

Ref: GGIAL/MoEF&CC-EC/2020-21/0477

Date: 20th May 2020

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

Sub: Submission of Half Yearly EC Compliance Report of Greenfield International Airport at Mopa, Goa by GMR Goa International Airport Limited, for the period from October 2019 to March 2020.

Ref: 1. Original EC vide letter No. F.No.10-29/2011-IA.III dated 28th October 2015
2. Amendment in EC for Change in Project Proponent dated 22nd February 2018
3. NGT Order dated 21st August 2018
4. Supreme Court of India Order dated 16th January 2020
5. Addendum to Original EC dated 13th March 2020

Dear Sir,

With reference to the subject & reference mentioned above, we are herewith submitting the Half Yearly Environmental Clearance (EC) Compliance Report of Greenfield International Airport at Mopa, Goa by GMR Goa International Airport Limited (GGIAL), for the period from October 2019 to March 2020.

As per Supreme Court of India (SCI) order dated 18th Jan 2019, the project maintained status quo. After subsequent hearing, the SCI in its order dated 16th Jan 2020 lifted the stay and allowed the project to continue. Further, in compliance to SCI Order dated 16th Jan 2020, MoEF&CC has also issued the addendum to Environment Clearance to GGIAL dated 13th March 2020. All the conditions given in the addendum of EC shall be complied during construction and operation phases of the Airport.

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

Kindly acknowledge receipt of the same.

Thanking you,

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


M.L.N.B Prasad
Chief Development Officer



Enclosed: As Above

Copy for kind information to:

1. The Director, MoEF&CC, GOI, New Delhi -3
2. The Member Secretary, CPCB, Delhi-32
3. The Member Secretary, Goa State Pollution Control Board, Saligao, Goa
4. The Director, Directorate of Civil Aviation, GoG, Porvorim, Goa -21

HALF YEARLY ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT

(Period: October 2019 to March 2020)



Environmental Clearance Compliance Status Report Of Greenfield International Airport at Mopa, Goa

With reference to
MoEF&CC's Original EC Letter No: F.No.10-29/2011-IA.III dated 28.10.2015
Supreme Court of India Order dated 16.01.2020
Addendum to Original EC Conditions dated 13.03.2020



GMR GOA International Airport Limited

Mopa, Pernem Taluka, District North Goa, Goa - 403512



Half Yearly EC Compliance Report (Oct 2019 to March 2020)

Point-wise compliance

S.No.	Reference No.	Conditions	Compliance
Conditions of EC dated 28/10/2015			
1.	4 (A) (i)	'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	Complied. Obtained Renewal of Consent to Establish from Goa State Pollution Control Board (GSPCB), vide Letter No. 12/2019-PCB/299315/R0002481 dated 29/01/2020, with validity for 3 years. Copy of CTE is enclosed as Annexure-1 .
2.	4 (A) (ii)	The Project Proponent shall ensure availability of adequate land at the junction of the Mopa Airport road and Mumbai /Goa NH-17 for traffic circulation/management and to provide for all the traffic interchanges and proposed clover leaf.	Noted, It will be addressed in due course in collaboration with Govt. of Goa.
3.	4 (A) (iii)	The approach and exit roads to the Airport shall be got approved from the NHAI and should be according to IRC norms.	Noted, It will be addressed in due course in collaboration with Govt. of Goa.
4.	4 (A) (iv)	A perusal of the Topo sheet superimposed on the runway area indicates that the extreme end of the runway is covering the drainage area partly. The drainage area which is under the runway shall be channelized. The area between the parallel taxiway and runway shall be handled carefully to drain the water from the area in the outfall 2.	Complied. Included in the engineering design, vetted by IIT Mumbai. Compliance shall also be ensured during construction. Earth work in progress.
5.	4 (A) (v)	The PP shall submit the site clearance certificate from Directorate General of Civil Aviation (DGCA), before commencement of work at the project site.	Submitted and Complied. (Annexure - B of vide letter no. - 108/DOCA/EC/HYCR/2017/575 dated

Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
6.	4 (A) (vi)	Sewage and other liquid effluent generated from the airport including from the existing terminal should be treated according to the norms laid down by the State Pollution Control Board. The treated sewage shall be recycled for flushing/ gardening. Proper dual plumbing shall be provided.	10/11/2017 of Director of Civil Aviation (DoCA), Goa) STP outlet standards prescribed by GSPCB in CTE will be considered in the design, Will be addressed and complied with during operational phases of airport. Currently, we are in the construction phase and hence infrastructure is being built.
7.	4 (A) (vii)	The solid waste generated shall be properly collected, segregated and disposed according to the provisions of Solid Waste (Management and Handling) Rules, 2000. The project proponent shall make provisions for drinking water at convenient places for passengers and also at the cafeterias as to reduce generation of solid wastes including PET bottles.	Noted, compliance shall be ensured. project is in construction phase and necessary infrastructure to ensure compliance with given condition is being built
8.	4 (A) (viii)	Installation and operation of DG sets shall comply with the guidelines of CPCB.	Being complied.
9.	4 (A) (ix)	Parking provision shall be provided according to the National Building Code of India, 2005.	Noted, Compliance shall be ensured.
10.	4 (A) (x)	Water conservation fixtures shall be provided and water balance shall be maintained through verifiable metering for fresh raw water, recycled as well as rain water harvesting.	Noted, Compliance shall be ensured.
11.	4 (A) (xi)	Necessary permission shall be obtained for drawing of ground water from competent authority prior to construction / operation of the project.	Complied. Permission has been obtained from the WRD, Goa

Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
12.	4 (A) (xii)	The land use around the Airport complex shall be regulated through a plan to control unauthorized development which may create problems in the operation of Airport.	Copies of WRD permits are enclosed as Annexure-2 . Will be addressed in due course by Govt. of Goa.
13.	4 (A) (xiii)	The wastewater from hangers shall be tested for presence of heavy metals, if any, and shall be treated in STP. The treated wastewater shall be used for gardening/ flushing.	Will be addressed and complied with during operational phases of airport. Currently, we are in the construction phase and hence infrastructure is being built.
14.	4 (A) (xiv)	Rain water harvesting shall be provided to recharge the ground water.	Noted, Compliance shall be ensured.
15.	4 (A) (xv)	Energy conservation to the extent of at least 20% shall be incorporated including water conservation (reuse/recycle, rain water harvesting and water efficient fixtures) and other green building practices for various buildings proposed within the airport complex. The PP shall consider ECBC Guidelines 2009 to achieve energy-efficiency. The energy conservation measures shall be subject to periodic verification by the competent Energy Conservation/ Efficiency authority in the State.	Noted, Compliance shall be ensured.
16.	4 (A) (xvi)	The project proponent shall prepare a detailed traffic management plan to take care of increased vehicular traffic which should also cover/clearly delineate widening/ increasing the existing roads and associated road infrastructure approving/ installation of road safety features/pedestrian	Noted, Compliance shall be addressed by Govt. of Goa.



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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
17.	4 (A) (xvii)	<p>facility/FOB/under passes etc. (that can be done by carrying out road safety audits). Measures shall be taken to prevent encroachment along/ within the Rows on connecting/ main arterial roads.</p> <p>All the recommendations of the EMP shall be complied with in letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to RO, MoEF&CC along with half yearly compliance report.</p>	<p>Noted, Compliance shall be ensured.</p> <p>Compliance to the mitigation measures in Matrix Format is attached as Annexure-3.</p>
18.	4 (A) (xviii)	<p>The responses / commitments made during public hearing shall be complied with in letter and spirit.</p>	<p>Noted, being addressed by Govt. of Goa.</p>
19.	4 (A) (xix)	<p>Project Proponent shall install noise level display system. Noise level shall be monitored regularly in all seasons (different meteorological conditions) within the compound as well as nearby habitations and it shall be ensured that the noise level is within the prescribed limits. During night time the noise levels measured at the boundary shall be restricted to the permissible levels to comply with the prevalent regulations.</p>	<p>Noted, Compliance shall be ensured.</p> <p>Noise level being monitored. Noise level Monitoring reports are enclosed as Annexure-4.</p>
20.	4 (A) (xx)	<p>The location of monitoring stations and monitoring of noise level during day and night shall be in accordance with the CPCB guidance document "Requirement and procedure for monitoring Ambient Noise Level due to aircraft" published on 25th June, 2008.</p>	<p>Noted. Compliance shall be ensured during Operations.</p>
21.	4 (A) (xxi)	<p>Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate</p>	<p>Being Complied.</p>



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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
22.	4 (A) (xxii)	watercourses and the dump sites for such material must be secured so that they should not leach into the ground water. Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approval of the SPCB.	Being complied.
23.	4 (A) (xxiii)	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	Noted. Complied. EC has been obtained from MoEF&CC.
24.	4 (A) (xxiv)	The project proponent will set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Environmental management cell has been set up under the supervision of a Senior Executive designated as VP & Head – EHS & Sustainability. Complied.
25.	4 (A) (xxv)	<p>Corporate Environment Responsibility:</p> <p>a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/ deviation/violation of the environmental or forest norms/ conditions.</p> <p>c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.</p>	Complied Complied.



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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
		d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/ or shareholders or stakeholders at large.	Complied.
B.		GENERAL CONDITIONS:- EC dated 28/10/2015	
26.	4 (B) (i)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care etc. The housing may be in the form of temporary structures to be removed after the completion of the project	Being complied.
27.	4 (B) (ii)	A First Aid Room will be provided in the project both during construction and operation of the project.	Complied.
28.	4 (B) (iii)	All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.	Being Complied.
29.	4 (B) (iv)	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Being Complied.
30.	4 (B) (v)	The diesel generator sets to be used during construction phase should be low Sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise	Being Complied.



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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
		emission standards. The diesel required for operating DG sets shall be stored in underground tanks and if required clearance from Chief Controller of Explosives shall be taken.	
31.	4 (B) (vi)	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.	Being followed.
32.	4 (B) (vii)	Fly ash usage shall be explored as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27 th August, 2003.	Being complied.
33.	4 (B) (viii)	Ready mixed concrete must be used in building construction.	Complied, Being followed.
34.	4 (B) (ix)	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Considered in the engineering design, vetted by IIT Mumbai. Earth work is in progress.
35.	4 (B) (x)	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Being complied.
36.	4 (B) (xi)	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	Considered in the Design.
37.	4 (B) (xii)	Use of glass may be reduced by up to 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective coating in windows.	Considered in the Design.



