

GMR Hyderabad International Airport Limited

MOEF&CC - Environmental Clearance - 50 MPPA

Six Monthly Condition Wise Compliance Report –

October 2021 to March 2022

Subject: Environmental Clearance for the expansion of Rajiv Gandhi International Airport (RGIA) 50 MPPA at village Shamshabad, in Hyderabad, Telangana by M/s. GMR Hyderabad International Airport Limited (GHIAL)

Reference: Ministry of Environment, Forest and Climate Change (MoEF &CC) clearance F.No.10-71/2018-IA-III dated 05th Nov 2019 and Addendum issued for F.No.10-71/2018-IA-III dated 15th May 2020

S.NO	PART A - SPECIFIC CONDITIONS	COMPLIANCE STATUS
A. SPECIFIC CONDITIONS:		
i.	Clearance from Directorate General of Civil Aviation (DGCA) and Airports Authority of India (AAI) for safety and project facilities shall be obtained	As advised all necessary clearances will be obtained from DGCA and AAI before commissioning the facilities. * In March 2022 GHIAL has obtained commissioning level approval from DGCA for vehicular movement in GSE Tunnel, for Taxiway J, extended portion of Taxiway D and recommissioning of a portion Taxiway K1 at RGI Airport, Hyderabad.
ii.	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	We have obtained Consent for Establishment for RGIA Expansion from 25 – 40 MPPA from TSPCB on 18.09.2020 and further CFO will be obtained from TSPCB as per the regulations before going for operation.
iii.	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.	Noted and the airport is being complied with GSR 94(E) notification on dust mitigation measures for C&D waste
iv.	Water requirement after expansion shall not exceed 14,332 KLD. Water requirement for the airport shall be met by HMWSSB with prior permission before commissioning of the project. No ground water shall be extracted without prior permission from CGWA.	After expansion of the airport, water consumption will be limited up to 14332 KLD. GHIAL has obtained permission for the Ground water abstraction and rainwater recharge plan from the state ground water department vide letter no. 65/OS/GWD/RRD/2020/214/ dated 19/3/2021.
v.	Aircraft maintenance, sensitivity of the location where activities are undertaken, and control of runoff of potential contaminants, chemicals etc., shall be properly implemented and reported	The aircraft maintenance activity is being performed in the closed workshop i.e., Maintenance, Repair, and Overhauling (MRO) facility of the airport. The washings and floor cleanings of the MRO facility are routed to an in- house ETP with in the workshop.
vi	The wastewater generated shall be treated in the Sewage Treatment Plant (STP) of capacity 1850 KLD (2 x 925 KLD) (existing), 3000 KLD (under implementation) and 2200 KLD (proposed). Overall STP capacity after the expansion shall be 7050 KLD. Treated water shall be reused for flushing, cooling water make-up and green belt development. As proposed the Airport will operate on zero liquid discharge principle.	GHIAL is operating Airport on zero liquid discharge principle. Wastewater generated in Airport is recycled by treating water in STP and reused for cooling tower makeup, Flushing and Landscaping i.e., for plantation in the Airport.

vii	During construction and operational phase AAQ monitoring should include PM 10, PM2.5, SO2, NOx, NH3, CO, CH4 and Benzene.	The AAQ monitoring is being done during the construction activities and also while operation of the airport expansion project.
viii	During airport operation period, noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations. A monitoring station for ambient air and noise levels shall be provided in the village nearest to the airport.	GHIAL is operating an online continuous environmental monitoring station at the boundary of the Airport to monitor ambient noise levels of the airport and the parameters are ensured within the permissible limits.
ix	Traffic Management Plan as submitted shall be implemented in letter and spirit. Apart, a detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time. Traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D] competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	Traffic management and decongestion plan has already been carried out by the specialized agency i.e., IBI Consultancy India Private Limited in December 2018.
X	An onsite disaster management plan shall be drawn up to account for risks and accidents. This onsite plan shall be dovetailed with the onsite management plan for the district.	Airport is having an onsite disaster management plan, which covers fire accidents, natural calamities etc. The plan has been developed to cascade and integrate with the district onsite management plan.
xi	No tree shall be cut/transplanted unless exigencies demand. Where absolutely necessary, tree cutting/transplantation shall be with prior permission from the concerned Authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest	We ensure the permission of the forest department for trees cut/ transplantation within the Airport premises.

	Department. Plantations to be ensured species (cut) to species (planted). In case of any tree felling/non-survival of transplanted tree, compensatory plantation in the ratio of 1:10 (i.e., planting of 10 trees for every 1 tree) shall be done and maintained. The plantation species 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. Adequate area shall be provided for green belt development and landscaping.	
xii	A water security plan to the satisfaction of the CGWA shall be drawn up to include augmenting water supply and sanitation facilities and recharge of ground water in at least two villages and schools, as part of the C.S.R. activities.	Water security plan is not required as per latest notification published by CGWA, GOI notification: File No. 25-231CGWA/NOCAP/2018 Dated 01.02.2019. GHIAL has established several water management projects in the surrounding villages to improve the drinking water quality and augmentation of ground water.
xiii	The company shall draw up and implement a corporate social Responsibility plan as per the Company's Act of 2013.	Noted and the CSR plan is being implemented as part of the Environmental Management Plan and CSR activities.
xiv	As per the Ministry's Office Memorandum F.No. 22-65/2017-IA.III dated 1 st May, 2018, and proposed by the project proponent, an amount of FRS. 21.25 Crore @0.25% of project Cost) shall be earmarked under Corporate Environment Responsibility (CER) for the activities such as Education (Gifted Children Scheme providing English medium education support from 1st std till they get a job to the meritorious children from under privileged from villages around Airport , Support to 11 Govt Schools around Airport -Providing teachers wherever there is shortage, infra support, note books etc., Education support to Airport Cab Drivers Children), Health & Sanitation (Medical Camps in villages around Airport, Mobile Medical Unit (MMU) for senior citizens with free treatment & medicines in 23 villages around Airport, New MMU Vehicle, Nutrition Centres for pregnant & lactating women	GMR Hyderabad International Airport Ltd. (GHIAL) has been implementing community development initiatives in the villages surrounding Rajiv Gandhi International Airport form the past 16 years. The objective is to improve the quality of life of the communities through need-based interventions in the areas of Education; Health, Hygiene, Sanitation; and Empowerment and Livelihoods. Education: Intensive activities in these thrust areas have been focused in six villages i.e. Airport Colony (rehabilitation colony), Gollapalli, Mamidipalli, Shamshabad, Charynagar and Ranganayakula Thanda as these are the villages most affected by the airport. The CSR initiatives are also extended to another 17 villages surrounding the airport. CSR activities in these villages have created a win-win situation for the community and the Company. For instance, skill trainings followed by job placements have helped youth from marginalized groups in these villages to settle in wage/self-

