

Ref: GHIAL/AO/ENV/TGPCB/2026-08

Date: 16/7/2026

The Environmental Engineer,
Regional Office-I, Ranga Reddy District,
Telangana State Pollution Control Board,
Begumpet, Hyderabad - 500016.

Sub: Submission of "Environmental Statement" for April 2025-March 2026

Ref: Consent & Authorization order no. Authorization No: 20245073850 Dated 29.03.2024 (Schedule B Serial No 27.)

Dear Sir,

Please find attached herewith "Environmental Statement" in Form-V for the period April 2025 - March 2026 pertaining to Rajiv Gandhi international Airport.

This is for your information and records please.

Thanking you,

Yours Sincerely,

For GMR Hyderabad International Airport Ltd,



B Ramana Murthy
Head - Safety & Environmental Compliance

Enclosure: Environmental Statement in Form-V

Copy to:

- ❖ The Member Secretary, TGPCB, Hyderabad.



GMR HYDERABAD INTERNATIONAL AIRPORT LIMITED

Regd. Office: GMR Aero Towers, Rajiv Gandhi International Airport, Shamshabad, Hyderabad - 500108, Telangana State, India
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Environmental Statement for FY 2025-26

FORM V (See rule 14)

Environmental Statement for the financial year ending the 31st March 2026.

PART A

Name and address of the owner/occupier of the industry operation or process	M/s. GMR Hyderabad International Airport Limited, Shamshabad, Ranga Reddy District, Hyderabad, Telangana state
Industry category Primary – (STC Code) Secondary – (STC Code)	Airports (Orange category as per the revised CPCB- Classification of the industrial sectors January 2025)
Production capacity	Passengers: 30486531; Cargo: 202690 tonnes
Year of establishment	The Airport was commissioned on 23 rd March 2008
Date of last environmental statement submitted.	26 th June 2025

PART B

Water and Raw Material Consumption

Water consumption in m³/d - N/A	
Process -	-----
Cooling –	-----
Domestic -	-----

Name of products	Process water consumption per unit of product output.	
	During the current financial year (2024-25)	During the current financial year (2025-26)
Airport operations	4027.92 KLD (Domestic + Cooling + Flushing+ irrigation) GHIAL net water consumption	3741.52 KLD (Domestic + Cooling + Flushing+ irrigation) GHIAL net water consumption
Break-up	fresh water (HMWS): 1208.73 KLD Fresh water (Reservoir 2): 276.28 KLD Treated wastewater: 1225.94 KLD Ground water: 1316.98 KLD	fresh water (HMWS): 1195.22 KLD Fresh water (Reservoir 2): 396.43 KLD Treated wastewater: 1373.81 KLD Ground water: 776.06 KLD

*Water consumption details are attached as Annexure- I

Raw material Consumption: Not Applicable since this is an airport.

Name of raw material/ Name of products	Consumption of raw material per unit of output	
	During the previous financial year (2024-25)	During the current financial year (2025-26)
	-----	-----

PART C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollution	Quantity of pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.
(a) Water	No wastewater has been discharged from the airport. The sewage generated from the Airport (1813 KL / day) was treated in the STP within the premises of the airport. After treatment the wastewater is recycled for flushing, cooling tower makeup and irrigation within the airport premises]	Wastewater and air quality parameters are being monitored by MoEF &CC approved laboratory. Monitoring data enclosed as Annexure II.	Wastewater parameters are within the prescribed standards. The ambient air quality and D.G sets - chimney monitoring results are within the T.G.P.C.B. prescribed standards.
(b) Air	The air pollutants from the DG set chimneys are released at the height of 100 feet.		

PART D

HAZARDOUS WASTES

(As specified under Hazardous Wastes (Management & Handling Rules, 1989)

Hazardous Wastes	Total Quantity (Liters)	
	During the current financial year (2024-25)	During the current financial year (2025-26)
From Process (Used oil & Grease)	Total: 9600 liters of Used Oil, 132 numbers used oil filters and 116 kg of expired lab chemicals	Total: 20730 liters of Used Oil, 100 nos. of soaked mats, 20 nos. of used oil filter elements

From pollution control facilities.	Nil	Nil
------------------------------------	-----	-----

Hazardous Wastes generation & disposal details are attached as Annexure- III

PART E
Solid Wastes

		Total Quantity (kg)	
		During the current financial year (2024-25)	During the current financial year (2025-26)
From Process (Food waste, plastic, paper, metal and glass scrap)	kg	6107065	6160679
From pollution control facility (STP generated sludge)	kg	385000	883000
Quantity recycled or reutilized within the unit (Food waste, sludge from STP is converted into compost and used as manure)	kg	1109000	1225988
Sold (Plastic, paper, metal and glass scrap)	kg	689885	724038
Disposed (Disposal of food waste to GHMC)	kg	4693180	4066160

Total solid waste generated 7043679 kg/year [Food waste-5436641 kg, STP sludge- 883000 kg, paper/carton box- 337728 kg, plastic-200995 kg, Iron/Metal waste-62670 kg and glass-122645 kg]

****Solid Waste Disposal details are mentioned in Annexure-IV**

PART F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Type of waste	Composition	Quantity generated in (Ltr/Year)	Disposal
Hazardous waste (Used oil & Aviation Turbine Fuel)	Organic material	Used oil- 20730 liters/year 100 nos. of soaked mats and 20 nos. used oil filter elements	T.G.P.C.B authorized agencies.

Type of waste	Composition	Quantity generated in (Ltr/Year)	Disposal
Solid waste	Garbage (Paper, plastic, metal, glass), STP sludge and food waste	7043679 kg/year	*Sludge generated from STP are used as manure. *Food waste generated is being sent to GHMC dump yard. *Other waste, i.e. paper, plastic, glass, and metal is sent to recyclers.

PART G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

- The treated wastewater and the rainwater runoff had been used for irrigation, cool Tower Makeup and flushing purposes instead of HMWS & SB source water.

**Expenditure made on Pollution control equipment /Services/Consents/Waste disposal etc. for the financial year 2025–26.*

Sl. No	Description of the expenditure	Cost Incurred for FY 2025 -26
1	Noise Monitoring Terminal (NMT)-Space Rental charges	₹ 1,44,000.00
2	Hydrogen gas cylinders refilling for GHIAL	₹ 9,380.00
3	Real Time Data uploading Charges to TGPCB server	₹ 77,280.00
4	Annual Maintenance Contract (AMC) of Piezometers	₹ 54,000.00
5	10MBPS Internet Leased Line (ILL) services for NMTs	₹ 3,20,000.00
6	Third party environmental quality monitoring	₹ 9,55,000.00
7	Comprehensive Maintenance Contract (CMC) Visits for NMTs	₹ 27,90,000.00
8	Operation and Maintenance of CCTV cameras	₹ 1,62,000.00
9	AMC of CAAQMS west and SLM-East	₹ 1,76,460.00
10	Hydrogen Gas Manifold System Comprehensive Maintenance Contract	₹ 1,34,334.00
11	Upgradation of Level 5 airport carbon accreditation fees	₹ 21,06,800.00
12	Intranet for P2P LINK services for the data transfer between CAAQMS GMR Township	₹ 50,499.96
13	Supply of CAAQMS-1 Spares at RGIA, GHIAL	₹ 5,55,974.39