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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
38.	4 (B) (xiii)	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.	Considered in the Design
39.	4 (B) (xiv)	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.	Considered in the Design
40.	4 (B) (xv)	The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.	Noted, Compliance shall be ensured
41.	4 (B) (xvi)	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	Noted, Compliance shall be ensured
42.	4 (B) (xvii)	The construction of the structures shall be undertaken as per the plans approved by the concerned local authorities/local administration, meticulously conforming to the existing local and central rules and regulations.	Noted, Compliance shall be ensured
43.	4 (B) (xviii)	The construction material shall be obtained only from approved quarries. In case new quarries are to be opened, specific approvals from the competent authority shall be obtained in this regard.	Being complied.

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S.No.	Reference No.	Conditions	Compliance
44.	4 (B) (xix)	Adequate precautions shall be taken during transportation of the construction material so that it does not affect the environment adversely.	Being complied.
45.	4 (B) (xx)	Full support shall be extended to the officers of this Ministry/Regional Office by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Noted, Compliance shall be ensured
46.	4 (B) (xxi)	A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry regarding the implementation of the stipulated conditions.	Monitoring being conducted is being conducted by MoEF&CC Approved Lab Monitoring reports of AAQ, Water and Noise are enclosed as Annexure – 4 .
47.	4 (B) (xxii)	Ministry of Environment, Forest & Climate Change or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	Noted.
48.	4 (B) (xxiii)	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	Noted.
49.	4 (B) (xxiv)	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment, Forest & Climate Change.	Noted.
50.	4 (B) (xxv)	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval	1. Financial Closure for the project has been achieved on 07 th July 2017.




Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
		of the project by the concerned authorities and the date of start of land development work.	<p>2. The Appointed Date of the project has been declared as 04th September 2017.</p> <p>3. Land development work has already been started (Letter submitted to Regional office MoEF&CC vide letter no. GGIAL/MoEF&CC/2018/0194, dated :26/02/2018).</p>
51.	4 (B) (xxvi)	A copy of the clearance letter shall be marked to concerned Panchayat / local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.	Complied
52.	4 (B) (xxvii)	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office / Tehsildar's office for 30 days.	Complied
53.	4 (B) (xxviii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.	Noted. Compliance shall be ensured
54.	5(B)	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability	Noted, Relevant environmental acts are being complied with.

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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
55.	6(B)	<p>(Insurance) Act, 1991 and EIA Notification 2006, including the amendments and rules made thereafter.</p> <p>All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.</p>	<p>Noted, Necessary approvals from the concerned authorities are being obtained as applicable.</p>
56.	7(B)	<p>The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at http://www.envfor.nic.in. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry.</p>	<p>Complied.</p>
57.	8(B)	<p>This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No .460 of 2004 as may be applicable to this project.</p>	<p>Noted.</p>

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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
58.	9(B)	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	Being Complied.
59.	10(B)	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
60.	11(B)	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	Noted. Compliance shall be ensured
Additional NGT Conditions vide NGT order dated 21/08/2018			
A Air Environment			
61.	1	Total Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM) during construction phase. Un-burnt and Hydro Carbons (HC), Lead (Pb), CO ₂ , SO ₂ , CO ₂ , SOOT and Oxides of Nitrogen (NOx) during operation phase are going to be major pollutants in this kind of project. Besides, fugitive emissions of Volatile Organic Compounds (VOC) during fuel handling can be another issue for ambient air environment. The	Being Complied Currently in the construction phase of the project, Environmental Monitoring of Suspended Particulate Matter (SPM), PM ₁₀ , PM _{2.5} , SO ₂ , NOx, CO are being conducted. The AAQ Monitoring report is enclosed as Annexure-4 .

Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
62.	2	<p>provision of only 6 (six) Air Quality Monitoring Stations is inadequate as sampling duration has been given as 'twice a week, 4 weeks in a season as per CPCB standards for NAAQM, 1994. It would be appropriate if the Project Proponent establishes real time online continuous Air Quality Monitoring Station also which is connected to CPCB server and capable of monitoring all relevant and critical parameters and mitigation measures taken.</p> <p>Although all parameters w.r.t ambient air parameters have been found to be within limits for all 6 (six) locations monitored, we feel for the purpose of giving/depicting holistic picture with regard to ambient air in the area, at least 3 (three) more locations falling in the State of Maharashtra be also monitored and documented.</p>	<p>The real time online continuous Air Quality Monitoring Station shall be installed and will be operational in operation phase.</p> <p>Will be complied with, in collaboration with Govt of Goa.</p>
	B	Water Environment	
63.	1	<p>Only two number of Rain Water Harvesting pits have been provided which we feel are not adequate and there is a need to place other pits at such locations so as to capture all the excess drainage for water re-charge.</p>	<p>Noted, Compliance shall be ensured.</p>
64.	2	<p>More frequent Water Quality Monitoring i.e. once every month may be carried out by Project Proponent at bore wells and STP discharge plants instead of 4 (four) times in a year as proposed.</p>	<p>Noted, Being complied.</p>
	C	Noise Environment	
65.	1	<p>It has been proposed that ambient noise levels shall be monitored around the premises of airport, near DG sets and at</p>	<p>Noted, compliance shall be ensured in operation phase</p>




Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
66.	2	main entrance/boundary of airport once a week at 7 (seven) locations which we feel are inadequate. Besides these, continuous monitoring of occupational noise exposure limits in such industrial environments would be appropriate with audible or visual alarm output capability.	Noted, Compliance shall be ensured in operational phase
67.	3	Integrated Noise Model (INM) be more frequently used and mitigation undertaken during the operational phase of project at regular intervals. Although ambient noise levels have been found to be within limits at 9 (nine) locations monitored, we feel for the purpose of giving/depicting holistic picture with regard to ambient noise levels in the area, at least 3 (three) more locations falling in the State of Maharashtra be also monitored and documented.	Will be complied with, in collaboration with Govt. of Goa.
	D	Land Environment	
68.	1	There is a potential for impact on soil quality due to project related spills and leaks of fuel and chemicals and uncontrolled disposal of wastes and waste water. Adequate care be taken to avoid spills and leaks of hazardous substances and all project related wastes. Littering on sites and beyond the sites needs to be adequately prevented and controlled.	Noted, Compliance shall be ensured.
69.	2	Debris and Muck Management Plan to be prepared and implemented so as to avoid spillage of muck and debris on the slopes.	Noted, Compliance shall be ensured.




Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
70.	3	Soil conservation and stabilization measures needs to be undertaken by deploying both mechanical and bio-engineering methods.	Noted, Compliance shall be ensured as per requirements.
71.	4	Remediation, restoration and compensation needs to be integral part of policy so as to provide adequate relief for any environmental or project related disasters.	Noted, Compliance shall be ensured.
	E	Biological Environment	
72.	1	Efforts be made to transplant the trees to other locations in the same vicinity by using appropriate mechanical devices which are available these days.	Being complied
73.	2	Efforts be made to plant indigenous species which are tall in size rather than small saplings.	Noted, Compliance shall be ensured.
74.	3	Concerns have been raised by appellants with regard to plant species 'Dipcadi concanense' which has been claimed to be a threatened plant. This claim of the appellants have been negated by the respondent by producing a documentation of Botanical Survey of India, Western Regional Centre, Pune, Maharashtra titled as "A Note on Occurrence and Distribution of Dipcadi concanense". By invoking Precautionary Principle, we direct the Project Proponent to draw up a Conservancy by Plan/Scheme for 'Dipcadi concanense' in collaboration with	Complied.



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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
		Forest Department, State of Goa and Botanical Survey of India and ensure its implementation	
		Socio-economic Environment	
75.	F 1	Adequate drills with respect to implementation of Disaster Management plan needs to be carried out at regular intervals so as to ensure preparedness and rapid response to any disasters both man-made or natural.	Noted, Compliance shall be ensured.
76.	2	Although 'Disaster Management Plan' as Annexure-II is part of EIA Report under the Sub head 1.2.1- National Disasters needs further elaboration especially in terms of Emergency Response Measures, Rules and Responsibility, Mitigation, etc.	Being Complied. Disaster Management Plan for the construction phase of the project is prepared and being implemented. Emergency response drill are being conducted at construction site.
Addendum to EC dated 23rd March 2020			
	I	Statutory compliance	
77.	(i)	The project proponent shall obtain certificate from Chief Wildlife Warden (CWLW) of State through State Government that none of the area of the project falls in the notified Eco-sensitive Zone (ESZ) and no activity prohibited in the Eco-sensitive zone will be taken up.	Noted, Compliance shall be ensured.
78.	(ii)	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.	Complied, Consent to Establish has been obtained from Goa State Pollution Control Board.

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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
79.	(iii)	The project proponent shall obtain necessary permission from the competent authority for drawal of water from Tillari Irrigation Canal.	Complied, Permission has been obtained.
80.	II (i)	Air quality monitoring and preservation The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM ₁₀ and PM _{2.5} in reference to PM emission, and SO ₂ and NOx in reference to SO ₂ and NOx emissions) within and outside the airport area covering upwind and downwind directions.	Being Complied , Currently in the construction phase of the project, Environmental Monitoring of Suspended Particulate Matter (SPM), PM ₁₀ , PM _{2.5} , SO ₂ , NOx, CO are being conducted. The AAQ Monitoring report is enclosed as Annexure-4 .
81.	(ii)	Notification GSR 94 (E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities shall be complied with.	Being Complied
82.	(iii)	Soil and other construction materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet	Being Complied
83.	(iv)	The excavation working area should be sprayed with water after operation so as to maintain the entire surface wet.	Being Complied
84.	(v)	Excavated materials shall be handled and transported in a manner that they do not cause any air pollution.	Being Complied
85.	(vi)	The soil/construction materials carried by the vehicle should be covered by impervious sheeting to avoid leaking of the dusty materials.	Being Complied
	III	Water quality monitoring and preservation	

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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
86.	(i)	Appropriate drainage channels need to be designed to take care of the water flow into the nearest water courses/rivers, etc.	Considered in the design of storm water drainage system.
87.	(ii)	It should be ensured that sustainable water flow in the various channels of watershed in the plateau is maintained.	Considered in the design
88.	(iii)	Storm water drains are to be built for discharging storm water from the air-field to avoid flooding/water logging in project area. Domestic and industrial waste water shall not be allowed to be discharged into the storm water drains and directed to STP for treatment.	Considered in the design
89.	(iv)	Proper drainage systems, emergency containment in the event of a major spill during monsoon season etc. shall be provided.	Considered in the design
90.	(v)	The runoff from paved structures like Aprons can be routed through drains to oil separation tanks and sedimentation basins before being discharged into rainwater harvesting structures.	Considered in the design of storm water drainage system.
91.	(vi)	Run off from chemicals and other contaminants from aircraft maintenance and other areas within the airport shall be suitably contained and treated before disposal. A spillage and contaminant containment plan shall be drawn up and implemented to the satisfaction of the State Pollution Control Board.	Considered in the design of storm water drainage system.
92.	(vii)	The project activity shall conform to the General Standards for Discharge of Environmental Pollutants notified in the Environment (Protection) Rules, 1986, and amended from time to time.	Being complied
93.	(viii)	Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Rain water harvesting structures shall conform to CGWA guidelines. Before recharging	Considered in the design of storm water drainage system.