<p>in 3 villages), Empowerment & Livelihoods (Hyderabad Vocational Training Centre to train about 1000 youth every year with free boarding & lodging facilities and placement support, Nagaram Vocational Training centre, training about 300 youth every year, Raikal Vocational Training Centre training about 300 youth every year, Support to Swarna Bharath Trust, Muchintal for Vocational Trainings, Boys Hostel Construction at Vocational Training Centre, Hyderabad, Community Level Trainings, Admin Expenses and Community Development (Community Street lights, Community Infra support, Support to Orphanages). The activities proposed under CER shall be restricted to the affected area around the project, The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.</p>	<p>employment, which has resulted in improved economic status of the families.</p> <p>The CSR initiatives around RGIA in the sphere of education are focused on addressing the gap in quality of education in the target area. GHIAL-CSR has been supporting the govt. educational institutions from pre-primary to higher secondary levels in eight villages. Further, GHIAL-CSR is supporting 121 poor and meritorious children from four villages to GMR Chinmaya Vidyalaya to make quality education accessible to local communities. Through these intensive initiatives, the CSR has been able to reach about 3000 in 11 primary schools and 4 high schools.</p> <p>Health:</p> <p>With the intent of making ‘Health for All’ GHIAL CSR launched a series of initiatives from treatment to awareness towards the well-being of people around Hyderabad Airport. Based on various needs assessment studies in the project sites, four major health interventions are being implemented.</p> <p>The MMU started its operations from the year 2005 in association with Help Age India, providing healthcare services to the elderly people in 13 villages. In target villages, 5-7 per cent of the population comprises of the elderly and all are availing MMU services. Once-a-week MMU visits all the 13 villages around the airport and elderly are making use of the medical advice and free medicines as per their need. During the reporting period, 26400 treatments were provided and medicines were also given to the needy.</p> <p>In order to reduce the maternal and infant mortality rates in the community, the GHIAL CSR initiated Nutrition Centres in the year 2005 at Airport Rehabilitation Colony, Ranganayakula Thanda and Mamidipally villages for pregnant and lactating women. These Centres provide daily nutrition supplements, health awareness sessions and regular health check-ups for them. During the year 300 under-privileged women got benefitted from these centres.</p> <p>Empowerment and Livelihoods:</p> <p>GHIAL CSR is running 3 vocational training Centre’s in Telangana,. In 2021-2022, 1056 candidates were trained in these Centers and 920 settled either by way of wage employment or self-employment.</p>
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		<p>Women empowerment is one of the key focus areas of GHIAL-CSR and as part of this, women groups from affected villages have been trained on tailoring, jute and paper products, chocolate making, garment making, etc. To further support the women in marketing these products, an initiative called EMPOWER (Enabling Marketing of Products of Women Entrepreneurs) has been initiated by GHIAL CSR. During April 2021 to March 2022, the turnover of EMPOWER was Rs. 77 lakhs. Total Women benefited are 35 women.</p>
B. STANDARD CONDITIONS:		
I. Statutory compliance:		
i	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	Telangana state is having its own regulation i.e., Water, Land and Trees Act - 2002. Accordingly, the water resource management is coming under the State Ground Water Department jurisdiction. Accordingly, GHIAL has obtained permission for the Ground water abstraction and rainwater recharge plan from the state ground water department vide letter no. 65/OS/GWD/RRD/2020/214/ dated 19/3/2021.
ii	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.	GHIAL have power agreement with State electricity board.
iii	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.	All the necessary permissions were taken from competent authority for present storage capacity and for future coming storage facilities the permissions will be taken as per the guidelines from competent authority.
II. Air quality monitoring and preservation:		
i	During construction and operational phase AAQ monitoring should include PM10, PM2.5, S02, NOx, NH3, CO, CH4 and Benzene.	An Online Continuous Ambient Air quality monitoring station is being operated at the RGIA airport premises. Analyzers to monitor NH3 & Benzene will be installed shortly.
ii	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM10 and PM2.5 in reference to PM emission, and S02 and NOX in	Complied with. The ambient air quality monitoring is being done within the airport (one) by a permanent station and around the airport at three locations at an angle of 120 degrees each covering upwind/downwind

	reference to SO ₂ and NO _x emissions) within and outside the airport area at least at four locations (one within and three outside the plant area at an angle of 120 each), covering upwind and downwind directions	directions by engaging a MoEF &CC authorized laboratory.
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 iv. The excavation working area should be sprayed with water after operation so as to maintain the entire surface wet.	Water is sprayed on soil and other construction material. So as to maintain the entire surface wet prior to any operations like loading, unloading or transfer of material.
iv	Excavated materials shall be handled and transported in a manner that they do not cause any problems of air pollution.	Wet conditions are maintained by spraying water on excavation materials during handling and transportation of material.
v	The soil/construction materials carried by the vehicle should be covered by impervious sheeting to ensure that the dusty materials do not leak from the vehicle.	Vehicles carrying soil/ Construction materials is covered by impervious sheet to prevent the leak of dusty material from vehicle.

