Office Copy

adani

Ref No. LIAL/CAO/ES/23-24/ 1410

Date:26.09.2023

To,

Member Secretary,
Uttar Pollution Control Board
Building.No. TC-12V Vibhuti Khand,
Gomti Nagar Lucknow-226 010

Sub: Environmental Statement for the financial year ending 31st March 2023 for "Chaudhary Charan Singh International Airport" Lucknow, **by M/s Lucknow International Airport Limited (LIAL)**

Ref:

i. **Consolidated Consent to Operate and Authorization (CCA) vide letter no. 155571/ UPPCB/ Lucknow (UPPCBRO)/ CTO/both/ LUCKNOW/ 2022 Dated 01/07/2022.**

Dear Sir,

With reference to the above mentioned subject and reference, please find enclosed Environmental Statement in Form V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for Chaudhary Charan Singh International (CCSI) Airport, Lucknow for the financial year ending 31st March 2023.

Kindly consider above submission and acknowledge.

Thank you,
Yours Sincerely,
For, M/s Lucknow International Airport Limited

Rahul Bhatkoti
Chief Airport Officer
CCS International Airport

डाक प्राप्ति रसीद
प्राप्ति दिनांक 29-9-23
प्राप्तकर्ता के हस्ताक्षर
उ0प्र0 प्रदूषण नियंत्रण बोर्ड, लखनऊ

Encl: As above.

Copy to: Regional Officer, Regional Office Lucknow - Picup Bhawan B-Block, 4th Floor, Vibhuti Khand, Gomti Nagar, Lucknow-226010

Lucknow International Airport Limited
First Floor Terminal-1,
CCS International Airport Lucknow,
Lucknow-226009
Uttar Pradesh
CIN: U63030GJ2019PLC109814

Tel +91 79 2656 5555
Fax +91 79 2555 5500
Email: info@adani.com
Website: www.adani.com

Registered Office: Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad – 382 421

Received 29/9/23

Environment Statement for 2022-23 for M/s. Lucknow 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. Rahul Bhatkoti Chief Airport Officer Lucknow International Airport Ltd. (LIAL) First Floor Terminal 1, CCS International Airport Lucknow, Lucknow-226009, Uttar Pradesh, India
(ii)	Industry Category Primary (STC Code) Secondary (STC Code)	:	Red-Large NA NA
(iii)	Production Capacity		No production as Airport is an Infrastructure
(iv)	Year of Establishment	:	Commercial Date of Operation (COD): 2nd Nov 2020
(v)	Date of last Environment Statement submitted	:	30th September 2022

PART – B

Water and Raw Material Consumption

(i) Water Consumption (in m3/day)

Water Consumption	1001.3
Process	NA
Domestic & cooling	1001.3

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

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)
NA	NA	NA

*Lucknow International Airport Limited (LIAL), being an Airport Operator, does not have any manufacturing or production.

(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

*Lucknow International Airport Limited (LIAL), being an Airport Operator, does not have any manufacturing or production.

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) Water	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-4**. 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	7.83	
	Total Suspended Solids	3.02	Total Suspended Solids (mg/l)	20.0	
	BOD (5 Days @ 20 °C)	1.82	BOD (5 Days @ 20°C) (mg/l)	12.1	
	Oil & Grease	-	Oil & Grease (mg/l)	<0.1	
	COD	6.18	COD (mg/l)	41	
(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.

	Particulate Matter (PM)	0.4	Particulate Matter (mg/Nm3)	11	The Analysis of the D.G Set Stack Monitoring report attached as **Annexure-5**.
	Sulphur Dioxide (SO_2)	0.46	Sulphur Dioxide (PPM)	11.7	
	Nitrogen Oxide (NO_x)	4.83	Nitrogen Oxide (NO_x) (PPM)	124	

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	NA
(b) From Pollution Control facilities	NA	NA

Lucknow International Airport Limited (LIAL) being an Airport Operator does not have any manufacturing or production. So, there is no hazardous waste generation from process & disposal.

PART – E

Solid Waste

Solid Waste	Total Quantity (Kg)	
	During the previous financial year (2021-22)	During the current financial year (2022-2023)
(a) From Process	NA	
(b) From Pollution Control facilities	NA	
(c) 1. Quantity recycled or reused	**Refer Annexure -2**	
2. Sold		
3. Disposed		

Environment Statement for 2022-23 for M/s. Lucknow 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 LIAL operation, an effective Solid Waste Management plan has been implemented at site, which includes:
  - ✓ Separate waste bins (for dry & wet waste) at all the locations including Airside Landside & within the Terminals.
  - ✓ Collection & Segregation of waste,
  - ✓ The segregated waste are collected and from there, shifted to Waste yard situated at backend of the Airport.
  - ✓ All the waste after proper segregation is being sent to the recognized agency M/s Sharda Enterprises for further recycling like plastic waste.
  - ✓ Non-recyclable waste sent to Lucknow Nagar for further disposal.
  - ✓ Hazardous Waste, generated at LIAL are being managed inline to the Hazardous Waste Management Rules 2016, amended till date.
  - ✓ Battery Waste, generated at LIAL are managed inline to the Battery Waste Management Rules 2010, amended till date
  - ✓ E-Waste, generated at LIAL are being managed inline to the E-Waste Management Rules 2016, amended till date
- As part of way forward, Lucknow International Airport Ltd has their future plans for managing it's wastes under 5 R principal and step ahead with a vision of Zero Waste to Landfill.

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

PART – G

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

Energy Savings

- Installed roof top solar panel of 515 KV solar capacity as utilization of renewable source of energy for captive use resulted into reduction the emission of 221 ton CO2.
- Solar lights installed -75 nos.

