

To,

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

Date: 10<sup>th</sup> November 2023

Ref: GGIAL/MoEF&CC-EC/2023-2024/1839

**Sub: Submission of Half Yearly EC Compliance Report of 'Greenfield International Airport at Mopa, Goa' by GMR Goa International Airport Limited (GGIAL), for the period from April 2023 to September 2023.**

**Name of the Project: Greenfield International Airport at Mopa, Goa.**  
**EC File No. : F.No.10-29/2011-IA.III dated 28<sup>th</sup> October 2015**

**Ref: 1. Original EC vide letter No. F.No.10-29/2011-IA.III dated 28<sup>th</sup> October 2015**  
**2. Hon'ble Supreme Court of India's Order dated 16<sup>th</sup> January 2020**  
**3. Addendum to Original EC dated 13<sup>th</sup> March 2020**

Dear Sir,

With reference to the subject & reference mentioned above, we are herewith submitting the Half Yearly Environmental Clearance (EC) Compliance Report of 'Greenfield International Airport at Mopa, Goa' by GMR Goa International Airport Limited (GGIAL), for the period from April 2023 to September 2023. Scheduled domestic & international commercial operation commenced on 5<sup>th</sup> January 2023 and 21<sup>st</sup> July 2023 respectively.

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

We request your good offices to kindly acknowledge receipt of the same.

Thanking you,

Yours Sincerely,

for **GMR Goa International Airport Limited**

**RANGANATHAN**

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**R V Sheshan**

**Chief Executive Officer**

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Enclosure: As above

**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: April 2023 to September 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 dated 13.03.2020

## GMR GOA INTERNATIONAL AIRPORT LIMITED MANOHAR INTERNATIONAL AIRPORT

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Mopa, Pernem Taluka, North Goa District, 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).
3.	4 (A) (iii)	The approach and exit roads to the Airport shall be approved by the NHAI 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.

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No.	Reference No.	Conditions	Compliance
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 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	Complied. All solid waste is collected, segregated, and disposed of according to the provisions of Solid Waste (M&H) Rules, 2016.

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No.	Reference No.	Conditions	Compliance
		convenient places for passengers and also at the cafeterias as to reduce the generation of solid wastes including PET bottles.	Integrated Solid Waste Management Facility (ISWMF) has been set up within the airport complex to handle all solid wastes 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.
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.

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No.	Reference No.	Conditions	Compliance
			(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. 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.	Complied, 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.

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No.	Reference No.	Conditions	Compliance
			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.
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 to prevent encroachment along/ within the Rows on connecting/ main arterial roads.	As per CA, this is being addressed by GoG.
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	Complied.

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No.	Reference No.	Conditions	Compliance
		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.	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 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 have been disposed-off to GSPCB authorized recyclers. Major construction activities have been completed and the airport is Operational.

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No.	Reference No.	Conditions	Compliance
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.	<p>EC obtained from MoEF&amp;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.</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> <p>Scheduled commercial airport operation commenced on 5<sup>th</sup> January 2023.</p>
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.	<p>Complied.</p> <p>Environmental Management Cell has been set up under the supervision of a Senior Executive designated as Vice President &amp; Head – EHS &amp; Sustainability.</p>
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.

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No.	Reference No.	Conditions	Compliance
		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. 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 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	Complied. 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.

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No.	Reference No.	Conditions	Compliance
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 aspects of people, only in approved sites with the approval of competent authority.	Complied. Excavation and filling activities for airport project have been completed. 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,

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No.	Reference No.	Conditions	Compliance
			<p>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>).</p> <p>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. &amp; State Govt.</p>
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.

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No.	Reference No.	Conditions	Compliance
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.
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.

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No.	Reference No.	Conditions	Compliance
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 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. Major construction / excavation / filling activities have been completed. Currently excavation/filling activity is being carried out for spine road by addressing all environmental aspects.

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No.	Reference No.	Conditions	Compliance
			Refer <b>Annexure- 1A</b>
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 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 April 2022 to September 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.

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No.	Reference No.	Conditions	Compliance
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 Directorate General of Civil Aviation (DGCA), GoI, New Delhi vide their letter no. AV.20024/17/00-AL dated 27<sup>th</sup> July 2017.</li> <li>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).</li> </ol> <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.

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No.	Reference No.	Conditions	Compliance
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 April 2023 to September 2023 is enclosed as <b>Annexure – 3</b> .
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).

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No.	Reference No.	Conditions	Compliance
			List of approval / clearances / permits obtained during April 2023 to September 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 & 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.	Complied. EC was published in Tarun Bharat and Navhind Times on 31 <sup>st</sup> August 2015.
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	Noted.

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No.	Reference No.	Conditions	Compliance
		days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	
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 2022-23, Environmental Statement for temporary construction plants viz., Hot Mix Plant, Batching Plant, Wet Mix Macadam (WMM) Plant and Crushing Plants has been submitted to GSPCB. For FY 2022-23, Environmental Statement for the operation and maintenance of the airport has been submitted to GSPCB in September 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 (NO <sub>x</sub> ) 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	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> , NO <sub>x</sub> , 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

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		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 and capable of monitoring all relevant and critical parameters and mitigation measures taken.	been installed and commissioned at GSPCB approved location.
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> .

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No.	Reference No.	Conditions	Compliance
	<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 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.	Complied. 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	Complied. All major construction activities have been completed. Secondary containment of adequate capacity was provided at bulk bitumen,

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No.	Reference No.	Conditions	Compliance
		related wastes. Littering on sites and beyond the sites needs to be adequately prevented and controlled.	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. 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.

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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.
76.	2	Although 'Disaster Management Plan' as Annexure-II is part of EIA Report under the Sub head 1.2.1- National Disasters needs	Complied. For the construction phase of the project, 'Onsite Emergency and Disaster

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No.	Reference No.	Conditions	Compliance
		further elaboration especially in terms of Emergency Response Measures, Rules and Responsibility, Mitigation, etc.	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 valid till 1 <sup>st</sup> August 2027.
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 Tilari irrigation Canal.

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No.	Reference No.	Conditions	Compliance
			(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> .
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	Compliances are being ensured. Details are enclosed in <b>Annexure-1A</b>
83.	(iv)	The excavation working area should be sprayed with water after operation so as to maintain the entire surface wet.	Compliances are being ensured. Details are enclosed in <b>Annexure-1A</b>

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No.	Reference No.	Conditions	Compliance
84.	(v)	Excavated materials shall be handled and transported in a manner that they do not cause any air pollution.	Compliances are being ensured. Details are enclosed in <b>Annexure-1A</b>
85.	(vi)	The soil/construction materials carried by the vehicle should be covered by impervious sheeting to avoid leaking of the dusty materials.	Compliances are being ensured. Details are enclosed in <b>Annexure-1A</b>
	<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.
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 commissioned and in operation.
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.

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No.	Reference No.	Conditions	Compliance
			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 approved by GSPCB.
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	Complied. Rainwater harvesting for roof runoff and surface runoff has been implemented as

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		the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.	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 Report as per GSR-568 (E) dated 18 <sup>th</sup> June 2018 is prepared and will be submitted to DGCA in October 2023.
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 regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.	Complied. DG sets are installed with acoustic enclosures. Random workplace noise 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	Complied. Noise level monitoring is being carried out at airport boundary through MoEF&CC

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No.	Reference No.	Conditions	Compliance
		building shall be restricted to the permissible levels to comply with the prevalent regulations.	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 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.	Complied. 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.

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 Date: 2023.11.10 13:14:25 +05'30'

No.	Reference No.	Conditions	Compliance
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 on-board to handle all wastes.
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 Solid Waste Management Plan has been prepared and same has been approved by GSPCB. a. Separate arrangement 'Airside Waste Transfer Station' has been provided to collect the trash from flights. Same is then transferred to Integrated Solid Waste Management Facility (ISWMF)
	a.	Trash collected in flight and disposed at the airport including segregation, collection and disposed.	
	b.	Toilet wastes and sewage collected from aircrafts and disposed at the Airport.	
	c.	Wastes arising out of maintenance and workshops	

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Date: 2023.11.10 13:16:23 +05'30'

No.	Reference No.	Conditions	Compliance
	d.	Wastes arising out of eateries and shops situated inside the airport complex.	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. All waste generated from maintenance and workshop is being collected, segregated, processed and transferred via Integrated Solid Waste Management Facility. d. All waste from eateries and shops is being collected, segregated, processed and transferred via Integrated Solid Waste Management Facility. e. Hazardous waste is being disposed-off to GSPCB authorized recyclers.
	e.	Hazardous and other wastes	
	<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	Noted. Compliance is being ensured.

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No.	Reference No.	Conditions	Compliance
		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.	
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 they will be able to derive economic benefits from such fruit crops and also such trees will provide better biological environment to birds.	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. Till now, GSBB has distributed & Planted 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.	Complied in collaboration with GoG.

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AB, cn=RANGANATHAN VENKATA SHESHAN  
Date: 2023.11.10 13:20:45 +05'30'

No.	Reference No.	Conditions	Compliance
		Compliance for each mitigation plan shall be submitted to Regional Office, MoEF&CC along with half yearly compliance report.	
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.
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 domestic 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>			

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No.	Reference No.	Conditions	Compliance
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.
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 26 <sup>th</sup> June 2023. Further, NEERI reviewed the EC compliances on 22 <sup>nd</sup> September 2023.

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Date: 2023.11.10 13:25:20 +05'30'

**ANNEXURE – 1A**

**ENVIRONMENTAL MITIGATION MEASURES AS PER EIA REPORT AND COMPLIANCE STATUS**  
**(CONSTRUCTION PHASE)**  
**AS OF SEPTEMBER 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.	Being complied. Excavation/filling activity is being carried out for spine road construction. Sample copy of Field Service Report of the vehicles working for the spine road construction work is enclosed as <b>Appendix-A</b> .
02	Ensure vehicles with valid Pollution Under Control certificates are used.	Being Complied. Excavation/filling activity is being carried out for spine road construction. Sample copy of PUC of the vehicles working for the spine road construction work is enclosed as <b>Appendix-B</b> .
03	Implement dust control activities such as water sprinkling on unpaved sites.	Being Complied. Excavation/filling activity is being carried out for spine road construction. Dust control measures are being implemented at site on the unpaved areas & excavation site using water tankers. Sample photographs of implementation of dust control measures are enclosed as <b>Appendix-C</b> .

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DN: c=IN, o=Flynnair, postalCode=521157, st=Andhra Pradesh, serialNumber=C09AC6475B3C4E3D08905175A6274262F0C0B88EC98D4F01F9EAD, cn=RANGANATHAN VENKATA SHESHAN  
Date: 2023.11.01 13:27:45 +05'30'

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 partly. 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 is in operation at the construction workmen camp. The STP is 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 except ongoing spine road construction and hence labour strength have also reduced significant. 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> .

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Date: 2023.11.19 13:29:41 +05'30'

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.	Being complied. Excavation/filling activity is being carried out for spine road construction. Sample copy of Field Service Report of the vehicles working for other minor construction work is enclosed as <b>Appendix-A</b> .

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cn=RANGANATHAN VENKATA SHESHAN  
Date: 2023.11.10 13:30:28 +05'30'

S. No.	Mitigation Measures	Compliance Status
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. 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.

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cn=RANGANATHAN VENKATA  
SHESHAN  
Date: 2023.11.10 13:32:32 +05'30'

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

**BALAJEE INFRA TECH & CONSTRUCTION PVT. LTD.**

**EQUIPMENT FITNESS REPORT FOR VEHICLE & EARTH MOVING EQUIPMENT**

Name of Site: GIML  
 Identification No: TSC07 02142.72  
 Date: 13/09/2023  
 Inspection Item: MSC

Invo. - Shrikanth Srinivasan 0971 2413 8615700

Sl No	Check Points	Observation	Remarks
1	Engine condition	ok	
2	Cabin - Brake / Hand Brake	ok	
3	Inspector System	-	
4	Guards / Covers / Doors	-	
5	Fastener lock pins - Keys	-	Inside door lock as working door for accessible
6	Warn - Reverse Turn / Lights	ok	
7	Indicators - Wiper Blades	ok	
8	Operative Axles	ok	
9	Tyre pressure / Tyre Condition	ok	
10	Condition of Battery and Lamps	ok	
11	Operating levers - steering	ok	
12	Controls & warning devices	-	
13	Fire extinguisher Provided	ok	
14	First Aid Box	ok	(Not fully available)
15	Seat Belt	ok	
16	Rear view Camera / Mirror	ok	(Camera not available)
17	Daily start device	Not ok	
18	Wheel Block	Not ok	
19	NO - INSURANCE / PWC / DL	ok	
20	Song Alarm Provided	-	

This Vehicle/ Earth Moving Equipment has been checked for the above points and

Found FIT for deployment  Found UN FIT for deployment

 (P & M Engineer)
  (HSEM / HSEO)



**Sample copy of Field Survey Report for Vehicle**

**RANGANATHAN VENKATASHESHAN**

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 Date: 2023.11.10 13:34:34 +05'30'



**Appendix - B**  
**Sample PUC Certificates**

Form 38  
December 2022

**Pollution Under Control Certificate**  
Authorized By  
Government of Maharashtra

Date: 22/05/2023  
Time: 10:17:24 AM  
Validity upto: 21/11/2023



Category No. / Registration No.: MA02M120011001  
Type of Registration: 1200000100  
Make & Year of the Vehicle: MAHARASHTRA  
Model Name: MAHARASHTRA  
Fuel: DIESEL  
Poll. Code: MA02M120011001  
Date: 22/05/2023  
Time: 10:17:24 AM  
Validity upto: 21/11/2023

Vehicle Photo with Registration plate  
80 mm x 30 mm



Sl. No.	Pollutant (as applicable)	Units (as applicable)	Envision limits	Measured Value (with 2 decimal places)
1	Carbon Monoxide (CO)	g/kwhour (%)	5	5.12
2	Hydrocarbon (HC)	ppm	100	95.50
3	Nitrogen Oxide (NOx)	ppm	100	95.50
4	Particulate Matter (PM)	mg/m <sup>3</sup>	1.0	0.85
5	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.85

The PUC certificate is valid generated through the national system of motor vehicles and does not require any signature.

Authorized Signature with date: 22/05/2023

Form 38  
December 2022

**Pollution Under Control Certificate**  
Authorized By  
Government of Maharashtra

Date: 27/06/2023  
Time: 16:52:00 PM  
Validity upto: 26/12/2023



Category No. / Registration No.: MA02M120011001  
Type of Registration: 1200000100  
Make & Year of the Vehicle: MAHARASHTRA  
Model Name: MAHARASHTRA  
Fuel: DIESEL  
Poll. Code: MA02M120011001  
Date: 27/06/2023  
Time: 16:52:00 PM  
Validity upto: 26/12/2023

Vehicle Photo with Registration plate  
80 mm x 30 mm



Sl. No.	Pollutant (as applicable)	Units (as applicable)	Envision limits	Measured Value (with 2 decimal places)
1	Carbon Monoxide (CO)	g/kwhour (%)	5	5.12
2	Hydrocarbon (HC)	ppm	100	95.50
3	Nitrogen Oxide (NOx)	ppm	100	95.50
4	Particulate Matter (PM)	mg/m <sup>3</sup>	1.0	0.85
5	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.85

The PUC certificate is valid generated through the national system of motor vehicles and does not require any signature.

Authorized Signature with date: 27/06/2023

**Photographs of Sample PUC Certificates**

**RANGANATHAN VENKATA SHESHAN**

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DN: c=IN, o=Personal, postalCode=562157, st=Karnataka, serialNumber=2C9AC68293B3C455D089051156AC282D0674042FFDC08889EC98624FB1F98EAD, cn=RANGANATHAN VENKATA SHESHAN  
Date: 2023.11.10 13:37:35 +05'30'

**Appendix – C**

**Dust Control Measures Implemented at Site**



**Water Sprinkling on Unpaved Haul Roads**



**Excavated materials transported by covering with tarpaulin sheet**

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**Appendix - D**

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



**DG Set with adequate Stack Height**

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cn=RANGANATHAN VENKATA  
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Date: 2023.11.10 13:43:24 +05'30'

**Appendix – E**

**Portable Toilet Facilities**



**Portable Toilets at Site**

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cn=RANGANATHAN VENKATA  
SHESHAN  
Date: 2023.11.10 13:45:14 +05'30'

**ANNEXURE – 1B**

**ENVIRONMENTAL MITIGATION MEASURES AS PER EIA REPORT AND COMPLIANCE STATUS**  
**(OPERATION PHASE)**  
**AS OF SEPTEMBER 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. Periodical preventive maintenance is conducted for all vehicles and equipments. The sample service / maintenance report is attached in <b>Appendix-I</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-II</b> .

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 st=Karnataka,  
 serialNumber=JCHAG62933EC030289W1156AC2D,  
 email=, c=IN, postalCode=562137,  
 cn=RANGANATHAN VENKATA SHESHAN  
 Date: 2023.11.16 13:47:31 +05'30'

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-III</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. Drip irrigation system has been provided in landscaping & avenue plantation areas at landside. Details are provided in <b>Appendix-IV</b>
<b>Mitigation Measures for Land Environment during Operation Phase</b>		
06	Develop and maintain dedicated waste storage areas	Being Complied. Integrated Solid Waste Management Facility (ISWMF) has been developed and being maintained. Collection, transportation, segregation, treatment and disposal activities of all bio-degradable and non-biodegradable wastes are being undertaken via ISWMF only. Details are provided in <b>Appendix-V</b> .
07	Ensure hazardous waste storage areas are provided with secondary containment	Noted. Secondary containment system has been provided at hazardous waste storage areas. Details are provided in <b>Appendix-VI</b> .

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cn=RANGANATHAN VENKATA SHESHAN  
Date: 2023.11.10 13:49:53 +05'30'

S. No.	Mitigation Measures	Compliance Status
<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 Report as per GSR-568 (E) dated 18 <sup>th</sup> June 2018 is prepared and will be submitted to DGCA in October 2023.
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 Report as per GSR-568 (E) dated 18 <sup>th</sup> June 2018 is prepared and will be submitted to DGCA in October 2023.
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 Report as per GSR-568 (E) dated 18 <sup>th</sup> June 2018 is prepared and will be submitted to DGCA in October 2023.
11	Pilots are encouraged not to use reverse thrust between 23:00 and 6:00 except in the interest of safety.	Being Complied. 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.

**Mitigation Measures for Socio-economic Environment during Operation Phase**

14	Ensure implementation of disaster management plan	Noted. 'Airport Emergency Response Plan' has been prepared and this is being implemented.
----	---	--

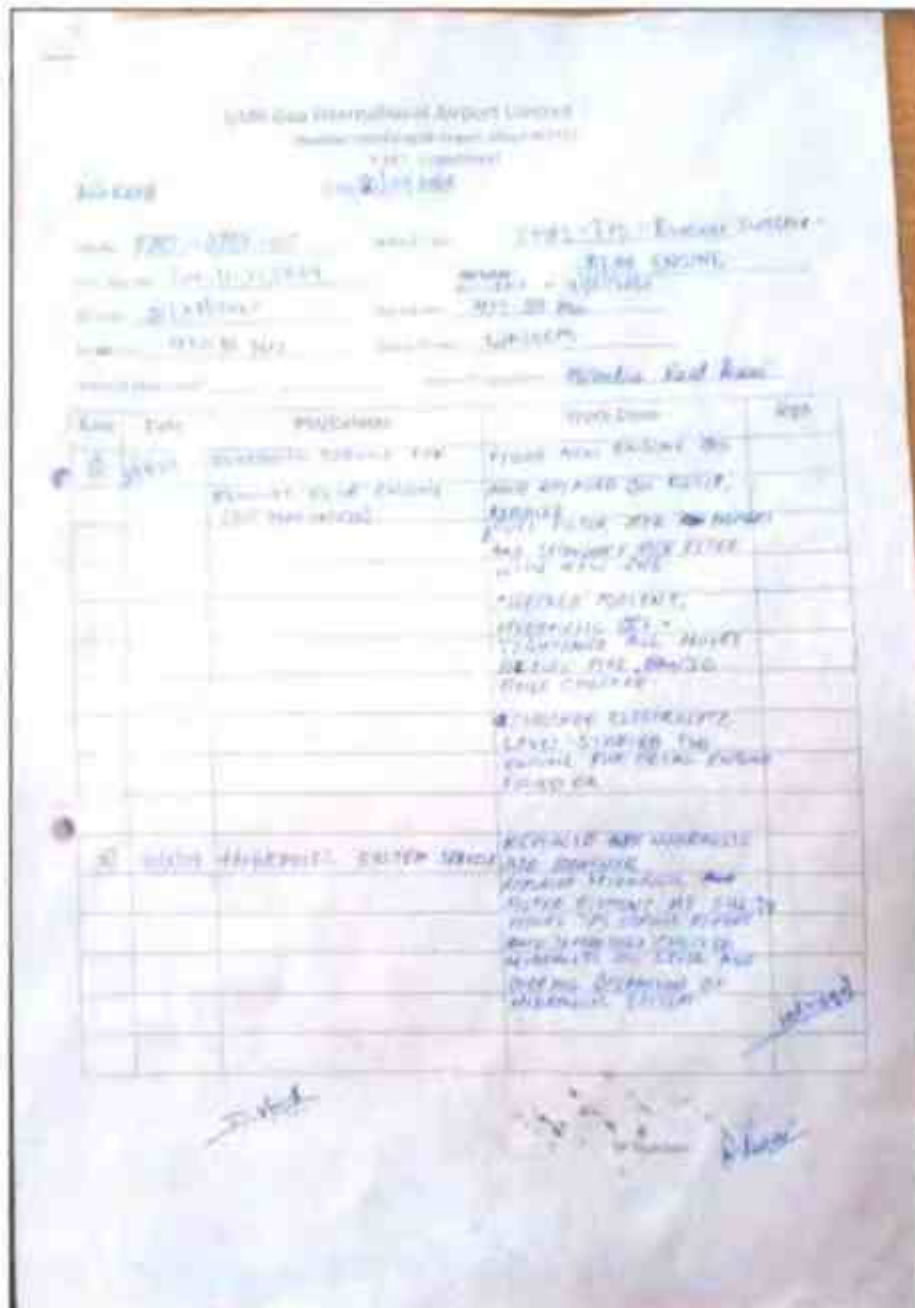
RANGANATH  
AN VENKATA  
SHESHAN

Digitally signed by RANGANATHAN  
VENKATA SHESHAN  
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serialNumber=2C9AC68293B3C455D08  
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VENKATA SHESHAN  
Date: 2023.11.10 13:54:50 +05'30'



**Appendix-I**

**Preventive Maintenance of Vehicle and Equipment**




Sample of Job Card and Repair Order for Vehicle


**RANGANATHAN VENKATASHESHAN**

Digitally signed by RANGANATHAN VENKATASHESHAN  
DN: cn=BN, o=Personal, postalCode=562157, st=Karnataka, serialNumber=2C9AC6B293B3C455D0B9051156AC282D0674042FFDC0B889EC9B624F81F98EA0, cn=RANGANATHAN VENKATASHESHAN  
Date: 2023.11.10 13:57:00 +05'30'











**ANLON**



**MONTHLY INSPECTION CHECKLIST**

Sl. No.	Inspection Item	Remarks
1	Check engine oil level	Checked engine oil level OK
2	Check engine coolant level	Checked engine coolant level OK
3	Check engine air filter	Checked engine air filter OK
4	Check engine oil filter	Checked engine oil filter OK
5	Check engine oil pressure	Checked engine oil pressure OK
6	Check engine oil temperature	Checked engine oil temperature OK
7	Check engine oil level	Checked engine oil level OK
8	Check engine oil pressure	Checked engine oil pressure OK
9	Check engine oil temperature	Checked engine oil temperature OK
10	Check engine oil level	Checked engine oil level OK
11	Check engine oil pressure	Checked engine oil pressure OK
12	Check engine oil temperature	Checked engine oil temperature OK
13	Check engine oil level	Checked engine oil level OK
14	Check engine oil pressure	Checked engine oil pressure OK
15	Check engine oil temperature	Checked engine oil temperature OK
16	Check engine oil level	Checked engine oil level OK
17	Check engine oil pressure	Checked engine oil pressure OK
18	Check engine oil temperature	Checked engine oil temperature OK
19	Check engine oil level	Checked engine oil level OK
20	Check engine oil pressure	Checked engine oil pressure OK
21	Check engine oil temperature	Checked engine oil temperature OK
22	Check engine oil level	Checked engine oil level OK
23	Check engine oil pressure	Checked engine oil pressure OK
24	Check engine oil temperature	Checked engine oil temperature OK
25	Check engine oil level	Checked engine oil level OK
26	Check engine oil pressure	Checked engine oil pressure OK
27	Check engine oil temperature	Checked engine oil temperature OK
28	Check engine oil level	Checked engine oil level OK
29	Check engine oil pressure	Checked engine oil pressure OK
30	Check engine oil temperature	Checked engine oil temperature OK
31	Check engine oil level	Checked engine oil level OK
32	Check engine oil pressure	Checked engine oil pressure OK
33	Check engine oil temperature	Checked engine oil temperature OK
34	Check engine oil level	Checked engine oil level OK
35	Check engine oil pressure	Checked engine oil pressure OK
36	Check engine oil temperature	Checked engine oil temperature OK
37	Check engine oil level	Checked engine oil level OK
38	Check engine oil pressure	Checked engine oil pressure OK
39	Check engine oil temperature	Checked engine oil temperature OK
40	Check engine oil level	Checked engine oil level OK
41	Check engine oil pressure	Checked engine oil pressure OK
42	Check engine oil temperature	Checked engine oil temperature OK
43	Check engine oil level	Checked engine oil level OK
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45	Check engine oil temperature	Checked engine oil temperature OK
46	Check engine oil level	Checked engine oil level OK
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54	Check engine oil temperature	Checked engine oil temperature OK
55	Check engine oil level	Checked engine oil level OK
56	Check engine oil pressure	Checked engine oil pressure OK
57	Check engine oil temperature	Checked engine oil temperature OK
58	Check engine oil level	Checked engine oil level OK
59	Check engine oil pressure	Checked engine oil pressure OK
60	Check engine oil temperature	Checked engine oil temperature OK

Sample Copy of Periodical Checklist for Vehicle Maintenance

**RANGANATHAN VENKATA SHESHAN**

Digitally signed by RANGANATHAN VENKATA SHESHAN  
 DN: c=IN, o=Personal, postalCode=562157, st=Karnataka, serialNumber=2C9AC68293B3C455D089051156AC282D0674042FFDC0B889EC9B624F81F9BEA0, cn=RANGANATHAN VENKATA SHESHAN  
 Date: 2023.11.10 14:01:52 +05'30'

### Appendix-II

### Raw Water Consumption

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

**RAW WATER BILL FOR NAGZAB U SCHEME TO PUMP RAW WATER TO MOFA INTERNATIONAL AIRPORT**

CLIENT	GMR, Pernem Goa	Date of commissioning	24.12.2020
No. of pumps	4 nos (2 standby)	Type of meter	Flow meter
Capacity of pumps	115 KW each	Bill no	4
Discharge of pumps	100 ltr (50 ltr each pump)	Bill date	30.06.2023
Reading for Month upto	<b>2.08.2023 to 30.06.2023</b>	Payment due date	20.07.2023
Serial no. of flow meter	120407158	Previous Reading (liters in Cumecs. (L))	818124.50
		Current Reading (liters in Cumecs. (L))	<b>991358.4281</b>

S no	Month for which bill is raised	Billed discharge in cumecs	Rate per cu m	Total bill
1	1.07.2023 to 30.06.2023	175911.8152	20.00	3518236.304
			<b>Total</b>	<b>3518236.30</b>
			<b>Rs</b>	<b>₹ 35,18,236.30</b>