III. Water quality monitoring and preservation:

i	Aircraft maintenance, sensitivity of the location where activities are undertaken, and control of runoff of potential contaminants, chemicals etc. shall be properly implemented and reported.	Noted and will be ensured during the operational phase.
ii	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	Noted and will be ensured during the operational phase.
iii	Proper drainage systems, emergency containment in the event of a major spill during monsoon season etc. shall be provided	Runoff drainage system and emergency containment for the spill controls are being provided.
iv	The runoff from paved structures like Runways, Taxiways, can be routed through drains to oil separation tanks and sedimentation basins before being discharged into rainwater harvesting structures.	For the current airport operations, runoff from runways and taxiways is collected and routed through drains to oil separation tanks before being discharged into rainwater harvesting structures. Similarly, for the airport expansion, the same procedure will also be implemented.

v	Storm water drains are to be built for discharging storm water from the airfield to avoid flooding/water logging in project area. Domestic and industrial wastewater shall not be allowed to be discharged into storm water drains.	The runoff from Airfield area is discharged through storm water drains to avoid flooding or water logging. No waste water is discharged in to storm water drains.
vi	Rainwater harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Rainwater harvesting structures shall conform to CGWA designs. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.	The runoff from rooftop will be collected in drains and passed through oil and water separation tanks and sedimentation basins before recharge into rainwater harvesting structures.
vii	Total freshwater use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.	Fresh water consumption is limited with in the permitted quantity. GHIAL has obtained permission from HMWSSB for usage of fresh water.
viii	A certificate from the competent authority for discharging treated effluent/ untreated effluents into the public sewer/ disposal/drainage systems along with the final disposal point should be obtained.	GHIAL follows zero liquid discharge principle by which the waste water generated in RGI Airport is recycled in Airport STP and reused for flushing and irrigation. No waste water is discharged from airport. * Wastewater from the STP outlet quality is being analysed and reported by MoEF&CC approved laboratory.
ix	A detailed drainage plan for rainwater shall be drawn up and implemented	Currently, the Airport is having the rainwater draining system for its paved areas and building rooftops. The runoff is collected in the rainwater storage tanks and allowed for recharge within the airport premises. Further, the drainage network is being extended in line with the airport expansion work plan.
x	No ground water shall be extracted without prior permission from CGWA.	GHIAL has obtained permission from State Ground Water Board of Telangana for extracting and using ground water.
xi	A water security plan to the satisfaction of the CGWA shall be drawn up to include augmenting water supply and sanitation facilities and recharge of ground water in at least two villages and schools, as part of the C.S.R. activities.	Water security plan is not required as per latest notification published by CGWA, GOI notification: File No. 25-231CGWA/NOCAP/2018 Dated 01.02.2019. GHIAL has established several water management projects in the surrounding villages to improve the drinking water quality and augmentation of ground water.
IV. Noise monitoring and prevention:		
i	Noise level survey shall be carried as per the prescribed guidelines and report in this regard	Noted and the noise monitoring reports are enclosed as Annexure - 2

	shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	
ii	Noise from vehicles and 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.	Noise generated from vehicles, power machinery and Equipment onsite are kept under the prescribed limits by undertaking regular servicing, maintenance of mufflers and enclosures of equipment.
iii	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.	Presently, the DG sets are equipped with acoustic enclosures. Necessary noise mitigation measures are being practiced by the airlines and ground support departments. Further, the same will also be practiced for the airport expansion project to reduce the noise from DG sets, ground-run bays and ear plugs for operating personnel.
iv	During airport operation period, noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations. A monitoring station for ambient air and noise levels shall be provided in the village nearest to the airport	An online continuous environmental monitoring station with ambient noise and ambient air quality monitoring equipment is being operated at the boundary of the airport. The monitoring results are found within the prescribed limits. In the surrounding villages, ambient air and noise levels are being monitored by an authorized environmental laboratory.
v	Where construction activity is likely to cause noise nuisance to nearby residents, restrict operation hours between 7 am to 6 pm.	Noted and the construction activity is restricted between 07:00 a.m. to 6:00 p.m.
IV. Energy Conservation measures:		
i	Energy conservation measures like installation of LED for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning.	GHIAL had included several energy conservation measures in the project design and installed energy efficient lighting equipment like Compact Fluorescent Lamps (CFLs) /Tubular Fluorescent Lamps (TFLs) and Light-emitting diode (LEDs) for lighting the areas outside the building. The electrical waste is disposed off as per the e-Waste Management and Handling Rules, 2016.
V. Waste management:		
i	Notification GSR 94(E) dated 25.012018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities shall be complied with.	Dust mitigation measures are being implemented in RGIA as per notification GSR 94(E) dated 25.01.2018 of MoEF&CC.

ii	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).	Excavated soil is separately stored at designated low-level areas and ensured the heap slopes maintained not greater than 2:1 (horizontal/vertical).
iii	The project activity shall conform to the Fly Ash notification issued under the E.P. Act of 1986.	Noted.
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 disposed off as per Solid Waste Management Rules, 2016 and Construction and Demolition Waste Rules, 2016.	All the solid waste, Construction & Demolition waste generated at construction site is managed as per the Solid Waste Management Rules, 2016 and Construction and Demolition Waste Rules, 2016.
v	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.	All the Construction & Demolition waste is managed as per Construction and Demolition Waste Rules, 2016.
vi	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: <ul style="list-style-type: none"> a. Trash collected in flight and disposed at the airport including segregation, collection and disposal. b. Toilet wastes and sewage collected from aircrafts and disposal at the Airport. c. Wastes arising out of maintenance and workshops d. Wastes arising out of eateries and shops situated inside the airport complex. e. Hazardous and other wastes 	Noted.
vii	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. Solid wastes	All the solid waste, generated from construction site, PTB, Flight Kitchens, Canteens are properly segregated & managed as per the Solid Waste Management Rules, 2016

	shall be disposed in accordance to the Solid Waste Management Rules, 2016 as amended	
viii	A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project	Noted.
ix	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.	Used CFL's & TFL's is collected and disposed to authorized recycler.
VI. Green Belt:		
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 Airport.	GHIAL have developed 694.5 acres, greenbelt has been developed with various plants.
ii	Topsoil shall be separately stored and used in the development of green belt.	Excavated topsoil is separately stored at designated low-level areas and ensured the heap slopes maintained not greater than 2:1 (horizontal/vertical).
VII. Public hearing and Human health issues:		
i	Construction site should be adequately barricaded before the construction begins.	All the adjoining construction sites are barricaded without any openings for the airside access/intrusion.
ii	Traffic congestion near the entry and exit points from the roads adjoining the airport shall be avoided. Parking should be fully internalized, and no public space should be utilized.	Traffic congestion near the entry and exit points from the roads adjoining the Airport is avoided by construction of 4 & 6 lane (from Hyderabad –Bangalore highway to the Srisailam highway) road. A fully internalized dedicated parking area has been developed and no public space is utilized.
iii	Provision of Electro-mechanical doors for toilets meant for disabled passengers. Children nursing/feeding room to be located conveniently near arrival and departure gates.	Provision of electro-mechanical doors at toilets meant for disabled passengers is included in the terminal expansion works and implemented. In addition, the nursing/feeding rooms for children near arrival and departure gates have been provided.
iv	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Airport is having an onsite disaster management plan, which covers fire accidents, natural calamities etc. The plan has been developed to cascade and integrate with the district onsite management plan.
v	Provision shall be made for the housing of construction labour within the site with all	Construction Labours are provided with all necessary infrastructure and facilities within the site.

