	20/01/2023		
Sample Collected by	GLPL Representative	Sample Received On	20/01/2023		
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023		
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit		

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.87	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	22.11	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	58	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	6.04	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	20	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0094	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pemem, Mopa, North Goa - 403512		

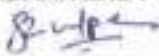
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.020	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

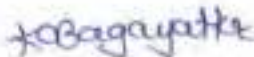
### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	4.80	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	1.94	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	3	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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# GADARK LAB PVT. LTD.

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## TEST REPORT

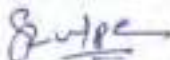
Report No.	GW/23/0094	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/202 2/02/74	17/02/2022	16/02/2023
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367


## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0095	Report Date	25/01/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 20/01/2023	Environmental Condition of Lab	Temp °C	Humidity %
			25.2	49.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	WTP RO			
Sampling Details	WTP RO Outlet Water Sample	Date of Collection	20/01/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/01/2023	
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.78	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	2.0	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	2.0	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	< 0.5	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.25	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	< 2.0	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0095	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

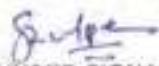
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.002	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	< 0.8	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	< 0.5	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	< 0.1	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

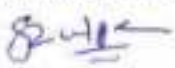
Report No	GW/23/0095	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E. Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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4. Customer complaint register is available at laboratory.
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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/202 2/02/74	17/02/2022	16/02/2023
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0096	Report Date	25/01/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 20/01/2023	Environmental Condition of Lab	Temp °C	Humidity %
			25.2	49.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L0 Fountain			
Sampling Details	PTB L0 Water Fountain Sample	Date of Collection	20/01/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/01/2023	
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.83	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	15.14	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	34	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	2.01	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	10	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0096	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

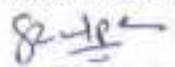
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.016	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	4.0	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	< 0.5	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	1	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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### TEST REPORT

Report No.	GW/23/0096	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

#### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/202 2/02/74	17/02/2022	16/02/2023
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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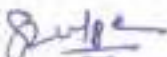
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0097	Report Date	25/01/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 20/01/2023	Environmental Condition of Lab	Temp °C 25.2	Humidity % 49.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L1 Fountain			
Sampling Details	PTB L1 Water Fountain Sample	Date of Collection	20/01/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/01/2023	
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.75	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	18.14	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	35	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	2.01	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	10	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

For GADARK LAB PVT. LTD.

  
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## TEST REPORT

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Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		


### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.014	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	IS 3025
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	4.0	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	< 0.5	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	1	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW/23/0097	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E. Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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4. Customer complaint register is available at laboratory.
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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/202 2/02/74	17/02/2022	16/02/2023
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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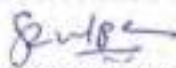
## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0098	Report Date	25/01/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 20/01/2023	Environmental Condition of Lab	Temp °C	Humidity %
			25.2	49.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L2 Fountain			
Sampling Details	PTB L2 Water Fountain Sample	Date of Collection	20/01/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/01/2023	
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.74	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	18.14	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	37	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	2.01	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	14	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0098	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512.		


### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.016	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	IS 3025
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	4.80	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.40	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	0.8	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW/23/0098	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/062	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/202 2/02/74	17/02/2022	16/02/2023
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0099	Report Date	25/01/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 20/01/2023	Environmental Condition of Lab	Temp °C	Humidity %
			25.2	49.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1080	
Sampling Point	Admin 1 <sup>st</sup> Floor			
Sampling Details	Admin 1 <sup>st</sup> Floor – Water Dispenser	Date of Collection	20/01/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/01/2023	
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	


#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.24	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	24.19	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	45	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	8.05	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	20	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0099	Report Date	25/01/2023
Order / Reference	As per dated	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

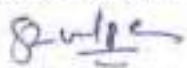
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.010	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	IS 3025
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	5.61	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	1.46	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	2	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW/23/0099	Report Date	25/01/2023
Order / Reference	As Per Dated 20/01/2023	Sample Received on	20/01/2023
Analysis Started On	21/01/2023	Analysis Completed On	25/01/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/202 2/02/74	17/02/2022	16/02/2023
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	32	Average Humidity (%)	66
Average Wind Speed (km/hr)	18.1	Average Wind direction (Deg)	216
Latitude	N 15°45'51.1"	Longitude	E 73°56'32.4"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0181	65.8	63.40	13.72	< 6.0	< 9.0	0.35	110.6	0.08	< 1.0
2	06/02/2023	GA/23/0252	63.3	57.49	14.72	< 6.0	< 9.0	1.63	219.9	0.04	< 1.0
3	09/02/2023	GA/23/0281	67.3	62.88	11.85	< 6.0	< 9.0	0.73	161.0	0.06	< 0.1
4	13/02/2023	GA/23/0300	70.0	57.35	14.47	< 6.0	< 9.0	0.65	103.6	0.04	< 1.0
5	16/02/2023	GA/23/0327	62.7	54.70	13.31	< 6.0	< 9.0	0.24	68.5	0.11	< 1.0
6	20/02/2023	GA/23/0372	68.5	57.04	15.34	< 6.0	< 9.0	0.84	115.4	0.04	< 1.0
7	23/02/2023	GA/23/0425	72.4	60.26	17.05	< 6.0	< 9.0	0.84	143.3	0.08	< 1.0
8	27/02/2023	GA/23/0460	62.5	56.22	12.10	< 6.0	< 9.0	1.05	152.0	0.03	< 1.0
<b>NAAQS LIMITS *</b>			--	100	60	80	80	2	--	1	--
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 16

#### \*N.A.A.Q.S. – National Ambient Air Quality Standards

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[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient instrument No. 9	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 934-DTA-2020	07/03/2022	07/03/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	09/03/2022	09/03/2023
Gaseous Sampler Sr. No. 6896-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
Tel : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

OFF: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Shemecheadvan Goa State (G-A2)		
Average Ambient Temperature (°C)	32.2	Average Humidity (%)	73
Average Wind Speed (km/hr)	22.4	Average Wind direction (Deg)	238
Latitude	N 15°42'06.1"	Longitude	E 73°49'21.5"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

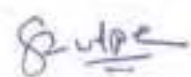
Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0180	74.2	59.30	15.34	< 6.0	< 9.0	0.69	118.3	0.05	< 1.0
2	06/02/2023	GA/23/0251	67.6	53.95	13.72	< 6.0	< 9.0	0.39	51.12	0.02	< 1.0
3	09/02/2023	GA/23/0280	73.5	52.71	14.97	< 6.0	< 9.0	0.65	189.7	0.03	< 1.0
4	13/02/2023	GA/23/0299	77.0	61.16	17.09	< 6.0	< 9.0	1.07	166.5	0.04	< 1.0
5	16/02/2023	GA/23/0326	69.6	53.58	15.39	< 6.0	< 9.0	0.49	199.2	0.08	< 1.0
6	20/02/2023	GA/23/0371	74.3	57.43	17.26	< 6.0	< 9.0	0.66	119.0	0.04	< 1.0
7	23/02/2023	GA/23/0424	76.7	58.50	14.26	< 6.0	< 9.0	0.69	128.5	0.09	< 1.0
8	27/02/2023	GA/23/0459	70.2	51.40	15.93	< 6.0	< 9.0	0.90	147.1	0.05	< 1.0
<b>NAAQS LIMITS *</b>			—	100	60	80	80	2	—	1	—
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

#### \*N.A.A.Q.S. – National Ambient Air Quality Standards

Note :

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- Customer complaint register is available at laboratory
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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 8	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 916-DTA-2020	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 1329-R-273-DTG-2015	05/03/2022	05/03/2023
Gaseoue Sampler Sr. No. 6787-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	60
Average Wind Speed (km/hr)	17.4	Average Wind direction (Deg)	222
Latitude	N 15°45'37.3"	Longitude	E 73°53'14.22"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

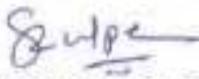
Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0173	129.6	79.86	18.71	< 6.0	< 9.0	0.55	172.8	0.05	< 1.0
2	06/02/2023	GA/23/0244	121.3	77.76	17.63	< 6.0	< 9.0	0.94	148.9	0.03	< 1.0
3	09/02/2023	GA/23/0273	126.3	79.98	19.79	< 6.0	< 9.0	1.17	157.7	0.03	< 1.0
4	13/02/2023	GA/23/0292	121.3	73.52	16.80	< 6.0	< 9.0	0.82	187.5	0.05	< 1.0
5	16/02/2023	GA/23/0319	127.5	69.42	19.38	< 6.0	< 9.0	0.53	76.1	0.02	< 1.0
6	20/02/2023	GA/23/0364	119.8	77.90	16.18	< 6.0	< 9.0	0.63	143.7	0.05	< 1.0
7	23/02/2023	GA/23/0417	138.7	66.18	18.84	< 6.0	< 9.0	0.51	61.01	0.02	< 1.0
8	27/02/2023	GA/23/0452	130.4	68.60	15.18	< 6.0	< 9.0	0.62	67.0	0.03	< 1.0
<b>NAAQS LIMITS *</b>			--	100	60	80	80	2	--	1	--
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXII) 2005	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 16

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 1	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 301-DTK-2015	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 2823-DTB-2020	05/03/2022	05/03/2023
Gaseoue Sampler Sr. No. 6771-DTH-2020	05/03/2022	05/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel.: (022) 2577 7068 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Purva Casarvarnem - Goa State (G-A4)		
Average Ambient Temperature (°C)	32.0	Average Humidity (%)	65
Average Wind Speed (km/hr)	18	Average Wind direction (Deg)	240
Latitude	N 15°41'41.9"	Longitude	E 73°50'16.6"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0174	101.8	59.71	15.76	< 6.0	< 9.0	1.10	187.3	0.05	< 1.0
2	06/02/2023	GA/23/0245	98.2	56.62	13.02	< 6.0	< 9.0	1.07	204.1	0.02	< 1.0
3	09/02/2023	GA/23/0274	101.9	62.84	16.97	< 6.0	< 9.0	0.36	189.7	0.03	< 1.0
4	13/02/2023	GA/23/0293	99.1	57.98	14.39	< 6.0	< 9.0	1.05	164.5	0.04	< 1.0
5	16/02/2023	GA/23/0320	100.4	55.39	15.64	< 6.0	< 9.0	0.80	66.5	0.01	< 1.0
6	20/02/2023	GA/23/0365	94.8	57.68	13.22	< 6.0	< 9.0	0.26	68.7	0.03	< 1.0
7	23/02/2023	GA/23/0418	102.9	52.97	14.22	< 6.0	< 9.0	0.89	136.8	0.06	< 1.0
8	27/02/2023	GA/23/0453	96.9	49.61	13.85	< 6.0	< 9.0	0.95	141.1	0.02	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

*Santosh V. Zulpe*

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



*Pragya*

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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 2	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 336-DTK-2015	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 2832-DTB-2020	09/03/2022	09/03/2023
Gaseous Sampler Sr. No. 6888-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

## TEST REPORT

### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	32.5	Average Humidity (%)	72
Average Wind Speed (km/hr)	11.2	Average Wind direction (Deg)	234
Latitude	N 15°40'38.0"	Longitude	E 73°46'21.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)


Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0175	39.9	50.40	10.69	< 6.0	< 9.0	1.14	158.7	0.06	< 1.0
2	06/02/2023	GA/23/0246	42.8	55.90	12.18	< 6.0	< 9.0	0.47	65.8	0.03	< 1.0
3	09/02/2023	GA/23/0275	47.7	57.93	14.01	< 6.0	< 9.0	0.23	132.8	0.05	< 1.0
4	13/02/2023	GA/23/0294	49.5	49.58	10.69	< 6.0	< 9.0	1.09	150.0	0.04	< 1.0
5	16/02/2023	GA/23/0321	44.7	53.55	12.35	< 6.0	< 9.0	0.95	86.4	0.09	< 1.0
6	20/02/2023	GA/23/0366	49.3	48.84	10.65	< 6.0	< 9.0	0.95	138.0	0.10	< 1.0
7	23/02/2023	GA/23/0419	50.9	46.38	11.10	< 6.0	< 9.0	0.41	81.3	0.12	< 1.0
8	27/02/2023	GA/23/0454	46.9	45.93	10.35	< 6.0	< 9.0	0.33	78.1	0.04	< 1.0
<b>NAAQS LIMITS *</b>			--	100	60	80	80	2	--	1	--
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2005	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXIII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 3	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 919-DTA-2020	07/03/2022	07/03/2023
Respirable Dust Sampler Sr. No. 2841-DTB-2020	09/03/2022	09/03/2023
Gaseoue Sampler Sr. No. 6904-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	32	Average Humidity (%)	68
Average Wind Speed (km/hr)	11.4	Average Wind direction (Deg)	205
Latitude	N 15°48'40.0"	Longitude	E 73°52'50.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0178	60.4	63.40	14.43	< 6.0	< 9.0	0.61	96.7	0.08	< 1.0
2	06/02/2023	GA/23/0249	65.5	67.22	15.93	< 6.0	< 9.0	0.88	110.8	0.04	< 1.0
3	09/02/2023	GA/23/0278	70.2	61.50	12.85	< 6.0	< 9.0	0.30	63.0	0.06	< 1.0
4	13/02/2023	GA/23/0297	97.3	56.47	11.89	< 6.0	< 9.0	0.51	92.0	0.01	< 1.0
5	16/02/2023	GA/23/0324	72.4	49.22	15.18	< 6.0	< 9.0	0.24	83.2	0.06	< 1.0
6	20/02/2023	GA/23/0369	65.2	58.72	13.60	< 6.0	< 9.0	0.30	61.6	0.06	< 1.0
7	23/02/2023	GA/23/0422	70.4	55.30	13.27	< 6.0	< 9.0	0.79	135.6	0.12	< 1.0
8	27/02/2023	GA/23/0457	62.1	50.73	12.93	< 6.0	< 9.0	0.23	64.6	0.04	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

*Santosh V. Zulpe*

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



*K. B. Bagayath*

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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 6	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 335-DTF-2015	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2022	16/05/2023
Gaseoue Sampler Sr. No. 262-D-22	16/05/2022	16/05/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

OFF: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	60
Average Wind Speed (km/hr)	8.9	Average Wind direction (Deg)	188
Latitude	N 15°43'01.3"	Longitude	E 73°46'00.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0176	59.3	54.70	11.81	< 6.0	< 9.0	1.25	188.8	0.07	< 1.0
2	06/02/2023	GA/23/0247	63.4	51.64	10.89	< 6.0	< 9.0	0.75	128.1	0.03	< 1.0
3	09/02/2023	GA/23/0276	90.3	52.78	12.81	< 6.0	< 9.0	0.33	84.5	0.05	< 1.0
4	13/02/2023	GA/23/0295	93.0	58.74	15.39	< 6.0	< 9.0	0.95	157.0	0.03	< 1.0
5	16/02/2023	GA/23/0322	84.0	55.20	13.89	< 6.0	< 9.0	0.81	96.3	0.11	< 1.0
6	20/02/2023	GA/23/0367	78.3	46.61	10.77	< 6.0	< 9.0	0.62	77.0	0.06	< 1.0
7	23/02/2023	GA/23/0420	80.5	55.88	13.10	< 6.0	< 9.0	0.70	132.0	0.08	< 1.0
8	27/02/2023	GA/23/0455	83.2	60.30	14.85	< 6.0	< 9.0	0.71	127.4	0.05	< 1.0
<b>NAAQS LIMITS *</b>			--	100	60	80	80	2	--	1	--
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

#### \*N.A.A.Q.S. – National Ambient Air Quality Standards

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- Customer complaint register is available at laboratory.
- Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

For GADARK LAB PVT. LTD.