Solar Lights

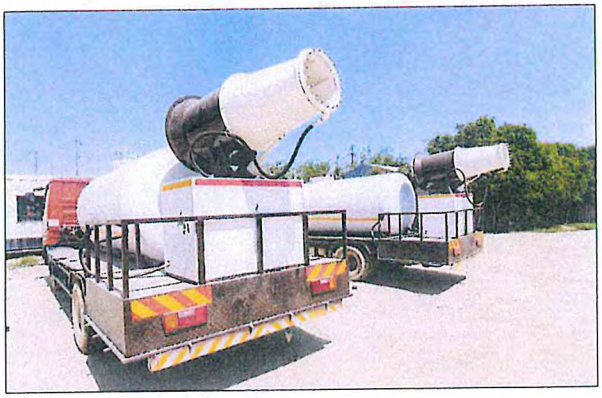
Water Conservation:

- The treated water generated from the STP utilized for gardening and horticulture activity within LIAL premises to conserve the 55,111 KL fresh water in FY 22-23.
- Approx 32 nos. of new Rain water harvesting wells have been constructed as part of water conservation measures.

Air Management and Carbon Neutrality:

- Transition of conventional 10 nos. vehicles to Electric Vehicles.
- 02 nos. of Anti-smog guns for dust suppression.
- High GWP R22 to low GWP R32 AC's replacement - 49 Nos.
- EV Charging station installed - 01 Nos.
- Green cover of ~6.37 Ha has been developed.
- Following safeguard measures are taken for abatement of dust emissions:
  - ✓ Dust suppression of roards.
  - ✓ Green cover of ~6.37 Ha has been developed.

EV Vehicles



Anti-Smog Guns

EV Charging Station

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. The reports are attached as **Annexure-6.**

PART – H

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

- LIAL has developed an adequate Green Belt Area and is properly maintained by the Horticulture Team at the Airport.

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

PART – I

Any other particulars for improving the quality of environment:

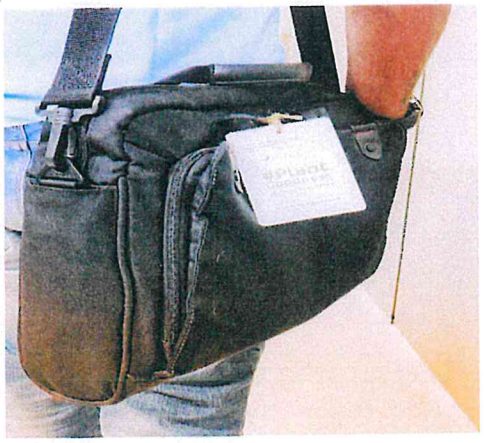
- LIAL Budget for environmental management measures for the FY 2022-23 of about **INR 205.48 Lakhs** was spent. Details enclosed as **Annexure – 3.**
- Environment awareness sessions via Role play, Quiz Competition, Webinar, Selfie point and signature campaign at World Environment Day, Renewal Energy Day and Plant Bag Tag Environment Day were organized at LIAL in FY 2022-23.

World Environment Day:

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

Renewal Energy Day:

Plant Bag Tags Environment Day:



Date: 26.09.2023

Rahul Bhatkoti
Chief Airport Officer
Lucknow International Airport Limited

Annexure – 1

Details of Water Consumption and Treated Water Discharge
April 2022-March 2023

Month	Water consumption (KL)
Apr-22	45419.12
May-22	37129.47
Jun-22	35245.14
Jul-22	41371.24
Aug-22	25717.77
Sep-22	38885.91
Oct-22	37544.61
Nov-22	32729.97
Dec-22	20666.37
Jan-23	23622.84
Feb-23	11094.78
Mar-23	16050.67
Total	365477.89
Per Month	30456.49
Per Day	1001.3

ANNEXURE – 2
Details of Waste Management of LIAL, Lucknow

Sr. No.	Waste Description	Disposal Method	Unit	Quantity 2021-22	Quantity 2022-23
Non-Hazardous					
1.	Dry Waste	As per Solid Waste Management Rules 2016	Kg	81.03	90
2.	RDF (Non-Recyclable)				
3.	Organic Waste				
4.	E-Waste	Disposed through recycler	MT	NIL	NIL
Others					
1.	Battery Waste	Disposed through recycler/manufacturer	MT	3.58	NIL

ANNEXURE – 3

Cost of Environmental Protection Measures of LIAL, Lucknow

April 2022 – March 2023

Sr. No.	Activity	Cost incurred (INR in Lacs)
1.	Legal & Statutory Expenses	9.3
2.	Environmental Monitoring Services	15
3.	Waste Storage Yard modification	77.7
4.	Others- Antismog guns, EV vehicles	155.1
5.	Horticulture Expenses	153.48
6.	O&M of Sewage Treatment Plant	76.3
Total		**205.48**

Annexure 4
STP Analysis Reports

Vimta Labs Limited
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Hyderabad-500 051,Telangana, India
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ISSUED TO:
M/S. LUCKNOW INTERNATIONAL AIRPORT LIMITED., (CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT),AMAUSI, LUCKNOW, UTTARPRADESH-226009

Report Number	:	VLL/VLS/22/01177/008
Issued Date	:	2022.05.08
P. Order Ref	:	5700301505
P.O. Date	:	20.10.2021

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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	08.04.2022
Analysis Start Date	:	11.04.2022
Analysis Completion Date	:	20.04.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	CPCB Standard	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.43	7.65	5.5 - 9.0	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	221	26	100	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	352	312	2100	--
4	Total Nitrogen	APHA 4500-B	mg/L	9.4	3.5	10	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	323	52	250	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	92	13	30	< 20
7	Oil and Grease	APHA 5520-C	mg/L	4.5	<1.0	10	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	3.3	<0.1	5	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-	-
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	231	<1.8	<100	<1000