	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.	
vi	An onsite disaster management plan shall be drawn up to account for risks and accidents. This onsite plan shall be dovetailed with the onsite management plan for the district.	Airport has an onsite disaster management plan, which covers fire accidents, natural calamities etc. The plan has been developed to cascade and integrate with the district onsite management plan.
vii	Occupational health surveillance of the workers shall be done on a regular basis.	Occupational health surveillance of workers is done regularly.
VIII. Corporate Environment Responsibility:		
i	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Noted.
ii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.	GHIAL Have a separate environmental management cell (EMC) with qualified staff.
iii	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the	An adequate amount has been allocated for environmental management activities

	Ministry/Regional Office along with the Six-Monthly Compliance Report	
iv	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	The Environment Dept. of GHIAL has made an annual audit plan and the audits are being conducted for the airport stakeholders as per the plan. Also, third party environmental audit is conducted annually as part of ISO 14001 compliance process.
IX. Miscellaneous:		
i	The project proponent shall make public the environmental clearance granted for their project, along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Environment clearance of the project is advertised in two local newspapers, of which one is vernacular language. Copy of newspaper advertisement is attached as Annexure 1
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Copies of the clearance letter have been shared with the offices of Notified Area Committee, Panchayat and local bodies.
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	The six-monthly report is being submitted to the Regional office, MoEF, CPCB, and State Pollution Control Board. The results of the environmental parameters monitoring have been enclosed as Annexure – 2.
iv	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment Forest and Climate Change at environment clearance portal.	GHIAL is submitting six monthly report on the status of the compliance of stipulated Environmental conditions to MOEF&CC.
v	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	The Annual Environmental Statement 2020-21 in Form- V is submitted to SPCB on 29.09.2021 and soft copy of the same is uploaded in the company website. https://www.hyderabad.aero/green-sky-initiatives.aspx pdf

vi	The criteria pollutant levels namely; PM10, PM2.5, SO2, NOx (ambient levels) shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Criteria pollutants levels like PM10, PM 2.5, SO2 and NOx in Ambient Air is monitored continuously and values are displayed at a convenient location near main gate of the GHIAL site office
vii	The project proponent 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, commencing the land development work and start of production operation by the project	GHIAL issued USD 300 mn (Rs 2067 cr) through offshore bonds in April 2019 and additional USD 300 mn (Rs 2188 cr) through offshore bonds in February 2021.
viii	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Project authorities will strictly adhere to stipulations made by Telangana State Pollution control Board and state Govt
ix	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that made during their presentation to the Expert Appraisal Committee.	GHIAL shall abide by all the commitments and recommendations made in the EIA/EMP report, public hearing and Expert Appraisal Committee
x	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	No further expansion or modifications shall be made without prior approval from MoEF&CC.
xi	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted and No fabricated data shall be submitted to MoEF&CC.
xii	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
xiii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.
xiv	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted.

xv	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts/NGT and any other Court of Law relating to the subject matter.	Noted.
xvi	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.

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RGIA 50 MPPA Expansion Environment Clearance Advertisement in Newspaper

The New Indian Express: - dated 16.11.2019

 **HYDERABAD** RAJIV GANDHI INTERNATIONAL AIRPORT **GAR**

NOTICE

This is to inform that the Government of India, Ministry of Environment, Forest, and Climate Change(MOEF&CC), New Delhi has accorded **Environmental Clearance(EC)** for expansion of Rajiv Gandhi International Airport from **25 MPPA to 50 MPPA capacity**, Shamshabad village, Hyderabad, Telangana by M/s GMR Hyderabad International Airport Limited.

Copy of the said Environmental Clearance with the environmental conditions and safeguards were made available in the airport website www.hyderabad.aero and may also be seen in the MOEF &CC website www.envfor.nic.in. The copy of the Environmental Clearance is also available with the Telangana State Pollution Control Board.

Dt. 16.11.2019 Sd/-
Authorised Signatory

HIA/39/PREM ASSOCIATES



HYDERABAD RAJIV GANDHI INTERNATIONAL AIRPORT



ప్రకటన

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సంతకము

(అధికృత సంతకందారుడు)

ENVIRONMENTAL QUALITY MONITORING REPORT

March 2022

Rajiv Gandhi International Airport



Submitted to:



M/s. GMR Hyderabad International Airport Limited,

Shamshabad, Hyderabad - 500108.

Prepared by:



M/s Pragathi Labs and Consultants Pvt. Ltd.

(Recognized by MoEF & CC., GOI, New Delhi

Certified by ISO 9001:2015, & ISO 45001:2015)

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For and on behalf of
M/s. PRAGATHI LABS & CONSULTANTS
PVT LTD


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ABBREVIATIONS

Short	Expanded Form	Short	Expanded Form
%	Percentage	L _{eq.}	Equivalent levels
°C	Degree Celsius	m	Meter
µg	Microgram	mg	Milligram
µm	Micrometer	mg/l	Milligram per liter
µs	Micro Siemens	mg/Nm ³	Milligram per normal cubic meter
AAQ	Ambient Air Quality	max	Maximum
ACF	Activated Carbon Filter	min	Minimum
AGL	Airfield Ground Lighting	mm	Millimeter
a.m.	After meridian	m/sec	Meter per second
TSPCB	Telangana State Pollution Control Board	Nm ³	Normal cubic meter
APHA	American Public Health Association	Nm ³ /hr	Normal cubic meter per hour
BOD	Bio-Chemical Oxygen Demand	NO _x	Oxides of Nitrogen
BDL	Below Detectable Limit	NW	Northwest
COD	Chemical Oxygen Demand	pH	Potentiality of hydrogen ions
CFO	Consent for Operation	PM _{2.5}	Particulate Matter size less than 2.5 µm
cm	Centimeter	PM ₁₀	Particulate Matter size less than 10 µm
CO	Carbon Monoxide	p.m.	Post meridian
dB(A)	Decibels on scale A	ppm	Parts per million
ds/m	Decisiemens per meter	RGIA	Rajiv Gandhi International Airport
D.G. Set	Diesel Generator Set	RWHS	Rain Water Harvesting Structure
E.C.	Electrical Conductivity	SE	Southeast
ENE	East of Northeast	SO ₂	Sulphur Dioxide
g/cc	gram/centimeter cube	SPM	Suspended Particulate Matter
GHIAL	GMR Hyderabad International Airport Ltd	Sq.m	Square meter
IS	Indian Standards	SSW	South of Southwest
kg/ha	Kilogram per hectare	STP	Sewage Treatment Plant
km	Kilometer	TDS	Total Dissolved Solids
km/h	Kilometer per hour	WNW	West of Northwest
KVA	Kilo Volt – Ampere	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. Pragathi Labs & Consultants Pvt Ltd (PLCPL)** the environmental consultancy service contract for carrying out monthly environmental parameters monitoring study for their ongoing works of Rajiv Gandhi International Airport, Shamshabad and Hyderabad. This monitoring report is an overview of the findings of the field investigations carried out for the month of March, 2022. The field monitoring data was collected during **03-03-2022 to 08-03-2022** at Rajiv Gandhi International Airport, Shamshabad and surrounding area. The study area for Environmental Monitoring is airport premises and its surrounding area 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 the 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 (63%) in partnership with Airport Authority of India (13%), Government of Telangana (13%) and Malaysia Airports Holdings Berhad (11%). 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 duplicate 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