*Santosh V. Zulpe*

**AUTHORISED SIGNATORY**  
[SANTOSH V. ZULPE]



*Karagayathar*

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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 4	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 1957-DTA-2020	17/03/2022	17/03/2023
Respirable Dust Sampler Sr. No. 2827-DTB-2020	09/03/2022	09/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	70
Average Wind Speed (km/hr)	15.5	Average Wind direction (Deg)	220
Latitude	N 15°46'12.3"	Longitude	E 73°49'20.5"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0179	65.2	55.56	12.64	< 6.0	< 9.0	0.83	189.0	0.06	< 1.0
2	06/02/2023	GA/23/0250	60.1	49.62	11.10	< 6.0	< 9.0	0.97	193.2	0.02	< 1.0
3	09/02/2023	GA/23/0279	56.8	43.29	11.52	< 6.0	< 9.0	0.29	73.2	0.04	< 1.0
4	13/02/2023	GA/23/0298	54.5	50.84	10.77	< 6.0	< 9.0	1.15	163.7	0.01	< 1.0
5	16/02/2023	GA/23/0325	49.8	42.47	12.35	< 6.0	< 9.0	0.34	108.9	0.05	< 1.0
6	20/02/2023	GA/23/0370	45.4	50.35	9.23	< 6.0	< 9.0	0.73	111.7	0.01	< 1.0
7	23/02/2023	GA/23/0423	49.2	44.48	12.27	< 6.0	< 9.0	0.63	138.4	0.07	< 1.0
8	27/02/2023	GA/23/0458	44.4	48.31	10.52	< 6.0	< 9.0	0.72	125.7	0.02	< 1.0
<b>NAAQS LIMITS *</b>			--	100	60	80	80	2	--	1	--
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXII) 2008	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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  - Samples will be preserved for a period 15 days from the delivery of Test Report.
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  - Customer complaint register is available at laboratory.
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For GADARK LAB PVT. LTD.

**AUTHORISED SIGNATORY**  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 7	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 1955-DTA-2020	17/03/2022	17/03/2023
Respirable Dust Sampler Sr. No. 1284-R-228-DTK-2014	05/03/2022	05/03/2023
Gaseoue Sampler Sr. No. 1440-DTJ-2014	05/03/2022	05/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 + +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	February 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	32	Average Humidity (%)	65
Average Wind Speed (km/hr)	8.7	Average Wind direction (Deg)	210
Latitude	N 15°46'11.7"	Longitude	E 73°53'47.0"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/02/2023	GA/23/0177	55.0	43.55	9.36	< 6.0	< 9.0	0.79	130.5	0.06	< 1.0
2	06/02/2023	GA/23/0248	58.7	44.46	9.15	< 6.0	< 9.0	0.23	51.1	0.02	< 1.0
3	09/02/2023	GA/23/0277	48.7	46.66	11.27	< 6.0	< 9.0	0.40	121.7	0.04	< 1.0
4	13/02/2023	GA/23/0296	54.3	44.97	10.73	< 6.0	< 9.0	0.81	148.7	0.01	< 1.0
5	16/02/2023	GA/23/0323	57.7	41.58	11.85	< 6.0	< 9.0	0.22	113.8	0.06	< 1.0
6	20/02/2023	GA/23/0368	49.3	49.32	9.69	< 6.0	< 9.0	0.67	107.5	0.06	< 1.0
7	23/02/2023	GA/23/0421	55.4	45.35	10.98	< 6.0	< 9.0	0.36	63.8	0.05	< 1.0
8	27/02/2023	GA/23/0456	47.7	40.71	8.82	< 6.0	< 9.0	0.31	65.7	0.03	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2000	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 16

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 5	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 917-DTA-2020	03/03/2022	03/03/2023
Respirable Dust Sampler Sr. No. 1328-R-272-DTG-2015	05/03/2022	05/03/2023
Gaseoue Sampler Sr. No. 1445-DTJ-2014	05/03/2022	05/03/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

NOISE LEVEL MONITORING REPORT											
Date of Issue		03/03/2023									
Name of Client		M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED									
Address of Client		ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.									
Sampling Plan		GLPL/QF/7.3/06			Sampling Procedure No.				GLPL/SOP/AA/17		
Sample Collected By		GLPL Representative									
AMBIENT AIR NOISE POLLUTION MONITORING											
Sr. No.	Date of Sampling	Report No.	Station ID	Zone	Sampling Location	Day Time Noise in dB(A)			Night Time Noise in dB(A)		
						L <sub>max</sub>	L <sub>max</sub>	L <sub>eq</sub>	L <sub>max</sub>	L <sub>max</sub>	L <sub>eq</sub>
1	17.02.2023	GA/23/0328	G-N1	I	Mopa Boundary	38	81.3	55.3	38.3	80	50.4
2	12.02.2023	GA/23/0286	G-N2	I	Shemecheadvan	31.6	79.8	52.5	32.6	74.1	43.3
3	12.02.2023	GA/23/00287	G-N3	C	Nagzar	30.1	87.7	57.2	30.6	70.5	42.6
4	24.02.2023	GA/23/0434	G-N4	R	Purva Casarvamem	34.4	67.8	50.2	31	59.1	43.0
5	13.02.2023	GA/23/0301	G-N5	R	Chandel	35.2	70.6	52.9	31	67.3	38.7
6	11.02.2023	GA/23/0402	G-N6	R	Khajne Amere Porscodem	30.6	66	50.9	32.9	55.8	43.5
7	24.02.2023	GA/23/0435	G-N7	R	Warkhand	32.3	77.3	47.4	30.1	65.1	43.2
8	25.02.2023	GA/23/0439	G-N8	C	Rajvil Wada Tonxem	32.8	69.4	46.7	30.4	70.4	49.5
9	25.02.2023	GA/23/0438	G-N9	C	Village Panchayat Tamboxem - Mopa - Ugvam	38.5	83	44.0	38.2	63	44.4
10	11.02.2023	GA/23/0401	M-N1	R	Satarde	31	85.2	47.5	33.5	48.7	42.7
11	07.02.2023	GA/23/0293	M-N2	R	Dingane	37.1	81.4	52.2	35.7	77.8	43.9
12	07.02.2023	GA/23/0294	M-N3	R	Netarde	30.1	89.5	49.5	30	58.1	37.5
I – Industrial Zone, C – Commercial Zone, R – Residential Zone											
1] Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows											
Area Code		Category of Area			Limits in dB(A) Leq						
					Day Time		Night Time				
(A)		Industrial Area (I)			75		70				
(B)		Commercial Area (C)			65		55				
(C)		Residential Area (R)			55		45				
(D)		Silence Zone (S)			50		40				
2] Day time to reckoned in between 6:00 am to 10 pm and night time is reckoned in between 10:00 pm to 06:00 am											
3] "dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A "decibel" is a unit in which noise is measured.											
4] "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.											
5] Leq : It is the energy mean of the noise level over a specified period.											
<b>Note :</b> 1. The results relate only to the samples tested. 2. Test Report shall not be reproduced except in full, without written approval of the laboratory. 3. Test Results relate only to the conditions prevailing at the time of sampling. 4. Customer complaint register is available at laboratory. 5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.											
For GADARK LAB PVT. LTD.											
 <b>AUTHORISED SIGNATORY</b> <b>[SANTOSH V. ZULPE]</b>								 <b>CHECKED BY</b>			

**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 554067	16/05/2022	16/05/2023

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 546176	24/06/2022	24/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0268	Report Date	20/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 16/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	35
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	WTP RO			
Sampling Details	WTP RO Inlet Water Sample	Date of Collection	16/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/02/2023	
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.52	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	24.42	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	42	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	13.09	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	4.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	8	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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## TEST REPORT

Report No.	GW/23/0268	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

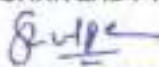
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.018	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	2.40	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	0.068	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.49	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	10.0	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB : H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

## TEST REPORT

Report No.	GW/23/0268	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37 <sup>o</sup> C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5 <sup>o</sup> C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

For GADARK LAB PVT. LTD.

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### Note:

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4. Customer complaint register is available at laboratory.
5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

Page 3 of 3

**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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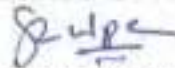
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0269	Report Date	20/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 16/02/2023	Environmental Condition of Lab	Temp °C 29.5	Humidity % 35
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	WTP RO			
Sampling Details	WTP RO Outlet Water Sample	Date of Collection	16/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/02/2023	
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	6.91	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	4.07	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	5	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	3.02	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	1.00	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	< 2.0	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0269	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

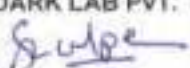
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.002	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	< 0.8	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	0.068	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	< 0.5	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	1.7	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW/23/0269	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 <sup>o</sup> C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 <sup>o</sup> C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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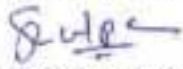
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0270		Report Date	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 16/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	35
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L0 Fountain			
Sampling Details	PTB L0 Water Fountain Sample	Date of Collection	16/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/02/2023	
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.31	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	8.14	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	13	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	7.05	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.25	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	6	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

For GADARK LAB PVT. LTD.

  
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## TEST REPORT

Report No.	GW/23/0270	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

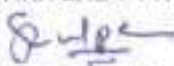
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.008	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

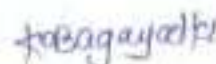
### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	1.60	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.49	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	2.7	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW/23/0270	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

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Page 3 of 3

**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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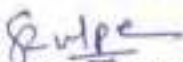
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0271	Report Date	20/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 16/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	35
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L1 Fountain			
Sampling Details	PTB L1 Water Fountain Sample	Date of Collection	16/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/02/2023	
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.49	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	8.14	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	14	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	9.06	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	4	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
Tel.: (02362) 223519 • E-mail: info@gadark.in • Website: www.gadark.in

OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

Report No.	GW/23/0271	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

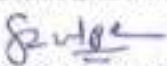
#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.006	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	IS 3025
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	0.80	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	0.064	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.49	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	2.3	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW/23/0271	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37 <sup>o</sup> C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5 <sup>o</sup> C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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### Note:

1. Results relate only to the sample tested.
2. Test Report shall not be reproduced except in full, without written approval of the laboratory.
3. Samples will be preserved for a period 15 days from the delivery of Test Report.
4. Customer complaint register is available at laboratory.
5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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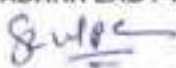
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0272	Report Date	20/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 16/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	35
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L2 Fountain			
Sampling Details	PTB L2 Water Fountain Sample	Date of Collection	16/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/02/2023	
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.40	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	10.18	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	12	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	9.06	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.25	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	2	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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# GADARK LAB PVT. LTD.

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### TEST REPORT

Report No.	GW/23/0272	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

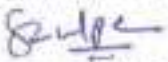
#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.006	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	IS 3025
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	0.80	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	0.065	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	< 0.5	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	2.3	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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# GADARK LAB PVT. LTD.

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## TEST REPORT

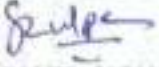
Report No.	GW/23/0272	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.

Page 3 of 3

**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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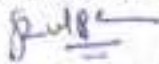
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0273	Report Date	20/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 16/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	35
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Admin Ground Floor			
Sampling Details	Admin Ground Floor – Water Dispenser	Date of Collection	16/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/02/2023	
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	


#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.53	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	24.42	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	33	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	13.09	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	1.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	20	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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### TEST REPORT

Report No.	GW/23/0273	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

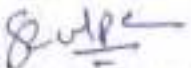
#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.002	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	IS 3025
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	6.41	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.97	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	3.0	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	< 0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW/23/0273	Report Date	20/02/2023
Order / Reference	As Per Dated 16/02/2023	Sample Received on	16/02/2023
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

For GADARK LAB PVT. LTD.

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Page 3 of 3

**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 <sup>0</sup> C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 <sup>0</sup> C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 + +91 93213 12367

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0229	Report Date	13/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 07/02/2023	Environmental Condition of Lab	Temp °C 26.08	Humidity % 50.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Inlet			
Sampling Details	STP Inlet Water Sample	Date of Collection	07/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	07/02/2023	
Analysis Started On	08/02/2023	Analysis Completed On	13/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:


Sr. No.	Parameters	Result	Unit	Method
1	pH	7.12	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	499	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	167	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	80	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	19	mg/lit	APHA 5520 B
6	Ammonia	52.75	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	73.02	mg/lit	APHA 4500-Norg

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	Method
8	Fecal Coliform at 44.5°C for 24 hrs.	> 1600	MPN Index/100ml	APHA 9221 E

End

For GADARK LAB PVT. LTD.

  
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[SANTOSH V. ZULPE]



  
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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 22/02/74	17/02/2022	16/02/2023
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 + +91 93213 12367

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0230	Report Date	13/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 07/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			26.08	50.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Outlet			
Sampling Details	STP Outlet Water Sample	Date of Collection	07/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	07/02/2023	
Analysis Started On	08/02/2023	Analysis Completed On	13/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

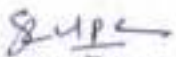
Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	7.61	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	33	mg/lit	50.00	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	8	mg/lit	10.00	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	10	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	3.92	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	8.06	mg/lit	10.00	APHA 4500-Norg

### Microbiological Parameters:

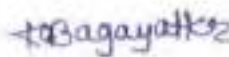
8	Fecal Coliform at 44.5°C for 24 hrs.	79	MPN Index/100ml	100	APHA 9221 E
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End

For GADARK LAB PVT. LTD.

  
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[SANTOSH V. ZULPE]



  
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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 22/02/74	17/02/2022	16/02/2023
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0274		Report Date	20/02/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 16/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	35
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Outlet			
Sampling Details	STP Outlet Water Sample	Date of Collection	16/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/02/2023	
Analysis Started On	16/02/2023	Analysis Completed On	20/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

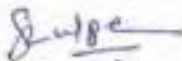
Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	6.89	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	73	mg/lit	50.00	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	19	mg/lit	10.00	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	7	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	15.79	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	19.15	mg/lit	10.00	APHA 4500-Norg

### Microbiological Parameters:

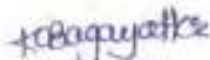
8	Fecal Coliform at 44.5°C for 24 hrs.	> 1600	MPN Index/100ml	100	APHA 9221 E
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End

For GADARK LAB PVT. LTD.

  
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[SANTOSH V. ZULPE]



  
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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 <sup>o</sup> C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 <sup>o</sup> C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0331	Report Date	24/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 20/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.4	51.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Inlet			
Sampling Details	STP Inlet Water Sample	Date of Collection	20/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/02/2023	
Analysis Started On	20/02/2023	Analysis Completed On	24/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

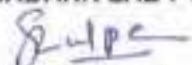
Sr. No.	Parameters	Result	Unit	Method
1	pH	7.20	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	622	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	214	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	157	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	8	mg/lit	APHA 5520 B
6	Ammonia	88.70	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	92.06	mg/lit	APHA 4500-Norg

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	Method
8	Fecal Coliform at 44.5°C for 24 hrs.	> 1600	MPN Index/100ml	APHA 9221 E

End

For GADARK LAB PVT. LTD.