Sl. No	Description of the expenditure	Cost Incurred for FY 2025 -26
14	Supply installation testing and commissioning of New Mobile CAAQM Station along with five year of CAMC	₹ 1,29,26,900.00
15	Comprehensive study on Greenhouse Gas (GHG) Emission Control Measures	₹ 4,70,000.00
16	Procurement of Cylinder Trolley for CAAQMS	₹ 13,000.00
17	Procurement of Cylinder Storage Cage for CAAQMS	₹ 3,000.00
18	Installation of Power supply infrastructure material for the Mobile CAAQMS	₹ 1,50,568.00
19	Procurement of Filled Nitrogen Gas Cylinders for CAAQMS	₹ 30,900.00
20	Piezometers walkways at reservoir 2, RGIA, Hyderabad.	₹ 1,19,595.33
21	CAAQMS-SO2 analyser spares (Photo Diode) at RGIA, GHIAL	₹ 8,100.00
22	Supply of Industrial Socket and cable for Mobile CAAQMS electrical charging points installations	₹ 1,50,000.00
23	Third party environmental compliance audit as directed by MoEF and CC at Hyderabad Airport	₹ 2,50,000.00
24	CMC FOR 6 KVA UPS @CAAQMS-1	₹ 29,000.00
25	Third party onsite verification of GHG emission from Jan'25-Mar'26	₹ 3,00,000.00
26	GHIAL Sustainability Reporting (FY 2024 -25) Verification and Assurance	₹ 2,80,000.00
27	GHIAL Sustainability Report Designer (FY 2024 -25)	₹ 4,10,000.00
28	CAMC for CAAQMS Township	₹ 93,250.00
29	AC/DC Charger or the Mobile CAAQMS VAN at RGIA Hyderabad	₹ 30,000.00
30	Conducting Climate Risk Impact study for GMR Airports	₹ 31,50,000.00
31	Environmental reward & recognition to the Airport stakeholders	₹ 40,000.00
32	Lighting at Piezometer- 1 Area at RGIA, Hyderabad	₹ 3,95,890.00
33	Solar Power Plant Operation & Maintenance	₹ 47,95,343.28
34	Consent Fee Payment to TGPCB	₹ 21,36,900.00
35	Horticulture & Greenbelt development	₹ 11,14,00,000.00
36	Solid waste collection and transportation charges (MSW) including Operational charges of Composting Plant	₹ 1,75,42,601.00
37	STP, WTP, rain water harvesting Operational Cost	₹ 3,17,94,124.83
	Total	₹ 19,40,54,900.79

PART H

Additional measures/investment proposal for environmental protection including abatement of pollution.

A laboratory for testing domestic wastewater generated at the airport has been established at the Sewage Treatment Plants (STPs) of Rajiv Gandhi International Airport (RGIA) to facilitate regular monitoring and analysis of treated and untreated wastewater quality in compliance with regulatory requirements.

An Integrated Solid Waste Management Facility (ISWMF) with a processing capacity of 14 TPD was established at RGIA to manage and process airport-generated food waste in an environmentally sustainable manner, ensuring compliance with applicable solid waste management regulations.

A Mobile Environmental Quality Monitoring System, mounted on an electric vehicle, has been deployed at RGIA to monitor key environmental parameters, including **Ambient Air Quality, Ambient Noise Levels, and Meteorological (Weather) Conditions**, enabling real-time environmental surveillance across the airport premises.

PART I

Any other particulars for improving the quality of the environment

As part of its carbon management strategy, RGIA has implemented several impactful initiatives:

1. Green Buildings

The Passenger Terminal Building achieved LEED Platinum certification from the U.S. Green Building Council (USGBC) in 2025, reflecting world-class sustainability standards.

2. Airport Carbon Accreditation

RGIA attained Level 5 (highest level) under the ACI Airport Carbon Accreditation program in 2025, demonstrating leadership in carbon neutrality.

3. Carbon Sink Development

Extensive greenbelt and natural vegetation have been established across the airport premises to act as carbon sinks.

4. Transition to 100% Green Electricity

GHIAL has fully transitioned to sustainable green energy for all airport operations and its wider ecosystem. This shift is enabled by a combination of RGIA's 10 MWp solar power plant and green energy supplied by TGSPDCL, resulting in a substantial reduction in carbon emission.

5. Electrification of GHIAL's vehicles and equipment

Gradual replacement of conventional fleet and equipment with Electric Vehicles (EVs)

6. Energy-Efficient Operations

Multiple measures have been adopted to optimize energy use:

- Conversion of conventional lighting to LED across the terminal.
- HVAC optimization based on operational needs, including efficient cooling towers and chiller plants.

- Replacement of major conventional vehicles with electric vehicles (EVs).
- Reduction of diesel generator usage through a Fast Bus Transfer System (FBTS).

7. Sustainable Airside Operations

- Adoption of single-engine taxiing and use of Bridge Mounted Equipment (BME) with Fixed Electrical Ground Power Units (FEGPU) and Pre-conditioned Air (PCA) to minimize emissions from Auxiliary Power Units (APUs).
- Establishment of a 5 MWp electrical substation for EV charging at the airside, encouraging airlines and ground handlers to transition their Ground Support Equipment (GSE) to EVs.

8. Net zero carbon Airport: *GHIAL achieved a 95% reduction in Scope 1 and Scope 2 greenhouse gas emissions in 2025 compared to the 2010 baseline year, well ahead of the Net Zero target year of 2035, and continues to sustain its Net Zero Carbon status. The remaining 5% residual emissions are offset through the purchase of carbon removal units, thereby maintaining carbon neutrality. Further, GHIAL has aligned its Scope 3 Net Zero Carbon target with the ICAO Long-Term Aspirational Goal (LTAG) 2050, with a target year of 2050.*

9. A climate risk assessment study, along with the identification of mitigation and adaptation measures to address potential impacts on airport infrastructure and operations, is currently being carried out by an external agency.



B. Ramana Murthy

Head- Safety and Environmental Compliance
GMR Hyderabad International Airport,
Shamshabad, Ranga Reddy District,
Telangana state.

-End-

Annexure -1Water consumption details for April 2025 –March 2026

GMR Hyderabad International Airport Limited-Net Water Consumption FY 2025-2026							
Month	Domestic (kl)		Cooling Tower (CT) makeup water (kl)	Flushing (kl)	Gardening (kl)		Total (kl)
	HMWS&SB	Reservoir-2	Treated WW	Treated WW	Treated WW	Ground Water	GHIAL's net Water Consumption
Apr-25	38561	13333	23110	14511	1926	44463	135904
May-25	48369	0	24546	19601	191	37794	130501
Jun-25	44852	0	18411	20680	0	28847	112790
Jul-25	43061	6097	20596	15014	3595	14230	102593
Aug-25	42372	13691	16252	14546	10972	10359	108192
Sep-25	27398	16148	15494	9402	14789	15684	98915
Oct-25	28744	15797	15360	6247	13202	15304	94653
Nov-25	39572	17831	11810	15283	16255	19742	120493
Dec-25	31228	15836	7933	18894	20802	24876	119569
Jan-26	29603	14208	8678	26722	10622	24785	114618
Feb-26	30815	10214	9362	26125	5961	22459	104936
Mar-26	31678	21543	16000	16476	12072	24720	122489
Total	436254	144698	187552	203501	110387	283263	1365653
						Per Day (kl per day)	3741.52

Note:

1. Domestic: fresh water from HMWS&SB
2. Cooling tower (CT) makeup: Treated wastewater (WW) from STP
3. Flushing: Treated wastewater (WW) from STP
4. Gardening: Treated wastewater (WW) from STP + Groundwater

*GHIAL's net consumption means excluding concessionaires like Novotel, In-flight kitchens, Amazon fulfillment center, GMR Aero Technic Limited, SEZ tenants etc.

RAJIV GANDHI INTERNATIONAL AIRPORT HYDERABAD



ENVIRONMENTAL QUALITY MONITORING REPORT

Submitted to
M/s. GMR Hyderabad International Airport Ltd.
Shamshabad, Hyderabad 500108.

MARCH 2026

Prepared by



Vimta Labs Limited, Hyderabad.

ACKNOWLEDGEMENT

M/s. Vimta Labs Limited expresses sincere debt of gratitude to M/s. GMR Hyderabad International Airport Ltd., for the opportunity given by assigning the preparation of Environmental Quality Monitoring Study for **Rajiv Gandhi International Airport** located at Shamshabad, Hyderabad. Special mention needs to be made for executives of M/s. GMR Hyderabad International Airport for their co-operation and assistance during the preparation of this report. We also wish to acknowledge our gratitude to all of them who helped during the monitoring period.

For and on behalf of
M/s. Vimta Labs Limited



Authorized Signatory.