(Rupees Thirty Five Lakh Two Hundred Seventy Seven only)

  
 (Assistant Engineer)

### Raw Water Consumption through Water Meter (March 2023 to June 2023)

**RANGANATHAN VENKATA SHESHAN**

Digitally signed by RANGANATHAN VENKATA SHESHAN  
 DN: c=IN, o=Personal, postalCode=562157, st=Karnataka, serialNumber=2C9AC68293B3C455D089051156AC282D0674042FFDC08B89EC9B624F81F9BEA0, cn=RANGANATHAN VENKATA SHESHAN  
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**Appendix-III**  
**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**

**RANGANATHAN VENKATA SHESHAN**

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Date: 2023.11.10 14:10:23 +05'30'

**Appendix-IV**  
**Drip Irrigation for Landscaping & Avenue Plantation**



**Drip Irrigation for Landscaping & Avenue Plantation**

**RANGANATHAN VENKATASHESHAN**

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Date: 2023.11.10 14:13:13 +05'30'



**Sprinkler Irrigation for Landscaping & Avenue Plantation**

**RANGANATHAN  
VENKATA  
SHESHAN**

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RANGANATHAN VENKATA  
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SHESHAN  
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**Appendix-V**  
**Integrated Solid Waste Management Facility**

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



**Integrated Solid Waste Management Facility**

**Collection:** From triple waste bins (offices, terminal, deplaned aircraft waste, retails, cargo, etc.)



**RANGANATHAN  
VENKATA  
SHESHAN**

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SHESHAN  
Date: 2023.11.10 14:18:33 +05'30'

**Transportation:** To the Integrated Solid Waste Management Facility by Electrical Vehicle



**Segregation:** Through Material Recovery Facility (MRF)



**Disposal:** – Recyclable - Authorised Vendor & Non-recyclable – Send as RDF to cement kilns



**RANGANATH  
AN VENKATA  
SHESHAN**

Digitally signed by RANGANATHAN  
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VENKATA SHESHAN  
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**Appendix-VI**  
**Secondary Containment at Hazardous Waste Storage Area**



**Hazardous Waste Storage Facility**



**Provision made for Category Wise Storage of Hazardous Wastes**

**RANGANATHAN VENKATA SHESHAN**

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Date: 2023.11.10 14:24:14 +05'30'

**ENVIRONMENTAL QUALITY MONITORING REPORT FOR PERIOD OF  
APRIL-2023 TO SEPTEMBER 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

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/05/2023		
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	April 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	34	Average Humidity (%)	81
Average Wind Speed (km/hr)	29	Average Wind direction (Deg)	265
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	03.04.2023	GA/23/0793	133.4	72.60	37.30	< 6.0	< 9.0	0.29	67.1	0.06	< 1.0
2	06.04.2023	GA/23/0806	147.4	66.45	28.19	< 6.0	< 9.0	0.68	106.4	0.04	< 1.0
3	10.04.2023	GA/23/0835	131.1	82.68	29.77	< 6.0	< 9.0	0.34	58.7	0.06	< 1.0
4	13.04.2023	GA/23/0856	147.4	88.71	26.53	< 6.0	< 9.0	0.71	116.1	0.07	< 1.0
5	17.04.2023	GA/23/0874	161.2	95.20	30.48	< 6.0	< 9.0	0.79	103.8	0.04	< 1.0
6	20.04.2023	GA/23/0920	141.0	83.46	21.79	< 6.0	< 9.0	0.61	129.4	0.11	< 1.0
7	24.04.2023	GA/23/0949	155.6	90.61	28.82	< 6.0	< 9.0	0.41	87.3	0.08	< 1.0
	27.04.2023	GA/23/0984	135.1	78.77	30.61	< 6.0	< 9.0	0.50	75.3	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>	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) 1995	GC Method	IS 5182 (Part XXIII) 2004	EPA Method 18

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

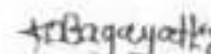
**Note :**

- 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. 1256-L-22	07/01/2023	07/01/2024
Respirable Dust Sampler Sr. No. 475-A-23	07/01/2023	07/01/2024
Gaseous 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



# GADARK LAB PVT. LTD.

## 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	04/05/2023		
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	April 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Shemecheadvan Goa State (G-A2)		
Average Ambient Temperature (°C)	34	Average Humidity (%)	80
Average Wind Speed (km/hr)	36.2	Average Wind direction (Deg)	271
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	03.04.2023	GA/23/0792	160.5	68.19	25.95	< 6.0	< 9.0	0.35	79.8	0.03	< 1.0
2	06.04.2023	GA/23/0805	166.6	70.99	30.56	< 6.0	< 9.0	0.95	140.9	0.03	< 1.0
3	10.04.2023	GA/23/0834	154.4	77.45	31.23	< 6.0	< 9.0	0.71	133.4	0.03	< 1.0
4	13.04.2023	GA/23/0855	161.2	80.14	33.27	< 6.0	< 9.0	0.73	122.9	0.06	< 1.0
5	17.04.2023	GA/23/0873	176.3	89.80	32.81	< 6.0	< 9.0	0.50	98.1	0.02	< 1.0
6	20.04.2023	GA/23/0919	164	89.58	31.89	< 6.0	< 9.0	0.43	70.8	0.10	< 1.0
7	24.04.2023	GA/23/0948	176.2	91.40	35.14	< 6.0	< 9.0	0.35	104.3	0.04	< 1.0
8	27.04.2023	GA/23/0983	159.1	87.59	35.55	< 6.0	< 9.0	0.44	70.3	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 XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1990	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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##### Note:

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- 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.

*S. V. Zulpe*

AUTHORISED SIGNATORY  
[SANTOSH V. ZULPE]



*Pr. Bagayath*

CHECKED BY

**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 8	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 936-DTA-2020	18/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 476-A-23	07/01/2023	07/01/2024
Gaseous 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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### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/05/2023		
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	April 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	33.0	Average Humidity (%)	74
Average Wind Speed (km/hr)	25.2	Average Wind direction (Deg)	242
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	03.04.2023	GA/23/0785	173.0	90.29	28.57	< 6.0	< 9.0	0.49	129.6	0.06	< 1.0
2	06.04.2023	GA/23/0798	174.3	88.61	33.39	< 6.0	< 9.0	0.79	110.4	0.03	< 1.0
3	10.04.2023	GA/23/0827	161.9	90.20	37.76	< 6.0	< 9.0	0.68	126.6	0.06	< 1.0
4	13.04.2023	GA/23/0848	179.8	90.75	40.00	< 6.0	< 9.0	1.05	136.9	0.06	< 1.0
5	17.04.2023	GA/23/0866	192.1	86.74	29.82	< 6.0	< 9.0	0.86	117.9	0.06	< 1.0
6	20.04.2023	GA/23/0912	177.7	91.51	38.63	< 6.0	< 9.0	0.41	68.9	0.07	< 1.0
7	24.04.2023	GA/23/0941	189.5	92.22	38.22	< 6.0	< 9.0	0.75	85.4	0.04	< 1.0
8	27.04.2023	GA/23/0976	176.2	91.07	35.55	< 6.0	< 9.0	0.61	78.7	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) 2008	USEPA-FEM, 40 CFR Part 50, Appendix-L, 2014-2018	IS 5182 (Part 5) 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. 1	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 847-DTJ-2019	08/10/2022	08/10/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	19/02/2023	18/02/2024
Gaseous Sampler Sr. No. 6896-DTC-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



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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OFF: 15, Hindustan Kothnoor 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	04/05/2023		
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	April 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Purva Casarvarem - Goa State (G-A4)		
Average Ambient Temperature (°C)	33.5	Average Humidity (%)	73
Average Wind Speed (km/hr)	24	Average Wind direction (Deg)	251
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	03.04.2023	GA/23/0786	156.4	85.93	32.64	< 6.0	< 9.0	0.57	78.4	0.05	< 1.0
2	06.04.2023	GA/23/0799	159.9	74.14	26.95	< 6.0	< 9.0	0.40	80.4	0.05	< 1.0
3	10.04.2023	GA/23/0828	141.4	80.39	34.97	< 6.0	< 9.0	0.39	87.6	0.04	< 1.0
4	13.04.2023	GA/23/0849	149.5	84.02	38.96	< 6.0	< 9.0	0.55	120.8	0.05	< 1.0
5	17.04.2023	GA/23/0867	164.9	85.76	21.54	< 6.0	< 9.0	0.33	52.0	0.05	< 1.0
6	20.04.2023	GA/23/0913	173.6	88.37	25.78	< 6.0	< 9.0	0.60	87.5	0.09	< 1.0
7	24.04.2023	GA/23/0942	161.3	90.33	34.14	< 6.0	< 9.0	0.65	76.1	0.03	< 1.0
8	27.04.2023	GA/23/0977	141.7	88.26	28.28	< 6.0	< 9.0	0.84	112.2	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 3182 (Part 4)	IS 3182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2016	IS 3182 (Part II) 2001	IS 3182 (Part V) 2006	IS 3182 (Part X) 1999	GC Method	IS 3182 (Part XX) 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. 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
Gaseous 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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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/05/2023		
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	April 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	34	Average Humidity (%)	79
Average Wind Speed (km/hr)	22.4	Average Wind direction (Deg)	242
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	03.04.2023	GA/23/0787	76.5	59.81	19.63	< 6.0	< 9.0	0.64	121.6	0.07	< 1.0
2	06.04.2023	GA/23/0800	66.3	55.54	17.09	< 6.0	< 9.0	0.43	106.4	0.01	< 1.0
3	10.04.2023	GA/23/0829	76.5	65.31	15.80	< 6.0	< 9.0	0.41	85.8	0.05	< 1.0
4	13.04.2023	GA/23/0850	65.9	57.82	18.50	< 6.0	< 9.0	0.79	111.9	0.07	< 1.0
5	17.04.2023	GA/23/0868	78.3	65.09	22.83	< 6.0	< 9.0	0.45	82.6	0.05	< 1.0
6	20.04.2023	GA/23/0914	66.1	60.39	15.93	< 6.0	< 9.0	0.37	64.2	0.14	< 1.0
7	24.04.2023	GA/23/0943	77.9	65.65	12.52	< 6.0	< 9.0	0.85	101.6	0.06	< 1.0
	27.04.2023	GA/23/0978	59.7	57.85	17.80	< 6.0	< 9.0	0.72	105.9	0.10	< 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 XXII) 2006	USEPA FEM, 42 CFR Part 85, Appendix-L, 2014-2016	IS 5182 (Part 6) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part K) 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 Patil*

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

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	04/05/2023		
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	April 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	33	Average Humidity (%)	82
Average Wind Speed (km/hr)	22	Average Wind direction (Deg)	249
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	03.04.2023	GA/23/0790	135.8	67.25	18.63	< 6.0	< 9.0	0.55	98.7	0.08	< 1.0
2	06.04.2023	GA/23/0803	126.1	64.64	24.08	< 6.0	< 9.0	0.34	80.6	0.04	< 1.0
3	10.04.2023	GA/23/0832	143.3	67.27	25.99	< 6.0	< 9.0	0.43	121.0	0.06	< 1.0
4	13.04.2023	GA/23/0853	155.0	70.59	29.94	< 6.0	< 9.0	0.98	122.3	0.05	< 1.0
5	17.04.2023	GA/23/0871	166.1	73.28	34.02	< 6.0	< 9.0	0.35	53.9	0.04	< 1.0
6	20.04.2023	GA/23/0917	149.5	77.43	28.73	< 6.0	< 9.0	0.49	86.1	0.16	< 1.0
7	24.04.2023	GA/23/0946	166.1	89.03	35.52	< 6.0	< 9.0	0.44	72.8	0.09	< 1.0
8	27.04.2023	GA/23/0981	146.1	72.27	26.70	< 6.0	< 9.0	0.48	102.3	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 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	GC Method	IS 5182 (Part XXI) 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. 935-DTA-2015	19/02/2023	18/02/2024
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 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	04/05/2023		
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/T.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	April 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Safarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	33.5	Average Humidity (%)	80
Average Wind Speed (km/hr)	18.8	Average Wind direction (Deg)	220
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	03.04.2023	GA/23/0788	117.8	65.60	25.66	< 6.0	< 9.0	0.43	96.2	0.08	< 1.0
2	06.04.2023	GA/23/0801	106.1	67.42	27.49	< 6.0	< 9.0	0.30	67.2	0.06	< 1.0
3	10.04.2023	GA/23/0830	94.3	70.09	27.57	< 6.0	< 9.0	0.47	103.6	0.07	< 1.0
4	13.04.2023	GA/23/0851	105.4	74.13	29.23	< 6.0	< 9.0	0.69	128.9	0.08	< 1.0
5	17.04.2023	GA/23/0869	117.8	78.05	26.16	< 6.0	< 9.0	0.34	72.6	0.08	< 1.0
6	20.04.2023	GA/23/0915	102.6	68.15	22.95	< 6.0	< 9.0	0.39	72.8	0.12	< 1.0
7	24.04.2023	GA/23/0944	115.7	62.79	17.88	< 6.0	< 9.0	0.63	117.2	0.05	< 1.0
8	27.04.2023	GA/23/0979	103.8	67.59	25.32	< 6.0	< 9.0	0.40	79.9	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 XXII) 2008	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2016	IS 5182 (Part 6) 2001	IS 5182 (Part VI) 2008	IS 5182 (Part K) 1988	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. 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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### TEST REPORT


AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/05/2023		
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	April 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	34	Average Humidity (%)	85
Average Wind Speed (km/hr)	25	Average Wind direction (Deg)	258
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	03.04.2023	GA/23/0791	107.5	62.53	18.55	< 6.0	< 9.0	0.39	70.8	0.05	< 1.0
2	06.04.2023	GA/23/0804	99.6	58.84	15.22	< 6.0	< 9.0	0.88	136.4	0.02	< 1.0
3	10.04.2023	GA/23/0833	114.4	60.50	17.47	< 6.0	< 9.0	0.47	97.7	0.05	< 1.0
4	13.04.2023	GA/23/0854	104.9	61.60	14.93	< 6.0	< 9.0	0.88	113.9	0.06	< 1.0
5	17.04.2023	GA/23/0872	117.8	66.47	17.84	< 6.0	< 9.0	0.47	85.2	0.05	< 1.0
6	20.04.2023	GA/23/0916	91.1	62.28	16.26	< 6.0	< 9.0	0.88	134.6	0.10	< 1.0
7	24.04.2023	GA/23/0947	105.3	60.99	20.38	< 6.0	< 9.0	0.33	84.9	0.05	< 1.0
8	27.04.2023	GA/23/0982	89.1	58.11	23.20	< 6.0	< 9.0	0.47	93.6	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 3182 (Part 4)	IS 3182 (Part XXXI) 2006	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2015	IS 3182 (Part II) 2001	IS 3182 (Part VI) 2006	IS 3182 (Part X) 1995	GC Method	IS 3182 (Part XXXI) 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



# 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	04/05/2023		
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	April 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	32.5	Average Humidity (%)	68
Average Wind Speed (km/hr)	12.6	Average Wind direction (Deg)	238
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	03.04.2023	GA/23/0789	97.3	60.41	15.84	< 6.0	< 9.0	0.47	84.8	0.07	< 1.0
2	06.04.2023	GA/23/0802	86.5	62.64	17.67	< 6.0	< 9.0	0.26	60.1	0.07	< 1.0
3	10.04.2023	GA/23/0831	64.4	65.77	17.17	< 6.0	< 9.0	0.34	114.1	0.05	< 1.0
4	13.04.2023	GA/23/0852	58.6	56.86	17.59	< 6.0	< 9.0	0.85	105.6	0.05	< 1.0
5	17.04.2023	GA/23/0870	74.7	61.03	18.88	< 6.0	< 9.0	0.44	78.6	0.03	< 1.0
6	20.04.2023	GA/23/0916	59.3	55.38	14.06	< 6.0	< 9.0	0.56	122.2	0.10	< 1.0
7	24.04.2023	GA/23/0945	62.0	57.90	16.80	< 6.0	< 9.0	0.95	129.1	0.04	< 1.0
8	27.04.2023	GA/23/0960	44.3	63.94	20.96	< 6.0	< 9.0	0.91	127.1	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>	ppm	µg/m <sup>3</sup>	ppm
METHOD			IS 5182 (Part 4)	IS 5182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2018	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 :

- 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.

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[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. 942-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 477-A-23	07/01/2023	07/01/2024
Gaseous Sampler Sr. No. 470-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

NOISE LEVEL MONITORING REPORT													
Date of Issue		19/04/2023											
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 <sub>max</sub>	L <sub>eq</sub>	L <sub>90</sub>	L <sub>max</sub>	L <sub>eq</sub>	L <sub>90</sub>		
1	14/04/2023	GA/23/0858	G-N1	I	Mopa Boundary	33.2	68.2	59.9	35.6	79.2	58.1		
2	08/04/2023	GA/23/0813	G-N2	I	Shemchadvan	33.4	74.8	56.7	30.8	56.3	40.1		
3	08/04/2023	GA/23/0812	G-N3	C	Nagzar	30.9	74.7	52.0	28.2	63.1	47.1		
4	11/04/2023	GA/23/0838	G-N4	R	Purva Casarvamem	33.8	82.5	51.8	29.9	56.9	41.0		
5	14/04/2023	GA/23/0857	G-N5	R	Chandal	36.2	76.1	54.1	30.7	65.8	44.5		
6	11/04/2023	GA/23/0837	G-N6	R	Khajne Amere Porwadem	37.5	68.5	49.9	31.1	57.9	42.0		
7	09/04/2023	GA/23/0823	G-N7	R	Warkhend	35.8	78.1	52.4	31.4	56.6	40.1		
8	04/04/2023	GA/23/0795	G-N8	C	Rajal Wada Tonem	30.8	72.8	53.5	32.9	63.0	46.9		
9	09/04/2023	GA/23/0824	G-N9	C	Village Panchayat Tambosem - Mopa - Ugvem	32.7	70.8	49.0	29.3	46.1	35.8		
10	04/04/2023	GA/23/0794	M-N1	R	Setarda	31.9	73.8	53.9	30.5	57.9	43.9		
11	07/04/2023	GA/23/0807	M-N2	R	Dingare	32.9	71.8	46.4	32.9	44.2	38.3		
12	07/04/2023	GA/23/0808	M-N3	R	Netarda	25.3	76.5	49.0	24.1	49.7	35.2		
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 is 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 relative 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.													
<p>Note :</p> <p>1. The results relate only to the samples tested.</p> <p>2. Test Report shall not be reproduced except in full, without written approval of the laboratory.</p> <p>3. Test Results relate only to the conditions prevailing at the time of sampling.</p> <p>4. Customer complaint register is available at laboratory.</p> <p>5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.</p>													
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/23/0604		Report Date	24/04/2023
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 17/04/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.8	45
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	17/04/2023	
Sample Collected by	GLPL Representative	Sample Received On	17/04/2023	
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023	
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	0.2	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	20.21	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	52	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	14.12	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>	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.	GW23/0604	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

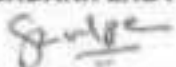
### Chemical Testing:

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>	0.040	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F <sup>-</sup>	< 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

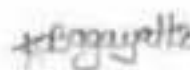
### Metal Analysis:

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	4.01	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	0.052	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	7.9	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.	GW23/0604	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
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	17/04/2023	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/23/0605		Report Date	24/04/2023
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 17/04/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.8	45
Sampling Plan	GLPL/QF/7 3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB Dominos L2 Fountain			
Sampling Details	PTB Dominos L2 Water Fountain Sample	Date of Collection	17/04/2023	
Sample Collected by	GLPL Representative	Sample Received On	17/04/2023	
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023	
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	7.22	-	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	8.08	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	25	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl <sup>-</sup>	9.08	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub> <sup>2-</sup>	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

Report No.	GW23/0605	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

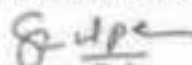
### Chemical Testing:

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>	0.004	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	0.077	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	2.8	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.	GW23/0605	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
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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**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	17/04/2023	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/23/0606		Report Date	24/04/2023
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 17/04/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.8	45
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	17/04/2023	
Sample Collected by	GLPL Representative	Sample Received On	17/04/2023	
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023	
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	7.35	-	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	10.10	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	27	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	9.08	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>	12	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.	GW23/0606	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
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>	0.004	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F <sup>-</sup>	< 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	3.21	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	2.6	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/23/0606	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
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/GLPUC/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	TECHVAL/20 23/02/89	17/04/2023	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/23/0607	Report Date	24/04/2023	
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 17/04/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.8	45
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Admin Building 1 <sup>st</sup> Floor			
Sampling Details	Admin Building 1 <sup>st</sup> Floor Water Fountain	Date of Collection	17/04/2023	
Sample Collected by	GLPL Representative	Sample Received On	17/04/2023	
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023	
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	7.42	-	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	20.21	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	56	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	12.11	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	3.25	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>	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.	GW23/0607	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
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 <sup>-</sup>	< 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	7.4	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/23/0607	Report Date	24/04/2023
Order / Reference	As Per Dated 17/04/2023	Sample Received on	17/04/2023
Analysis Started On	17/04/2023	Analysis Completed On	24/04/2023
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	17/04/2023	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/23/0591	Report Date	19/04/2023	
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 13/04/2023	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	13/04/2023	
Sample Collected by	GLPL Representative	Sample Received On	13/04/2023	
Analysis Started On	13/04/2023	Analysis Completed On	19/04/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	Ph	7.08	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	805	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	286	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	86	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	8	mg/lit	APHA 5520 B
6	Ammonia	86.89	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	98.89	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

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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	13/04/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



# GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

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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

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0592	Report Date	19/04/2023	
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 13/04/2023	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	13/04/2023	
Sample Collected by	GLPL Representative	Sample Received On	13/04/2023	
Analysis Started On	13/04/2023	Analysis Completed On	19/04/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	8.13	-	5.5 - 9.0	APHA 4500 H*
2	Chemical Oxygen Demand (COD)	40	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)	14	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	2.69	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	6.83	mg/lit	10.00	APHA 4500-Norg

### Microbiological Parameters:

8	Fecal Coliform at 44.5°C for 24 hrs.	47	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:

1. Results relate only to the sample tested.
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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.

**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	13/04/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/06/2023		
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/T.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	May 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	34.5	Average Humidity (%)	80
Average Wind Speed (km/hr)	42	Average Wind direction (Deg)	278
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	01.05.2023	GA/23/1023	118.1	67.12	20.21	< 6.0	< 9.0	0.39	51.3	0.13	< 1.0
2	04.05.2023	GA/23/1083	133.5	84.13	35.84	< 6.0	< 9.0	0.84	139.2	0.08	< 1.0
3	08.05.2023	GA/23/1152	116.2	76.70	40.34	< 6.0	< 9.0	0.60	121.6	0.06	< 1.0
4	11.05.2023	GA/23/1230	132.2	69.04	41.21	< 6.0	< 9.0	0.63	107.3	0.07	< 1.0
5	15.05.2023	GA/23/1291	147.6	61.57	37.26	< 6.0	< 9.0	0.78	108.6	0.05	< 1.0
6	18.05.2023	GA/23/1336	160.1	76.44	35.22	< 6.0	< 9.0	0.37	83.9	0.10	< 1.0
7	22.05.2023	GA/23/1387	139.6	85.73	26.86	< 6.0	< 9.0	0.53	70.5	0.05	< 1.0
8	25.05.2023	GA/23/1459	122.5	69.62	21.17	< 6.0	< 9.0	0.48	53.2	0.06	< 1.0
	29.05.2023	GA/23/1501	108.7	74.84	25.16	< 6.0	< 9.0	0.51	95.2	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 XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2019	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  
[SACHIN B. GAONKAR]



  
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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
Gaseous 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	03/06/2023		
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	May 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Shemeshchavan, Goa State (G-A2)		
Average Ambient Temperature (°C)	35	Average Humidity (%)	78
Average Wind Speed (km/hr)	40.8	Average Wind direction (Deg)	278
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	01.05.2023	GA/23/1022	142.0	74.35	22.95	<6.0	<9.0	0.72	138.3	0.08	<1.0
2	04.05.2023	GA/23/1082	159.0	78.24	40.29	<6.0	<9.0	0.68	145.5	0.05	<1.0
3	08.05.2023	GA/23/1151	128.1	67.21	45.91	<6.0	<9.0	0.52	110.0	0.08	<1.0
4	11.05.2023	GA/23/1229	154.5	61.86	40.42	<6.0	<9.0	0.58	84.2	0.08	<1.0
5	15.05.2023	GA/23/1290	171.3	56.51	38.30	<6.0	<9.0	0.62	88.3	0.04	<1.0
6	18.05.2023	GA/23/1335	148.2	71.50	28.11	<6.0	<9.0	0.41	58.7	0.03	<1.0
7	22.05.2023	GA/23/1386	124.7	79.21	20.17	<6.0	<9.0	0.87	120.5	0.06	<1.0
8	25.05.2023	GA/23/1458	111.0	60.92	10.94	<6.0	<9.0	0.80	101.9	0.06	<1.0
9	29.05.2023	GA/23/1500	94.4	66.90	22.04	<6.0	<9.0	0.38	73.6	0.07	<1.0
<b>HAAQS 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 XXXI) 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 XXX) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

*Sachin B. Gaonkar*

**AUTHORISED SIGNATORY**  
**[SACHIN B. GAONKAR]**



*[Signature]*

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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. 936-DTA-2020	18/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 476-A-23	07/01/2023	07/01/2024
Gaseous 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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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/06/2023		
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	May 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	35	Average Humidity (%)	80
Average Wind Speed (km/hr)	38.2	Average Wind direction (Deg)	259
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	01.05.2023	GA/23/1015	164.6	90.99	27.32	< 6.0	< 9.0	0.47	105.9	0.06	< 1.0
2	04.05.2023	GA/23/1075	179.5	91.78	40.34	< 6.0	< 9.0	0.79	115.0	0.03	< 1.0
3	08.05.2023	GA/23/1144	157.5	88.19	45.87	< 6.0	< 9.0	0.82	123.4	0.05	< 1.0
4	11.05.2023	GA/23/1222	179.5	87.37	39.92	< 6.0	< 9.0	0.89	105.5	0.06	< 1.0
5	15.05.2023	GA/23/1283	103.7	93.29	36.43	< 6.0	< 9.0	0.89	122.3	0.03	< 1.0
6	18.05.2023	GA/23/1328	177.7	91.69	30.85	< 6.0	< 9.0	0.45	87.8	0.05	< 1.0
7	22.05.2023	GA/23/1379	163.8	89.19	32.48	< 6.0	< 9.0	0.66	112.0	0.04	< 1.0
8	25.05.2023	GA/23/1451	185.1	89.68	35.80	< 6.0	< 9.0	0.36	88.2	0.03	< 1.0
9	29.05.2023	GA/23/1493	164.0	90.13	23.74	< 6.0	< 9.0	0.80	105.9	0.04	< 1.0
<b>NAAQS LIMITS *</b>			--	100	50	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 53, 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.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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. 847-DTJ-2019	08/10/2022	08/10/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	19/02/2023	18/02/2024
Gaseous Sampler Sr. No. 6896-DTC-2020	16/02/2023	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	03/06/2023		
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	May 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Purva Casarvarem - Goa State (G-A4)		
Average Ambient Temperature (°C)	34	Average Humidity (%)	75
Average Wind Speed (km/hr)	32	Average Wind direction (Deg)	255
Latitude	N 15°41'41.9"	Longitude	E 73°50'16.5"
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	01.05.2023	GA/23/1016	127.4	71.81	22.83	< 6.0	< 9.0	0.63	121.6	0.08	< 1.0
2	04.05.2023	GA/23/1076	146.6	85.66	25.86	< 6.0	< 9.0	0.90	123.0	0.05	< 1.0
3	08.05.2023	GA/23/1145	124.7	78.82	40.71	< 6.0	< 9.0	0.58	112.3	0.05	< 1.0
4	11.05.2023	GA/23/1223	149.5	68.99	32.93	< 6.0	< 9.0	0.81	126.9	0.03	< 1.0
5	15.05.2023	GA/23/1284	170.7	61.26	34.76	< 6.0	< 9.0	0.59	67.5	0.02	< 1.0
6	18.05.2023	GA/23/1329	149.5	73.64	26.99	< 6.0	< 9.0	0.72	98.8	0.04	< 1.0
7	22.05.2023	GA/23/1380	157.2	81.33	30.36	< 6.0	< 9.0	0.45	80.3	0.04	< 1.0
8	25.05.2023	GA/23/1452	149.5	73.41	41.50	< 6.0	< 9.0	0.62	98.2	0.06	< 1.0
9	29.05.2023	GA/23/1494	134.1	62.64	22.75	< 6.0	< 9.0	0.65	124.2	0.06	< 1.0
<b>NAAQSLIMITS*</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 FCM, 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 XXX) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
(SACHIN B. GAONKAR)



