adani

Ref: MgIAL/Operations/Env/2023-24/ 2875

29th September 2023

To,

Member Secretary,
Karnataka State Pollution Control Board
"Parisara Bhavana", No #49, Church Street,
Bengaluru - 560001

Sir,

Sub: Submission of Environment Statement (Form V) for "Mangaluru International Airport Limited" for the period April-2022 to March 2023.

Ref.: Consent For Operation date: 18th March 2022.

With reference to the above subject and reference, we are hereby submitting Environment Statement (Form V) for "Mangaluru International Airport Limited" for the period April-2022 to March 2023.

Kindly consider the above submission and acknowledge.

Thanking you,
For **Mangaluru International Airport Limited.**

Vijaya Mohan K,
Head-QEHS

Encl: As above

Copy to:

1. Environment Officer, Regional Officer Karnataka State Pollution Control Board Plot No.10 B. Baikamapady Industrial Area, Mangalore-575011

RECEIVED
Regional Office
30/09/23.
Karnataka State Pollution Control Board
Plot No.10-'B', Baikampady Industrial Area
Mangaluru-575011

O/C

Mangaluru International Airport Limited
(Formerly known as Adani Mangaluru International Airport Ltd)
Bajpe Main Road,
Kenjar, PO: Bajpe,
Mangaluru 574 142,
Karnataka, India
CIN: U63030GJ2019PLC110062

Tel +91 824 295 5222
Fax +91 824 295 5222
adaniairports@adani.com
www.adani.com

Environment Statement for 2022-23
M/s. Mangaluru International Airport Limited

FORM V
(See Rule 14)

Environmental Statement for the period from 1st April 2022 to 31st March 2023

PART – A

(i)	Name and address of the Owner/ Occupier of the Industry Operation or Process	:	Mr. Mukesh Nanhani Chief Airport Officer Mangaluru International Airport Limited, Bajpe Main Rd, Kenjar P.O, Mangaluru, Karnataka. Pin-574142, India.
(ii)	Industry Category Primary (STC Code) Secondary (STC Code)	:	Red-Large NA NA
(iii)	Production Capacity		No production as Airport is Service industry.
(iv)	Year of Establishment	:	Commercial Date of Operation (COD): 31st October 2020
(v)	Date of last Environment Statement submitted	:	30th September 2022

Environment Statement for 2022-23
M/s. Mangaluru International Airport Limited

PART – B

Water and Raw Material Consumption

(i) Water Consumption (in m3/day)

Water Consumption	231 KL/day
Process	Nil
Domestic & cooling	231 KL/DAy

Details of Water Consumption for the period of April 2022 to March 2023 are enclosed as **Annexure – 1**.

Details	Process water consumption per unit of products	
	During the previous financial year (2021-22)	During the current financial year (2022-2023)
Not applicable	Not applicable	Not applicable

Mangaluru International Airport Limited (MGIAL), is an Airport Service Industry and does not carry out any manufacturing or production. The water is mainly consumed in domestic purpose and horticulture etc.

(ii) Raw Material Consumption

Name of Raw Material	Name of Products	Consumption of Raw Material per Unit of output	
		During the previous financial year (2021-22)	During the current financial year (2022-2023)
Not applicable	Not applicable	Not applicable	Not applicable

Mangaluru International Airport Limited is an Airport Service Industry and does not undergo any manufacturing or production.

Environment Statement for 2022-23
M/s. Mangaluru International Airport Limited

PART – C

Pollutants discharged to Environment/Unit of Output
(Parameters as specified in consent issued)

Pollutants	Quantity of pollutants discharged (mass/day)		Concentrations of pollutants in discharges (mass/volume)		Percentage of variation from prescribed standards with reasons
(a) Wastewater	**Parameters**	**Avg. Mass Kg/Day**	**Parameters**	**Avg.**	There is no variation from prescribed standards in terms of quality of wastewater discharge. As a part of Environment Monitoring programme, monthly STP monitoring is being carried out. The analysis of the STP Monitoring report attached as **Annexure-2**. Waste Water generated is being treated in STP. Treated water during April 2022 to March 2023. was utilized for horticulture / landscaping purpose within premises.
	pH	-	pH	7.5	
	Total Suspended Solids	3.75	Total Suspended Solids (mg/l)	24.8	
	BOD (5 Days @ 20 °C)	1.49	BOD (5 Days @ 20°C) (mg/l)	9.0	
	Oil & Grease	0.02	Oil & Grease (mg/l)	<10	
	COD	5.64	COD (mg/l)	37	
(b) Air	**Parameters**	**Avg. Mass Kg/Day**	**Parameters**	**Avg.**	As a part of Environment Monitoring programme, DG set flue gas monitoring is being carried out quarterly. The Analysis of the D.G Set Stack Monitoring report attached as **Annexure-3**.
	Particulate Matter (PM)	-	Particulate Matter (mg/Nm3)	11	
	Sulphur Dioxide (SO_2)	-	Sulphur Dioxide (PPM)	18	
	Nitrogen Oxide (NO_x)	-	Nitrogen Oxide (NO_x) (PPM)	269	