  
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[SANTOSH V. ZULPE]



  
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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0343	Report Date	27/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 22/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	40
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Outlet			
Sampling Details	STP Outlet Water Sample	Date of Collection	22/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	22/02/2023	
Analysis Started On	22/02/2023	Analysis Completed On	27/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

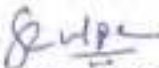
Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	8.49	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	44	mg/lit	50.00	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	9	mg/lit	10.00	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	8	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	0.90	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	1.12	mg/lit	10.00	APHA 4500-Norg

### Microbiological Parameters:

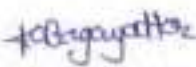
8	Fecal Coliform at 44.5°C for 24 hrs.	40	MPN Index/100ml	100	APHA 9221 E
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End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0344	Report Date	27/02/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 23/02/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.6	40.0
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Outlet			
Sampling Details	STP Outlet Water Sample	Date of Collection	23/02/2023	
Sample Collected by	GLPL Representative	Sample Received On	23/02/2023	
Analysis Started On	23/02/2023	Analysis Completed On	27/02/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

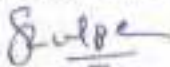
Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	7.59	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	24	mg/lit	50.00	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	7	mg/lit	10.00	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	8	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	3.92	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	5.04	mg/lit	10.00	APHA 4500-Norg

### Microbiological Parameters:

8	Fecal Coliform at 44.5°C for 24 hrs.	79	MPN Index/100ml	100	APHA 9221 E
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End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



  
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### Note:

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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 <sup>0</sup> C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 <sup>0</sup> C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	16/02/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	32	Average Humidity (%)	88
Average Wind Speed (km/hr)	20.1	Average Wind direction (Deg)	220
Latitude	N 15°45'51.1"	Longitude	E 73°56'32.4"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0499	57.8	54.94	13.60	< 6.0	< 9.0	0.77	159.9	0.05	< 1.0
2	06/03/2023	GA/23/0539	72.4	61.43	20.79	< 6.0	< 9.0	0.69	116.5	0.09	< 1.0
3	09/03/2023	GA/23/0580	79.0	60.27	18.42	< 6.0	< 9.0	0.90	118.9	0.05	< 0.1
4	13/03/2023	GA/23/0613	87.1	58.47	20.04	< 6.0	< 9.0	0.86	107.3	0.09	< 1.0
5	16/03/2023	GA/23/0644	97.4	59.89	22.21	< 6.0	< 9.0	0.31	71.2	0.07	< 1.0
6	20/03/2023	GA/23/0675	105.9	60.97	24.28	< 6.0	< 9.0	0.30	81.9	0.05	< 1.0
7	23/03/2023	GA/23/0702	118.0	60.56	27.45	< 6.0	< 9.0	0.16	51.2	0.11	< 1.0
8	27/03/2023	GA/23/0737	128.7	78.49	29.82	< 6.0	< 9.0	0.44	120.0	0.13	< 1.0
9	30/03/2023	GA/23/0768	142.6	81.19	25.41	< 6.0	< 9.0	0.44	120.0	0.07	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2005	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXIII) 2004	EPA Method 16

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 9	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 1256-L-22	07/01/2023	07/01/2024
Respirable Dust Sampler Sr. No. 475-A-23	07/01/2023	07/01/2024
Gaseoue Sampler Sr. No. 472-L-22	07/01/2023	07/01/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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## TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Shemecheadvan Goa State (G-A2)		
Average Ambient Temperature (°C)	32	Average Humidity (%)	72
Average Wind Speed (km/hr)	28.3	Average Wind direction (Deg)	242
Latitude	N 15°42'06.1"	Longitude	E 73°49'21.5"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0498	78.4	57.76	18.59	< 6.0	< 9.0	0.17	70.7	0.06	< 1.0
2	06/03/2023	GA/23/0538	84.0	82.04	19.38	< 6.0	< 9.0	0.56	143.0	0.05	< 1.0
3	09/03/2023	GA/23/0579	73.5	52.71	14.97	< 6.0	< 9.0	0.65	189.7	0.03	< 1.0
4	13/03/2023	GA/23/0612	102.4	64.76	24.95	< 6.0	< 9.0	0.92	144.6	0.08	< 1.0
5	16/03/2023	GA/23/0643	115.6	69.07	28.44	< 6.0	< 9.0	0.50	107.9	0.04	< 1.0
6	20/03/2023	GA/23/0674	128.3	66.64	23.74	< 6.0	< 9.0	0.51	121.5	0.04	< 1.0
7	23/03/2023	GA/23/0701	146.8	68.05	25.03	< 6.0	< 9.0	0.67	147.4	0.04	< 1.0
8	27/03/2023	GA/23/0736	159.2	69.75	26.32	< 6.0	< 9.0	1.04	140.1	0.10	< 1.0
9	30/03/2023	GA/23/0767	170.2	70.61	28.69	< 6.0	< 9.0	0.65	98.6	0.06	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part III) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 8	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 847-DTJ-2019	08/10/2022	08/10/2023
Respirable Dust Sampler Sr. No. 476-A-23	07/01/2023	07/01/2024
Gaseoue Sampler Sr. No. 471-L-22	07/01/2023	07/01/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	32.0	Average Humidity (%)	62
Average Wind Speed (km/hr)	18.2	Average Wind direction (Deg)	228
Latitude	N 15°45'37.3"	Longitude	E 73°53'14.22"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0491	177.1	83.66	21.04	< 6.0	< 9.0	0.65	60.9	0.03	< 1.0
2	06/03/2023	GA/23/0531	193.8	92.14	46.78	< 6.0	< 9.0	0.93	133.1	0.04	< 1.0
3	09/03/2023	GA/23/0572	179.5	87.64	25.78	< 6.0	< 9.0	0.71	137.9	0.02	< 1.0
4	13/03/2023	GA/23/0605	168.1	77.66	31.10	< 6.0	< 9.0	0.95	136.9	0.06	< 1.0
5	16/03/2023	GA/23/0636	159.3	74.82	28.69	< 6.0	< 9.0	0.48	119.6	0.06	< 1.0
6	20/03/2023	GA/23/0667	171.7	75.71	30.81	< 6.0	< 9.0	0.49	104.7	0.07	< 1.0
7	23/03/2023	GA/23/0694	183.3	94.79	34.39	< 6.0	< 9.0	0.54	126.9	0.05	< 1.0
8	27/03/2023	GA/23/0729	172.7	93.31	31.27	< 6.0	< 9.0	0.57	102.9	0.03	< 1.0
9	30/03/2023	GA/23/0780	160.2	92.33	29.32	< 6.0	< 9.0	0.32	93.5	0.04	< 1.0
<b>NAAQS LIMITS *</b>			--	100	60	80	80	2	--	1	--
<b>UNITS</b>			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part V) 2008	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

**AUTHORISED SIGNATORY**  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 1	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 301-DTK-2015	17/02/2023	16/02/2024
Respirable Dust Sampler Sr. No. 2823-DTB-2020	18/02/2023	17/02/2024
Gaseous Sampler Sr. No. 6771-DTH-2020	17/02/2023	16/02/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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## TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Purva Casarvarnem - Goa State (G-A4)		
Average Ambient Temperature (°C)	32.0	Average Humidity (%)	68
Average Wind Speed (km/hr)	20	Average Wind direction (Deg)	232
Latitude	N 15°41'41.9"	Longitude	E 73°50'16.6"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0492	133.0	55.04	17.09	< 6.0	< 9.0	0.55	111.9	0.03	< 1.0
2	06/03/2023	GA/23/0532	156.5	86.59	29.32	< 6.0	< 9.0	0.38	87.4	0.06	< 1.0
3	09/03/2023	GA/23/0573	141.1	69.69	30.52	< 6.0	< 9.0	0.37	90.4	0.04	< 1.0
4	13/03/2023	GA/23/0606	132.2	71.49	23.91	< 6.0	< 9.0	0.26	70.8	0.03	< 1.0
5	16/03/2023	GA/23/0637	121.6	66.72	22.25	< 6.0	< 9.0	0.41	110.3	0.06	< 1.0
6	20/03/2023	GA/23/0668	134.2	65.67	23.66	< 6.0	< 9.0	0.68	116.7	0.06	< 1.0
7	23/03/2023	GA/23/0695	147.5	95.99	28.65	< 6.0	< 9.0	0.59	133.3	0.01	< 1.0
8	27/03/2023	GA/23/0730	135.1	85.9	24.75	< 6.0	< 9.0	0.95	61.0	0.06	< 1.0
9	30/03/2023	GA/23/0761	148.2	90.41	20.87	< 6.0	< 9.0	0.78	121.4	0.05	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

*Santosh V. Zulpe*

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



*Jeetgajth*

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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 2	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 336-DTK-2015	17/02/2023	16/02/2024
Respirable Dust Sampler Sr. No. 2832-DTB-2020	17/02/2023	16/02/2024
Gaseoue Sampler Sr. No. 6888-DTB-2020	18/02/2023	17/02/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	32.5	Average Humidity (%)	70
Average Wind Speed (km/hr)	15.4	Average Wind direction (Deg)	230
Latitude	N 15°40'38.0"	Longitude	E 73°46'21.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0493	50.6	53.60	11.19	< 6.0	< 9.0	0.46	121.2	0.04	< 1.0
2	06/03/2023	GA/23/0533	55.8	57.50	12.35	< 6.0	< 9.0	0.75	136.4	0.09	< 1.0
3	09/03/2023	GA/23/0574	55.8	59.73	14.01	< 6.0	< 9.0	0.32	76.1	0.03	< 1.0
4	13/03/2023	GA/23/0607	59.3	63.57	18.21	< 6.0	< 9.0	0.23	54.1	0.08	< 1.0
5	16/03/2023	GA/23/0638	68.2	60.79	17.01	< 6.0	< 9.0	0.46	91.0	0.05	< 1.0
6	20/03/2023	GA/23/0669	78.5	52.67	13.60	< 6.0	< 9.0	0.93	139.5	0.07	< 1.0
7	23/03/2023	GA/23/0696	89.1	58.89	15.93	< 6.0	< 9.0	0.50	108.1	0.07	< 1.0
8	27/03/2023	GA/23/0731	80.0	59.54	19.00	< 6.0	< 9.0	0.64	129.6	0.06	< 1.0
9	30/03/2023	GA/23/0762	86.8	61.17	15.76	< 6.0	< 9.0	0.62	102.6	0.03	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 3	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 919-DTA-2020	18/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 2841-DTB-2020	19/02/2023	18/02/2024
Gaseoue Sampler Sr. No. 6904-DTB-2020	18/02/2023	17/02/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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## INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	32.5	Average Humidity (%)	71
Average Wind Speed (km/hr)	13.3	Average Wind direction (Deg)	212
Latitude	N 15°48'40.0"	Longitude	E 73°52'50.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0496	59.3	52.72	13.68	< 6.0	< 9.0	0.93	153.9	0.06	< 1.0
2	06/03/2023	GA/23/0536	77.2	58.53	15.55	< 6.0	< 9.0	0.38	52.5	0.10	< 1.0
3	09/03/2023	GA/23/0577	65.9	61.48	13.85	< 6.0	< 9.0	0.61	83.6	0.08	< 1.0
4	13/03/2023	GA/23/0610	84.8	62.72	17.80	< 6.0	< 9.0	0.69	105.9	0.06	< 1.0
5	16/03/2023	GA/23/0641	102.7	65.44	19.25	< 6.0	< 9.0	0.69	101.0	0.10	< 1.0
6	20/03/2023	GA/23/0672	110.4	69.74	22.58	< 6.0	< 9.0	0.43	94.3	0.07	< 1.0
7	23/03/2023	GA/23/0699	122.4	95.29	27.53	< 6.0	< 9.0	0.30	87.0	0.07	< 1.0
8	27/03/2023	GA/23/0734	135.6	87.93	22.08	< 6.0	< 9.0	0.33	60.7	0.09	< 1.0
	30/03/2023	GA/23/0765	148.1	71.17	24.37	< 6.0	< 9.0	0.24	61.6	0.08	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2008	USEPA FEM, 40 CFR Part 50, Appendix-L 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part V) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 6	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 335-DTF-2015	17/02/2023	16/02/2023
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2022	16/05/2023
Gaseous Sampler Sr. No. 262-D-22	16/05/2022	16/05/2023
UV Spectrophotometer Sr. No. Equiptronics EQ 825	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	32.5	Average Humidity (%)	64
Average Wind Speed (km/hr)	10.8	Average Wind direction (Deg)	190
Latitude	N 15°43'01.3"	Longitude	E 73°46'00.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0494	75.1	57.56	13.18	< 6.0	< 9.0	0.96	146.1	0.06	< 1.0
2	06/03/2023	GA/23/0534	80.2	63.09	14.68	< 6.0	< 9.0	0.89	134.6	0.10	< 1.0
3	09/03/2023	GA/23/0575	75.4	59.69	17.30	< 6.0	< 9.0	0.30	79.06	0.05	< 1.0
4	13/03/2023	GA/23/0608	86.2	63.11	19.54	< 6.0	< 9.0	0.67	135.3	0.10	< 1.0
5	16/03/2023	GA/23/0639	96.9	67.53	21.58	< 6.0	< 9.0	0.80	133.8	0.10	< 1.0
6	20/03/2023	GA/23/0670	104.8	58.87	17.17	< 6.0	< 9.0	0.32	62.7	0.07	< 1.0
7	23/03/2023	GA/23/0697	92.4	72.25	20.83	< 6.0	< 9.0	0.42	122.8	0.07	< 1.0
8	27/03/2023	GA/23/0732	99.2	61.48	21.29	< 6.0	< 9.0	0.72	140.1	0.09	< 1.0
	30/03/2023	GA/23/0763	109.7	64.16	28.86	< 6.0	< 9.0	0.98	147.2	0.06	< 1.0
<b>NAAQS LIMITS *</b>			<b>--</b>	<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>2</b>	<b>--</b>	<b>1</b>	<b>--</b>
<b>UNITS</b>			<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>µg/m<sup>3</sup></b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>µg/m<sup>3</sup></b>	<b>ppm</b>
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 16

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For **GADARK LAB PVT. LTD.**

**AUTHORISED SIGNATORY**  
**[SANTOSH V. ZULPE]**



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 4	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 1957-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 2827-DTB-2020	17/02/2023	16/02/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	32	Average Humidity (%)	75
Average Wind Speed (km/hr)	18.4	Average Wind direction (Deg)	230
Latitude	N 15°46'12.3"	Longitude	E 73°49'20.5"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0497	49.0	50.28	11.64	< 6.0	< 9.0	0.02	86.3	0.03	< 1.0
2	06/03/2023	GA/23/0537	52.2	40.01	32.89	< 6.0	< 9.0	0.18	51.44	0.06	< 1.0
3	09/03/2023	GA/23/0578	55.6	38.28	18.21	< 6.0	< 9.0	0.45	71.4	0.04	< 1.0
4	13/03/2023	GA/23/0611	61.2	47.67	15.14	< 6.0	< 9.0	0.71	109.2	0.02	< 1.0
5	16/03/2023	GA/23/0642	69.6	51.87	12.02	< 6.0	< 9.0	0.28	51.8	0.01	< 1.0
6	20/03/2023	GA/23/0673	81.9	54.23	13.18	< 6.0	< 9.0	0.72	75.2	0.04	< 1.0
7	23/03/2023	GA/23/0700	97.8	64.72	15.59	< 6.0	< 9.0	0.63	142.6	0.03	< 1.0
8	27/03/2023	GA/23/0735	108.2	66.31	19.05	< 6.0	< 9.0	0.83	115.9	0.07	< 1.0
9	30/03/2023	GA/23/0766	117.8	59.04	16.72	< 6.0	< 9.0	0.39	122.0	0.06	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1996	GC Method	IS 5182 (Part XXII) 2004	EPA Method 15