  
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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. 338-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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Tel.: (022) 2577 7069 / 2577 7070 / 2065 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/06/2023		
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	May 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	34.5	Average Humidity (%)	82
Average Wind Speed (km/hr)	30.5	Average Wind direction (Deg)	267
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	01.05.2023	GA/23/1017	53.6	52.08	15.01	< 6.0	< 9.0	0.55	85.3	0.11	< 1.0
2	04.05.2023	GA/23/1077	66.2	55.39	20.96	< 6.0	< 9.0	0.67	104.2	0.08	< 1.0
3	08.05.2023	GA/23/1146	68.1	53.88	25.41	< 6.0	< 9.0	0.49	113.9	0.07	< 1.0
4	11.05.2023	GA/23/1224	84.9	57.19	22.00	< 6.0	< 9.0	0.65	130.2	0.05	< 1.0
5	15.05.2023	GA/23/1285	102.6	68.19	23.00	< 6.0	< 9.0	0.45	65.4	0.04	< 1.0
6	18.05.2023	GA/23/1330	88.8	59.85	24.99	< 6.0	< 9.0	0.62	103.6	0.07	< 1.0
7	22.05.2023	GA/23/1381	78.5	68.13	27.90	< 6.0	< 9.0	0.52	85.8	0.05	< 1.0
8	25.05.2023	GA/23/1453	64.1	59.47	16.92	< 6.0	< 9.0	0.41	64.6	0.05	< 1.0
9	29.05.2023	GA/23/1495	55.5	65.27	11.14	< 6.0	< 9.0	0.63	97.7	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 16

#### \*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.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
CHECKED BY

**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
Gaseous 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



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/06/2023		
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/T/3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	May 2023		

#### AMBIENT AIR LOCATION


Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	34	Average Humidity (%)	80
Average Wind Speed (km/hr)	35	Average Wind direction (Deg)	260
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	01.05.2023	GA/23/1020	132.3	66.48	21.67	< 6.0	< 9.0	0.71	79.1	0.09	< 1.0
2	04.05.2023	GA/23/1060	149.5	74.83	31.80	< 6.0	< 9.0	0.50	78.8	0.07	< 1.0
3	08.05.2023	GA/23/1149	121.1	67.60	37.59	< 6.0	< 9.0	0.63	96.5	0.08	< 1.0
4	11.05.2023	GA/23/1227	143.9	61.49	36.22	< 6.0	< 9.0	0.82	79.8	0.08	< 1.0
5	15.05.2023	GA/23/1288	163.9	67.03	34.02	< 6.0	< 9.0	0.41	70.6	0.03	< 1.0
6	18.05.2023	GA/23/1333	146.0	76.48	17.51	< 6.0	< 9.0	0.74	90.5	0.06	< 1.0
7	22.05.2023	GA/23/1384	124.7	72.45	24.24	< 6.0	< 9.0	0.64	94.8	0.06	< 1.0
8	25.05.2023	GA/23/1456	114.3	58.28	18.42	< 6.0	< 9.0	0.53	96.6	0.07	< 1.0
9	29.05.2023	GA/23/1498	100.6	69.21	20.58	< 6.0	< 9.0	0.61	110.1	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 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 19

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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.

  
**AUTHORISED SIGNATORY**  
**[SACHIN B. GAONKAR]**



  
**CHECKED BY**

**CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING**

Ambient Instrument No. 6	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 935-DTA-2015	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2023	15/05/2024
Gaseous Sampler Sr. No. 262-D-22	16/05/2023	15/05/2024
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 / 2005 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/06/2023		
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	May 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	34.5	Average Humidity (%)	76
Average Wind Speed (km/hr)	28.4	Average Wind direction (Deg)	238
Latitude	N 15°43'01.3"	Longitude	E 73°46'00.2"
Instrument Used	FPS (APM - 550)	RDS (APM - 460)	GPS (APM - 411)

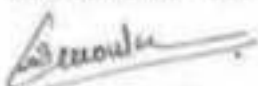
Sr. No.	Date of Sampling	Report No.	PARAMETERS								
			SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	CO <sub>2</sub>	Lead	VOC
1	01.05.2023	GA/23/1018	90.7	81.67	20.54	< 6.0	< 9.0	0.71	123.4	0.09	< 1.0
2	04.05.2023	GA/23/1078	104.7	66.53	23.83	< 6.0	< 9.0	0.42	77.7	0.10	< 1.0
3	08.05.2023	GA/23/1147	82.0	80.80	37.43	< 6.0	< 9.0	0.48	92.2	0.07	< 1.0
4	11.05.2023	GA/23/1225	104.7	61.30	29.61	< 6.0	< 9.0	0.71	107.4	0.09	< 1.0
5	15.05.2023	GA/23/1286	117.5	62.83	21.12	< 6.0	< 9.0	0.93	98.3	0.03	< 1.0
6	18.05.2023	GA/23/1331	98.6	66.71	23.54	< 6.0	< 9.0	0.42	63.0	0.06	< 1.0
7	22.05.2023	GA/23/1382	77.8	79.05	21.83	< 6.0	< 9.0	0.57	70.4	0.06	< 1.0
8	25.05.2023	GA/23/1454	62.7	64.47	18.05	< 6.0	< 9.0	0.43	72.1	0.06	< 1.0
9	29.05.2023	GA/23/1496	57.1	65.97	24.74	< 6.0	< 9.0	0.51	98.3	0.06	< 1.0
<b>NAAQSLIMITS*</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 XXX) 2006	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 XXX) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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 7089 / 2577 7070 / 2065 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/06/2023		
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	May 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	35	Average Humidity (%)	80
Average Wind Speed (km/hr)	40	Average Wind direction (Deg)	284
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	01.05.2023	GA/23/1021	78.5	52.85	18.80	< 6.0	< 9.0	0.37	73.4	0.08	< 1.0
2	04.05.2023	GA/23/1081	97.1	57.24	25.37	< 6.0	< 9.0	0.93	147.3	0.02	< 1.0
3	08.05.2023	GA/23/1150	78.4	52.89	11.73	< 6.0	< 9.0	0.49	109.0	0.05	< 1.0
4	11.05.2023	GA/23/1228	90.9	55.29	19.67	< 6.0	< 9.0	0.72	97.1	0.07	< 1.0
5	15.05.2023	GA/23/1289	108.0	67.81	21.29	< 6.0	< 9.0	0.59	93.8	0.02	< 1.0
6	18.05.2023	GA/23/1334	95.7	60.43	16.18	< 6.0	< 9.0	0.39	50.8	0.03	< 1.0
7	22.05.2023	GA/23/1385	77.9	57.22	27.78	< 6.0	< 9.0	0.91	121.3	0.08	< 1.0
8	25.05.2023	GA/23/1457	55.5	39.97	13.89	< 6.0	< 9.0	0.81	109.9	0.05	< 1.0
9	29.05.2023	GA/23/1499	44.2	50.64	16.22	< 6.0	< 9.0	0.36	78.4	0.06	< 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 XXXI) 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 XXXI) 2006	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
(SACHIN B. GAONKAR)



  
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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 800	17/01/2023	16/01/2024



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## INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel. : (022) 2577 7069 / 2577 7070 / 2065 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/06/2023		
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	May 2023		

#### AMBIENT AIR LOCATION


Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	34	Average Humidity (%)	72
Average Wind Speed (km/hr)	24.3	Average Wind direction (Deg)	242
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	01.05.2023	GA/23/1019	36.4	52.55	18.26	< 6.0	< 9.0	0.82	120.3	0.06	< 1.0
2	04.05.2023	GA/23/1079	47.9	59.80	20.87	< 6.0	< 9.0	0.70	140.5	0.04	< 1.0
3	08.05.2023	GA/23/1148	43.7	54.09	21.37	< 6.0	< 9.0	0.69	126.0	0.10	< 1.0
4	11.05.2023	GA/23/1226	62.3	59.87	22.54	< 6.0	< 9.0	0.55	112.3	0.05	< 1.0
5	15.05.2023	GA/23/1287	70.1	51.74	23.87	< 6.0	< 9.0	0.87	115.4	0.02	< 1.0
6	18.05.2023	GA/23/1332	55.8	66.11	10.69	< 6.0	< 9.0	0.49	68.3	0.05	< 1.0
7	22.05.2023	GA/23/1383	42.0	51.99	12.56	< 6.0	< 9.0	0.74	130.5	0.06	< 1.0
8	25.05.2023	GA/23/1455	25.7	51.65	10.19	< 6.0	< 9.0	0.46	81.4	0.06	< 1.0
9	29.05.2023	GA/23/1497	21.9	54.52	14.22	< 6.0	< 9.0	0.67	125.4	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 3182 (Part 4)	IS 3182 (Part XXXI) 2004	USEPA FEDM, 40 CFR Part 50, Appendix-E, 2014-2019	IS 3182 (Part I) 2001	IS 3182 (Part V) 2006	IS 3182 (Part X) 1999	GC Method	IS 3182 (Part XXI) 2004	EPA Method 19

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

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  - 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  
[SACHIN B. GAONKAR]



  
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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. 942-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 477-A-23	07/01/2023	07/01/2024
Gaseous Sampler Sr. No. 470-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



# GADARK LAB PVT. LTD.

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### TEST REPORT

NOISE LEVEL MONITORING REPORT											
Report Date	03/06/2023										
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											
Sl. No.	Date of Sampling	Report No.	Station ID	Zone	Sampling Location	Day Time Noise in dB(A)			Night Time Noise in dB(A)		
						Leq	L <sub>max</sub>	L <sub>90</sub>	Leq	L <sub>max</sub>	L <sub>90</sub>
1	16.05.2023	GA/23/1321	G-N1	I	Mopa Boundary	40.1	88.3	56.2	40.1	77.0	43.8
2	18.05.2023	GA/23/1360	G-A2	I	Shemachadwan	30.1	87.3	53.3	29.7	88.2	44.8
3	18.05.2023	GA/23/1200	G-A5	C	Nagzar	31.8	82.1	55.3	27.8	73.4	45.8
4	06.05.2023	GA/23/1127	G-N4	R	Purva Casarvanem	32.4	85.9	53.0	24.3	90.9	44.8
5	18.05.2023	GA/23/1201	G-N5	R	Chandel	32.0	95.5	54.9	29.3	73.3	46.3
6	06.05.2023	GA/23/1128	G-N6	R	Khajha Amora Poracodem	20.1	74.9	51.1	25.4	91.7	37.2
7	01.05.2023	GA/23/1052	G-N7	R	Wakhand	33.2	84.9	54.4	30.9	81.9	44.4
8	02.05.2023	GA/23/1054	G-N8	C	Rajul Wada Torvam	34.2	90.8	57.3	33.4	64.9	51.1
9	01.05.2023	GA/23/1081	G-N9	C	Village Panchayat Tardovan - Mopa - Ussem	33.6	88.8	61.6	31.2	76.7	53.2
10	02.05.2023	GA/23/1053	M-N1	R	Satarda	33.8	74.2	54.6	33.2	80.8	43.5
11	05.05.2023	GA/23/1118	M-A2	R	Origara	26.8	82.0	48.1	25.4	55.2	37.9
12	05.05.2023	GA/23/1119	M-A3	R	Netarde	22.3	88.1	54.4	22.4	62.8	40.7
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 is reckoned in between 8:00 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 reliable 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.											
5. 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 [SACHIN B. GAONKAR]								CHECKED BY			

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Equipment Name	Calibrated On	Calibration Due Date
Noise Level Meter Sr. No. 554067	16/05/2023	16/05/2024

Equipment Name	Calibrated On	Calibration Due Date
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/23/0810	Report Date	22/05/2023	
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 16/05/2023	Environmental Condition of Lab	Temp °C 24.4	Humidity % 41
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	16/05/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/05/2023	
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.58	-	6.5 – 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	20.16	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	80	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	15.08	mg/lit	250.00	APHA 4500 Cl-B
9	Sulphate as SO <sub>4</sub>	2.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	50	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/23/0810	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.044	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B.C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	13.63	mg/lit	75.0	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.057	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	3.89	mg/lit	30.0	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 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	8.2	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	< 0.01	mg/lit	0.05	APHA 3120 B

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### TEST REPORT

Report No	GW/23/0810	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/2223/082	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/CP/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/2023/02/89	16/05/2023	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/23/0811	Report Date	22/05/2023	
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 16/05/2023	Environmental Condition of Lab	Temp °C 24.4	Humidity % 41
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L0 Water Fountain			
Sampling Details	PTB L0 Water Fountain Sample	Date of Collection	16/05/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/05/2023	
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.53	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	10.08	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	62	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	10.05	mg/lit	250.00	APHA 4500 Cl-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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	34	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.055	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/23/0811	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.038	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	6.41	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.089	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	4.38	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 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	7.8	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	< 0.01	mg/lit	0.05	APHA 3120 B

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*K. B. Bagayatkar*  
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## TEST REPORT

Report No.	GW23/0811	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/GLPU/C/2223/082	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/2023/02/89	16/05/2023	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/23/0812	Report Date	22/05/2023	
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 16/05/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.4	41
Sampling Plan	GLPU/QF/7_3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB Arrival Water Fountain L1			
Sampling Details	PTB Arrival Water Fountain L1 Sample	Date of Collection	16/05/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/05/2023	
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.48	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2160 B
6	Total Alkalinity	10.08	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	60	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	11.06	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	38	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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# GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

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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/23/0812	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.028	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F-
17	Phenolic Compound	< 0.001	mg/lit	0.001	IS 3025
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	6.41	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.051	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	5.36	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.005	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	8.0	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	< 0.01	mg/lit	0.05	APHA 3120 B

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# GADARK LAB PVT. LTD.

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## TEST REPORT

Report No.	GW/23/0812	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/2223/682	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/2023/02/89	16/05/2023	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.	GW23/0813		Report Date	22/05/2023
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	Environmental Condition of Lab	Temp °C	Humidity %
	16/05/2023		24.4	41
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB Encalm Lounge L2			
Sampling Details	PTB Encalm Lounge L2 Water Sample		Date of Collection	16/05/2023
Sample Collected by	GLPL Representative		Sample Received On	16/05/2023
Analysis Started On	16/05/2023		Analysis Completed On	22/05/2023
Sample Container	Plastic Carboy + Glass Bottle		Sample Quantity	4 lit + 1.25 lit

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.42	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	8.06	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	55	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	9.05	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	32	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/23/0813	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.025	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	IS 3025
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	5.61	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.088	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	4.92	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0098	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	7.9	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	< 0.01	mg/lit	0.05	APHA 3120 B

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## TEST REPORT

Report No.	GW/23/0813	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/ 2223/062	15/10/2022	14/10/2023
06.	ICP – OES	GL/EQ/CP/01	-	In house Calibration	
07.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207005	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/ 2023/02/89	16/05/2023	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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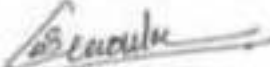
## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0814	Report Date	22/05/2023	
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 16/05/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.4	41
Sampling Plan	GLP/OF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Admin Building Ground Floor			
Sampling Details	Admin Building Ground Floor Water Fountain	Date of Collection	16/05/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/05/2023	
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.28	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	24.19	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	78	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	16.08	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	54	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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# GADARK LAB PVT. LTD.

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## TEST REPORT

Report No.	GW23/0814	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	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	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	IS 3025
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	10.42	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.063	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	6.82	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 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	3.1	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	< 0.01	mg/lit	0.05	APHA 3120 B

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# GADARK LAB PVT. LTD.

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## TEST REPORT

Report No.	GW/23/0814	Report Date	22/05/2023
Order / Reference	As Per Dated 16/05/2023	Sample Received on	16/05/2023
Analysis Started On	16/05/2023	Analysis Completed On	22/05/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/2223/082	15/10/2022	14/10/2023
06.	ICP - OES	GL/EQ/CP/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/2023/02/89	16/05/2023	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.

## 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

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/0767	Report Date	16/05/2023	
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 10/05/2023	Environmental Condition of Lab	Temp °C	Humidity %
			31.2	53
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	10/05/2023	
Sample Collected by	GLPL Representative	Sample Received On	10/05/2023	
Analysis Started On	10/05/2023	Analysis Completed On	16/05/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

#### Chemical Testing:

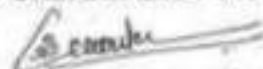
Sr. No.	Parameters	Result	Unit	Method
1	pH	6.73	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	1053	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	370	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	98	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	10	mg/lit	APHA 5520 B
6	Ammonia	89.23	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	104.72	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.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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 ° C)	GL/EQ/I-01	AVI/2207006	01/07/2022	30/06/2023
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207018	01/07/2022	30/06/2023
07.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	10/05/2023	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/23/0768		Report Date	16/05/2023
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 10/05/2023	Environmental Condition of Lab	Temp °C	Humidity %
			31.2	53
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	10/05/2023	
Sample Collected by	GLPL Representative	Sample Received On	10/05/2023	
Analysis Started On	10/05/2023	Analysis Completed On	16/05/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

#### Chemical Testing:


Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	6.97	-	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)	6	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	3.02	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	7.26	mg/lit	10.00	APHA 4500-Norg

#### Microbiological Parameters:

8	Fecal Coliform at 44.5°C for 24 hrs.	58	MPN Index/100ml	100	APHA 9221 E
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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	10/05/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023



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### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/07/2023		
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	June 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	87
Average Wind Speed (km/hr)	51	Average Wind direction (Deg)	290
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	01.06.2023	GA/23/1543	96.2	68.91	25.03	<6.0	<9.0	0.49	82.4	0.05	<1.0
2	05.06.2023	GA/23/1554	114.9	70.23	27.49	<6.0	<9.0	0.52	96.2	0.04	<1.0
3	08.06.2023	GA/23/1578	94.3	57.04	21.83	<6.0	<9.0	0.24	83.24	0.06	<1.0
4	12.06.2023	GA/23/1607	70.0	53.73	20.50	<6.0	<9.0	0.61	119.01	0.03	<1.0
5	15.06.2023	GA/23/1619	61.4	60.82	24.86	<6.0	<9.0	0.57	110.7	0.07	<1.0
6	19.06.2023	GA/23/1642	58.2	62.10	20.17	<6.0	<9.0	0.56	115.0	0.05	<1.0
7	22.06.2023	GA/23/1655	55.8	54.77	18.92	<6.0	<9.0	0.87	148.2	0.05	<1.0
8	26.06.2023	GA/23/1682	53.7	61.04	13.72	<6.0	<9.0	0.37	140.6	0.05	<1.0
9	29.06.2023	GA/23/1695	35.0	52.78	11.35	<6.0	<9.0	0.63	144.8	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 XXII) 2006	USEPA-FEM, 40 CFR Part 55, Appendix-L, 2014-2016	IS 5182 (Part 6) 2001	IS 5182 (Part VI) 2004	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

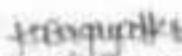
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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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
Gaseous 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	03/07/2023		
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	June 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Sherncheadvan Goa State (G-A2)		
Average Ambient Temperature (°C)	31	Average Humidity (%)	82
Average Wind Speed (km/hr)	58.3	Average Wind direction (Deg)	301
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	01.06.2023	GA/23/1542	77.8	57.07	17.05	< 6.0	< 9.0	0.28	59.5	0.04	< 1.0
2	05.06.2023	GA/23/1553	95.7	66.21	15.88	< 6.0	< 9.0	0.59	85.6	0.06	< 1.0
3	08.06.2023	GA/23/1577	78.3	52.21	32.93	< 6.0	< 9.0	0.23	55.53	0.05	< 1.0
4	12.06.2023	GA/23/1606	59.3	56.63	21.46	< 6.0	< 9.0	0.29	72.94	0.03	< 1.0
5	15.06.2023	GA/23/1618	57.4	57.64	23.41	< 6.0	< 9.0	0.77	123.9	0.05	< 1.0
6	19.06.2023	GA/23/1641	54.2	49.97	19.13	< 6.0	< 9.0	0.33	125.0	0.04	< 1.0
7	22.06.2023	GA/23/1654	39.2	58.89	14.72	< 6.0	< 9.0	0.67	128.5	0.03	< 1.0
8	26.06.2023	GA/23/1681	37.3	54.95	12.60	< 6.0	< 9.0	0.33	125.0	0.04	< 1.0
9	29.06.2023	GA/23/1694	22.0	45.06	12.18	< 6.0	< 9.0	0.34	115.2	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 XXII) 2006	USEPA FEM, 40 CFR Part 60, Appendix L, 2014-2015	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	OC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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. 936-DTA-2020	18/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 476-A-23	07/01/2023	07/01/2024
Gaseous Sampler Sr. No. 471-L-22	07/01/2023	07/01/2024
UV Spectrophotometer Sr. No. Equiptronics EQ 626	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	03/07/2023		
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	June 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	85
Average Wind Speed (km/hr)	59	Average Wind direction (Deg)	278
Latitude	N 15°45'37.3"	Longitude	E 73°53'14.22"
Instrument Used	FPS (APM - 550)	RDS (APM - 450)	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	01.06.2023	GA/23/1535	146.0	83.83	27.45	< 6.0	< 9.0	0.90	128.9	0.05	< 1.0
2	05.06.2023	GA/23/1546	183.3	89.66	27.82	< 6.0	< 9.0	0.50	119.4	0.05	< 1.0
3	06.06.2023	GA/23/1570	167.5	80.55	30.40	< 6.0	< 9.0	0.81	123.7	0.03	< 1.0
4	12.06.2023	GA/23/1599	157.6	73.85	22.70	< 6.0	< 9.0	0.60	115.3	0.05	< 1.0
5	15.06.2023	GA/23/1611	145.2	77.35	21.75	< 6.0	< 9.0	0.66	131.4	0.07	< 1.0
6	19.06.2023	GA/23/1634	124.7	68.32	19.59	< 6.0	< 9.0	0.46	115.9	0.03	< 1.0
7	22.06.2023	GA/23/1647	117.9	59.96	17.38	< 6.0	< 9.0	0.28	116.9	0.03	< 1.0
8	26.06.2023	GA/23/1674	100.6	54.06	15.80	< 6.0	< 9.0	0.44	116.7	0.03	< 1.0
	29.06.2023	GA/23/1687	82.0	51.84	12.27	< 6.0	< 9.0	0.77	138.9	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 3182 (Part 4)	IS 3182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 55, Appendix L 2014-2016	IS 3182 (Part 3) 2001	IS 3182 (Part VI) 2006	IS 3182 (Part X) 1996	GC Method	IS 3182 (Part XXII) 2004	EPA Method 18

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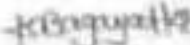
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AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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. 847-DTJ-2019	08/10/2022	08/10/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	19/02/2023	18/02/2024
Gaseous Sampler Sr. No. 6896-DTC-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	03/07/2023		
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	June 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Purva Casarvarnem - Goa State (G-A4)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	86
Average Wind Speed (km/hr)	60	Average Wind direction (Deg)	276
Latitude	N 15°41'41.9"	Longitude	E 73°50'16.5"
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	01.06.2023	GA/23/1536	159.8	63.87	27.65	< 6.0	< 9.0	0.60	110.8	0.06	< 1.0
2	05.06.2023	GA/23/1547	172.7	83.93	25.12	< 6.0	< 9.0	0.38	73.9	0.06	< 1.0
3	08.06.2023	GA/23/1571	148.1	63.87	25.20	< 6.0	< 9.0	0.24	65.5	0.03	< 1.0
4	12.06.2023	GA/23/1600	126.7	53.41	19.42	< 6.0	< 9.0	0.72	121.7	0.02	< 1.0
5	15.06.2023	GA/23/1612	115.5	57.57	18.17	< 6.0	< 9.0	0.55	121.9	0.07	< 1.0
6	19.06.2023	GA/23/1635	98.4	55.41	14.60	< 6.0	< 9.0	0.26	126.1	0.04	< 1.0
7	22.06.2023	GA/23/1648	82.3	63.17	16.01	< 6.0	< 9.0	0.35	127.1	0.04	< 1.0
8	26.06.2023	GA/23/1675	64.3	55.68	13.97	< 6.0	< 9.0	0.33	124.9	0.05	< 1.0
9	29.06.2023	GA/23/1688	55.8	46.16	11.68	< 6.0	< 9.0	0.49	112.5	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 XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix I, 2014-2018	IS 5182 (Part I) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1996	GC Method	IS 5182 (Part XXI) 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  
[SACHIN B. GAONKAR]



  
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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
Gaseous 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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## INDUSTRIAL ANALYSTS & CONSULTANTS

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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

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/07/2023		
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	June 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	89
Average Wind Speed (km/hr)	51.2	Average Wind direction (Deg)	298
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	01.06.2023	GA/23/1537	53.6	58.97	10.98	<6.0	<9.0	0.32	57.3	0.05	<1.0
2	05.06.2023	GA/23/1548	69.7	72.89	17.76	<6.0	<9.0	0.62	128.5	0.05	<1.0
3	08.06.2023	GA/23/1572	59.3	54.88	20.50	<6.0	<9.0	0.42	116.3	0.42	<1.0
4	12.06.2023	GA/23/1601	55.3	51.58	12.10	<6.0	<9.0	0.50	101.0	0.04	<1.0
5	15.06.2023	GA/23/1613	47.5	43.05	14.22	<6.0	<9.0	0.25	104.5	0.04	<1.0
6	19.06.2023	GA/23/1636	43.8	34.59	11.81	<6.0	<9.0	0.42	108.1	0.03	<1.0
7	22.06.2023	GA/23/1649	31.8	49.29	12.43	<6.0	<9.0	0.37	103.2	0.02	<1.0
8	26.06.2023	GA/23/1676	30.4	53.80	11.93	<6.0	<9.0	0.41	104.1	0.07	<1.0
9	29.06.2023	GA/23/1689	25.6	42.24	10.02	<6.0	<9.0	0.23	109.6	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 XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix-L 2014-2018	IS 5182 (Part 6) 2011	IS 5182 (Part VI) 2008	IS 5182 (Part X) 1999	OC Method	IS 5182 (Part XXII) 2004	EPA Method 15

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

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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
Gaseous 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 800	17/01/2023	16/01/2024