Environment Statement for 2022-23
M/s. Mangaluru International Airport Limited

PART – D

Hazardous Wastes
(As specified under Hazardous & Other waste Wastes Management 2016)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year (2021-22)	During the current financial year (2022-2023)
(a) From Process	NA	Not applicable. Mangaluru International Airport Limited (MGIAL) being an Airport Operator does not have any manufacturing or production. So, there is no hazardous waste generation from process.
(b) From Pollution Control facilities	0	Used Oil (Cat 5.1)-1.27 KL Used Oil is generated as hazardous waste from DG set operation is disposed to SPCB authorized reprocessor.

PART – E
Solid Waste

Solid Waste	Total Quantity (Kg)		
	During the previous financial year (2021-22)	During the current financial year (2022-2023)	Disposal Method
(a) From Process	NA		
(b) From Pollution Control facilities			
Dry Waste Organic Waste	65.8 MT	26.545 MT	As per Solid waste management Rules, 2016
E-Waste	1.5 MT	0	Asper E Waste Rules, 2016.
Battery Waste	3.03	0.880 MT	As per Battery Waste Rules, 2016.

Environment Statement for 2022-23
M/s. Mangaluru International Airport Limited

PART - F

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:

As a part of Mangaluru international Airport Limited operation, an effective Solid Waste Management plan has been implemented at site, which includes:

- Collection & Segregation of waste from the source
- Provided separate waste bins (for dry & wet waste) at all the locations including Airside, Landside & Terminals.
- Well demarcated four waste collection points were established, where the segregated waste is collected, shifted to Waste management facility.
- All the inorganic waste after proper segregation is being given to the recognized agency Ms. MS Scrap Enterprises for further handling.
- Organic waste generated is treated in organic waste converter (500KG Capacity). The compost generated from OWC is used for horticulture purpose at MIAL premises.
- Hazardous Waste at Mangaluru International Airport Limited is managed inline to the Hazardous Waste Management Rules 2016.
- Battery Waste, generated are managed inline to the Battery Waste Management Rules 2010, amended till date
- E-Waste, generated are being managed inline to the E-Waste Management Rules 2016, amended till date
- Solid waste generated is handled in line to 5R of waste management to attain zero waste to land fill .

Waste Management Facility

Dry waste segregation facility

Dry waste segregation

Organic Waste

PART – G

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

Energy Savings

Street LED Lights

LED Lights in Offices & Terminal

- Conversion of 1111 no.s of conventional lights to LED lights. Achieved an annual energy savings of 678 GJ and overall emission reduction of 148.96 tCO2 in FY22-23.
- Proactively controlled lighting systems are provided. The landside street lights are made operational on timer basis according to the daylights.
- Sensitization of the team & continuous follow up is done for further improvising the Airport environmental & sustainability aspects.
- Timely maintenance of AHU's filters & coil, chillers, cooling towers is being carried out at MIAL. Regular monitoring is being carried out for the same.

Water Conservation

- As part of water conservation approximately 100% sensor-based water taps have been installed in all the washrooms of the Terminal building at MIAL.
- Rainwater collection tank of capacity 5000m3 is constructed to collect rain water.
- 100% Treated Water from the STP is utilized for gardening & horticulture purpose.
- Drip irrigation system is adopted at avenue plantation.

Wastewater Management

- 150 KLD of Sewage Treatment Plant (STP) is operational at MIAL
- Sewage Treatment Plant (STP) (MBR) is installed at site for treating and handling the domestic sewage generated from airport premises. STP treated wateris Monitored by MoEF&CC & NABL accredited laboratory, and all the results are observed to be within Stipulated Standards.
- The treated wastewater generated from the STP is utilized for gardening and horticulture activity within MIAL premises to conserve the freshwater consumption.