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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
		the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.	
	IV	Noise monitoring and prevention	
94.	(i)	Notification G.S.R. 568(E) dated 18.06.2018 of MoEF&CC regarding Ambient Air Quality Standards with respect to Noise in Airport Noise Zone shall be complied with.	Noted, Compliance shall be ensured in operational phase
95.	(ii)	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Being Complied Noise Monitoring is being conducted and enclosed in Annexure-4
96.	(iii)	Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment's.	Being Complied DG sets are installed with acoustic enclosures. Random workplace monitoring carried out.
97.	(iv)	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	Noted, Compliance shall be ensured. DG sets are installed with acoustic enclosures. PPEs as required are provided.
98.	(v)	During airport operation period, noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	Noted, Compliance shall be ensured in operational phase
99.	(vi)	Where construction activity is likely to cause noise nuisance to nearby residents, restrict it to only during day time i.e. between 7 am to 6 pm.	Being complied

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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
100.		Notification G.S.R. 568(E) dated 18.06.2018 of MoEF&CC regarding Ambient Air Quality Standards with respect to Noise in Airport Noise Zone shall be complied with.	Noted, Compliance shall be ensured in operation phase
101.	V (i)	Energy Conservation / climate change measures Energy conservation measures like installation of LED should be integral part of the project design and should be in place before project commissioning.	Noted, Compliance shall be ensured..
102.	(ii)	Initiatives such as Green Infrastructure Development program, adoption of less emission intensive technologies, renewable energy program, electrical vehicles and Airport Carbon Accreditation need to be adopted to reduce its impact on climate change and Green House Gas (GHG) emissions as per environmental best practices governing greenfield airports.	Noted, Compliance shall be ensured. The requirements of Green Infrastructure Development program, adoption of less emission intensive technologies, renewable energy program, electrical vehicles are being considered in the design and implementation. Airport Carbon Accreditation shall be take up during operation phase as per the plan.
	VI	Waste Management	
1.	(i)	Soil stockpile shall be managed in such a manner that dust emission and sediment runoff are minimized. Ensure that soil stockpiles are designed with no slope greater than 2:1 (horizontal/vertical).	Being complied
2.	(ii)	The project activity shall conform to the Fly Ash notification issued under the E.P. Act of 1986.	Being complied




S.No.	Reference No.	Conditions	Compliance
3.	(iii)	The solid wastes shall be segregated as per the norms of the Solid Waste Management Rules, 2016. Recycling of wastes such as paper, glass (produced from terminals and aircraft caterers), metal (at aircraft maintenance site), plastics (from aircrafts, terminals and offices), wood, waste oil and solvents (from maintenance and engineering operations), kitchen wastes and vegetable oils (from caterers) shall be carried out.	Noted, Compliance shall be ensured.
4.	(iv)	Solid inert waste found on construction sites consists of building rubble, demolition material, concrete; bricks, timber, plastic, glass, metals, bitumen etc shall be reused/recycled or managed so as to strictly conform to the Solid Waste Management Rules, 2016, and Construction and Demolition Waste Management Rules, 2016.	Being Complied
5.	(v)	The project proponents shall implement a management plan duly approved by the State Pollution Control Board and obtain its permissions for the safe handling and disposal of:	Noted, Compliance shall be ensured. in the operational phase.
	a.	Trash collected in flight and disposed at the airport including segregation, collection and disposed.	
	b.	Toilet wastes and sewage collected from aircrafts and disposed at the Airport.	
	c.	Wastes arising out of maintenance and workshops	
	d.	Wastes arising out of eateries and shops situated inside the airport complex.	
	e.	Hazardous and other wastes	
	VII	Green Belt	
6.	(i)	Green belt shall be developed in area as provided in project details, with native tree species in accordance with Forest	Noted, Compliance shall be ensured.




Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
7.	(ii)	<p>Department. The greenbelt shall inter-alia cover the entire periphery of the Air Port.</p> <p>The plantation species in and around Airport site should be carefully chosen to avoid bird nesting and to improve pollution control and noise control measures. Water intensive and/or invasive species should not be used for landscaping.</p>	Noted, Compliance shall be ensured.
8.	(iii)	<p>Plantation activity should be taken up under the expert guidance for forest department of Goa, care should be taken that soil erosion measures should be taken up on priority so that the rich mineralized soil of forest is not washed away. The plantation activity should also have an approach of soil conservation where planting is done along the contours avoiding gully formation. As far as possible monocultural plantation should be avoided.</p>	Noted, Compliance shall be ensured
9.	(iv)	<p>The proposed 10 times compensatory plantation need to be monitored by the Government of Goa so that the target of planting 5.5 lakh saplings is achieved in a time bound manner, their survival rate is monitored and mortality is replenished. As major chunk of 2.5 lakh of saplings is proposed to be done by the village level Bio Diversity Committees, it is necessary to ensure that people are largely given native species and/or fruit bearing saplings so that they will be able to derive economic benefits from such fruit crops and also such trees will provide better biological environment to birds.</p>	Noted, Compliance shall be ensured as per the plan
10.	(v)	<p>Top soil shall be separately stored and used in the development of green belt.</p>	Being complied
VIII			
11.	(i)	<p>Public hearing and Human health issues</p> <p>Solution/management plan regarding redressal of all the concerns raised in the public hearing must be clearly spelt out</p>	Being complied in collaboration with Govt. of Goa

Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
		in the EMP and shall be implemented in letter and spirit. Compliance for each mitigation plan shall be submitted to Regional Office, MoEF&CC along with half yearly compliance report.	
12.	(ii)	Provision of Electro-mechanical doors for toilets meant for disabled passengers shall be ensured. Children nursing/feeding room shall be located conveniently near arrival and departure gates.	Requirements are being considered in the design.
13.	(iii)	Emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Being implemented for the construction phase of the project.
14.	(iv)	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied. Labor colony established with all necessary infrastructure and facilities.
15.	(v)	Occupational health surveillance of the workers shall be done on a regular basis.	Noted, Compliance shall be ensured.
		Conditions of Hon'ble Supreme Court of India (SCI) Order dated 16/01/2020	
16.	(i)	Ref. No. 47 : Adopt a Zero Carbon Programme during Construction and operational Phases of the Airport	Noted, compliance shall be ensured In line with our commitments submitted to Supreme court of India, infrastructure required for the Zero Carbon program

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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

S.No.	Reference No.	Conditions	Compliance
17.	(ii)	Ref. No. 48 : The National Environmental Engineering Research Institute to be appointed to oversee compliance with the directions cumulatively issued by the Supreme Court	during operation phase is considered in the design and will be implemented during the operational phase of the Airport as per the plan.
		Appointment of NEERI has been initiated as per SCI order, is in progress with NEERI.	



GOA STATE POLLUTION CONTROL BOARD

गोंय राज्य प्रदूषण नियंत्रण मंडळ

(An ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 Certified Board)

Phone Nos : 0832- 2407700,
2407701, 2407702
Tel/Fax No: 0832- 2407700



Email Ids:
Chairman, GSPCB, chairman-gspcb.goa@nic.in
Member Secretary, GSPCB, ms-gspcb.goa@nic.in
Environment Engineer, GSPCB, ee-gspcb.goa@nic.in
Scientist, GSPCB, scientist-gspcb.goa@nic.in
Office, goapcb@gspcb.in

No.12/2019-PCB/299315/R0002481

Date:29/01/2020

Renewal of Consent to Establish under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981

[To be referred as Water Act & Air Act]

RENEWAL OF CONSENT TO ESTABLISH is hereby granted to:

M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED
(Represented by: Mr. Ranganathan Venkata Sheshan)
(Red Category)

Mopa,
Pernem - Goa

Located in the area declared under the provisions of the Water Act & Air Act, subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:

1. This Renewed Consent to establish is issued in supersession of the earlier Consent Orders issued vide Order No.5/5163/16-PCB/CI-1999 dated 07/09/2016, Amendment No.5/5163/16-PCB/CI-2454 dated 16/01/2017 is valid up to commissioning of the facility/plant or 3 years from the date of issue, **whichever is earlier.**
2. This Renewed Consent to Establish is valid for the establishment of:

Sr. No	Description	Capacity
1.	Airport	----

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

- (i) The daily quantity of domestic effluent from the facility shall not exceed **5 MLD**
- (ii) **Sewage Treatment Plant:**
The unit shall provide comprehensive sewage treatment plant of **5 MLD capacity** consisting of primary/ secondary and/ or tertiary treatment as is warranted with reference to influent quality and operate and maintain the same continuously so as to achieve the quality of the treated effluent to the following standards:

pH	Between	5.5 & 9.0
Suspended Solids	Not to exceed	Not more than 20 mg/l
BOD, 3 days, 27° C	Not to exceed	10 mg/l
COD	Not to exceed	50 mg/l
Oil & Grease	Not to exceed	10mg/l
NH4-N	Not to exceed	5mg/l
N-total	Not to exceed	10mg/l
Fecal Coliform	Less than	100 MPN/100 ml
Bio-assay test		90% survival of fish after 96hours in 100% effluent

(iv) **Sewage Disposal:**

The treated effluent shall be recycled to the maximum extent and remaining shall be used on land for gardening. There shall not be any discharge outside the unit premises.

(v) A good house-keeping shall be maintained within the unit premises. All pipes, valves and drains shall be maintained in leak-proof condition. Floor washings shall be maintained to the effluent collection system only and shall not be allowed to find way in open areas.

(vi) **Non-Hazardous Solid Waste:**

All the Solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board. Biodegradable waste (*i.e. wet-waste*) be treated on-site by composting.

(vii) The operator shall provide composting facility in a closed shed in the premises.

(viii) The dry waste has to be segregated and baled and to be disposed to (local authority) /through Goa Waste Management Corporation.