Name : Dr. Subba Reddy Mallampati
Position : Manager-Environment

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ABBREVIATIONS

Short form	Expanded Form
%	Percentage
°C	Degree Celsius
<	Less than
µg	Microgram
µm	Micrometer
µs	Micro Siemens
AAQ	Ambient Air Quality
ACF	Activated Carbon Filter
AGL	Airfield Ground Lighting
a.m.	After meridian
TSPCB	Telangana State Pollution Control Board
BOD	Bio-Chemical Oxygen Demand
BDL	Below Detectable Limit
COD	Chemical Oxygen Demand
CFO	Consent for Operation
cm	Centimeter
CO	Carbon Monoxide
dB(A)	Decibels on scale A
ds/m	Deci siemens per meter
D.G. Set	Diesel Generator Set
E	East
E.C.	Electrical Conductivity
ENE	East of Northeast
g/cc	Gram/centimeter cube
GHIAL	GMR Hyderabad International Airport Ltd
IS	Indian Standards
kg/ha	Kilogram per hectare
km	Kilometer
Kmph	Kilometer per hour
KVA	Kilo Volt – Ampere
l	Liter
Leq.	Equivalent levels
m	Meter
mg	Milligram
mg/l	Milligram per liter
mg/Nm ³	Milligram per normal cubic meter
max	Maximum
min	Minimum
mm	Millimeter
m/sec	Meter per second
N	North
Nm ³	Normal cubic meter

Short form	Expanded Form
Nm ³ /hr	Normal cubic meter per hour
NO _x	Oxides of Nitrogen
NW	Northwest
pH	Potentiality of hydrogen ions
PM _{2.5}	Particulate Matter size less than 2.5 µm
PM ₁₀	Particulate Matter size less than 10 µm
p.m.	Post meridian
ppm	Parts per million
RGIA	Rajiv Gandhi International Airport
RWHS	Rainwater Harvesting Structure
S	South
SE	Southeast
SO ₂	Sulphur Dioxide
SPM	Suspended Particulate Matter
Sq.m	Square meter
SSW	South of Southwest
STP	Sewage Treatment Plant
TDS	Total Dissolved Solids
W	West
WNW	West of Northwest
WTP	Water Treatment Plant
g/KW-hr	Gram per Kilo Watt hour

1.0 INTRODUCTION

M/s. GMR Hyderabad International Airport Limited has awarded **M/s. VIMTA LABS LIMITED**. The environmental consultancy service contract for carrying out monthly environmental parameters monitoring study for their ongoing works of Rajiv Gandhi International Airport, Shamshabad, Hyderabad. This monitoring report is an overview of the findings of the field investigations carried out for the month of March 2026. The field monitoring data was collected from 16.03.2026 to 17.03.2026 at Rajiv Gandhi international Airport, Shamshabad and 10 km surrounding area. The study area for Environmental Monitoring is airport premises and its surrounding area up to 10 km of aerial distance is taken as buffer zone which is located towards east of Hyderabad, NH-44 (Bangalore Highway). This site is approximately 20 km away from the Hyderabad city premises.

1.1 Objective:

The objective of environmental parameters monitoring is to create an overview of the existing environmental quality using the field investigations in and around the study area.

1.2 GMR Hyderabad International Airport Limited:

GMR Hyderabad International Airport Limited (GHIAL) is a joint venture company promoted by the GMR Group (74%) in partnership with Government of India (13%), Government of Telangana (13%). The Company was incorporated to design, finance, build, operate and maintain a world class Greenfield airport at Shamshabad, Hyderabad, and Telangana.

1.3 Environmental Monitoring Study:

The environmental monitoring study and analysis is carried out for air, water, soil, wastewater quality and Noise Levels in and around the airport site. The samples collection measurements are carried out within a radius of 10 km with the airport site as epicenter.

The ambient air quality monitoring is carried out for 24 hours for assessing air pollutants levels. Instantaneous duplication for the water and wastewater samples are collected to assess the quality of water and wastewater characteristics.

2.0 ENVIRONMENTAL STATUS OF STUDY AREA

2.1 Meteorological Monitoring: Data Analysis - Micro Meteorological Status

Meteorological parameters are important factors in the study of air pollution. The transport and diffusion of the pollutants in the atmosphere are governed by meteorological parameters. Wind velocity, wind direction and diffusion of pollutants depend mainly on three factors. Ambient temperatures, humidity, rainfall, atmospheric pressure etc. are known as secondary meteorological parameters as these factors control the dispersion of the pollutants indirectly by affecting the primary

Factors. Thus, to assess the air pollution impact, it is essential to collect the above meteorological parameters in the project area.

2.1.1 Data Presentation:

Meteorological data was recorded at intervals of every one hour, during the study period of March 2026. Recorded average values for the month of March 2026.

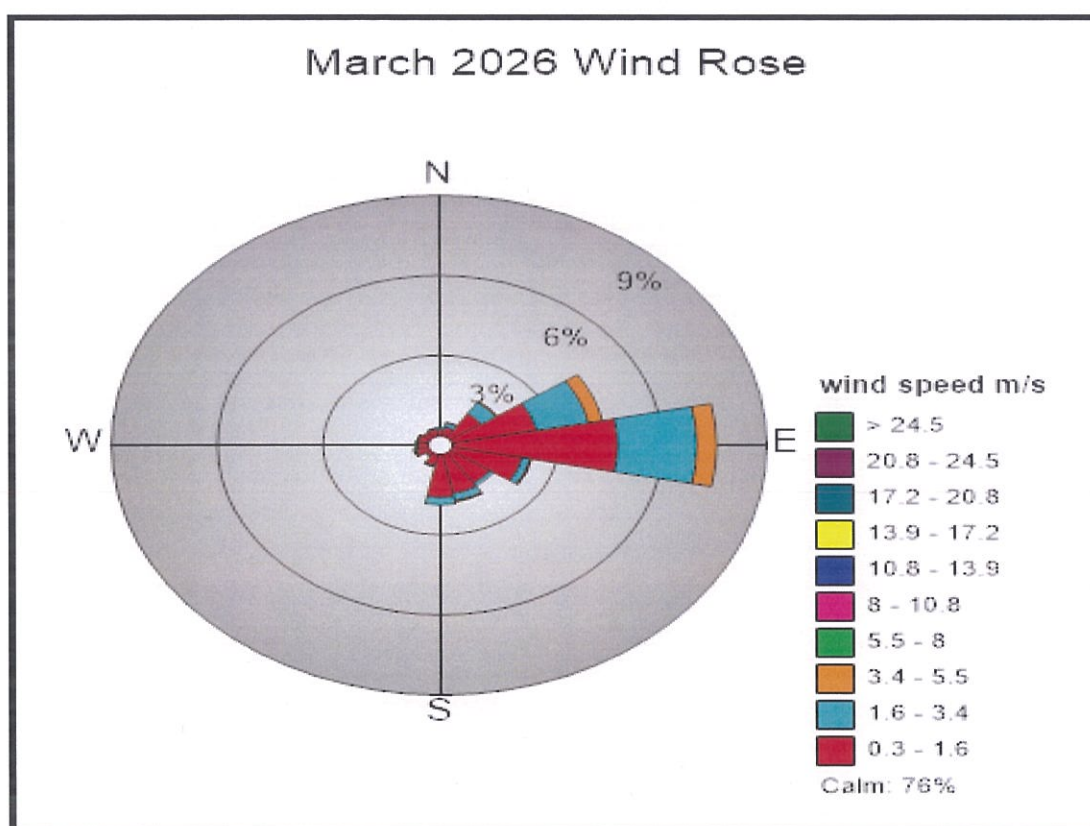
S No.	Parameters	March 2026		
		Min	Max	Average
1	Relative humidity (%)	12.86	99.9	51.38
2	Temperature (°C)	16.7	38.5	27.9
3	Total rainfall (mm)	52.6		
4	Predominant Wind Direction	(E)		
5	Wind speed (m/s)	0	4.27	0.32
6	Atmospheric Pressure (milli bars)	600.87	1099.10	1071.30

2.1.3 Results

The winds are predominantly recorded in the East (E) direction. The winds were blowing with speed ranging from 0.0 to 4.27 m/s of the total time. Calm conditions prevailed for 76.0% (<1km/hr) of the total time. The average temperature range is with minimum of 16.7°C and maximum of 38.5°C.

Note: -Data source for Meteorological data is weather monitoring system installed at Airside of the RGIA.

FIGURE – 1: WIND ROSE DIAGRAM March 2026



2.2 Ambient Air Quality:

2.2.1 Analysis Techniques

TABLE-1
TECHNIQUES USED FOR AMBIENT AIR QUALITY MONITORING

Sr.No.	Parameter	Technique	Technical Protocol
1	Particulate Matter as PM ₁₀	Gravimetric	IS-5182 (Part -23)
2	Particulate Matter as PM _{2.5}	Gravimetric	IS-5182 (Part -24)
3	Sulphur dioxide as SO ₂	Spectrophotometer	IS-5182 (Part-02)
4	Oxides of Nitrogen as NO ₂	Spectro photometer	IS-5182 (Part-06)
5	Ozone as O ₃	Spectro photometer	Method-411
6	Carbon monoxide as CO	NDIR	IS-5182 (Part-10)
7	Ammonia as NH ₃	UV- Spectro photometer	Indophenol Blue Method
8	Benzene as C ₆ H ₆	Gas Chromatography	ASTM D 3686-95
9	Methane as CH ₄	Gas Chromatography	IS-5182 (Part -12)

2.2.2 Details of Monitoring Locations:

Seven locations have been selected for ambient air quality monitoring locations. Location details are given in **Table-2**.