Air Management:

- Adequate green cover of about 6.01 Acres has been developed.
- Ambient Air Quality Monitoring is carried out by engaging MoEF&CC & NABL accredited laboratory, and all the results are observed to be within Stipulated Standards.
- Installed 1 no. Online Continuous Ambient Air Quality Monitoring system within premises.
- Regular road cleaning both inside and outside of airport using road cleaning machines
- Environment Monitoring for D.G Stack Flue Gas Emissions will be carried out by MoEF&CC and NABL accredited laboratory.

Soil Management

Environment Monitoring for Soil Analysis is being carried out by MoEF&CC and NABL accredited laboratory and all the results are under the norms inline to stipulated standards.

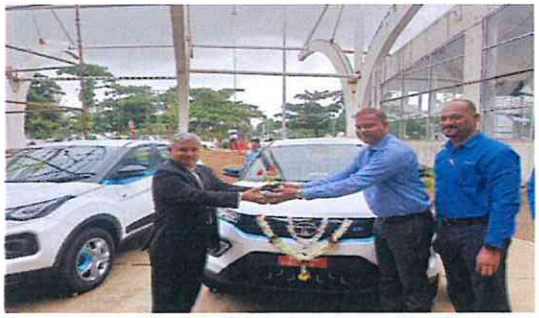
PART – H

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

Carbon Neutrality Initiatives:

- Transitioned 6 no.s of conventional vehicles with electric vehicle.
- Installed 2 no. of EV charging stations at city side carparking.
- Converted 151no.s CO2 type fire extinguishers with a lower Global Warming Potential ABC type fire extinguisher
- Converted 59 No.s of R22 AC refrigerant with R32 -lower Global Warming Potential refrigerant.

Electric vehicle charging station



Electric vehicles for airport operations

Environment Statement for 2022-23
M/s. Mangaluru International Airport Limited

PART – I

Any other particulars for improving the quality of environment:

- MGIAL Expenditure for environmental management measures for the FY 2022-23 of about **INR 340 Lakhs** was spent. Details are mentioned as below.

S. No.	Activity	Cost Incurred (2022-23) in Lakhs
1	EHS Manpower	12.00
2	Legal and Statutory Expenses	77.00
3	Environmental Monitoring Services	8.82
4	Waste Management and Disposal	3.60
5	O & M of Sewage Treatment Plant	5.27
6	Awareness Programs	0.46
7	Horticulture Expenses	103.48
8	Carbon Neutrality Initiatives	129.00
Total		**340.12**

- Environment awareness sessions via, Quiz Competition, Webinar, Selfie point, Distribution of sapling to passengers on World Environment Day in FY 2022-23.

Date: 29.09.2023

Vijayamohan Kondeti
Head- QEHS
Mangaluru International Airport Limited

Environment Statement for 2022-23
M/s. Mangaluru International Airport Limited

Annexure – 1

Details of Water Consumption for the period April 2022 to March 2023

Month	Water consumption (KL)
Apr-22	4670
May-22	5981
Jun-22	7030
Jul-22	7857
Aug-22	6322
Sep-22	7763
Oct-22	4860
Nov-22	7797
Dec-22	5759
Jan-23	6921
Feb-23	9779
Mar-23	9511
Total	**84250**
	231 KL/Day

ANNEXURE-2

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
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ISSUED TO:
M/S. MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD,
KENJAR HC,
KARNATAKA 574142.

Report Number : VLL/VLS/22/01163/006
Issued Date : 2022.05.08
P. Order Ref : 5700301699
P.O. Date : 26.10.2021

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**APRIL 2022**
Quantity Collected for Analysis	:	5 Liter
Type of Container used for sampling	:	HDPE Plastic Container-3 L Amberlite Glass Container-2 L
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, and Free Residual Chlorine.
Sample Collected On	:	20.04.2022,...
Analysis Start Date	:	22.04.2022
Analysis Completion Date	:	28.04.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.32	7.07	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	171	16	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	324	303	2100
4	Total Nitrogen	APHA 4500-B	mg/L	11.2	2.7	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	296	36	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	84	9.3	10
7	Oil and Grease	APHA 5520-C	mg/L	6.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	3.7	<0.1	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	271	<1.8	<100

Dr. SubbaReddy Mallampati
Group Leader-Environment

Vimta Labs Limited
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Hyderabad-500 051,Telangana, India
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ISSUED TO:
M/S. MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD,
KENJAR HC,
KARNATAKA 574142.

