Chhatrapati Shivaji Maharaj
INTERNATIONAL AIRPORT
MUMBAI

Ref: MIAL/ENV/F-25/47

29th November 2024

To,
Additional PCCF,
Ministry of Environment, Forest, & Climate Change,
Regional Office, WCZ, New Civil Lanes,
Nagpur - 440001.

Dear Sir,

Subject: Half yearly Environmental Compliance report of Environment Clearance received for Upgradation of Chhatrapati Shivaji Maharaj International Airport by Mumbai International Airport Limited

Ref: - Environment clearance File no. 10-5/2007-IA-III dated 2nd June 2017

With reference to above, please find enclosed herewith the compliance Report of EC conditions for the period from April 24 to September 24.

Kindly acknowledge the receipt of the EC compliance report.

Thank you.

Yours faithfully,

For Mumbai International Airport Limited

Head - Environment & Sustainability

Encl: Half yearly Environmental Compliance report.

CC: 1) Zonal officer- Central Pollution Control Board, Vadodara

2) Regional officer - Maharashtra Pollution Control Board, Sion (E)

Mumbai International Airport Limited
Chhatrapati Shivaji Maharaj International Airport
1st Floor, Terminal 1B, Santacruz (E),
Mumbai 400 099,
Maharashtra, India
CIN: U45200MH2006PLC160164

Tel +91 22 6685 0900 / 6685 0901
csmia.adaniairports.com

Registered office: Office of the Airport Director, Terminal-1B, CSMI Airport, Mumbai – 400099, Maharashtra, India

Environmental Clearance
Six Monthly Compliance Report

Mumbai International Airport Limited
Terminal 1, Santacruz (East), Mumbai -400099

of

Chhatrapati Shivaji Maharaj International Airport
(CSMIA)

For
Period of April- 2024 to September- 2024

SIX MONTHLY COMPLIANCE REPORT
(01.04.2024 to 30.09.2024)
Present Status of Compliance to Conditions stipulated in EC F.No. 10-5/2007-IA-III dated 2nd June 2017

Earlier EC 2007 was granted for expansion and modernization of Chhatrapati Shivaji Maharaj International Airport (CSMIA) by M/s Mumbai International Airport limited (MIAL) as phase – I and Phase-II components. . The new EC "up gradation of Chhatrapati Shivaji Maharaj International Airport' has been accorded by Ministry of Environment & Forest and Climate Change on 2nd June 2017 for completion of balance work of EC 2007. Activities and components are being develoed inline to the EC.
Compliance status of the conditions stipulated in EC'2017 letter is as below:

S.N.	Conditions	Compliance Status
(A) Specific Condition		
I.	As proposed, this environmental clearance is only for up-gradation of Chhatrapati Shivaji International Airport.	Noted
II.	The project proponent shall obtain clearance from DGCA and AAI for safety and project facilities.	Complied. Aerodrome license have been obtained from DGCA. Refer **Annexure – 01- Aerodrome Licence.**
III.	Construction site shall be adequately barricaded before the construction begins.	Complied. All construction sites are barricaded with metallic sheets before initiating construction activities. The same will be complied for remaining proposed developments in future. Refer **Annexure- 02- Barricading practices**
IV.	Soil and other construction material shall be sprayed with water prior to any loading, unloading or transfer operations so as to maintain the dusty material wet.	Complied. Water sprinkling is carried out on the soil and construction material during high wind to ensure no dust pollution while loading & unloading. The same will be complied for remaining proposed developments in future.
V.	The soil/construction materials carried by the vehicles shall be covered by impervious sheeting to ensure that the dusty material do not leak from the vehicle.	Complied. It is being ensured the vehicles / dumpers carrying soil and construction material are covered with tarpaulin to ensure no dust pollution during transportation. The same will be complied for remaining proposed developments in future. Refer **Annexure- 03 Construction material truck covered by impervious sheets.**

S.N.	Conditions	Compliance Status
VI.	The excavation working area shall be sprayed with water after operation so as to maintain the entire surface wet.	Agreed to complied. At the time of excavation, measures to reduce dust pollution are being taken. The same will be complied for remaining proposed developments in future.
VII.	Soil stockpile shall be managed in such a manner that dust emission and sediment runoff are minimized. Ensure that soil stockpiles are designed with no slope greater than 2:1 (horizontal / vertical). Topsoil shall be separately stored and used in the development of green belt.	Agreed to comply. Safety measures are being taken and soil sample shall be collected and analysed for fertility to determine further usage as per conditions.
VIII.	A detailed drainage plan for rainwater shall be drawn up and implemented.	Complied. CSMIA has integrated stormwater plan in place with 2600 M3 of collection tank and the collected water is being used for non-potable purpose, copy storm water storage tank
IX.	Groundwater abstraction and rainwater recharge shall be as may be prescribed by the CGWA. A clearance from CGWA shall be obtained in this regard.	Not applicable. Water for CSMIA is being sourced from MCGM.
X.	Noise from vehicles and power machinery and equipment onsite shall not exceed the prescribed limit. Equipment should be regularly serviced. Attention shall also be given to muffler maintenance and enclosure of noisy equipment's.	Complied. At CSMIA, noise level monitoring is being carried out in and around airport premises at 10 locations by MOEF & NABL accredited lab. All the results have been observed within standards. Also, vehicles and equipment are being maintained & serviced as per manufacture recommendations. DG sets are being provided with acoustic enclosures. **Annexure -04 Environmental monitoring reports.**
XI.	Where construction activity is likely to cause noise nuisance to nearby residents, restrict operation hours between 7am to 6pm	Complied, Minor construction works are being undertaken within the airside region. Regular Noise monitoring is being carried out in at 10 location and all the results have been observed within the standards.
XII.	Solid inert waste found on construction sites consists of building rubble, demolition material, concrete, bricks, timber, plastic, glass, metals, bitumen etc.	Complied, Solid waste is being managed and handled inline to 5 R principle of Waste Management.

S.N.	Conditions	Compliance Status
	shall be reused /recycled or disposed-off as per the Solid Waste Management Rule, 2016 and the Construction and Demolition Waste Rules 2016.	C&D waste, when generated will be handled inline to C&D waste rules 2016, amended till date.
XIII.	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulfur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board (SPCB).	Complied. DG sets are being used for emergency backup purpose only. DG set Enclosures has been provided, and low sulphur diesel is being used. DG stack has been provided as per aviation safety. CTE has been obtained from SPCB vide dated 21/09/2022. Refer **Annexure -05 - DG Enclosures and stack.** **Annexure -05A – Consent to establish dated 21/09/2022.**
XIV.	Aircraft maintenance, sensitivity of the location where activities are undertaken and control of runoff of potential contaminants, chemicals etc. shall be properly implemented and reported.	Complied. Contingency plan for spills prevention is in place & implemented. Refer **Annexure -06 Contingency plan for spills prevention.**
XV.	Proper drainage systems, emergency containment in the event of a major spill during monsoon season etc. shall be provided.	Complied. Contingency plan for spills prevention is in place & implemented. Oil interceptors are commissioned to contain spills. Refer **Annexure- 07 Oil interceptors drawing.**
XVI.	The runoff from paved structures like runways, taxiways can be routed through drains to oil separation tanks and sedimentation basins before being discharged into rainwater harvesting structures.	Complied. CSMIA has integrated stormwater plan in place with 2600 M3 of collection tank & 229 recharge pits. 05 nos of oil interceptor are provided across the airport before routing to the rainwater harvesting structure.
XVII.	Storm water drains are to be built for discharging storm water from airfield to avoid flooding/water logging in project area during monsoon season/cloud bursts.	Complied. CSMIA has integrated stormwater plan in place with 2600 M3 of collection tank & 229 recharge pits. Access runoff is being routed to the nearby water body through dedicated outfall.

S.N.	Conditions	Compliance Status
XVIII.	Rainwater harvesting for roof run-off and surface runoff, as plan submitted should be implemented. Before recharging the surface runoff, pre-treatment must be done to remove suspended matter, Oil & grease.	Complied. CSMIA has integrated stormwater plan in place with 2600 M3 of collection tank & 229 recharge pits. 05 of oil interceptor are provided across the airport before routing to the rainwater harvesting structure. Recharge pits are provided with coarse sand and stone aggregate filtration.
XIX.	Total freshwater requirement from MCGM shall not exceed from 8 MLD	Complied. Average 3.18 MLD water was sourced from MCGM during the period of April-24 to September-24.
XX.	Wastewater generation shall not exceed from 10 MLD and treated in the STP. Treated sewage shall be recycled / reused for cooling tower makeup, flushing and horticulture.	Complied. MIAL has constructed and commissioned 15 MLD state-of-art SBR technology STPs for treating the wastewater generated at CSIA. On modular bases. Average 2.93 MLD domestic Wastewater was generated during the period April-24 to September-24. Recycled water is being analysed by MoEFCC & NABL accredited laboratory and all results are observed to be within limits. Treated water is being reused for Horticulture, HVAC & flushing purpose The treated water is fully recycled in flushing, HVAC and gardening. Attached STP reports in, **Annexure -04 Environmental monitoring reports.**
XXI.	Acoustic enclosures for DG sets, noise barriers for ground run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	Complied. DG sets installed are having acoustic enclosures and the personnel working at airside areas are provided with adequate personnel protective equipment for noise impact such as ear plugs, earmuffs. Refer **Annexure -05 Photos DG sets.**
XXII.	During airport operation period, noise shall be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations. A monitoring station for ambient air and noise levels shall be provided in the village nearest to the airport.	Complied. AAQ monitoring is being carried out at 4 location and ANQ monitoring is being carried out at 10 locations within the Airport boundary by MoEF/NABL accredited lab. CAQMS and CNQMS system has also been installed at the site. All the results are observed to be within the standards. Refer **Annexure -04 Environmental monitoring reports.**

S.N.	Conditions	Compliance Status
XXIII.	The solid waste shall be segregated as per the norms of the Municipal Solid waste Management Rules 2016. Recycling of wastes such as paper, glass (produced from terminals and aircraft caterers), metal (at aircraft maintenance site), plastics (from aircraft, terminals & offices), wood, waste oil and solvents (from maintenance and engineering operation), kitchen wastes and vegetable oils (from caterers) shall be carried out.	Complied. Waste Management procedure has been implemented. waste segregation and disposal methods are followed as per stipulated regulatory requirements. Waste is collected in bins, segregated, and channelized to MPCB authorized waste handling agency. Waste handlers do the segregation and further channelize for recycling and disposal according to rule. The hazardous wastes are collected and stored at designated storage area and disposed-off at MPCB authorized TSDF and recyclers inline to Hazardous Waste management rule, amended till date.
XXIV.	Traffic congestion near the entry and exit points from the roads adjoining the airport shall be avoided. Parking should be fully internalized, and no public space should be utilized.	Complied. Surface along with Multi-Level Car Parking buildings (MLCPs) have been constructed for vehicle parking with adequate capacity at both the passenger terminals and traffic management plan has been implemented.
XXV.	Energy conservation measures like installation of LED/CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.	Complied. Energy efficient lights has been considered during the design as well as at the time of replacement of existing lighting. Terminal-2 has been awarded with Platinum Rating Facility in existing building project category by CII. The E-waste generated due to used CFL/TFL are disposed of to authorized recyclers. **Annexure-08 Certificate of Green Building Platinum Rating.**
XXVI.	An onsite disaster management plan shall be drawn up to account for risks and accidents. This onsite plan shall be dovetailed with the onsite management plan for the district.	Complied, An onsite disaster management plan is in place aligned with district plan. **Annexure – 15 Emergency Preparedness Plan**
XXVII.	The concerns of the public hearing panel shall be suitably addressed to, and the recommendations adopted as part of the Environmental Management Plan and in the plan for CSR as applicable.	Complied. EMP has been implemented in the field of Energy, Water & wastewater, Solid Waste management. **Annexure – 11 Environment Management Plan**

S.N.	Conditions	Compliance Status
XXVIII.	A water security plan, to the satisfaction of the CGWA shall be drawn up to include augmenting water supply and sanitation facilities and recharge of ground water in at least two villages and schools, as part of the CSR activity.	Complied. MIAL has provided Rainwater harvesting facility for non-potable used and constructed toilet at a Zilla Parishad school catering to majorly underprivileged students in Shahapur District of Maharashtra as a part of CSR activity. **Annexure – 14 Details on water related works.**
(B) GENERAL CONDITIONS		
I.	The project authorities must strictly adhere to the stipulations made by the SPCB, State Government and any other statutory authority.	Complied All the applicable conditions are complied. MPCB has granted Consent to operate CTO-Format-1.0-CAC-UAN No.000111260-CR-2205000810. It is valid till dated 31.05.2024, the renewable application has submitted through portal with application no. 100009132000 dated 01-04-2024. Consent to Establish vide letter no BO/CAC-cell/Format1.0/CAC/UAN No.0000136644/CE/2208000664 dated 15.08.2022 & it is valid till dated 14.08.2027.
II.	No further modification of expansion in the project shall be carried out without prior approval of the Ministry of Environment Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to the Ministry for clearance, a fresh reference shall be made to this Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required if any.	Agreed and complied

S.N.	Conditions	Compliance Status
III.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all the sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the EPA Rules, 1989 viz. 78dBA (daytime) and 70dBA (nighttime)	Complied. Regular ambient noise monitoring is carried out in and around airport area at around 10 locations by MoEF/NABL accredited lab. CNQMS system has also been installed at the site. All the results are observed to be within the standards. **Annexure -04 Environmental monitoring reports.**
IV.	A separate Environmental Management cell equipped with full-fledged laboratory facilities must be set up to carry out the environmental management and monitoring function.	Complied. Organogram of environment management cell is enclosed. **Annexure 12- Organogram of environment management cell.**
V.	Adequate funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures and shall be used to implement to conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.	Complied. As part of implementation of environmental protection measures and EMP, INR of 12.44 Cr. was spent during the period April 24 to September 24. Copy of EMP expenditure is attached. **Annexure 13- Environmental Expenditure**
VI.	The regional office of this Ministry/CPCB/SPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with the statistical interpretation shall be submitted to them regularly.	Complied. Compliance data is being submitted along with six monthly compliance report. **Annexure- 09 Letter of previous compliance report submission.**
VII.	A copy of clearance letter shall be sent by the proponent to be concerned Panchayat / Zila parishad / Municipal corporation, urban local body and the local NGO, if any from whom any suggestion / representation, if any, were received while processing the proposal. The clearance letter	Complied. Copy of clearance letter is also available on the company's website. https://csmia.adaniairports.com/all-reports.aspx>> Environment Compliance reports. The copy of clearance letter was submitted to MMRDA & Collector vide letter no MIAL/DIR(UP)/158(B)/2017/173

S.N.	Conditions	Compliance Status
	shall also be put on the website of the company the proponent.	dated 28th June 2017 and MIAL/DIR(UP)/158(B)/2s017/175 dated 28th June 2017 respectively.
VIII.	A project proponent shall also submit six monthly monitoring reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hardcopies as well as by e-mail) to the Regional Officer of MoEF&CC, the respective Zonal office of CPCB and the SPCB. The regional officer of this Ministry /CPCB/SPCB shall monitor the stipulated conditions.	Complied. Compliance data is being submitted along with six monthly compliance report. **Annexure- 09 Letter of previous compliance report submission.**
IX.	The environmental statement for each financial year ending 31st March in form –V as is mandated to be submitted by the project proponent to the concerned SPCB as prescribed under Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of Clearance conditions and shall also be sent to the respective Regional office of MoEF&CC by e-mail.	Complied. Environment statement is submitted on MPCB portal, Copies are attached. Same is also displayed on company website. - https://csmia.adaniairports.com/all-reports.aspx>> Environment Compliance reports. **Annexure – 10 Environment statement Form- V.**
X.	The project proponent shall inform the public that the project has been accorded environmental clearance by Ministry and copies of the clearance letter are available with SPCB and may also be seen at website of the Ministry of Environment, Forest & Climate Change at http://www.envfor.nic.in. This shall be advertised within seven days from the date of receipt of the clearance letter at least two local newspaper that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional Office of this Ministry.	Complied. Communicated to MoEF&CC vide letter no MIAL/ENV/17/40 dated 13th December 2017.

S.N.	Conditions	Compliance Status
XI.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing of land development work.	Agreed to Complied.
XII.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed to Comply
XIII.	The ministry reserves the right to stipulate additional conditions, if necessary. The company in time bound manner shall implement these conditions	Agreed to Comply
XIV.	This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in writ petition (Civil) No 460 of 2004 as may be applicable to this subject.	Agreed to Comply

Annexure -01 Aerodrome License.