Dr. SubbaReddyMallampati
Group Leader-Environment

Vimta Labs Limited
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ISSUED TO:
M/S. LUCKNOW INTERNATIONAL AIRPORT LIMITED., (CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT),AMAUSI, LUCKNOW, UTTARPRADESH-226009

Report Number	:	VLL/VLS/22/03413/008
Issued Date	:	2022.06.08
P. Order Ref	:	5700309099
P.O. Date	:	13.05.2022

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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	26.05.2022
Analysis Start Date	:	28.05.2022
Analysis Completion Date	:	04.06.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	CPCB Standard	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.63	7.35	5.5 - 9.0	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	195	23	100	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	321	302	2100	--
4	Total Nitrogen	APHA 4500-B	mg/L	7.4	2.7	10	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	288	61	250	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	87	15	30	< 20
7	Oil and Grease	APHA 5520-C	mg/L	3.2	<1.0	10	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	4.1	<0.1	5	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-	-
10	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	327	<1.8	<100	<1000

Dr. SubbaReddyMallampati
Dy.Manager

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M/S. LUCKNOW INTERNATIONAL AIRPORT LIMITED., (CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT),AMAUSI, LUCKNOW, UTTARPRADESH-226009

Report Number	:	VLL/VLS/22/04900/008
Issued Date	:	2022.07.06
P. Order Ref	:	5700309099
P.O. Date	:	13.05.2022

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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	03.06.2022
Analysis Start Date	:	06.06.2022
Analysis Completion Date	:	15.06.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.42	7.51	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	136	18	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	352	321	--
4	Total Nitrogen	APHA 4500-B	mg/L	11.3	5.3	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	241	48	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	76	12	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	8.3	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	135	102	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	281	<1.8	<1000

Dr. SubbaReddyMallampati
Dy. Manager-Environment

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UTTARPRADESH-226009

Report Number : VLL/VLS/22/06624/008
Issued Date : 2022.08.05
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
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	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.83	7.67	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	118	15	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	382	307	--
4	Total Nitrogen	APHA 4500-B	mg/L	9.3	4.1	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	277	56	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	83	15	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	6.2	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	114	86	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	197	<1.8	<1000

Dr. Subba Reddy Mallampati
Dy. Manager-Environment

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M/S. LUCKNOW INTERNATIONAL AIRPORT LIMITED.,
(CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT),AMAUSI, LUCKNOW,
UTTARPRADESH-226009

Report Number : VLL/VLS/22/08169/008
Issued Date : 2022.09.06
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	12.08.2022
Analysis Start Date	:	13.08.2022
Analysis Completion Date	:	22.08.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.32	7.71	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	85	17	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	327	263	--
4	Total Nitrogen	APHA 4500-B	mg/L	11.3	3.3	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	166	42	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	55	12	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	4.8	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	96	67	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	163	<1.8	<1000

Dr. Subba Reddy Mallampati
Dy. Manager-Environment

Vimta Labs Limited
Registered Office
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Hyderabad-500 051,Telangana, India
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ISSUED TO:
M/S. LUCKNOW INTERNATIONAL AIRPORT LIMITED.,
(CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT),AMAUSI, LUCKNOW,
UTTARPRADESH-226009

Report Number : VLL/VLS/22/10012/008
Issued Date : 2022.10.07
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	03.09.2022
Analysis Start Date	:	05.09.2022
Analysis Completion Date	:	12.09.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.44	7.57	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	69	15	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	533	467	--
4	Total Nitrogen	APHA 4500-B	mg/L	32.7	4.2	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	131	35	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	47	10.6	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	22	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	104	53	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	144	<1.8	≤1000

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ISSUED TO:
M/S. LUCKNOW INTERNATIONAL AIRPORT LIMITED.,
(CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT),AMAUSI, LUCKNOW,
UTTARPRADESH-226009

Report Number : VLL/VLS/22/11550/008
Issued Date : 2022.11.07
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**October 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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	14.10.2022
Analysis Start Date	:	15.10.2022
Analysis Completion Date	:	25.10.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.42	7.66	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	75	19	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	612	552	--
4	Total Nitrogen	APHA 4500-B	mg/L	44.9	7.1	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	153	44.1	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	52	12.5	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	31	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	133	66	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	422	6.4	<1000

GPS – 1. STP Inlet Water : 26.766229,80.885353
2. STP Outlet Water : 26.766947,80.886001

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Report Number	:	VLL/VLS/22/13344/008
Issued Date	:	2022.12.07
P. Order Ref	:	5700309099
P.O. Date	:	13.05.2022

SAMPLE PARTICULARS	:	**STP WATER**
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**November 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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	18.11.2022
Analysis Start Date	:	21.11.2022
Analysis Completion Date	:	30.11.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.66	7.81	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	62	17.8	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	792	706	--
4	Total Nitrogen	APHA 4500-B	mg/L	58.2	8.2	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	171	35.9	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	63	9.7	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	43	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	147	73	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	502	38.7	<1000

GPS – 1. STP Inlet Water : 26.766229,80.885353
2. STP Outlet Water : 26.766947,80.886001

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Report Number	:	VLL/VLS/22/15373/008
Issued Date	:	2023.01.07
P. Order Ref	:	5700309099
P.O. Date	:	13.05.2022

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**December 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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	03.12.2022
Analysis Start Date	:	05.12.2022
Analysis Completion Date	:	14.12.2022
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.41	10.36	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	47	14.4	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	747	793	--
4	Total Nitrogen	APHA 4500-B	mg/L	36.7	10.6	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	74	22.5	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	31	8	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	35	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	117	48	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	640	214	<1000

GPS – 1. STP Inlet Water : 26.766229,80.885353
2. STP Outlet Water : 26.766947,80.886001