Report Number : VLL/VLS/22/02952/006
Issued Date : 2022.06.03
P. Order Ref : 5700301699
P.O. Date : 26.10.2021

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**MAY 2022**
Quantity Collected for Analysis	:	5 Liter
Type of Container used for sampling	:	HDPE Plastic Container-3 L Amberlite Glass Container-2 L
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, and Free Residual Chlorine.
Sample Collected On	:	18.05.2022,...
Analysis Start Date	:	20.05.2022
Analysis Completion Date	:	27.05.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.22	7.14	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	192	18	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	301	287	2100
4	Total Nitrogen	APHA 4500-B	mg/L	13.3	4.1	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	274	43	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	76	8.8	10
7	Oil and Grease	APHA 5520-C	mg/L	7.3	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	4.8	<0.1	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	311	<1.8	<100

Dr. SubbaReddy Mallampati
Dy. Manager

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ISSUED TO:
M/S. MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD,
KENJAR HC,
KARNATAKA 574142.

Report Number : VLL/VLS/22/04667/006
Issued Date : 2022.07.05
P. Order Ref : 5700301699
P.O. Date : 26.10.2021

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**June 2022**
Quantity Collected for Analysis	:	5 Liter
Type of Container used for sampling	:	HDPE Plastic Container-3 L Amberlite Glass Container-2 L
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, and Free Residual Chlorine.
Sample Collected On	:	22.06.2022
Analysis Start Date	:	23.06.2022
Analysis Completion Date	:	02.07.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.49	7.36	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	32	8	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	524	408	2100
4	Total Nitrogen	APHA 4500-B	mg/L	76	6.2	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	180	30	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	54	9.2	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	38	1.6	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	127	<1.8	<100

Dr. SubbaReddy Mallampati
Dy. Manager-Environment

Vimta Labs Limited
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ISSUED TO:

M/S. MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD,
KENJAR HC,
KARNATAKA - 574142.

Report Number	:	VLL/VLS/22/06627/006
Issued Date	:	2022.08.04
P. Order Ref	:	5700312428
P.O. Date	:	20.07.2022

SAMPLE PARTICULARS	:	**STP WATER**
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**July 2022**
Quantity Collected for Analysis	:	5 Liter
Type of Container used for sampling	:	HDPE Plastic Container-3 L Amberlite Glass Container-2 L
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, and Free Residual Chlorine.
Sample Collected On	:	20.07.2022
Analysis Start Date	:	22.07.2022
Analysis Completion Date	:	30.07.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.24	7.35	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	41	13	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	612	453	2100
4	Total Nitrogen	APHA 4500-B	mg/L	82	4.8	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	202	41	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	63	8.6	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	44	2.7	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	106	<1.8	<100

Dr. SubbaReddy Mallampati
Dy. Manager-Environment

Vimta Labs Limited
Registered Office
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M/S. MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD,
KENJAR HC,
KARNATAKA - 574142.

Report Number	:	VLL/VLS/22/08033/006
Issued Date	:	2022.09.02
P. Order Ref	:	5700312428
P.O. Date	:	20.07.2022

SAMPLE PARTICULARS	:	STP WATER
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	August 2022
Quantity Collected for Analysis	:	5 Liter
Type of Container used for sampling	:	HDPE Plastic Container-3 L Amberlite Glass Container-2 L
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, Free Residual Chlorine and Fecal Coliform.
Sample Collected On	:	23.08.2022
Analysis Start Date	:	25.08.2022
Analysis Completion Date	:	02.09.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.13	7.72	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	36	15	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	566	372	2100
4	Total Nitrogen	APHA 4500-B	mg/L	68	2.8	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	120	33	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	41	8.1	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	32	1.8	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	137	<1.8	<100

Dr. Subba Reddy Mallampati
Dy. Manager-Environment

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M/S. MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD,
KENJAR HC,
KARNATAKA - 574142.