सत्यमेव जयते

GOVERNMENT OF INDIA
OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION
DGCA COMPLEX, OPP. SAFDARJUNG AIRPORT, NEW DELHI-110003

Application Id **2024/ASD/Renewal/0000003187**
License No. **AL/PUBLIC/005**

AERODROME LICENSE - PUBLIC USE

The Director General of Civil Aviation, in exercise of the powers under Rule 78 of the Aircraft Rules, 1937 delegated vide S.O. No. 727 (E) dated the 4 October, 1994, hereby grants license to,

MUMBAI INTERNATIONAL AIRPORT LIMITED

for

CHHATRAPATI SHIVAJI MAHARAJ INTERNATIONAL AIRPORT ,MUMBAI

Latitude : 19°05'29.6"N , Longitude : 072°51'57.5"E

The ARFF category of the aerodrome and other details are as contained in its Aerodrome Manual.

This license authorizes the aerodrome to be used as regular place of landing and departure to all persons on equal terms and conditions for operation by aircraft requiring specifications of runway and associated facilities including granted exemptions equal to or less than those indicated in the aerodrome Manual, subject to the conditions as contained in schedule-I and for a period as shown in Schedule-II hereto

The license is liable to be suspended/modified/ withdrawn/ and/or any limitations or conditions may be imposed, if any violation of the provisions of the Aircraft Act 1934, Aircraft Rules 1937, or any orders/ directions/ requirements issued under the said Act, rules or of the limitations or conditions as in schedule-I are observed.

This Aerodrome License is not transferable.

Signature valid
Signed by: Vikram Dev Du

Date of Issue: **30-04-2008**
New Delhi

DIRECTOR GENERAL OF CIVIL AVIATION

License No. AL/PUBLIC/005
SCHEDULE-II

VALIDITY OF THE LICENSE

CHHATRAPATI SHIVAJI *MAHARAJ INTERNATIONAL AIRPORT, MUMBAI*

FROM	TO	SIGNED AUTHORITY
03-05-2006	02-05-2008	K GOHAIN
03-05-2008	02-05-2010	K GOHAIN
03-05-2010	02-05-2012	DR. NASIM ZAIDI
03-05-2012	02-05-2014	E.K.BHARAT BHUSHAN
03-05-2014	02-05-2016	DR. PRABHAT KUMAR
03-05-2016	02-05-2018	MS. M SATHIYAVATHY
03-05-2018	02-05-2020	B S BHULLAR
03-05-2020	02-05-2022	ARUN KUMAR
03-05-2022	02-05-2024	ARUN KUMAR
03-05-2024	02-05-2029	VIKRAM DEV DUTT

Signature valid
Signed by: Vikram Dev Dutt

Annexure -02 Barricading practices.







Annexure- 03 Construction material truck covered by impervious sheets.

Annexure -03 – Construction Material Trucks are covered with tarpaulin





Annexure- 04 Environmental Monitoring Reports.

Ashwamedh
Engineers & Consultants
Laboratory Services Division

TC-5509

Ashwamedh Engineers & Consultants
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(Near Guru Gobind Singh School, Near Pandav Nagari,
Turn at Sai Mandir Chowk / Samrat Sweet Turning)
sales@ashwamedh.net +91-253-2392225

NOISE LEVEL MEASURMENT REPORT

Sample ID: N/05/24/5028	Report No.: N/05/24/5028	Report Date	07/05/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No. 5700343880	Date of Monitoring	29/04/2024 to 30/04/2024
Calibration Certificate	CC342223000000982F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	540021

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Runway 27 End	67.25	66.8	68.2	62.5	61.7	63.3	CPCB Protocol for Ambient Level Noise Monitoring, July:2015
2	STP Terminal- 1	63.95	62.3	65.6	57	55.7	58.3	
3	CCR-2	68.5	67.8	69.2	53.95	52.3	55.6	
4	Apron Control	66.25	65.3	67.2	58.6	57.3	59.9	
5	6 No Gate (Sahar)	66.75	65.3	68.2	61.45	60.3	62.6	
6	J 8	58.85	57.3	60.4	51.55	50.8	52.3	
7	Runway 14 End	65.5	64.3	66.7	55.2	54.3	56.1	
8	Project Office (Sahar)	65.6	64.4	66.8	50.23	48.2	52.3	
9	Cargo 4D	68.05	66.3	69.8	64.20	63.3	65.1	
10	OWC Kurla	61.55	60.8	62.3	51.30	49.3	53.3	

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

Ashwamedh Engineers & Consultants
Laboratory Services Division

End of Report

Note:
1. The result listed refers only to the tested sample(s) and applicable parameter(s).
2. This report is not to be reproduced except in full, without written approval of the laboratory.
3. In case sampling is not done by laboratory, the results apply to the sample as received.
4. There are no additions to, deviation or exclusions from the method.

Ashwamedh
Engineers & Consultants
Laboratory Services Division

TC-5509

Ashwamedh Engineers & Consultants
Survey No. 102, Plot No.26, Wadala Pathardi Road,
Indira Nagar, Nashik - 422009, Maharashtra, India
(Near Guru Gobind Singh School, Near Pandav Nagari,
Turn at Sai Mandir Chowk / Samrat Sweet Turning)
sales@ashwamedh.net +91-253-2392225

NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5033	Report No.: N/06/24/5033	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000880F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	CCR-2	66.45	65.6	67.3	60.25	59.2	61.3	CPCB Protocol for Ambient Level Noise Monitoring, July 2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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Laboratory Services Division

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5034	Report No.: N/06/24/5034	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000879F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	STP Terminal- 1	64.45	63.8	65.1	58.55	57.8	59.3	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5035	Report No.: N/06/24/5035	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000878F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Runway 27 End	69.15	68.3	70	64.45	63.3	65.6	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

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End of Report

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5036	Report No.: N/06/24/5036	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000881F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Apron Control	64.15	63.1	65.2	56.55	55.3	57.8	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5037	Report No.: N/06/24/5037	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000882F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	6 No Gate (Sahar)	68.25	67.3	69.2	63.45	62.3	64.6	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5038	Report No.: N/06/24/5038	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000883F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	J 8	60.8	59.3	62.3	53.4	52.3	54.5	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5039	Report No.: N/06/24/5039	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	CC342223000000884F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Runway 14 End	68.25	67.3	69.2	64.45	63.3	65.6	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5040	Report No.: N/06/24/5040	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000885F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Project Office (Sahar)	64.55	63.3	65.8	58.25	57.3	59.2	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5041	Report No.: N/06/24/5041	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	C342223000000886F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial. No.	91207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Cargo 4D	68.2	67.1	69.3	63.3	62.3	64.3	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5042	Report No.: N/06/24/5042	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	28/05/2024 to 29/05/2024
Calibration Certificate	CC342223000000887F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	19120763

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	OWC Kurla	63.3	62.3	64.3	53.95	52.3	55.6	CPCB Protocol for Ambient Level Noise Monitoring, July 2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5563	Report No.: N/06/24/5563	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000878F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	19120763

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Runway 27 End	68.4	67.5	69.4	62.5	61.9	63.2	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ashwamedh Engineers & Consultants
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5562	Report No.: N/06/24/5562	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000879F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	STP Terminal- 1	63.2	62.1	64.4	58.5	57.3	59.7	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5561	Report No.: N/06/24/5561	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000880F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	CCR-2	65.5	64.7	66.4	61.3	60	62.6	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5564	Report No.: N/06/24/5564	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000881F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Apron Control	66.3	65.1	67.6	59.2	58.5	60.5	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5565	Report No.: N/06/24/5565	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000882F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	6 No Gate (Sahar)	67.4	66.9	68	63.3	62.3	67.4	CPCB Protocol for Ambient Level Noise Monitoring, July 2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

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End of Report

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5567	Report No.: N/06/24/5567	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000884F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Runway 14 End	64.3	63	65.7	56.3	55.3	57.4	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5568	Report No.: N/06/24/5568	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000885F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Project Office (Sahar)	63.5	62.7	64.4	57.4	56	58.8	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5566	Report No.: N/06/24/5566	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000883F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	J 8	57.5	56.7	58.4	50.7	49.6	51.8	CPCB Protocol for Ambient Level Noise Monitoring, July 2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5569	Report No.: N/06/24/5569	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000886F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Cargo 4D	61.6	60.7	62.5	54.7	53.9	55.6	CPCB Protocol for Ambient Level Noise Monitoring, July-2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/06/24/5570	Report No.: N/06/24/5570	Report Date	22/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	17/06/2024 to 18/06/2024
Calibration Certificate	CC342223000000887F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	19120763

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
10	OWC Kurla	67.4	66.3	68.5	62.4	61.2	63.7	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5785	Report No.: N/07/24/5785	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000880F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	CCR-2	68.4	67.2	69.7	63.8	62.9	64.6	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5786	Report No.: N/07/24/5786	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000879F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	STP Terminal- 1	64.4	63.2	65.7	59.6	58.4	60.8	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5787	Report No.: N/07/24/5787	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000878F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Runway 27 End	67.6	66.7	68.4	63.3	62.5	64.2	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5788	Report No.: N/07/24/5788	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000881F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Apron Control	67.7	66.6	68.8	61.2	60	62.5	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5789	Report No.: N/07/24/5789	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000882F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	6 No Gate (Sahar)	66.4	65.2	67.7	60.6	59.7	61.5	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5791	Report No.: N/07/24/5791	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000884F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
7	Runway 14 End	65.8	64.7	66.9	62.2	61	63.4	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

Ashwamedh Engineers & Consultants
Laboratory Services Division

End of Report

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5792	Report No.: N/07/24/5792	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000885F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Project Office (Sahar)	66.6	65.8	67.5	61.1	60.3	62	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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Laboratory Services Division

Ninad Soundankar
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Reviewed & Authorised by

End of Report

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5793	Report No.: N/07/24/5793	Report Date	31/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000886F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Cargo 4D	63.4	62.6	64.2	58.2	57.1	59.3	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5794	Report No.: N/07/24/5794	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000887F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	OWC Kurla	68.2	67	69.4	62.6	61.4	63.7	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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Ashwamedh Engineers & Consultants
Laboratory Services Division

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/07/24/5790	Report No.: N/07/24/5790	Report Date	30/07/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	25/07/2024 to 26/07/2024
Calibration Certificate	CC342223000000883F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	J 8	54.4	53.4	55.5	49.6	48.7	50.4	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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Laboratory Services Division

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5205	Report No.: N/08/24/5205	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000878F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Runway 27 End	68.1	67.2	69.0	63.5	62.1	64.9	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

Ashwamedh Engineers & Consultants ★ Laboratory Services Division

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5204	Report No.: N/08/24/5204	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000879F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
2	STP Terminal- 1	59.7	58.9	60.4	52.2	51.0	53.4	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5203	Report No.: N/08/24/5203	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000880F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	CCR-2	66.45	65.6	67.3	60.25	59.2	61.3	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5206	Report No.: N/08/24/5206	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000881F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Apron Control	68.4	67.2	69.7	63.3	62.0	64.6	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5207	Report No.: N/08/24/5207	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000882F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	6 No Gate (Sahar)	67.1	66.2	68.1	62.8	61.7	63.9	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5209	Report No.: N/08/24/5209	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000884F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Runway 14 End	67.5	66.6	68.4	60.6	59.4	61.8	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5210	Report No.: N/08/24/5210	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000885F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Project Office (Sahar)	63.4	62.8	64.0	56.5	55.5	57.5	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
Technical Manager (Chemical)
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5211	Report No.: N/08/24/5211	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000886F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	Cargo 4D	68.3	67.2	69.4	62.8	60.8	64.7	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5212	Report No.: N/08/24/5212	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000887F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	OWC Kurla	63.4	62.6	64.2	53.4	52.1	54.8	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/08/24/5208	Report No.: N/08/24/5208	Report Date	10/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	07/08/2024 to 08/08/2024
Calibration Certificate	CC342223000000883F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1.	J 8	52.4	51.5	53.4	49.4	48.7	50.2	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5738	Report No.: N/09/24/5738	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000880F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	CCR-2	67.3	66	68.7	63.6	62.9	64.2	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5739	Report No.: N/09/24/5739	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000879F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	STP Terminal- 1	63.6	62.5	64.7	56.4	55.5	57.3	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5740	Report No.: N/09/24/5740	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000878F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Runway 27 End	67.25	66.4	68.1	62.45	61.6	63.3	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5741	Report No.: N/09/24/5741	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000881F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Apron Control	67.6	66.7	69.2	62.5	61.9	63.5	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

Ninad Soundankar
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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5742	Report No.: N/09/24/5742	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000882F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	6 No Gate (Sahar)	66.3	65.2	67.4	59.6	58.7	61	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5743	Report No.: N/09/24/5743	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000883F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	J 8	64.2	63	65.4	55.2	54.3	56.3	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5744	Report No.: N/09/24/5744	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000884F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Runway 14 End	68.5	67.5	69.2	63.4	62.1	64.8	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5745	Report No.: N/09/24/5745	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000885F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/220500081 0 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Project Office (Sahar)	66.3	65.1	67.5	52.1	51	53.2	CPCB Protocol for Ambient Level Noise Monitoring. July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5746	Report No.: N/09/24/5746	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000886F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	Cargo 4D	63.4	62.2	64.7	58.4	57.7	59.2	CPCB Protocol for Ambient Level Noise Monitoring, July:2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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NOISE LEVEL MEASURMENT REPORT

Sample ID: N/09/24/5747	Report No.: N/09/24/5747	Report Date	03/10/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1B, Santacruz (E), Mumbai-400099 Maharashtra		
Monitoring Done By	Laboratory	Sample Description/Type	Ambient Noise
Order Reference	SO No.5700343880 Date:14.05.2024	Date of Monitoring	27/09/2024 to 28/09/2024
Calibration Certificate	CC342223000000887F	Instrument Model	Sound level Meter
Consent Number & Date.	Format 1.0/CAC/UAN No.0000111260/CR/2205000810 Date.13.05.2022	Instrument Serial .No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Day Time (6AM-10PM) dB (A)			Night Time (10PM -6AM) dB (A)			Method
		Leq	Lmin	Lmax	Leq	Lmin	Lmax	
1	OWC Kurla	64.4	63.1	65.7	52.3	51.2	53.5	CPCB Protocol for Ambient Level Noise Monitoring, July 2015

Limit

As Per the Environment (Protection)Rules, 1986, Schedule -I

Serial Number	Industry	Limits in dB (A) weighted scale	
		Day (6 a.m. to 10 p.m.)	Night (10 p.m. to 6 a.m.)
112	Airport (Busy Airport)	70	65

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5011	Report No. AA/05/24/5011	Report Date	08/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Project Office (Sahar)	Date - Sampling	29/04/2024 to 30/04/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	02/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	07/05/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
8.8 km/h	S-E	(Max./Min.): 52/48%	(Max./Min.): 31/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**14.2**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**36.6**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**82**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**47**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun 1999
Carbon Monoxide (CO)	**1.58**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**37.2**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1601
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5013	Report No. AA/05/24/5013	Report Date	08/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	OWC (Kurla)	Date - Sampling	29/04/2024 to 30/04/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	02/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	07/05/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
8.8 km/h	S-E	(Max./Min.): 52/48%	(Max./Min.): 31/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**15.4**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**39.8**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**86**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**49**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.74**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**46.3**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1603
Calibration Certificate No.: CC342223000001520F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5014	Report No. AA/05/24/5014	Report Date	08/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Terminal 1 MLCP (Santacruz)	Date - Sampling	29/04/2024 to 30/04/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	02/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	07/05/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
8.8 km/h	S-E	(Max./Min.): 52/48%	(Max./Min.): 31/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**9.5**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**32.4**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**77**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**35**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.18**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**BLQ (LOQ:20)**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1602
Calibration Certificate No.: CC342223000001517F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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End of Report