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UTTARPRADESH-226009

Report Number : VLL/VLS/22/17211/008
Issued Date : 2023.02.08
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	January 2023
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: andAmmonicalNitroge. Residual Chlorine and Fecal Coliform.
Sample Collected On	:	12.01.2023
Analysis Start Date	:	14.01.2023
Analysis Completion Date	:	24.01.2023
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.20	7.55	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	62	23	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	783	688	--
4	Total Nitrogen	APHA 4500-B	mg/L	28.4	8.5	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	63	34	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	24	12	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	29.4	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	132	56	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	477	148	<1000

GPS- 1. STP Inlet Water :26.766229,80.885353
2. STP Outlet Water :26.766947,80.886001

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Report Number : VLL/VLS/22/18886/008
Issued Date : 2023.03.10
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

SAMPLE PARTICULARS : STP WATER

Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	**February 2023**
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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	16.02.2023
Analysis Start Date	:	18.02.2023
Analysis Completion Date	:	27.02.2023
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.14	7.82	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	56	28	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	733	645	--
4	Total Nitrogen	APHA 4500-B	mg/L	33.7	6.6	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	85	39	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	27	14	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	24.5	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	118	71	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN/ 100ml	608	166	<1000

GPS – 1. STP Inlet Water : 26.766229.80.885353
2. STP Outlet Water : 26.766947.80.886001

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UTTARPRADESH-226009

Report Number : VLLAVLS/22/23062008
Issued Date : 2023.04.04
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

SAMPLE PARTICULARS	:	STP WATER
Frequency Of Sampling	:	One Grab sample in a Month
Month of Sampling	:	March 2023
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; andAmmonical Nitroge, Residual Chlorine and Fecal Coliform.
Sample Collected On	:	21.03.2023
Analysis Start Date	:	23.03.2023
Analysis Completion Date	:	31.03.2023
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	Method Adopted	UoM	STP Inlet Water	STP Outlet Water	Limits as per G.S.R. 1265(E)
1	pH	IS:3025 P-11	--	7.16	7.34	6.5 - 9.0
2	Total Suspended Solids	IS:3025 P-17	mg/L	46	24	< 50
3	Total Dissolved Solids	IS:3025 P-16	mg/L	782	656	--
4	Total Nitrogen	APHA 4500-B	mg/L	27.6	8.1	--
5	Chemical Oxygen Demand	APHA 5220B	mg/L	98	23	--
6	Biological Oxygen Demand at 27°C, 3 days	IS:3025 P-44	mg/L	32	11	< 20
7	Oil and Grease	APHA 5520-C	mg/L	<0.1	<0.1	--
8	Ammonical Nitrogen	APHA 4500-F	mg/L	31.7	<0.1	--
9	Residual Chlorine	IS:3025 P-26	mg/L	<0.1	<0.1	-
10	Chlorides (as Cl)	IS 3025 (Part 32	mg/L	127	87	-
11	Fecal Coliform	EPA Method 1681: 2006	MPN /100ml	765	128	<1000

GPS - 1. STP Inlet Water : 26.766229,80.885353
2. STP Outlet Water : 26.766947,80.886001

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Annexure 5
DG Stack Analysis Reports

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UTTAR PRADESH-226009S

Report Number : VLL/VLS/22/04900/024
Issued Date : 2022.07.06
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

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

Sampling Date : 2022.06.16
Frequency of Monitoring : Quarterly
Monitoring Month : June 2022
Sample Registration Date : 2022.06.18
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	DG4	DG5	* Limits
Physical Parameter									
1	Capacity	KVA	-	750	750	750	750	750	--
2	Stack diameter	m	-	0.8	0.8	0.8	0.8	0.8	--
3	Area of the Stack	m^2	-	0.454	0.454	0.454	0.454	0.454	--
4	Flue gas Temperature	^0C	USEPA M-2	142	138	151	147	136	--
5	Velocity of the Flue gas	m/Sec		6.22	7.41	6.93	7.49	6.44	--
6	Volumetric Flow rate	Nm^3/hr		9633.8	11483.8	10744.1	11608.9	9971.0	--
Chemical Parameters									
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM 30&34	14.7	15.0	18.9	13.9	13.6	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		75.67	62.96	75.77	64.13	66.55	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.972	0.964	1.085	0.993	0.885	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		144.76	138.89	146.06	135.65	149.23	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.859	2.127	2.092	2.100	1.984	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		14.81	18.89	24.25	20.04	20.69	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.190	0.289	0.347	0.310	0.275	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	13.95	12.23	12.28	11.86	13.67	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.179	0.187	0.176	0.184	0.182	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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Report Number	:	VLL/VLS/22/04900/025
Issued Date	:	2022.07.06
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS	:	**DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED	:	**DGCA Building**
Sampling Date	:	2022.06.21
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	June 2022
Sample Registration Date	:	2022.06.23
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.159	0.159	--
4	Flue gas Temperature	^0C	USEPA M-2	123	133	--
5	Velocity of the Flue gas	m/Sec		5.94	7.69	--
6	Volumetric Flow rate	Nm^3/hr		3226.7	4179.5	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	9.4	13.6	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		56.45	64.29	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.642	0.840	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		115.18	127.37	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.310	1.664	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		19.12	21.75	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.218	0.284	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	14.20	12.41	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.162	0.162	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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UTTAR PRADESH-226009S

Report Number	:	VLL/VLS/22/04900/026
Issued Date	:	2022.07.06
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS	:	DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED	:	ATC Technical Block
Sampling Date	:	2022.06.17
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	June 2022
Sample Registration Date	:	2022.06.20
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	200	200	--
2	Stack diameter	m	-	0.43	0.43	--
3	Area of the Stack	m^2	-	0.1453	0.1453	--
4	Flue gas Temperature	^0C	USEPA M-2	122	116	--
5	Velocity of the Flue gas	m/Sec		5.80	7.10	--
6	Volumetric Flow rate	Nm^3/hr		2874.9	3521.8	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	8.7	10.4	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		43.76	43.02	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.629	0.758	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3	USEPA CTM30&34	102.52	116.83	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.474	2.057	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3	USEPA CTM30&34	16.21	18.44	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.233	0.325	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	9.21	8.08	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.132	0.142	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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AMAUSI, LUCKNOW,
UTTAR PRADESH-226009S