Report Number	:	VLL/VLS/22/09425/006
Issued Date	:	2022.09.24
P. Order Ref	:	5700312428
P.O. Date	:	20.07.2022

SAMPLE PARTICULARS	:	STP WATER
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**September 2022**
Quantity Collected for Analysis	:	5 Liter
Type of Container used for sampling	:	HDPE Plastic Container-3 L Amberlite Glass Container-2 L
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, Free Residual Chlorine and Fecal Coliform.
Sample Collected On	:	15.09.2022
Analysis Start Date	:	17.09.2022
Analysis Completion Date	:	24.09.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.06	7.01	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	25	8.4	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	670	660	2100
4	Total Nitrogen	APHA 4500-B	mg/L	52	5.9	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	106	28.2	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	46.3	5.9	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	28	<0.1	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	124	2.1	<100

Sivakumar Madireddy
Group Leader-Environment

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
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Vimta
Driven by Quality. Inspired by Science.

ISSUED TO:
M/S. MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD,
KENJAR HC,
KARNATAKA - 574142.

Report Number	:	VLL/VLS/22/11204/006
Issued Date	:	2022.11.07
P. Order Ref	:	5700315733
P.O. Date	:	04.10.2022

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	October 2022
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, Free Residual Chlorine and Fecal Coliform.
Sample Collected On	:	19.10.2022
Analysis Start Date	:	21.10.2022
Analysis Completion Date	:	31.10.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.32	7.35	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	32	12.4	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	645	561	2100
4	Total Nitrogen	APHA 4500-B	mg/L	43	3.8	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	142	39.5	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	51.2	8.1	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	36	<0.1	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	233	10.6	<100

GPS – STP Inlet water : 12° 57'02.147"N, 74°52'15.003"E
STP Outlet Water : 12° 57'01.682"N, 74°52'14.651"E

Sivakumar Madireddy
Group Leader-Environment

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BAJPE MAIN RD,
KENJAR HC,
KARNATAKA - 574142.

Report Number : VLL/VLS/22/13052/006
Issued Date : 2022.12.07
P. Order Ref : 5700315733
P.O. Date : 04.10.2022

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling : One Grab sample in a Month
Month of Sampling : **November 2022**
Test Required : pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen, Free Residual Chlorine and Fecal Coliform.
Sample Collected On : 22.11.2022
Analysis Start Date : 24.11.2022
Analysis Completion Date : 02.12.2022
Sample collected by Vimta Labs Ltd.,

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.54	7.92	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	52	16.6	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	754	661	2100
4	Total Nitrogen	APHA 4500-B	mg/L	51	6.8	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	182	22.7	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	60.7	7.7	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	43	<0.1	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	412	28.6	<100

GPS – STP Inlet water : 12° 57'02.147"N, 74°52'15.003"E
STP Outlet Water : 12° 57'01.682"N, 74°52'14.651"E

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Report Number	:	VLL/VLS/22/15057/006
Issued Date	:	2023.01.09
P. Order Ref	:	5700315733
P.O. Date	:	04.10.2022

SAMPLE PARTICULARS	:	STP WATER
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**December2022**
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; andAmmonical Nitrogen, Free Residual Chlorine and Fecal Coliform.
Sample Collected On	:	20.12.2022
Analysis Start Date	:	22.12.2022
Analysis Completion Date	:	31.12.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.04	7.12	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	67	18.2	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	602	524	2100
4	Total Nitrogen	APHA 4500-B	mg/L	44.7	8.2	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	125	20	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	43.8	8.6	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	35	<0.1	5
9	TotalResidual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/100ml	386	42	<100

GPS – STP Inlet water :12° 57'02.147"N, 74°52'15.003"E
STP Outlet Water :12° 57'01.682"N, 74°52'14.651"E

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Report Number	:	VLL/VLS/22/17258/006
Issued Date	:	2023.02.06
P. Order Ref	:	5700315733
P.O. Date	:	04.10.2022

SAMPLE PARTICULARS	:	STP WATER
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**January 2023**
Test Required	:	pH; Total Suspended Solids; Total Dissolved Solids; Total Nitrogen; Chemical Oxygen Demand; Biological Oxygen Demand; Oil and Grease; and Ammonical Nitrogen. Free Residual Chlorine and Fecal Coliform.
Sample Collected On	:	24.01.2023
Analysis Start Date	:	25.01.2023
Analysis Completion Date	:	04.02.2023
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.53	7.31	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	48	15.2	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	755	582	2100
4	Total Nitrogen	APHA 4500-B	mg/L	34.3	6.8	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	125	34	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	43.8	7.3	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
8	Ammonical Nitrogen	APHA 4500-F	mg/L	43	<0.1	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	462	68	<100