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OFF: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 60.  
Tel.: (022) 2577 7068 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/07/2023		
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	June 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	31	Average Humidity (%)	86
Average Wind Speed (km/hr)	54	Average Wind direction (Deg)	290
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	01.06.2023	GA/23/1540	88.2	59.26	26.74	<6.0	<9.0	0.27	65.6	0.04	<1.0
2	05.06.2023	GA/23/1551	110.7	66.01	22.04	<6.0	<9.0	0.51	96.7	0.06	<1.0
3	08.06.2023	GA/23/1575	91.7	60.70	24.66	<6.0	<9.0	0.29	87.19	0.06	<1.0
4	12.06.2023	GA/23/1604	88.3	51.92	17.59	<6.0	<9.0	0.30	94.37	0.04	<1.0
5	15.06.2023	GA/23/1616	62.7	57.65	13.47	<6.0	<9.0	0.59	124.3	0.05	<1.0
6	19.06.2023	GA/23/1639	55.5	56.11	17.17	<6.0	<9.0	0.45	110.0	0.02	<1.0
7	22.06.2023	GA/23/1652	43.5	59.08	12.89	<6.0	<9.0	0.43	102.1	0.03	<1.0
8	26.06.2023	GA/23/1679	34.9	54.27	15.18	<6.0	<9.0	0.25	115.8	0.03	<1.0
9	29.06.2023	GA/23/1692	25.8	44.56	12.23	<6.0	<9.0	0.40	145.5	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 XXII) 2006	USEPA FEM, 40 CFR Part 51, Appendix L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1990	OC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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

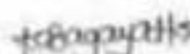
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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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. 935-DTA-2015	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2023	15/05/2024
Gaseoue Sampler Sr. No. 262-D-22	16/05/2023	15/05/2024
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



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Tel.: (022) 2577 7069 / 2577 7070 / 2065 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/07/2023		
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/7.3/05	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	June 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	82
Average Wind Speed (km/hr)	40.1	Average Wind direction (Deg)	265
Latitude	N 15°43'01.3"	Longitude	E 73°48'00.2"
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	01.06.2023	GA/23/1538	52.4	59.87	15.26	<6.0	<9.0	0.50	102.9	0.06	<1.0
2	05.06.2023	GA/23/1549	68.2	69.45	29.90	<6.0	<9.0	0.45	77.1	0.05	<1.0
3	08.06.2023	GA/23/1573	46.9	58.56	18.55	<6.0	<9.0	0.37	69.89	0.03	<1.0
4	12.06.2023	GA/23/1602	42.5	44.74	14.93	<6.0	<9.0	0.52	116.8	0.02	<1.0
5	15.06.2023	GA/23/1614	40.2	63.79	11.81	<6.0	<9.0	0.54	127.1	0.06	<1.0
6	19.06.2023	GA/23/1637	38.5	54.51	17.76	<6.0	<9.0	0.31	121.3	0.03	<1.0
7	22.06.2023	GA/23/1650	24.9	45.42	13.85	<6.0	<9.0	0.65	117.9	0.05	<1.0
8	26.06.2023	GA/23/1677	27.4	53.82	10.06	<6.0	<9.0	0.31	110.5	0.02	<1.0
9	29.06.2023	GA/23/1690	24.9	46.35	11.52	<6.0	<9.0	0.29	122.8	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 XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2016	IS 5182 (Part 0) 2001	IS 5182 (Part VI) 2000	IS 5182 (Part X) 1995	GC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	16/02/2024
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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OFF: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 40.  
Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/07/2023		
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	June 2023		

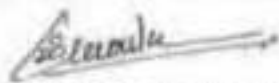
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	31.5	Average Humidity (%)	83
Average Wind Speed (km/hr)	45	Average Wind direction (Deg)	308
Latitude	N 15°46'12.3"	Longitude	E 73°49'20.5"
Instrument Used	FPS (APM - 550)	RDS (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	01.06.2023	GA/23/1541	42.5	58.53	13.81	< 6.0	< 9.0	0.37	89.7	0.04	< 1.0
2	05.06.2023	GA/23/1552	39.8	53.21	16.26	< 6.0	< 9.0	0.45	77.7	0.05	< 1.0
3	08.06.2023	GA/23/1576	30.4	45.08	14.68	< 6.0	< 9.0	0.26	71.98	0.05	< 1.0
4	12.06.2023	GA/23/1605	23.2	37.36	9.31	< 6.0	< 9.0	0.56	139.6	0.02	< 1.0
5	15.06.2023	GA/23/1617	20.8	34.35	11.68	< 6.0	< 9.0	0.67	120.1	0.06	< 1.0
6	19.06.2023	GA/23/1640	19.4	41.02	10.81	< 6.0	< 9.0	0.22	130.0	0.05	< 1.0
7	22.06.2023	GA/23/1653	17.7	50.33	11.19	< 6.0	< 9.0	0.48	106.8	0.04	< 1.0
8	26.06.2023	GA/23/1680	19.6	45.03	10.35	< 6.0	< 9.0	0.28	122.9	0.02	< 1.0
9	29.06.2023	GA/23/1693	14.3	39.53	8.98	< 6.0	< 9.0	0.56	137.6	0.03	< 1.0
NAAQS LIMITS <sup>1</sup>			–	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 XXII) 2008	USEPA FEM, 40 CFR Part 51, Appendix L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2009	IS 5182 (Part K) 1995	OC Method	IS 5182 (Part XXII) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
(SACHIN B. GAONKAR)



  
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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. 1855-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 825	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 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/07/2023		
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	June 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	31	Average Humidity (%)	82
Average Wind Speed (km/hr)	29.2	Average Wind direction (Deg)	232
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	01.06.2023	GA/23/1539	19.4	62.30	13.81	<6.0	<9.0	0.31	76.6	0.03	<1.0
2	05.06.2023	GA/23/1550	24.6	55.38	17.09	<6.0	<9.0	0.40	67.2	0.04	<1.0
3	08.06.2023	GA/23/1576	30.4	45.08	14.68	<6.0	<6.0	0.40	121.4	0.04	<1.0
4	12.06.2023	GA/23/1603	12.2	40.45	12.06	<6.0	<6.0	0.74	129.2	0.04	<1.0
5	15.06.2023	GA/23/1615	11.0	42.27	9.66	<6.0	<9.0	0.66	107.4	0.04	<1.0
6	19.06.2023	GA/23/1638	9.60	36.11	11.27	<6.0	<9.0	0.33	120.0	0.03	<1.0
7	22.06.2023	GA/23/1651	11.0	40.76	9.90	<6.0	<9.0	0.50	115.3	0.05	<1.0
8	26.06.2023	GA/23/1678	12.4	37.73	11.52	<6.0	<9.0	0.23	109.6	0.06	<1.0
9	29.06.2023	GA/23/1691	10.9	32.20	9.40	<6.0	<9.0	0.22	112.7	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 51, 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

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

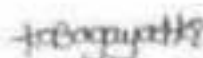
##### Note :

- 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.

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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. 942-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 477-A-23	07/01/2023	07/01/2024
Gaseous Sampler Sr. No. 470-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

NOISE LEVEL MONITORING REPORT											
Date of Issue		03/07/2023									
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>eq</sub>	L <sub>max</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>max</sub>	L <sub>90</sub>
1	25.06.2023	GA/23/1670	G-N1	I	Mopa Boundary	33.4	65.8	61.6	32.6	75.5	54.2
2	25.06.2023	GA/23/1671	G-N2	I	Shemachadvan	34.6	94.3	68.6	36.3	86.8	58.9
3	24.06.2023	GA/23/1668	G-N3	C	Nagzar	31.9	90.1	61.8	33.7	81.0	53.1
4	24.06.2023	GA/23/1668	G-N4	R	Purva Casarvamam	31.2	79.4	63.9	31.8	72.8	43.3
5	26.06.2023	GA/23/1673	G-N5	R	Chudal	31.6	92.6	61.5	30.9	78.1	42.9
6	27.06.2023	GA/23/1683	G-N6	R	Khazne Amora Porcodem	30.6	80.4	53.2	34.4	78.1	43.1
7	26.06.2023	GA/23/1672	G-N7	R	Wakhad	30.2	81.0	60.3	30.1	63.8	40.3
8	29.06.2023	GA/23/1686	G-N8	C	Ravi Wada Tonem	30.5	82.7	60.1	30.9	69.2	49.2
9	29.06.2023	GA/23/1685	G-N9	C	Village Penchayant Tamboren - Mopa - Ugvem	30.7	79.1	58.3	30.0	67.2	51.1
10	27.06.2023	GA/23/1584	M-N1	R	Satarde	30.0	78.5	49.8	30.1	61.3	40.6
11	23.06.2023	GA/23/1667	M-N2	R	Dingana	30.3	80.4	60.8	30.1	68.7	43.2
12	23.06.2023	GA/23/1666	M-N3	R	Nestarde	33.7	85.1	49.5	30.0	67.8	42.2
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 is reckoned in between 8:00 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.											
 AUTHORISED SIGNATORY [SACHIN B. GAONKAR]							 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	16/05/2023	16/05/2024

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 546176	23/06/2023	23/06/2024



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1004	Report Date	26/06/2023	
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 20/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			23.9	40
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	20/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/06/2023	
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.07	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	20.06	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	52	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	10.93	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	32	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.	GW23/1004	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	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	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B.C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	5.61	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.068	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	4.38	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 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	4.6	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	< 0.01	mg/lit	0.05	APHA 3120 B

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### TEST REPORT

Report No.	GW23/1004	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/2223/082	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/2207005	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/2023/02/89	20/06/2023	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/23/1005	Report Date	26/06/2023	
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 20/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			23.9	40
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	PTB L0 Water Fountain			
Sampling Details	PTB L0 Water Fountain Sample	Date of Collection	20/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/06/2023	
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.05	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	12.05	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	40	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	9.93	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	24	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.	GW23/1005	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	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 <sup>-</sup>	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	4.01	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	3.41	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 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	4.1	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	< 0.01	mg/lit	0.05	APHA 3120 B

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## TEST REPORT

Report No.	GW/23/1005	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernern, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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.

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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	GLEQ/pH/01	-	In house Calibration	
02.	Turbidity Meter	GLEQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GLEQ/BAL/03	AVI/2207023	01/07/2022	30/06/2023
04.	Hot Air Oven	GLEQ/O/01	AVI/2207012	01/07/2022	30/06/2023
05.	U V Spectrophotometer	GLEQ/UV/01	AAS/GLPL/C/ 2223/082	15/10/2022	14/10/2023
06.	ICP – OES	GLEQ/ICP/01	-	In house Calibration	
07.	Microbiological Incubator (37 °C)	GLEQ/I-01	AVI/2207005	01/07/2022	30/06/2023
08.	Microbiological Incubator (44.5 °C)	GLEQ/I-03	AVI/2207016	01/07/2022	30/06/2023
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/ 2023/02/89	20/06/2023	15/02/2024
10.	Autoclave	GLEQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GLEQ/WB/01	AVV/2207017	01/07/2022	30/06/2023



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel.: (022) 2577 7069 / 2577 7070 / 2065 0091 • +91 93213 12367

### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1006	Report Date	26/06/2023	
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 20/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			23.9	40
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Aircraft Filling Point (Apron)			
Sampling Details	Aircraft Filling Point (Apron)	Date of Collection	20/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/06/2023	
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.06	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	8.03	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	37	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	7.95	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	0.05	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.	GW23/1006	Report Date	28/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	28/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.009	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	IS 3025
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	2.40	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.072	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	3.41	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 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	3.9	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	< 0.01	mg/lit	0.05	APHA 3120 B

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## TEST REPORT

Report No.	GW23/1006	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E. Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/ 2223/082	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/ 2023/02/89	20/06/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11.	Water Bath	GL/EQ/WB/01	AVV/2207017	01/07/2022	30/06/2023



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1007	Report Date	26/06/2023	
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 20/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			23.9	40
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Retail Outlet (Idli.com)			
Sampling Details	Retail Outlet (Idli.com-L2)	Date of Collection	20/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/06/2023	
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.03	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	10.04	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	39	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl <sup>-</sup>	8.94	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub> <sup>2-</sup>	1.00	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	22	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/23/1007	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.011	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F-
17	Phenolic Compound	< 0.001	mg/lit	0.001	IS 3025
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN- D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	4.01	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.050	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	2.92	mg/lit	30.0	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 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	< 0.01	mg/lit	0.05	APHA 3120 B

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### TEST REPORT

Report No.	GW23/1007	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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/2223/082	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	TECHVAL/2023/02/89	20/06/2023	15/02/2024
10	Autoclave	GL/EQ/A/01	AVI/2207004	01/07/2022	30/06/2023
11	Water Bath	GL/EQ/WB/01	AVV/2207017	01/07/2022	30/06/2023



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1008		Report Date	26/06/2023
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	Environmental Condition of Lab	Temp °C	Humidity %
	20/06/2023		23.9	40
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Admin Building First Floor			
Sampling Details	Admin Building Water Dispenser	Date of Collection	20/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/06/2023	
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.09	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	16.06	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	44	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	6.95	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	28	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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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

Report No.	GW/23/1008	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.021	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	IS 3025
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	4.81	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.053	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	3.89	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	< 0.0006	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	5.0	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	0.034	mg/lit	0.05	APHA 3111 B

For GADARK LAB PVT. LTD.

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# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

LAB: H-54, Additional M.J.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 - 63.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

Report No.	GW/23/1008	Report Date	26/06/2023
Order / Reference	As Per Dated 20/06/2023	Sample Received on	20/06/2023
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - G

End

For GADARK LAB PVT. LTD.

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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.

### 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/ 2223/082	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/ 2023/02/89	20/06/2023	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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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1009	Report Date	26/06/2023	
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 20/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			31.7	70
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	20/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/06/2023	
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

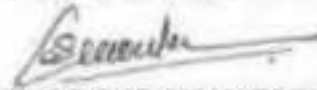
Sr. No.	Parameters	Result	Unit	Method
1	pH	6.89	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	1022	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	350	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	89	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	8	mg/lit	APHA 5520 B
6	Ammonia	78.21	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	95.95	mg/lit	APHA 4500-Norg

### Microbiological Parameters:

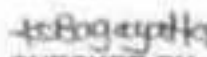
Sr. No.	Parameters	Result	Unit	Method
8	Fecal Coliform at 44.5°C for 24 hrs	> 1600	MPN Index/100ml	APHA 9221 E

End

For GADARK LAB PVT. LTD.

  
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**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/2207008	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	25/05/2023	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

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GWIK/23/0050		Report Date	26/06/2023
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 20/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			31.7	70
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	20/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	20/06/2023	
Analysis Started On	20/06/2023	Analysis Completed On	26/06/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	7.08	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	43	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)	17	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)	8.85	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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### 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/2207005	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	25/05/2023	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 / 2685 0091 + +91 93213 12367

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1035	Report Date	04/07/2023	
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 28/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.8	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Inlet Storm Water Sample			
Sampling Details	OWS Inlet	Date of Collection	28/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	28/06/2023	
Analysis Started On	28/06/2023	Analysis Completed On	04/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.61	-	APHA 4500 H <sup>+</sup>
2	Turbidity	51.4	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	61	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	8	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	44	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	22	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.077	mg/lit	APHA 3111 B
9	Iron (Fe)	0.080	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	---	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPLC /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	---	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No	GW/23/1037	Report Date	04/07/2023	
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 28/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.8	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Outlet Storm Water Sample			
Sampling Details	OWS Outlet	Date of Collection	28/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	28/06/2023	
Analysis Started On	28/06/2023	Analysis Completed On	04/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.4	-	APHA 4500 H <sup>+</sup>
2	Turbidity	21.09	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	15	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	5	mg/lit	IS 3025 (Part 4): 1993
5	Total Suspended Solids (TSS)	15	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	21	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.073	mg/lit	APHA 3111 B
9	Iron (Fe)	0.073	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l  
End

For GADARK LAB PVT. LTD.

**AUTHORISED 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	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	---	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPL/C /2223/063	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	---	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1032	Report Date	04/07/2023	
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 28/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.8	82
Sampling Plan	GLPL/QF/7 3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS 4 A Storm Water Sample			
Sampling Details	Storm Water LS 4 A	Date of Collection	28/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	28/06/2023	
Analysis Started On	28/06/2023	Analysis Completed On	04/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.07	-	APHA 4500 H <sup>+</sup>
2	Turbidity	95.2	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	38	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	9	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	71	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	62	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.019	mg/lit	APHA 3111 B
9	Iron (Fe)	0.070	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

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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	AV/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AV/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AV/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	-	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	-	Inhouse	Inhouse



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### TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1033	Report Date	04/07/2023	
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 28/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.8	82
Sampling Plan	GLPL/QF/7 3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS 3 Storm Water Sample			
Sampling Details	Storm Water LS 3	Date of Collection	28/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	28/06/2023	
Analysis Started On	28/06/2023	Analysis Completed On	04/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.59	-	APHA 4500 H <sup>+</sup>
2	Turbidity	94.8	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	15	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	5	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	62	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	98	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.103	mg/lit	APHA 3111 B
9	Iron (Fe)	< 0.049	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

  
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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.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



# 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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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1034	Report Date	04/07/2023	
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 28/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.8	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS I Storm Water Sample			
Sampling Details	Storm Water LS 1	Date of Collection	28/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	28/06/2023	
Analysis Started On	28/06/2023	Analysis Completed On	04/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.72	-	APHA 4500 H <sup>+</sup>
2	Turbidity	77.0	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	46	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	9	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	58	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	55	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.054	mg/lit	APHA 3111 B
9	Iron (Fe)	0.101	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOO Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1035	Report Date	04/07/2023	
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 28/06/2023	Environmental Condition of Lab	Temp °C 28.8	Humidity % 82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall 2 Storm Water Sample			
Sampling Details	Air Side Outfall 2	Date of Collection	28/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	28/06/2023	
Analysis Started On	28/06/2023	Analysis Completed On	04/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.5	-	APHA 4500 H*
2	Turbidity	93	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	19	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	6	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	72	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	36	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.065	mg/lit	APHA 3111 B
9	Iron (Fe)	0.075	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

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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	AVV2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPLC/2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1038	Report Date	04/07/2023	
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 28/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.8	82
Sampling Plan	GLPL/QF/7 3/05	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall - 3 Storm Water Sample			
Sampling Details	Air Side Outfall - 3	Date of Collection	28/06/2023	
Sample Collected by	GLPL Representative	Sample Received On	28/06/2023	
Analysis Started On	28/06/2023	Analysis Completed On	04/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.2	-	APHA 4500 H <sup>+</sup>
2	Turbidity	93	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	15	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	4	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	84	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	30	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.050	mg/lit	APHA 3111 B
9	Iron (Fe)	0.081	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

AUTHORISED 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	GL/EQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPL/C /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	03/08/2023		
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	July 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	90
Average Wind Speed (km/hr)	58	Average Wind direction (Deg)	310
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	03.07.2023	GA/23/1718	32.5	48.07	8.61	< 6.0	< 9.0	0.38	122.2	0.06	< 1.0
2	06.07.2023	GA/23/1729	30.3	51.97	11.02	< 6.0	< 9.0	0.36	120.7	0.04	< 1.0
3	10.07.2023	GA/23/1744	21.3	48.60	9.56	< 6.0	< 9.0	0.39	133.9	0.07	< 1.0
4	13.07.2023	GA/23/1767	19.9	41.75	12.06	< 6.0	< 9.0	0.46	134.9	0.06	< 1.0
5	17.07.2023	GA/23/1790	18.8	38.51	10.19	< 6.0	< 9.0	0.34	110.5	0.03	< 1.0
6	20.07.2023	GA/23/1803	16.6	31.06	10.73	< 6.0	< 9.0	0.40	109.7	0.02	< 1.0
7	24.07.2023	GA/23/1814	15.3	43.33	13.56	< 6.0	< 9.0	0.36	118.3	0.04	< 1.0
8	27.07.2023	GA/23/1825	25.7	47.43	11.98	< 6.0	< 9.0	0.26	125.2	0.03	< 1.0
9	31.07.2023	GA/23/1836	36.4	57.26	14.43	< 6.0	< 9.0	0.41	119.3	0.04	< 1.0
NAAQS LIMITS *			--	100	60	60	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 XXIII) 2006	EPA Method 18

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

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
(SACHIN B. GAONKAR)



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

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/08/2023		
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	July 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Shemecheadyan, Goa State (G-A2)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	88
Average Wind Speed (km/hr)	62.5	Average Wind direction (Deg)	321
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	03.07.2023	GA/23/1717	19.2	38.34	11.48	<6.0	<9.0	0.86	134.3	0.04	<1.0
2	06.07.2023	GA/23/1728	17.7	46.11	15.01	<6.0	<9.0	0.21	103.5	0.03	<1.0
3	10.07.2023	GA/23/1743	15.9	39.14	13.88	<6.0	<9.0	0.59	134.8	0.05	<1.0
4	13.07.2023	GA/23/1766	14.1	44.73	12.02	<6.0	<9.0	0.42	139.4	0.07	<1.0
5	17.07.2023	GA/23/1789	12.6	39.51	9.77	<6.0	<9.0	0.52	103.7	0.03	<1.0
6	20.07.2023	GA/23/1802	10.1	35.06	9.52	<6.0	<9.0	0.43	115.7	0.05	<1.0
7	24.07.2023	GA/23/1813	11.8	38.21	11.99	<6.0	<9.0	0.99	136.4	0.05	<1.0
8	27.07.2023	GA/23/1824	22.1	44.66	10.98	<6.0	<9.0	0.62	130.0	0.04	<1.0
9	31.07.2023	GA/23/1835	32.5	56.50	12.85	<6.0	<9.0	0.45	116.6	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 3182 (Part 4)	IS 3182 (Part XXII) 2008	USEPA FEM, 40 CFR Part 50, Appendix L, 2014-2016	IS 3182 (Part II) 2001	IS 3182 (Part VI) 2008	IS 3182 (Part X) 1999	GC Method	IS 3182 (Part XXX) 2004	EPA Method 15

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
(SACHIN B. GAONKAR)



  
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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. 936-DTA-2020	18/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 476-A-23	07/01/2023	07/01/2024
Gaseous 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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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/08/2023		
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/QF77.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	July 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	92
Average Wind Speed (km/hr)	65	Average Wind direction (Deg)	292
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	03.07.2023	GA/23/1710	68.3	47.48	13.64	< 6.0	< 9.0	0.79	125.1	0.005	< 1.0
2	06.07.2023	GA/23/1721	59.3	46.55	15.14	< 6.0	< 9.0	0.68	136.8	0.01	< 1.0
3	10.07.2023	GA/23/1736	46.9	44.09	11.60	< 6.0	< 9.0	0.50	124.6	0.03	< 1.0
4	13.07.2023	GA/23/1759	36.5	41.92	12.48	< 6.0	< 9.0	0.64	126.9	0.04	< 1.0
5	17.07.2023	GA/23/1782	33.4	40.23	9.86	< 6.0	< 9.0	0.44	129.2	0.03	< 1.0
6	20.07.2023	GA/23/1795	30.8	36.55	9.02	< 6.0	< 9.0	0.71	125.7	0.02	< 1.0
7	24.07.2023	GA/23/1806	28.0	41.14	10.85	< 6.0	< 9.0	0.50	110.3	0.04	< 1.0
8	27.07.2023	GA/23/1817	30.9	50.37	11.27	< 6.0	< 9.0	0.40	117.3	0.05	< 1.0
	31.07.2023	GA/23/1828	36.4	59.88	13.14	< 6.0	< 9.0	0.57	125.4	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 XXII) 2006	USEPA FED. 40 CFR Part 50, Appendix-L 2014-2018	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2009	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  
[SACHIN B. GAONKAR]



  
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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. 847-DTJ-2019	08/10/2022	08/10/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	19/02/2023	18/02/2024
Gaseous Sampler Sr. No. 6896-DTC-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 7089 / 2577 7070 / 2085 0091 • +91 93213 12367

## TEST REPORT

### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/05/2023		
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	July 2023		

### AMBIENT AIR LOCATION

Location of Ambient Air Station	Purva Casarvarnem - Goa State (G-A4)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	90
Average Wind Speed (km/hr)	68	Average Wind direction (Deg)	288
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	03.07.2023	GA/23/1711	38.0	38.45	12.10	< 6.0	< 9.0	0.82	141.4	0.11	< 1.0
2	06.07.2023	GA/23/1722	31.9	43.12	11.02	< 6.0	< 9.0	0.37	112.4	0.02	< 1.0
3	10.07.2023	GA/23/1737	22.2	37.96	10.81	< 6.0	< 9.0	0.23	119.6	0.06	< 1.0
4	13.07.2023	GA/23/1760	20.2	40.86	7.65	< 6.0	< 9.0	0.41	115.4	0.04	< 1.0
5	17.07.2023	GA/23/1783	18.8	36.12	11.73	< 6.0	< 9.0	0.53	114.3	0.02	< 1.0
6	20.07.2023	GA/23/1796	17.6	32.96	6.45	< 6.0	< 9.0	0.37	120.3	0.03	< 1.0
7	24.07.2023	GA/23/1807	15.7	36.54	8.36	< 6.0	< 9.0	0.71	125.2	0.02	< 1.0
8	27.07.2023	GA/23/1818	18.6	45.46	10.10	< 6.0	< 9.0	0.22	120.1	0.02	< 1.0
9	31.07.2023	GA/23/1829	25.6	53.37	11.68	< 6.0	< 9.0	0.77	127.7	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) 2006	USEPA FEM, 40 CFR Part 50, Appendix L 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part K) 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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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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. 335-DTK-2015	17/02/2023	16/02/2024
Respirable Dust Sampler Sr. No. 2832-DTB-2020	17/02/2023	16/02/2024
Gaseous 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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Tel.: (022) 2577 7069 / 2577 7070 / 2065 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/08/2023		
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	July 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	92
Average Wind Speed (km/hr)	60.3	Average Wind direction (Deg)	302
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	03.07.2023	GA/23/1712	22.6	36.93	8.15	<6.0	<9.0	0.73	116.6	0.01	<1.0
2	06.07.2023	GA/23/1723	19.6	31.55	8.77	<6.0	<9.0	0.54	126.1	0.04	<1.0
3	10.07.2023	GA/23/1738	16.6	37.80	9.98	<6.0	<9.0	0.38	123.5	0.06	<1.0
4	13.07.2023	GA/23/1761	15.0	35.82	8.44	<6.0	<9.0	0.80	140.8	0.03	<1.0
5	17.07.2023	GA/23/1784	11.8	34.20	6.36	<6.0	<9.0	0.45	113.3	0.03	<1.0
6	20.07.2023	GA/23/1797	10.8	29.97	8.90	<6.0	<9.0	0.54	115.9	0.05	<1.0
7	24.07.2023	GA/23/1808	8.9	27.59	6.90	<6.0	<9.0	0.75	128.4	0.01	<1.0
8	27.07.2023	GA/23/1819	11.8	40.34	7.82	<6.0	<9.0	0.35	124.2	0.05	<1.0
9	31.07.2023	GA/23/1830	9.4	33.31	6.78	<6.0	<9.0	0.55	114.1	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 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 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	16/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 2841-DTB-2020	19/02/2023	18/02/2024
Gaseous Sampler Sr. No. 6904-DTB-2020	16/02/2023	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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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • •01 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/08/2023		
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	July 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	91
Average Wind Speed (km/hr)	61	Average Wind direction (Deg)	301
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	03.07.2023	GA/23/1715	23.2	53.33	14.97	< 6.0	< 9.0	0.85	138.9	0.005	< 1.0
2	06.07.2023	GA/23/1726	20.5	45.36	11.93	< 6.0	< 9.0	0.31	117.8	0.02	< 1.0
3	10.07.2023	GA/23/1741	18.7	41.27	9.81	< 6.0	< 9.0	0.52	105.8	0.02	< 1.0
4	13.07.2023	GA/23/1764	17.8	40.68	9.98	< 6.0	< 9.0	0.35	125.2	0.04	< 1.0
5	17.07.2023	GA/23/1787	15.2	34.86	9.19	< 6.0	< 9.0	0.59	127.2	0.03	< 1.0
6	20.07.2023	GA/23/1800	12.7	32.08	10.81	< 6.0	< 9.0	0.56	131.3	0.06	< 1.0
7	24.07.2023	GA/23/1811	10.6	37.60	9.07	< 6.0	< 9.0	0.49	131.8	0.03	< 1.0
8	27.07.2023	GA/23/1822	19.9	53.04	12.60	< 6.0	< 9.0	0.50	115.1	0.05	< 1.0
9	31.07.2023	GA/23/1833	28.0	56.05	10.31	< 6.0	< 9.0	0.53	104.1	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 3182 (Part 4)	IS 3182 (Part XXII) 2006	USEPA-FEM, 40 CFR Part 32, Appendix-L, 2014-2018	IS 3182 (Part 5) 2001	IS 3182 (Part VI) 2006	IS 3182 (Part X) 1999	GC Method	IS 3182 (Part XXII) 2004	EPA Method 15

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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. 935-DTA-2015	18/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2023	15/05/2024
Gaseous Sampler Sr. No. 262-D-22	16/05/2023	15/05/2024
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	03/08/2023		
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	July 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	89
Average Wind Speed (km/hr)	53.5	Average Wind direction (Deg)	271
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	03.07.2023	GA/23/1713	21.4	45.73	8.73	< 6.0	< 9.0	0.65	102.8	0.01	< 1.0
2	06.07.2023	GA/23/1724	18.7	36.45	9.36	< 6.0	< 9.0	0.33	109.4	0.002	< 1.0
3	10.07.2023	GA/23/1739	16.1	38.42	8.48	< 6.0	< 9.0	0.46	129.2	0.02	< 1.0
4	13.07.2023	GA/23/1762	13.7	44.60	9.31	< 6.0	< 9.0	0.54	125.0	0.04	< 1.0
5	17.07.2023	GA/23/1785	11.3	37.01	10.27	< 6.0	< 9.0	0.38	115.8	0.03	< 1.0
6	20.07.2023	GA/23/1798	9.4	32.07	7.94	< 6.0	< 9.0	0.75	134.2	0.05	< 1.0
7	24.07.2023	GA/23/1809	11.4	34.56	8.82	< 6.0	< 9.0	0.61	112.3	0.03	< 1.0
8	27.07.2023	GA/23/1820	18.9	49.37	10.48	< 6.0	< 9.0	0.45	110.2	0.04	< 1.0
9	31.07.2023	GA/23/1831	22.8	50.41	9.11	< 6.0	< 9.0	0.70	133.4	0.046	< 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 42 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.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	16/02/2024
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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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/08/2023		
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	July 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Dingane - Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	89
Average Wind Speed (km/hr)	58.8	Average Wind direction (Deg)	322
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	03.07.2023	GA/23/1716	12.1	42.29	10.15	<6.0	<9.0	0.58	129.5	0.08	<1.0
2	06.07.2023	GA/23/1727	9.9	38.41	8.19	<6.0	<9.0	0.22	103.9	0.03	<1.0
3	10.07.2023	GA/23/1742	7.8	37.47	7.28	<6.0	<9.0	0.29	111.0	0.01	<1.0
4	13.07.2023	GA/23/1765	8.5	31.90	9.48	<6.0	<9.0	0.35	122.2	0.03	<1.0
5	17.07.2023	GA/23/1788	6.3	27.50	7.78	<6.0	<9.0	1.01	141.6	0.01	<1.0
6	20.07.2023	GA/23/1801	5.1	26.22	8.11	<6.0	<9.0	0.29	107.5	0.02	<1.0
7	24.07.2023	GA/23/1812	7.0	24.57	7.94	<6.0	<9.0	0.59	127.9	0.06	<1.0
	27.07.2023	GA/23/1823	10.5	28.36	9.61	<6.0	<9.0	0.28	125.1	0.04	<1.0
9	31.07.2023	GA/23/1834	8.3	26.45	8.19	<6.0	<9.0	0.82	143.6	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 3182 (Part 4)	IS 3182 (Part XXII) 2006	USEPA FEM, 40 CFR Part 50, Appendix L 2014-2018	IS 3182 (Part II) 2001	IS 3182 (Part V) 2006	IS 3182 (Part X) 1999	GC Method	IS 3182 (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.