Report Number	:	VLL/VLS/22/04900/027
Issued Date	:	2022.07.06
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS	:	DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED	:	CCR office
Sampling Date	:	2022.06.18
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	June 2022
Sample Registration Date	:	2022.06.20
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.16	0.16	--
4	Flue gas Temperature	^0C	USEPA M-2	125	130	--
5	Velocity of the Flue gas	m/Sec		6.72	7.88	--
6	Volumetric Flow rate	Nm^3/hr		3649.4	4278.1	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	9.1	10.4	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		54.25	59.16	≤3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.619	0.791	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		115.59	125.16	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.318	1.673	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		16.95	18.64	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.193	0.249	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	13.29	10.70	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.152	0.143	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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ISSUED TO:
M/S.LUCKNOW INTERNATIONAL AIRPORT LIMITED., (CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT), AMAUSI, LUCKNOW, UTTAR PRADESH-226009S

Report Number	:	VLL/VLS/22/04900/028
Issued Date	:	2022.07.06
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

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

Sampling Date	:	2022.06.23
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	June 2022
Sample Registration Date	:	2022.06.25
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	* Limits
Physical Parameter					
1	Capacity	KVA	-	200	--
2	Stack diameter	m	-	0.55	--
3	Area of the Stack	m^2	-	0.24	--
4	Flue gas Temperature	^0C	USEPA M-2	118	--
5	Velocity of the Flue gas	m/Sec		6.04	--
6	Volumetric Flow rate	Nm^3/hr		4897.3	--
Chemical Parameters					
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	9.1	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		42.27	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.035	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		84.22	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		2.062	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		17.99	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.440	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	7.27	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.178	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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UTTAR PRADESH-226009S

Report Number : VLL/VLS/22/10012/024
Issued Date : 2022.10.08
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

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

Sampling Date : 2022.09.20
Frequency of Monitoring : Quarterly
Monitoring Month : September 2022
Sample Registration Date : 2022.09.22
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	DG4	DG5	* Limits
Physical Parameter									
1	Capacity	KVA	-	750	750	750	750	750	--
2	Stack diameter	m	-	0.8	0.8	0.8	0.8	0.8	--
3	Area of the Stack	m^2	-	0.454	0.454	0.454	0.454	0.454	--
4	Flue gas Temperature	°C	USEPA M-2	128	142	133	129	125	--
5	Velocity of the Flue gas	m/Sec		7.43	6.48	7.14	6.63	5.95	--
6	Volumetric Flow rate	Nm^3/hr		11513.8	10043.9	11062.5	10273.1	9227.0	--
Chemical Parameters									
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM 30&34	17.1	16.9	14.8	14.4	12.3	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		69.51	69.02	72.85	68.90	58.68	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.067	0.924	1.075	0.944	0.722	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		142.05	136.69	137.41	162.61	139.40	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		2.181	1.831	2.027	2.227	1.715	
11	Hydro Carbons as CH4@ 15% O2	mg/Nm^3		12.14	17.02	17.99	18.44	16.65	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.186	0.228	0.265	0.253	0.205	
12	Particulate Matter@15% O2	mg/Nm^3	USEPA M-5	10.31	12.48	10.72	12.03	10.59	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.158	0.167	0.158	0.165	0.130	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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AMAUSI, LUCKNOW,
UTTAR PRADESH-226009S

Report Number	:	VLL/VLS/22/10012/025
Issued Date	:	2022.10.08
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS	:	DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED	:	DGCA Building
Sampling Date	:	2022.09.21
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	September 2022
Sample Registration Date	:	2022.09.23
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	*Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.159	0.159	--
4	Flue gas Temperature	°C	USEPA M-2	119	126	--
5	Velocity of the Flue gas	m/Sec		7.02	6.73	--
6	Volumetric Flow rate	Nm^3/hr		3810.9	3654.0	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	11.4	14.3	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		43.79	54.43	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.521	0.622	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		97.18	108.18	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.157	1.235	
11	Hydro Carbons as CH4@ 15% O2	mg/Nm^3		13.83	14.05	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.165	0.160	
12	Particulate Matter@15% O2	mg/Nm^3	USEPA M-5	11.19	11.10	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.133	0.127	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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Report Number : VLL/VLS/22/10012/026
Issued Date : 2022.10.08
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

SAMPLE PARTICULARS : DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED : ATC Technical Block

Sampling Date : 2022.09.26
Frequency of Monitoring : Quarterly
Monitoring Month : September 2022
Sample Registration Date : 2022.09.28
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	200	200	--
2	Stack diameter	m	-	0.43	0.43	--
3	Area of the Stack	m^2	-	0.1453	0.1453	--
4	Flue gas Temperature	°C	USEPA M-2	118	121	--
5	Velocity of the Flue gas	m/Sec		6.29	6.68	--
6	Volumetric Flow rate	Nm^3/hr		3120.9	3315.5	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	10.0	9.4	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		51.34	44.41	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.801	0.736	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3	USEPA CTM30&34	127.30	93.80	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.986	1.555	
11	Hydro Carbons as CH4@ 15% O2	mg/Nm^3	USEPA CTM30&34	17.74	13.48	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.277	0.223	
12	Particulate Matter@15% O2	mg/Nm^3	USEPA M-5	7.69	8.31	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.120	0.138	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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UTTAR PRADESH-226009S