GPS – STP Inlet water : 12° 57'02.147"N, 74°52'15.003"E
STP Outlet Water : 12° 57'01.682"N, 74°52'14.651"E

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Report Number	:	VLL/VLS/22/19360/006
Issued Date	:	2023.03.11
P. Order Ref	:	5700315733
P.O. Date	:	04.10.2022

SAMPLE PARTICULARS	:	**STP WATER**
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**February2023**
Test Required	:	pH: Total Suspended Solids; Total Dissolved Solids; Total Nitrogen: Chemical Oxygen Demand; Biological Oxygen Demand: Oil and Grease: andAmmonical Nitrogen, Free Residual Chlorine and Fecal Coliform.
Sample Collected On	:	22.02.2023
Analysis Start Date	:	24.02.2023
Analysis Completion Date	:	06.03.2023
Sample collected by Vimta Labs Ltd..		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.34	6.98	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	52.7	10.5	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	723	510	2100
4	Total Nitrogen	APHA 4500-B	mg/L	29.7	5.1	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	220	30	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	49.1	8.0	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
.1	Ammonical Nitrogen	APHA 4500-F	mg/L	37	<0.1	5
9	TotalResidual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/100ml	714	85	<100

GPS – STP Inlet water :12° 57'02.147"N, 74°52'15.003"E
STP Outlet Water :12° 57'01.682"N, 74°52'14.651"E

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Report Number	:	VLL/VLS/22/21053/006
Issued Date .	:	2023.04.05
P. Order Ref	:	5700315733
P.O. Date	:	04.10.2022

SAMPLE PARTICULARS	:	STP WATER
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	March 2023
Test Required	:	pH: Total Suspended Solids: Total Dissolved Solids: Total Nitrogen: Chemical Oxygen Demand: Biological Oxygen Demand: Oil and Grease; and Ammonical Nitrogen. Free Residual Chlorine and Fecal Coliform.
Sample Collected On	:	15.03.2023
Analysis Start Date	:	17.03.2023
Analysis Completion Date	:	29.03.2023
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	KSPCB Standard
1	pH	IS:3025 P-11	--	7.80	7.05	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	63.2	12.5	20
3	Total Dissolved Solids	IS:3025 P-16	mg/L	804	581	2100
4	Total Nitrogen	APHA 4500-B	mg/L	25.4	6.6	10
5	Chemical Oxygen Demand	APHA 5220B	mg/L	123	28	50
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	41.6	7.5	10
7	Oil and Grease	APHA 5520-C	mg/L	<1.0	<1.0	10
.1	Ammonical Nitrogen	APHA 4500-F	mg/L	45.2	<0.1	5
9	Total Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	1
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	830	46	<100

GPS – STP Inlet water : 12° 57'02.147"N, 74°52'15.003"E
STP Outlet Water : 12° 57'01.682"N, 74°52'14.651"E

Dr. Subba Reddy Mallampati
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ANNEXURE-3

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ISSUED TO:
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KARNATAKA 574142.

Report Number : VLL/VLS/21/00647/001
Issued Date : 2022.04.14
P. Order Ref : 5700301699
P. Order Date : 26.10.2021

SAMPLE PARTICULARS : **DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED : **NITB Building**

Sampling Date : 2022.04.09
Frequency of Monitoring : Half Yearly
Monitoring Month : APRIL 2022
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	DG4	* Limits
Physical Parameters								
1	Capacity	KVA	-	750	750	750	40	--
2	Stack diameter	m	-	0.3	0.3	0.3	0.1	--
3	Area of the Stack	m^2	-	0.071	0.071	0.071	0.008	--
4	Flue gas Temperature	^0C	USEPA M-2	149	137	146	121	--
5	Velocity of the Flue gas	m/Sec		10.7	10.2	9.8	8.0	--
6	Volumetric Flow rate	Nm^3/hr		2593	2472	2375	215	--
Chemical Parameters								
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	26.3	20.6	24.0	18.0	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		71.19	58.47	66.05	23.64	≤3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.246	0.193	0.209	0.127	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		185.78	151.82	214.23	111.20	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		0.642	0.500	0.678	0.599	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		1.30	1.51	2.14	3.43	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.004	0.005	0.007	0.018	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	18.09	15.99	18.30	10.67	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.063	0.053	0.058	0.057	

*Limits as per CPCB DG Emission NotificationGSR 771(E)

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ISSUED TO:
M/S.MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD, KENJAR HC,
KARNATAKA 574142.