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Sample ID : AA/05/24/5014	Report No. AA/05/24/5014	Report Date	08/05/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5012	Report No. AA/05/24/5012	Report Date	08/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Sarvodaya Hospital (Ghatkopar)	Date - Sampling	29/04/2024 to 30/04/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	02/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	07/05/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
8.8 km/h	S-E	(Max./Min.): 52/48%	(Max./Min.): 31/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**11.8**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**30.2**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**80**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**39**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.45**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**34**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1604
Calibration Certificate No.: CC342223000001528F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5777	Report No. AA/05/24/5777	Report Date	05/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Project Office Sahar	Date - Sampling	27/05/2024to 28/05/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/06/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
9.8 km/h	S-E	(Max./Min.): 71/67%	(Max./Min.): 35/29°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**15**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**34.3**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**84**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**49**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.66**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**33.8**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1601
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/05/24/5777	Report No. AA/05/24/5777	Report Date	05/06/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5778	Report No. AA/05/24/5778	Report Date	05/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	MLCP Santacruz (T1)	Date - Sampling	27/05/2024 to 28/05/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/06/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
9.8 km/h	S-E	(Max./Min.): 71/68%	(Max./Min.): 35/28°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**10.4**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**30.2**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**74**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**32**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun 1999
Carbon Monoxide (CO)	**1.28**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**BLQ (LOQ:20)**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1602
Calibration Certificate No.: CC342223000001517F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/05/24/5778	Report No. AA/05/24/5778	Report Date	05/06/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5779	Report No. AA/05/24/5779	Report Date	05/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	OWC Kurla	Date - Sampling	27/05/2024 to 28/05/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/06/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
9.8 km/h	S-E	(Max./Min.): 71/68%	(Max./Min.): 35/29°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**16.2**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**36.2**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**88**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**51**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.82**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**42.4**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1603
Calibration Certificate No.: CC342223000001520F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
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Reviewed & Authorised by

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Sample ID : AA/05/24/5779	Report No. AA/05/24/5779	Report Date	05/06/2024

Ninad Soundankar
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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/05/24/5780	Report No. AA/05/24/5780	Report Date	05/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Sarvodaya Hospital Ghatkopar	Date - Sampling	27/05/2024 to 28/05/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/05/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/06/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
9.8 km/h	S-E	(Max./Min.): 71/68%	(Max./Min.): 35/28°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**12.7**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**32.8**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**78**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**37**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun 1999
Carbon Monoxide (CO)	**1.34**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**30.1**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1604
Calibration Certificate No.: CC342223000001528F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
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Reviewed & Authorised by

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Laboratory Services Division

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Sample ID : AA/05/24/5780	Report No. AA/05/24/5780	Report Date	05/06/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/06/24/5497	Report No. AA/06/24/5497	Report Date	04/07/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Project Office Sahar	Date - Sampling	17/06/2024 to 18/06/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each CO: 1 x 1 no. bladder NH_3: 10 ml x 24 no. plastic bottle	Date - Receipt of Sample	19/06/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/07/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 77/64%	(Max./Min.): 33/29°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**11.6**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**30.6**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**81**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**40**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.31**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**30.1**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1601
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
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Sample ID : AA/06/24/5497	Report No. AA/06/24/5497	Report Date	04/07/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/06/24/5498	Report No. AA/06/24/5498	Report Date	04/07/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	T1 MLCP Santacruz	Date - Sampling	17/06/2024 to 18/06/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each CO: 1 x 1 no. bladder NH_3: 10 ml x 24 no. plastic bottle	Date - Receipt of Sample	19/06/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/07/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 77/64%	(Max./Min.): 33/29°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**8.1**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**25.1**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**70**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**28**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.11**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**BLQ (LOQ:20)**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1602
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/06/24/5498	Report No. AA/06/24/5498	Report Date	04/07/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/06/24/5499	Report No. AA/06/24/5499	Report Date	04/07/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	OWC Kurla	Date - Sampling	17/06/2024 to 18/06/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each CO: 1 x 1 no. bladder NH_3: 10 ml x 24 no. plastic bottle	Date - Receipt of Sample	19/06/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/07/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 77/64%	(Max./Min.): 33/29°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**12.7**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**31**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**83**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**44**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.4**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**33.8**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1603
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/06/24/5499	Report No. AA/06/24/5499	Report Date	04/07/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/06/24/5500	Report No. AA/06/24/5500	Report Date	04/07/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Sarvodaya Hospital (Ghatkopar)	Date - Sampling	17/06/2024 to 18/06/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each CO: 1 x 1 no. bladder NH_3: 10 ml x 24 no. plastic bottle	Date - Receipt of Sample	19/06/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/07/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 77/64%	(Max./Min.): 33/29°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**10.4**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**28**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**75**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**32**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.21**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**27.9**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1604
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/06/24/5500	Report No. AA/06/24/5500	Report Date	04/07/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/07/24/5729	Report No. AA/07/24/5729	Report Date	02/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Project Office Sahar	Date - Sampling	25/07/2024 to 26/07/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	27/07/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	01/08/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
12.0 km/h	S-E	(Max./Min.): 79/65%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**9.3**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**26.2**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**77**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**35**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.1**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**27.4**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1601
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/07/24/5729	Report No. AA/07/24/5729	Report Date	02/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/07/24/5730	Report No. AA/07/24/5730	Report Date	02/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	MLCP Santacruz (T1)	Date - Sampling	25/07/2024 to 26/07/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	27/07/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	01/08/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
12.0 km/h	S-E	(Max./Min.): 79/65%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**6.9**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**22.5**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**66**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**25**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**0.9**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**BLQ (LOQ:20)**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1602
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/07/24/5730	Report No. AA/07/24/5730	Report Date	02/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/07/24/5731	Report No. AA/07/24/5731	Report Date	02/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	OWC Kurla	Date - Sampling	25/07/2024 to 26/07/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	27/07/2024
Sampling Procedure	As per method referenee	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	01/08/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
12.0 km/h	S-E	(Max./Min.): 79/65%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**10.4**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**27.3**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**79**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**38**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.2**	4	mg/m³	CPCB Guidelines, Volume II. 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**30.1**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1603
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/07/24/5731	Report No. AA/07/24/5731	Report Date	02/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/07/24/5732	Report No. AA/07/24/5732	Report Date	02/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Sarvodaya Hospital (Ghatkopar)	Date - Sampling	25/07/2024 to 26/07/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	27/07/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	01/08/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
12.0 km/h	S-E	(Max./Min.): 79/65%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**8.1**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**25.8**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**74**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**32**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.09**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**23.6**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1604
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/07/24/5732	Report No. AA/07/24/5732	Report Date	02/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/08/24/5191	Report No. AA/08/24/5191	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Project Office Sahar	Date - Sampling	07/08/2024 to 08/08/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	09/08/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

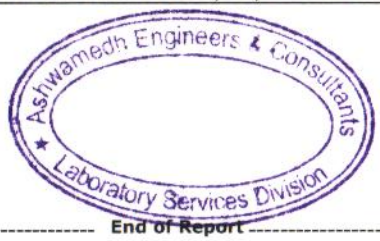
Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.7 km/h	S-W	(Max./Min.): 75/64%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**10.4**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**29.9**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**79**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**38**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.29**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**27.4**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1601
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/08/24/5191	Report No. AA/08/24/5191	Report Date	14/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/08/24/5192	Report No. AA/08/24/5192	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	OWC Kurla	Date - Sampling	07/08/2024 to 08/08/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	09/08/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.7 km/h	S-W	(Max./Min.): 75/64%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**9.3**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**30.2**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**81**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**40**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.39**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**26.9**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1603
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/08/24/5192	Report No. AA/08/24/5192	Report Date	14/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/08/24/5193	Report No. AA/08/24/5193	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	MLCP Santacruz (T1)	Date - Sampling	07/08/2024 to 08/08/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	09/08/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.7 km/h	S-W	(Max./Min.): 75/64%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**5.8**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**24.7**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**66**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**22**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.08**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**23.6**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1602
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/08/24/5193	Report No. AA/08/24/5193	Report Date	14/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/08/24/5194	Report No. AA/08/24/5194	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Sarvodaya Hospital Ghatkopar	Date - Sampling	07/08/2024 to 08/08/2024
Sample Quantity / Packing	PM_{10}, Lead: 1 x 3 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	09/08/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.7 km/h	S-W	(Max./Min.): 75/64%	(Max./Min.): 30/27°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**6.9**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**26.6**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**76**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**34**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.2**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**22.6**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA : Time Weighted Average
: NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide
Sampling Equipment ID: AEC/EQ/1604
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/08/24/5194	Report No. AA/08/24/5194	Report Date	14/08/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/09/24/5712	Report No. AA/09/24/5712	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Project Office Sahar	Date - Sampling	27/09/2024 to 28/09/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 2 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/09/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 75/63%	(Max./Min.): 30/26°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**11.7**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**31.4**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**82**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**41**	60	µg/m³	CPCB Guideline, Volume I,36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.36**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**33.7**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide.
Sampling Equipment ID: AEC/EQ/1601
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/09/24/5712	Report No. AA/09/24/5712	Report Date	05/10/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/09/24/5713	Report No. AA/09/24/5713	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	OWC Kurla	Date - Sampling	27/09/2024 to 28/09/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 2 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/09/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 75/63%	(Max./Min.): 30/26°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**12.8**	80	µg/m³	IS 5182 (Part 2/Sec I): 2023
Nitrogen Dioxide (NO_2)	**32.9**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**85**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**44**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.48**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**38.6**	400	µg/m³	CPCB Guidelines, Volume I.36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide.
Sampling Equipment ID: AEC/EQ/1603
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/09/24/5713	Report No. AA/09/24/5713	Report Date	05/10/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/09/24/5714	Report No. AA/09/24/5714	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Terminal-1 MLCP Santacruz	Date - Sampling	27/09/2024 to 28/09/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 2 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/09/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 75/63%	(Max./Min.): 30/26°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**8.2**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**27.3**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**70**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**29**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.11**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**25.9**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide.
Sampling Equipment ID: AEC/EQ/1602
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/09/24/5714	Report No. AA/09/24/5714	Report Date	05/10/2024

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AMBIENT AIR QUALITY MONITORING REPORT

Sample ID : AA/09/24/5715	Report No. AA/09/24/5715	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Ambient Air
Sampling Location	Sarvodaya Hospital (Ghatkopar)	Date - Sampling	27/09/2024 to 28/09/2024
Sample Quantity / Packing	PM_{10}, pb: 1 x 2 no. filter paper $PM_{2.5}$: 1 x 1 no. filter paper SO_2, NO_2: 30 ml x 6 no. plastic bottle each NH_3: 10 ml x 24 no. plastic bottle CO: 1 no. bladder	Date - Receipt of Sample	30/09/2024
Sampling Procedure	As per method reference	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Meteorological Data / Environmental Conditions

Average Wind Velocity	Wind Direction	Relative Humidity	Temperature	Duration of Survey
10.0 km/h	S-W	(Max./Min.): 75/63%	(Max./Min.): 30/26°C	24 h

Parameter	Result	NAAQS# 2009	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Sulphur Dioxide (SO_2)	**9.3**	80	µg/m³	IS 5182 (Part 2/Sec 1): 2023
Nitrogen Dioxide (NO_2)	**29.2**	80	µg/m³	IS 5182 (Part 6): 2017
Particulate Matter (size less than 10 µm) or PM_{10}	**79**	100	µg/m³	IS 5182 (Part 23): 2017
Particulate Matter (size less than 2.5µm) or $PM_{2.5}$	**37**	60	µg/m³	CPCB Guideline, Volume I.36/2012-13, Page No.15:2013
Lead (as Pb)	**BLQ (LOQ:0.02)**	1	µg/m³	EPA/625/R-96/010 a Compendium Method IO-3.1 & 3.2, Jun: 1999
Carbon Monoxide (CO)	**1.28**	4	mg/m³	CPCB Guidelines, Volume II, 37/2012-13, Page no.16: 2013
Ammonia (NH_3)	**29.8**	400	µg/m³	CPCB Guidelines, Volume I,36/2012-13, Page No.35: 2013

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
TWA Time Weighted Average
NAAQS (National Ambient Air Quality Standards (Industrial, Residential, Rural and other Area) specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM10, PM2.5, Lead and Ammonia, 1 hour TWA in case of Carbon Monoxide.
Sampling Equipment ID: AEC/EQ/1604
Calibration Certificate No.: CC342223000001514F
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : AA/09/24/5715	Report No. AA/09/24/5715	Report Date	05/10/2024

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3025	Report No. N/06/24/3025N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-1 D.G set 3000 KVA Utility T-2							
1	East	11:25	A1	92	B1	66	26
2	West	11:30	A2	90	B2	63	27
3	South	11:35	A3	98	B3	72	26
4	North	11:40	A4	96	B4	71	25
			Average	**94**	**Average**	**68**	**26**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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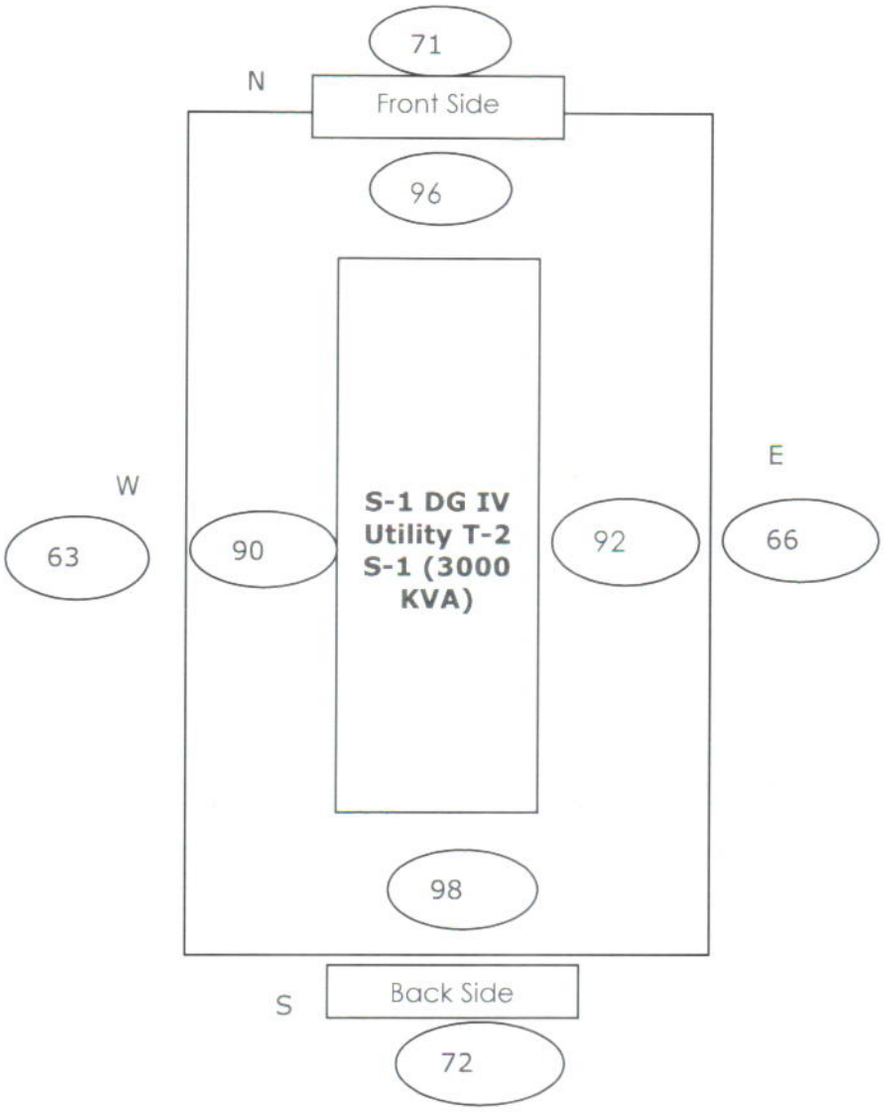
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Turn at Sai Mandir Chowk / Samrat Sweet Turning)
sales@ashwamedh.net +91-253-2392225

Sample ID: N/06/24/3025	Report No. N/06/24/3025N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-1 D.G set 3000 KVA Utility T-2



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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Laboratory Services Division