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[SACHIN B. GAONKAR]



  
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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. 1264-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



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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OFF: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 53.  
Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/08/2023		
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	July 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	93
Average Wind Speed (km/hr)	40.1	Average Wind direction (Deg)	258
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	03.07.2023	GA/23/1714	9.5	33.08	11.89	< 6.0	< 9.0	0.74	114.4	0.06	< 1.0
2	06.07.2023	GA/23/1725	7.9	30.60	8.11	< 6.0	< 9.0	0.30	104.4	0.02	< 1.0
3	10.07.2023	GA/23/1740	6.4	33.13	7.24	< 6.0	< 9.0	0.22	108.8	0.07	< 1.0
4	13.07.2023	GA/23/1763	7.9	29.60	5.99	< 6.0	< 9.0	0.45	124.6	0.04	< 1.0
5	17.07.2023	GA/23/1786	6.3	27.59	7.65	< 6.0	< 9.0	0.89	136.2	0.03	< 1.0
6	20.07.2023	GA/23/1799	5.4	28.15	6.07	< 6.0	< 9.0	0.53	121.6	0.02	< 1.0
7	24.07.2023	GA/23/1810	6.4	30.52	7.65	< 6.0	< 9.0	0.81	130.4	0.04	< 1.0
8	27.07.2023	GA/23/1821	11.5	30.05	6.24	< 6.0	< 9.0	0.56	120.2	0.04	< 1.0
9	31.07.2023	GA/23/1832	15.8	27.44	7.32	< 6.0	< 9.0	0.64	111.3	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 XXII) 2006	USEPA FEM, 40 CFR Part 51, Appendix L, 2014-2016	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXX) 2004	EPA Method 18

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

##### Note :

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- Samples will be preserved for a period 15 days from the delivery of Test Report.
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[SACHIN B. GAONKAR]



  
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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. 942-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 477-A-23	07/01/2023	07/01/2024
Gaseous Sampler Sr. No. 470-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

NOISE LEVEL MONITORING REPORT													
Date of Issue		03/08/2023											
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)				
						Leq	Lmax	L90	Leq	Lmax	L90		
1	11.07.2023	GA/23/1755	G-N1	I	Mopa Boundary	34.8	90.7	59.3	35.0	74.7	49.8		
2	11.07.2023	GA/23/1756	G-N2	I	Shemochadvan	35.9	103.4	60.8	30.0	93.8	49.7		
3	08.07.2023	GA/23/1734	G-N3	C	Nagzar	30.8	81.3	49.5	30.5	72.1	46.7		
4	08.07.2023	GA/23/1735	G-N4	R	Purna Casuarina	30.2	83.4	53.8	30.6	68.3	43.9		
5	12.07.2023	GA/23/1758	G-N5	R	Charatel	30.3	79.9	49.5	30.1	66.8	39.3		
6	14.07.2023	GA/23/1768	G-N6	R	Khajne Amare Pansodem	31.6	70.5	52.1	30.5	67.3	42.4		
7	12.07.2023	GA/23/1757	G-N7	R	Warkhand	35.4	80.9	51.8	31.1	59.9	42.5		
8	15.07.2023	GA/23/1776	G-N8	C	Rajvil Wada Toxom	30.2	106.4	58.8	30.2	80.2	48.9		
9	14.07.2023	GA/23/1769	G-N9	C	Village Panchayat Tamborem - Mopa - Ujran	30.5	93.9	52.4	30.8	71.9	48.9		
10	15.07.2023	GA/23/1775	M-N1	R	Santata	30.4	70.8	52.8	30.5	68.3	41.3		
11	07.07.2023	GA/23/1730	M-N2	R	Dirigane	30.3	82.1	53.7	30.3	61.9	43.3		
12	07.07.2023	GA/23/1731	M-N3	R	Nertande	30.5	79.6	52.0	30.3	59.3	42.8		
<b>I - Industrial Zone, C - Commercial Zone, R - Residential Zone</b>													
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 is reckoned in between 5:00 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 relative 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.													
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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.													
 AUTHORIZED SIGNATORY [SACHIN B. GAONKAR]								 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	16/05/2023	16/05/2024

<b>Equipment Name</b>	<b>Calibrated On</b>	<b>Calibration Due Date</b>
Noise Level Meter Sr. No. 546176	23/06/2023	23/06/2024



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No	GW23/1183		Report Date	20/07/2023
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	Environmental Condition of Lab	Temp °C	Humidity %
	15/07/2023		24.0	50
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	15/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	15/07/2023	
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

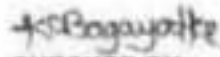
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	6.49	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	4.06	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	13	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	3.03	mg/lit	250.00	APHA 4500 Cl-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	0.05	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

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## TEST REPORT

Report No.	GW23/1183	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		


### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	< 0.01	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	1.60	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	0.49	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.053	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	0.61	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	< 0.01	mg/lit	0.05	APHA 3120 B

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# GADARK LAB PVT. LTD.

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### TEST REPORT

Report No	GW/23/1183	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E. Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/08/2023	28/08/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/08/2023	28/08/2024
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/2207008	29/08/2023	28/08/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/08/2023	28/08/2024
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	15/07/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/08/2023	28/08/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/08/2023	28/08/2024



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1187		Report Date	20/07/2023
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	Environmental Condition of Lab	Temp °C	Humidity %
	15/07/2023		24.0	50
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	International Departure Water Fountain L2			
Sampling Details	International Departure Water Fountain L2 Water Sample	Date of Collection	15/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	15/07/2023	
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.30	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	14.19	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	39	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl <sup>-</sup>	10.10	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub> <sup>2-</sup>	1.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	24	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.	GW23/1187	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	< 0.01	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B.C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	6.41	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	1.95	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.015	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	2.0	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	< 0.01	mg/lit	0.05	APHA 3120 B

For GADARK LAB PVT. LTD.

  
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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.  
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/23/1187	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
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	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - G

End

For GADARK LAB PVT. LTD.

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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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LFR/01	TECH/VAL/20 23/02/89	15/07/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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

### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1186	Report Date	20/07/2023	
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 15/07/2023	Environmental Condition of Lab	Temp °C 24.0	Humidity % 50
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	International Arrival Water Fountain L1			
Sampling Details	International Arrival Water Fountain L1 Sample	Date of Collection	15/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	15/07/2023	
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.22	-	6.5 - 8.5	APHA 4500 H*
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	10.14	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	35	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	9.09	mg/lit	250.00	APHA 4500 Cl-B
9	Sulphate as SO <sub>4</sub>	1.25	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	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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# GADARK LAB PVT. LTD.

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

### TEST REPORT

Report No.	GW/23/1186	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	< 0.01	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B.C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	5.61	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	1.46	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.051	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	2.2	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	< 0.01	mg/lit	0.05	APHA 3120 B

For GADARK LAB PVT. LTD.

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# GADARK LAB PVT. LTD.

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

### TEST REPORT

Report No.	GW/23/1186	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 °C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	15/07/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1185	Report Date	20/07/2023	
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 15/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.0	50
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Admin Building Ground Floor			
Sampling Details	Admin Building Water Fountain	Date of Collection	15/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	15/07/2023	
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.11	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	18.25	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	80	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	10.10	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	4.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	38	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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[SACHIN B. GAONKAR]



  
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# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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## TEST REPORT

Report No.	GW/23/1185	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	< 0.01	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530 - B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	9.62	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.082	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	3.41	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.036	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	3.6	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	< 0.01	mg/lit	0.05	APHA 3120 B

For GADARK LAB PVT. LTD.

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# GADARK LAB PVT. LTD.

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### TEST REPORT

Report No.	GW/23/1185	Report Date	20/07/2023
Order / Reference	As Per Dated 15/07/2023	Sample Received on	15/07/2023
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - G

End

For GADARK LAB PVT. LTD.

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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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	15/07/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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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/23/1184	Report Date	20/07/2023	
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 15/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.2	97
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	15/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	15/07/2023	
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

#### Chemical Testing:

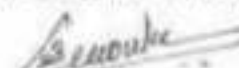
Sr. No.	Parameters	Result	Unit	Method
1	pH	7.08	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	1007	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	333	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	68	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	5	mg/lit	APHA 5520 B
6	Ammonia	60.85	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	82.69	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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	29/06/2023	28/06/2024
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
07.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	25/05/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024



# 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 - 63.  
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1169	Report Date	20/07/2023	
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 15/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.2	97
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	15/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	15/07/2023	
Analysis Started On	15/07/2023	Analysis Completed On	20/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	7.71	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	36	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)	15	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	4.03	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	7.95	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

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	29/06/2023	28/06/2024
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
07.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	25/05/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024



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

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1119	Report Date	11/07/2023	
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 06/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.0	88
Sampling Plan	GLPL/QF/7.3/08	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Inlet Storm Water Sample			
Sampling Details	OWS Inlet	Date of Collection	06/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	06/07/2023	
Analysis Started On	06/07/2023	Analysis Completed On	11/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Sampling & Analysis Method
1	pH	7.25	-	APHA 4500 H*
2	Turbidity	31.9	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	25	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	8	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	35	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	32	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.107	mg/lit	APHA 3111 B
9	Iron (Fe)	0.068	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

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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	28/06/2023	28/06/2024
03.	COD Digester	GL/eq/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/eq/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/eq/Turb/01	-	Inhouse	Inhouse
06.	Gas Chromatograph	GL/eq/GC/03	AAS/GLCPL/C/2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/eq/AAS/01	-	Inhouse	Inhouse



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1120	Report Date	11/07/2023	
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 06/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.0	88
Sampling Plan	GLPL/QF/7.3/05	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Outlet Storm Water Sample			
Sampling Details	OWS Outlet	Date of Collection	06/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	06/07/2023	
Analysis Started On	06/07/2023	Analysis Completed On	11/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	


### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Sampling & Analysis Method
1	pH	7.89	-	APHA 4500 H <sup>+</sup>
2	Turbidity	14.4	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	17	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	6	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	10	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	30	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.067	mg/lit	APHA 3111 B
9	Iron (Fe)	0.116	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	--	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPL/C/2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	--	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1121	Report Date	11/07/2023	
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 06/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.0	88
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall 2 Storm Water Sample			
Sampling Details	Air Side Outfall 2	Date of Collection	06/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	06/07/2023	
Analysis Started On	06/07/2023	Analysis Completed On	11/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	6.97	-	APHA 4500 H <sup>+</sup>
2	Turbidity	57.5	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	42	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	10	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	52	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	20	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.063	mg/lit	APHA 3111 B
9	Iron (Fe)	0.088	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

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[SACHIN B. GAONKAR]



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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	AVV/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPLIC /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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Tel. : (022) 2577 7669 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1122		Report Date	11/07/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 06/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.0	88
Sampling Plan	GLPUQF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS 3 Storm Water Sample			
Sampling Details	Storm Water LS 3	Date of Collection	06/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	06/07/2023	
Analysis Started On	06/07/2023	Analysis Completed On	11/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.81	-	APHA 4500 H <sup>+</sup>
2	Turbidity	75.3	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	33	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	11	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	23	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	53	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.048	mg/lit	APHA 3111 B
9	Iron (Fe)	0.099	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1123	Report Date	11/07/2023	
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 06/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.0	88
Sampling Plan	GLPUQF/7 3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS 4 A Storm Water Sample			
Sampling Details	Storm Water LS 4 A	Date of Collection	06/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	06/07/2023	
Analysis Started On	06/07/2023	Analysis Completed On	11/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.66	-	APHA 4500 H <sup>+</sup>
2	Turbidity	77.3	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	50	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	15	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	44	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	35	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.029	mg/lit	APHA 3111 B
9	Iron (Fe)	0.188	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No	GW23/1124	Report Date	11/07/2023	
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 06/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.0	88
Sampling Plan	GLPUQF/7 3/05	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall - 3 Storm Water Sample			
Sampling Details	Air Side Outfall - 3	Date of Collection	06/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	06/07/2023	
Analysis Started On	06/07/2023	Analysis Completed On	11/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.64	-	APHA 4500 H <sup>+</sup>
2	Turbidity	85.4	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	8	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	3	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	57	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	22	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.064	mg/lit	APHA 3111 B
9	Iron (Fe)	0.064	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

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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	29/06/2023	28/06/2024
03.	COD Digester	GL/eq/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/eq/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/eq/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/eq/GC/03	AAS/GLCPLC/2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/eq/AAS/01	—	Inhouse	Inhouse



# 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/23/1125	Report Date	11/07/2023	
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 06/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			28.0	68
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS - I Storm Water Sample			
Sampling Details	Storm Water LS - I	Date of Collection	06/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	06/07/2023	
Analysis Started On	06/07/2023	Analysis Completed On	11/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.01	-	APHA 4500 H <sup>+</sup>
2	Turbidity	92.9	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	133	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	40	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	187	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	42	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.056	mg/lit	APHA 3111 B
9	Iron (Fe)	< 0.049	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nepheometer	GL/EQ/Turb/01	---	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	---	Inhouse	Inhouse



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### TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1223	Report Date	26/07/2023	
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 21/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			27.8	99
Sampling Plan	GLPUQF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Inlet			
Sampling Details	OWS Inlet Storm Water Sample	Date of Collection	21/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	21/07/2023	
Analysis Started On	21/07/2023	Analysis Completed On	26/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.65	-	APHA 4500 H <sup>+</sup>
2	Turbidity	22.4	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	56	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	6	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	18	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	23	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.051	mg/lit	APHA 3111 B
9	Iron (Fe)	0.090	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\*- Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l  
End

For GADARK LAB PVT. LTD.

  
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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPLC /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1224	Report Date	26/07/2023	
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 21/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			27.8	99
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Outlet			
Sampling Details	OWS Outlet Storm Water Sample	Date of Collection	21/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	21/07/2023	
Analysis Started On	21/07/2023	Analysis Completed On	26/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.04	-	APHA 4500 H <sup>+</sup>
2	Turbidity	17.2	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	8	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	< 2.0	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	12	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	22	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.037	mg/lit	APHA 3111 B
9	Iron (Fe)	0.061	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l  
End

For GADARK LAB PVT. LTD.

  
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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPL/C /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1225	Report Date	26/07/2023	
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pemem, Mopa, North Goa - 403512			
Order / Reference	As Per Dated 21/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			27.8	99
Sampling Plan	GLPUQF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall 2			
Sampling Details	Air Side Outfall 2 Storm Water Sample	Date of Collection	21/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	21/07/2023	
Analysis Started On	21/07/2023	Analysis Completed On	26/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	


### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.01	-	APHA 4500 H*
2	Turbidity	35.5	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	64	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	10	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	26	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	34	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.042	mg/lit	APHA 3111 B
9	Iron (Fe)	0.083	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

  
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[SACHIN B. GAONKAR]



  
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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPLIC /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1226	Report Date	26/07/2023	
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 21/07/2023	Environmental Condition of Lab	Temp °C 27.8	Humidity % 99
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Storm Water LS 3			
Sampling Details	LS 3 Storm Water Sample	Date of Collection	21/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	21/07/2023	
Analysis Started On	21/07/2023	Analysis Completed On	26/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.50	-	APHA 4500 H*
2	Turbidity	55.5	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	32	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	10	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	44	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	44	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.054	mg/lit	APHA 3111 B
9	Iron (Fe)	< 0.049	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

**AUTHORISED SIGNATORY**  
**[SACHIN B. GAONKAR]**



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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	29/06/2023	28/06/2024
03.	COD Digester	GL/eq/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/eq/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/eq/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/eq/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1227	Report Date	26/07/2023	
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 21/07/2023	Environmental Condition of Lab	Temp °C 27.8	Humidity % 99
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Storm Water LS 4 A			
Sampling Details	LS 4 A Storm Water Sample	Date of Collection	21/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	21/07/2023	
Analysis Started On	21/07/2023	Analysis Completed On	26/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.99	-	APHA 4500 H <sup>+</sup>
2	Turbidity	33.0	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	16	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	< 2.0	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	28	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	51	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.062	mg/lit	APHA 3111 B
9	Iron (Fe)	0.063	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1228		Report Date	26/07/2023
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 21/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			27.6	99
Sampling Plan	GLPU/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall - 3			
Sampling Details	Air Side Outfall - 3 Storm Water Sample	Date of Collection	21/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	21/07/2023	
Analysis Started On	21/07/2023	Analysis Completed On	26/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.30	-	APHA 4500 H*
2	Turbidity	36.9	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	24	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	4	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	26	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	39	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.080	mg/lit	APHA 3111 B
9	Iron (Fe)	0.063	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPL/C/2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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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

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Tel.: (022) 2577 7069 / 2577 7070 / 2685 0091 • +91 93213 12367

### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1229	Report Date	26/07/2023	
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 21/07/2023	Environmental Condition of Lab	Temp °C	Humidity %
			27.8	98
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS - I Storm Water Sample			
Sampling Details	Storm Water LS - I	Date of Collection	21/07/2023	
Sample Collected by	GLPL Representative	Sample Received On	21/07/2023	
Analysis Started On	21/07/2023	Analysis Completed On	26/07/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	5.91	-	APHA 4500 H <sup>+</sup>
2	Turbidity	33.5	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	24	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	7	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	32	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	206	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.052	mg/lit	APHA 3111 B
9	Iron (Fe)	0.084	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

**AUTHORISED SIGNATORY**  
**[SACHIN B. GAONKAR]**



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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.

**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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	---	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	---	Inhouse	Inhouse



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## TEST REPORT

### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	04/09/2023		
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	August 2023		

### AMBIENT AIR LOCATION

Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	31.0	Average Humidity (%)	87
Average Wind Speed (km/hr)	62	Average Wind direction (Deg)	305
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	03.08.2023	GA/23/1888	34.18	59.47	17.34	< 6.0	< 9.0	0.49	119.9	0.08	< 1.0
2	07.08.2023	GA/23/1933	32.94	54.13	13.60	< 6.0	< 9.0	0.35	104.4	0.05	< 1.0
3	10.08.2023	GA/23/1964	42.9	64.07	14.01	< 6.0	< 9.0	0.31	110.4	0.06	< 1.0
4	14.08.2023	GA/23/1977	46.2	60.89	12.43	< 6.0	< 9.0	0.39	120.1	0.06	< 1.0
5	17.08.2023	GA/23/1995	43.3	52.01	11.31	< 6.0	< 9.0	0.56	126.0	0.05	< 1.0
6	21.08.2023	GA/23/2014	49.2	53.57	13.43	< 6.0	< 9.0	0.47	116.2	0.06	< 1.0
7	24.08.2023	GA/23/2044	51.9	55.57	11.85	< 6.0	< 9.0	0.41	106.6	0.04	< 1.0
8	28.08.2023	GA/23/2096	59.2	59.44	10.89	< 6.0	< 9.0	0.95	135.7	0.03	< 1.0
9	31.08.2023	GA/23/2111	56.3	55.44	12.48	< 6.0	< 9.0	0.65	125.7	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 XXII) 2006	IS 5182 (Part XXIV) 2008	IS 5182 (Part III) 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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- For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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
Gaseous 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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Tel.: (022) 2577 7069 / 2577 7070 / 2065 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	04/09/2023		
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	August 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Shemecheadvan Goa State (G-A2)		
Average Ambient Temperature (°C)	31	Average Humidity (%)	62
Average Wind Speed (km/hr)	60.2	Average Wind direction (Deg)	316
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	03.08.2023	GA/23/1667	28.37	51.33	11.60	< 6.0	< 9.0	0.61	117.6	0.06	< 1.0
2	07.08.2023	GA/23/1932	25.12	48.41	9.44	< 6.0	< 9.0	0.59	131.8	0.04	< 1.0
3	10.08.2023	GA/23/1963	38.7	65.65	14.22	< 6.0	< 9.0	0.46	118.4	0.04	< 1.0
4	14.08.2023	GA/23/1976	42.5	55.70	13.47	< 6.0	< 9.0	0.28	115.0	0.07	< 1.0
5	17.08.2023	GA/23/1994	37.8	52.25	14.06	< 6.0	< 9.0	0.39	105.2	0.03	< 1.0
6	21.08.2023	GA/23/2013	52.4	54.19	11.23	< 6.0	< 9.0	0.36	122.7	0.04	< 1.0
7	24.08.2023	GA/23/2043	53.3	57.20	13.93	< 6.0	< 9.0	0.45	125.8	0.02	< 1.0
8	28.08.2023	GA/23/2095	61.7	60.43	14.51	< 6.0	< 9.0	0.37	112.9	0.03	< 1.0
9	31.08.2023	GA/23/2110	60.1	63.01	15.68	< 6.0	< 9.0	0.85	130.8	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 3182 (Part 4)	IS 3182 (Part XXII) 2006	IS 3182 (Part XXIV) 2006	IS 3182 (Part V) 2001	IS 3182 (Part VI) 2009	IS 3182 (Part X) 1999	GC Method	IS 3182 (Part XXI) 2004	EPA Method 16

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For GADARK LAB PVT. LTD.



AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]

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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. 936-DTA-2020	18/02/2023	17/02/2024
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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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	04/09/2023		
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/7.3/05	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	August 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Nagzar – Goa State (G-A3)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	86
Average Wind Speed (km/hr)	60	Average Wind direction (Deg)	288
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	03.08.2023	GA/23/1880	37.5	54.77	18.92	< 6.0	< 9.0	0.47	123.1	0.03	< 1.0
2	07.08.2023	GA/23/1925	39.45	58.70	16.88	< 6.0	< 9.0	0.99	142.9	0.06	< 1.0
3	10.08.2023	GA/23/1956	46.4	71.15	14.01	< 6.0	< 9.0	0.76	128.3	0.06	< 1.0
4	14.08.2023	GA/23/1969	49.3	64.30	11.02	< 6.0	< 9.0	0.50	110.2	0.05	< 1.0
5	17.08.2023	GA/23/1987	38.5	52.60	10.44	< 6.0	< 9.0	0.45	120.0	0.06	< 1.0
6	21.08.2023	GA/23/2006	49.7	60.02	13.06	< 6.0	< 9.0	0.57	111.7	0.02	< 1.0
7	24.08.2023	GA/23/2036	53.0	64.07	16.67	< 6.0	< 9.0	0.27	122.6	0.05	< 1.0
8	28.08.2023	GA/23/2086	59.4	65.96	14.43	< 6.0	< 9.0	0.55	123.7	0.04	< 1.0
	31.08.2023	GA/23/2103	70.0	60.33	16.63	< 6.0	< 9.0	0.38	111.5	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>	ppm	µg/m <sup>3</sup>	ppm
<b>METHOD</b>			IS 5182 (Part 4)	IS 5182 (Part XXX) 2006	IS 5182 (Part XXX) 2006	IS 5182 (Part R) 2001	IS 5182 (Part VS) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXX) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

**AUTHORISED SIGNATORY**  
[SACHIN B. GAONKAR]



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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. 847-DTJ-2019	08/10/2022	08/10/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	19/02/2023	18/02/2024
Gaseous Sampler Sr. No. 6896-DTC-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	04/09/2023		
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	August 2023		

AMBIENT AIR LOCATION			
Location of Ambient Air Station	Purva Casarvarem - Goa State (G-A4)		
Average Ambient Temperature (°C)	31	Average Humidity (%)	84
Average Wind Speed (km/hr)	70	Average Wind direction (Deg)	290
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	03.08.2023	GA/23/1881	23.7	58.89	14.72	< 6.0	< 9.0	0.71	141.2	0.04	< 1.0
2	07.08.2023	GA/23/1926	27.35	55.07	12.93	< 6.0	< 9.0	0.45	110.4	0.02	< 1.0
3	10.08.2023	GA/23/1957	28.0	62.98	12.43	< 6.0	< 9.0	0.36	115.2	0.07	< 1.0
4	14.08.2023	GA/23/1970	31.6	56.26	13.14	< 6.0	< 9.0	0.33	120.1	0.07	< 1.0
5	17.08.2023	GA/23/1988	22.2	46.78	9.65	< 6.0	< 9.0	0.33	130.0	0.06	< 1.0
6	21.08.2023	GA/23/2007	31.0	57.55	10.19	< 6.0	< 9.0	0.70	127.2	0.07	< 1.0
7	24.08.2023	GA/23/2037	35.2	60.71	11.81	< 6.0	< 9.0	0.68	128.7	0.05	< 1.0
	28.08.2023	GA/23/2089	41.4	58.37	12.06	< 6.0	< 9.0	0.28	106.4	0.03	< 1.0
9	31.08.2023	GA/23/2104	38.7	50.22	13.22	< 6.0	< 9.0	0.23	102.6	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 XXIV) 2006	IS 5182 (Part XXIV) 2006	IS 5182 (Part 8) 2001	IS 5182 (Part V) 2006	IS 5182 (Part X) 1989	GC Method	IS 5182 (Part XXXI) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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
Gaseous 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	04/09/2023		
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	GLPLQDF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	August 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	90
Average Wind Speed (km/hr)	62.5	Average Wind direction (Deg)	312
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	03.08.2023	GA/23/1882	13.8	31.56	7.03	< 6.0	< 9.0	0.42	115.1	0.03	< 1.0
2	07.08.2023	GA/23/1927	11.56	34.46	6.20	< 6.0	< 9.0	0.36	115.9	0.04	< 1.0
3	10.08.2023	GA/23/1958	11.7	43.84	8.48	< 6.0	< 9.0	0.30	107.5	0.06	< 1.0
4	14.08.2023	GA/23/1971	13.7	33.65	7.89	< 6.0	< 9.0	0.56	135.0	0.07	< 1.0
5	17.08.2023	GA/23/1989	7.6	30.16	5.49	< 6.0	< 9.0	0.28	115.0	0.05	< 1.0
6	21.08.2023	GA/23/2008	9.4	33.30	8.57	< 6.0	< 9.0	0.63	117.1	0.03	< 1.0
7	24.08.2023	GA/23/2038	12.0	37.24	9.86	< 6.0	< 9.0	0.43	118.8	0.05	< 1.0
8	28.08.2023	GA/23/2090	10.8	37.25	10.10	< 6.0	< 9.0	0.40	118.6	0.03	< 1.0
9	31.08.2023	GA/23/2105	9.4	32.65	9.02	< 6.0	< 9.0	0.65	124.9	0.06	< 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	IS 5182 (Part XXIV) 2006	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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6. 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**  
[SACHIN B. GAONKAR]



**CHECKED BY**

**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



# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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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

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/09/2023		
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	GLPLQF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	August 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A6)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	90
Average Wind Speed (km/hr)	65	Average Wind direction (Deg)	305
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	03.08.2023	GA/23/1885	24.88	53.94	13.85	< 6.0	< 9.0	0.76	129.7	0.05	< 1.0
2	07.08.2023	GA/23/1930	22.09	47.78	10.77	< 6.0	< 9.0	0.83	137.8	0.05	< 1.0
3	10.08.2023	GA/23/1961	30.9	63.69	12.64	< 6.0	< 9.0	0.50	130.7	0.06	< 1.0
4	14.08.2023	GA/23/1974	35.0	53.04	10.19	< 6.0	< 9.0	0.78	126.3	0.05	< 1.0
5	17.08.2023	GA/23/1992	25.5	55.24	12.39	< 6.0	< 9.0	0.78	110.1	0.05	< 1.0
6	21.08.2023	GA/23/2011	38.3	46.88	13.72	< 6.0	< 9.0	0.41	107.3	0.07	< 1.0
7	24.08.2023	GA/23/2041	40.7	52.84	10.35	< 6.0	< 9.0	0.47	115.2	0.03	< 1.0
8	28.08.2023	GA/23/2093	42.3	48.98	11.60	< 6.0	< 9.0	0.84	137.2	0.04	< 1.0
9	31.08.2023	GA/23/2108	38.8	45.98	13.76	< 6.0	< 9.0	0.81	135.6	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 XXXI) 2006	IS 5182 (Part XXXV) 2008	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXXI) 2006	EPA Method 16

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

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



CHECKED BY



CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Ambient Instrument No. 6	Calibrated On	Calibration Due Date
Fine Particulate Sampler S. No. 935-DTA-2015	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2023	15/05/2024
Gaseous Sampler Sr. No. 262-D-22	16/05/2023	15/05/2024
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 / 2685 0091 • +91 93213 12367

### TEST REPORT

AMBIENT AIR QUALITY MONITORING REPORT			
Report Date	04/09/2023		
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	August 2023		
AMBIENT AIR LOCATION			
Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	81
Average Wind Speed (km/hr)	56.4	Average Wind direction (Deg)	258
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	03.08.2023	GA/23/1883	25.6	53.50	12.89	< 6.0	< 9.0	0.23	104.7	0.03	< 1.0
2	07.08.2023	GA/23/1928	22.40	47.60	9.86	< 6.0	< 9.0	0.23	107.6	0.03	< 1.0
3	10.08.2023	GA/23/1959	25.7	64.81	10.98	< 6.0	< 9.0	0.50	136.3	0.05	< 1.0
4	14.08.2023	GA/23/1972	35.6	49.83	11.39	< 6.0	< 9.0	0.67	130.0	0.06	< 1.0
5	17.08.2023	GA/23/1990	23.1	44.07	10.23	< 6.0	< 9.0	0.50	125.0	0.06	< 1.0
6	21.08.2023	GA/23/2009	26.4	46.95	11.98	< 6.0	< 9.0	0.58	118.4	0.06	< 1.0
7	24.08.2023	GA/23/2039	27.7	52.94	12.64	< 6.0	< 9.0	0.63	120.9	0.05	< 1.0
8	28.08.2023	GA/23/2091	29.0	60.09	10.94	< 6.0	< 9.0	0.49	119.4	0.04	< 1.0
9	31.08.2023	GA/23/2106	30.8	54.75	10.77	< 6.0	< 9.0	0.49	123.4	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) 2006	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXX) 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**  
**[SACHIN B. GAONKAR]**



**CHECKED BY**

**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	04/09/2023		
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/OF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	August 2023		

### AMBIENT AIR LOCATION

Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	92
Average Wind Speed (km/hr)	54.3	Average Wind direction (Deg)	311
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	03.08.2023	GA/23/1886	9.28	31.40	7.86	< 6.0	< 9.0	0.66	124.7	0.06	< 1.0
2	07.08.2023	GA/23/1931	10.01	26.51	7.49	< 6.0	< 9.0	0.30	114.3	0.04	< 1.0
3	10.08.2023	GA/23/1962	10.5	29.43	11.60	< 6.0	< 9.0	0.48	112.4	0.04	< 1.0
4	14.08.2023	GA/23/1975	8.9	31.33	9.56	< 6.0	< 9.0	0.72	125.0	0.07	< 1.0
5	17.08.2023	GA/23/1993	7.0	27.88	8.03	< 6.0	< 9.0	0.73	125.2	0.05	< 1.0
6	21.08.2023	GA/23/2012	9.0	34.17	10.44	< 6.0	< 9.0	0.87	137.4	0.05	< 1.0
7	24.08.2023	GA/23/2042	10.3	37.69	9.61	< 6.0	< 9.0	0.35	121.6	0.06	< 1.0
8	28.08.2023	GA/23/2094	11.6	34.51	9.90	< 6.0	< 9.0	0.39	118.9	0.03	< 1.0
9	31.08.2023	GA/23/2109	10.4	29.74	9.11	< 6.0	< 9.0	0.51	128.2	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 XXII) 2006	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2006	EPA Method 1E

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]

  
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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
Gaseoue 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	04/09/2023		
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/7.3/05	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	August 2023		
<b>AMBIENT AIR LOCATION</b>			
Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	90
Average Wind Speed (km/hr)	50.1	Average Wind direction (Deg)	262
Latitude	N 15°46'11.7"	Longitude	E 73°53'47.0"
Instrument Used	FPS (APM - 550)	RDS (APM - 400)	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	03.08.2023	GA/23/1884	11.0	29.29	9.98	< 6.0	< 9.0	0.78	130.4	0.04	< 1.0
2	07.08.2023	GA/23/1929	11.83	31.41	8.86	< 6.0	< 9.0	0.63	140.0	0.05	< 1.0
3	10.08.2023	GA/23/1960	19.1	30.27	9.86	< 6.0	< 9.0	0.34	119.8	0.09	< 1.0
4	14.08.2023	GA/23/1973	16.0	27.64	7.81	< 6.0	< 9.0	0.56	115.1	0.07	< 1.0
5	17.08.2023	GA/23/1991	14.4	22.73	8.48	< 6.0	< 9.0	0.67	135.0	0.06	< 1.0
6	21.08.2023	GA/23/2010	11.5	31.23	6.86	< 6.0	< 9.0	0.49	108.8	0.06	< 1.0
7	24.08.2023	GA/23/2040	10.0	28.13	8.40	< 6.0	< 9.0	0.53	125.5	0.04	< 1.0
8	28.08.2023	GA/23/2092	9.1	31.56	7.81	< 6.0	< 9.0	0.57	131.9	0.04	< 1.0
9	31.08.2023	GA/23/2107	7.8	28.28	6.45	< 6.0	< 9.0	0.45	120.6	0.06	< 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	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2000	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  
[SACHIN B. GAONKAR]



  
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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. 942-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 477-A-23	07/01/2023	07/01/2024
Gaseous Sampler Sr. No. 470-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

NOISE LEVEL MONITORING REPORT											
Date of Issue		04/09/2023									
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>eq</sub>	L <sub>90</sub>	L <sub>max</sub>	L <sub>eq</sub>	L <sub>90</sub>
1	15.08.2023	GA/23/1978	G-N1	I	Mopa Boundary	33.4	58.4	60.9	34.8	74.0	48.5
2	06.08.2023	GA/23/1924	G-N2	I	Shemochadvan	33.6	60.1	52.5	38.6	72.5	44.2
3	06.08.2023	GA/23/1923	G-N3	C	Nagzar	30.2	58.8	61.4	31.3	69.4	52.0
4	04.08.2023	GA/23/1899	G-N4	R	Purna Casarvarnem	30.9	64.9	53.8	30.4	58.3	43.9
5	10.08.2023	GA/23/1968	G-N5	R	Chandel	30.4	64.7	53.6	30.1	62.2	43.1
6	08.08.2023	GA/23/1934	G-N6	R	Khajne Amers Porcodten	30.7	75.7	52.2	30.1	63.0	42.7
7	10.08.2023	GA/23/1965	G-N7	R	Warkhand	31.6	68.3	51.2	30.2	59.3	43.2
8	18.08.2023	GA/23/2003	G-N8	C	Rajul Wada Torxem	30.7	63.8	48.4	30.4	62.0	39.6
9	18.08.2023	GA/23/2004	G-N9	C	Village Parchayant Tamborem - Mopa - Ugvem	30.8	64.3	57.6	30.1	73.6	50.9
10	08.08.2023	GA/23/1935	M-N1	R	Salarda	30.8	77.3	52.5	30.6	59.3	43.5
11	01.08.2023	GA/23/1844	M-N2	R	Dingane	30.6	62.0	52.4	30.1	70.7	37.8
12	01.08.2023	GA/23/1845	M-N3	R	Netarde	30.8	69.9	53.2	30.1	58.2	41.8
<b>I - Industrial Zone, C - Commercial Zone, R - Residential Zone</b>											
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 is reckoned in between 8:00 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.											
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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Equipment Name	Calibrated On	Calibration Due Date
Noise Level Meter Sr. No. 554067	16/05/2023	16/05/2024

Equipment Name	Calibrated On	Calibration Due Date
Noise Level Meter Sr. No. 546176	23/06/2023	23/06/2024



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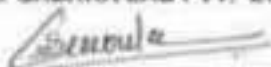
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1443		Report Date	22/08/2023
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 17/06/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.1	50
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	17/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/08/2023	
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	6.82	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	6.07	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	24	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl <sup>-</sup>	7.10	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub> <sup>2-</sup>	0.50	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	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.	GW23/1443	Report Date	22/08/2023
Order / Reference	As Per Dated 17/08/2023	Sample Received on	18/08/2023
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

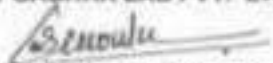
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.004	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F-
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN- D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	1.80	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	1.46	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.021	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	4.4	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	0.12	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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## TEST REPORT

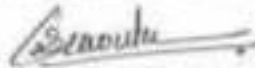
Report No.	GW23/1443	Report Date	22/08/2023
Order / Reference	As Per Dated 17/08/2023	Sample Received on	18/08/2023
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

### Microbiological Parameters:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - G

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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.	Turbidity Meter	GL/EQ/Turb/01	-	In house Calibration	
03.	Analytical Balance	GL/EQ/BAL/03	AVI/2207023	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	17/08/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1444	Report Date	22/08/2023	
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 17/08/2023	Environmental Condition of Lab	Temp °C 24.1	Humidity % 50
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Admin 2 <sup>nd</sup> Floor Pantry ( East Wing)			
Sampling Details	Admin 2 <sup>nd</sup> Floor Pantry ( East Wing) Water Sample	Date of Collection	17/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/08/2023	
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.15	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	50.60	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	52	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	15.22	mg/lit	250.00	APHA 4500 Cl <sup>-</sup> B
9	Sulphate as SO <sub>4</sub>	1.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	24	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/23/1444	Report Date	22/08/2023
Order / Reference	As Per Dated 17/08/2023	Sample Received on	18/08/2023
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.026	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	7.21	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.049	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	1.46	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.015	mg/lit	5.00	APHA 3111 B
31	Sodium as Na	9.4	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	0.13	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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### TEST REPORT


Report No.	GW/23/1444	Report Date	22/08/2023
Order / Reference	As Per Dated 17/08/2023	Sample Received on	18/08/2023
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	17/08/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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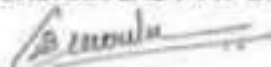
### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1445	Report Date	22/08/2023	
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 17/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.1	50
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Café Gox			
Sampling Details	Café Gox Water Fountain Sample	Date of Collection	17/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/08/2023	
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.34	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	58.69	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	55	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	8.02	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	30	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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[SACHIN B. GAONKAR]



  
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# GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB: H-54, Additional M.I.D.C. Kudat, Taluka - Kudat, 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 / 2065 0091 • +91 93213 12367

## TEST REPORT

Report No.	GW/23/1445	Report Date	22/08/2023
Order / Reference	As Per Dated 17/08/2023	Sample Received on	18/08/2023
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

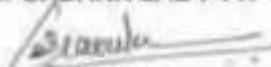
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	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	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	8.02	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	0.059	mg/lit	1.00	APHA 3111 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	2.44	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.011	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	0.84	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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## TEST REPORT


Report No.	GW/23/1445	Report Date	22/08/2023
Order / Reference	As Per Dated 17/08/2023	Sample Received on	18/08/2023
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023
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	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	17/08/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/K/23/0070	Report Date	22/08/2023	
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 17/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.2	88
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	17/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/08/2023	
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:


Sr. No.	Parameters	Result	Unit	Method
1	pH	6.88	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	995	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	317	mg/lit	IS 3025 (Part 44): 1993
4	Total Suspended Solids (TSS)	72	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	6	mg/lit	APHA 5520 B
6	Ammonia	51.24	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	62.16	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	AV/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AV/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AV/2207014	29/06/2023	28/06/2024
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AV/2207006	29/06/2023	28/06/2024
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AV/2207016	29/06/2023	28/06/2024
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	25/05/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AV/2207004	29/06/2023	28/06/2024



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/K/23/0071	Report Date	22/08/2023	
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 17/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.2	88
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	17/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	18/08/2023	
Analysis Started On	18/08/2023	Analysis Completed On	22/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:


Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	7.54	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	32	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)	13	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)	6.44	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

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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	29/06/2023	28/06/2024
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	25/05/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1475	Report Date	29/08/2023	
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 24/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Inlet			
Sampling Details	OWS Inlet Storm Water Sample	Date of Collection	24/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	25/08/2023	
Analysis Started On	25/08/2023	Analysis Completed On	29/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.16	-	APHA 4500 H <sup>+</sup>
2	Turbidity	13.8	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	32	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	6	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	9	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	28	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.080	mg/lit	APHA 3111 B
9	Iron (Fe)	0.116	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l  
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	GLEQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GLEQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GLEQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GLEQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GLEQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GLEQ/GC/03	AAS/GLCPL/C /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GLEQ/AAS/01	—	Inhouse	Inhouse



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No	GW/23/1478	Report Date	29/08/2023	
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 24/08/2023	Environmental Condition of Lab	Temp °C 29.5	Humidity % 82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Outlet			
Sampling Details	OWS Outlet Storm Water Sample	Date of Collection	24/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	25/08/2023	
Analysis Started On	25/08/2023	Analysis Completed On	29/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.37	-	APHA 4500 H <sup>+</sup>
2	Turbidity	10.2	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	32	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	5	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	5	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	25	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.089	mg/lit	APHA 3111 B
9	Iron (Fe)	0.147	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l  
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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPL/C /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1477	Report Date	29/08/2023	
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 24/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall 2			
Sampling Details	Air Side Outfall 2 Storm Water Sample	Date of Collection	24/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	25/08/2023	
Analysis Started On	25/08/2023	Analysis Completed On	29/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.01	-	APHA 4500 H <sup>+</sup>
2	Turbidity	12.8	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	32	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	7	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	7	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	23	mg/lit	APHA 2540 C
8	Manganese (Mn)	< 0.010	mg/lit	APHA 3111 B
9	Iron (Fe)	< 0.049	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

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02.	Hot Air Oven	GLEQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GLEQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GLEQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GLEQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GLEQ/GC/03	AAS/GLCPL/C /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GLEQ/AAS/01	—	Inhouse	Inhouse



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## TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1478	Report Date	29/08/2023	
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 24/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Storm Water LS - III			
Sampling Details	LS - III Storm Water Sample	Date of Collection	24/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	25/08/2023	
Analysis Started On	25/08/2023	Analysis Completed On	29/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.42	-	APHA 4500 H <sup>+</sup>
2	Turbidity	98.3	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	63	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	8	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	111	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	46	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.047	mg/lit	APHA 3111 B
9	Iron (Fe)	< 0.049	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	GLEQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GLEQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GLEQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GLEQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GLEQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GLEQ/AAS/01	—	Inhouse	Inhouse



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1479	Report Date	29/08/2023	
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 24/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Storm Water LS - IV			
Sampling Details	LS- IV Storm Water Sample	Date of Collection	24/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	25/08/2023	
Analysis Started On	25/08/2023	Analysis Completed On	29/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.70	-	APHA 4500 H <sup>+</sup>
2	Turbidity	68.7	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	16	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	6	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	36	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	58	mg/lit	APHA 2540 C
8	Manganese (Mn)	< 0.010	mg/lit	APHA 3111 B
9	Iron (Fe)	< 0.049	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

  
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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	29/06/2023	28/06/2024
03.	COD Digester	GL/eq/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/eq/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/eq/Turb/01	---	Inhouse	Inhouse
06.	AAS (GBC)	GL/eq/AAS/01	---	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1480	Report Date	29/08/2023	
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 24/08/2023	Environmental Condition of Lab	Temp °C 29.5	Humidity % 82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall - 3			
Sampling Details	Air Side Outfall - 3 Storm Water Sample	Date of Collection	24/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	25/08/2023	
Analysis Started On	25/08/2023	Analysis Completed On	29/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.61	-	APHA 4500 H <sup>+</sup>
2	Turbidity	38.2	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	40	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	7	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	14	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	38	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.021	mg/lit	APHA 3111 B
9	Iron (Fe)	0.183	mg/lit	APHA 3111 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l  
End

For GADARK LAB PVT. LTD.

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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	---	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPLC /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GL/EQ/AAS/01	---	Inhouse	Inhouse



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## TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1461	Report Date	29/08/2023	
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 24/08/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	82
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	LS I Storm Water Sample			
Sampling Details	Storm Water L5 1	Date of Collection	24/08/2023	
Sample Collected by	GLPL Representative	Sample Received On	25/08/2023	
Analysis Started On	25/08/2023	Analysis Completed On	29/08/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	5.67	-	APHA 4500 H <sup>+</sup>
2	Turbidity	41	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	55	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	8	mg/lit	IS 3025 (Part 44): 1993
5	Total Suspended Solids (TSS)	15	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	210	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.086	mg/lit	APHA 3111 B
9	Iron (Fe)	< 0.049	mg/lit	APHA 3111 B

End

For GADARK LAB PVT. LTD.

  
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[SACHIN B. GAONKAR]



  
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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	GLEQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GLEQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GLEQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GLEQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GLEQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GLEQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Mopa Boundry - Goa State (G-A1)		
Average Ambient Temperature (°C)	30.0	Average Humidity (%)	67
Average Wind Speed (km/hr)	62	Average Wind direction (Deg)	322
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	04.09.2023	GA/23/2129	50.4	57.65	11.68	< 6.0	< 9.0	0.41	125.9	0.05	< 1.0
2	07.09.2023	GA/23/2142	39.1	51.28	11.23	< 6.0	< 9.0	0.37	116.2	0.06	< 1.0
3	11.09.2023	GA/23/2172	33.1	44.95	13.43	< 6.0	< 9.0	0.45	108.7	0.04	< 1.0
4	14.09.2023	GA/23/2183	34.5	52.21	14.51	< 6.0	< 9.0	0.59	133.9	0.02	< 1.0
5	18.09.2023	GA/23/2205	33.0	47.05	10.10	< 6.0	< 9.0	0.81	120.8	0.03	< 1.0
6	21.09.2023	GA/23/2216	30.3	50.56	12.85	< 6.0	< 9.0	0.45	111.2	0.05	< 1.0
7	25.09.2023	GA/23/2229	28.3	41.73	10.73	< 6.0	< 9.0	0.42	125.8	0.05	< 1.0
8	28.09.2023	GA/23/2240	26.4	39.16	12.72	< 6.0	< 9.0	0.25	112.4	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 XXX) 2084	IS 5182 (Part XXXV) 2009	IS 5182 (Part 4) 2001	IS 5182 (Part VI) 2005	IS 5182 (Part X) 1999	OC Method	IS 5182 (Part XXX) 2004	EPA Method 18

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

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For GADARK LAB PVT. LTD.

  
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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Ambient Instrument No. B	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
Gaseous 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	03/10/2023		
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	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Shemecheadvan Goa State (G-A2)		
Average Ambient Temperature (°C)	30	Average Humidity (%)	85
Average Wind Speed (km/hr)	68	Average Wind direction (Deg)	338
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	04.09.2023	GA/23/2128	50.3	52.77	13.10	< 6.0	< 9.0	0.38	114.2	0.04	< 1.0
2	07.09.2023	GA/23/2141	37.3	49.86	12.23	< 6.0	< 9.0	0.47	139.8	0.06	< 1.0
3	11.09.2023	GA/23/2171	26.4	45.71	10.89	< 6.0	< 9.0	0.42	120.9	0.04	< 1.0
4	14.09.2023	GA/23/2182	27.5	55.78	13.14	< 6.0	< 9.0	0.40	121.9	0.07	< 1.0
5	18.09.2023	GA/23/2204	25.7	43.84	11.77	< 6.0	< 9.0	0.93	194.6	0.03	< 1.0
6	21.09.2023	GA/23/2215	23.5	40.49	10.56	< 6.0	< 9.0	0.39	81.3	0.03	< 1.0
7	25.09.2023	GA/23/2228	22.0	46.05	11.73	< 6.0	< 9.0	0.45	131.0	0.06	< 1.0
8	28.09.2023	GA/23/2239	21.0	40.94	12.02	< 6.0	< 9.0	0.30	113.7	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	IS 5182 (Part XXIV) 2006	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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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
(SACHIN B. GAONKAR)



  
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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. 936-DTA-2020	16/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 476-A-23	07/01/2023	07/01/2024
Gaseous 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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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Nagzar - Goa State (G-A3)		
Average Ambient Temperature (°C)	29.5	Average Humidity (%)	89
Average Wind Speed (km/hr)	70.2	Average Wind direction (Deg)	302
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	04.09.2023	GA/23/2121	58.4	55.71	14.43	< 6.0	< 9.0	0.74	144.5	0.04	< 1.0
2	07.09.2023	GA/23/2134	42.6	50.62	12.60	< 6.0	< 9.0	0.73	131.5	0.04	< 1.0
3	11.09.2023	GA/23/2164	35.4	62.07	14.22	< 6.0	< 9.0	0.58	120.8	0.04	< 1.0
4	14.09.2023	GA/23/2175	40.6	65.45	13.02	< 6.0	< 9.0	0.23	113.1	0.07	< 1.0
5	18.09.2023	GA/23/2197	35.8	57.89	11.89	< 6.0	< 9.0	0.85	166.9	0.06	< 1.0
6	21.09.2023	GA/23/2208	33.6	52.09	12.23	< 6.0	< 9.0	0.97	104.2	0.06	< 1.0
7	25.09.2023	GA/23/2221	31.0	57.17	11.27	< 6.0	< 9.0	0.76	130.6	0.04	< 1.0
8	28.09.2023	GA/23/2232	29.9	48.16	13.93	< 6.0	< 9.0	0.55	112.9	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 XXII) 2006	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2000	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  
[SACHIN B. GAONKAR]



  
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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. 847-DTJ-2019	08/10/2022	08/10/2023
Respirable Dust Sampler Sr. No. 2842-DTB-2020	19/02/2023	18/02/2024
Gaseous Sampler Sr. No. 6896-DTC-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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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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	GLPI/QF/7.3/06	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Purva Casarvarnem - Goa State (G-A4)		
Average Ambient Temperature (°C)	29.5	Average Humidity (%)	92
Average Wind Speed (km/hr)	76	Average Wind direction (Deg)	300
Latitude	N 15°41'41.9"	Longitude	E 73°50'18.6"
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	04.09.2023	GA/23/2122	31.9	48.10	9.73	< 6.0	< 9.0	0.50	128.5	0.02	< 1.0
2	07.09.2023	GA/23/2135	23.0	44.90	10.31	< 6.0	< 9.0	0.36	122.6	0.06	< 1.0
3	11.09.2023	GA/23/2165	19.5	52.00	11.85	< 6.0	< 9.0	0.51	121.9	0.04	< 1.0
4	14.09.2023	GA/23/2176	21.7	60.03	10.52	< 6.0	< 9.0	0.30	127.1	0.04	< 1.0
5	18.09.2023	GA/23/2198	20.5	60.78	6.49	< 6.0	< 9.0	0.93	150.6	0.04	< 1.0
6	21.09.2023	GA/23/2209	19.4	48.48	9.94	< 6.0	< 9.0	0.37	88.6	0.05	< 1.0
7	25.09.2023	GA/23/2222	18.1	43.49	8.36	< 6.0	< 9.0	0.38	113.3	0.02	< 1.0
8	28.09.2023	GA/23/2233	16.9	39.35	10.81	< 6.0	< 9.0	0.56	124.6	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	IS 5182 (Part XXIV) 2006	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  
[SACHIN B. GAONKAR]