2.1.1 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.

2.1.2 Meteorological Data

Meteorological data was recorded continuously in RGIA Core Zone, during the study period of March 2022. Recorded average values for the month of March 31st 2022.

Table 1 Meteorological data of March 2022

S. No.	Parameters	March 2022		
		Min	Max	Average
1	Relative humidity (%)	7.4	88.7	41.8
2	Temperature (°C)	17.1	40.2	28.9
3	Total rainfall (mm)	0.0		
4	Predominant Wind Direction	E ,ESE,SE		
5	Wind speed (m/s)	0	2.99	0.90
6	Atmospheric Pressure (mille bars)	599.86	600.18	599.88

2.1.3 Results

The predominant wind direction found during study period of March month was predominantly East followed by East South East & South East. Wind frequency in the East (16.9%), East South East (12.2%), and South East (11.4%).The blowing wind speed varies from 0 to 2.99 m/s of the total time.Calm conditions prevailed for 22.31 % (<1km/hr) of the total time. The minimum and maximum temperature is 17.1 °C of 40.2 °C in the total time.

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

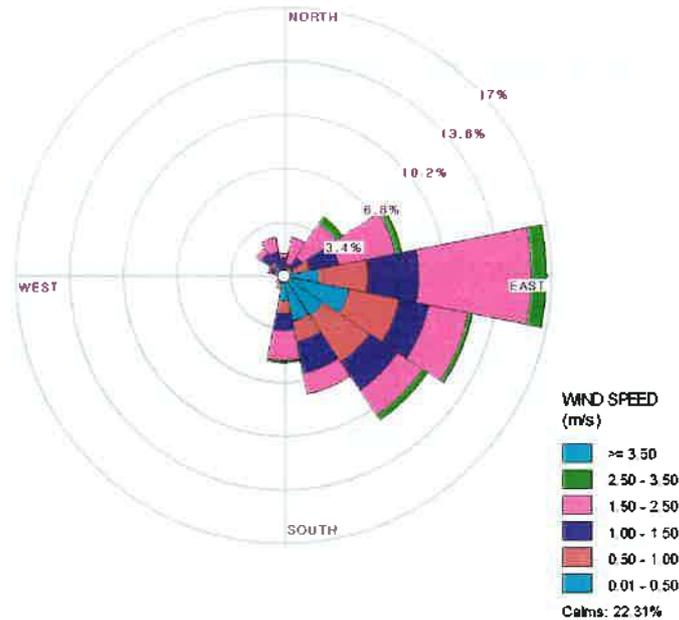


Fig. 1 Wind Rose Diagram of March 2022

2.2 Ambient Air Quality

2.2.1 Analysis Techniques and Method of Measurement

Table 2 Ambient Air Quality Monitoring Methodology and Protocol

S. No.	Parameter	Method of Measurement
1	Particulate Matter (PM ₁₀)	Respirable Dust Sampler (IS:5182 (Part-23), 2006
2	Particulate Matter (PM _{2.5})	PM _{2.5} Dust Sampler (IS:5182-Part-24),
3	Sulphur Dioxide (SO ₂)	IS:5182 (Part-2), 2001 (Improved West & Gaeke Method)
4	Nitrogen dioxide(NO ₂)	IS:5182 (Part-6),2006 (Modified Jacob & Hocchheiser Method)
5	Carbon Monoxide (CO)	IS:5182 (Part-10), 1999 (Non-Dispersive Infra-Red Method)
6	Hydrocarbons (HC)	IS:5182 (Part-17), 1979 (Adsorption and Desorption followed by GC)
7	Ozone (O ₃)	IS:5182 (Part-9), 1974 (Chemical Method)

2.2.2 Details of Monitoring Locations

Ambient air quality monitoring is conducted in and around RGI Airport in 4 locations and the details of Location is mentioned in Table 3.

Table 3: Ambient Air Quality Monitoring Locations

S. No	Name of the Location	Direction	Distance from the Aerodrome Reference (km)	Specification of the Location
1	Near East Pier Flg-4	-	---	Core Zone
2	GMR Vara Lakshmi Foundation	North west	---	Core Zone
3	GMR Township, Mammidipalli	North East	3.43	Buffer Zone
4	Rasheedguda	South West	3.29	Buffer Zone

2.2.3 Ambient Air Quality Results

Ambient Air samples are collected as per the procedure mentioned in Table 2 and collected samples are analyzed for PM₁₀, PM_{2.5}, SO₂, NO_x, Ozone, CO, and Hydrocarbons. Ambient air quality results are given in Table 4.

Table 4: Ambient Air Quality Results in Expansion Sites

Parameter	Unit	Limit	GMRVF	GMR Township, Mammidipalli	Rasheedguda	Near East Pier Flg-4
Date of Monitoring			03-03-2022	03-03-2022	03-03-2022	03-03-2022
PM ₁₀	µg/m ³	100	60	54	48	63
PM _{2.5}	µg/m ³	60	32	28	24	30
Sulphur Dioxide (SO ₂)	µg/m ³	80	14.5	12.8	10.2	16.1
Oxides of Nitrogen (NO _x)	µg/m ³	80	18.7	17.2	16.4	20.3
Ozone (O ₃)	µg/m ³	100	10.9	9.7	12.5	11.6
Carbon Monoxide (CO)	mg/m ³	2	0.34	0.28	0.25	0.46
Hydrocarbons (HC)	ppm	-	<1.0	<1.0	<1.0	<1.0

*Note: AAQ Standard limits: - as per GHIAL's CFO dated 01.02.2022.