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3026	Report No. N/06/24/3026N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-2 D.G set 3000 KVA Utility T-2							
1	East	11:05	A1	95	B1	66	25
2	West	11:10	A2	98	B2	72	26
3	South	11:15	A3	89	B3	63	26
4	North	11:20	A4	93	B4	68	25
			Average	**93.75**	**Average**	**69.25**	**25.5**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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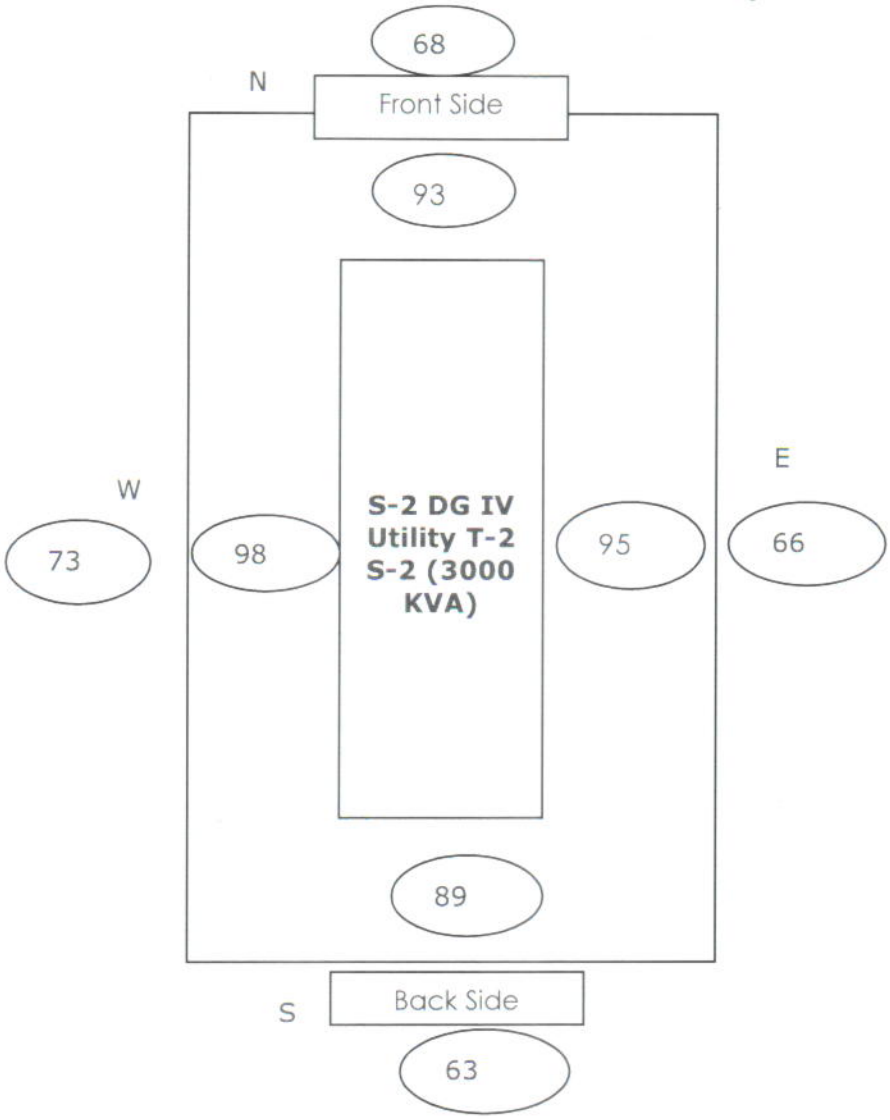
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Sample ID: N/06/24/3026	Report No. N/06/24/3026N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-2 D.G set 3000 KVA Utility T-2



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3027	Report No. N/06/24/3027N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-3 D.G set 3000 KVA Utility T-2							
1	East	11:50	A1	88	B1	63	25
2	West	11:55	A2	91	65	65	26
3	South	12:00	A3	96	B3	71	25
4	North	12:05	A4	98	B4	73	25
			Average	**93.25**	**Average**	**68**	**25.25**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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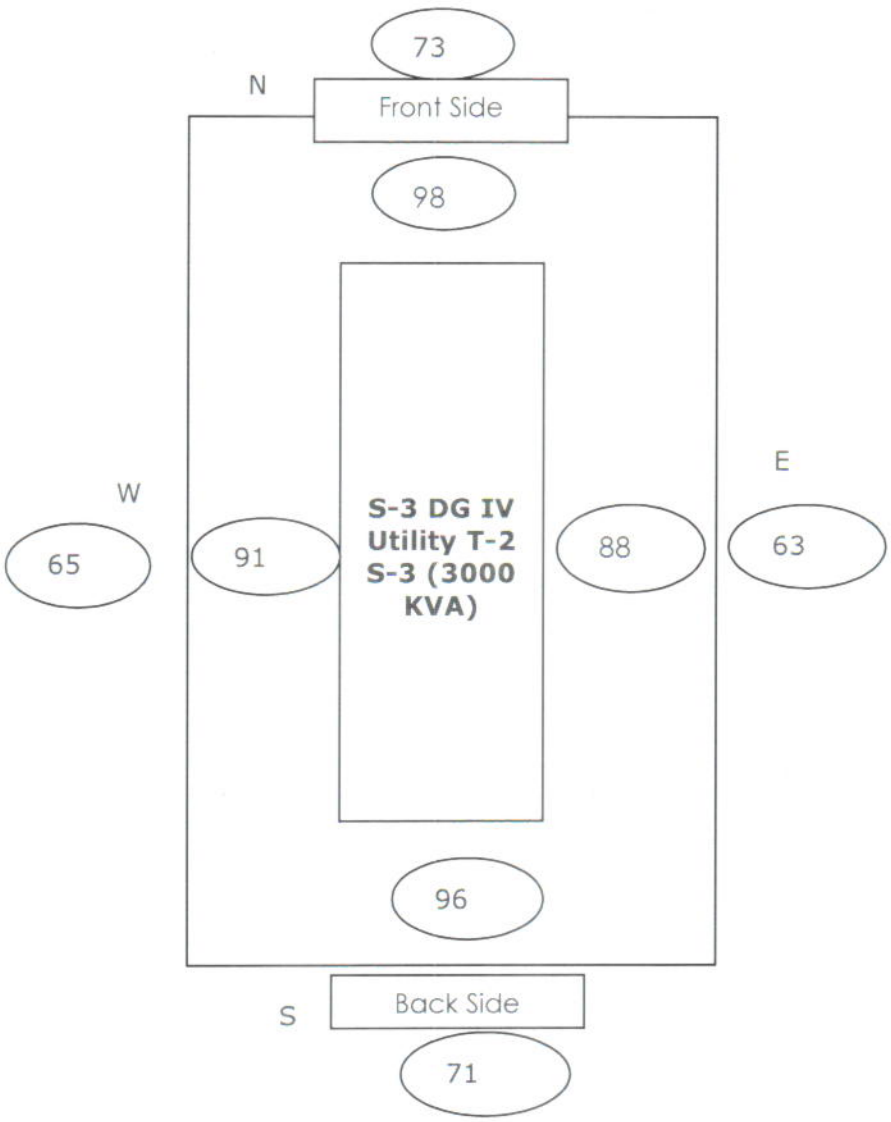
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Sample ID: N/06/24/3027	Report No. N/06/24/3027N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-3 D.G set 3000 KVA Utility T-2



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3028	Report No. N/06/24/3028N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-4 D.G set 3000 KVA Utility T-2							
1	East	12:10	A1	94	B1	68	26
2	West	12:15	A2	91	B2	64	27
3	South	12:20	A3	88	B3	62	26
4	North	12:25	A4	97	B4	70	27
			Average	**95.5**	**Average**	**66**	**26.05**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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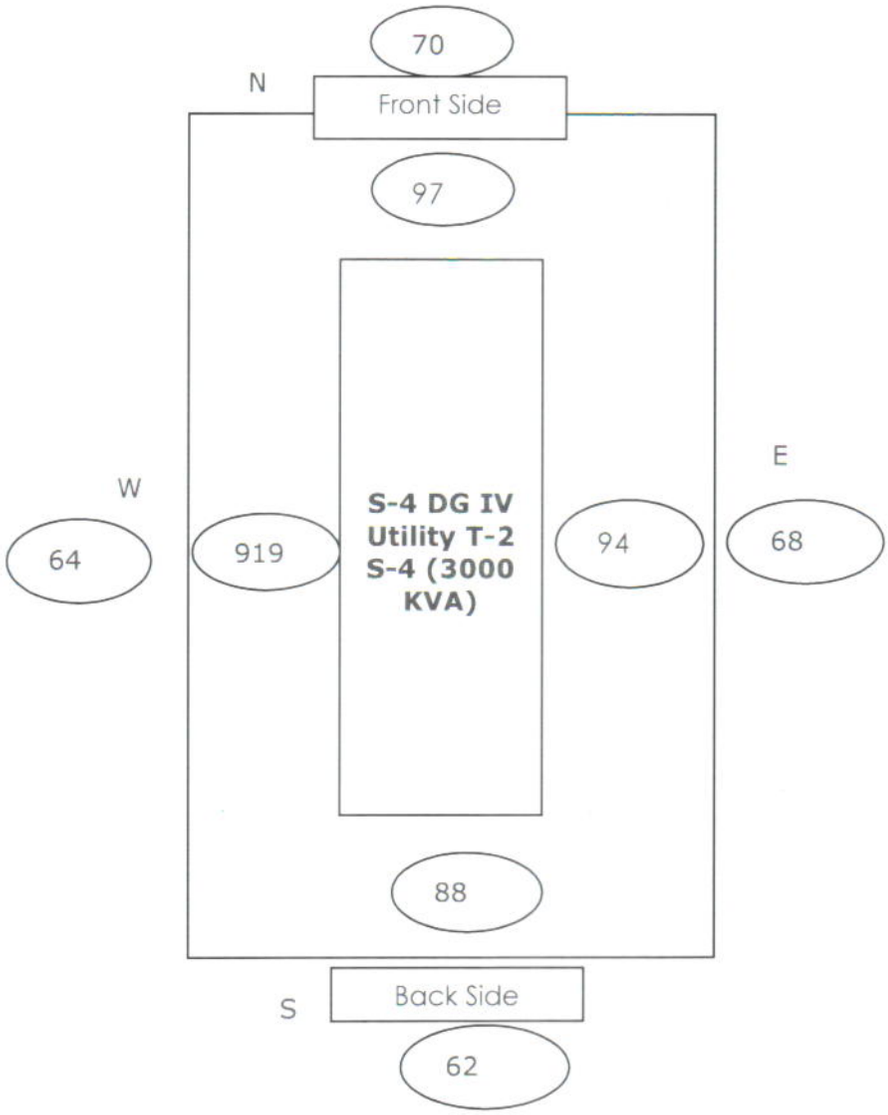
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Sample ID: N/06/24/3028	Report No. N/06/24/3028N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION-S-4 D.G set 3000 KVA Utility T-2



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3029	Report No. N/06/24/3029N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-5 D.G set 3000 KVA Utility T-2							
1	East	12:30	A1	85	B1	59	26
2	West	12:35	A2	89	B2	64	25
3	South	12:40	A3	95	B3	69	26
4	North	12:45	A4	92	B4	66	26
			Average	**90.25**	**Average**	**64.5**	**25.75**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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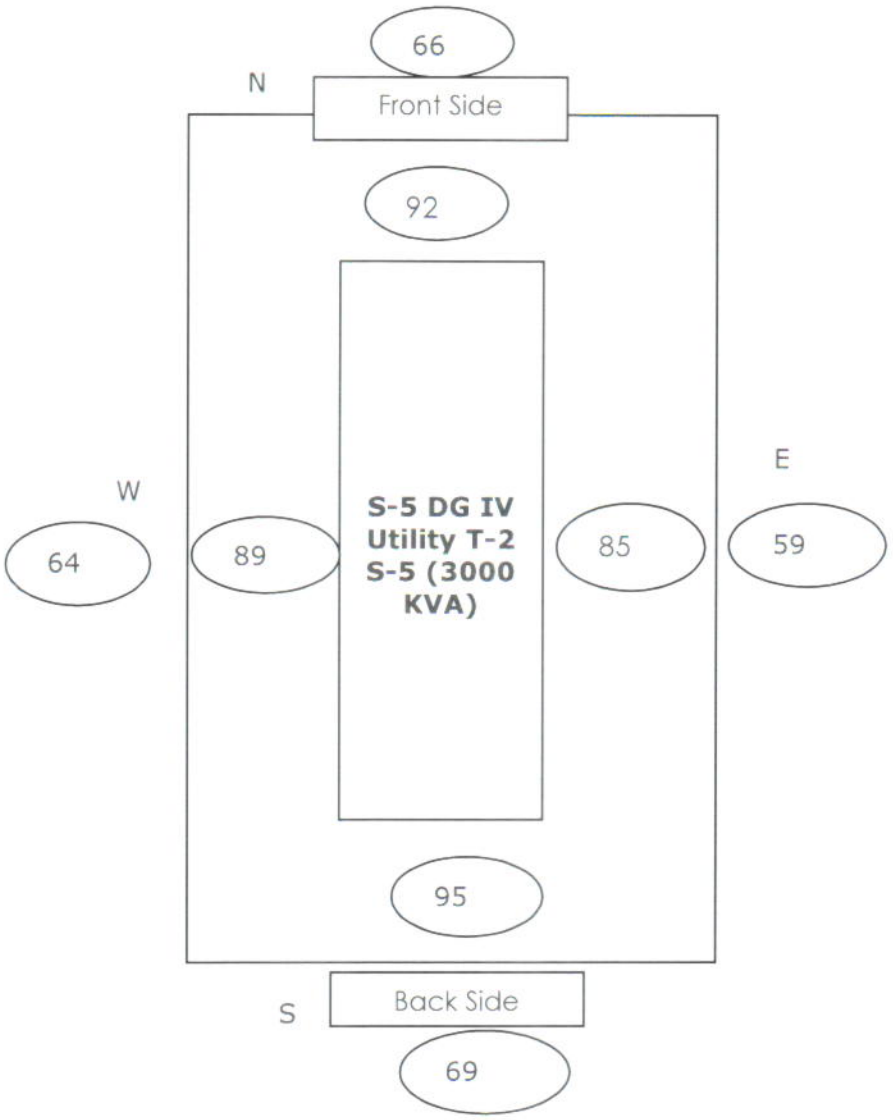
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Sample ID: N/06/24/3029	Report No. N/06/24/3029N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-5 D.G set 3000 KVA Utility T-2



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3030	Report No. N/06/24/3030N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-6 D.G set 3000 KVA Utility T-2							
1	East	12:35	A1	95.7	B1	70.3	25.1
2	West	12:40	A2	97.7	B2	71.4	26.3
3	South	12:45	A3	90.1	B3	64.4	25.7
4	North	12:50	A4	92.0	B4	66.1	25.9
			Average	**93.9**	**Average**	**68.05**	**25.85**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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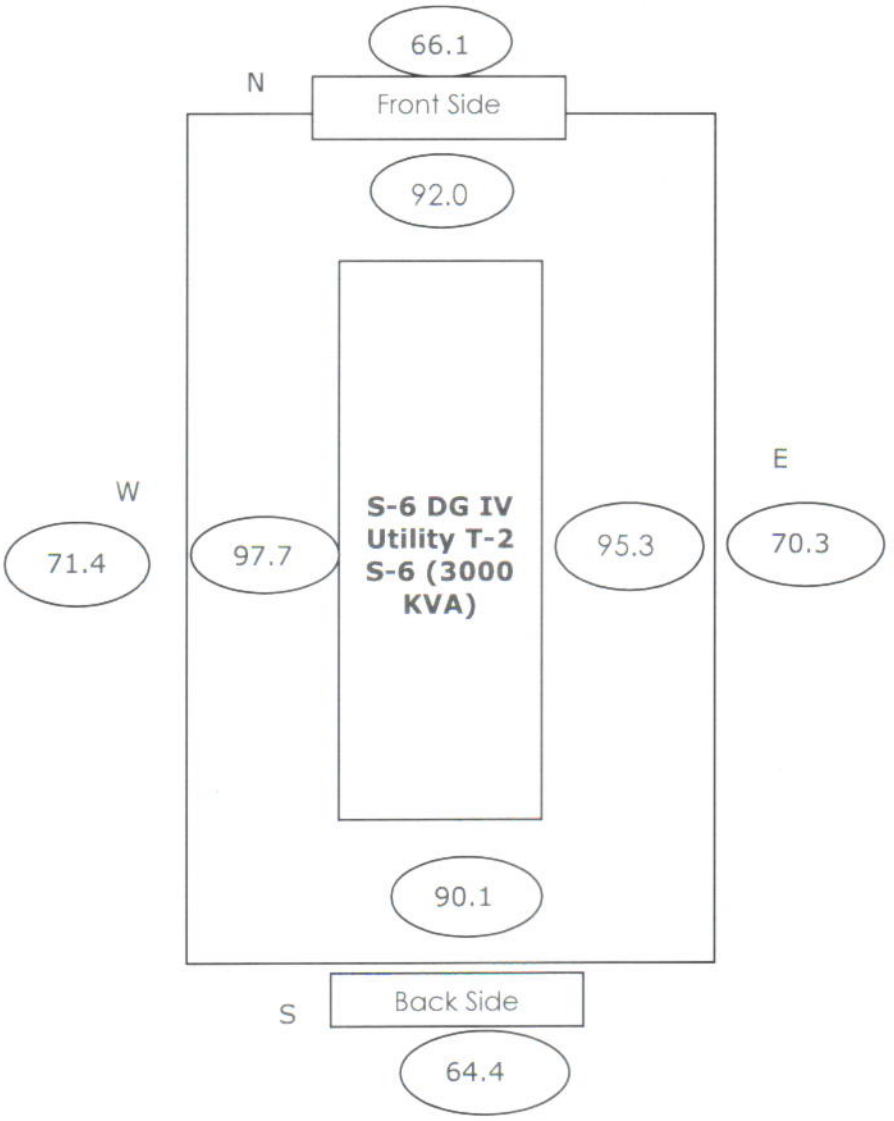
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Sample ID: N/06/24/3030	Report No. N/06/24/3030N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-6 D.G set 3000 KVA Utility T-2