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 7	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 1955-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 1284-R-228-DTK-2014	17/02/2023	16/02/2024
Gaseous Sampler Sr. No. 1440-DTJ-2014	17/02/2023	16/02/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/04/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED		
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.		
Sampling Plan	GLPL/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	March 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	60
Average Wind Speed (km/hr)	9.9	Average Wind direction (Deg)	208
Latitude	N 15°46'11.7"	Longitude	E 73°53'47.0"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	02/03/2023	GA/23/0495	28.4	43.81	10.10	< 6.0	< 9.0	0.36	89.3	0.06	< 1.0
2	06/03/2023	GA/23/0535	31.1	50.62	12.93	< 6.0	< 9.0	0.22	51.3	0.06	< 1.0
3	09/03/2023	GA/23/0576	33.7	56.02	14.55	< 6.0	< 9.0	0.42	61.8	0.01	< 1.0
4	13/03/2023	GA/23/0609	37.0	56.39	13.31	< 6.0	< 9.0	0.27	50.6	0.06	< 1.0
5	16/03/2023	GA/23/0640	43.5	57.06	14.55	< 6.0	< 9.0	0.91	145.9	0.03	< 1.0
6	20/03/2023	GA/23/0671	52.4	49.87	12.10	< 6.0	< 9.0	0.36	86.6	0.07	< 1.0
7	23/03/2023	GA/23/0698	66.6	67.71	14.72	< 6.0	< 9.0	0.35	130.1	0.02	< 1.0
8	27/03/2023	GA/23/0733	74.7	57.99	18.30	< 6.0	< 9.0	0.39	64.9	0.06	< 1.0
	30/03/2023	GA/23/0764	84.5	58.98	14.10	< 6.0	< 9.0	0.29	56.1	0.09	< 1.0
NAAQS LIMITS *			--	100	60	80	80	2	--	1	--
UNITS			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXIII) 2008	USEPA FEM, 40 CFR Part 50, Appendix-L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 5	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 917-DTA-2020	18/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 1328-R-272-DTG-2015	17/02/2023	16/02/2024
Gaseous Sampler Sr. No. 1445-DTJ-2014	17/02/2023	16/02/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 826	15/10/2022	14/10/2023
Gas Chromatograph (GC) Sr. No. Thermo-Fisher Trace 600	17/01/2023	16/01/2024



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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

NOISE LEVEL MONITORING REPORT													
Date of Issue		03/04/2023											
Name of Client		M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED											
Address of Client		ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.											
Sampling Plan		GLPL/QF/7.3/06				Sampling Procedure No.				GLPL/SOP/AA/17			
Sample Collected By		GLPL Representative											
AMBIENT AIR NOISE POLLUTION MONITORING													
Sr. No.	Date of Sampling	Report No.	Station ID	Zone	Sampling Location	Day Time Noise in dB(A)			Night Time Noise in dB(A)				
						$L_{max}$	$L_{min}$	$L_{eq}$	$L_{max}$	$L_{min}$	$L_{eq}$		
1	15/03/2023	GA/23/0617	G-N1	I	Mopa Boundary	41.7	83.9	56.6	50.4	74.8	53.3		
2	18/03/2023	GA/23/0649	G-N2	I	Shemachadvan	41.2	83.6	56.1	47.5	84.6	53.5		
3	18/03/2023	GA/23/0650	G-N3	C	Nagzar	37.2	78.6	55.3	37.7	67.2	51.2		
4	14/03/2023	GA/23/0614	G-N4	R	Purva Cassarvarem	32.0	67.3	51.0	29.8	63.1	38.6		
5	28/03/2023	GA/23/0740	G-N5	R	Chandel	30.9	82.5	51.7	30.2	71.6	40.7		
6	14/03/2023	GA/23/0615	G-N6	R	Khajne Amere Porscodem	34.3	72.4	47.1	37.4	53.7	43.2		
7	28/03/2023	GA/23/0741	G-N7	R	Warkhand	30.0	84.6	53.7	34.8	63.1	43.9		
8	07/03/2023	GA/23/0542	G-N8	C	Rajvil Wade Torxem	35.8	69.6	51.1	28.3	60.3	45.3		
9	15/03/2023	GA/23/0618	G-N9	C	Village Panchayat Tamboxem - Mopa - Ugvem	39.2	85.2	52.1	40.2	70.2	51.4		
10	07/03/2023	GA/23/0541	M-N1	R	Salarde	33.8	72.0	52.5	29.0	70.9	43.5		
11	03/03/2023	GA/23/0500	M-N2	R	Dingane	30.8	71.5	43.4	30.3	52.7	35.1		
12	03/03/2023	GA/23/0501	M-N3	R	Netarde	27.2	84.3	52.3	23.6	53.6	35.3		
I - Industrial Zone, C - Commercial Zone, R - Residential Zone													
1] Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows													
	Area Code	Category of Area		Limits in dB(A) Leq									
				Day Time	Night Time								
	(A)	Industrial Area (I)		75	70								
	(B)	Commercial Area (C)		65	55								
	(C)	Residential Area (R)		55	45								
	(D)	Silence Zone (S)		50	40								
2] Day time to reckoned in between 6:00 am to 10 pm and night time is reckoned in between 10:00 pm to 06:00 am													
3] "dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A "decibel" is a unit in which noise is measured.													
4] "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.													
5] Leq : It is the energy mean of the noise level over a specified period.													
<b>Note :</b> 1. The results relate only to the samples tested. 2. Test Report shall not be reproduced except in full, without written approval of the laboratory. 3. Test Results relate only to the conditions prevailing at the time of sampling. 4. Customer complaint register is available at laboratory. 5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.													
For GADARK LAB PVT. LTD.													
 <b>AUTHORISED SIGNATORY</b> <b>[SANTOSH V. ZULPE]</b>								 <b>CHECKED BY</b>					

**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 554067	16/05/2022	16/05/2023

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 546176	24/06/2022	24/06/2023



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## INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

NOISE LEVEL MONITORING REPORT								
Date of Issue		03/04/2023						
Name of Client		M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED						
Address of Client		ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, DADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA 403512.						
Sampling Plan		GLPL/QF/7.3/06			Sampling Procedure No.		GLPL/SOP/AA/17	
Sample Collected By		GLPL Representative						
AMBIENT AIR NOISE POLLUTION MONITORING								
Sr. No.	Date of Sampling	Report No.	Station ID	Zone	Sampling Location	Day Time Noise		In dB(A)
						L <sub>min</sub>	L <sub>max</sub>	L <sub>eq</sub>
1	09/03/2023	GA/23/0582	G-N3	C	Nagzar Pump Off	43.7	71.9	56.9
2	17/03/2023	GA/23/0648	G-N3	C	Nagzar Pump Off & On	45.7	74.7	61.2
3	24/03/2023	GA/23/0703	G-N3	C	Nagzar Pump Off & On	42.4	72.3	56.8
4	28/03/2023	GA/23/0704	G-N3	C	Nagzar Pump Off & On	44.0	66.9	59.7
I - Industrial Zone, C - Commercial Zone, R - Residential Zone								
1] Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows								
	Area Code	Category of Area			Limits in dB(A) Leq			
					Day Time	Night Time		
	(A)	Industrial Area (I)			75	70		
	(B)	Commercial Area (C)			65	55		
	(C)	Residential Area (R)			55	45		
	(D)	Silence Zone (S)			50	40		
2] Day time to reckoned in between 6:00 am to 10 pm and night time is reckoned in between 10:00 pm to 06:00 am								
3] "dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing. A "decibel" is a unit in which noise is measured.								
4] "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.								
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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 554067	16/05/2022	16/05/2023

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 546176	24/06/2022	24/06/2023



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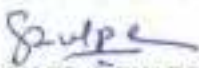
## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0444	Report Date	24/03/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 18/03/2023	Environmental Condition of Lab	Temp °C	Humidity %
			30.0	46
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Apron, Aircraft Filling Point			
Sampling Details	Apron, Aircraft Water Filling Point	Date of Collection	18/03/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/03/2023	
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

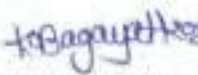
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.17	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	18.29	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	38	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	13.18	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	2.00	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	10	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0444	Report Date	24/03/2023
Order / Reference	As Per Dated 18/03/2023	Sample Received on	18/03/2023
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

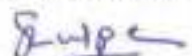
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.032	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	2.40	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.97	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	9.2	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	0.6	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

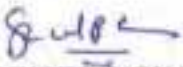
Report No.	GW/23/0444	Report Date	24/03/2023
Order / Reference	As Per Dated 18/03/2023	Sample Received on	18/03/2023
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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### Note:

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Page 3 of 3

### Equipment Calibration Details

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	18/03/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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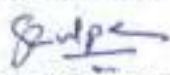
## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/0445	Report Date	24/03/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 18/03/2023	Environmental Condition of Lab	Temp °C	Humidity %
			30.0	46
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L0 Fountain			
Sampling Details	PTB L0 Water Fountain	Date of Collection	18/03/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/03/2023	
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.10	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	10.16	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	25	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	10.14	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	0.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	8	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0445	Report Date	24/03/2023
Order / Reference	As Per Dated 18/03/2023	Sample Received on	18/03/2023
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

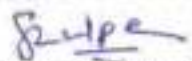
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.024	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

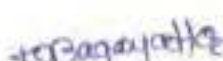
### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	1.6	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.97	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	4.2	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	0.1	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT


Report No.	GW/23/0445	Report Date	24/03/2023
Order / Reference	As Per Dated 18/03/2023	Sample Received on	18/03/2023
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	18/03/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



# GADARK LAB PVT. LTD.

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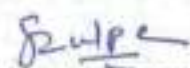
## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0446	Report Date	24/03/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 18/03/2023	Environmental Condition of Lab	Temp °C	Humidity %
			30.0	46
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB Retail Outlet (L2)			
Sampling Details	PTB Retail Outlet (L2)	Date of Collection	18/03/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/03/2023	
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1	pH	7.13	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Not Specified	APHA 2160 B
4	Colour	< 1.0	Colour Unit	Not Specified	APHA 2120 B
5	Odour	Agreeable	-	Not Specified	APHA 2150 B
6	Total Alkalinity	16.25	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	35	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	12.16	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	1.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	Not Specified	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	10	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.056	mg/lit	0.50	APHA 4500 NH <sub>3</sub>
13	Mineral Oil	< 0.1	mg/lit	0.50	APHA 5520 B

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## TEST REPORT

Report No.	GW/23/0446	Report Date	24/03/2023
Order / Reference	As Per Dated 18/03/2023	Sample Received on	18/03/2023
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

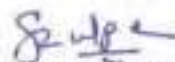
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.030	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	Not Specified	APHA 4500 F-
17	Phenolic Compound	< 0.001	mg/lit	Not Specified	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	Not Specified	APHA 4500 CN- D
19	Anionic Detergent	< 0.001	mg/lit	Not Specified	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.001	mg/lit	0.03	IS 3025 (Part 2)
21	Arsenic as As	< 0.001	mg/lit	0.01	IS 3025 (Part 2)
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	2.40	mg/lit	Not Specified	APHA 3500 Ca B
24	Cadmium as Cd	< 0.001	mg/lit	0.003	APHA 3111 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.001	mg/lit	0.01	APHA 3111 B
27	Magnesium as Mg	0.97	mg/lit	Not Specified	APHA 3500 Mg B
28	Chromium as Cr	< 0.014	mg/lit	Not Specified	APHA 3111 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0096	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	9.0	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	0.5	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.0049	mg/lit	0.05	APHA 3111 B

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## TEST REPORT

Report No.	GW23/0446	Report Date	24/03/2023
Order / Reference	As Per Dated 18/03/2023	Sample Received on	18/03/2023
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	IS desirable Limit (As per IS 10500)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Not Specified	APHA 9221 - G

End

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Page 3 of 3

**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPL/C/22 23/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	18/03/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	01/07/2022	30/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0447	Report Date	24/03/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 18/03/2023	Environmental Condition of Lab	Temp °C	Humidity %
			30.0	46
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Inlet			
Sampling Details	STP Inlet Water Sample	Date of Collection	18/03/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/03/2023	
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.00	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	212	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	74	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	174	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	7	mg/lit	APHA 5520 B
6	Ammonia	47.26	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	62.49	mg/lit	APHA 4500-Norg

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	Method
8	Fecal Coliform at 44.5°C for 24 hrs.	> 1600	MPN Index/100ml	APHA 9221 E

End

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**Equipment Calibration Details**

Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	18/03/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0448	Report Date	24/03/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 18/03/2023	Environmental Condition of Lab	Temp °C	Humidity %
			30.0	46
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Outlet			
Sampling Details	STP Outlet Water Sample	Date of Collection	18/03/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/03/2023	
Analysis Started On	18/03/2023	Analysis Completed On	24/03/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

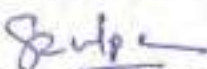
Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	6.29	-	5.5 - 9.0	APHA 4500 H*
2	Chemical Oxygen Demand (COD)	16	mg/lit	50.00	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	7	mg/lit	10.00	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	12	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	4.36	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	9.18	mg/lit	10.00	APHA 4500-Norg

### Microbiological Parameters:

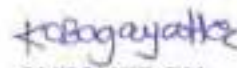
8	Fecal Coliform at 44.5°C for 24 hrs.	84	MPN Index/100ml	100	APHA 9221 E
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End

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Sr. No.	Equipment Name	Equipment Id	Certificate No.	Calibration Details	
				Calibration Date	Next Calibration Due Date
01.	pH Meter	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	01/07/2022	30/06/2023
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	01/07/2022	30/06/2023
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	01/07/2022	30/06/2023
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	18/03/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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## TEST REPORT

STACK EMISSION REPORT					
Test Report No.	GA/23/0515	Test Report Date	09/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED				
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, ADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA - 403 512.				
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	GLPL/SOP/SE/11		
Sample Collected By	GLPL Representative	Environmental Condition of Lab			
Date of Sampling	05/03/2023	Temperature (°C)	28.4	Humidity (%)	48.0
Sample Received on	06/03/2023	Analysis Period	06/03/2023 To 09/03/2023		

### SAMPLING DETAILS - STACK EMISSION

Stack Attached to	D. G. SET NO. 1 (2000 KVA) [S-1]
Lab Reference No.	GA/23/0515
Time of Sampling (Hrs)	12:00
Stack Diameter [mm]	457
Height [Meter]	30.0
Type of Fuel	HSD
Consumption of Fuel [Lit/hr]	250
Temperature of flue gas [°C]	470
Average flue gas velocity [m/s]	21.3
Average volume of flue gas discharged [Nm <sup>3</sup> /hr]	5049