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

(i) The unit may install the following equipments and shall be equipped with comprehensive control system as it is warranted with reference to generations of emissions and operate and maintain the same continuously:

Sr. No.	Name of Equipments/ Installation	No of Installation	Capacity	SO ₂ Kg/Hr	Particulate Matter mg/Nm ³
1.	D.G. Set	05	2000 KW	15.12	75

(ii) The unit should comply with all the standards for D.G. Sets prescribed at Sr. no. 94, 95 and 96 of Schedule I of the Environment (Protection) Rules, 1986.

(iii) The unit shall take adequate measures for control of noise levels from its own sources within the premises in respect of noise. The limits are as follows

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

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

5. **GENERAL CONDITIONS:**

1. Trees shall be planted and maintained around the plant in an area at least 4 times the built area of the industry. Green belt development shall be started along with the construction activity.
2. The domestic waste water shall be treated in a property designed septic tank and discharged on land for percolation through soak pit of adequate size within the factory premises.
3. The applicant shall not change or alter the quantity, the rates of discharge, temperature and the mode of disposal of the effluent without previous written permission of the Board.
4. The applicant shall provide facilities for collection of the samples to the Board staff.
5. The unit shall discharge the treated effluents preferably on land for irrigation/ gardening/ lawn within their own premises or re-use after suitable treatment.
6. Stack heights for a (Diesel generator set(s) shall be as follows:

(a) Diesel Generator set(s): The minimum height of the stack to be provided with each generator shall be as per the formula $H = h + \sqrt[0.2]{KVA}$ where H = total height of the stack in meters, h = height of the building in meters where the generators is installed and KVA = total generator capacity of the set in KVA.

The generator shall be installed in a closed area with a silencer and suitable noise absorption systems so as to comply with the ambient noise level standards as mentioned below:

The ambient noise level shall not exceed 75 dB (A) at a distance of 5 meters from the source.

7. The applicant shall provide ports in the chimney / stack and facilities such as ladder, platform etc. as per the directions of Pollution Control Board for monitoring the air emissions and the same shall be open for inspection and use the Board's staff. The chimney / stack attached to various sources of emissions shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
8. The unit shall implement the following Rules and Regulations notified by the Ministry of Environment and Forests, Govt. of India.
 - a) Hazardous And Other Wastes (Management and Transboundary Movement) Amended Rules, 2018;
 - b) Manufacture, storage and Import of Hazardous Chemicals Rules, 1989;
 - c) Rules for the Manufacture, Use, Import and Storage of Hazardous Micro – organism / - Genetically Engineered Organisms or Cell, 1989.
9. There shall not be any perceptible odour outside the industrial premises.
10. All the Rules and Regulations notified by the Ministry of Environment and Forests, Govt. of India in respect of noise pollution control measures shall be followed to avoid nuisance to public.

11. Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves its right and powers under section 27(2) of the Water (Prevention and Control of Pollution) Act 1974 and under section 21(4) of the Air (Prevention and Control of Pollution) Act 1981 to review any or all the conditions imposed hereby.
12. Any change in the details made after the submission of the application/ after obtaining the Consent to Establish shall be brought to the notice of the Board immediately.
13. This Consent to operate is granted without any prejudice to any of the permission(s) required under any law, by laws and regulations in force and **this Consent to Operate is confined to matters arising out of the Air Act and Water Act only.**
14. The unit should obtain permission from the Forest Department/ Wild Life Board wherever applicable.
15. The unit should implement rain water harvesting and ground water re-charge measures in consultation and approval of the Water Resource Department, Government of Goa and Directorate of Industries, Trade and Commerce, Government of Goa, before submitting an application for Consent to Operate.
16. The unit/ generator shall be responsible for safe and scientific collection, transportation, treatment and disposal of Bio-Medical Waste as per the provisions made under the Bio-Medical Waste Management Amended Rules, 2019. Any activity as defined under BMW Rules has to obtain a separate Authorization from Goa State Pollution Control Board.
17. The unit should obtain all permissions / approvals as required under the prevalent Rules / Acts in force.
18. The unit shall apply for Consents to Operate of the Board as required under section 25(1) (b & c) of the Water (Prevention and Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 in the prescribed application form, 45 days before commissioning of the plant
19. Reliable flow meter shall be installed to maintain record of water consumption / waste water consumption per day. This records so maintained shall be made available to the Board officials whenever required.

20. The unit shall bear the cost of analysis / monitoring in case of complaints received by the Board/ reinspections due to non compliances observed by the Board & monitoring carried by the Board.

21. The unit shall comply with the conditions stipulated in the judgment passed by the Hon'ble Supreme Court of India dated 16th January, 2020 in the matter M.A. No. 965 of 2019 in Civil Appeal No. 12251 of 2018.

To,
M/s. GMR GOA INTERNATIONAL AIRPORT LIMITED
C/o. Mr. Ranganathan Venkata Sheshan,
Sy. No. 381/1, Mathura One,
1st Floor, Porvorim, Bardez, Goa

Copy to:-

1. Accounts Section
2. Concerned File
3. Guard File

Received Consent fee of: **The Capital Investment of the unit is Rs. 1900 Crores**

Challan no.	Amount	Date
----	Rs.4,17,400/- (NOC fees)	24/10/2019

SHAMILA DOS
MILAGRES
MONTEIRO

Digitally signed by
SHAMILA DOS MILAGRES
MONTEIRO
Date: 2020.01.29 15:17:00
+05'30'

(Dr. Shamila Monteiro)
Member Secretary
Goa State Pollution Control Board

P.W.D. 585e

Government of Goa

ORIGINAL

WATER RESOURCES DEPARTMENT

RECEIPT FOR PAYMENT TO GOVERNMENT

No. 07

BOOK No. 358 RECEIPT

Division I Place Panvelim

Sub-Division I Date 22/03/2019

Received from Megawide Construction DMCC the sum of

Rs: 500/- (In words rupees Five Hundred only)

on account of Certificate of Registration of Bore well at Sy No. 260/1 Moth, Panvelim, Pernem North.

Reg: N 3270/R0. Signature: [Signature]

Designation: WORKS DIVISIONARY CASHIER
Panvelim-Goa

Cashier or Head Clerk



GOVERNMENT OF GOA Water Resources Department

FORM - III

[See Rule 3(6)(2)]

Certificate of Registration of an existing well and permission for it's continuous use in the Scheduled area under 5(4) of the Goa Ground Water Regulation Act, 2002 (Goa Act 1 of 2002).

Registrant Details

Name of the Applicant : Megawide Construction DMCC
Full Address : Post Bag No. 1, Green Field Airport, Mopa, Pernem, Goa, 403512

Location of the Well

Survey & Sub Div / PT & Chalta Number : 260/1
Name of Land : Math
Village Panchayat : Cansarvorim
Taluka & District : Pernem - North

Details of the Well

Type of Well : Bore well
Diameter / Size of the well (mts) : 0.15
Depth of the well (mts) : 70.00
Month & year of construction : Nov / 2018
Month & year of commissioning : Dec / 2018

Method of Water Drawal

Device used for lifting the ground water : Pump
Type of pump : Submersible
Horse Power (HP) : 3.00
Pump Capacity (LPM) : 150.00
E.D. Power Supply Connection No. : 0

Details of Water Usage

Purpose of usage : Commercial
Number of hours pumping per day : 8
Quantity of ground water drawn per day (Its) : 24,000
No. of months of use per year : 12
Registration Number : N 3270 / R 0
Certificate Validity : 13 / Mar / 2019 to 12 / Mar / 2024

This is subject to conditions specified overleaf.



WRS
Executive Engineer
on Works Division
Water Resources Department
Porvorim-Goa

Sinchai Bhawan, Near Police Station, Alto Porvorim, Bardez Goa.
(0832) 2412047 | www.goawrd.gov.in



This is subject to the following conditions:

1. *Validity period of registration is 5 (five) years from date of issue.*
2. *The permit holder should not deviate in any way from the specifications regarding well, pump etc. mentioned above without pre-intimation and approval of the Ground Water Officer.*
3. *The Ground Water Officer or any persons duly authorized by him shall have the right to enter and inspect the place with such assistance as may be necessary to satisfy himself whether the conditions specified in the permit are being complied with.*
4. *The drawal of ground water under this license should not interfere with the normal activities of the locality nor should it cause any traffic hazard.*
5. *The structure is registered for Commercial purpose. Charge for the Water Consumption will be as per the notification issued by the Government.*
6. *This permit will be withdrawn without prejudice to the Government, if the conditions of the permit are violated.*
7. *Suitability of water before use for human/animal consumption, he got approved from health authority.*

- e) The Assst Engineer sub division of W.D. & W.R.D. Panaji
- a) The Assst Engineer sub division of W.D. & W.R.D. Panaji

ORIGINAL

Government of Goa

P.W.D. 585e

WATER RESOURCES DEPARTMENT

RECEIPT FOR PAYMENT TO GOVERNMENT

No. of

BOOK No. 358

RECEIPT

Division

Place

Porvorim

Sub-Division

Date

22/03/19

Received from

Megawide Construction DMCC

the sum of

Rs:

500/-

(In words rupees

Five Hundred only

on account of

Certificate of Registration of Bore well at Sy No.

261/o Hath Chavakomem Porvorim North

Reg: N 3269/RO.

Signature:

CASHIER

Designation

Works Division (P.W.D.)
Porvorim-Goa

Cashier or Head Clerk



FORM - III
[See Rule 3(6)(2)]

Certificate of Registration of an existing well and permission for it's continuous use in the Scheduled area under 5(4) of the Goa Ground Water Regulation Act, 2002 (Goa Act 1 of 2002).