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3017	Report No. N/06/24/3017N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-7 D.G set 625 KVA Terminal 1-A (1)							
1	East	10:05	A1	91.3	B1	65.8	25.5
2	West	10:10	A2	97.9	B2	71.5	26.4
3	South	10:15	A3	93.7	B3	67.8	25.9
4	North	10:20	A4	90.0	B4	63.3	26.7
			Average	**93.2**	**Average**	**67.1**	**26.15**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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Laboratory Services Division

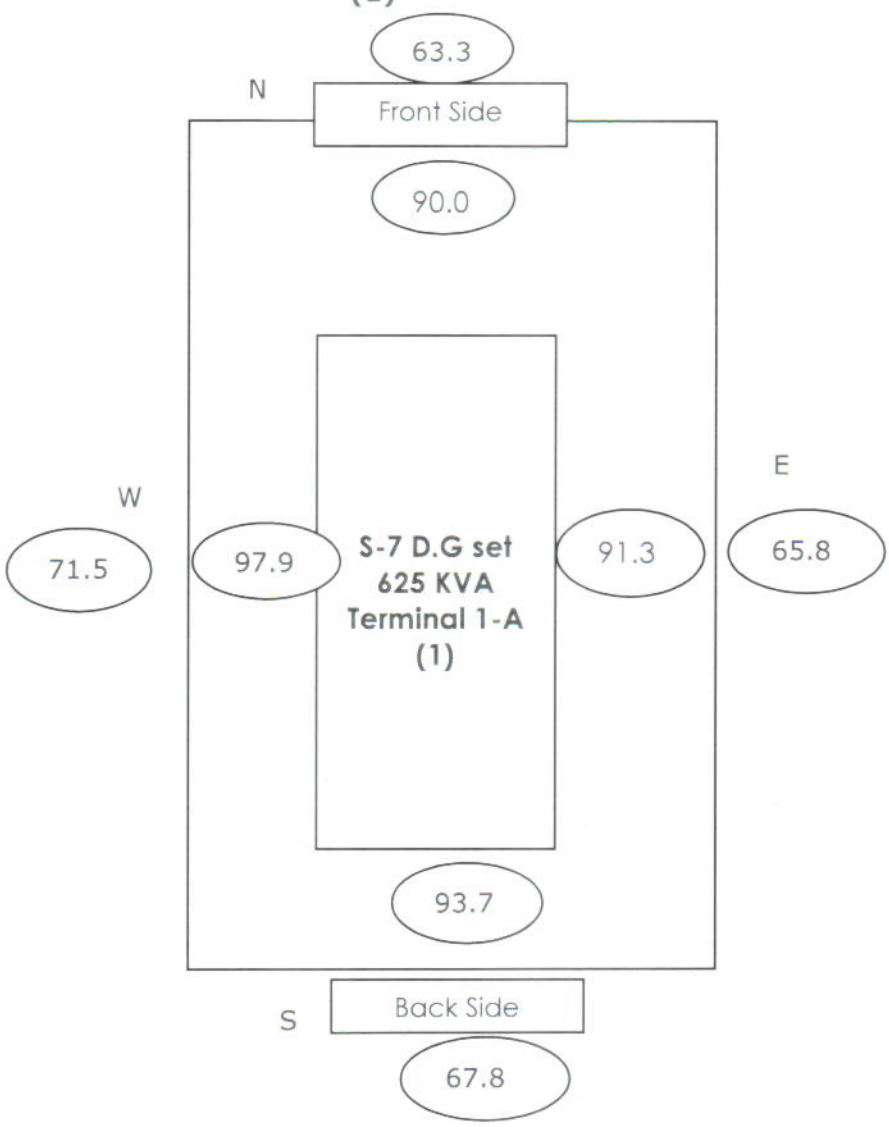
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Sample ID: N/06/24/3017	Report No. N/06/24/3017N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-7 D.G set 625 KVA Terminal 1-A (1)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3018	Report No. N/06/24/3018N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-8 D.G set 625 KVA Terminal 1-A (2)							
1	East	10:20	A1	88.4	B1	61.2	27.2
2	West	10:15	A2	92.7	B2	66.7	26.0
3	South	10:20	A3	97.1	B3	71.8	25.3
4	North	10:25	A4	90.0	B4	64.1	25.9
			Average	**92.05**	**Average**	**65.95**	**26.1**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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Technical Manager (Chemical)
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Laboratory Services Division

End of Report

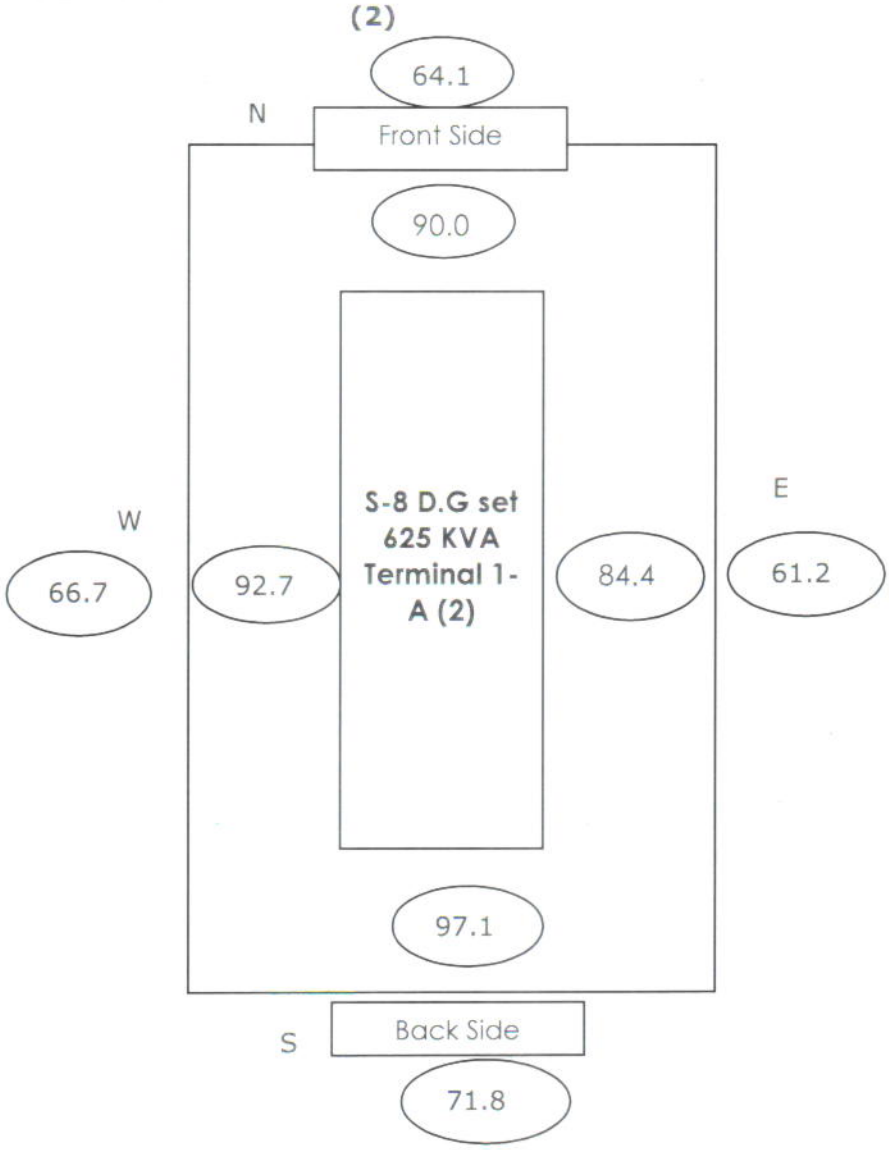
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Sample ID: N/06/24/3018	Report No. N/06/24/3018N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-8 D.G set 625 KVA Terminal 1-A (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3019	Report No. N/06/24/3019N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-9 D.G Sets Of 1010 KVA Terminal 1-C (1)							
1	East	10:45	A1	94.1	B1	66.7	27.4
2	West	10:50	A2	89.7	B2	63.2	26.5
3	South	10:55	A3	90.5	B3	64.4	25.7
4	North	11:00	A4	96.3	B4	68.7	27.6
			Average	**92.65**	**Average**	**65.75**	**26.8**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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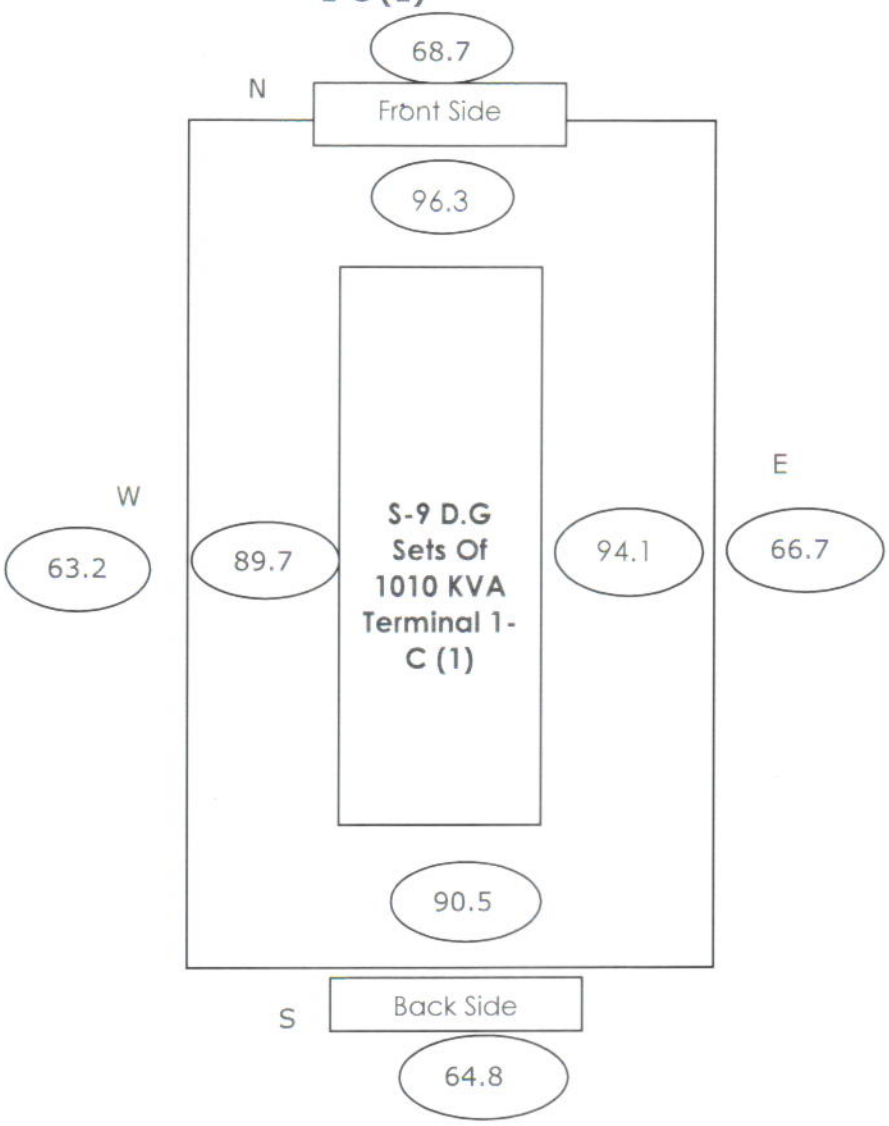
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Sample ID: N/06/24/3019	Report No. N/06/24/3019N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-9 D.G Sets Of 1010 KVA Terminal 1-C (1)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3020	Report No. N/06/24/3020N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-10 D.G Sets Of 1010 KVA Terminal 1-C (2)							
1	East	12:05	A1	93.2	B1	66.5	26.7
2	West	12:10	A2	98.5	B2	72.6	25.9
3	South	12:15	A3	90.0	B3	64.9	25.1
4	North	12:20	A4	94.3	B4	67.5	26.8
			Average	**94**	**Average**	**67.9**	**26.125**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