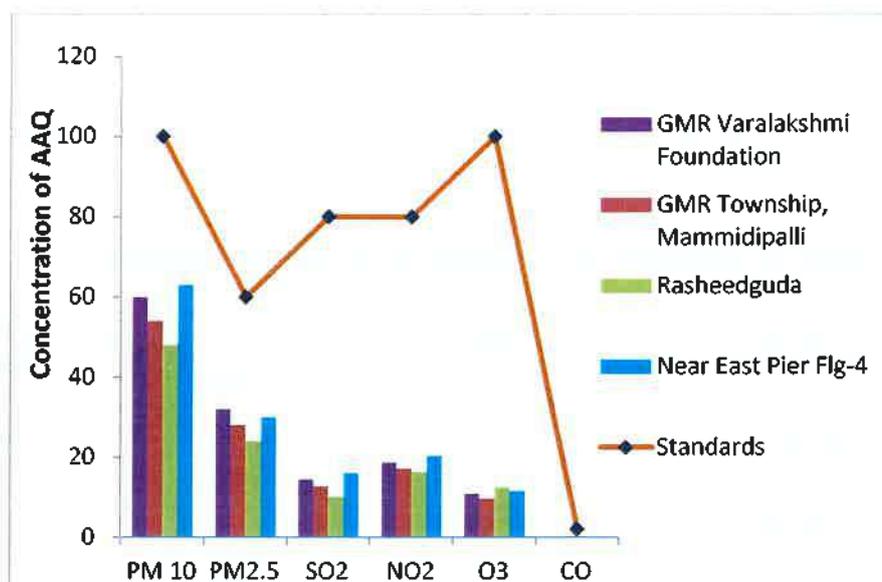


Fig. 2 Ambient Air Quality in Buffer and Core Zone

2.3 Ambient Noise Levels Monitoring:

2.3.1 Details of monitoring locations:

During Ambient Noise monitoring, noise levels are recorded in and around airport premises in 4 locations. Details of location are mentioned in Table - 5.

Table - 5: Ambient Noise Monitoring Locations

S. No	Name of the Location	Direction	Distance from the Aerodrome Reference Point (ARP) (km)*	Specification of the Location
1	AGL West	West	0.0	Core Zone
2	AGL East	East	0.0	Core zone

2.3.2 Ambient Noise Levels Results: Results of Ambient Noise Levels in and around airport premises is in Table - 6.

Table 6: Ambient Noise Levels

S.No	Sampling Location	Date of Monitoring	Units	Result		Standard Limit	
				Leq Day	Leq Night	Day Time	Night time
1	AGL West	March '22	dB (A)	51.25	49.75	75	70
2	AGL East	March '22	dB (A)	67.05	66.98	75	70

Table - 7: Ambient Noise levels standards

- As per Noise Pollution (Regulation and Control) Rules, 2000 Noise Limits are.

Category of Area	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

TABLE - 8: 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:

1. Day Time is recorded in between 6 a.m. and 10 p.m.
2. Night time is recorded in between 10 p.m. and 6 a.m.
3. 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.
4. Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.

5. 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.
6. 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.

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 9

Table 9: Ground Water Sampling Locations (Bore wells)

Code	Location	Direction	Distance (km)	Location Description
GW1	Rasheedguda	South West	7	Rural & Residential Area
GW2	GMR Town Ship, Mammidipalli	North East	3.5	Rural & Residential Area
GW3	Airport Borewell sample	Nodal Center	0	Industrial Area
GW4	Gollapalli Village	North West	6	Rural & Residential Area

2.4.2. Ground Water Quality Results

Physico-chemical analysis of Ground water locations at selected sites (Table 10 & 11) are listed below.

Table 10: Ground Water Quality Results

Date of Collection: 03rd and 04th March, 2022

Date of Analysis: 04th to 12th March, 2022

S.No	Parameter	Unit	Locations		IS 10500 : 2012 Standard	
			GW ₁	GW ₂	Acceptable Limits	Permissible Limits
1	pH @ 25.0°C	-	8.1	7.8	6.5-8.5	No relaxation
2	Electrical Conductivity	µmhos/cm	1330	1002	Not Specified	Not Specified
3	Total Dissolved solids	mg/l	920	708	500	2000
4	Alkalinity as CaCO ₃	mg/l	304	272	200	600
5	Hardness as CaCO ₃	mg/l	416	344	200	600
6	Calcium as Ca	mg/l	102	112	75	200
7	Magnesium as Mg	mg/l	39	15	30	100
8	Sodium as Na	mg/l	113	73	Not Specified	Not Specified
9	Potassium as K	mg/l	1.6	1.9	Not Specified	Not Specified
10	Chlorides as Cl ⁻	mg/l	180	110	250	1000
11	Fluoride as F	mg/l	1.0	1.2	1	1.5
12	Sulphates as SO ₄	mg/l	48	69	200	400
13	Iron as Fe	mg/l	0.24	0.2	0.3	No relaxation
14	Phosphates	mg/l	2.8	2.3	Not Specified	Not Specified
15	Nitrates as N	mg/l	16	6.7	45	No relaxation

Table 11: Ground Water Quality Results

Date of Collection: 03rd and 04th March, 2022

Date of Analysis: 04th to 12th March, 2022

S. No	Parameter	Unit	Locations		IS 10500: 2012 Standard	
			GW ₃	GW ₄	Acceptable Limits	Permissible Limits
1	pH @ 25.0°C	-	7.8	8.4	6.5-8.5	No relaxation
2	Electrical Conductivity	µmhos/cm	984	974	Not Specified	Not Specified
3	Total Dissolved solids	mg/l	652	661	500	2000
4	Alkalinity as CaCO ₃	mg/l	276	260	200	600
5	Hardness as CaCO ₃	mg/l	308	296	200	600
6	Calcium as Ca	mg/l	88	85	75	200
7	Magnesium as Mg	mg/l	20	20	30	100
8	Sodium as Na	mg/l	79	98	Not Specified	Not Specified
9	Potassium as K	mg/l	2.0	1.4	Not Specified	Not Specified
10	Chlorides as Cl ⁻	mg/l	115	155	250	1000
11	Fluoride as F	mg/l	1.1	1.1	1	1.5
12	Sulphates as SO ₄	mg/l	61	57	200	400
13	Iron as Fe	mg/l	0.12	0.18	0.3	No relaxation
14	Phosphates	mg/l	1.4	3.1	Not Specified	Not Specified
15	Nitrates as N	mg/l	12	19	45	No relaxation