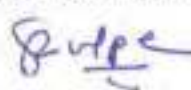
### ANALYSIS REPORT :

Parameters	Unit	Results	GSPCB Limits**	Sampling & Analysis Methods
TPM / SPM	mg/Nm <sup>3</sup>	40.6	75 mg/Nm <sup>3</sup>	IS 11255 (Part I) 1985
Sulphur Dioxide	mg/Nm <sup>3</sup>	117.4	---	IS 11255 (Part II) 1985
NOx	ppm v/v	74.3	710 ppm v/v	IS 11255 (Part VII) 2005
CO	mg/Nm <sup>3</sup>	15.9	150 mg/Nm <sup>3</sup>	APHA Edition II-134
NMHC	mg/Nm <sup>3</sup>	13.3	100 mg/Nm <sup>3</sup>	IS 5182 Part 21/2001

\*\*Consent No. 12/2022-PCB/1322094/R008891

End

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**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Instrument Name	Calibrated On	Calibration Due Date
Stack Monitoring Kit – Sr. No. 6120	13/10/2022	12/10/2023
UV Spectrophotometer – GL/EQ/UV/01	15/10/2022	14/10/2023
Analytical Balance - GL/EQ/BAL/03	01/07/2022	30/06/2023



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## TEST REPORT

STACK EMISSION REPORT					
Test Report No.	GA/23/GMR/0517	Test Report Date	09/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED				
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, ADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA - 403 512.				
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	GLPL/SOP/SE/11		
Sample Collected By	GLPL Representative	Environmental Condition of Lab			
Date of Sampling	05/03/2023	Temperature (°C)	28.4	Humidity (%)	48.0
Sample Received on	06/03/2023	Analysis Period	06/03/2023 To 09/03/2023		

### SAMPLING DETAILS - STACK EMISSION

Stack Attached to	D. G. SET NO. 2 (2000 KVA) [S-2]
Lab Reference No.	GA/23/GMR/0517
Time of Sampling (Hrs)	14:10
Stack Diameter [mm]	457
Height [Meter]	30.0
Type of Fuel	HSD
Consumption of Fuel [Lit/hr]	250
Temperature of flue gas [°C]	472
Average flue gas velocity [m/s]	23.1
Average volume of flue gas discharged [Nm <sup>3</sup> /hr]	5459

### ANALYSIS REPORT :

Parameters	Unit	Results	GSPCB Limits**	Sampling & Analysis Methods
TPM / SPM	mg/Nm <sup>3</sup>	48.3	75 mg/Nm <sup>3</sup>	IS 11255 (Part I) 1985
Sulphur Dioxide	mg/Nm <sup>3</sup>	109.0	---	IS 11255 (Part II) 1985
NOx	ppm v/v	64.78	710 ppm v/v	IS 11255 (Part VII) 2005
CO	mg/Nm <sup>3</sup>	12.8	150 mg/Nm <sup>3</sup>	APHA Edition II-134
NMHC	mg/Nm <sup>3</sup>	12.9	100 mg/Nm <sup>3</sup>	IS 5182 Part 21/2001

\*\*Consent No. 12/2022-PCB/1322094/R008891

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



Handwritten signature of J. Bagayatto  
CHECKED BY

#### Note :

1. The results relate only to the samples tested.
2. Test Report shall not be reproduced except in full, without written approval of the laboratory.
3. Samples will be preserved for a period 15 days from the delivery of Test Report.
4. Test Results relate only to the conditions prevailing at the time of sampling.
5. Customer complete register is available at laboratory.
6. Calibration details of the equipment's used in monitoring and / or analysis a back side of analysis report.

**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Instrument Name	Calibrated On	Calibration Due Date
Stack Monitoring Kit – Sr. No. 6120	13/10/2022	12/10/2023
UV Spectrophotometer – GL/EQ/UV/01	15/10/2022	14/10/2023
Analytical Balance - GL/EQ/BAL/03	01/07/2022	30/06/2023



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.  
Tel.: (02362) 223519 • E-mail: info@gadark.in • Website: www.gadark.in

OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

## TEST REPORT

STACK EMISSION REPORT					
Test Report No.	GA/23/0516	Test Report Date	09/03/2023		
Name of Client	M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED				
Address of Client	ADMINISTRATIVE BLOCK, MOPA INTERNATIONAL AIRPORT, ADACHIWADI ROAD, NAGZAR, TALUKA PERNEM, MOPA, NORTH GOA - 403 512.				
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	GLPL/SOP/SE/11		
Sample Collected By	GLPL Representative	Environmental Condition of Lab			
Date of Sampling	05/03/2023	Temperature (°C)	28.4	Humidity (%)	48.0
Sample Received on	06/03/2023	Analysis Period	06/03/2023 To 09/03/2023		

### SAMPLING DETAILS - STACK EMISSION

Stack Attached to	D. G. SET NO. 3 (2000 KVA) [S-3]
Lab Reference No.	GA/23/0516
Time of Sampling (Hrs)	12:45
Stack Diameter [mm]	457
Height [Meter]	30.0
Type of Fuel	HSD
Consumption of Fuel [Lit/hr]	250
Temperature of flue gas [°C]	475
Average flue gas velocity [m/s]	21.9
Average volume of flue gas discharged [Nm <sup>3</sup> /hr]	5158

### ANALYSIS REPORT :

Parameters	Unit	Results	GSPCB Limits**	Sampling & Analysis Methods
TPM / SPM	mg/Nm <sup>3</sup>	52.8	75 mg/Nm <sup>3</sup>	IS 11255 (Part I) 1985
Sulphur Dioxide	mg/Nm <sup>3</sup>	125.8	--	IS 11255 (Part II) 1985
NOx	ppm v/v	67.1	710 ppm v/v	IS 11255 (Part VII) 2005
CO	mg/Nm <sup>3</sup>	12.3	150 mg/Nm <sup>3</sup>	APHA Edition II-134
NMHC	mg/Nm <sup>3</sup>	12.1	100 mg/Nm <sup>3</sup>	IS 5182 Part 21/2001

\*\*Consent No. 12/2022-PCB/1322094/R008891

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



CHECKED BY

#### Note :

1. The results relate only to the samples tested.
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3. Samples will be preserved for a period 15 days from the delivery of Test Report.
4. Test Results relate only to the conditions prevailing at the time of sampling.
5. Customer complaint register is available at laboratory.
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UV Spectrophotometer – GL/EQ/UV/01	15/10/2022	14/10/2023
Analytical Balance - GL/EQ/BAL/03	01/07/2022	30/06/2023

**ANNEXURE – 3**
**ENVIRONMENTAL EXPENDITURE  
DURING PERIOD OF OCTOBER 2022 TO MARCH 2023**

*Note: All cost expenditures are in INR Crore.*

<b>S. N.</b>	<b>Particulars</b>	<b>Expenses during Oct 2022 to Mar 2023 (in INR Crore)</b>
1.	AAQ & Noise Levels Monitoring (in Goa & Maharashtra States)	0.341
2.	Dust suppression through tankers & chemical dust suppression	0.020
3.	Maintenance of translocated trees within the site	0.002
4.	Top soil preservation measures	0.353
5.	O&M of labour colony STP	0.149
6.	Occupational health surveillance of workmen	0.049
7.	Environment Management Cell (EMC) set up	0.063
8.	Waste Management (M/s Alterz Energy)	0.087
9.	Vacuum Tanker (Portable toilets at site)	1.955
10.	Environmental Compliance Monitoring by NEERI	0.170
11.	Aviation Noise Monitoring Terminal units (NMT)	0.105
12.	Installation of 625 KLD Sewage Treatment Plant	0.304
13.	Installation of 550 KLD Water Treatment Plant	0.304
14.	Miscellaneous (Campaigns, Seminar, Training, etc)	0.368
	<b>TOTAL</b>	<b>4.270</b>





**ANNEXURE – 4**
**LIST OF STATUTORY PERMITS / APPROVALS RELATED TO ENVIRONMENT  
OBTAINED DURING OCTOBER 2022 TO MARCH 2023**

S.N.	Statutory Permits/Approval	Date		Statutory Authority	Permit enclosed as
		Issued	Validity		
1	NOC for installation of 2 x 30 KL HSD Storage Facility	13.10.2022	-	Mopa Airport Development Authority (MADA), GoG	Appendix-1
2	Consent to Operate for Airport	20.10.2022	20.04.2023	Goa State Pollution Control Board (GSPCB)	Appendix-2
3	Membership with Goa Industrial Environment Management Authority	22.11.2022	-	Goa Industrial Environment Management Authority (GIEMA)	Appendix-3
4	PESO License for 60 KL HSD Tank (DG Sets)	02.12.2022	31.12.2024	Petroleum and Explosives Safety Organization (PESO)	Appendix-4
5	IGBC Platinum Certificate for Passenger Terminal Building (PTB)	10.12.2022	10.12.2025	Indian Green Building Council (IGBC)	Appendix-5
6	PESO License for Class-B ATF - 230 KL Storage (BPCL)	27.12.2022	31.12.2023	Petroleum and Explosives Safety Organization (PESO)	Appendix-6
7	Approval for Integrated Waste Management Plan & Contaminant Containment Plan	27.12.2022	-	Goa State Pollution Control Board (GSPCB)	Annexure-7
8	Authorization for Disposal of Non-Biodegradable Waste	24.01.2023	24.01.2024	Goa Waste Management Corporation (GWMC)	Appendix-8
9	Extension of Consent to Operate for Airport	13.04.2023	01.08.2027	Goa State Pollution Control Board (GSPCB)	Appendix-9



**Appendix-1**  
**NOC for installation of 2 x 30 KL HSD Storage Facility**

Office of Member Secretary  
Mopa Airport Development Authority  
Room No. 19  
Secretariat, Porvorim, Goa  
Goa-403521

Ph: 0832-2419542/543

Fax: 0832-2419869

No. MADA/44/APP/UNDER PETROLEUM RULE 2002/2022- 16

13<sup>th</sup> October 2022

To,

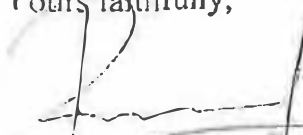
The Additional District Magistrate  
Magisterial Branch  
Collectorate building  
Panaji

**Sub: Reports regarding No Objection on Installation of 3 x 2000 KVA, 11 KV Prime Power Diesel generating sets to provide back up power to the Mopa Airport Project Site via Dadachiwadi under petroleum Rule 2002.**

Sir,

With reference to your letter No. 9/2022(1)-MAG/PET/NOC/2389 dated 13/8/2022, **NO OBJECTION** is hereby conveyed for the proposed 2 x 30 KL U/G HSD Storage facility at GMR Goa International Airport Limited, Mopa Airport site, via Dadachiwadi Road, Nagzar, Pernem taluka for further necessary action at your end.

Yours faithfully,

  
(Dr. S. Shanbhogue)  
Member Secretary  
MADA

Copy to:

The Chief Development Officer, GGIAL, Mathura One, Porvorim

DATE OF RECEIPT		14/10/2022
Department		
CDO Office		
Civil Engrs		
MEP & Avionics Systems	<input checked="" type="checkbox"/>	(Hemant)
Contracts		
Land		
Quality		
Planning		
Safety	<input checked="" type="checkbox"/>	(Shivaram)
IT		
President's Coordination		
GMR GOA INTERNATIONAL AIRPORT		

Page 351 of 377

**Appendix-2**  
**Consent to Operate for Airport**  
**GOA STATE POLLUTION CONTROL BOARD**

**गोंयराज्यप्रदूषणनियंत्रणमंडळ**

**(An ISO 9001-2015, ISO 14001:2015. ISO 45001:2018 Certified Board)**

Phone Nos: 0832- 2407700,  
2407701, 2407702  
Tel/Fax No: 0832- 2407700



Email Ids:  
Chairman, GSPCB, [chairman-gspcb.goa@nic.in](mailto:chairman-gspcb.goa@nic.in)  
Member Secretary, GSPCB, [ms-gspcb.goa@nic.in](mailto:ms-gspcb.goa@nic.in)  
Office: [mail.gspcb@gov.in](mailto:mail.gspcb@gov.in)

No.12/2022-PCB/1322094/R0008891

Date: 20/10/2022

**Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6(i) of the Hazardous & Other Wastes (Management and Transboundary Movement) Rules 2016, as amended thereafter**

[To be referred as Water Act, Air Act and HW (M & T) Rules respectively]

Consent to Operate is hereby granted to:

**M/s. GMR Goa International Airport Limited**  
**(Represented by: Mr. Sheshan R V, Chief Executive Officer)**  
**(Red Category)**

**Mopa, Pernem, North Goa**

Located in the area declared under the provisions of the Water Act & Air Act, subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:

1. This Consent to Operate is valid upto **a period of six months from the date of issue of this consent.**
2. This Consent to Operate is valid for the establishment of :

Sr. No	Description
1.	Airport (Operation and Maintenance) – 1 no.

**3.CONDITIONS REQUIRED TO BE COMPLIED UNDER THE WATER ACT:**

- (i) The daily quantity of domestic effluent from the unit shall not exceed **625 KLD**
- (ii) **Sewage Treatment Plant:**  
The unit shall install sewage treatment plant (**625 KLD capacity**) of FMR technology, as proposed, consisting of primary treatment comprising of bar screen & oil & grease trap, secondary treatment comprising of aeration / FMR reactor & clarifier tank and tertiary treatment comprising of multi grade filter & activated carbon filter as is warranted with reference to influent quality and operate & maintain the same continuously so as to achieve the quality of the treated effluent to the following standards:

pH	Between	5.5 & 9.0
Suspended Solids	Not to exceed	Not more than 20 mg/l
BOD, 3 days, 27° C	Not to exceed	10 mg/l
COD	Not to exceed	50 mg/l
Oil & Grease	Not to exceed	10 mg/l
N-total	Not to exceed	10 mg/l
Fecal Coliform	Less than	100 MPN/100 ml

**(iii) Sewage Disposal:**

The treated effluent shall be recycled to the maximum extent and remaining shall be used on land for gardening. There shall not be any discharge outside the unit premises.

(iv) A good house-keeping shall be maintained within the unit premises. All pipes, valves and drains shall be maintained in leak-proof condition. Floor washings shall be maintained to the effluent collection system only and shall not be allowed to find way in open areas.

(v) The unit shall at his own cost get the effluent samples collected both before and after treatment and analyse every month the parameters indicated above from a laboratory recognized by Ministry of Environment & Forest and Climate Change under the Environment Protection Act, 1986 and rules there under and results shall be submitted online regularly to this Board, in the succeeding month.

**(vi) Non-Hazardous Solid Waste:**

All the Solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board. The total quantity shall be segregated and treated as follows:

Sr. no.	Type of segregated solid waste	Quantity	Disposal
1	Bio-degradable waste	2 MT/ day	To be processed in Organic Waste Converter to convert as manure.
2.	Non-biodegradable waste	3 MT/ day	Non-Recyclable waste to be baled and then handed over to GWMC or disposed off in cement kiln. Recyclable waste to be disposed to the recyclers.

(vii) The applicant should upload monthly statement (below format) regarding the solid waste generation online.