Registrant Details

Name of the Applicant : Megawide Construction DMCC
Full Address : Post Bag No. 1, Green Field Airport, Mopa, Pernem, Goa, 403512

Location of the Well

Survey & Sub Div / PT & Chalta Number : 261/0
Name of Land : Math
Village Panchayat : Causarvornem
Taluka & District : Pernem - North

Details of the Well

Type of Well : Bore well
Diameter / Size of the well (mts) : 0.15
Depth of the well (mts) : 84.00
Month & year of construction : Nov / 2018
Month & year of commissioning : Dec / 2018

Method of Water Drawal

Device used for lifting the ground water : Pump
Type of pump : Submersible
Horse Power (HP) : 3.00
Pump Capacity (LPM) : 150.00
E.D. Power Supply Connection No. : 0

Details of Water Usage

Purpose of usage : Commercial
Number of hours pumping per day : 8
Quantity of ground water drawn per day (lts) : 24,000
No. of months of use per year : 12
Registration Number : N 3269 / R 0
Certificate Validity : 13 / Mar / 2019 to 12 / Mar / 2024

This is subject to conditions specified overleaf.



all
Executive Engineer
Works Division
Water Resources Department
Porvorim-Goa



This is subject to the following conditions:

1. *Validity period of registration is 5 (five) years from date of issue.*
2. *The permit holder should not deviate in any way from the specifications regarding well, pump etc. mentioned above without pre-intimation and approval of the Ground Water Officer.*
3. *The Ground Water Officer or any persons duly authorized by him shall have the right to enter and inspect the place with such assistance as may be necessary to satisfy himself whether the conditions specified in the permit are being complied with.*
4. *The drawal of ground water under this license should not interfere with the normal activities of the locality nor should it cause any traffic hazard.*
5. *The structure is registered for Commercial purpose. Charge for the Water Consumption will be as per the notification issued by the Government.*
6. *This permit will be withdrawn without prejudice to the Government, if the conditions of the permit are violated.*
7. *Suitability of water before use for human/animal consumption, be got approved from health authority.*

② The Assistant Engineer Sub-III work Div 5, WRO Pernem.
a) The Assistant Engineer subcliv II W.D.D. Panvelim

ANNEXURE – 3
ENVIRONMENTAL MITIGATION MEASURES AS PER EIA REPORT AND COMPLIANCE STATUS
AS OF MARCH 2020

No	Mitigation measures	Compliance status
Mitigation measures for Air Environment during Construction Phase		
01	Ensure preventive maintenance of vehicles and equipment.	Being complied. Copy of sample Checklist for Maintenance is enclosed as Annexure-A .
02	Ensure vehicles with valid Pollution under Control certificates are used.	Being complied. Copy of sample PUC certificate is enclosed as Annexure-B .
03	Implement dust control activities such as water sprinkling on unpaved sites	Being complied with. Photographs of implementation of Dust control measures are enclosed as Annexure-C .
04	Ensure vertical stacks with height sufficient for dispersion as per CPCB guideline for DG stacks.	DG sets stack height is as per the CPCB Guidelines. Photo showing DG with adequate stack height is enclosed as Annexure-D .
Mitigation measures for Water Environment during Construction Phase		
05	Monitor water usage at construction camps to prevent wastage.	Being complied.
06	Ensure STP at construction camps/sites and the proposed facilities are properly designed to handle peak waste water load and properly maintained	STP of 225 KLD is operational at the workmen colony. It is designed to handle peak WW load and being properly maintained. Complied.
07	Ensure supply of temporary/portable toilets for construction staff	Being complied. Photos of Portable toilet facilities are enclosed as Annexure-E .
Mitigation measures for Land Environment during Construction Phase		
08	Avoiding rainy season for construction so as to avoid soil erosion	Appropriate measures taken.



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09	Ensure top soil stock pile is not contaminated with any type of spills.	Being followed.
10	Ensure any material resulting from clearing and grading should not be deposited on approach roads, streams or ditches, which may hinder the passage and/or natural water drainage.	Being followed.
Mitigation measures for Noise Environment during Construction Phase		
11	Ensure preventive maintenance of equipment and vehicles	Being complied with.
12	Ensure DG sets are provided with acoustic enclosures and exhaust mufflers	DG sets have acoustic enclosures.
13	Ensure vehicle movement is avoided at night, and close to sensitive receptors (such as schools, hospitals, place of worships)	Being complied with.
Mitigation measures for Biological Environment during Construction Phase		
14	Keep a tally of trees cut	Records have been maintained. Being complied.
15	Avoid cutting of trees wherever possible	Being complied with.
16	Closing of trenches as soon as possible after pipeline laying, if any.	Will be complied with.
Mitigation measures for Socio-economic Environment during Construction Phase		
17	Prohibit use of firewood in project camps and making use of cooking gas is mandatory.	Being Complied.
18	Regulating speed limit of the vehicles	Being regulated.



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Half Yearly EC Compliance Report (Oct 2019 to March 2020)

ANNEXURE-A PREVENTATIVE MAINTENANCE OF VEHICLES



FIELD SERVICE REPORT

F041

Work Order No.

Date: 21/02/2020

Machine Model	G9100	Machine S/N	MSJ06700089	Engine S/N	
Delivery Date		HMR	249	Under Warranty	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Application	Grading	Break Down			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Customer	Lakshmi Srinivasa Const.	Contact Person	Mr. Sathi		
Machine Location	Mopa Airport	Contact No.	9640183628		
Complaint		Cause			
250 hours mandatory service		250 hours mandatory service due.			
Correction		Replaced Component Serial Number			
Done the 250 hours service as per procedure. Started the machine & checked, found ok		Description	Old Part S/N	New Part S/N	

Parts Used (Please attach a separate sheet to this form if the space for parts is insufficient)					
Part Number	Description	Qty	Part Number	Description	Qty
411000050216	Engine oil filter	01			
15W40	Engine oil	22.6ltr			
411000050322	Fuel filter	01			
411000050302	W-Separator	01			

Lead technician: Hussain Nalika Assistant: Sudesh Naik

Trip	Dispatch		Arrival at Jobsite		Travel Hour	Mileage	Job start		Job complete		Labour Hour	Technician
	Date	Time	Date	Time			Date	Time	Date	Time		
1 st												
2 nd												
3 rd												

Any Other Findings On Machine / Recommendations	Customer Comments
	<input type="checkbox"/> Satisfied <input type="checkbox"/> Normal <input type="checkbox"/> Unsatisfied

Customer: SK Nalika
Signature & Date

Technician: [Signature]
Signature & Date

Supervisor: _____
Signature & Date

1. Work Order / 2. Customer / 3. Service



**ANNEXURE-B
 PUC CERTIFICATE**

GOVERNMENT OF GOA
 DIRECTORATE OF TRANSPORT
 Rule 116B(10)(C)
 POLLUTION UNDER CONTROL CERTIFICATE

D1

PUC LICENSE ID No. **PUC/01/2006**
 Upto **30-09-2020**

CERTIFICATE SERIAL No.
445543

Vehicle Type: **OTHERS**
 Vehicle No.: **GA 08 U 5479**

Date of Testing: **20-12-2019**
 Time of Testing: **9:25:54 AM**

I.D. No.: **0236**
 Odometer Reading:

Sl. No.	RPM	K. Value	HSU Values %
1	1462	1.19	
2	1020	0.00	
3	1116	1.50	
4			
5			
6			

Valid Upto :- **19-06-2020**

Certified that this vehicle emission levels conforms to the standards prescribed under rule 115(2) of CMVR-1989
 The Certificate is valid for six months from the date of issue