TABLE – 2
AMBIENT AIR QUALITY MONITORING LOCATIONS

Sr. No	Name of the Location	Direction/distance with respect to airport		Environmental setting
		Direction	Distance (km)*	Pollution generating sources
1	Site Office	Nodal Center	0.0	Vehicular movements, aircraft movements, airport dust, fugitive dust from surrounding activities.
2	GMR VF Building	Nodal Center	0.0	Vehicular movements, aircraft movements, airport dust, fugitive dust from surrounding activities.
3	Cargo Site)	Nodal Center	0.0	Vehicular movements, aircraft movements, airport dust, fugitive dust from surrounding activities.

Sr. No	Name of the Location	Direction/distance with respect to airport		Environmental setting
		Direction	Distance (km)*	Pollution generating sources
4	GMR Township, Mamidipalli	Northeast	3.43	Residential activities are like unpaved village roads, vehicular pollution, agricultural & domestic activities.
5	Rasheedguda	South West	3.4	Residential activities are like unpaved village roads, Vehicular pollution, agricultural & domestic activities.
6	Sardar Nagar	Southeast	8.2	Residential activities are like unpaved village roads, vehicular pollution, agricultural & domestic activities.
7	Vellankanni Nagar	North West	4.7	Residential activities are like unpaved village roads, vehicular pollution, agricultural & domestic activities.

2.2.3 Parameter Monitored and Results: Monitoring has been conducted for PM₁₀, PM_{2.5}, SO₂, NO_x, CO, Ammonia, Ozone, Methane and Benzene. The ambient air quality monitoring results of all these parameters are given in Table – 3&4

TABLE- 3
AMBIENT AIR QUALITY RESULTS

Sampling Locations			Buffer Zone (Surrounding)			
			GMR Township Mamidipalli	Rasheedguda	Sardar Nagar	Vellankanni Nagar
Parameters	Units	Limits	16.03.2026	17.03.2026	17.03.2026	17.03.2026
Particulate Matter as PM ₁₀	µg/m ³	< 100	62.3	61.6	68.7	68.9
Particulate Matter as PM _{2.5}	µg/m ³	< 60	29.9	28.9	27.9	32.6
Sulphur dioxide as SO ₂	µg/m ³	< 80	23.4	22.5	24.1	24.6
Oxides of Nitrogen as NO ₂	µg/m ³	< 80	24.6	24.6	25.7	27.9
Ozone as O ₃	µg/m ³	< 100	20.5	23.5	23.2	25.5
Carbon monoxide as CO	mg/m ³	< 02	0.84	0.86	0.84	0.85
Ammonia as NH ₃	µg/m ³	< 400	21.9	25.4	22.5	24.0
Benzene as C ₆ H ₆	µg/m ³	< 05	< 1.0	< 1.0	< 1.0	< 1.0
Methane as CH ₄	µg/m ³	--	<0.01	<0.01	<0.01	<0.01

Sampling Location			RGI Airport Boundary		
			Site Office	GMR VF Building	Cargo Site
Parameters	Units	Limits	16.03.2026	16.03.2026	16.03.2026
Particulate Matter as PM ₁₀	µg/m ³	< 100	73.3	70.1	66.7
Particulate Matter as PM _{2.5}	µg/m ³	< 60	36.5	35.3	33.0
Sulphur dioxide as SO ₂	µg/m ³	< 80	21.3	23.3	24.4
Oxides of Nitrogen as NO ₂	µg/m ³	< 80	25.0	24.6	28.1
Ozone as O ₃	µg/m ³	< 100	19.8	22.1	24.1
Carbon monoxide as CO	mg/m ³	< 02	0.89	0.93	0.87
Ammonia as NH ₃	µg/m ³	< 400	26.1	20.8	23.3
Benzene as C ₆ H ₆	µg/m ³	< 05	< 1.0	< 1.0	< 1.0
Methane as CH ₄	µg/m ³	--	<0.01	<0.01	<0.01

Note:

1. AAQ Standard Limits: - As per GHIAL's CFO dated 29.03.2024 and NAAQMS.

FIGURE-2

VARIATIONS OF AAQ PARAMETERS PM₁₀ AND PM_{2.5}

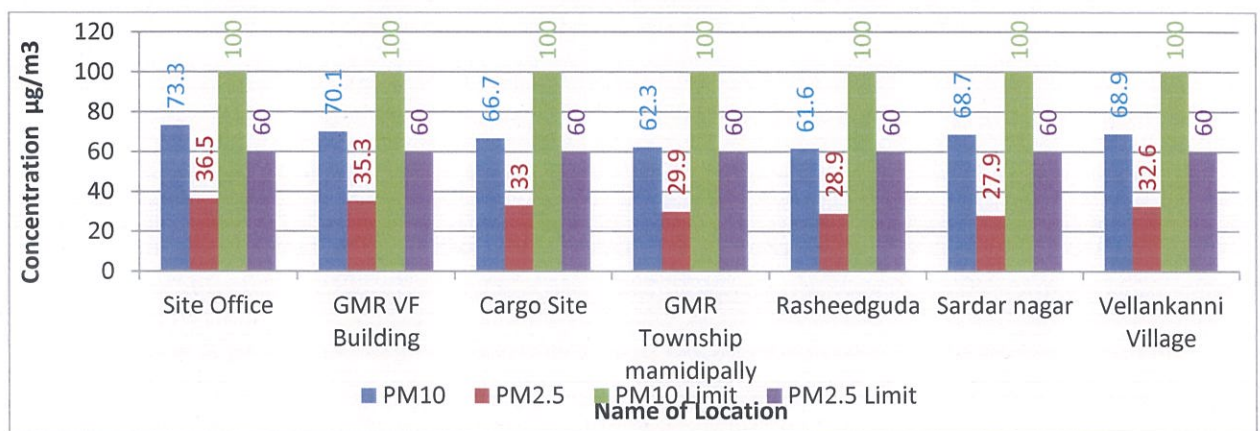
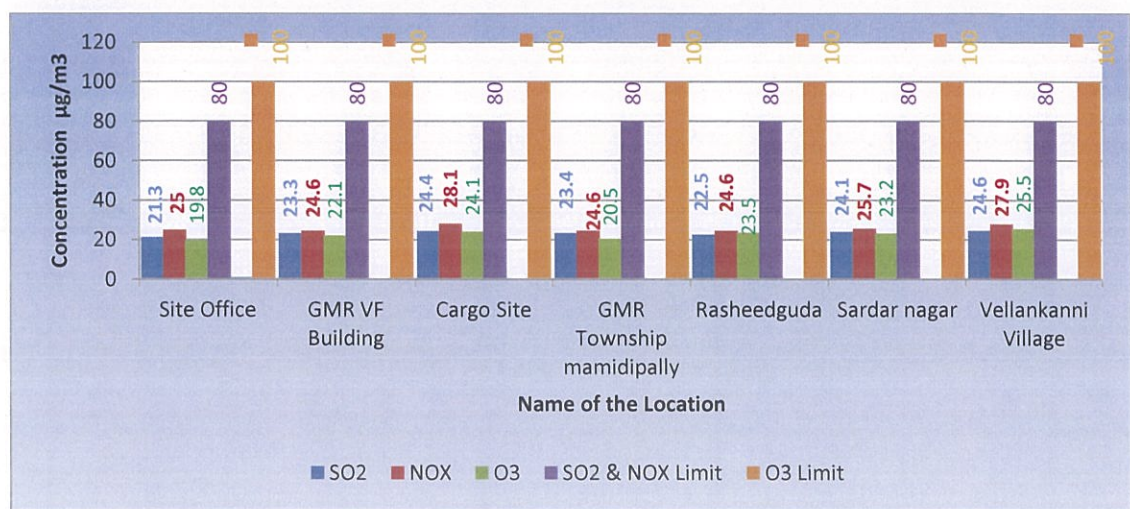