Report Number : VLL/VLS/22/10012/027
Issued Date : 2022.10.08
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

SAMPLE PARTICULARS : DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED : CCR office

Sampling Date	:	2022.09.24
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	September 2022
Sample Registration Date	:	2022.09.26
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.16	0.16	--
4	Flue gas Temperature	°C	USEPA M-2	116	123	--
5	Velocity of the Flue gas	m/Sec		7.10	7.27	--
6	Volumetric Flow rate	Nm^3/hr		3857.1	3951.9	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	10.2	8.7	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		59.16	55.10	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.713	0.680	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		127.82	116.98	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.541	1.445	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		12.97	16.11	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.156	0.199	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	10.63	10.71	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.128	0.132	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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AMAUSI, LUCKNOW,
UTTAR PRADESH-226009S

Report Number : VLL/VLS/22/10012/028
Issued Date : 2022.10.08
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

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

Sampling Date : 2022.09.26
Frequency of Monitoring : Quarterly
Monitoring Month : September 2022
Sample Registration Date : 2022.09.28
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	* Limits
Physical Parameter					
1	Capacity	KVA	-	200	--
2	Stack diameter	m	-	0.55	--
3	Area of the Stack	m^2	-	0.24	--
4	Flue gas Temperature	°C	USEPA M-2	115	--
5	Velocity of the Flue gas	m/Sec		6.75	--
6	Volumetric Flow rate	Nm^3/hr		5478.0	--
Chemical Parameters					
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	8.7	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		40.37	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.106	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		77.80	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		2.131	
11	Hydro Carbons as CH4@ 15% O2	mg/Nm^3		10.87	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.298	
12	Particulate Matter@15% O2	mg/Nm^3	USEPA M-5	5.34	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.146	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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Report Number	:	VLL/VLS/22/15373/021
Issued Date	:	2023.01.07
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS	:	**DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED	:	**SCADA Building**
Sampling Date	:	2022.12.19
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	December 2022
Sample Registration Date	:	2022.12.21
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	DG4	DG5	* Limits
Physical Parameter									
1	Capacity	KVA	-	**750**	**750**	**750**	**750**	**750**	--
2	Stack diameter	m	-	0.8	0.8	0.8	0.8	0.8	--
3	Area of the Stack	m^2	-	0.454	0.454	0.454	0.454	0.454	--
4	Flue gas Temperature	^0C	USEPA M-2	131	126	128	130	123	--
5	Velocity of the Flue gas	m/Sec		7.32	7.04	6.93	7.21	6.65	--
6	Volumetric Flow rate	Nm^3/hr		11432.6	11102.4	11083,4	11365.3	9836.2	--
Chemical Parameters									
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM 30&34	16.3	15.2	13.7	15.6	11.8	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		71.33	67.43	65.3	69.32	60.32	**≤ 3.5**
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.320	0.973	0.832	1.007	0.806	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		156.32	148.44	152.3	160.32	141.7	**NOx + HC ≤ 4.0**
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		2.007	1.809	1.988	1.987	1.802	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		16.44	14.83	16.08	15.34	15.09	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.254	0.173	0.212	0.235	0.188	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	13.4	13.02	10.43	11.43	11.02	**≤ 0.2**
	Particulate Matter @ 15% O2	gr/kw-hr		0.172	0.154	0.144	0.176	0.124	

***Limits as CPCB DG Emission Guidelines as Per GSR 771(E)**

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Report Number	:	VLL/VLS/22/15373/022
Issued Date	:	2023.01.07
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

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

Sampling Date	:	2022.12.10
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	December 2022
Sample Registration Date	:	2022.12.12
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.159	0.159	--
4	Flue gas Temperature	^0C	USEPA M-2	122	120	--
5	Velocity of the Flue gas	m/Sec		6.92	7.14	--
6	Volumetric Flow rate	Nm^3/hr		3721.4	3533.2	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	13.2	12.7	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		51.34	47.32	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.711	0.652	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		104.2	110.3	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.234	1.395	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		15.41	13.88	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.171	0.163	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	11.05	10.87	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.111	0.108	

***Limits as CPCB DG Emission Guidelines as Per GSR 771(E)**

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Report Number	:	VLL/VLS/22/15373/023
Issued Date	:	2023.01.07
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS : **DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED : **ATC Technical Block**

Sampling Date	:	2022.12.08
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	December 2022
Sample Registration Date	:	2022.12.10
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	200	200	--
2	Stack diameter	m	-	0.43	0.43	--
3	Area of the Stack	m^2	-	0.1453	0.1453	--
4	Flue gas Temperature	^0C	USEPA M-2	125	117	--
5	Velocity of the Flue gas	m/Sec		6.53	6.41	--
6	Volumetric Flow rate	Nm^3/hr		3251.3	3423.4	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	9.2	8.5	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		63.46	58.12	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.743	0.916	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3	USEPA CTM30&34	118.5	130.61	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.665	1.807	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3	USEPA CTM30&34	14.08	15.34	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.208	0.241	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	9.12	10.04	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.141	0.124	

***Limits as CPCB DG Emission Guidelines as Per GSR 771(E)**

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ISSUED TO:

M/S.LUCKNOW INTERNATIONAL AIRPORT LIMITED.,
(CHAUDHARY CHARAN SINGH INTERNATIONAL AIRPORT),
AMAUSI, LUCKNOW,
UTTAR PRADESH-226009S

Report Number	:	VLL/VLS/22/15373/024
Issued Date	:	2023.01.07
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS : **DIESEL GENERATOR EMISSION MONITORING**
PLACE OF DG SET INSTALLED : **CCR office**