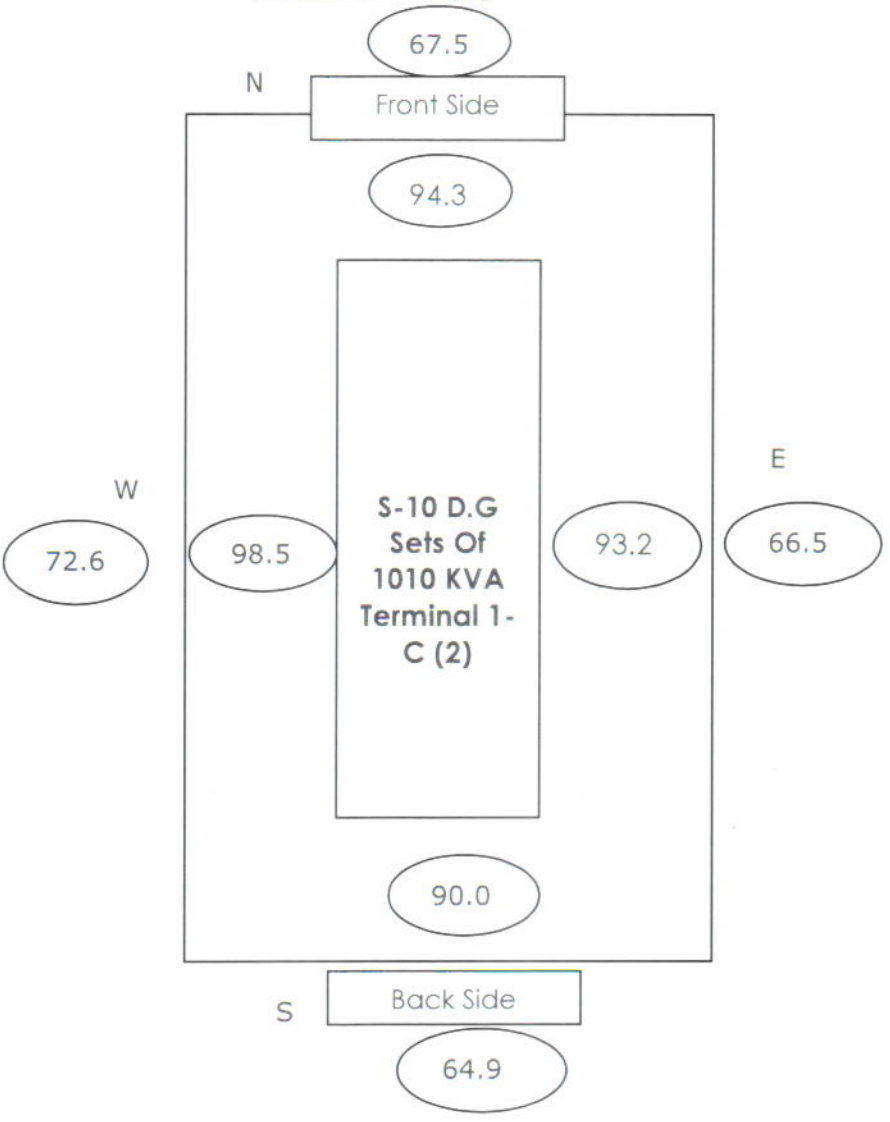
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Sample ID: N/06/24/3020	Report No. N/06/24/3020N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-10 D.G Sets Of 1010 KVA Terminal 1-C (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3021	Report No. N/06/24/3021N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-11 D.G Sets Of 625 KVA Terminal 1-C							
1	East	11:15	A1	95.7	B1	68.7	27.0
2	West	11:20	A2	90.1	B2	65	25.1
3	South	11:25	A3	88.7	B3	63.3	25.3
4	North	11:30	A4	93.3	B4	66.8	26.5
			Average	**91.95**	**Average**	**65.95**	**25.9**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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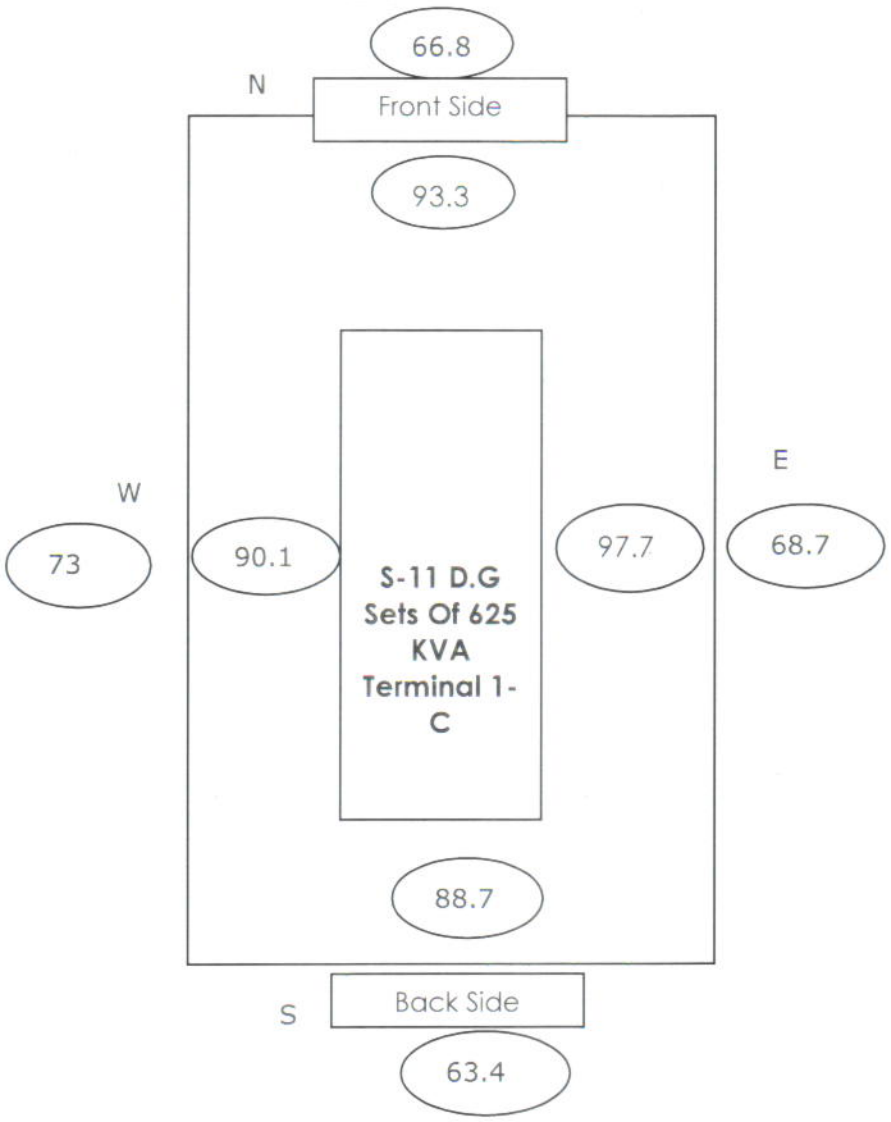
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Sample ID: N/06/24/3021	Report No. N/06/24/3021N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-11 D.G Sets Of 625 KVA Terminal 1-C



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3031	Report No. N/06/24/3031N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-12 D.G Sets Of 500 KVA – CCR 2 (1)							
1	East	12:10	A1	87.5	B1	59.9	27.6
2	West	12:15	A2	90.4	B2	65.4	25.0
3	South	12:20	A3	92.7	B3	65.9	26.8
4	North	12:25	A4	95.9	B4	68.2	27.7
			Average	**91.6**	**Average**	**64.85**	**26.77**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

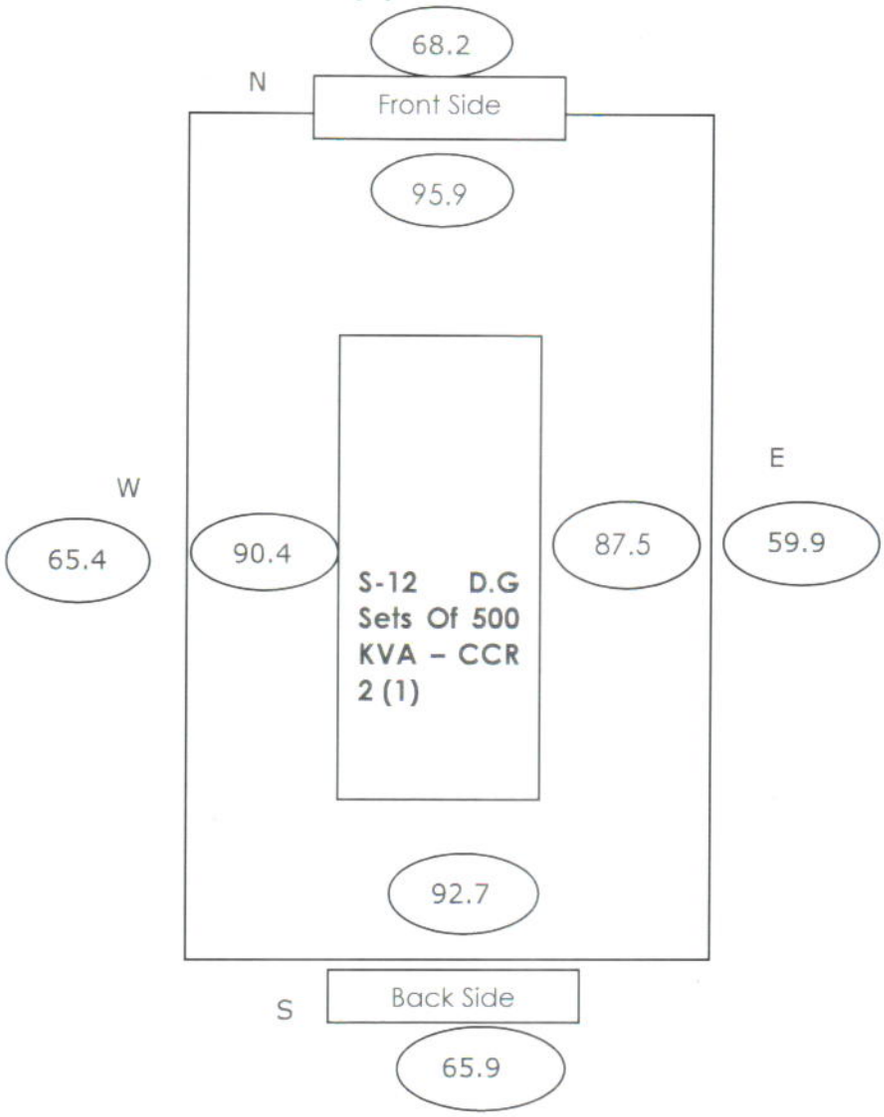
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Sample ID: N/06/24/3031	Report No. N/06/24/3031N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-12 D.G Sets Of 500 KVA – CCR 2 (1)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3032	Report No. N/06/24/3032N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-13 D.G Sets Of 500 KVA – CCR 2 (2)							
1	East	12:35	A1	97.8	B1	72.1	25.7
2	West	12:40	A2	91.4	B2	64.0	27.4
3	South	12:45	A3	95.7	B3	67.9	27.8
4	North	12:50	A4	92.3	B4	65.8	26.5
			Average	**94.3**	**Average**	**67.45**	**26.85**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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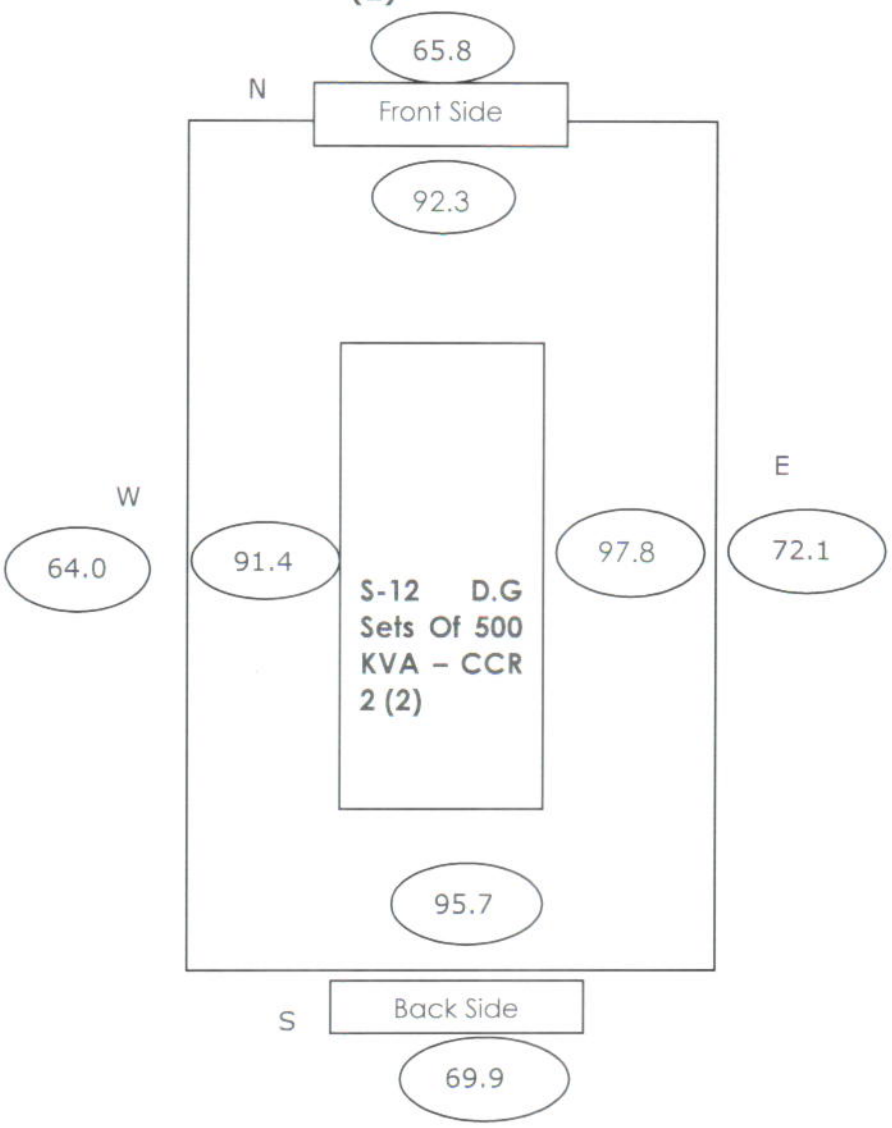
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Sample ID: N/06/24/3032	Report No. N/06/24/3032N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai - 400099.

NOISE LOCATION- S-13 D.G Sets Of 500 KVA – CCR 2 (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3033	Report No. N/06/24/3033N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-14 D.G Sets Of 750 KVA CCR 1 (1)							
1	East	01:10	A1	93.0	B1	67.3	25.7
2	West	01:15	A2	91.2	B2	64.7	26.5
3	South	01:20	A3	96.6	B3	69.7	26.9
4	North	01:25	A4	94.8	B4	69.5	25.3
			Average	**93.9**	**Average**	**67.8**	**26.1**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

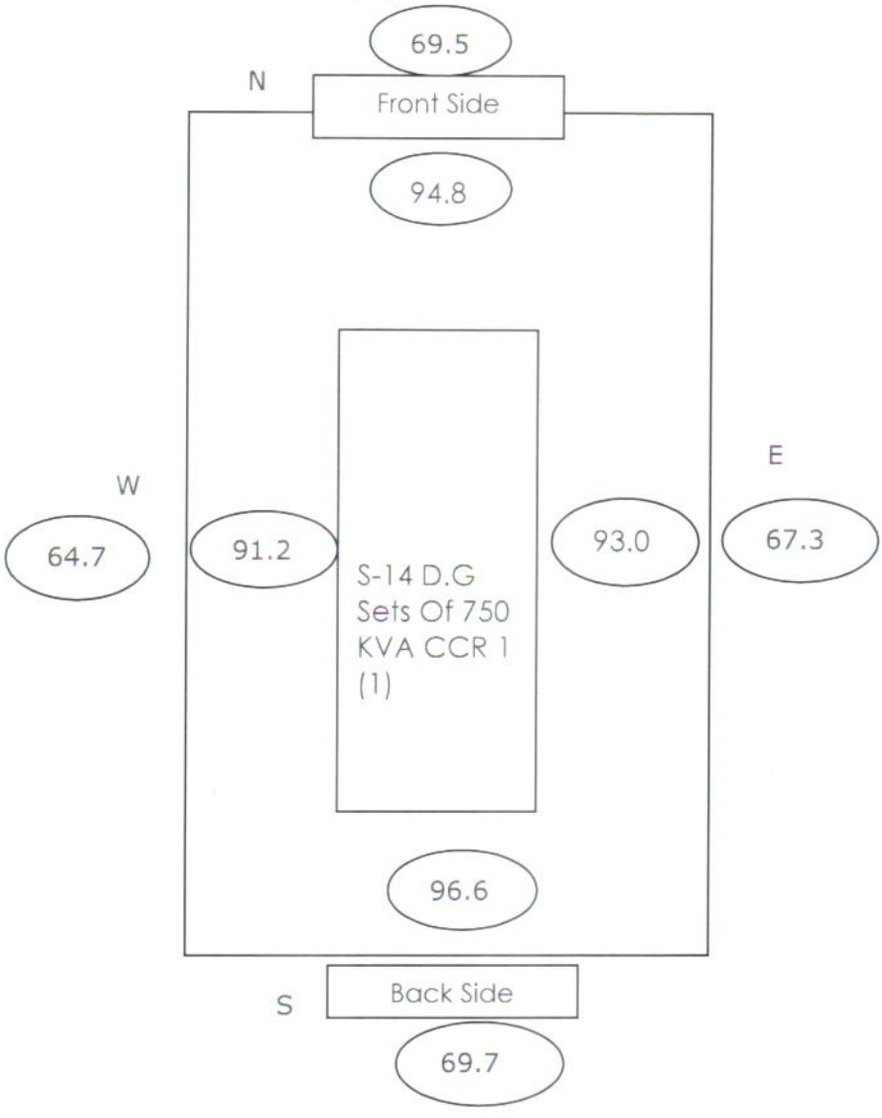
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Sample ID: N/06/24/3033	Report No. N/06/24/3033N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-14 D.G Sets Of 750 KVA CCR 1 (1)