FIGURE-3 VARIATIONS OF AAQ PARAMETERS SO₂, NO_x AND OZONE (O₃)



2.3 Noise Levels

2.3.1 Details of monitoring locations:

During the study period noise monitoring has been conducted at seven locations. Locations details are given in Table- 4

TABLE-4
NOISE MONITORING LOCATIONS

S. No.	Name of the location	Direction / distance with respect to airport site		Description
		Direction	Distance (km)*	
1	Site Office	Nodal Center	0.0	Airport
2	GMR VF Building	Nodal Center	0.0	Airport
3	Cargo Site	Nodal Center	0.0	Airport
4	GMR Township, Mamidipalli	North East	3.43	Airport Noise Zone
5	Rasheedguda	South West	3.4	Airport Noise Zone
6	Sardar Nagar	Southeast	8.2	Airport Noise Zone
7	Vellankanni Nagar	North West	4.7	Airport Noise Zone

2.3.2 Parameters Monitored: Parameters monitored during the study period are given in Table-5.

TABLE -5
NOISE ANALYSIS DATA

Sr. No.	Locations	Date	Noise Levels in dB (A) Leq			
			Day Time	Limits	Nighttime	Limits
RGI Airport Core Zone						
1	GMR VF Building	16.03.2026	66.5	75	61.8	70
RGI Airport Site						
2	Site Office	16.03.2026	68.7	75	60.2	70
3	Cargo Site	16.03.2026	67.9		57.5	
Buffer Zone (Airport Noise Zone)						
4	GMR Township, Mamidipalli	16.03.2026	67.9	70	59.6	65
5	Rasheedguda	17.03.2026	69.3		55.3	
6	Sardar Nagar	17.03.2026	65.3		58.7	
7	Vellankanni Nagar	17.03.2026	64.1		59.7	

Note: The standards in the residential Area are superseded by the Airport Noise zone standards as per MOEF&CC, GSR 568(E) under airport noise zone notified by DGCA vide letter Ref No. 04-01/2019-AED dated 05.07.2024.
The standards are Day time (from 6:00 am to 10:00 pm). **Leq:** 70 dB (A)
Night time from 10:00 pm to 6:00 am) **Leq:** 65 dB (A).

TABLE-6
AMBIENT NOISE LEVELS STANDARDS FOR AIRPORTS – GSR 568 (E)

➤ As per MoEF& CC GSR 568 (E) Noise standards for Airports are as follows

Category of Airports	Limits in dB(A) Leq	
	Day Time	Night Time
Ambient Noise levels in Airport Noise zone		
Busy Airports	70	65
All other Airports excluding proposed Airports	65	60
Within Airport boundary	75	70

- Rajiv Gandhi International Airport, Hyderabad comes under Busy Airports Category

Note:

- Day Time is recorded in between 6:00 AM to 10:00PM.
- Nighttime is recorded between 10:00PM to 6:00 AM.
- Silence zone is defined as areas up to 100 meters around such premises as hospitals, educational institutions and courts. The silence zones are to be declared by the Competent Authority.
- Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.
- Mixed categories of areas should be declared as one of the four above-mentioned categories by the Competent Authority and the corresponding standards shall apply.

Source: EPA Notification [G.S.R. 106-01-123 (E), dt. 26.12.1989 published in the Gazette No. 643 dt. 26.12.1989]

- *dB (A) L_{eq} denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
- A “decibel” is a unit in which noise is measured.
- “A” in dB (A) L_{eq} , denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
- L_{eq} : It is energy mean of the noise level over a specified period.

Figure-4 Noise Levels Variation for Airport Core Zone.

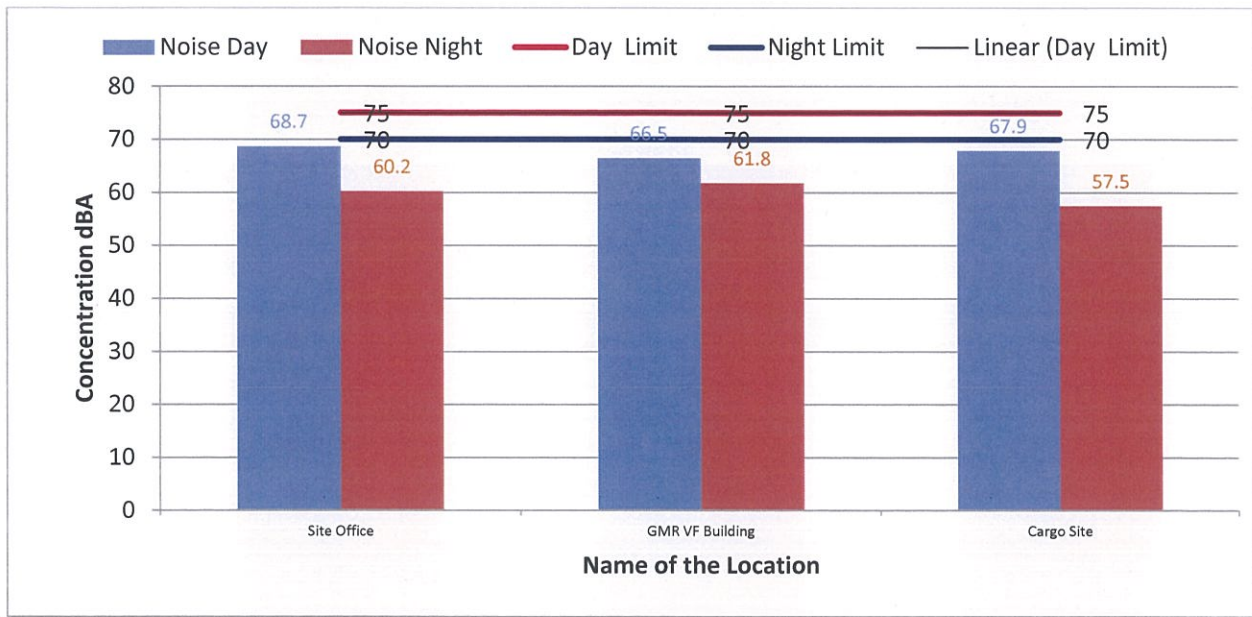
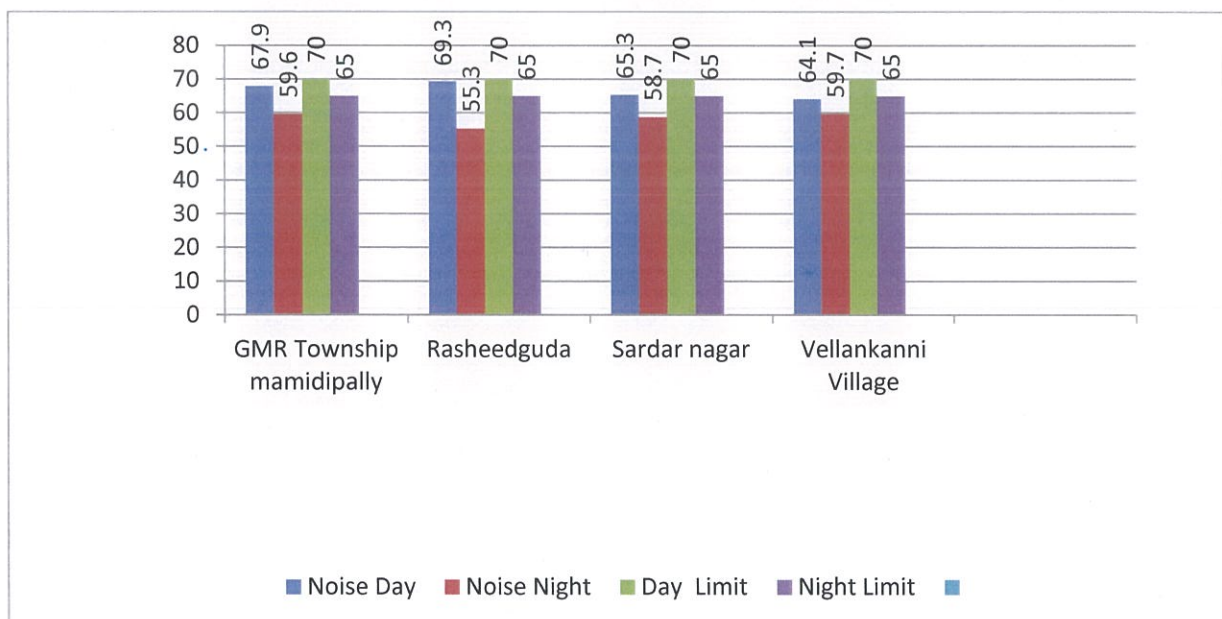


Figure-5 Noise Levels Variation for Airport Buffer zone (Airport Noise Zone).