Sampling Date	:	2022.12.13
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	December 2022
Sample Registration Date	:	2022.12.15
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.16	0.16	--
4	Flue gas Temperature	^0C	USEPA M-2	124	119	--
5	Velocity of the Flue gas	m/Sec		7.33	7.18	--
6	Volumetric Flow rate	Nm^3/hr		3687.3	3761.4	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	9.7	7.3	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		53.4	62.7	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.821	0.764	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		131.11	124.52	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.356	1.287	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		17.44	15.87	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.173	0.183	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	11.25	10.84	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.119	0.123	

***Limits as CPCB DG Emission Guidelines as Per GSR 771(E)**

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Report Number	:	VLL/VLS/22/15373/025
Issued Date	:	2023.01.07
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

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

Sampling Date	:	2022.12.14
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	December 2022
Sample Registration Date	:	2022.12.16
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	* Limits
Physical Parameter					
1	Capacity	KVA	-	200	--
2	Stack diameter	m	-	0.55	--
3	Area of the Stack	m^2	-	0.24	--
4	Flue gas Temperature	^0C	USEPA M-2	121	--
5	Velocity of the Flue gas	m/Sec		6.59	--
6	Volumetric Flow rate	Nm^3/hr		5255.7	--
Chemical Parameters					
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	9.5	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		35.76	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.266	
10	Oxides of Nitrogen@ 15% O2	mg/Nm3		82.4	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.972	
11	Hydro Carbons as CH4@ 15% O2	mg/ Nm^3		8.44	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.371	
12	Particulate Matter@15% O2	mg/ Nm^3	USEPA M-5	7.12	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.126	

***Limits as CPCB DG Emission Guidelines as Per GSR 771(E)**

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UTTAR PRADESH-226009S

Report Number : VLL/VLS/22/21062/024
Issued Date : 2023.04.04
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

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

Sampling Date : 2023.03.11 & 2023.03.13
Frequency of Monitoring : Quarterly
Monitoring Month : March 2023
Sample Registration Date : 2023.03.15
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	DG3	DG4	DG5	* Limits
Physical Parameter									
1	Capacity	KVA	-	750	750	750	750	750	--
2	Stack diameter	m	-	0.8	0.8	0.8	0.8	0.8	--
3	Area of the Stack	m^2	-	0.454	0.454	0.454	0.454	0.454	--
4	Flue gas Temperature	°C	USEPA M-2	122	132	124	128	132	--
5	Velocity of the Flue gas	m/Sec		7.15	6.65	6.71	7.21	6.78	--
6	Volumetric Flow rate	Nm^3/hr		11086.2	10311.4	10396.4	11170.0	10500.6	--
Chemical Parameters									
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM-30&34	13.5	10.8	13.9	12.4	14.6	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		74.72	72.86	68.15	66.73	72.85	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.104	1.002	0.945	0.994	1.020	
10	Oxides of Nitrogen @ 15% O2	mg/Nm3		146.6	142.5	133.4	138.4	137.4	
	Oxides of Nitrogen @ 15% O2	gr/kw-hr		2.168	1.987	1.850	2.062	1.924	NOx + HC ≤ 4.0
11	Hydro Carbons as CH4 @ 15% O2	mg/Nm3		12.25	19.55	16.80	14.05	16.18	
	Hydro Carbons as CH4 @ 15% O2	gr/kw-hr		0.181	0.269	0.233	0.209	0.227	
12	Particulate Matter @ 15% O2	mg/Nm3	USEPA M-5	10.48	10.45	9.71	8.71	10.15	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.155	0.144	0.135	0.130	0.142	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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UTTAR PRADESH-226009S

Report Number : VLL/VLS/22/21062/025
Issued Date : 2023.04.04
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

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

Sampling Date : 2023.03.23
Frequency of Monitoring : Quarterly
Monitoring Month : March 2023
Sample Registration Date : 2023.03.25
Sample Collected by Vimta Labs Ltd

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.159	0.159	--
4	Flue gas Temperature	°C	USEPA M-2	117	123	--
5	Velocity of the Flue gas	m/Sec		6.53	6.94	--
6	Volumetric Flow rate	Nm^3/hr		3547.5	3768.0	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	10.6	11.7	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		54.03	57.54	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.569	0.678	
10	Oxides of Nitrogen@ 15% O2	mg/Nm^3		115.5	117.1	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.281	1.380	
11	Hydro Carbons as CH4@ 15% O2	mg/Nm^3		13.72	14.59	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.152	0.172	
12	Particulate Matter@ 15% O2	mg/Nm^3	USEPA M-5	12.49	10.24	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.138	0.121	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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UTTAR PRADESH-226009S

Report Number : VLL/VLS/22/21062/026
Issued Date : 2023.04.04
P. Order Ref : 5700309099
P. Order Date : 13.05.2022

SAMPLE PARTICULARS : DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED : ATC Technical Block

Sampling Date : 2023.03.25
Frequency of Monitoring : Quarterly
Monitoring Month : March 2023
Sample Registration Date : 2023.03.27
Sample Collected by Vimta Labs Ltd.