NOTE: = Readings taken from ~~DG Set~~ at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3034	Sample ID: N/06/24/3034N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-15 D.G Sets Of 750 KVA CCR 1 (2)							
1	East	02:10	A1	91.4	B1	63.9	27.5
2	West	02:15	A2	94.8	B2	68.4	26.4
3	South	02:20	A3	98.1	B3	71.3	26.8
4	North	02:25	A4	92.3	B4	67.3	25.0
			Average	**94.15**	**Average**	**67.72**	**26.4**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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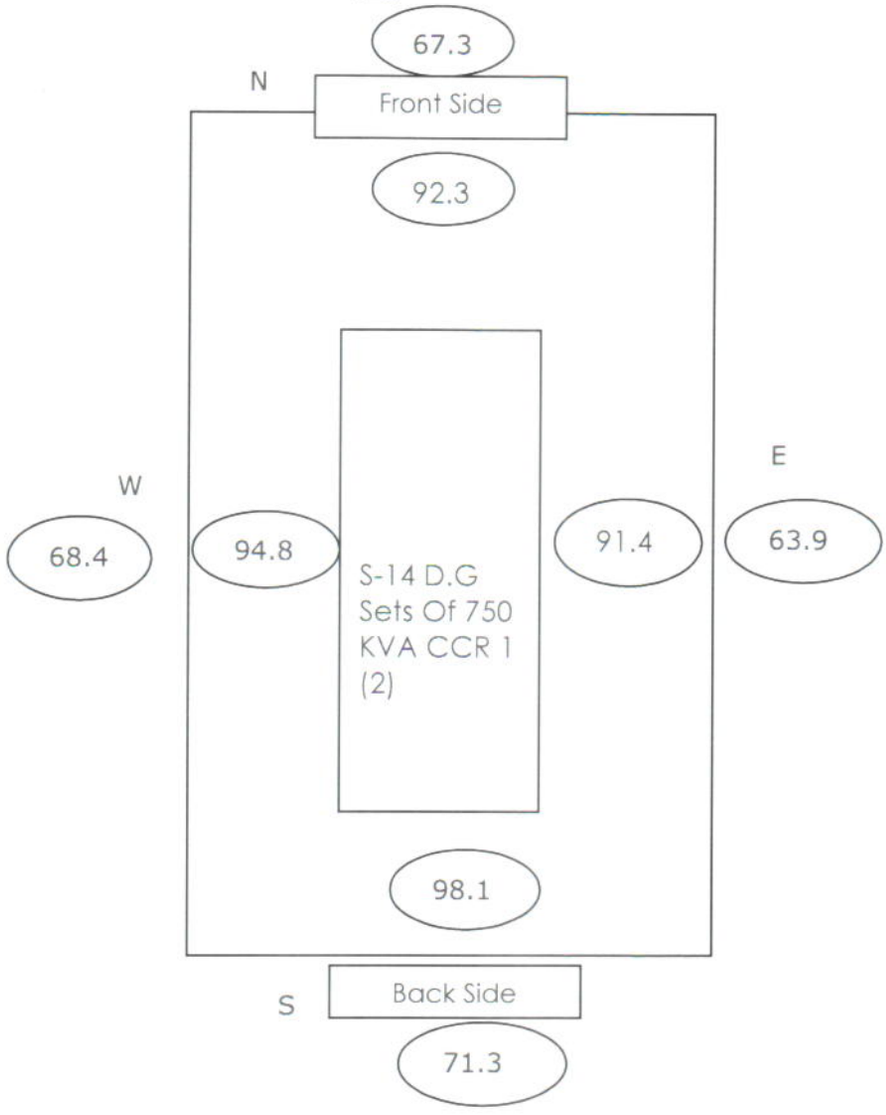
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Sample ID: N/06/24/3034	Sample ID: N/06/24/3034N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-15 D.G Sets Of 750 KVA CCR 1 (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3035	Report No. N/06/24/3035N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal &SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-16 D.G Sets Of 500 KVA Cargo Intake Point							
1	East	01:35	A1	95.4	B1	70.0	25.4
2	West	01:40	A2	97.8	B2	70.7	27.1
3	South	01:45	A3	94.7	B3	68.2	26.5
4	North	01:50	A4	99.2	B4	73.3	25.9
			Average	**96.8**	**Average**	**70.55**	**26.22**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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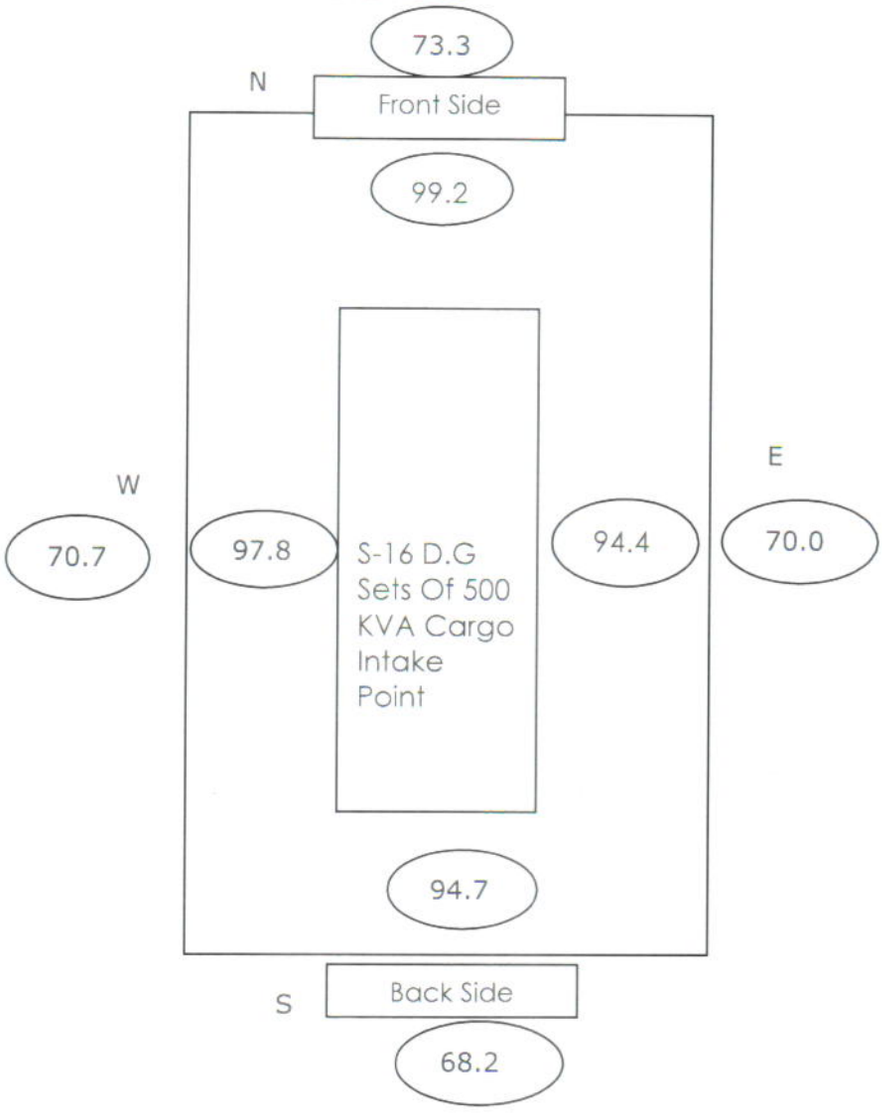
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Sample ID: N/06/24/3035	Report No. N/06/24/3035N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-16 D.G Sets Of 500 KVA Cargo Intake Point



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3036	Report No. N/06/24/3036N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-17 D.G Sets Of 437.5 KVA Cargo Intake Point							
1	East	02:05	A1	88.4	B1	62.7	25.7
2	West	02:10	A2	90.7	B2	65.4	25.3
3	South	02:15	A3	95.5	B3	70.5	25.0
4	North	02:20	A4	93.0	B4	67.1	25.9
			Average	**91.9**	**Average**	**66.4**	**25.45**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

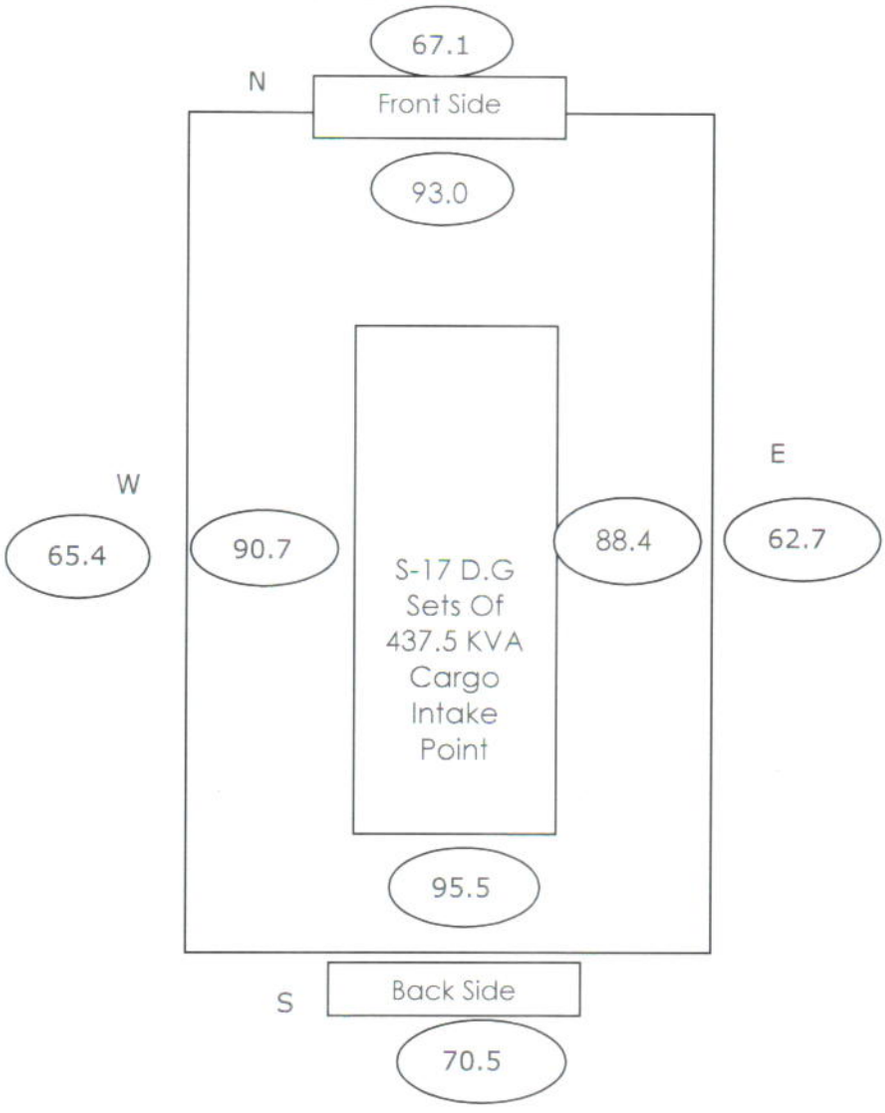
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Sample ID: N/06/24/3036	Report No. N/06/24/3036N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-17 D.G Sets Of 437.5 KVA Cargo Intake Point



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3037	Report No. N/06/24/3037N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-18 D.G Sets Of 250 KVA Import Warehouse							
1	East	02:05	A1	92.1	B1	65.6	26.5
2	West	02:05	A2	97.2	B2	71.3	25.9
3	South	02:10	A3	93.7	B3	67.8	25.7
4	North	02:20	A4	96.7	B4	70.6	26.1
			Average	**94.92**	**Average**	**68.8**	**26.05**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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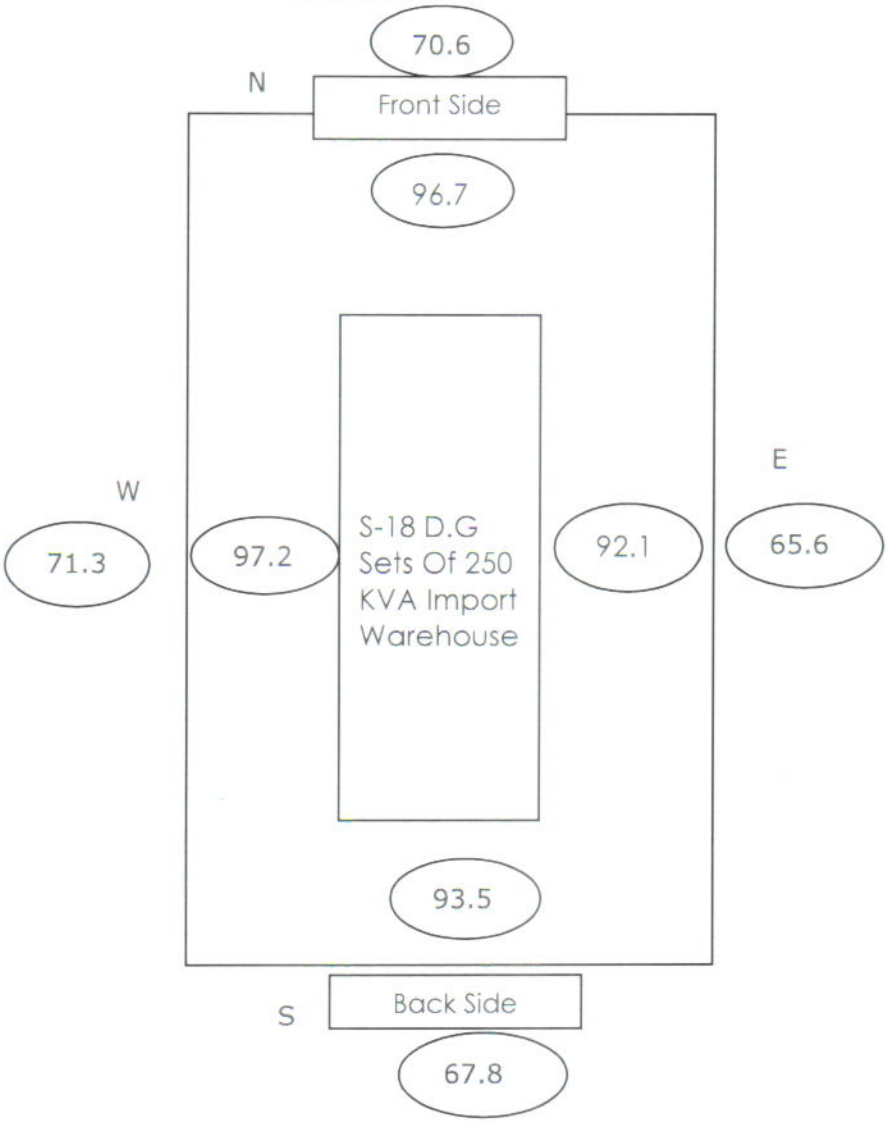
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Sample ID: N/06/24/3037	Report No. N/06/24/3037N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-18 D.G Sets Of 250 KVA Import Warehouse



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3038	Report No. N/06/24/3038N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-19 D.G Sets Of 650 KVA Terminal 1-A							
1	East	02:25	A1	87.4	B1	59.9	27.5
2	West	02:30	A2	90.5	B2	64.8	25.7
3	South	02:35	A3	89.5	B3	64.1	25.6
4	North	02:40	A4	93.1	B4	66.3	26.8
			Average	**90.1**	**Average**	**63.8**	**26.4**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

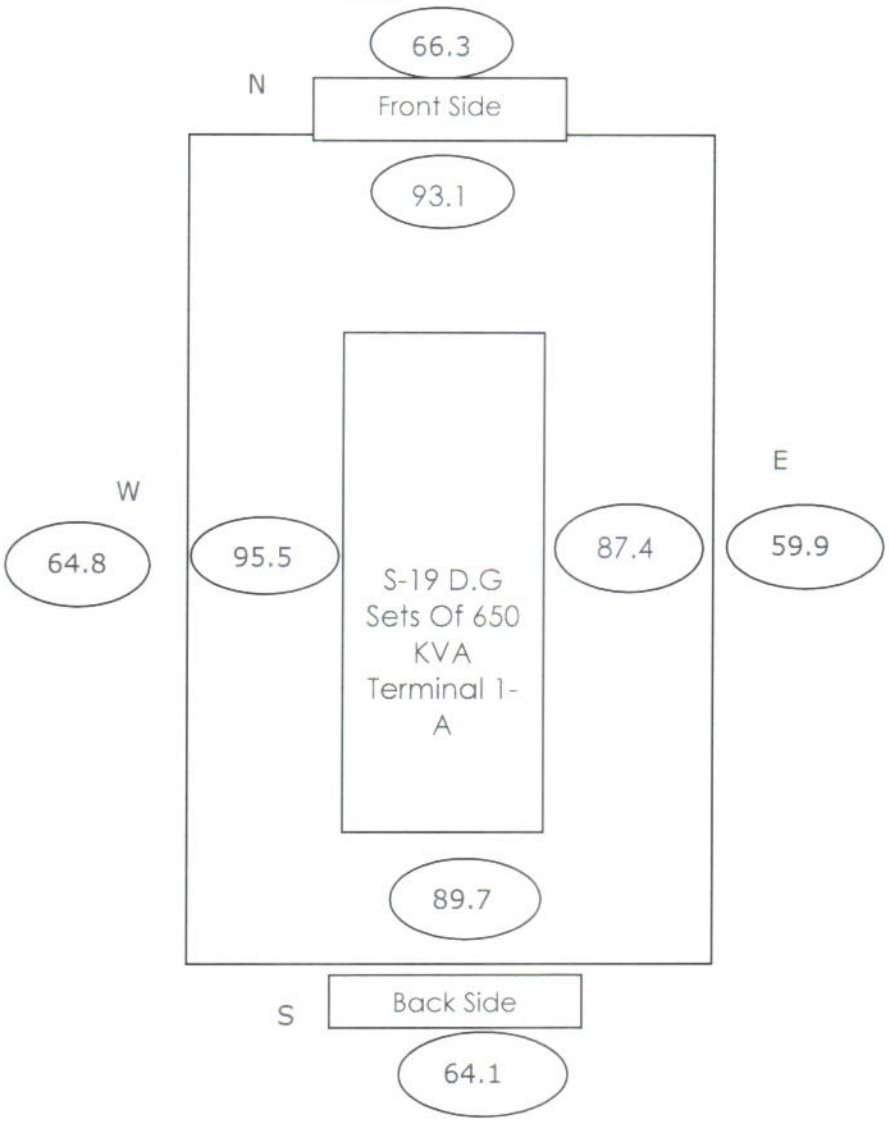
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Sample ID: N/06/24/3038	Report No. N/06/24/3038N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-19 D.G Sets Of 650 KVA Terminal 1-A