DUKI F AUTO CARE CENTRE
 RAMNATH COLONY, SALCATE, GOA

Authorised Signatory
 Engineer-in-charge




**ANNEXURE-C
DUST CONTROL MEASURES IMPLEMENTED AT SITE**



WATER SPRINKLING BY TANKERS ON UNPAVED HAUL ROADS

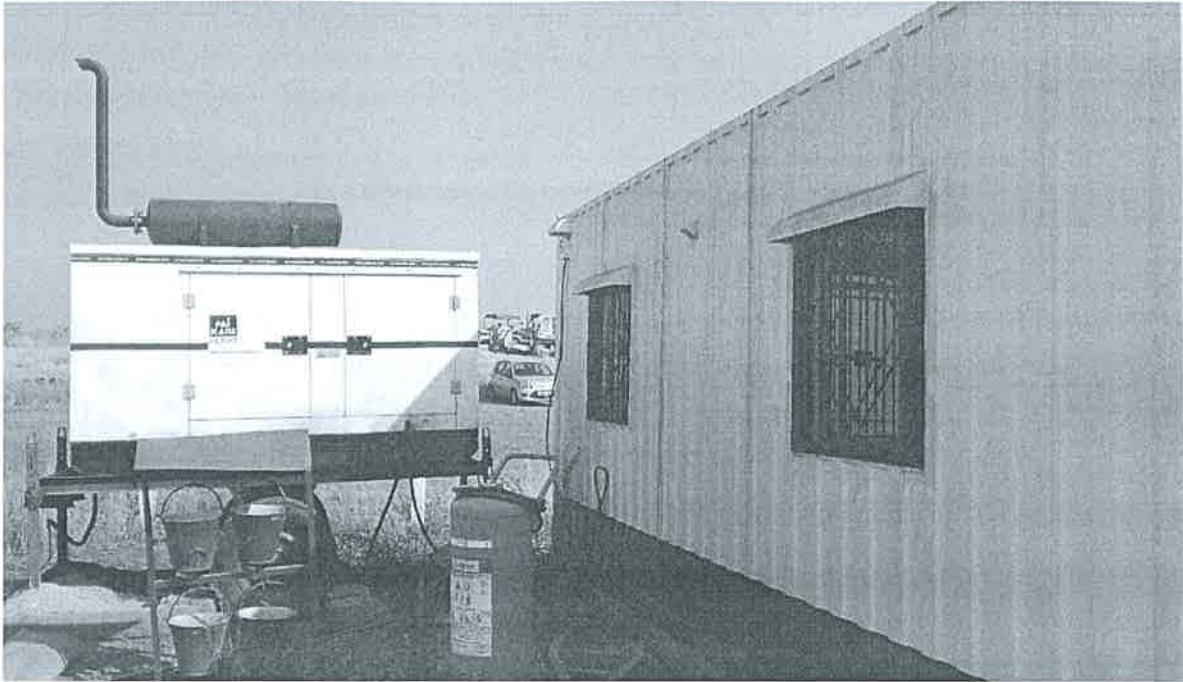


FOG CANNON AT MATERIAL STORAGE AREA OF WMM plant AA

Handwritten signature



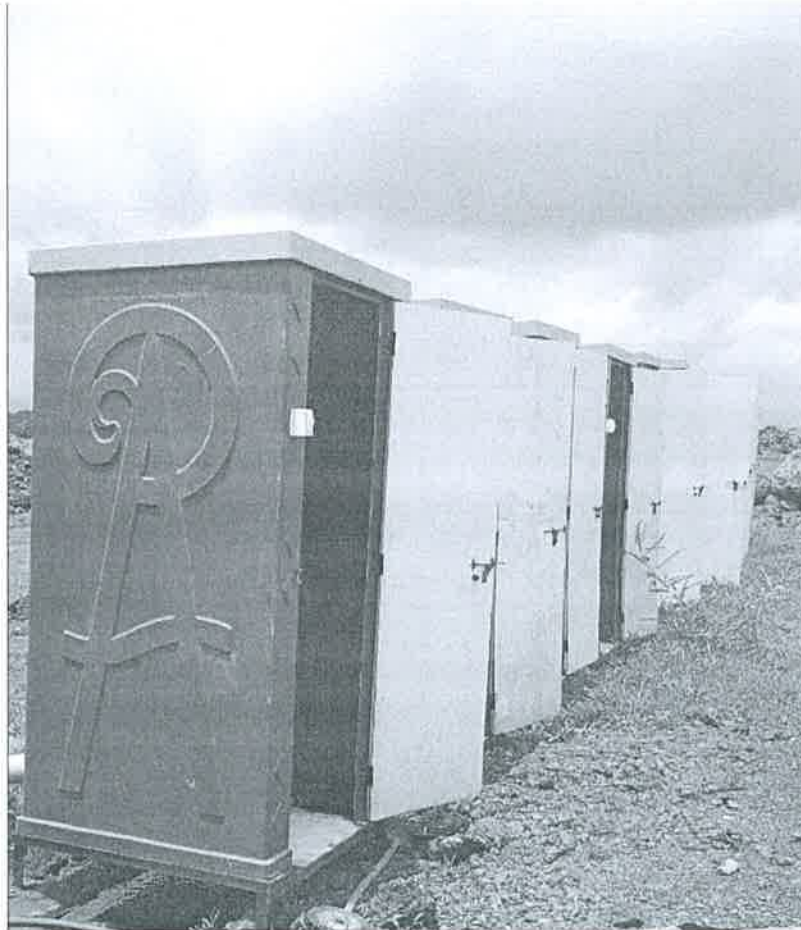
ANNEXURE-D
40 KVA DIESEL GENERATOR WITH ADEQUATE STACK HEIGHT



MS



ANNEXURE-E
PORTABLE TOILET FACILITIES



MS





Sadekar Enviro Engineers Pvt. Ltd.

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SPM FILTER
 SPM UPLC

AMBIENT AIR QUALITY MONITORING REPORT

Report No.	SEE/AR/03/2020/5559	Report Date	16/03/2020		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of lab			
Date of Sampling	09/03/2020	Temperature (°C)*	26.5	Humidity (%)*	58
Analysis Started On	11/03/2020	Analysis Completed On	16/03/2020		

AMBIENT AIR STATION LOCATION

Location of ambient air station	Semeche Advan, Varkhad				
Ambient Temperature (°C)*	29.8	Humidity (%)*	64		
Wind Speed (km/hr)*	1.9	Wind Direction (deg)*	276		
Instruments Used	R.D.S.(APM- 460), F.P.S (APM – 550) & G.P.S.(APM – 411)				

POLLUTION PARAMETERS

Sr. No.	Parameters	Result	Unit	Limits (NAAQS-2009)	Method
01.	SPM	142.20	µg/m ³	-	IS 5182(Part 04)
02.	PM ₁₀	83.58	µg/m ³	100.00	IS 5182(Part 23)
03.	PM _{2.5}	37.27	µg/m ³	60.00	Lab SOP NO.: SEE/LD/SQP-AA-04
04.	SO ₂	16.55	µg/m ³	80 .00	IS 5182 (Part 02)
05.	NO _x	21.58	µg/m ³	80 .00	IS 5182 (Part 06)
06.	CO	0.08	mg/m ³	4.00	Lab SOP NO.: SEE/LD/SOP-AA-10


Note : Test results related only to the sample tested.

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

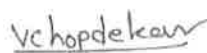
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 Analysed by
 Dipali Sawant




 Authorized Signatory
 Varsha Pole

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E-mail : sadekarenviro@rediffmail.com • Website : www.sadekarenviro.com • CIN - U45209MH1999PTC-116379

Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 BL(SR NO.1895-DTJ-2014)	ECL/SEEPL/2019-20/FLOW/792	27/05/2019	27/05/2020

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR No. 288-DTJ-2014)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEPL/2019-20/FLOW/826	30/05/2019	30/05/2020

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (COA 109)	03/06/2019	02/06/2020



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AMBIENT AIR QUALITY MONITORING REPORT

Report No.	SEE/AR/03/2020/5560	Report Date	16/03/2020		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of lab			
Date of Sampling	09/03/2020	Temperature (°C)*	26.5	Humidity (%)*	58
Analysis Started On	11/03/2020	Analysis Completed On		16/03/2020	

AMBIENT AIR STATION LOCATION

Location of ambient air station	Airport Boundary, Opp. To CH1400n				
Ambient Temperature (°C)*	29.8	Humidity (%)*	64		
Wind Speed (km/hr)*	1.9	Wind Direction (deg)*	276		
Instruments Used	R.D.S.(APM- 460), F.P.S.(APM - 550) & G.P.S.(APM - 411)				

POLLUTION PARAMETERS

Sr. No.	Parameters	Result	Unit	Limits (NAAQS-2009)	Method
01.	SPM	175.13	µg/m ³	-	IS 5182(Part 04)
02.	PM ₁₀	86.47	µg/m ³	100.00	IS 5182(Part 23)
03.	PM _{2.5}	39.25	µg/m ³	60.00	Lab SOP NO.: SEE/LD/SOP-AA-04
04.	SO ₂	14.23	µg/m ³	80 .00	IS 5182 (Part 02)
05.	NO _x	17.53	µg/m ³	80 .00	IS 5182 (Part 06)
06.	CO	0.10	mg/m ³	4.00	Lab SOP NO.: SEE/LD/SOP-AA-10


Note : Test results related only to the sample tested.

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

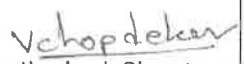
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Analysed by
Dipali Sawant




Authorized Signatory
Varsha Pole

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 BL(SR NO.1461-DTD-2009)	ECL/SEEPL/2019-20/FLOW/789	29/05/2019	29/05/2020

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR NO. 104-DTK-2012)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550 MINI	ECL/SEEPL/2019-20/FLOW/822	29/05/2019	29/05/2020

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (COA 109)	03/06/2019	02/06/2020



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2008 LEG

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AMBIENT AIR QUALITY MONITORING REPORT

Report No.	SEE/AR/03/2020/5561	Report Date	16/03/2020		
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited				
Address of Client	Mopa, Goa				
Sample Collected By	SEEPL Representative	Environmental condition of lab			
Date of Sampling	09/03/2020	Temperature (°C)*	26.5	Humidity (%)*	58
Analysis Started On	11/03/2020	Analysis Completed On		16/03/2020	

AMBIENT AIR STATION LOCATION

Location of ambient air station	R & R Colony				
Ambient Temperature (°C)*	29.8	Humidity (%)*	64		
Wind Speed (km/hr)*	1.9	Wind Direction (deg)*	276		
Instruments Used	R.D.S.(APM- 460), F.P.S.(APM – 550) & G.P.S.(APM – 411)				

POLLUTION PARAMETERS

Sr. No.	Parameters	Result	Unit	Limits (NAAQS-2009)	Method
01.	SPM	112.54	µg/m ³	-	IS 5182(Part 04)
02.	PM ₁₀	77.89	µg/m ³	100.00	IS 5182(Part 23)
03.	PM _{2.5}	29.81	µg/m ³	60.00	Lab SOP NO.: SEE/LD/SOP-AA-04
04.	SO ₂	09.38	µg/m ³	80 .00	IS 5182 (Part 02)
05.	NO _x	13.35	µg/m ³	80 .00	IS 5182 (Part 06)
06.	CO	0.07	mg/m ³	4.00	Lab SOP NO.: SEE/LD/SOP-AA-10

Note : Test results related only to the sample tested.

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

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Dipali Sawant



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Varsha Pole

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Calibration details of Equipment used for Sampling & Analysis

Respirable Dust Sampler's with Gaseous Sampling

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	RDS- APM 460 BL(SR NO.1456-DTD-2009)	ECL/SEEPL/2019-20/FLOW/784	28/05/2019	28/05/2020

UV Spectrophotometer

Sr No.	Equipment Name	Calibration
01	UV	In House Calibration

Fine Particulate Sampler (SR No. 301-DTE-2010)

Sr No.	Equipment Name	Certificate No.	Calibrated on	Calibration due date
01	FPS - APM 550	ECL/SEEPL/2019-20/FLOW/827	30/05/2019	30/05/2020

CO METER

Sr No.	Instrument Type	Calibrated on	Calibration due date
01	CO Analyzer (COA 109)	03/06/2019	02/06/2020



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NOISE LEVEL MONITORING REPORT

Report No.	SEE/AR/03/2020/5567-69	Report Date	16/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Date of Sampling	09/03/2020		
Sample Collected By	SEEPL Representative		

Sr. No.	Sampling Location (From 1.0 meter off)	Report No.	Noise In dB(A)		Noise in dB (A) Leq
			Max.	Min.	Night Time
01.	Near R&R Colony	SEE/AR/03/2020/5567	47	41	44
02.	Semeche Advan, Varkhad	SEE/AR/03/2020/5568	40	32	36
03.	Airport Boundary, Opp. To CH1400n	SEE/AR/03/2020/5569	36	30	33

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

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

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

Note : Test results related only to the sample tested.

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

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Monitored by
Anand Chavan

Authorized Signatory
Varsha Pole



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E-mail : sadekarenviro@rediffmail.com • Website : www.sadekarenviro.com • CIN - U45209MH1998PTC-116379

Calibration Details of Equipment used for Sampling

Noise Level Meter No.1(A0913-1393)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	2019-20/CFC/421/2	03/07/2019	03/07/2020



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NOISE LEVEL MONITORING REPORT			
Report No.	SEE/AR/03/2020/5565-66	Report Date	16/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Date of Sampling	09/03/2020		
Sample Collected By	SEEPL Representative		

Sr. No.	Report No.	Sampling Location (From 1 meter off)	Noise in dB (A) Leq	Limits
			Day Time	
01.	SEE/AR/03/2020/5565	PTB Working Area	74.5	75
02.	SEE/AR/03/2020/5566	Near DG.500 KVA (ACC Batching Plant)	67.9	75

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

Note : Test results related only to the sample tested.