2.4 Ground water quality monitoring:

2.4.1 Details of monitoring locations: Four ground water samples were collected and analyzed for different parameters. Locations details are given in **Table-7**.

TABLE-7
DETAILS OF GROUND WATER SAMPLING LOCATIONS

Sr. No.	Name of the location	Direction/distance with respect to airport site		Sources	Description
		Direction	Distance (km)*		
1	Raseedguda	South West	3.4	Bore well water	Rural & Residential Area
2	Gollapali	South	3.1	Bore well water	Rural & Residential Area
3	GMR Township, Mamidipalli	North East	3.43	Bore well water	Rural & Residential Area
4	Airport-1 (Irrigation Water)	West	0.0	Bore well water	Rural & Residential Area

2.4.2 Parameters monitored and results:

Monitored parameters and their results at different locations are given in **Table-9&10**.

TABLE-8
GROUND WATER QUALITY RESULTS

Date of Collection: 17.03.2026

Date of Analysis: 18.03.2026

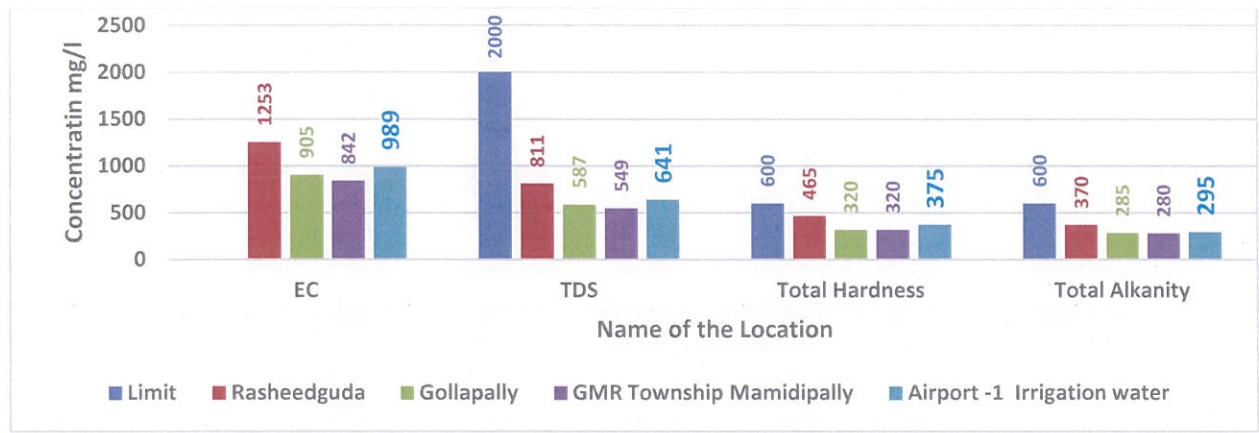
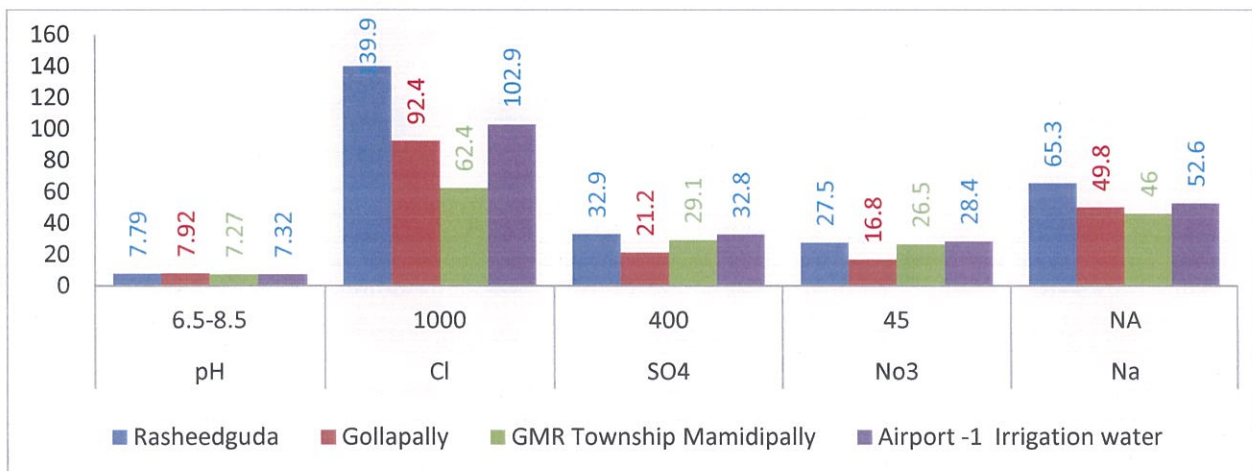
S No	Test Parameters	Units	Results		LIMITS (IS:10500)2012	
			Raseedguda	Gollapalli	Desirable	Permissible
1	pH at 25°C	-	7.79	7.92	6.5	8.5
2	Electrical Conductivity at 25°C	µS/cm	1253	905	-	-
3	Total dissolved solids at 180°C	mg/L	811	587	500	(2000)
4	Total Hardness as CaCO ₃	mg/L	465	320	200	(600)
5	Total Alkalinity as CaCO ₃	mg/L	370	285	200	(600)
6	Calcium as Ca	mg/L	106.2	78.4	75	(200)
7	Magnesium as Mg	mg/L	52.6	35.2	30	(100)
8	Free Residual chlorine	mg/L	<0.05	<0.05	0.2	(1.0)
9	Chlorides as Cl	mg/L	139.9	92.4	250	(1000)
10	Sulphates as SO ₄	mg/L	32.9	21.2	200	(400)
11	Fluorides as F	mg/L	0.59	0.61	1.0	(1.5)
12	Nitrates as NO ₃	mg/L	27.5	16.8	45	(NR)
13	Sodium as Na	mg/L	65.3	49.8	-	-
14	Potassium as K	mg/L	2.1	2.9	-	-
15	Iron as Fe	mg/L	0.19	0.05	0.3	(NR)

TABLE-9
GROUND WATER QUALITY RESULTS

Date of Collection: 17.03.2026

Date of Analysis: 18.03.2026

SNo	Test Parameters	Units	Results		LIMITS (IS:10500)2012	
			GMR Township, Mamidipalli	Airport-1 (Irrigation Water) – L5 Well	Desirable	Permissible
1	pH at 25°C	-	7.27	7.32	6.5	8.5
2	Electrical Conductivity at 25°C	µS/cm	842	989	-	-
3	Total dissolved solids at 180°C	mg/L	549	641	500	(2000)
4	Total Hardness as CaCO ₃	mg/L	320	375	200	(600)
5	Total Alkalinity as CaCO ₃	mg/L	280	295	200	(600)
6	Calcium as Ca	mg/L	70.4	76.8	75	(200)
7	Magnesium as Mg	mg/L	34.2	44.8	30	(100)
8	Free Residual chlorine	mg/L	<0.05	<0.05	0.2	(1.0)
9	Chlorides as Cl	mg/L	62.4	102.9	250	(1000)
10	Sulphates as SO ₄	mg/L	29.1	32.8	200	(400)
11	Fluorides as F	mg/L	0.42	0.69	1.0	(1.5)
12	Nitrates as NO ₃	mg/L	26.5	28.4	45	(NR)
13	Sodium as Na	mg/L	46.0	52.6	-	-
14	Potassium as K	mg/L	3.4	2.9	-	-
15	Iron as Fe	mg/L	0.11	0.14	0.3	(NR)

FIGURE- 6: VARIATION OF GROUND WATER

FIGURE- 7: VARIATION OF GROUND WATER:


2.5 Wastewater Analysis

Waste Water samples were collected from Two STP i.e. STP I & II for analysis from Equalization Tank and Softener outlet.

2.5.1 Details of Monitoring Locations:

Two wastewater samples have been collected; details of sampling location are given in **Table-10**.