Sr. No.	Date	Quantity of wet/dry waste	Name of agency collecting the wet/ dry waste	Authorized Signatory

(viii) The unit should operate and maintain machinery/equipment/facility for converting bio-degradable /organic waste generated from the unit to compost so as to meet the standard for compost prescribed in the Solid Waste Management Rules, 2016.

(ix) The unit should have zero discharge policy. ie the treated waste water may be re-used in process/green belt development /or any other use as deemed fit by the unit.

**4. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE AIR ACT:**

(i) The unit may install the following equipment and shall be equipped with comprehensive control system as it is warranted with reference to generations of emissions:

Sr. No.	Name of Equipments/ Installation	No of Installation	Capacity	SO <sub>2</sub> Kg/Hr	Particulate Matter mg/Nm <sup>3</sup>
1.	D.G. set	3	2000 KVA	51.12	75

(ii) The applicant shall observe the following standards for D. G. Sets  $\geq$  1000 KVA

Sr. No	Parameters	Limits
1.	NO <sub>x</sub> (as NO <sub>2</sub> )	710 ppmv (at 15% O <sub>2</sub> ) Dry basis
2.	NMHC(as C)	100 mg/Nm <sup>3</sup> (at 15% O <sub>2</sub> )
3.	Particulate Matter	75 mg/Nm <sup>3</sup> (at 15 % O <sub>2</sub> )
4.	CO	150 mg/Nm <sup>3</sup> (at 15 % O <sub>2</sub> )
5.	Sulphur Content in Fuel	Less than 2%

(iii) The unit shall erect the chimney(s) of the following specifications:

Sr. No	Chimney attached to	Height
1.	D.G. set (2000 KVA)	30 mtrs

(iv) The unit shall observe the following standards:-

Sr. No	Type of fuel	Quantity /hr
1.	H.S.D. (For D.G. set of 2000 KVA)	710 litres/hr

(v) The Stack Port Hole and Platform is to be designed as per CPCB guidelines Method 1 Part 1 of Stack Monitoring – Material & methodology for isokinetic sampling.

(vi) The unit should comply with all the standards for D.G. Sets prescribed at Sr. no. 94, 95 and 96 of Schedule I of the Environment (Protection) Rules, 1986.

(vii) The unit should carry out emission monitoring from the stacks once a year from a laboratory recognized by Ministry of Environment and Forest & Climate Change under the Environment Protection Act, 1986 and the result shall be submitted online to the Board.

(viii) The unit shall adhere to G.S.R. 568(E) dated 18th June, 2018, Ambient Air Quality Standards with respect to Noise in Airport Noise Zone and shall take adequate measures for control of noise levels from its own sources within the premises in respect of noise. The limits are as follows

Sl. No.	Industry	Parameters	Standards	
		Ambient Air Quality Standards with respect to Noise in Airport Noise Zone		
“112	Airports	Type of Airports	Limits in dB (A) Leq	
			Day time	Night time
		Busy Airport	70	65
	All other Airports excluding proposed Airports	65	60	

- (ix) The unit shall achieve the following Ambient Air Quality standards at 6 monitoring locations in Goa and 3 monitoring locations in Maharashtra other than CAAQM Station:

Sr. No.	Pollutant	Time weighted	Concentration in Ambient Air	
			Industrial residential rural & other area	Ecologically sensitive area (notified by Central Government)
1.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual* 24 hours**	50 80	20 80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual* 24 hours**	40 80	30 80
3.	Particulate Matter (size less than 10 µg) or PM <sub>10</sub> µg/m <sup>3</sup>	Annual* 24 hours**	60 100	60 100
4.	Particulate Matter (size less than 2.50 µg) or PM <sub>2.5</sub> µg /m <sup>3</sup>	Annual* 24 hours**	40 60	40 60
5.	Lead (Pb), µg /m <sup>3</sup>	Annual* 24 hours**	0.50 1.0	0.50 1.0
6.	Carbon Monoxide (CO), mg/m <sup>3</sup>	8 hours** 1 hour**	02 04	02 04

\*Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

\*\* 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

- (x) The Unit shall carry out Ambient Air Quality Monitoring once every month from a laboratory recognized by MOEF under the Environment Protection Act., 1986 and the report should be submitted online to the Board.
- (xi) The unit shall maintain and operate Continuous Ambient Air Quality Monitoring System (Parameters PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, Ozone, Hydrocarbons) and transfer the data to the Board server and CPCB server.
- (xii) The SMS/ email alerts will be sent to the unit if found to be non-complying to the standards prescribed in Consent. In case the unit is found to be non-complying for three consecutive occasions, necessary action will be initiated.

**5. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE HAZARDOUS AND OTHER WASTES (MANAGEMENT AND TRANSBOUNDARY MOVEMENT) RULES 2016, AS AMENDED THEREAFTER:**

- i) The unit is hereby granted authorization to operate a facility for collection, storage and disposal of hazardous wastes as specified below:

Sr. No.	Category	Type of waste	Quantity	Mode of disposal
1.	5.1	Used / Spent oil	5000 litres/ annum	To recycler registered with SPCB and having valid authorization of SPCB.
2.	5.2	Wastes/ residues containing oil	1000 kg/ annum	To be sent to CHWTSDF operated by M/s Ponda Envocare Ltd. at Pissurlem IDC, Goa for incineration.
3.	33.1	Discarded containers contaminated with	2000 kg/ annum	To recycler registered with SPCB and having valid

		hazardous chemicals/ wastes		authorization of SPCB.
--	--	--------------------------------	--	------------------------

- ii)** The authorization shall comply with the provisions of the Environment (Protection) Act, 1986 and the rule made there under.
- iii)** The person authorized shall not rent, lend, sell or transfer or otherwise transport the hazardous waste without obtaining prior permission of the Goa State Pollution Control Board.
- iv)** Any unauthorized change in personnel, equipment or working conditions as mentioned in the unit by the person authorized shall constitute a breach of his authorization.
- v)** It is a duty of the authorized person to take permission of the Goa State Pollution Control Board to close down the facility.
- vi)** The inner bottom surfaces of the tank shall be impervious enough to prevent leakage or seepage of these wastes into the sub surface soil or ground water.
- vii)** The occupier shall maintain a manifest system as per Rule 19 for disposal of hazardous wastes to ensure that these wastes are delivered to the designated facility preventing pilferage and clandestine disposal due to unforeseen events that may occur during transit.
- viii)** The manifest shall be endorsed by the dispatcher, transporter and receiver of hazardous wastes. The endorsed copy shall be furnished to the Goa State Pollution Control Board.
- ix)** Under any circumstances the hazardous waste shall not be disposed to unauthorized facilities.
- x)** The occupier shall maintain the records for collection, storage and disposal of hazardous waste in Form 3 of as per Hazardous And Other Waste (Management & Transboundary Movement) Rules 2016, as amended thereafter.
- xi)** The occupier shall furnish annual returns for collection, storage and disposal of hazardous waste through OCMMS systems.
- xii)** The unit shall put up an online board (minimum size 6x4 Feet) at prominent location providing details as follows in English and Konkani languages:-
- Hazardous Waste category number.
  - Hazardous Waste quantity number.
  - Treatment facility for each category.
  - Mode of disposal for each category.
  - Consent to Operate under Air Act, Water Act and Hazardous Waste Authorization-number, date and validity period.
  - Quantity and Nature of Hazardous Chemicals being used.
- xiii)** The occupier shall ensure that the Hazardous Wastes are not allowed to be stored for more than 90 days.
- xiv)** The occupier shall furnish annual returns online for collection, storage and disposal of hazardous waste in Form 4 by 30<sup>th</sup> June of every year.
- xv)** The occupier has to obtain registration with the CHWTSDF operated by M/s Ponda Envocare at Pissurlem IDC, Goa for the disposal of hazardous waste within 30 days of receipt of this Consent.

**6. GENERAL CONDITIONS:**

- (i) The unit shall not change or alter the quantity, quality of discharge, temperature or the mode of the effluent/ emission or hazardous wastes or control equipment provided for without previous permission of the Board.
- (ii) The unit shall provide facility for collection of samples of effluent, air emissions to the Board staff.
- (iii) An application in prescribed form along with the prescribed fees for renewal of Consent shall be submitted at least 60days before the expiry of validity of this Consent. An application for renewal of Consent submitted after expiry of the validity shall accompany with penalty of 50% of the Consent fees in addition to the prescribed consent fees.
- (iv) The Board shall be forthwith informed of any accident or unforeseen event involving discharge of any poisonous, noxious or polluting matter into a stream or well or on land or into the atmosphere, as result of such discharge water/ air is being polluted
- (v) This Consent to operate is granted without any prejudice to any of the permission(s) required under any law, by laws and regulations in force the Consent to Operate is confined to matters arising out of the Air Act and Water Act only.
- (vi) The Board reserves the right to amend or add any conditions in this consent and the same shall be binding on the applicant.
- (vii) The unit shall submit to this office, the Environmental Statement Report in Form V for the Financial Year ending April to March by 30<sup>th</sup> September of the succeeding year as per the provisions of the rule 14 of the Environment (Protection) (*Second Amendment*) Rules, 1992.
- (viii) The Unit shall bear the cost of analysis / monitoring in case of complaints received by the Board / re-inspections due to non-compliances observed by the Board & monitoring carried by the Board.
- (ix) The unit shall submit the details of the Public Liability Insurance Policy under the PLI Act 1991, to the Board office, if applicable.
- (x) The Unit shall submit returns for disposal of batteries under the Batteries (*Management & Handling*) Rules 2001 as amended thereafter, if applicable.
- (xi) The unit shall submit returns for disposal of e-waste under the E-Waste Management Rules 2016 as amended thereafter, if applicable.
- (xii) The unit shall submit returns for disposal of plastic waste under the Plastic Waste Management Rules 2016 as amended thereafter, if applicable.
- (xiii) The unit shall comply to the guidelines and dust mitigation measures in handling Construction materials and Demolition waste issued by the Central Pollution Control Board (CPCB) and are placed on Board website – [www.goaspcb.gov.in](http://www.goaspcb.gov.in), if applicable.
- (xiv) The import, stocking, distribution, sale and use of single use plastic, including polystyrene and expanded polystyrene, commodities as per the Plastic Waste Management Rules 2016, as amended thereafter, shall be prohibited with effect from the 1st July, 2022.
- (xv) The unit has to obtain no objection certificate from the Central Ground Water Authority or the concerned State Authority for any ground water abstraction, if applicable.



(xvi) The unit should implement rain water harvesting and ground water re-charge measures within the premises as approved by Water Resources Department, Govt. of Goa.

(xvii) The unit shall carryout plantation of native tree species within the project site in the required areas in accordance with the Forest Department, Govt. of Goa.

To,

**M/s. GMR Goa International Airport Limited**

**(Represented by: Mr. Sheshan R V, Chief Executive Officer)**

**Mopa, Pernem, North-Goa**

Copy to:-

1. Accounts Section
2. Concerned File
3. Guard File

Received Consent fee of: **The Capital Investment of the unit is Rs.2594.33 Crore**

<b>Cheque no.</b>	<b>Amount</b>	<b>Date</b>
<b>32022090</b>	<b>Rs. 25,71,7566/-</b>	<b>07/09/2022</b>

**DR SHAMILA MONTEIRO** Digitally signed by DR SHAMILA MONTEIRO  
Date: 2022.10.20  
16:31:08 +05'30'

**(Dr. Shamila Monteiro)**  
**Member Secretary**  
**Goa State Pollution Control Board**

CUSTOMER FEEDBACK

Dear Citizen / Customer,

We appreciate you for sparing a few minutes for giving us your valuable feedback on our services

Name : .....

Contact .....

Address:

.....  
 .....

Email: ..... Date.....

Name of the service availed:

.....

Are you aware that service standards are included in the Citizen’s Charter as available on Board’s website

:[www.goaspcb.gov.in](http://www.goaspcb.gov.in)?

Yes  No

If yes, is the Citizen Charter simple and easy to understand?

Yes  No

Description of service delivery parameters (Consents/Authorisation/RTI’s/Complaints etc.)	Excellent	Good	Fair	Average	Poor	Reason for grading
Time taken to deliver service in comparison to service standards mentioned in Citizen’s Charter						
Quality of service (accuracy, completeness)						
Knowledge of dealing hand / staff regarding services/schemes						
Courtesy of staff						
Board’s response in view of your query/requirement is to your satisfaction						
Date of your visit to the office and your overall experience						

Suggestions for improvement, if any

.....  
 .....  
 .....

Signature & date

**To,**  
 The Member Secretary,  
 Goa State Pollution Control Board,  
 Near Pilerne Industrial Estate,  
 Opposite Saligao Seminary, Saligao, Bardez, Goa. 403511

- ❖ Please note that your feedback is considered essential for overall improvement and development of Board functions in service of environment.

Certificate of Membership

*This is to certify that*

GMR Goa International Airport Limited  
*is the member of the*

**Goa Industries Environment Management  
Association**

Reg. No.: - 66/Goa/2007



Membership No.: 103/2022-23

Date: 22/11/2022



K.V.S. Krishnakumar

**K.V.S. Krishnakumar**  
*President*

A.J. D'Souza

**A.J. D'Souza**  
*Treasurer*

**Appendix-4**  
**PESO License for 60 KL HSD Tank (DG Sets)**

Print Back



**भारत सरकार**  
**Government of India**  
**वाणिज्य और उद्योग मंत्रालय**  
**Ministry of Commerce & Industry**  
**पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो)**  
**Petroleum & Explosives Safety Organisation (PESO)**  
**ए-1 और ए-2 विंग, पाँचवा तल, केंद्रीय कार्यालय परिसर, सी.बी.डी. बेलापुर**  
**नवी मुंबई (महा.)- 400614**  
**A1 & A2 wing, 5th Floor, C.G.O. complex, CBD Belapur, Navi Mumbai (M.S.),**  
**Mumbai - 400614**

E-mail : [jtccemumbai@explosives.gov.in](mailto:jtccemumbai@explosives.gov.in)

Phone/Fax No : **022 - 27575946,27573881**

संख्या /No. : **P/WC/GA/15/86 (P529504)**

दिनांक /Dated : **02/12/2022**

सेवा में  
/To,

**M/s. M/s. GMR GOA INTERNATIONAL AIRPORT LTD,**  
**SY NO. 114/1,114/4,115/1,115/2,117/1,117/4 , MOPA,**  
**MOPA,**  
**Pernem,**  
**Taluka: Pernem,**  
**District: NORTH GOA,**  
**State: Goa**  
**PIN: 403512**

विषय /Sub : **Survey No, 114/1,114/4,115/1,115/2,117/1,117/4, MOPA AIRPORT PROJECT SITE,VIA DADACHIWADI ROAD - NAGZER,PERNEM TALUK,NORTH GOA - 403512, MOPA, Pernem, Taluka: Pernem, District: NORTH GOA, State: Goa, PIN: 403512 में पेट्रोलियम वर्ग B का अधिष्ठापन -अनुज्ञप्ति जारी करने के बारे में ।**  
**Petroleum Class B Installation at Survey No, 114/1,114/4,115/1,115/2,117/1,117/4, MOPA AIRPORT PROJECT SITE,VIA DADACHIWADI ROAD - NAGZER,PERNEM TALUK,NORTH GOA - 403512, MOPA, Pernem, Taluka: Pernem, District: NORTH GOA, State: Goa, PIN: 403512 Grant of License regarding.**

महोदय  
/Sir(s),

कृपया आपके पत्र क्रमांक **OIN1207434** दिनांक **18/11/2022** का अवलोकन करें ।

Please refer to your letter No. **OIN1207434** dated **18/11/2022**

विषयान्तर्गत अधिष्ठापन में निम्नलिखित पेट्रोलियम पदार्थों के वर्ग तथा मात्रा के भंडारण के लिए पेट्रोलियम नियम, 2002 के अधीन प्ररूप - XV में स्वीकृत, दिनांक **31/12/2024** तक वैध अनुज्ञप्ति संख्या **P/WC/GA/15/86 (P529504)** दिनांक **02/12/2022** भेजी जा रही है ।

Licence No. **P/WC/GA/15/86 (P529504)** dated **02/12/2022** granted in Form XV under the Petroleum Rules, 2002 and valid till **31/12/2024** for the storage of the following kinds and quantities of Petroleum at the subject installation is forwarded herewith.