Report Number : VLL/VLS/21/00647/002
Issued Date : 2022.04.14
P. Order Ref : 5700301699
P. Order Date : 26.10.2021

SAMPLE PARTICULARS : **DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED : **OLD AIRPORT TERMINAL**

Sampling Date : 2022.04.09
Frequency of Monitoring : Half Yearly
Monitoring Month : APRIL 2022
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	* Limits
Physical Parameter							
1	Capacity	KVA	-	500	250	30	--
2	Stack diameter	m	-	0.3	0.3	0.1	--
3	Area of the Stack	m^2	-	0.071	0.071	0.008	--
4	Flue gas Temperature	^0C	USEPA M-2	128	120	106	--
5	Velocity of the Flue gas	m/Sec		11.2	9.3	6.3	--
6	Volumetric Flow rate	Nm^3/hr		2714	2253	170	--
Chemical Parameters							
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	20.9	15.4	14.6	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		72.86	58.22	40.42	≤3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.395	0.525	0.229	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		178.09	130.09	90.87	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		0.967	1.173	0.514	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		1.16	2.48	1.99	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.006	0.022	0.011	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	15.99	9.38	7.09	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.087	0.085	0.040	

***Limits as per CPCB DG Emission Notification GSR 771(E)**

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Report Number : VLL/VLS/21/00647/003
Issued Date : 2022.04.14
P. Order Ref : 5700301699
P. Order Date : 26.10.2021

SAMPLE PARTICULARS : **DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED : **NATS BUILDING**

Sampling Date : 2022.04.08
Frequency of Monitoring : Half Yearly
Monitoring Month : APRIL 2022
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	750	750	--
2	Stack diameter	m	-	0.3	0.3	--
3	Area of the Stack	m^2	-	0.071	0.071	--
4	Flue gas Temperature	^0C	USEPA M-2	138	132	--
5	Velocity of the Flue gas	m/Sec		12.6	11.7	--
6	Volumetric Flow rate	Nm^3/hr		3053	2835	--
Chemical Parameters						
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	16.6	18.3	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		74.75	71.99	≤3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.304	0.272	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		188.29	180.30	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		0.766	0.682	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		1.69	2.11	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.007	0.008	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	17.86	14.33	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.073	0.054	

*Limits as per CPCB DG Emission Notification GSR 771(E)

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KARNATAKA 574142.

Report Number : VLL/VLS/21/00647/004
Issued Date : 2022.04.14
P. Order Ref : 5700301699
P. Order Date : 26.10.2021

SAMPLE PARTICULARS : **DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED : **ASR MSSR Area**

Sampling Date : 2022.04.09
Frequency of Monitoring : Half Yearly
Monitoring Month : APRIL 2022
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	125	125	--
2	Stack diameter	m	-	0.3	0.3	--
3	Area of the Stack	m^2	-	0.071	0.071	--
4	Flue gas Temperature	^0C	USEPA M-2	120	126	--
5	Velocity of the Flue gas	m/Sec		9.8	9.3	--
6	Volumetric Flow rate	Nm^3/hr		264	250	--
Chemical Parameters						
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	21.7	17.7	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		53.35	46.38	≤3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.113	0.093	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		99.25	111.17	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		0.209	0.223	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		0.94	0.76	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.002	0.002	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	11.49	10.16	≤0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.024	0.020	

***Limits as per CPCB DG Emission Notification GSR 771(E)**

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Report Number : VLL/VLS/22/17258/010
Issued Date : 2023.02.06
P. Order Ref : 5700315733
P. Order Date : 04.10.2022

SAMPLE PARTICULARS : DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED : NITB Building