TABLE-10
DETAILS OF WASTEWATER SAMPLING LOCATIONS

S. No	Location	Direction/Distance from airport		Description
		Direction	Distance	
1	Equalization Tank –I & II	Nodal Center	0.0	Wastewater samples
2	Softener outlet –I & II	Nodal Center	0.0	STP-Airport-Airside

2.5.2 Parameters Monitored:

All the parameters are well within the prescribed limits as presented in Table-12 & 13.

TABLE-11
MEASURED WASTEWATER PARAMETERS WITH RESULTS

Date of Collection: 17.03.2026

Date of Analysis: 18.03.2026

Name and Address of the Industry			M/s. GMR Hyderabad International Airport Ltd. Shamshabad-500 108, Hyderabad.		
			Results		Limits
Sl. No.	Test Parameters	Units	Equalization Tank Inlet-I	Softener Outlet - I	
1	Apparent	-	Black	Colorless	--
2	True Color	Hazen	10	<5.0	-
3	Odor	Ton	Dis-Agreeable	Dis-Agreeable	-
4	Total Suspended Solids at 105°C	mg/L	116	22	100
5	Turbidity	NTU	1.2	<1.0	-
6	Oil & Grease	mg/L	3.0	1.4	10
7	pH at 25°C	-	7.33	7.71	5.5-9.0
8	Electrical Conductivity	µS/cm	1942	1668	-
9	Residual Free chlorine as Cl	mg/L	<1.0	<1.0	1.0
10	Ammonical Nitrogen as NH ₃ -N	mg/L	124.2	3.2	50
11	Nitrates as NO ₃	mg/L	19.7	4.1	10
12	Nitrites as NO ₂	mg/L	<1.0	<1.0	-
13	Phosphates as PO ₄	mg/L	34.9	2.7	5.0
14	Chemical Oxygen demand at 150°C	mg/L	810	30	250
15	Biochemical Oxygen demand 3days at 27°C	mg/L	254	8.2	10
16	Total Hardness as CaCO ₃	mg/L	135	115	-
17	Sulfide as S ²⁻	mg/L	<1.0	<1.0	2.0
18	Dissolved Oxygen as DO	mg/L	<1.0	4.4	-
19	Arsenic as As	mg/L	<0.01	<0.01	0.2
20	Mercury as Hg	mg/L	<0.001	<0.001	0.01
21	Lead as Pb	mg/L	0.01	<0.01	0.1
22	Cadmium as cd	mg/L	0.01	<0.01	2.0
23	Hex.Chromium as Cr+6	mg/L	<0.01	<0.01	0.1
24	Total Chromium as cr	mg/L	0.05	<0.01	2.0
25	Zinc as Zn	mg/L	0.07	0.37	5.0
26	Copper as Cu	mg/L	0.32	0.14	3.0
27	E.coli	MPN/10 0ml	Absent	Absent	-
28	Total Dissolved Solids at 180°C	mg/L	1257	1083	-

****CPCB Limit as per GSR 422(E) & GHIAL Consent order dt.29.03.2024**

TABLE-12
MEASURED WASTEWATER PARAMETERS WITH RESULTS

Date of Collection: 17.03.2026

Date of Analysis: 18.03.2026

Name and Address of the Industry			M/s. GMR Hyderabad International Airport Ltd. Shamshabad-500 108, Hyderabad.		
Sl. No.	Test Parameters	Units	Results		Limits
			Equalization Tank Inlet-II	Softener Outlet – II	
1	Apparent	-	Black	Colorless	--
2	True Color	Hazen	10	<5.0	-
3	Odor	Ton	Dis-Agreeable	Dis-Agreeable	-
4	Total Suspended Solids at 105°C	mg/L	120	32	100
5	Turbidity	NTU	1.5	<1.0	-
6	Oil & Grease	mg/L	3.6	1.1	10
7	pH at 25°C	-	7.72	7.36	5.5-9.0
8	Electrical Conductivity	µS/cm	2096	1684	-
9	Residual Free chlorine as Cl	mg/L	<1.0	<1.0	1.0
10	Ammonical Nitrogen as NH ₃ -N	mg/L	130.8	4.4	50
11	Nitrates as NO ₃	mg/L	21.6	4.5	10
12	Nitrites as NO ₂	mg/L	<1.0	<1.0	-
13	Phosphates as PO ₄	mg/L	28.1	2.27	5.0
14	Chemical Oxygen demand at 150°C	mg/L	790	30	250
15	Biochemical Oxygen demand 3days at 27°C	mg/L	252	8.2	10
16	Total Hardness as CaCO ₃	mg/L	140	105	-
17	Sulfide as S ²⁻	mg/L	<1.0	<1.0	2.0
18	Dissolved Oxygen as DO	mg/L	<1.0	3.6	-
19	Arsenic as As	mg/L	<0.01	<0.01	0.2
20	Mercury as Hg	mg/L	<0.001	<0.001	0.01
21	Lead as Pb	mg/L	0.02	<0.01	0.1
22	Cadmium as cd	mg/L	0.06	<0.01	2.0
23	Hex.Chromium as Cr+6	mg/L	<0.01	<0.01	0.1
24	Total Chromium as cr	mg/L	0.06	<0.01	2.0
25	Zinc as Zn	mg/L	0.03	0.14	5.0
26	Copper as Cu	mg/L	0.29	0.10	3.0
27	E.coli	MPN/100ml	Absent	Absent	-
28	Total Dissolved Solids at 180°C	mg/L	1361	1089	-

**CPCB Limit as per GSR 422(E) & GHIA Consent order dt.29.03.2024

APHA: American Public Health Association

NTU: Nephelometric Turbidity Unit

NR : No Relaxation

FIGURE-8: VARIATION OF WASTEWATER STP – I

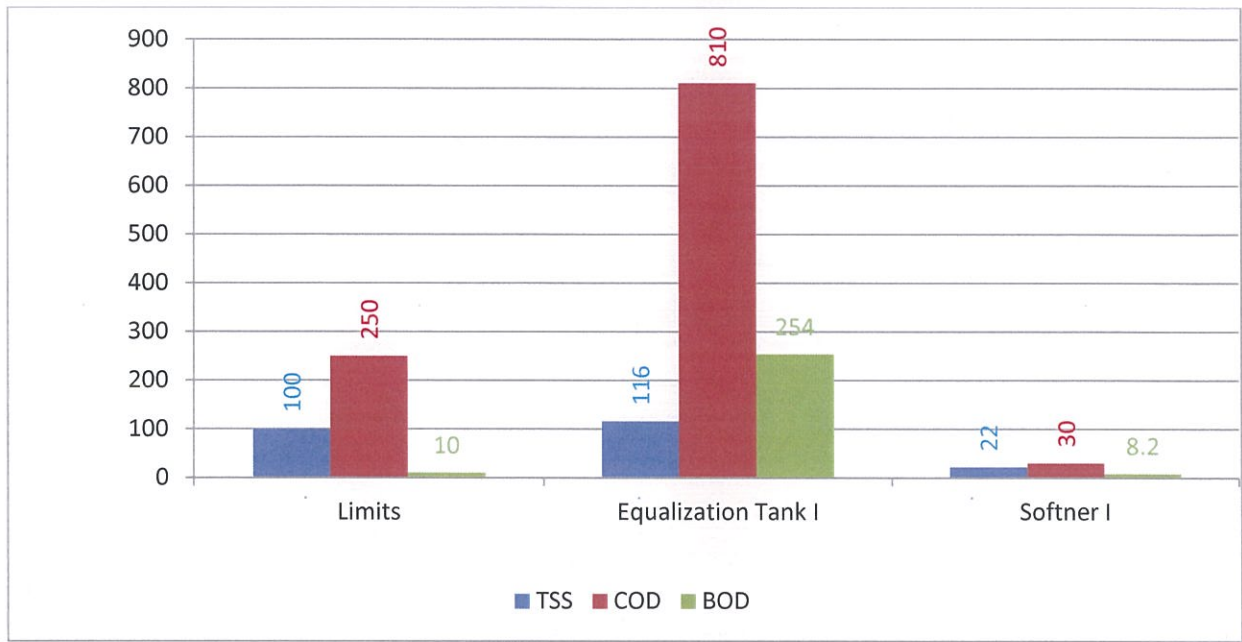
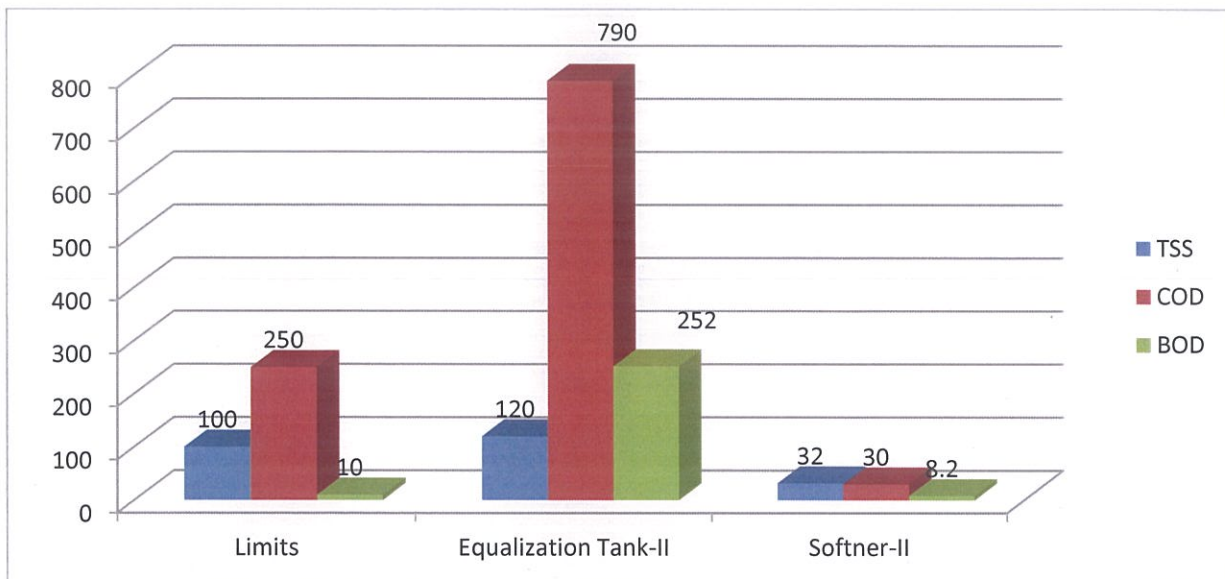