पेट्रोलियम का विवरण /Description of Petroleum	किलोलीटरों में अनुज्ञप्त क्षमता /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	<b>NIL</b>
वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	<b>NIL</b>
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	<b>60.00 KL</b>

वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C, otherwise than in bulk	NIL
<hr/>	
कुल क्षमता /Total Capacity	60.00 KL
<hr/>	

कृपया पेट्रोलियम नियम 2002 के अधीन बनाए गए नियम 148 में दी गई प्रक्रिया का कड़ाई से पालन करें और अनुज्ञप्ति के नवीकरण हेतु समस्त दस्तावेजों को अनुज्ञप्ति की वैधता समाप्ति की तारीख या उससे पूर्व इस कार्यालय को प्रेषित करें।

Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for further renewal of the licence to this office, so as to reach on or before the date on which licence expires.

यह अनुमोदन/ अनुमति अन्य प्राधिकारियों से आवश्यक अनुमति/क्लीयरन्स प्राप्त करने से या यथा लागू अन्य विधियों से छूट नहीं देती है।

This approval/permission, however, does not absolve from obtaining necessary permission/clearance from other authorities or under other statutes as applicable.

भवदीय /Yours faithfully,

((ए. के. श्रीवास्तव)  
(A.K.Srivastava))  
उप मुख्य विस्फोटक नियंत्रक  
Dy. Chief Controller of Explosives  
कृते संयुक्त मुख्य विस्फोटक नियंत्रक  
For Jt. Chief Controller of Explosives  
नवी मुंबई (महा.)/Mumbai

**Copy forwarded to :-**

1. The Airport Authority, NORTH GOA(Goa) with reference to his NOC No 9/2022(I)-MAG/PET/NOC/3032 Dated 09/11/2022

**For Jt. Chief Controller of Explosives  
Mumbai**

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट <http://peso.gov.in> देखें)

(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

**Note:-This is system generated document does not require signature.**

**Disclaimer : This page gives the latest action taken by this organization on your application. This page is made available for the information of concerned applicant/licensee only. All efforts have been made to secure this information. However, PESO will not be responsible for any misuse of the information by unauthorized persons including the hackers.**



Appendix-5  
IGBC Platinum Certificate



Confederation of Indian Industry

## Indian Green Building Council (IGBC)

*hereby certifies that*

# GMR Goa International Airport Terminal

**Mopa, Goa**

(IGBC Registration No: NBO 19 0084)

*has successfully achieved the Green Building Standards required for  
the following level of certification under the*

***IGBC Green New Buildings Rating System***

(Owner-Occupied Building)

## Platinum

10 December 2022

*(This Certificate is valid for 3 years from the date of certification)*



**C N Raghavendran**

Chair, IGBC Green New Buildings

**Gurmit Singh Arora**

Chairman, IGBC

**K S Venkatagiri**

Executive Director, CII-Godrej GBC

## Appendix-6

## PESO License for Class-B ATF - 230 KL Storage (BPCL)



भारत सरकार

Government of India

वाणिज्य और उद्योग मंत्रालय

Ministry of Commerce &amp; Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो)

Petroleum &amp; Explosives Safety Organisation (PESO)

पाँचवा तल, ए-ब्लॉक, सी.जी.ओ.कॉम्प्लेक्स, सेमिनरी हिल्स

नागपुर- 440006

5th Floor, A-Block, CGO Complex, Seminary Hills,

Nagpur - 440006

E-mail : [explosives@explosives.gov.in](mailto:explosives@explosives.gov.in)Phone/Fax No : 0712 -2510248, Fax-  
2510577

संख्या /No. : P/HQ/GA/15/868 (P529583)

दिनांक /Dated : 27/12/2022

सेवा में /To,

M/s. Bharat Petroleum Corporation Limited,  
GMR GOA INTERNATIONAL AIRPORT LIMITED, Mopa Airpor,  
Pernem,  
Taluka: Pernem,  
District: NORTH GOA,  
State: Goa  
PIN: 403512

विषय /Sub : Survey No, 107/1,107/14, 107/30, GMR GOA INTERNATIONAL AIRPORT LIMITED, Mopa Airport Project Site, Via Dadachiwadi road - Nagzar, Pernem Taluka,, Pernem, Pernem, Taluka: Pernem, District: NORTH GOA, State: Goa, PIN: 403512 में स्थित विद्यमान पेट्रोलियम वर्ग B अधिष्ठापन में अनुज्ञप्ति सं P/HQ/GA/15/868 (P529583) के नवीकरण के संदर्भ में ।  
Existing Petroleum Class B installation at Survey No, 107/1,107/14, 107/30, GMR GOA INTERNATIONAL AIRPORT LIMITED, Mopa Airport Project Site, Via Dadachiwadi road - Nagzar, Pernem Taluka,, Pernem, Pernem, Taluka: Pernem, District: NORTH GOA, State: Goa, PIN: 403512 - Licence No. P/HQ/GA/15/868 (P529583) - Renewal regarding.

महोदय /Sir  
(5).

कृपया आपके पत्र क्रमांक OIN1260947 दिनांक 27/12/2022 का अवलोकन करें ।  
Please refer to your letter No. : OIN1260947, dated 27/12/2022

अनुज्ञप्ति संख्या P/HQ/GA/15/868 (P529583) दिनांक 27/12/2022 को दिनांक 31/12/2023 तक नवीनीकृत कर इस पत्र के साथ अद्यतित की जा रही है ।

Licence No. P/HQ/GA/15/868 (P529583) dated 27/12/2022 is forwarded herewith duly renewed upto 31/12/2023.

कृपया पेट्रोलियम नियम 2002 के अधीन बनाए गए नियम 148 में दी गई प्रक्रिया का कड़ाई से पालन करें । अनुज्ञप्ति के नवीकरण हेतु समस्त दस्तावेजों को अनुज्ञप्ति की वैधता समाप्त होने की तिथि से कम से कम 30 दिन पूर्व **Jt. Chief Controller of Explosives, West Circle, Mumbai** कार्यालय को प्रेषित करें ।

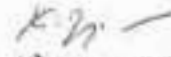
Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence to **Jt. Chief Controller of Explosives, West Circle, Mumbai**, so as to reach his office on or before the date on which

Licence expires.

कृपया पावती दें।

Please acknowledge the receipt.

भवदीय /Yours faithfully,



((के.त्यागराजन)

(K. Thiagarajan))

संयुक्त मुख्य विस्फोटक नियंत्रक

Jt. Chief Controller of Explosives

कृते मुख्य विस्फोटक नियंत्रक

For Chief Controller of Explosives

नागपुर/Nagpur

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(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट <http://peso.gov.in> देखें)

(For more information regarding status, fees and other details please visit our website: <http://peso.gov.in>)



**प्ररूप XV**  
**(प्रथम अनुसूची का अनुच्छेद 6 देखिए)**  
**FORM XV**  
**(see Article 6 of the First Schedule)**

**अधिष्ठापनों में पेट्रोलियम के आयात और भंडारकरण के लिए अनुज्ञप्ति**  
**LICENCE TO IMPORT AND STORE PETROLEUM IN AN INSTALLATION**

अनुज्ञप्ति सं. (Licence No.) : P/HQ/GA/15/868(P529583)

फीस रूपए (Fee Rs.) 14000/- per year

**M/s. Bharat Petroleum Corporation Limited, GMR GOA INTERNATIONAL AIRPORT LIMITED, Mopa Airpor, Pernem, Taluka: Pernem, District: NORTH GOA, State: Goa, PIN: 403512** को केवल इसमें यथा विनिर्दिष्ट वर्ग और मात्राओं में पेट्रोलियम 230.00 KL आयात करने के लिए और उसका, नीचे वर्णित और अनुमोदित नक्शा संख्या P/HQ/GA/15/868(P529583) तारीख 27/12/2022 जो कि इससे उपाबद्ध हैं, में दिखाए गए स्थान पर भण्डारकरण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुज्ञप्ति की अतिरिक्त शर्तों के अधीन रहते हुए, यह अनुज्ञप्ति अनुदत्त की जाती है।

Licence is hereby granted to **M/s. Bharat Petroleum Corporation Limited, GMR GOA INTERNATIONAL AIRPORT LIMITED, Mopa Airpor, Pernem, Taluka: Pernem, District: NORTH GOA, State: Goa, PIN: 403512** valid only for the importation and storage of 230.00 KL Petroleum of the class and quantities as herein specified and storage thereof in the place described below and shown on the approved plan No P/HQ/GA/15/868(P529583) dated 27/12/2022 attached hereto subject to the provisions of the Petroleum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनुज्ञप्ति 31st day of December 2023 तक प्रवृत्त रहेगी।

The Licence shall remain in force till the 31st day of December 2023

पेट्रोलियम का विवरण /Description of Petroleum	अनुज्ञप्त मात्रा (किलोलीटरों में) /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	NIL
वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	NIL
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	230.00 KL
वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C, otherwise than in bulk	NIL
<b>कुल क्षमता /Total Capacity</b>	<b>230.00 KL</b>

December 27, 2022

For Chief Controller of Explosives

Page 36 of 36  
Bhopal

## GOA STATE POLLUTION CONTROL BOARD

## गोंय राज्य प्रदूषण नियंत्रण मंडळ

(An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Board)

Phone Nos. : 0832-2407700  
2407701, 2407702  
2407703

Tel/Fax No. : 0832-2407700



Emails:

Chairman, GSPCB: chairman-gspcb.goa@nic.in  
Member Secretary GSPCB: ms-gspcb.goa@nic.in  
Office: mail.gspcb@gov.in

No. 12/2022-PCB/1322094/ROCOB891/Tech/18182

Date: 27/12/2022

To,  
M/s GMR Goa International Airport Limited  
(Represented by: Mr. Sheshan R V, Chief Executive Officer)  
Mopa, Pernem-Goa

Sub: Seeking approval for 'Integrated Waste Management Plan' and Spillage & Contaminant Containment Plan' for Airport Operation & Maintenance

Ref: 1) Your letter no. GGIAUGSPCB/22-23/1277 dated 18/11/22

Sir,

With reference to the above, the Board is in receipt of two plans for approval i.e. 'Integrated Waste Management Plan' and 'Spillage & Contaminant Containment Plan' submitted by your unit, in compliance to EC condition no. (v) under 'VI. Waste Management' and condition no. (vi) under 'III. Water Quality Monitoring and Preservation.

Therefore, the Board hereby approves the two plans of 'Integrated Waste Management Plan' and 'Spillage & Contaminant Containment Plan' submitted by your unit vide letter (1) referred above.

You are required to maintain appropriate records and file returns under the required EP Act and Rules pertaining to Waste Management.

Yours Faithfully,

(Dr. Shamila Monteiro)  
Member Secretary

For Goa State Pollution Control Board



Ref: GWMC/Tech/51/pari-3/2022-23/1528

Date: 24/01/2023

To,  
Vice President,  
EHS & Sustainability,  
GMR Goa International Airport Limited,  
Survey No 381/3, Mathura One,  
1<sup>st</sup> Floor, NH-17, Porvorim,  
Goa, India-403501.

**Sub.: Authorization for deposition non-biodegradable waste with Goa Waste Management Corporation**

Ref No 1: Y/L no GGIAL/GWMC/2022-23/1434 dated 13/01/2023.

Sir,

This is in response to your letter referred above for disposal non-biodegradable waste with GWMC.

The waste should be deposited only in a segregated manner in compliance to the following legislation's

1. Solid Waste Management Rules 2016.
2. The Goa Non-biodegradable Garbage Control Act 1996.
3. Final order of NGT in the matter Saligao Civic and Consumer Cell v/s State of Goa & Ors. (No. 15/2015).
4. Any non-compliance will result in cancellation of the service without any notice.
5. Authorization from Goa State Pollution Control Board (GSPCB) or any other authority if required to be obtained as per law/rules.

This is to inform you that the waste shall be accepted at a fee of Rs 3770/- per ton and additional GST @ 18% i.e Rs 4449/- per ton and authorization shall be valid for 1 year from date of issue of this letter.

You are requested to deposit initial amount Rs 15,000/- as security deposit which will be refunded at the end of authorization period. The payment shall be made by Cheque / DD / RTGS / NEFT in favour of Goa Waste Management Corporation. The bank details are given below:

<b>Bank Name</b>	State Bank of India
<b>Branch</b>	Panaji
<b>Account Number</b>	40412633563
<b>IFSC Code</b>	SBIN0004212
<b>GST No</b>	30AAAGG1376A1Z8
<b>PAN No</b>	AAAGG1376A

It has to be ensured that no bio-medical waste, e-waste, Hazardous waste or C&D waste is brought at the facility.

The vehicles used for transportation should be covered and not be over loaded above the cargo hold level. Also ensure that there is no spillage of waste along the way during transportation. Before deposition of waste, may kindly intimate the vehicle registration details/ number on samir.natekar@zerowastegoa.com.

Please note that NON-SEGREGATED WASTE WILL NOT BE ACCEPTED

Yours Faithfully,



(Dr. Levinson Martins)  
**Managing Director**

# GOA STATE POLLUTION CONTROL BOARD

गोंय राज्य प्रदूषण नियंत्रण मंडळ

**(An ISO 9001-2015, ISO 14001:2015, ISO 45001:2018 Certified Board)**

Phone Nos : 0832- 2407700,  
2407701, 2407703



Email Ids:  
Chairman, GSPCB: [chairman-gspcb.goa@nic.in](mailto:chairman-gspcb.goa@nic.in)  
Member Secretary, GSPCB: [ms-gspcb.goa@nic.in](mailto:ms-gspcb.goa@nic.in)  
Office: [mail.gspcb@gov.in](mailto:mail.gspcb@gov.in)

No.12/2023-PCB/1617143/R00011760

Date: 13/04/2023

**Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6(i) of the Hazardous & Other Wastes (Management and Transboundary Movement) Rules 2016, as amended thereafter**

[To be referred as Water Act, Air Act and HW (M & T) Rules respectively]

Consent to Operate is hereby granted to:

**M/s. GMR Goa International Airport Limited**  
**(Represented by: Mr. Sheshan R V, Chief Executive Officer)**  
**(Red Category)**

**Mopa, Pernem, North Goa**

Located in the area declared under the provisions of the Water Act & Air Act, subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:

1. This Consent to Operate is issued in supersession of the earlier Consent Orders issued vide Order No. 12/2022-PCB/1322094/R0008891 dated 20/10/2022, is valid for **01/08/2027**
2. This Consent to Operate is valid for the activity of:

Sr. No	Description
1.	Airport (Operation and Maintenance) – 1 no.