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

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Khajne Amere Porscodem - Goa State (G-A5)		
Average Ambient Temperature (°C)	30.0	Average Humidity (%)	86
Average Wind Speed (km/hr)	70.5	Average Wind direction (Deg)	328
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	04.09.2023	GA/23/2123	7.9	28.98	8.40	< 6.0	< 9.0	0.35	125.5	0.03	< 1.0
2	07.09.2023	GA/23/2136	6.4	23.09	7.36	< 6.0	< 9.0	0.34	123.6	0.06	< 1.0
3	11.09.2023	GA/23/2166	5.9	18.90	5.78	< 6.0	< 9.0	0.83	126.9	0.06	< 1.0
4	14.09.2023	GA/23/2177	8.2	24.94	8.69	< 6.0	< 9.0	0.35	113.6	0.05	< 1.0
5	18.09.2023	GA/23/2199	6.0	22.26	5.70	< 6.0	< 9.0	1.03	178.0	0.02	< 1.0
6	21.09.2023	GA/23/2210	4.5	19.26	7.07	< 6.0	< 9.0	0.68	139.7	0.06	< 1.0
7	25.09.2023	GA/23/2223	3.3	19.62	6.57	< 6.0	< 9.0	0.69	121.4	0.02	< 1.0
8	28.09.2023	GA/23/2234	4.1	22.10	7.28	< 6.0	< 9.0	0.47	122.3	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 XXIII) 2006	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2004	EPA Method 13

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For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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-OTA-2020	18/02/2023	17/02/2024
Respirable Dust Sampler Sr. No. 2841-DTB-2020	19/02/2023	18/02/2024
Gaseous 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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Tel. : (022) 2577 7069 / 2577 7070 / 2085 0061 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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 3/08	Page No.	1 of 1
Sample Collected By	GLPL Representative		
Month of Sampling	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Rajvil Wada Torxem - Goa State (G-A5)		
Average Ambient Temperature (°C)	29.5	Average Humidity (%)	89
Average Wind Speed (km/hr)	68.9	Average Wind direction (Deg)	332
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	04.09.2023	GA/23/2126	28.8	48.49	11.98	< 6.0	< 9.0	0.36	125.3	0.03	< 1.0
2	07.09.2023	GA/23/2139	25.6	44.12	10.81	< 6.0	< 9.0	0.59	132.2	0.06	< 1.0
3	11.09.2023	GA/23/2169	19.4	52.66	11.06	< 6.0	< 9.0	0.88	122.2	0.06	< 1.0
4	14.09.2023	GA/23/2180	24.8	57.24	11.35	< 6.0	< 9.0	0.27	107.0	0.02	< 1.0
5	18.09.2023	GA/23/2202	20.9	45.94	10.15	< 6.0	< 9.0	0.87	185.6	0.02	< 1.0
6	21.09.2023	GA/23/2213	18.7	45.45	11.89	< 6.0	< 9.0	0.65	113.9	0.05	< 1.0
7	25.09.2023	GA/23/2226	17.5	41.02	10.44	< 6.0	< 9.0	0.63	134.7	0.01	< 1.0
8	28.09.2023	GA/23/2237	6.2	33.64	11.60	< 6.0	< 9.0	0.52	126.9	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 XXIII) 2006	IS 5182 (Part XXIV) 2006	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  
[SACHIN B. GAONKAR]



  
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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. 935-DTA-2015	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 192-E-22	16/05/2023	15/05/2024
Gaseous Sampler Sr. No. 262-D-22	16/05/2023	15/05/2024
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 9091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Satarda - Maharashtra State (M-A1)		
Average Ambient Temperature (°C)	30.0	Average Humidity (%)	88
Average Wind Speed (km/hr)	62.2	Average Wind direction (Deg)	298
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	04.09.2023	GA/23/2124	28.2	46.73	10.52	< 6.0	< 9.0	0.47	141.2	0.02	< 1.0
2	07.09.2023	GA/23/2137	26.8	46.45	9.02	< 6.0	< 9.0	0.51	129.4	0.06	< 1.0
3	11.09.2023	GA/23/2167	20.3	44.28	10.73	< 6.0	< 9.0	0.55	118.1	0.07	< 1.0
4	14.09.2023	GA/23/2178	22.0	48.86	9.44	< 6.0	< 9.0	0.38	122.6	0.07	< 1.0
5	16.09.2023	GA/23/2200	20.7	41.31	10.15	< 6.0	< 9.0	0.96	172.8	0.02	< 1.0
6	21.09.2023	GA/23/2211	16.8	35.35	9.94	< 6.0	< 9.0	0.60	123.0	0.03	< 1.0
7	25.09.2023	GA/23/2224	17.5	34.01	7.07	< 6.0	< 9.0	0.35	111.6	0.06	< 1.0
8	28.09.2023	GA/23/2235	16.4	31.99	8.52	< 6.0	< 9.0	0.77	133.3	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 XXIII) 2006	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part A) 1998	GC Method	IS 5182 (Part XXX) 2004	EPA Method 18

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For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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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### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Dingane – Maharashtra State (M-A2)		
Average Ambient Temperature (°C)	30.5	Average Humidity (%)	82
Average Wind Speed (km/hr)	63	Average Wind direction (Deg)	328
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	04.09.2023	GA/23/2127	9.0	28.00	7.11	< 6.0	< 9.0	0.54	138.1	0.02	< 1.0
2	07.09.2023	GA/23/2140	7.9	27.37	8.15	< 6.0	< 9.0	0.40	127.2	0.06	< 1.0
3	11.09.2023	GA/23/2170	6.1	24.50	9.48	< 6.0	< 9.0	0.60	118.5	0.05	< 1.0
4	14.09.2023	GA/23/2181	7.7	21.85	7.44	< 6.0	< 9.0	0.66	129.8	0.05	< 1.0
5	18.09.2023	GA/23/2203	6.9	19.39	5.61	< 6.0	< 9.0	0.74	168.4	0.05	< 1.0
6	21.09.2023	GA/23/2214	5.5	21.18	8.69	< 6.0	< 9.0	0.48	99.7	0.05	< 1.0
7	25.09.2023	GA/23/2227	4.2	19.17	6.65	< 6.0	< 9.0	0.48	129.8	0.05	< 1.0
8	28.09.2023	GA/23/2238	3.0	19.43	8.40	< 6.0	< 9.0	0.24	102.7	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	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXX) 2004	EPA Method 18

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

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For GADARK LAB PVT. LTD.

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[SACHIN B. GAONKAR]



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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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Tel. : (022) 2577 7089 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

#### AMBIENT AIR QUALITY MONITORING REPORT

Report Date	03/10/2023		
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	September 2023		

#### AMBIENT AIR LOCATION

Location of Ambient Air Station	Netarde - Maharashtra State (M-A3)		
Average Ambient Temperature (°C)	30.0	Average Humidity (%)	86
Average Wind Speed (km/hr)	51.1	Average Wind direction (Deg)	267
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	04.09.2023	GA/23/2125	7.0	22.29	8.73	< 6.0	< 9.0	0.46	126.2	0.01	< 1.0
2	07.09.2023	GA/23/2138	5.7	18.81	5.61	< 6.0	< 9.0	0.35	116.6	0.07	< 1.0
3	11.09.2023	GA/23/2168	4.7	17.39	7.86	< 6.0	< 9.0	0.78	134.9	0.01	< 1.0
4	14.09.2023	GA/23/2179	5.5	23.40	6.57	< 6.0	< 9.0	0.45	108.5	0.03	< 1.0
5	18.09.2023	GA/23/2201	4.5	16.16	5.20	< 6.0	< 9.0	0.60	152.6	0.06	< 1.0
6	21.09.2023	GA/23/2212	3.5	20.10	7.66	< 6.0	< 9.0	0.75	132.7	0.04	< 1.0
7	25.09.2023	GA/23/2225	2.4	14.58	5.32	< 6.0	< 9.0	0.59	133.2	0.05	< 1.0
8	28.09.2023	GA/23/2236	2.0	18.19	6.57	< 6.0	< 9.0	0.45	107.0	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 XXII) 2006	IS 5182 (Part XXIV) 2006	IS 5182 (Part II) 2001	IS 5182 (Part VI) 2006	IS 5182 (Part X) 1999	GC Method	IS 5182 (Part XXII) 2006	EPA Method 18

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For GADARK LAB PVT. LTD.

  
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[SACHIN B. GAONKAR]



  
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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. 942-DTA-2020	19/02/2023	18/02/2024
Respirable Dust Sampler Sr. No. 477-A-23	07/01/2023	07/01/2024
Gaseous Sampler Sr. No. 470-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

### NOISE LEVEL MONITORING REPORT

Date of issue	03/10/2023										
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										
<b>AMBIENT AIR NOISE POLLUTION MONITORING</b>											
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	06.09.2023	GA/23/0143	G-N1	I	Mopa Boundary	31.5	77.6	54.2	30.0	63.0	41.2
2	06.09.2023	GA/23/0144	G-N2	I	Shemochrasaven	37.0	85.3	63.9	34.9	64.4	43.1
3	06.09.2023	GA/23/0132	G-N3	C	Nagzar	36.2	87.1	58.6	31.0	75.7	49.7
4	06.09.2023	GA/23/0133	G-N4	R	Purna Casarvamem	30.9	79.6	53.6	30.2	74.6	43.6
5	11.09.2023	GA/23/0173	G-N5	R	Chandol	30.9	85.3	53.9	30.2	71.2	44.0
6	12.08.2023	GA/23/0184	G-N6	R	Khajre Anere Ponscadem	30.5	75.4	44.2	30.1	65.3	38.7
7	11.08.2023	GA/23/0174	G-N7	R	Warehand	30.8	87.1	53.0	30.3	67.4	44.1
8	15.09.2023	GA/23/0188	G-N8	C	Rajul Wada Tourism	30.3	90.9	55.9	30.4	64.8	43.2
9	15.09.2023	GA/23/0189	G-N9	C	Village Panchayat Tamborem - Mopa - Ugum	30.5	75.4	45.9	30.6	62.7	36.0
10	12.09.2023	GA/23/0185	M-N1	R	Sabarda	30.5	77.4	46.2	30.4	67.3	40.7
11	05.09.2023	GA/23/0130	M-N2	R	Dingane	30.7	89.9	53.3	30.2	71.2	43.6
12	05.09.2023	GA/23/0131	M-N3	R	Netante	30.0	82.3	53.4	30.2	61.7	40.3
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 is reckoned in between 06:00 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 relative 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>											
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5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report.											
For <b>GADARK LAB PVT. LTD.</b>											
<b>AUTHORISED SIGNATORY</b> <b>[SACHIN B. GAONKAR]</b>											
				<b>CHECKED BY</b>							

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Equipment Name	Calibrated On	Calibration Due Date
Noise Level Meter Sr. No. 554067	16/05/2023	16/05/2024

Equipment Name	Calibrated On	Calibration Due Date
Noise Level Meter Sr. No. 546176	23/06/2023	23/06/2024



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1629	Report Date	21/09/2023	
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.6	45
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	15/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/09/2023	
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.26	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.3	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	16.13	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	54	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>	0.75	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	22	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/23/1629	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.050	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	7.21	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.01	mg/lit	1.00	APHA 3120 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	0.97	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 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	APHA 3120 B
31	Sodium as Na	3.4	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	1.4	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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### TEST REPORT


Report No.	GW/23/1629	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	25/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	15/09/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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## TEST REPORT

### ANALYSIS REPORT FOR WATER SAMPLE

Report No.	GW23/1630		Report Date	21/09/2023	
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %	
			24.6	45	
Sampling Plan	GLPLUQF/7 3/06	Sampling Procedure No.	APHA 1060		
Sampling Point	PTB L0				
Sampling Details	PTB L0 Water Fountain Sample		Date of Collection	15/09/2023	
Sample Collected by	GLPL Representative		Sample Received On	16/09/2023	
Analysis Started On	16/09/2023		Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle		Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	6.80	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	5.05	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	20	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	0.05	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.	GW23/1630	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

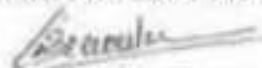
#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	< 0.001	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	1.60	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.01	mg/lit	1.00	APHA 3120 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	0.97	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.017	mg/lit	5.00	APHA 3120 B
31	Sodium as Na	0.86	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	0.96	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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## INDUSTRIAL ANALYSTS & CONSULTANTS

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## TEST REPORT

Report No.	GW/23/1630	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
34	Total Coliform at 37°C for 48 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	APHA 9221 - G

End

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### Note:

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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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPLC/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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	15/09/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1631		Report Date	21/09/2023
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.6	45
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Top's Office			
Sampling Details	Top's Office Dispenser (PTB) Water Sample	Date of Collection	15/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/09/2023	
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	6.79	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.1	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	4.03	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	16	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	9.07	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	0.05	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

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### TEST REPORT

Report No.	GW23/1631	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.004	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	0.60	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.01	mg/lit	1.00	APHA 3120 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	1.60	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.012	mg/lit	5.00	APHA 3120 B
31	Sodium as Na	0.54	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	1.0	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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## TEST REPORT


Report No.	GW23/1631	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPLC/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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	15/09/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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### TEST REPORT

#### ANALYSIS REPORT FOR WATER SAMPLE

Report No.	GW/23/1632		Report Date	21/09/2023	
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 15/09/2023	Environmental Condition of Lab		Temp °C	Humidity %
				24.6	45
Sampling Plan	GLPUQF/7.3/06	Sampling Procedure No.		APHA 1060	
Sampling Point	Admin Ground Floor				
Sampling Details	Admin Ground Floor Fountain Water Sample		Date of Collection	15/09/2023	
Sample Collected by	GLPL Representative		Sample Received On	16/09/2023	
Analysis Started On	16/09/2023		Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle		Sample Quantity	4 lt + 1.25 lt	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.25	-	6.5 - 8.5	APHA 4500 H*
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	14.11	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	56	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	12.09	mg/lit	250.00	APHA 4500 Cl-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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	22	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/23/1632	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.040	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F-
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B,C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN- D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	5.81	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.01	mg/lit	1.00	APHA 3120 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	1.95	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.013	mg/lit	5.00	APHA 3120 B
31	Sodium as Na	2.5	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	1.6	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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### TEST REPORT

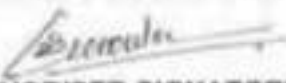
Report No.	GW23/1632	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi 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	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E.Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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/2207005	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	15/09/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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## TEST REPORT


### ANALYSIS REPORT FOR WATER SAMPLE

Report No.	GW/23/1633	Report Date	21/09/2023	
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.6	45
Sampling Plan	GLPL/QF/7 3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Café Gox			
Sampling Details	Café Gox Water Fountain Sample	Date of Collection	15/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/09/2023	
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.32	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.2	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	14.11	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	50	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	14.10	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	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	22	mg/lit	200.00	APHA 2340 C
12	Ammonia	< 0.066	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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[SACHIN B. GAONKAR]



  
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# GADARK LAB PVT. LTD.

## INDUSTRIAL ANALYSTS & CONSULTANTS

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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/23/1633	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.022	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B.C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	7.21	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.01	mg/lit	1.00	APHA 3120 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	0.97	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.015	mg/lit	5.00	APHA 3120 B
31	Sodium as Na	2.3	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	1.4	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

For GADARK LAB PVT. LTD.

  
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# GADARK LAB PVT. LTD.

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### TEST REPORT


Report No	GW/23/1633	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E. Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	15/09/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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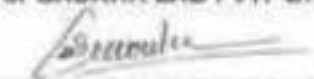
## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1635		Report Date	21/09/2023
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.5	45
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Dog Kennal			
Sampling Details	Dog Kennal Water Fountain (CISF) Sample	Date of Collection	15/09/2023	
Sample Collected by	GLPL Representative		Sample Received On	16/09/2023
Analysis Started On	16/09/2023		Analysis Completed On	21/09/2023
Sample Container	Plastic Carboy + Glass Bottle		Sample Quantity	4 lit + 1.25 lit

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.36	-	6.5 - 8.5	APHA 4500 H <sup>+</sup>
2	Turbidity	0.3	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	12.09	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	52	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>	1.00	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	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

For GADARK LAB PVT. LTD.

  
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### TEST REPORT

Report No.	GW/23/1635	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Requirement (Acceptable Limits as per IS 10500:2012)	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	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B.C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN <sup>-</sup> D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

#### Metal Analysis:

20	Aluminium as Al	0.011	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	6.41	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.01	mg/lit	1.00	APHA 3120 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	0.97	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.012	mg/lit	5.00	APHA 3120 B
31	Sodium as Na	2.1	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	1.2	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

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# GADARK LAB PVT. LTD.

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

## TEST REPORT

Report No.	GW/23/1635	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E. Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECHVAL/20 23/02/89	15/09/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



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## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1636		Report Date	21/09/2023
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			24.6	45
Sampling Plan	GLPUQF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	First Responder			
Sampling Details	First Responder (QRT) ASG Mopa Water Fountain	Date of Collection	15/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/09/2023	
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	4 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
1	pH	7.38	-	6.5 - 8.5	APHA 4500 H*
2	Turbidity	0.3	NTU	1.00	APHA 2130 B
3	Taste	Agreeable	-	Agreeable	APHA 2160 B
4	Colour	< 1.0	Colour Unit	5.0	APHA 2120 B
5	Odour	Agreeable	-	Agreeable	APHA 2150 B
6	Total Alkalinity	14.11	mg/lit	200.00	APHA 2320 B
7	Total Dissolved Solid	54	mg/lit	500.00	APHA 2540 C
8	Chlorides as Cl	12.09	mg/lit	250.00	APHA 4500 Cl-B
9	Sulphate as SO <sub>4</sub>	1.25	mg/lit	200.00	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E
10	Sulphides	< 0.001	mg/lit	0.05	APHA 4500 S <sup>2-</sup> F
11	Total Hardness as CaCO <sub>3</sub>	22	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/23/1636	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
Client Name & Address	GMR Goa International Airport Limited, Administrative Block, Mopa International Airport, Dadachiwadi Road, Nagzar, Taluka Pernem, Mopa, North Goa - 403512		

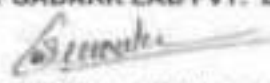
### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Requirement (Acceptable Limits as per IS 10500:2012)	Method
14	Residual Free Chlorine	Nil	mg/lit	0.20	APHA 4500 Cl B
15	Nitrate as NO <sub>3</sub>	0.026	mg/lit	45.00	APHA 4500 NO <sub>3</sub> B
16	Fluoride as F	< 0.001	mg/lit	1.0	APHA 4500 F <sup>-</sup>
17	Phenolic Compound	< 0.001	mg/lit	0.001	APHA 5530-B.C
18	Cyanide	< 0.001	mg/lit	0.05	APHA 4500 CN D
19	Anionic Detergent	< 0.001	mg/lit	0.2	APHA 5540 - C

### Metal Analysis:

20	Aluminium as Al	< 0.03	mg/lit	0.03	APHA 3120 B
21	Arsenic as As	< 0.01	mg/lit	0.01	APHA 3120 B
22	Boron as B	< 0.01	mg/lit	0.50	APHA 4500 B - B
23	Calcium as Ca	7.21	mg/lit	75.00	APHA 3500 Ca B
24	Cadmium as Cd	< 0.002	mg/lit	0.003	APHA 3120 B
25	Iron as Fe	< 0.01	mg/lit	1.00	APHA 3120 B
26	Lead as Pb	< 0.01	mg/lit	0.01	APHA 3120 B
27	Magnesium as Mg	0.97	mg/lit	30.00	APHA 3500 Mg B
28	Chromium as Cr	< 0.01	mg/lit	0.05	APHA 3120 B
29	Mercury as Hg	< 0.001	mg/lit	0.001	IS 3025 (Part 2)
30	Zinc as Zn	0.019	mg/lit	5.00	APHA 3120 B
31	Sodium as Na	2.9	mg/lit	Not Specified	APHA 3500 Na B
32	Potassium as K	1.7	mg/lit	Not Specified	APHA 3500 K B
33	Copper as Cu	< 0.01	mg/lit	0.05	APHA 3120 B

For GADARK LAB PVT. LTD.

  
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[SACHIN B. GAONKAR]



  
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### TEST REPORT


Report No.	GW/23/1636	Report Date	21/09/2023
Order / Reference	As Per Dated 15/09/2023	Sample Received on	16/09/2023
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023
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	Shall not be detectable in any 100 ml sample	APHA 9221 - B
35	E. Coli at 44.5°C for 24 hrs.	Absent	MPN Index/100ml	Shall not be detectable in any 100 ml sample	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	29/06/2023	28/06/2024
04.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
05.	U V Spectrophotometer	GL/EQ/UV/01	AAS/GLPLC/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	29/06/2023	28/06/2024
08.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
09.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/69	15/09/2023	15/02/2024
10.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024
11.	Water Bath	GL/EQ/WB/01	AVI/2207017	29/06/2023	28/06/2024



# 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, Vāhroli (West), Mumbai - 83.

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

## TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW23/1634		Report Date	21/09/2023
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			30.1	76
Sampling Plan	GLPU/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	STP Inlet			
Sampling Details	STP Inlet Water Sample	Date of Collection	15/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/09/2023	
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	8.48	-	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	1832	mg/lit	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	667	mg/lit	IS 3025 (Part 44)
4	Total Suspended Solids (TSS)	98	mg/lit	APHA 2540 D
5	Oil & Grease (O & G)	7	mg/lit	APHA 5520 B
6	Ammonia	93.52	mg/lit	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	102.48	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.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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### Note:

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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.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	29/06/2023	28/06/2024
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	26/05/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GWK/23/0074		Report Date	21/09/2023
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 15/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			30.1	78
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	15/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	16/09/2023	
Analysis Started On	16/09/2023	Analysis Completed On	21/09/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1.25 lit	

#### Chemical Testing:


Sr. No.	Parameters	Result	Unit	Limits	Method
1	pH	7.36	-	5.5 - 9.0	APHA 4500 H <sup>+</sup>
2	Chemical Oxygen Demand (COD)	40	mg/lit	50.00	APHA 5220 B
3	Biochemical Oxygen Demand (27°C day) (BOD)	8	mg/lit	10.00	IS 3025 (Part 44)
4	Total Suspended Solids (TSS)	15	mg/lit	20.00	APHA 2540 D
5	Oil & Grease (O & G)	< 0.1	mg/lit	10.00	APHA 5520 B
6	Ammonia	2.24	mg/lit	5.00	APHA 4500 NH <sub>3</sub> B&C
7	Total Nitrogen (as N)	5.49	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

For GADARK LAB PVT. LTD.

  
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[SACHIN B. GAONKAR]



  
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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Microbiological Incubator (37 ° C)	GL/EQ/I-01	AVI/2207006	29/06/2023	28/06/2024
06.	Microbiological Incubator (44.5 ° C)	GL/EQ/I-03	AVI/2207016	29/06/2023	28/06/2024
07.	Laminar Air Flow	GL/LF/01	TECH/VAL/20 23/02/89	25/05/2023	15/02/2024
08.	Autoclave	GL/EQ/A/01	AVI/2207004	29/06/2023	28/06/2024



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### TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/K/23/0075		Report Date	04/10/2023
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 29/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	78
Sampling Plan	GLPL/QF/7.3/05	Sampling Procedure No.	APHA 1060	
Sampling Point	OWS Inlet			
Sampling Details	OWS Inlet Storm Water Sample	Date of Collection	29/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	30/09/2023	
Analysis Started On	30/09/2023	Analysis Completed On	04/10/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.08	-	APHA 4500 H <sup>+</sup>
2	Turbidity	2.8	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	58	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	6	mg/lit	IS 3025 (Part 44)
5	Total Suspended Solids (TSS)	10	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	48	mg/lit	APHA 2540 C
8	Manganese (Mn)	< 0.01	mg/lit	APHA 3120 B
9	Iron (Fe)	0.025	mg/lit	APHA 3120 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 5440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l  
End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	GLEQ/pH/01	-	In house Calibration	
02	Hot Air Oven	GLEQ/OI/01	AVI/2207012	29/06/2023	28/06/2024
03	COD Digester	GLEQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04	BOD Incubator	GLEQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05	Nephelometer	GLEQ/Turb/01	—	Inhouse	Inhouse
06	Gas Chromatograph	GLEQ/GC/03	AAS/GLCPL/C/2223/083	17/01/2023	16/01/2024
07	AAS (GBC)	GLEQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/K/23/0076		Report Date	04/10/2023
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 29/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	78
Sampling Plan	GLPL/QF/7 3/06	Sampling Procedure No	APHA 1060	
Sampling Point	OWS Outlet			
Sampling Details	OWS Outlet Storm Water Sample	Date of Collection	29/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	30/09/2023	
Analysis Started On	30/09/2023	Analysis Completed On	04/10/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	


#### Chemical Testings:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.32	-	APHA 4500 H <sup>+</sup>
2	Turbidity	1.1	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	23	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	3	mg/lit	IS 3025 (Part 44)
5	Total Suspended Solids (TSS)	8	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	36	mg/lit	APHA 2540 C
8	Manganese (Mn)	< 0.01	mg/lit	APHA 3120 B
9	Iron (Fe)	0.030	mg/lit	APHA 3120 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

  
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(SACHIN B. GAONKAR)



  
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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	GLEQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GLEQ/O/01	AVI/2207012	29/05/2023	28/05/2024
03.	COD Digester	GLEQ/COD/01	AVI/2207010	29/05/2023	28/05/2024
04.	BOD Incubator	GLEQ/I/02	AVI/2207014	29/05/2023	28/05/2024
05.	Nephelometer	GLEQ/Turb/01	---	Inhouse	Inhouse
06.	Gas Chromatograph	GLEQ/GC/03	AAS/GLCPL/C/2223/083	17/01/2023	15/01/2024
07.	AAS (GBC)	GLEQ/AAS/01	---	Inhouse	Inhouse



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### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1672	Report Date	04/10/2023	
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 29/09/2023	Environmental Condition of Lab	Temp °C 29.5	Humidity % 78
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Air Side Outfall 2			
Sampling Details	Air Side Outfall 2 Storm Water Sample	Date of Collection	29/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	30/09/2023	
Analysis Started On	30/09/2023	Analysis Completed On	04/10/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	6.97	-	APHA 4500 H <sup>+</sup>
2	Turbidity	7.8	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	8	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	< 2.0	mg/lit	IS 3025 (Part 44)
5	Total Suspended Solids (TSS)	3	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	10	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.002	mg/lit	APHA 3120 B
9	Iron (Fe)	0.034	mg/lit	APHA 3120 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\* - Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



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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	GLEQ/pH/01	-	In house Calibration	
02.	Hot Air Oven	GLEQ/O/01	AVI/2207012	29/06/2023	28/06/2024
03.	COD Digester	GLEQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GLEQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GLEQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GLEQ/GC/03	AAS/GLCPL/C /2223/083	17/01/2023	16/01/2024
07.	AAS (GBC)	GLEQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1673	Report Date	04/10/2023	
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 29/09/2023	Environmental Condition of Lab	Temp °C 29.5	Humidity % 78
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Storm Water LS - III			
Sampling Details	LS - III Storm Water Sample	Date of Collection	29/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	30/09/2023	
Analysis Started On	30/09/2023	Analysis Completed On	04/10/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.22	-	APHA 4500 H <sup>+</sup>
2	Turbidity	108.5	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	23	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand(27°C day) (BOD)	4	mg/lit	IS 3026 (Part 44)
5	Total Suspended Solids (TSS)	36	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	41	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.002	mg/lit	APHA 3120 B
9	Iron (Fe)	0.010	mg/lit	APHA 3120 B

End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



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### TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1674	Report Date	04/10/2023	
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 29/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	78
Sampling Plan	GLPL/QF/7 3/06	Sampling Procedure No.	APHA 1060	
Sampling Point	Storm Water L5 - IV			
Sampling Details	L5- IV Storm Water Sample	Date of Collection	29/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	30/09/2023	
Analysis Started On	30/09/2023	Analysis Completed On	04/10/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.35	-	APHA 4500 H <sup>+</sup>
2	Turbidity	135.4	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	16	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	< 2.0	mg/lit	IS 3025 (Part 44)
5	Total Suspended Solids (TSS)	56	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	28	mg/lit	APHA 2540 C
8	Manganese (Mn)	1.360	mg/lit	APHA 3120 B
9	Iron (Fe)	0.241	mg/lit	APHA 3120 B

End

For GADARK LAB PVT. LTD,

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
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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	29/05/2023	28/05/2024
03.	COD Digester	GL/EQ/COD/01	AVI/2207010	29/05/2023	28/05/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/05/2023	28/05/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



# 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 7089 / 2577 7070 / 2085 0091 • +91 93213 12367

### TEST REPORT

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1675	Report Date	04/10/2023	
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 29/09/2023	Environmental Condition of Lab	Temp °C 25.5	Humidity % 78
Sampling Plan	GLPL/QF/7.3/06	Sampling Procedure No.	APHA 1050	
Sampling Point	Air Side Outfall - 3			
Sampling Details	Air Side Outfall - 3 Storm Water Sample	Date of Collection	29/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	30/09/2023	
Analysis Started On	30/09/2023	Analysis Completed On	04/10/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	


#### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.32	-	APHA 4500 H <sup>+</sup>
2	Turbidity	67.0	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	31	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	6	mg/lit	IS 3025 (Part 44)
5	Total Suspended Solids (TSS)	18	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	28	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.002	mg/lit	APHA 3120 B
9	Iron (Fe)	< 0.007	mg/lit	APHA 3120 B
10	Polynuclear Aromatic Hydrocarbons (PAH)	BDL*	mg/lit	APHA 6440

BDL\*- Below Detectable Limit for Polynuclear Aromatic Hydrocarbons is 0.001 mg/l

End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
CHECKED BY

#### 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.	Hot Air Oven	GL/EQ/O/01	AVI/2207012	29/05/2023	28/05/2024
03.	COO Digester	GL/EQ/COO/01	AVI/2207010	29/05/2023	28/05/2024
04.	BOD Incubator	GL/EQ/I/02	AVI/2207014	29/05/2023	28/05/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	Gas Chromatograph	GL/EQ/GC/03	AAS/GLCPL/C /2223/082	17/01/2023	18/01/2024
07.	AAS (DSC)	GL/EQ/AAS/01	—	Inhouse	Inhouse



# 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 12857

## TEST REPORT


ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	GW/23/1676		Report Date	04/10/2023
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 29/09/2023	Environmental Condition of Lab	Temp °C	Humidity %
			29.5	78
Sampling Plan	GLPL/QF/7.3/05	Sampling Procedure No.	APHA 1060	
Sampling Point	LS I Storm Water Sample			
Sampling Details	Storm Water LS 1	Date of Collection	29/09/2023	
Sample Collected by	GLPL Representative	Sample Received On	30/09/2023	
Analysis Started On	30/09/2023	Analysis Completed On	04/10/2023	
Sample Container	Plastic Carboy + Glass Bottle	Sample Quantity	5 lit + 1 lit	

### Chemical Testing:

Sr. No.	Parameters	Result	Unit	Method
1	pH	7.18	-	APHA 4500 H <sup>+</sup>
2	Turbidity	108.7	NTU	APHA 2130 B
3	Chemical Oxygen Demand (COD)	23	mg/lit	APHA 5220 B
4	Biochemical Oxygen Demand (27°C day) (BOD)	3	mg/lit	IS 3025 (Part 44)
5	Total Suspended Solids (TSS)	41	mg/lit	APHA 2540 D
6	Oil & Grease (O & G)	< 0.1	mg/lit	APHA 5520 B
7	Total Dissolved Solids 180°C	38	mg/lit	APHA 2540 C
8	Manganese (Mn)	0.002	mg/lit	APHA 3120 B
9	Iron (Fe)	0.011	mg/lit	APHA 3120 B

End

For GADARK LAB PVT. LTD.