FIGURE-9: VARIATION OF WASTEWATER STP – II



2.6 DG Stack Emission Data:

2.6.1 Presentation of results

DG - Stack details

Sample Collected on	2026.03.17
DG Set No	12
DG Set Capacity	2 MVA
DG Location	DG Yard RGIA
Stack diameter (m)	0.63
Stack Cross section (m ²)	0.312

Flue Gas characteristics

Temperature (°C)	186
Velocity (m/sec)	15.5
Flow rate (Nm ³ /hr)	11473

Emission Data

Parameters	Units	Limits*	Test Results
Sulphur dioxide @ 15% O ₂	mg/Nm ³	--	75.2
	Kg/day		21.81
	Ton/day		0.021
Carbon Monoxide @ 15% O ₂	mg/Nm ³	150	35.82
	gr/kw-hr	≤ 3.5	0.205
Oxides of Nitrogen @ 15% O ₂	mg/Nm ³	710	52.79
	gr/kw-hr	NO _x ≤ 4.0	0.303
Hydro Carbons as CH ₄ @ 15% O ₂	mg/Nm ³	-	33.71
	gr/kw-hr	HC ≤ 4.0	0.193
Particulate Matter @15% O ₂	mg/Nm ³	75	16.54
	gr/kw-hr	≤ 0.2	0.095
Non-Methane Hydrocarbons (NMHC) @ 15% O ₂	mg/Nm ³	100	25.6

*Note: DG Set Emission Limits as per CPCB notification GSR 449 (E) dated 09.07.2002

DG - Stack details

Sample Collected on	2026.03.17
DG Set No	01
DG Set Capacity	160 KVA
DG Location	Site Office
Stack diameter (m)	0.20
Stack Cross section (m ²)	0.035

Flue Gas characteristics

Temperature (°C)	89
Velocity (m/sec)	11.2
Flow rate (Nm ³ /hr)	1059

Emission Data

Parameters	Units	Limits*	Test Results
Sulphur dioxide@ 15% O ₂	mg/Nm ³	--	47.7
	Kg/day		0.65
	Ton/day		0.0006
Carbon Monoxide @ 15% O ₂	mg/Nm ³	-	14.15
	gr/kw-hr	≤ 3.5	0.047
Oxides of Nitrogen@ 15% O ₂	mg/Nm ³	-	19.39
	gr/kw-hr	NO _x ≤ 4.0	0.064
Hydro Carbons as CH ₄ @ 15% O ₂	mg/ Nm ³	-	12.67
	gr/kw-hr	HC ≤ 4.0	0.042
Particulate Matter@15% O ₂	mg/ Nm ³	-	9.87
	gr/kw-hr	≤ 0.2	0.033
Non-Methane Hydrocarbons (NMHC) @ 15% O ₂	mg/Nm ³	100	23.6

***Note: DG Set Emission Limits as per CPCB notification GSR 771 (E) dated 11.12.2013**

3.0 CONCLUSION:

Ambient Air Quality:

Ambient Air Quality parameters such as PM₁₀, PM_{2.5}, SO₂, NO_x, CO, Ammonia, Ozone, Methane and Benzene are well within the limits prescribed by TSPCB.

Ambient Noise Level:

Noise levels recorded in day and night are within the standard limits.

Wastewater Quality:

Wastewater samples are collected from each stage of treatment process in STP, Outlet water quality are within the General standard of effluent Discharge limits prescribed by Central Pollution Control Board and as per CFO issued by Telangana State Pollution Control Board.

Ground Water Quality:

Ground water samples are drawn from various locations in and surrounding villages which are found within the permissible limits.

Stack Emission:

Stack emission parameters are tested and found within the standard limits as prescribed by the TSPCB.

Hazardous Waste Generation and Disposal during Apr '25 – Mar '26

Manifest number	Date	Name of the waste	Name of Generator	Quantity (Litres)	Authorised agency
GHIAL/HWM/2025/01	02-05-2025	Used oil	Inter Globe Aviation Ltd (Indigo)	4600	M/s. Smart Lubricants
GHIAL/HWM/2025/02	23-07-2025	Used oil	Air India Sats Airport Services Pvt. Ltd.	3150	M/s. Supreme Lubricants Pvt. Ltd.
GHIAL/HWM/2025/03	10-09-2025	Used Oil	Inter Globe Aviation Ltd (Indigo)	2520	M/s. Smart Lubricants
GHIAL/HWM/2025/04	17-09-2025	Used oil	GHIAL	1890	M/s. Supreme Lubricants Pvt. Ltd.
GHIAL/HWM/2025/05	10-10-2025	Used Oil, Soaked mats, Used filter elements	Reliance BP Jio	800 litres used oil, 100 nos. soaked mats, 20 nos. used oil filter elements	M/s. Smart Lubricants
GHIAL/HWM/2025/06	11-12-2025	Used Oil	Air India Sats Airport Services Pvt. Ltd	1260	M/s. Supreme Lubricants Pvt. Ltd.
GHIAL/HWM/2025/07	19-12-2025	Used oil	Inter Globe Aviation Ltd (Indigo)	1470	M/s. Smart Lubricants
GHIAL/HWM/2025/08	30-12-2025	Used oil	GHIAL	4410	M/s. Supreme Lubricants Pvt. Ltd.
GHIAL/HWM/2026/01	23-01-2026	Used oil	Inter Globe Aviation Ltd (Indigo)	630	M/s. KMR Industries
Total hazardous waste generation during Apr '25 – Mar '26				20730 litres of Used Oil, 100 nos. soaked mats and 20 nos. used oil filter elements	

Solid Waste Disposal for April 2025-March 2026

Month & Year	Quantity in kg
Apr-25	519244
May-25	569769
Jun-25	527561
Jul-25	537014
Aug-25	631597
Sep-25	561060
Oct-25	401746
Nov-25	484963
Dec-25	561856
Jan-26	239033
Feb-26	341398
Mar-26	785438
Total waste generation	6160679
STP Sludge	883000
Total waste generation from process + STP	7043679

Note: Total solid waste generated 7043679 kg/year [Food waste-5436641 kg, STP sludge-883000 kg, paper/carton box- 337728 kg, plastic-200995 kg, Iron/Metal waste-62670 kg and glass-122645 kg]