### **3.CONDITIONS REQUIRED TO BE COMPLIED UNDER THE WATER ACT:**

(i) The daily quantity of domestic effluent from the unit shall not exceed **625 KLD**

(ii) **Sewage Treatment Plant:**

The unit shall install and operate sewage treatment plant (**625 KLD capacity**) of FMR technology, consisting of primary treatment comprising of bar screen & oil & grease separator, secondary treatment comprising of aeration / FMR reactor & clarifier tank and tertiary treatment comprising of multi grade filter & activated carbon filter, ultra filtration as is warranted with reference to influent quality and operate & maintain the same continuously so as to achieve the quality of the treated effluent to the following standards:

pH	Between	5.5 & 9.0
Suspended Solids	Not to exceed	Not more than 20 mg/l
BOD, 3 days, 27° C	Not to exceed	10 mg/l
COD	Not to exceed	50 mg/l
Oil & Grease	Not to exceed	10 mg/l
N-total	Not to exceed	10 mg/l
Fecal Coliform	Less than	100 MPN/100 ml

**(iii) Sewage Disposal:**

The treated effluent shall be recycled to the maximum extent of which 36.33% of treated effluent shall be utilized for cooling tower make-up, 28.99% of treated effluent shall be utilized for toilet flushing purpose and 34.67% of treated water shall be used on land for landscape/ gardening purpose. There shall not be any discharge outside the unit premises.

(iv) A good house-keeping shall be maintained within the unit premises. All pipes, valves and drains shall be maintained in leak-proof condition. Floor washings shall be maintained to the effluent collection system only and shall not be allowed to find way in open areas.

(v) The unit shall at his own cost get the effluent samples collected both before and after treatment and analyse every month the parameters indicated above from a laboratory recognized by Ministry of Environment & Forest and Climate Change under the Environment Protection Act, 1986 and rules there under and results shall be submitted online regularly to this Board, in the succeeding month.

**(vi) Non-Hazardous Solid Waste:**

All the Solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board:

The total quantity shall be segregated and treated as follows:

Sr. no.	Type of segregated solid waste	Quantity	Disposal
1	Bio-degradable waste	2 MT/ day	To be composted onsite in Organic Waste Convertor(4 TPD) and compost to be used for plantation.
2.	Non-biodegradable waste	3 MT/ day	Recyclable waste to be disposed to the recyclers. Non-Recyclable waste to be baled and then handed over to GWMC or disposed off in cement kiln.

(vii) The applicant should upload monthly statement (below format) regarding the solid waste generation online.

Sr. No.	Date	Quantity of wet/dry waste	Name of agency collecting the wet/ dry waste	Authorized Signatory

(viii) The unit should operate and maintain machinery/equipment/facility for converting bio-degradable /organic waste generated from the unit to compost so as to meet the standard for compost prescribed in the Solid Waste Management Rules, 2016.

(ix) The unit should have zero discharge policy. ie the treated waste water may be re-used in process/green belt development /or any other use as deemed fit by the unit.

**4. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE AIR ACT:**

- (i) The unit may install the following equipment and shall be equipped with comprehensive control system as it is warranted with reference to generations of emissions:

Sr. No.	Name of Equipments/ Installation	No of Installation	Capacity	SO <sub>2</sub> Kg/Hr	Particulate Matter mg/Nm <sup>3</sup>
1.	D.G. set	3	2000 KVA	51.12	75

- (ii) The applicant shall observe the following standards for D. G. Sets  $\geq$  1000 KVA

Sr. No	Parameters	Limits
1.	NO <sub>x</sub> (as NO <sub>2</sub> )	710 ppmv (at 15% O <sub>2</sub> ) Dry basis
2.	NMHC(as C)	100 mg/Nm <sup>3</sup> (at 15% O <sub>2</sub> )
3.	Particulate Matter	75 mg/Nm <sup>3</sup> (at 15 % O <sub>2</sub> )
4.	CO	150 mg/Nm <sup>3</sup> (at 15 % O <sub>2</sub> )
5.	Sulphur Content in Fuel	Less than 2%

- (iii) The unit shall erect the chimney(s) of the following specifications:

Sr. No	Chimney attached to	Height
1.	D.G. set (2000 KVA)	30 mtrs

- (iv) The unit shall observe the following standards:-

Sr. No	Type of fuel	Quantity /hr
1.	H.S.D. (For D.G. set of 2000 KVA)	710 litres/hr

- (v) The Stack Port Hole and Platform is to be designed as per CPCB guidelines Method 1 Part 1 of Stack Monitoring – Material & methodology for isokinetic sampling.
- (vi) The unit should comply with all the standards for D.G. Sets prescribed at Sr. no. 94, 95 and 96 of Schedule I of the Environment (Protection) Rules, 1986.
- (vii) The unit should carry out emission monitoring from the stacks once a year from a laboratory recognized by Ministry of Environment and Forest & Climate Change under the Environment Protection Act, 1986 and the result shall be submitted online to the Board.
- (viii) The unit shall adhere to G.S.R. 568(E) dated 18th June, 2018, Ambient Air Quality Standards with respect to Noise in Airport Noise Zone and shall take adequate measures for control of noise levels from its own sources within the premises in respect of noise. The limits are as follows

Sl. No.	Industry	Parameters	Standards	
		Ambient Air Quality Standards with respect to Noise in Airport Noise Zone		
“112	Airports	Type of Airports	Limits in dB (A) Leq	
			Day time	Night time
		Busy Airport	70	65
	All other Airports excluding proposed Airports	65	60	

- (ix) The unit shall achieve the following Ambient Air Quality standards at 6 monitoring locations in Goa and 3 monitoring locations in Maharashtra other than CAAQM Station:

Sr. No.	Pollutant	Time weighted	Concentration in Ambient Air	
			Industrial residential rural & other area	Ecologically sensitive area (notified by Central Government)
1.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual* 24 hours**	50 80	20 80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual* 24 hours**	40 80	30 80
3.	Particulate Matter (size less than 10 µg) or PM <sub>10</sub> µg/m <sup>3</sup>	Annual* 24 hours**	60 100	60 100
4.	Particulate Matter (size less than 2.50 µg) or PM <sub>2.5</sub> µg /m <sup>3</sup>	Annual* 24 hours**	40 60	40 60
5.	Lead (Pb), µg /m <sup>3</sup>	Annual* 24 hours**	0.50 1.0	0.50 1.0
6.	Carbon Monoxide (CO), mg/m <sup>3</sup>	8 hours** 1 hour**	02 04	02 04

\*Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

\*\* 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

- (x) The Unit shall carry out Ambient Air Quality Monitoring once every month from a laboratory recognized by MOEF under the Environment Protection Act., 1986 and the report should be submitted online to the Board.
- (xi) The unit shall maintain and operate Continuous Ambient Air Quality Monitoring System (Parameters PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, Ozone, Hydrocarbons) and transfer the data to the Board server and CPCB server.
- (xii) The SMS/ email alerts will be sent to the unit if found to be non-complying to the standards prescribed in Consent. In case the unit is found to be non-complying for three consecutive occasions, necessary action will be initiated.

**5. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE HAZARDOUS AND OTHER WASTES (MANAGEMENT AND TRANSBOUNDARY MOVEMENT) RULES 2016, AS AMENDED THEREAFTER:**

- i) The unit is hereby granted authorization to operate a facility for collection, storage and disposal of hazardous wastes as specified below:

Sr. No.	Category	Type of waste	Quantity	Mode of disposal
1.	5.1	Used / Spent oil	5 MT/ annum	To recycler registered with SPCB and having valid authorization of SPCB.
2.	33.1	Discarded containers contaminated with hazardous chemicals/ wastes	02 MT/ annum	To recycler registered with SPCB and having valid authorization of SPCB.



23.	33.2	Contaminated cotton rags or other cleaning materials	01 MT/ annum	To be sent to CHWTSDF operated by M/s Ponda Envocare Ltd. at Pissurlem IDC, Goa for incineration.
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- ii) The authorization shall comply with the provisions of the Environment (Protection) Act, 1986 and the rule made there under.
  - iii) The person authorized shall not rent, lend, sell or transfer or otherwise transport the hazardous waste without obtaining prior permission of the Goa State Pollution Control Board.
  - iv) Any unauthorized change in personnel, equipment or working conditions as mentioned in the unit by the person authorized shall constitute a breach of his authorization.
  - v) It is a duty of the authorized person to take permission of the Goa State Pollution Control Board to close down the facility.
  - vi) The inner bottom surfaces of the tank shall be impervious enough to prevent leakage or seepage of these wastes into the sub surface soil or ground water.
  - vii) The occupier shall maintain a manifest system as per Rule 19 (1) for disposal of hazardous wastes to ensure that these wastes are delivered to the designated facility preventing pilferage and clandestine disposal due to unforeseen events that may occur during transit.
  - viii) The manifest shall be endorsed by the dispatcher, transporter and receiver of hazardous wastes. The endorsed copy shall be furnished to the Goa State Pollution Control Board.
  - ix) Under any circumstances the hazardous waste shall not be disposed to unauthorized facilities.
  - x) The occupier shall maintain the records for collection, storage and disposal of hazardous waste in Form 3 of as per Hazardous Waste (Management & Transboundary Movement) Rules 2016, as amended thereafter.
  - xi) ***The unit shall put up a display board at prominent location providing details as per the proforma @ <http://goaspcb.gov.in/Hazardous-Waste-Management> for display of information related to Air, Water and Hazardous Waste generation.***
  - xii) The occupier shall ensure that the Hazardous Wastes are not allowed to be stored for more than 90 days.
  - xiii) The occupier shall furnish annual returns online for collection, storage and disposal of hazardous waste in Form 4 by 30<sup>th</sup> June of every year for the preceding period April to March.
- 6. GENERAL CONDITIONS:**
- (i) The unit shall not change or alter the quantity, quality of discharge, temperature or the mode of the effluent/ emission or hazardous wastes or control equipment provided for without previous permission of the Board.
  - (ii) The unit shall provide facility for collection of samples of effluent, air emissions to the Board staff.
  - (iii) An application in prescribed form along with the prescribed fees for renewal of Consent shall be submitted at least 60days before the expiry of validity of this Consent. An application for renewal

of Consent submitted after expiry of the validity shall accompany with penalty of 50% of the Consent fees in addition to the prescribed consent fees.

- (iv) The Board shall be forthwith informed of any accident or unforeseen event involving discharge of any poisonous, noxious or polluting matter into a stream or well or on land or into the atmosphere, as result of such discharge water/ air is being polluted
- (v) This Consent to operate is granted without any prejudice to any of the permission(s) required under any law, by laws and regulations in force the Consent to Operate is confined to matters arising out of the Air Act and Water Act only.
- (vi) The Board reserves the right to amend or add any conditions in this consent and the same shall be binding on the applicant.
- (vii) The unit shall submit to this office, the Environmental Statement Report in Form V for the Financial Year ending April to March by 30<sup>th</sup> September of the succeeding year as per the provisions of the rule 14 of the Environment (Protection) (*Second Amendment*) Rules, 1992.
- (viii) The Unit shall bear the cost of analysis / monitoring in case of complaints received by the Board / re-inspections due to non-compliances observed by the Board & monitoring carried by the Board.
- (ix) The unit shall submit the details of the Public Liability Insurance Policy under the PLI Act 1991, to the Board office, if applicable.
- (x) The Unit shall submit returns for disposal of batteries under the Batteries (*Management & Handling*) Rules 2001, as amended thereafter, if applicable.
- (xi) The unit shall submit returns for disposal of e-waste under the E-Waste Management Rules 2016, as amended thereafter, if applicable.
- (xii) The unit shall submit returns for disposal of plastic waste under the Plastic Waste Management Rules 2016, as amended thereafter, if applicable.
- (xiii) The unit shall comply to the guidelines and dust mitigation measures in handling Construction materials and Demolition waste issued by the Central Pollution Control Board (CPCB) and are placed on Board website – [www.goaspcb.gov.in](http://www.goaspcb.gov.in), if applicable.
- (xiv) The import, stocking, distribution, sale and use of single use plastic, including polystyrene and expanded polystyrene, commodities as per the Plastic Waste Management Rules 2016, as amended thereafter, shall be prohibited.
- (xv) The unit has to obtain no objection certificate from the Central Ground Water Authority or the concerned State Authority for any ground water abstraction, if applicable.
- (xvi) The unit should implement rain water harvesting and ground water re-charge measures within the premises as approved by Water Resources Department, Govt. of Goa.
- (xvii) The unit shall carryout plantation of native tree species within the project site in the required areas in accordance with the Forest Department, Govt. of Goa.

7. **SPECIFIC CONDITION**

- a. The unit shall stabilize the operation of STP within one month and submit compliance report to the Board along with the analysis report of treated water through a MoEF accredited laboratory.

To,  
M/s. GMR Goa International Airport Limited  
(Represented by: Mr. Sheshan R V, Chief Executive Officer)  
Mopa, Pernem, North-Goa

Copy to:-

1. Accounts Section
2. Concerned File
3. Guard File

Received Consent fee of: **The Capital Investment of the unit is Rs.2594.33 Crore**

<b>Cheque no.</b>	<b>Amount</b>	<b>Date</b>
<b>32022090</b>	<b>Rs. 25,71,7566/-</b>	<b>07/09/2022</b>

DR SHAMILA MONTEIRO  
Digitally signed by DR SHAMILA MONTEIRO  
Date: 2023.04.13  
17:01:44 +05'30'

**(Dr. Shamila Monteiro)**  
**Member Secretary**  
**Goa State Pollution Control Board**

**CUSTOMER FEEDBACK**

Dear Citizen / Customer,

We appreciate you for sparing a few minutes for giving us your valuable feedback on our services

Name : .....

Contact .....

Address:

.....  
 .....

Email: .....Date.....

Name of the service availed:

.....

Are you aware that service standards are included in the Citizen’s Charter as available on Board’s website  
[:www.goaspcb.gov.in](http://www.goaspcb.gov.in)?

Yes  No

If yes, is the Citizen Charter simple and easy to understand?

Yes  No

Description of service delivery parameters (Consents/Authorisation/RTI’s/Complaints etc.)	Excellent	Good	Fair	Average	Poor	Reason for grading
Time taken to deliver service in comparison to service standards mentioned in Citizen’s Charter						
Quality of service (accuracy, completeness)						
Knowledge of dealing hand / staff regarding services/schemes						
Courtesy of staff						
Board’s response in view of your query/requirement is to your satisfaction						
Date of your visit to the office and your overall experience						

Suggestions for improvement, if any

.....  
 .....  
 .....

Signature & date

**To,**  
 The Member Secretary,  
 Goa State Pollution Control Board,  
 Near Pilerne Industrial Estate,  
 Opposite Saligao Seminary, Saligao, Bardez, Goa. 403511

❖ Please note that your feedback is considered essential for overall improvement and development of Board functions in service of environment.