  
AUTHORISED SIGNATORY  
[SACHIN B. GAONKAR]



  
CHECKED BY

### 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.	Hot Air Oven	GL/EQ/O/01	AV/2207012	29/06/2023	28/06/2024
03.	COD Digester	GL/EQ/COD/01	AV/2207010	29/06/2023	28/06/2024
04.	BOD Incubator	GL/EQ/M02	AV/2207014	29/06/2023	28/06/2024
05.	Nephelometer	GL/EQ/Turb/01	—	Inhouse	Inhouse
06.	AAS (GBC)	GL/EQ/AAS/01	—	Inhouse	Inhouse

**ANNEXURE – 3**
**ENVIRONMENTAL EXPENDITURE  
DURING PERIOD OF APRIL 2023 TO SEPTEMBER 2023**
*Note: All cost expenditures are in INR Crore.*

<b>S. N.</b>	<b>Particulars</b>	<b>Total EXPENSES during Apr 2023 to Sep 2023 (in INR Crore)</b>
1.	AAQ & Noise Levels Monitoring (in Goa & Maharashtra States)	0.132
2.	Indoor Air Quality Monitoring	0.013
3.	Dust suppression through tankers & chemical dust suppression	0.028
4.	O&M of labour colony STP (225 KLD)	0.080
5.	O&M of labour colony STP (150 KLD)	0.120
6.	Occupational health surveillance of workmen	0.010
7.	Environment Management Cell (EMC) set up	0.590
8.	Hazardous Waste Management	0.0043
9.	Solid Waste Management	0.799
10.	Construction Debris & Scrap Management	0.070
11.	Suction Tankers Operation (Portable toilets at site)	0.294
12.	Environmental Compliance Monitoring by NEERI	0.200
13.	O&M of Aviation Noise Monitoring Terminals	0.060
14.	O&M of 625 KLD Sewage Treatment Plant	0.185
15.	O&M of 550 KLD Water Treatment Plant	0.231
16.	Landscaping & Horticulture	3.540
17.	Storm Water Flow Monitoring System	0.160
18.	Miscellaneous	0.070
	<b>TOTAL</b>	<b>6.586</b>

**RANGANATHAN  
VENKATA  
SHESHAN**

Digitally signed by RANGANATHAN  
VENKATA SHESHAN  
DN: c=IN, o=Personal,  
postalCode=562157, st=Karnataka,  
serialNumber=2C3AC6E293B3C455D0  
89051156AC282D0e74042FFDC0888  
EC08624FB1F9BEA0,  
cn=RANGANATHAN VENKATA  
SHESHAN  
Date: 2023.11.10 14:26:37 +05'30'

**ANNEXURE – 4**
**LIST OF STATUTORY PERMITS / APPROVALS RELATED TO ENVIRONMENT  
OBTAINED DURING APRIL 2023 TO SEPTEMBER 2023**

S.N.	Statutory Permits/Approval	Date		Statutory Authority	Permit enclosed as
		Issued	Validity		
1	Consent to Operate for Airport	13.04.2023	01.08.2027	GSPCB	Appendix-1
2	CTO for Cargo Terminal Building	08.05.2023	09.06.2027	GSPCB	Appendix-2
3	CTO for Taj Sats Building	07.06.2023	06.12.2023	GSPCB	Appendix-3
4	CTO for BPCL Fuel Farm	23.08.2023	27.07.2028	GSPCB	Appendix-4
5	Re-Issue of Aerodrome License (after airport name change)	16.08.2023	25.10.2027	DGCA	Appendix-5

**RANGANATHAN  
VENKATA  
SHESHAN**

Digitally signed by RANGANATHAN  
VENKATA SHESHAN  
DN: c=IN, o=Personal,  
postalCode=562157, st=Karnataka,  
serialNumber=2C9AC68293B3C455  
D0B9D51158AC282D0674042FFDC  
0B999EC98624F81F9BEA0,  
cn=RANGANATHAN VENKATA  
SHESHAN  
Date: 2023.11.10 14:29:19 +05'30'

# 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 ≥ 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*	50	20
		24 hours**	80	80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual*	40	30
		24 hours**	80	80
3.	Particulate Matter (size less than 10 µg) or PM <sub>10</sub> µg/m <sup>3</sup>	Annual*	60	60
		24 hours**	100	100
4.	Particulate Matter (size less than 2.50 µg) or PM <sub>2.5</sub> µg/m <sup>3</sup>	Annual*	40	40
		24 hours**	60	60
5.	Lead (Pb), µg/m <sup>3</sup>	Annual*	0.50	0.50
		24 hours**	1.0	1.0
6.	Carbon Monoxide (CO), mg/m <sup>3</sup>	8 hours**	02	02
		1 hour**	04	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)  
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.goaspqb.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 &amp; 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.

# 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



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/1676359/R00012209

Date: 08/05/2023

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 and 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 AIRPORTS LIMITED - AIR CARGO TERMINAL**  
(Represented by: *Shri. Saurabh Kumar*)  
(Green Category)

**Green Field International Airport, Mopa, Pernem, North Goa**

Located in the area declared under the provisions of the Water Act and 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. The Consent to Operate is valid upto 09/06/2027
2. This Consent to operate is valid for the activity as mentioned below:

Sr. No	Description	Quantity
1.	Handling of Air Cargo	30000 MT/annum

3. **CONDITIONS REQUIRED TO BE COMPLIED UNDER THE WATER ACT:**

- (i) The daily quantity of domestic effluent from the unit shall not exceed 1.8 KLD.
- (ii) **Domestic Effluent treatment and Disposal:-**  
The unit shall treat the domestic effluent in sewage treatment plant of M/s GMR Goa International Airport Limited and shall ensure that there shall be no discharge of waste water within/outside the unit premises.
- (iii) 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 & water body.
- (iv) **Non-Hazardous Solid Waste:**  
All the Solid wastes arising in the unit premises shall be properly classified and disposed off to the satisfaction of the Board as follows:

Sr. no.	Type of segregated solid waste	Quantity	Disposal
1.	Dry/Wet waste (MSW)	60 Kgs/month	To be disposed through Solid waste Management Facility of M/s GMR Goa International Airport Limited.
2.	Waste Packaging Material (Waste corrugated boxes, wooden pellets, plastic, etc.)	20 MT/annum	

- (v) 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

**4. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE AIR ACT:**

- (i) The unit shall maintain and operate air pollution control system of adequate capacity for the following equipments

Sr. No	Name of Equipments/ Installation	No of Installati on	Capacity	SO <sub>2</sub> Kg/Hr	(g/kw-hr)			
					NO <sub>x</sub>	HC	CO	PM
1.	D. G. Set	01	500 KVA	3.6	9.2	1.3	3.5	0.3

- (ii) The unit shall erect the chimney(s) of the following specifications

Sr. No	Chimney attached to	Height
1.	D. G. Set(for 500 KVA)	08 meters

- (iii) The unit shall observe the following standards:-

Sr. No	Type of fuel	Quantity /hr
1.	D. G. Set(for 500 KVA)	50 liters/hr.

- (iv) **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**

- (v) 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.

- (vi) The unit should carry out emission monitoring from the stack once a year from a laboratory recognized by Ministry of Environment and Forest under the Environment Protection Act, 1986 and the result shall be submitted to this Board.

- (vii) The unit 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:

Category of Area/ Zone	Limits in dB (A) Leq	
	Day time	Night time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day time is reckoned between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6 a.m.

**5. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE HAZARDOUS AND OTHER WASTES (MANAGEMENT AND TRANSBOUNDRY 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	0.05 MT/ annum	To recycler registered with SPCB and having valid 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 hotel 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 Wastes (Management and Transboundary Movement) Rules, 2016, as amended thereafter.
- (xi) The occupier shall furnish monthly returns for collection, storage and disposal of hazardous waste through OCMMS systems.
- (xii) The The unit shall put up a display board at prominent location near the main gate 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.
- (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 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 equipments provided for without previous permissions of the Board
- ii. The applicant shall provide facilities for collection of the samples to the Board staff.
- iii. An application in prescribed form along with the prescribed fees for renewal of Consent shall be submitted at least 60- days before the expiry of validity of this Consent. 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 fee.
- 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 permissions (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 Environmental (Protection) (Second Amendment) Rules, 1992.
- viii. The unit shall bear the cost of analysis / monitoring in case of complaints received by the Board/ re inspection due to non compliance 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 as 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 material and C & D waste issued by central Pollution Control Board and are placed on Board website – [www.goaspccb.gov.in](http://www.goaspccb.gov.in)
- 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.

To,  
**M/s. GMR Airports Limited - Air Cargo Terminal**  
*(Represented by: Shri Saurabh Kumar)*  
**Green Field International Airport, 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. 35 Crore**

Cheque no.	Amount	Date
52023	Rs. 581400.00	17/04/2023

**(Dr. Shamila Monteiro)**  
**Member Secretary**  
**For 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.goaspqb.gov.in](http://www.goaspqb.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 &amp; 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.



**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:  
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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/1699063/O00012413

Date: 07/06/2023

Consent to Operate under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorisation under Rule 6(i) of the Hazardous and 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 AND AUTHORISATION** is hereby granted to:

**M/s. TAJ SATS AIR CATERING LIMITED.**  
**(Represented by: Mr. Probal Dey)**  
**(Orange Category)**

**Within the premises of GMR Goa International Airport Limited, Mopa, Pernem - Goa**

Located in the area declared under the provisions of the Water Act, Air Act and Authorization under the provisions of HW (M & T) Rules, 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 for a period of six month from the date of issue of this consent.

2. This Consent to operate and Authorization is valid for the operation of:

Sr. No	Description	Quantity
1.	In-flight Air Catering unit	7000 meals/ day

3. **CONDITIONS REQUIRED TO BE COMPLIED UNDER THE WATER ACT:**

(i) The daily quantity of effluent from the unit (sewage & sullage) shall not exceed **44.8 K.L.D.**

(ii) **Sewage Treatment Plant:**

The unit shall treat domestic effluent in sewage treatment plant (60 KLD capacity) based on Activated sludge process technology consisting of primary treatment comprising of bar screen, oil & grease trap, secondary treatment comprising of aeration tank, settling tank and tertiary treatment comprising of sand filter, carbon filter and chlorination 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	100 mg/l
BOD, 3 days, 27° C	Not to exceed	30 mg/l
COD	Not to exceed	250 mg/l
Oil & Grease	Not to exceed	10mg/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 and flushing. There shall not be any discharge outside the premises.

- (iv) The unit shall provide a proper Oil and Grease Trap for effluent arising from its kitchen and shall have to comply with the 'General Standards for Discharge of Environmental Pollutants Part-A: Effluents' notified under Schedule-VI
- (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 and Forest under the Environment Protection Act, 1986 and rules there under and results shall be submitted regularly to this Board.
- (vi) A good house-keeping shall be maintained within the 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.

(vii) **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.	Dry waste	4.5 MT/month	To be disposed through Board authorized waste collectors.
2.	Wet waste	4.5 MT/month	To be composted through organic waste converter
3.	Used Cooking Oil	200 litres/ month	to be disposed through registered vendors

- (viii) 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

- (ix) 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.
- (x) The unit should have zero discharge policy, i.e. 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 shall maintain and operate air pollution control system of adequate capacity for the following equipments

Sr. No.	Name of Equipments/ Installation	No of Installation	Capacity	SO <sub>2</sub> Kg/Hr	NO <sub>x</sub> , HC, CO, PM			
					(g/kw-hr)			
1.	D.G. set	01	900 KVA	13.6	9.2	1.3	3.5	0.3

- (ii) The unit shall erect the chimney(s) of the following specifications:

Sr. No	Chimney attached to	Height
1.	D.G. set ( of 900 KVA capacity)	10 mtrs

- (iii) The unit shall observe the following standards:-

Sr. No	Type of fuel	Quantity /hr
1.	H.S.D. (for 900 KVA D.G. set)	189 ltrs/hr

- (iv) 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.

- (v) 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.

- (vi) The unit should carry out emission monitoring from the stack once in year from a laboratory recognized by Ministry of Environment and Forest under the Environment Protection Act, 1986 and the result shall be submitted to this Board.
- (vii) The unit 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:

Category of Area/ Zone	Limits in dB (A) Leq	
	Day time	Night time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day time is reckoned between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6 a.m.

**5. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE HAZARDOUS AND OTHER WASTES (MANAGEMENT AND TRANSBOUNDRY 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	0.2 MT/ annum.	To recycler registered with SPCB and having valid 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 hotel 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 Waste (Management & Transboundary Movement) Rules Amended 2018.
- (xi) The occupier shall furnish monthly returns for collection, storage and disposal of hazardous waste through online OCCMS systems.
- (xii) The unit shall put up an online board (minimum size 6x4 Feet) at prominent location near the main gate 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.
- Hazardous Waste Authorization number, date and validity period.
- Water Consent number, date and validity period.
- Air Consent 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 unit shall submit online annual returns in prescribed format on or before 30<sup>th</sup> June of every year.

**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 shall comply to the Circular issued by the Board regarding "Mechanism/Guidelines for Control of Pollution and Enforcement of Environment norms at individual establishments and the area/cluster of Restaurants/hotels/motels/banquets etc. in view of the NGT Order in OA No 400/2017 dated 10/06/2021 and as amended thereafter.

To,  
M/s. TAJSAATS AIR CATERING LIMITED  
C/o. Mr. Probal Dey  
Within the premises of GMR Goa International Airport Limited,  
Mopa, Pernem, Goa

Copy to:- 1. Accounts Section 2. Concerned File 3. Guard File

Received Consent fee of: **The Capital Investment of the unit is Rs. 16,50,00,000/-**

Challan no.	Amount	Date
047418	Rs. 790400.00/- (Water, Air & HW consent renewal fees)	24/04/2023

(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.goaspqb.gov.in](http://www.goaspqb.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 &amp; 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.

# 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/1773218/R00012879

Date: 23/08/2023

**Renewal of Consent to Operate under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorisation under Rule 6 (i) of the Hazardous and 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]

**RENEWAL OF CONSENT TO OPERATE AND AUTHORISATION is hereby granted to:**

**M/s. BHARAT PETROLEUM CORPORATION LIMITED**  
(Represented by: Mr. Christopher Tigga)  
(Red Category)

**Aviation Fuel Farm**

**Survey No. 107/1, 107/14, 107/30, Mopa Airport, Varkhand Village, Pernem - Goa**

Located in the area declared under the provisions of the Water Act and 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 Renewal of Consent to operate and Authorization is issued in supersession of the earlier Consent Orders issued vide Order No.12/2022-PCB/1394833/R00010451 dated 19/10/2022 & No.12/2023-PCB/1673045/R00012185 dated 08/05/2023 is valid upto **27/07/2028**

2. This Renewal of Consent to Operate is valid for the activity as mentioned below:

Sr. No	Description	Capacity
1.	Storage of Aviation Turbine Fuel (ATF)	8300 KL

3. **CONDITIONS REQUIRED TO BE COMPLIED UNDER THE WATER ACT:**

(i) The daily quantity of domestic effluent from the unit shall not exceed **2.0 KLD.**

(ii) **Domestic Effluent treatment and Disposal:-**

The unit shall treat the domestic effluent in sewage treatment plant of M/s GMR Goa International Airport Limited and shall ensure that there shall be no discharge of waste water within/outside the unit premises.

(iii) 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 & water body.

(iv) **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.

- (v) 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

**4. CONDITIONS REQUIRED TO BE COMPLIED UNDER THE AIR ACT:**

- (i) The unit shall maintain and operate air pollution control system of adequate capacity for the following equipments

Sr. No	Name of Equipments/ Installation	No of Installati on	Capacity	SO <sub>2</sub> Kg/Hr	(g/kw-hr)			
					NO <sub>x</sub>	HC	CO	PM
1.	D. G. Set	01	30 KVA	0.29	9.2	1.3	3.5	0.3
2.	D.G. Set	01	125 KVA	1.08	9.2	1.3	3.5	0.3
3.	D.G Set	01	380 KVA	2.88	9.2	1.3	3.5	0.3

- (ii) The unit shall erect the chimney(s) of the following specifications

Sr. No	Chimney attached to	Height
1.	D. G. Set(for 30 KVA)	3 meter
2.	D. G. Set(for 125 KVA)	8 meter
3.	D. G. Set(for 380 KVA)	10 meter

- (iii) The unit shall observe the following standards:-

Sr. No	Type of fuel	Quantity /hr
1.	D. G. Set(for 30 KVA)	4 litres/ hr
2.	D. G. Set(for 125 KVA)	15 litres/ hr
3.	D. G. Set(for 380 KVA)	litres/ hr

- (iv) **The Stack Port Hole and Platform is to be designed as per CPCB guidelines Method I Part 1 of Stack Monitoring – Material & methodology for isokinetic sampling.**

- (v) 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.

- (vi) The unit should carry out emission monitoring from the stacks once a year from a laboratory recognized by Ministry of Environment and Forest under the Environment Protection Act, 1986 and the result shall be submitted to this Board.

- (vii) The unit 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:

Category of Area/ Zone	Limits in dB (A) Leq	
	Day time	Night time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day time is reckoned between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6 a.m.



**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	0.06 MT/annum	To recycler registered with SPCB and having valid 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 hotel 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 Waste (Management & Transboundary Movement) Rules Amended 2018.
- (xi) The occupier shall furnish monthly returns for collection, storage and disposal of hazardous waste through online OCCMS systems.
- (xii) The unit shall put up an online board (minimum size 6x4 Feet) at prominent location near the main gate 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.
  - Hazardous Waste Authorization number, date and validity period.
  - Water Consent number, date and validity period.
  - Air Consent 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 unit shall submit online annual returns in prescribed format on or before 30<sup>th</sup> June of every year.

**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 equipments provided for without previous permissions of the Board
- ii. The applicant shall provide facilities for collection of the samples to the Board staff.
- iii. An application in prescribed form along with the prescribed fees for renewal of Consent shall be submitted at least 60- days before the expiry of validity of this Consent. 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 fee.
- 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 permissions (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 Environmental (Protection) (Second Amendment) Rules, 1992.
- viii. The unit shall bear the cost of analysis / monitoring in case of complaints received by the Board/ re inspection due to non compliance 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 as 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 C & D waste issued by Central Pollution Control Board and are placed on Board website goaspcb.gov.in.
- 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.

To,  
M/s. Bharat Petroleum Corporation Limited  
C/o. Mr. Christopher Tigga,  
Mopa Airport, Varkhand Village, Pernem - Goa

Copy to: - 1 Accounts Section 2 Concerned File 3 Guard File

Received Consent fee of: **The capital Investment of the unit is Rs. 4303.16 (in lakhs)**

Receipt no.	Amount	Date
83775	Rs. 6,96,800/-	20/07/2022

(Dr. Shamila Monteiro)  
Member Secretary  
For 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 &amp; 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.

**APPENDIX-5**  
**AERODROME LICENCE AFTER NAME CHANGE**



**GOVERNMENT OF INDIA**  
**OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION**  
DGCA COMPLEX, OPP. SAFDARJUNG AIRPORT, NEW DELHI-110 003

File No. AV.20025/05/2022-AL  
License No. AL/Public/096

**AERODROME LICENSE - PUBLIC USE**

The Director General of Civil Aviation, in exercise of the powers under Rule 78 of the Aircraft Rules, 1937 delegated vide S.O. No. 727 (E) dated the 4<sup>th</sup> October, 1994, hereby grants license to,

*GMR Goa International Airport Limited*

*(Name of License holder)*

for

*Manohar International Airport - Mopa, Goa*

*(Name & Place of Aerodrome)*

Latitude 15° 44' 32.99" N Longitude 073° 52' 01.23" E (WGS-84)

The ARFF category of the aerodrome and other details are as contained in its Aerodrome Manual.

This license authorizes the aerodrome to be used as regular place of landing and departure to all persons on equal terms and conditions for operation by aircraft requiring specifications of runway and associated facilities including granted exemptions equal to or less than those indicated in the Aerodrome Manual, subject to the conditions as contained in Schedule-I and for a period as shown in Schedule-II hereto.

The license is liable to be suspended/ modified/ withdrawn/ and/or any limitations or conditions may be imposed, if any violation of the provisions of the Aircraft Act 1934, Aircraft Rules 1937, or any orders/ directions/ requirements issued under the said Act, rules or of the limitations or conditions as in schedule-I are observed.

This Aerodrome License is not transferable.

(SEAL)

Date of Re-issue: 16<sup>th</sup> August, 2023

Date of Initial issue: 26<sup>th</sup> October, 2022

Place: New Delhi

**DIRECTOR GENERAL OF CIVIL AVIATION**

GENERAL CONDITIONS

1. The Licensee shall ensure that aerodrome facilities, equipment, services and procedures are operated and / or maintained properly and efficiently in accordance with the Aerodrome Manual submitted to DGCA, the applicable standards set out in the CARs and conditions specified in this license.
2. The Licensee shall ensure that the copies of the Aerodrome Manual and Safety Management System (SMS) Manual, accepted by DGCA are always kept complete and current. The Licensee shall ensure that each member of the aerodrome operating staff is aware of the contents of the every part of the aerodrome manual and SMS manual, relevant to his duties and undertakes his duties in conformity with the relevant provisions of these manuals.
3. The Licensee shall ensure that an adequate number of qualified and skilled personnel are employed to perform all critical activities for the operation and maintenance of its aerodrome, and that a programme to upgrade the competency for the personnel is in place.
4. The Licensee shall notify the agency responsible for Aeronautical Information Services and the air traffic control unit immediately of any obstacles, obstructions or hazards, change in level of service at the aerodrome as set out in any publication by the aeronautical information services or variation from the Standards; closure of the movement area of the aerodrome; significant change in aerodrome facility or the physical layout of the aerodrome; and any other condition that could affect aviation safety at the aerodrome and against which precautions are warranted.
5. The Licensee shall notify the agency responsible for Aeronautical Information Services of any change to any aerodrome facility or equipment or level of service at the aerodrome which has been planned in advance and which is likely to affect the accuracy of the information contained in any publication by the agency before effecting the change.
6. The licensee shall be responsible to ensure that all security and anti-hijacking arrangements stipulated from time to time by the Bureau of Civil Aviation Security for the aerodrome are complied with.
7. When so demanded by an officer duly authorized under the Aircraft Rules, 1937, this license and any other relevant documents shall be produced for inspection.
8. The licensee shall be responsible for payment to the concerned authorities of all applicable charges pertaining to the services provided by such authorities in connection with the aerodrome operation such as water supply, electricity supply, telephone lines etc.
9. Licensee shall maintain record of all aircraft landing at and taking-off from the aerodrome.
10. The Licensee shall have legally tenable agreement with CNS and ATM service provider(s) to ensure continuity and reliability of CNS and ATM to ensure the safety of aircraft in the airspace associated with aerodrome, and that proper coordination with the agencies responsible for aeronautical information services, meteorological services, security and other areas related to safety are established.
11. The aerodrome shall at all reasonable times be open to use by any aircraft in the service of the Central Government.
12. The licensee shall ensure that during the validity of the license the capability of the services/facilities, etc. is not degraded below the notified level.
13. The licensee is to submit the application for renewal in prescribed proforma along with relevant enclosures and fee, at least 2 months before expiry of license to the Director General of Civil Aviation. The license may be renewed if DGCA is satisfied that all requirements have been fulfilled.
14. Other requirements of Central Government and State Government as applicable shall be complied with.







Annexure to Sl. No. 18 of General Conditions of license.

**Actions required to be taken by the licensee for consideration of renewal of license validity of *Manohar International Airport – Mopa, Goa:-***

- i. Submit the quarterly progress report on pending observations contained in this office inspection report and on self-assessed non-compliances based on CAR provisions.
- ii. Submit exemption application complete in all respect for non-compliances identified if any for aerodrome facilities as per CAR Section 4 Series B Part I and observations raised by DGCA.
- iii. Continue to develop the operating procedures for all activities required to be performed for operation and maintenance of the aerodrome and carry out safety assessment of the same.
- iv. Submit updated SMS Implementation status at the aerodrome on completion of each phase.

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A handwritten signature in black ink is written over a circular official stamp. The signature is slanted and appears to be 'J. D. ...'. The stamp is partially obscured by the signature.