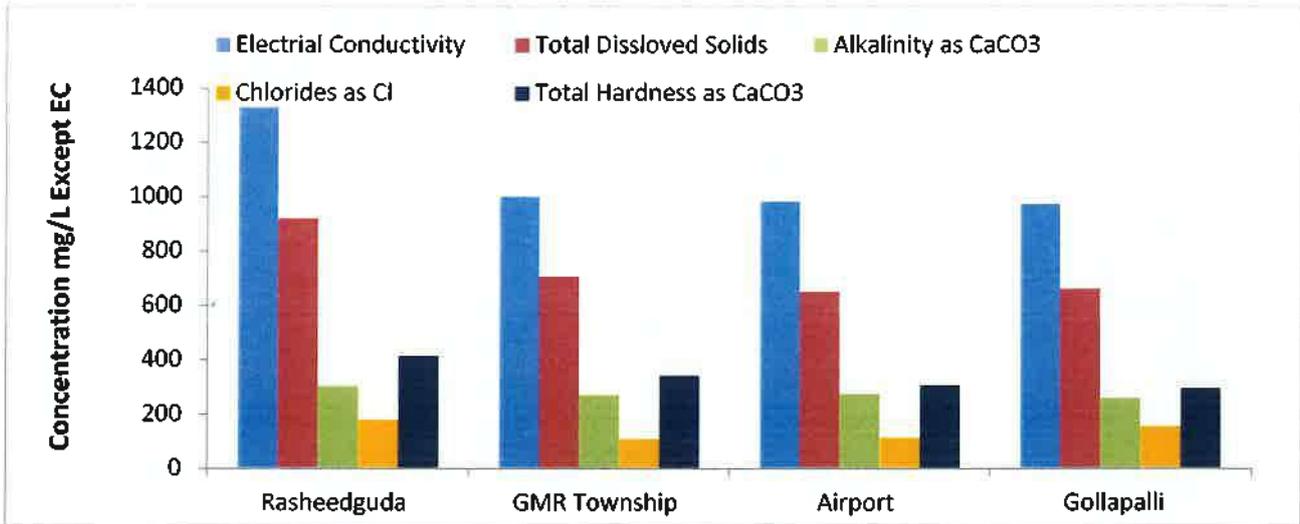


Fig. 3 Variation of Ground Water Quality

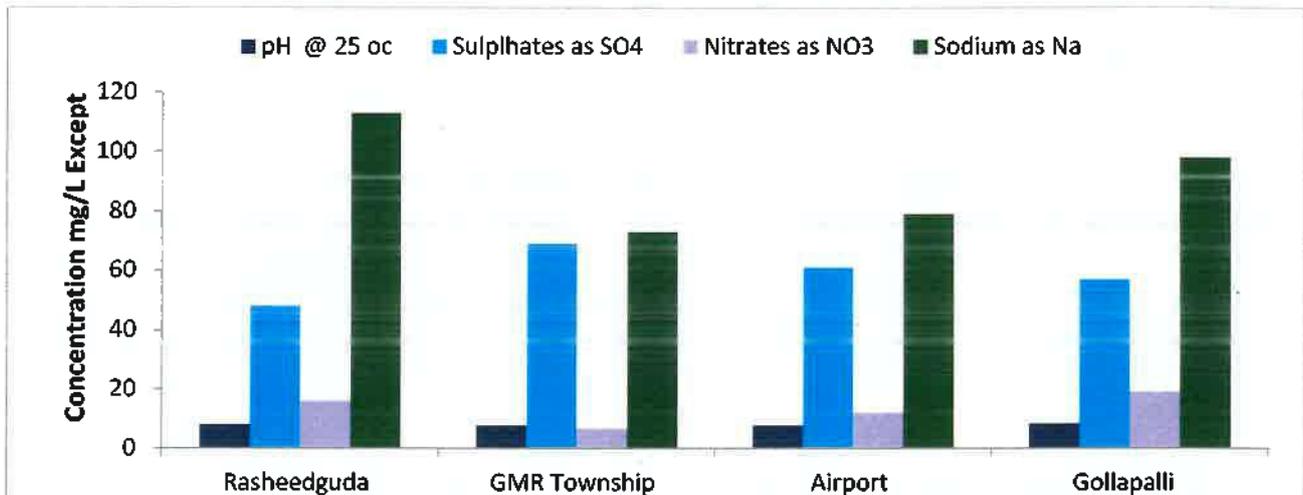


Fig. 4 Variation of Ground Water Quality

2.5 Wastewater Quality

Wastewater samples are collected from STP Inlet, Filter Feed, ACF Outlet and Softener outlet of STP to analyse its water quality through which treatment efficiency is assessed.

2.5.1 Details of Monitoring Locations

Four wastewater samples have been collected and details of sampling location are given in Table 12.

Table 12: Details of Wastewater Sampling Locations

Code	Location	Direction from ARP	Description
SW-1	STP Inlet	Nodal Center	Airport -Airsides
SW-2	Filter Feed		
SW-3	Ultra feed outlet		
SW-4	Softener outlet		

2.5.2 Wastewater Quality Results

Waste water sample is collected in each phase of STP treatment process to assess and analyse the treatment efficiency. In Softener outlet water sample which is outlet water from STP all the parameters are within the prescribed limits and the results of sample are in Table 13.