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	* Limits
Physical Parameter						
1	Capacity	KVA	-	200	200	--
2	Stack diameter	m	-	0.43	0.43	--
3	Area of the Stack	m^2	-	0.1453	0.1453	--
4	Flue gas Temperature	°C	USEPA M-2	122	124	--
5	Velocity of the Flue gas	m/Sec		6.07	6.47	--
6	Volumetric Flow rate	Nm^3/hr		3008.7	3207.0	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	10.3	12.3	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		59.36	45.38	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.893	0.728	
10	Oxides of Nitrogen@ 15% O2	mg/Nm^3	USEPA CTM30&34	116.7	105.6	NO_x + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.756	1.694	
11	Hydro Carbons as CH4 @ 15% O2	mg/Nm^3	USEPA CTM30&34	15.29	14.18	
	Hydro Carbons as CH4 @ 15% O2	gr/kw-hr		0.230	0.227	
12	Particulate Matter@ 15% O2	mg/Nm^3	USEPA M-5	7.41	8.62	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.111	0.138	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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Report Number	:	VLL/VLS/22/21062/027
Issued Date	:	2023.04.04
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS	:	DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED	:	CCR office
Sampling Date	:	2023.03.18
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	March 2023
Sample Registration Date	:	2023.03.20
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	DG2	*Limits
Physical Parameter						
1	Capacity	KVA	-	320	320	--
2	Stack diameter	m	-	0.45	0.45	--
3	Area of the Stack	m^2	-	0.16	0.16	--
4	Flue gas Temperature	°C	USEPA M-2	118	121	--
5	Velocity of the Flue gas	m/Sec		6.78	6.92	--
6	Volumetric Flow rate	Nm^3/hr		3681.2	3758.5	--
Chemical Parameters						
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	8.5	9.5	--
8	Carbon Monoxide @ 15% O2	mg/Nm		56.80	58.52	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		0.653	0.657	
10	Oxides of Nitrogen@ 15% O2	$mg/Nm3$		115.5	101.4	NOx + HC ≤ 4.0
	Oxides of Nitrogen@ 15% O2	gr/kw-hr		1.330	1.191	
11	Hydro Carbons as CH4@ 15% O2	mg/Nm^3		16.11	16.85	
	Hydro Carbons as CH4@ 15% O2	gr/kw-hr		0.185	0.198	
12	Particulate Matter @ 15% O2	mg/Nm^3	USEPA M-5	11.12	20.13	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.128	0.119	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

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UTTAR PRADESH-226009S

Report Number	:	VLL/VLS/22/21062/028
Issued Date	:	2023.04.04
P. Order Ref	:	5700309099
P. Order Date	:	13.05.2022

SAMPLE PARTICULARS	:	DIESEL GENERATOR EMISSION MONITORING
PLACE OF DG SET INSTALLED	:	MSSR Building
Sampling Date	:	2023.03.28
Frequency of Monitoring	:	Quarterly
Monitoring Month	:	March 2023
Sample Registration Date	:	2023.03.30
Sample Collected by Vimta Labs Ltd.		

TEST REPORT

Sr. No.	PARAMETERS	UoM	METHOD OF TESTING	DG1	* Limits
Physical Parameter					
1	Capacity	KVA	-	200	--
2	Stack diameter	m	-	0.55	--
3	Area of the Stack	m^2	-	0.24	--
4	Flue gas Temperature	°C	USEPA M-2	116	--
5	Velocity of the Flue gas	m/Sec		6.99	--
6	Volumetric Flow rate	Nm^3/hr		5671.0	--
Chemical Parameters					
7	Sulphur Dioxide @ 15% O2	mg/Nm^3	USEPA CTM30&34	9.3	--
8	Carbon Monoxide @ 15% O2	mg/Nm^3		39.95	≤ 3.5
9	Carbon Monoxide @ 15% O2	gr/kw-hr		1.333	
10	Oxides of Nitrogen@ 15% O2	mg/Nm^3		51.7	NOx + HC ≤ 4.0
	Oxides of Nitrogen @ 15% O2	gr/kw-hr		1.467	
11	Hydro Carbons as CH4 @ 15% O2	mg/Nm^3		9.25	
	Hydro Carbons as CH4 @ 15% O2	gr/kw-hr		0.261	
12	Particulate Matter@ 15% O2	mg/Nm	USEPA M-5	5.30	≤ 0.2
	Particulate Matter @ 15% O2	gr/kw-hr		0.145	

*Limits as CPCB DG Emission Guidelines as Per GSR 771(E)

Dr. SubbaReddy Mallampati
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Annexure 6
Soil Monitoring Reports

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Report Number : VLL/VLS/22/21062/029
Issued Date : 2023.04.05
P. Order Ref : 5700309099
P.O. Date : 13.05.2022

SAMPLE PARTICULARS : Soil Quality

Frequency Of Sampling	:	One Grab sample in a Six Months
Month of Sampling	:	**March 2023**
Quantity Collected for Analysis	:	1Kg
Type of Container used for sampling	:	Leak Proof ZIP Lock Cover
Test Required	:	As per ML Jackson Book
Sample Collected On	:	22.03.2023
Analysis Start Date	:	24.03.2023
Analysis Completion Date	:	31.03.2023
Sample collected by Vimta Labs Ltd.,		

TEST REPORT

Sr.No	Parameters	UoM	Near Terminal-1	Near Terminal-2	SCADA Building
1	Texture	--			
a	Sand	%	53	49	51
b	Silt	%	11	13	12
c	Clay	%	36	38	37
2	Textural Class	--	sandy clay	sandy clay	sandy clay
3	Bulk Density	g/cc	1.28	1.34	1.21
4	pH (1:5 Aq.Extraction)	--	7.56	7.34	7.48
5	Conductivity (1:5 Aq.Extraction)	µS/cm	241	278	184
6	Exchangeable Calcium as Ca	mg/kg	3245	3468	2965
7	Exchangeable Magnesium as Mg	mg/kg	985	1056	784
8	Exchangeable Sodium as Na	mg/kg	82.4	96.7	74.3
9	Sodium Absorption Ratio (SAR)	----	0.15	0.17	0.14
10	Available Nitrogen as N	Kg/hac	58.6	63.2	52.4
11	Available Phosphorous as P	Kg/hac	42.5	54.6	39.6
12	Available Potassium as K	Kg/hac	138.7	118.2	127.8
13	Organic Carbon	%	0.27	0.33	0.28
14	Organic Matter	%	0.46	0.57	0.49
15	Water Soluble Chlorides as Cl	mg/kg	82.4	62.6	57.7

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Group Leader-Environment