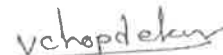
: Test results relate only to the condition prevailing at the time of sampling

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Monitored by
Anand Chavan




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Calibration Details of Equipment used for Sampling

Noise Level Meter No.1(A0913-1393)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	2019-20/CFC/421/2	03/07/2019	03/07/2020



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ISO 9001:2015
SPEL/17C

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NOISE LEVEL MONITORING REPORT

Report No.	SEE/AR/03/2020/5562 -64	Report Date	16/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		
Address of Client	Mopa, Goa		
Date of Sampling	09/03/2020		
Sample Collected By	SEEPL Representative		

Sr. No.	Sampling Location (From 1.0 meter off)	Report No.	Noise in dB(A)		Noise in dB(A) Leq Day Time
			Max.	Min.	
01.	Near R&R Colony	SEE/AR/03/2020/5562	51	45	48
02.	Semeche Advan, Varkhad	SEE/AR/03/2020/5563	50	46	48
03.	Airport Boundary, Opp. To CH1400n	SEE/AR/03/2020/5564	45	35	40

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

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

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

Note : Test results related only to the sample tested.

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

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

Monitored by
Anand Chavan



Authorized Signatory
Varsha Pole

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E-mail : sadekarenviro@rediffmail.com • Website : www.sadekarenviro.com • CIN - U45209MH1998PTC-116379

Calibration Details of Equipment used for Sampling

Noise Level Meter No.1(A0913-1393)

Sr No.	Equipment Name	Calibration Certificate No.	Calibrated on	Calibration due date
01	Noise Level Meter	2019-20/CFC/421/2	03/07/2019	03/07/2020



Sadekar Enviro Engineers Pvt. Ltd.

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TC - 7424

ULR No. TC74242000003605F

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	SEE/03/2020/4188	Report Date	18/03/2020	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 12/03/2020	Environmental Condition of Lab	Temp °C 26.3	Humidity % 55
Sampling Point	STP			
Sample Details	Inlet water	Date of Collection	12/03/2020	
Sample Collected By	SEEPL Representative	Sample Received On	12/03/2020	
Analysis Started On	12/03/2020	Analysis Completed On	18/03/2020	
Sample Container	Glass bottle +PVC Can	Sample Quantity	1000 ml + 1000ml	

Chemical Parameters

Sr.No.	Parameters	Results	Unit	Method
1.	pH	6.72	-	APHA(23 rd Edition) 4500 H+B
2.	Chemical Oxygen Demand (COD)	692.00	mg/lit	APHA(23 rd Edition) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	227.25	mg/lit	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	212.00	mg/lit	APHA(23 rd Edition) 2540-D
5.	Oil & Grease (O & G)	18.00	mg/lit	APHA(23 rd Edition) 5520-O & G

Note : Test results related only to the sample tested.

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ULR No. TC74242000003606F

ANALYSIS REPORT FOR WATER SAMPLE				
Report No.	SEE/03/2020/4189	Report Date	18/03/2020	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 12/03/2020	Environmental Condition of Lab	Temp °C	Humidity %
			26.3	55
Sampling Point	STP			
Sample Details	Outlet water	Date of Collection	12/03/2020	
Sample Collected By	SEEPL Representative	Sample Received On	12/03/2020	
Analysis Started On	12/03/2020	Analysis Completed On	18/03/2020	
Sample Container	Glass bottle +PVC Can	Sample Quantity	1000 ml + 1000ml	

Chemical Parameters

Sr.No.	Parameters	Results	Unit	*Limits	Method
1.	pH	7.85	-	5.5 – 9.0	APHA(23 rd Edition) 4500 H ⁺ -B
2.	Chemical Oxygen Demand (COD)	88.00	mg/lit	250.00	APHA(23 rd Edition) 5220-B
3.	Biochemical Oxygen Demand (27°C 3 day)(BOD)	17.76	mg/lit	30.00	IS 3025 (Part 44)
4.	Total Suspended Solids (TSS)	35.00	mg/lit	100.00	APHA(23 rd Edition) 2540-D
5.	Oil & Grease (O & G)	6.40	mg/lit	10.00	APHA(23 rd Edition) 5520-O & G

* Limits: General standards for Discharge of Environmental Pollutants into Inland Surface water, as per The Environment (Protection) Rules, 1986.

Note : Test results related only to the sample tested.

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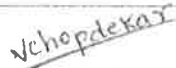
ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/03/2020/4198	Report Date	20/03/2020	
Name of Client	M/s.Viyay Nirman Company Pvt. Ltd			
Address of Client	Igreja Vaddo, House No 1468/2, Anjuna, Bardez.			
Order / Reference	As per dated 12/03/2020	Environmental Condition of Lab	Temp °C	Humidity %
			26.3	55
Sampling point	Tank			
Sample details	Tank Water	Date of collection	12/03/2020	
Sample Collected by	SEEPL Representative	Sample Received On	12/03/2020	
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	6.87	-	6.5 - 8.5	APHA(23 rd Edition) 4500 H ⁺ -B
2.	Turbidity	0.53	NTU	1.00	APHA(23 rd Edition) 2130 B
3.	Taste	Agreeable	-	Agreeable	APHA(23 rd Edition) 2160 B
4.	Color	<1.00	Hazen unit	5.00	APHA(23 rd Edition) 2120 B
5.	Odour	Agreeable	-	Agreeable	APHA(23 rd Edition) 2150 B
6.	Electric Conductivity	137	µS/cm	Not Specified	APHA(23 rd Edition) 2510-B
7.	Total Alkalinity	12.00	mg/lit	200.00	APHA(23 rd Edition) 2320 B
8.	Total Dissolved Solids	158.00	mg/lit	500.00	APHA(23 rd Edition) 2540 C
9.	Chlorides as Cl ⁻	13.51	mg/lit	250.00	APHA(23 rd Edition) 4500 Cl ⁻ B
10.	Sulphate as SO ₄ ²⁻	1.87	mg/lit	200.00	APHA(23 rd Edition) 4500 SO ₄ E
11.	Sulfides	<0.05	mg/lit	0.05	APHA(23 rd Edition) 4500 S ²⁻ F
12.	Total Hardness as CaCO ₃	14.00	mg/lit	200.00	APHA(23 rd Edition) 2340 C
13.	Ammonia	<0.50	mg/lit	0.50	APHA(23 rd Edition) 4500 NH ₃ B C


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Report No.	SEE/03/2020/4198	Report Date	20/03/2020
Order / Reference	As per daled 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s.Viyay Nirman Company Pvt. Ltd		

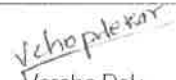
Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	Nil	mg/lit	0.50	APHA(23 rd Edition) 4500 Cl- C
15.	Nitrate as NO ₃	<1.00	mg/lit	45.00	APHA(23 rd Edition) 4500 NO ₃ B
16.	Fluoride as F ⁻	<0.10	mg/lit	1.00	APHA(23 rd Edition) 4500 F D
17.	Phenolic compound	<0.001	mg/lit	0.001	APHA(23 rd Edition) 5530-B,C
18.	Cyanide	<0.01	mg/lit	0.05	APHA(23 rd Edition) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	0.20	APHA(23 rd Edition) 5540 - C

Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	APHA(23 rd Edition) 3120 B
21.	Arsenic as As	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
22.	Boron as B	<0.01	mg/lit	0.50	APHA(23 rd Edition) 3120 B
23.	Calcium as Ca	2.40	mg/lit	75.00	APHA(23 rd Edition) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	APHA(23 rd Edition) 3120 B
25.	Iron as Fe	0.07	mg/lit	1.00	APHA(23 rd Edition) 3120 B
26.	Lead as Pb	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
27.	Magnesium as Mg	1.94	mg/lit	30.00	APHA(23 rd Edition) 3500Mg B
28.	Manganese as Mn	<0.01	mg/lit	0.10	APHA(23 rd Edition) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	APHA(23 rd Edition) 3120 B
30.	Selenium as Se	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
31.	Zinc as Zn	<0.01	mg/lit	5.00	APHA(23 rd Edition) 3120 B
32.	Sodium as Na	<1.00	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
33.	Potassium as K	<1.00	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
34.	Copper as Cu	<0.01	mg/lit	0.05	APHA(23 rd Edition) 3120 B


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Report No.	SEE/03/2020/4198	Report Date	20/03/2020
Order / Reference	As per dated 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s.Viyay Nirman Company Pvt. Ltd		

Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
35.	Total coliforms at 37°C for 48 hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-B
36.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-G

Note: Test results related only to the sample tested.

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ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/03/2020/4197	Report Date	20/03/2020	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 12/03/2020	Environmental Condition of Lab	Temp °C	Humidity %
			26.3	55
Sampling point	Borewell II			
Sample details	Borewell Water	Date of collection	12/03/2020	
Sample Collected by	SEEPL Representative	Sample Received On	12/03/2020	
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	7.10	-	6.5 - 8.5	APHA(23 rd Edition) 4500 H ⁺ -B
2.	Turbidity	0.51	NTU	1.00	APHA(23 rd Edition) 2130 B
3.	Taste	Agreeable	-	Agreeable	APHA(23 rd Edition) 2160 B
4.	Color	<1.00	Hazen unit	5.00	APHA(23 rd Edition) 2120 B
5.	Odour	Agreeable	-	Agreeable	APHA(23 rd Edition) 2150 B
6.	Electric Conductivity	121	µS/cm	Not Specified	APHA(23 rd Edition) 2510-B
7.	Total Alkalinity	58.00	mg/lit	200.00	APHA(23 rd Edition) 2320 B
8.	Total Dissolved Solids	161.00	mg/lit	500.00	APHA(23 rd Edition) 2540 C
9.	Chlorides as Cl ⁻	14.51	mg/lit	250.00	APHA(23 rd Edition) 4500 Cl ⁻ B
10.	Sulphate as SO ₄ ⁻	<1.00	mg/lit	200.00	APHA(23 rd Edition) 4500 SO ₄ E
11.	Sulfides	<0.05	mg/lit	0.05	APHA(23 rd Edition) 4500 S ²⁻ F
12.	Total Hardness as CaCO ₃	92.00	mg/lit	200.00	APHA(23 rd Edition) 2340 C
13.	Ammonia	<0.50	mg/lit	0.50	APHA(23 rd Edition) 4500 NH ₃ B C

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Report No.	SEE/03/2020/4197	Report Date	20/03/2020
Order / Reference	As per dated 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		

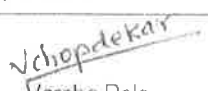
Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	Nil	mg/lit	0.50	APHA(23 rd Edition) 4500 Cl- C
15.	Nitrate as NO ₃	<1.00	mg/lit	45.00	APHA(23 rd Edition) 4500 NO ₃ B
16.	Fluoride as F	<0.10	mg/lit	1.00	APHA(23 rd Edition) 4500 F D
17.	Phenolic compound	<0.001	mg/lit	0.001	APHA(23 rd Edition) 5530-B,C
18.	Cyanide	<0.01	mg/lit	0.05	APHA(23 rd Edition) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	0.20	APHA(23 rd Edition) 5540 - C

Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	APHA(23 rd Edition) 3120 B
21.	Arsenic as As	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
22.	Boron as B	0.06	mg/lit	0.50	APHA(23 rd Edition) 3120 B
23.	Calcium as Ca	9.61	mg/lit	75.00	APHA(23 rd Edition) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	APHA(23 rd Edition) 3120 B
25.	Iron as Fe	0.73	mg/lit	1.00	APHA(23 rd Edition) 3120 B
26.	Lead as Pb	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
27.	Magnesium as Mg	16.52	mg/lit	30.00	APHA(23 rd Edition) 3500Mg B
28.	Manganese as Mn	<0.01	mg/lit	0.10	APHA(23 rd Edition) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	APHA(23 rd Edition) 3120 B
30.	Selenium as Se	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
31.	Zinc as Zn	0.03	mg/lit	5.00	APHA(23 rd Edition) 3120 B
32.	Sodium as Na	1.91	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
33.	Potassium as K	<1.00	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
34.	Copper as Cu	<0.01	mg/lit	0.05	APHA(23 rd Edition) 3120 B


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Report No.	SEE/03/2020/4197	Report Date	20/03/2020
Order / Reference	As per dated 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		

Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
35.	Total coliforms at 37°C for 48 hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-B
36.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-G

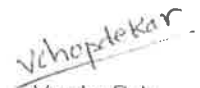
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ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/03/2020/1196	Report Date	20/03/2020	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 12/03/2020	Environmental Condition of Lab	Temp °C	Humidity %
			26.3	55
Sampling point	Borewell 1			
Sample details	Borewell Water	Date of collection	12/03/2020	
Sample Collected by	SEEPL Representative	Sample Received On	12/03/2020	
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	6.96	-	6.5 - 8.5	APHA(23 rd Edition) 4500 H*-B
2.	Turbidity	0.42	NTU	1.00	APHA(23 rd Edition) 2130 B
3.	Taste	Agreeable	-	Agreeable	APHA(23 rd Edition) 2160 B
4.	Color	<1.00	Hazen unit	5.00	APHA(23 rd Edition) 2120 B
5.	Odour	Agreeable	-	Agreeable	APHA(23 rd Edition) 2150 B
6.	Electric Conductivity	131	µS/cm	Not Specified	APHA(23 rd Edition) 2510-B
7.	Total Alkalinity	54.00	mg/lit	200.00	APHA(23 rd Edition) 2320 B
8.	Total Dissolved Solids	153.00	mg/lit	500.00	APHA(23 rd Edition) 2540 C
9.	Chlorides as Cl ⁻	15.01	mg/lit	250.00	APHA(23 rd Edition) 4500 Cl B
10.	Sulphate as SO ₄ ⁻	3.51	mg/lit	200.00	APHA(23 rd Edition) 4500 SO ₄ E
11.	Sulfides	<0.05	mg/lit	0.05	APHA(23 rd Edition) 4500 S ² F
12.	Total Hardness as CaCO ₃	70.00	mg/lit	200.00	APHA(23 rd Edition) 2340 C
13.	Ammonia	<0.50	mg/lit	0.50	APHA(23 rd Edition) 4500 NH ₃ B C

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Report No.	SEE/03/2020/4196	Report Date	20/03/2020
Order / Reference	As per dated 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		

Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	Nil	mg/lit	0.50	APHA(23 rd Edition) 4500 Cl- C
15.	Nitrate as NO ₃	2.29	mg/lit	45.00	APHA(23 rd Edition) 4500 NO ₃ B
16.	Fluoride as F ⁻	<0.10	mg/lit	1.00	APHA(23 rd Edition) 4500 F D
17.	Phenolic compound	<0.001	mg/lit	0.001	APHA(23 rd Edition) 5530-B,C
18.	Cyanide	<0.01	mg/lit	0.05	APHA(23 rd Edition) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	0.20	APHA(23 rd Edition) 5540 - C

Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	APHA(23 rd Edition) 3120 B
21.	Arsenic as As	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
22.	Boron as B	0.17	mg/lit	0.50	APHA(23 rd Edition) 3120 B
23.	Calcium as Ca	8.01	mg/lit	75.00	APHA(23 rd Edition) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	APHA(23 rd Edition) 3120 B
25.	Iron as Fe	0.75	mg/lit	1.00	APHA(23 rd Edition) 3120 B
26.	Lead as Pb	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
27.	Magnesium as Mg	12.15	mg/lit	30.00	APHA(23 rd Edition) 3500Mg B
28.	Manganese as Mn	<0.01	mg/lit	0.10	APHA(23 rd Edition) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	APHA(23 rd Edition) 3120 B
30.	Selenium as Se	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
31.	Zinc as Zn	0.06	mg/lit	5.00	APHA(23 rd Edition) 3120 B
32.	Sodium as Na	1.27	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
33.	Potassium as K	<1.00	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
34.	Copper as Cu	<0.01	mg/lit	0.05	APHA(23 rd Edition) 3120 B

Uchita Dongare
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Varsha Pole
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Report No.	SEE/03/2020/4196	Report Date	20/03/2020
Order / Reference	As per dated 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa international Airport Limited		

Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
35.	Total coliforms at 37°C for 48 hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-B
36.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-G

Note: Test results related only to the sample tested.

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Analyzed by

Vchopdekar

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ANALYSIS REPORT FOR WATER SAMPLE

Report No.	SEE/03/2020/4198	Report Date	20/03/2020	
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited			
Address of Client	Mopa, Goa			
Order / Reference	As per dated 12/03/2020	Environmental Condition of Lab	Temp °C	Humidity %
			26.3	55
Sampling point	Water Tank at PTB			
Sample details	Tank Water	Date of collection	12/03/2020	
Sample Collected by	SEEPL Representative	Sample Received On	12/03/2020	
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020	
Sample Container	Glass bottle + PVC Can	Sample Quantity	1000 ml + 4000ml	

Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
1.	pH	6.87	-	6.5 - 8.5	APHA(23 rd Edition) 4500 H ⁺ -B
2.	Turbidity	0.53	NTU	1.00	APHA(23 rd Edition) 2130 B
3.	Taste	Agreeable	-	Agreeable	APHA(23 rd Edition) 2160 B
4.	Color	<1.00	Hazen unit	5.00	APHA(23 rd Edition) 2120 B
5.	Odour	Agreeable	-	Agreeable	APHA(23 rd Edition) 2150 B
6.	Electric Conductivity	137	µS/cm	Not Specified	APHA(23 rd Edition) 2510-B
7.	Total Alkalinity	12.00	mg/lit	200.00	APHA(23 rd Edition) 2320 B
8.	Total Dissolved Solids	158.00	mg/lit	500.00	APHA(23 rd Edition) 2540 C
9.	Chlorides as Cl ⁻	13.51	mg/lit	250.00	APHA(23 rd Edition) 4500 Cl ⁻ B
10.	Sulphate as SO ₄ ²⁻	1.87	mg/lit	200.00	APHA(23 rd Edition) 4500 SO ₄ E
11.	Sulfides	<0.05	mg/lit	0.05	APHA(23 rd Edition) 4500 S ²⁻ F
12.	Total Hardness as CaCO ₃	14.00	mg/lit	200.00	APHA(23 rd Edition) 2340 C
13.	Ammonia	<0.50	mg/lit	0.50	APHA(23 rd Edition) 4500 NH ₃ B C

Uchita Dongare
Analyzed by



Varsha Pole
Authorized Signatory

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Report No.	SEE/03/2020/4198	Report Date	20/03/2020
Order / Reference	As per dated 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

Chemical Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
14.	Residual free chlorine	Nil	mg/lit	0.50	APHA(23 rd Edition) 4500 Cl- C
15.	Nitrate as NO ₃	<1.00	mg/lit	45.00	APHA(23 rd Edition) 4500 NO ₃ B
16.	Fluoride as F ⁻	<0.10	mg/lit	1.00	APHA(23 rd Edition) 4500 F D
17.	Phenolic compound	<0.001	mg/lit	0.001	APHA(23 rd Edition) 5530-B,C
18.	Cyanide	<0.01	mg/lit	0.05	APHA(23 rd Edition) 4500 CN -D
19.	Anionic Detergents	<0.10	mg/lit	0.20	APHA(23 rd Edition) 5540 - C

Metal Analysis

20.	Aluminium as Al	<0.01	mg/lit	0.03	APHA(23 rd Edition) 3120 B
21.	Arsenic as As	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
22.	Boron as B	<0.01	mg/lit	0.50	APHA(23 rd Edition) 3120 B
23.	Calcium as Ca	2.40	mg/lit	75.00	APHA(23 rd Edition) 3500Ca B
24.	Cadmium as Cd	<0.001	mg/lit	0.003	APHA(23 rd Edition) 3120 B
25.	Iron as Fe	0.07	mg/lit	1.00	APHA(23 rd Edition) 3120 B
26.	Lead as Pb	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
27.	Magnesium as Mg	1.94	mg/lit	30.00	APHA(23 rd Edition) 3500Mg B
28.	Manganese as Mn	<0.01	mg/lit	0.10	APHA(23 rd Edition) 3120 B
29.	Mercury as Hg	<0.001	mg/lit	0.001	APHA(23 rd Edition) 3120 B
30.	Selenium as Se	<0.01	mg/lit	0.01	APHA(23 rd Edition) 3120 B
31.	Zinc as Zn	<0.01	mg/lit	5.00	APHA(23 rd Edition) 3120 B
32.	Sodium as Na	<1.00	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
33.	Potassium as K	<1.00	mg/lit	Not Specified	APHA(23 rd Edition) 3120 B
34.	Copper as Cu	<0.01	mg/lit.	0.05	APHA(23 rd Edition) 3120 B

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Report No.	SEE/03/2020/4198	Report Date	20/03/2020
Order / Reference	As per dated 12/03/2020	Sample Received On	12/03/2020
Analysis Started On	12/03/2020	Analysis Completed On	20/03/2020
Name of Client	M/s. Megawide Construction DMCC C/o GMR Goa International Airport Limited		

Microbiological Parameters

Sr. No.	Parameter	Result	Unit	IS desirable Limit (As per IS 10500)	Method
35.	Total coliforms at 37°C for 48 hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-B
36.	E.coli at 44.5°C for 24hrs.	Absent	MPNIndex/100ml	Absent	APHA(23 rd Edition) 9221-G

Note: Test results related only to the sample tested.

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

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