Table 13: Wastewater Quality Results of STP

Date of Collection: 03rd and 04th March, 2022

Date of Analysis: 04th to 12th March, 2022

S.No	Test Parameters	Units	SW-1	SW-2	SW-3	SW-4	Limits
1	Apparent Color	Hazen	Light brown	Light Yellow	Colorless	Colorless	-
2	True Color	Pt-Co	6.0	5.0	< 5.0	< 5.0	-
3	Odour	-	Mild pungent	Agreeable	Agreeable	Agreeable	-
4	Turbidity	NTU	1.0	1.0	1.0	1.0	-
5	pH @ 25.0 °C	-	6.7	7.1	6.4	6.8	6.5 – 9.0
6	Electrical Conductivity	µmhos/cm	1502	1595	1626	1688	-
7	Total Dissolved solids	mg/l	998	1054	1069	1105	2100
8	Total Suspended Solids	mg/l	96	38	18	12	200
9	Hardness as CaCO ₃	mg/l	256	240	148	164	-
10	Total Residual Chlorine	mg/l	1.0	0.5	<0.1	<0.1	-
11	Ammonical Nitrogen as N	mg/l	30	19	8.0	9.0	-
12	Nitrites	mg/l	5.0	2.5	1.5	2.1	-
13	Nitrate as NO ₃	mg/l	6.0	4.2	3.0	2.9	-
14	Phosphates	mg/l	3.2	1.1	1.6	2.3	-
15	Oil and Grease	mg/l	9.0	5.0	3.0	3.0	10
16	COD	mg/l	532	32	28	20	-
17	BOD (3 days at 27 °C)	mg/l	120	9.0	11	8.0	10
18	Dissolved Oxygen	mg/l	4.2	4.7	5.5	6.6	-
19	Sulphides as S	mg/l	7.0	5.0	5.0	4.0	-

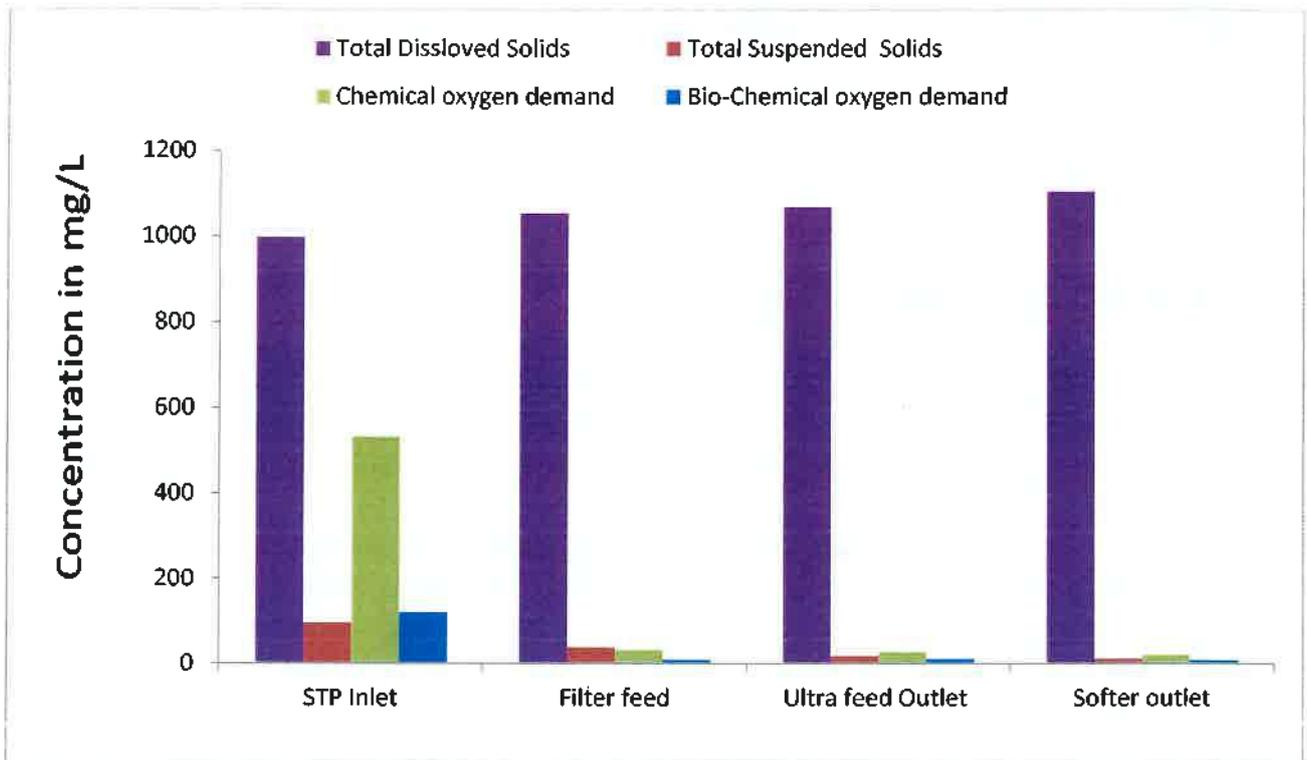


Fig. 5 Variation of Wastewater Quality in STP

2.6 D.G. Stack Emissions

2.6.1 D.G. Stack Emission Results

Table 14: DG Stack Emission Results

Sample Collected on	08-03-2022		
DG Set No	4		
DG Set Capacity	2000 KVA		
DG Location	D.G. Yard		
Stack diameter (m)	0.65		
Stack Height (m)	30		
Stack Cross section (m ²)	0.33		
Flue Gas characteristics			
Temperature (K)	426		
Velocity (m/sec)	8.9		
Flow rate (Nm ³ /hr)	9222		
Emission Data			
Parameters	Units	Limits	Test Results
Particulate matter (PM)	(mg/Nm ³)	75	29.3
Oxides of Nitrogen (NO _x)	(mg/Nm ³)	360	79.6
Carbon monoxide (CO)	(mg/Nm ³)	150	11.5
Non Methane Hydrocarbon (as C)	(mg/Nm ³)	100	15
Sulphur Dioxide (SO ₂)	(mg/Nm ³)	--	35.4

2.6 Conclusion

2.6.1 Ambient Air Quality

Ambient Air Quality in and around the airport premises are well within the prescribed limits of National Ambient Air Quality Standards (NAAQS) notified by CPCB.

2.6.2 Ambient Noise Levels:

Ambient Noise levels is recorder in airport premises (core zone) and in surrounding area (buffer zone) and it is observed that noise levels in day and night are within the standard limits of CPCB (Noise Pollution (regulation and Control) rules 2000 and GSR 568(E).

2.6.3 Ground Water Quality

Ground water samples are drawn from various locations in and surrounding villages and their quality is found well within the permissible portable water limits (IS 10500:2012).

2.6.4 Wastewater Quality

Wastewater samples are collected from each stage of treatment process in STP and analyzed. The Outlet water quality of STP is within the limits prescribed in CFO issued by Telangana State Pollution Control Board.