Sampling Date : 2023.01.25
Frequency of Monitoring : Half Yearly
Monitoring Month : January 2023
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	DG4	* Limits
Physical Parameters								
1	Capacity	KVA	-	750	750	750	40	--
2	Stack diameter	m	-	0.3	0.3	0.3	0.1	--
3	Area of the Stack	m^2	-	0.071	0.071	0.071	0.008	--
4	Flue gas Temperature	^0C	USEPA M-2	136.8	140.4	131.8	136.8	--
5	Velocity of the Flue gas	m/Sec		11.1	10.5	10.3	9.0	--
6	Volumetric Flow rate	Nm^3/hr		2690	2544	2496	242	--
Chemical Parameters								
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	14	15.43	14.74	9.4	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		298.93	279.54	288.26	346.82	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.072	0.948	0.959	2.101	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		659.11	644.89	651.93	442.07	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		2.364	2.188	2.169	2.678	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		1.39	2.72	3.48	3.89	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.005	0.009	0.012	0.024	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	22.03	24.47	22.07	14.99	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.079	0.083	0.073	0.091	

*Limits as per CPCB DG Emission NotificationGSR 771(E)

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ISSUED TO:
M/S.MANGALURU INTERNATIONAL AIRPORT LIMITED.,
BAJPE MAIN RD, KENJAR HC,
KARNATAKA 574142.

Report Number : VLL/VLS/22/17258/011
Issued Date : 2023.02.06
P. Order Ref : 5700315733
P. Order Date : 04.10.2022

SAMPLE PARTICULARS : DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED : OLD AIRPORT TERMINAL

Sampling Date : 2023.01.24
Frequency of Monitoring : Half Yearly
Monitoring Month : January 2023
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	* Limits
Physical Parameter							
1	Capacity	KVA	-	500	250	30	--
2	Stack diameter	m	-	0.3	0.3	0.1	--
3	Area of the Stack	m^2	-	0.071	0.071	0.008	--
4	Flue gas Temperature	^0C	USEPA M-2	113.1	107.0	109.3	--
5	Velocity of the Flue gas	m/Sec		10.2	8.6	7.0	--
6	Volumetric Flow rate	Nm^3/hr		2472	2084	188	--
Chemical Parameters							
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	22.9	20.0	9.1	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		203.69	91.73	54.03	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.007	0.765	0.339	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		353.10	289.34	91.57	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.745	2.412	0.575	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		2.47	2.26	1.17	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.012	0.019	0.007	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	15.23	10.53	5.65	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.075	0.088	0.035	

*Limits as per CPCB DG Emission Notification GSR 771(E)

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Report Number : VLL/VLS/22/17258/012
Issued Date : 2023.02.06
P. Order Ref : 5700315733
P. Order Date : 04.10.2022

SAMPLE PARTICULARS : DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED : NATS BUILDING

Sampling Date : 2023.01.24
Frequency of Monitoring : Half Yearly
Monitoring Month : January 2023
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	750	750	--
2	Stack diameter	m	-	0.3	0.3	--
3	Area of the Stack	m^2	-	0.071	0.071	--
4	Flue gas Temperature	^0C	USEPA M-2	102.8	101.7	--
5	Velocity of the Flue gas	m/Sec		11.7	11.3	--
6	Volumetric Flow rate	Nm^3/hr		2835	2738	--
Chemical Parameters						
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	20.0	19.7	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		366.10	548.27	≤3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.384	2.002	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		322.51	350.73	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.219	1.280	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		2.79	2.67	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.011	0.010	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	21.65	21.00	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.082	0.077	

*Limits as per CPCB DG Emission Notification GSR 771(E)

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Report Number : VLL/VLS/22/17258/013
Issued Date : 2023.02.06
P. Order Ref : 5700315733
P. Order Date : 04.10.2022

SAMPLE PARTICULARS : DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED : ASR MSSR Area

Sampling Date : 2023.01.24
Frequency of Monitoring : Half Yearly
Monitoring Month : January 2023
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	125	125	--
2	Stack diameter	m	-	0.3	0.3	--
3	Area of the Stack	m^2	-	0.071	0.071	--
4	Flue gas Temperature	^0C	USEPA M-2	112.7	126.6	--
5	Velocity of the Flue gas	m/Sec		10.1	9.6	--
6	Volumetric Flow rate	Nm^3/hr		272	258	--
Chemical Parameters						
7	Sulphur Dioxide	mg/Nm^3	USEPA CTM30&34	22.9	14.3	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		549.82	598.68	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.196	1.238	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		186.74	320.72	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		0.406	0.663	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		3.46	2.30	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.008	0.005	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	25.50	22.04	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.055	0.046	

*Limits as per CPCB DG Emission Notification GSR 771(E)

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