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3039	Report No. N/06/24/3039N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-20 D.G Sets Of 500 KVA Import Cold Zone							
1	East	02:25	A1	93.0	B1	67.3	25.7
2	West	02:30	A2	95.2	B2	70.0	25.2
3	South	02:35	A3	96.3	B3	71.3	25.0
4	North	02:40	A4	91.7	B4	65.0	26.7
			Average	**94.05**	**Average**	**68.4**	**25.65**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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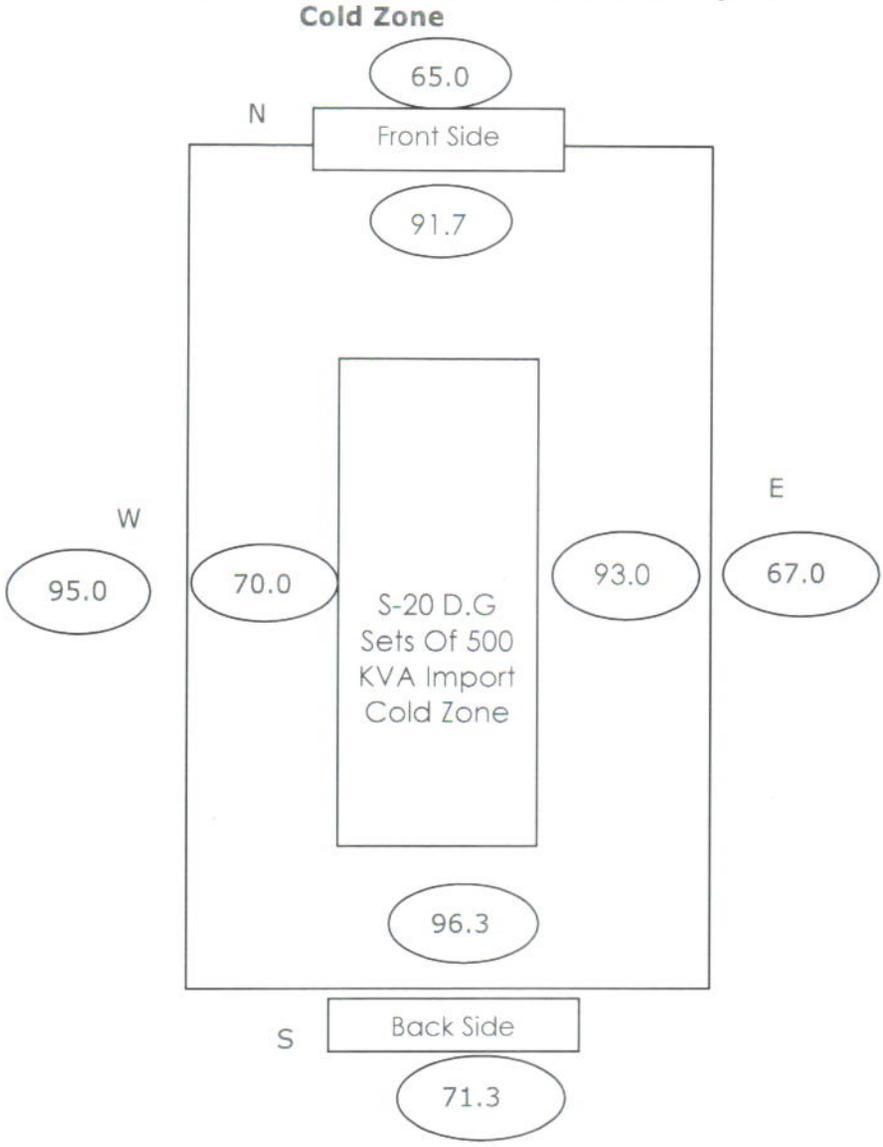
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Sample ID: N/06/24/3039	Report No. N/06/24/3039N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-20 D.G Sets Of 500 KVA Import Cold Zone



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3022	Report No. N/06/24/3022N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-21 D.G Sets Of 125 KVA Coporate Aviation Terminal							
1	East	02:40	A1	91.4	B1	65.7	25.7
2	West	02:45	A2	97.8	B2	71.9	25.9
3	South	02:50	A3	92.2	B3	65.4	26.8
4	North	02:20	A4	95.7	B4	69.3	26.4
			Average	**94.2**	**Average**	**68.0**	**26.2**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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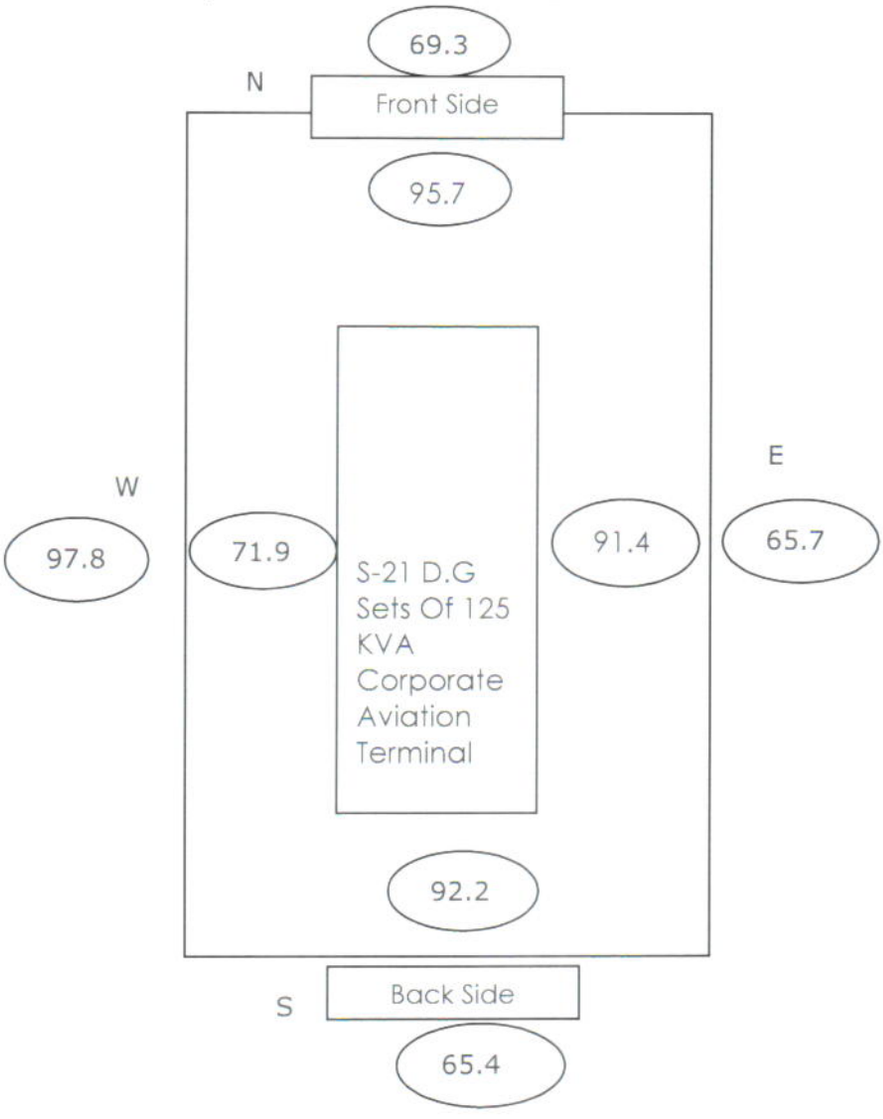
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Sample ID: N/06/24/3022	Report No. N/06/24/3022N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-21 D.G Sets Of 125 KVA
Coporate Aviation Terminal



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3023	Report No. N/06/24/3023N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-22 D.G Sets Of 2500 KVA Terminal 1-C							
1	East	03:05	A1	93.7	B1	66.9	26.8
2	West	03:10	A2	90.4	B2	63.0	27.4
3	South	03:15	A3	98.9	B3	73.0	25.9
4	North	03:20	A4	92.3	B4	67.3	25.0
			Average	**93.8**	**Average**	**67.55**	**26.27**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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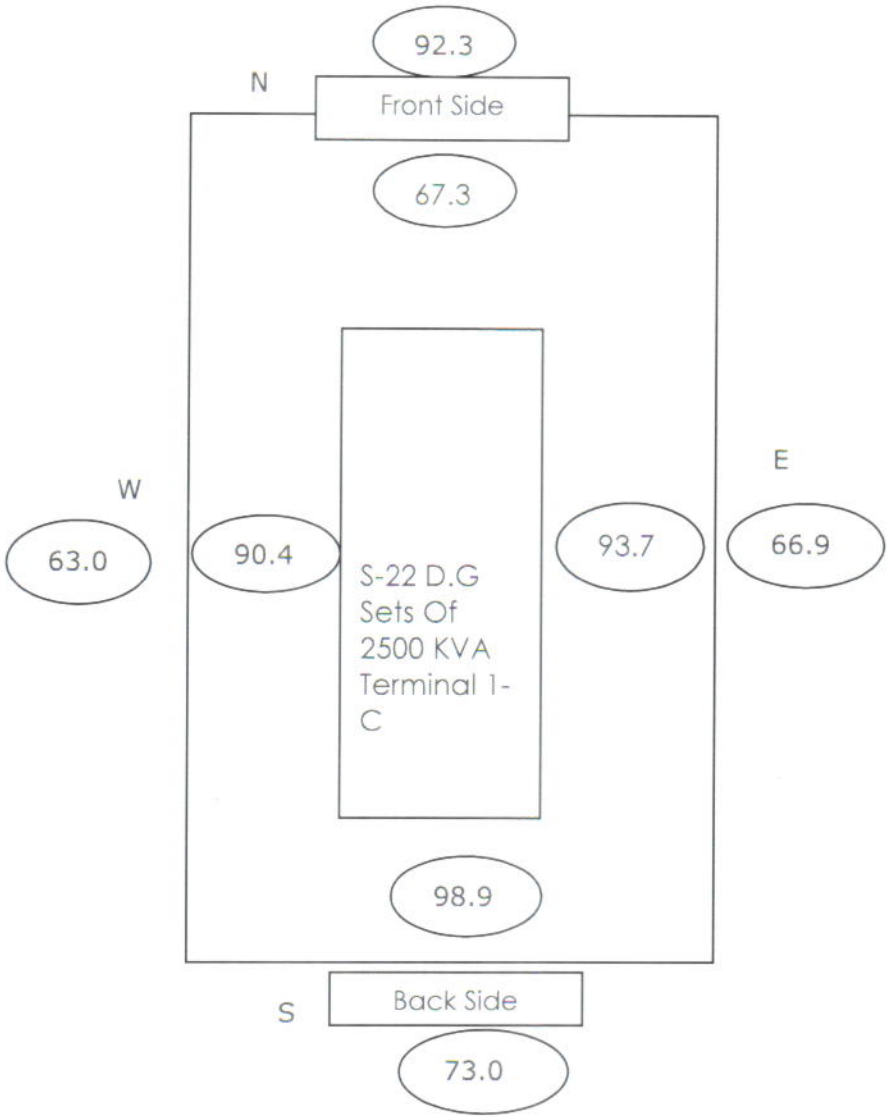
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Sample ID: N/06/24/3023	Report No. N/06/24/3023N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-22 D.G Sets Of 2500 KVA
Terminal 1-C



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3040	Report No. N/06/24/3040N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-23 D.G Sets Of 625 KVA Cargo Intake Point							
1	East	03:25	A1	96.8	B1	70.4	26.4
2	West	03:30	A2	94.2	B2	67.5	26.7
3	South	03:35	A3	93.7	B3	67.4	26.3
4	North	03:40	A4	97.8	B4	72.1	25.7
			Average	**95.55**	**Average**	**69.35**	**26.27**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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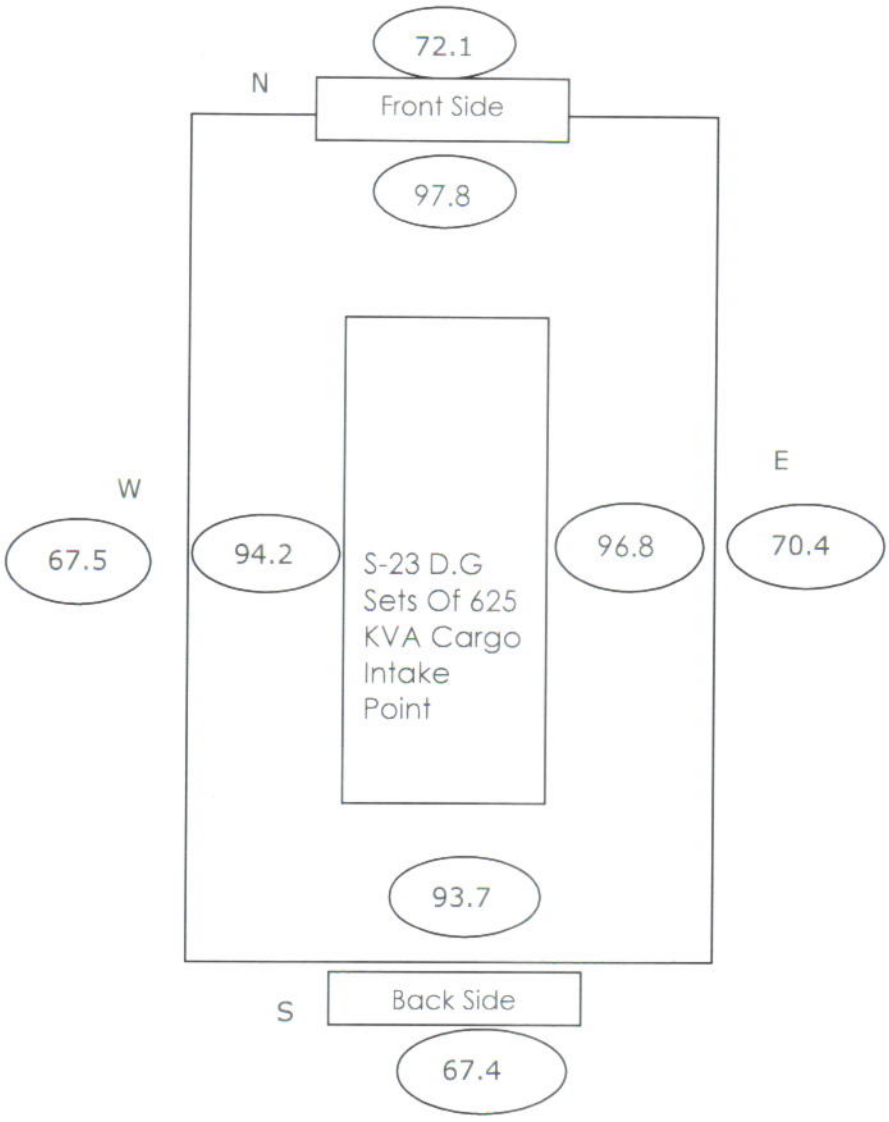
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Survey No. 102, Plot No.26, Wadala Pathardi Road,
Indira Nagar, Nashik - 422009, Maharashtra, India
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sales@ashwamedh.net +91-253-2392225

Sample ID: N/06/24/3040	Report No. N/06/24/3040N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-23 D.G Sets Of 625 KVA Cargo Intake Point



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

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Laboratory Services Division

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3041	Report No. N/06/24/3041N	Report Date	06/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	30/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-24 D.G Sets Of 380 KVA CSUB							
1	East	03:45	A1	89.4	B1	62.7	26.7
2	West	03:50	A2	93.5	B2	66.7	26.8
3	South	03:55	A3	98.6	B3	72.7	25.9
4	North	04:00	A4	92.7	B4	66.9	25.8
			Average	**93.55**	**Average**	**67.25**	**26.3**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

Ninad Soundankar
Technical Manager (Chemical)
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Laboratory Services Division

End of Report

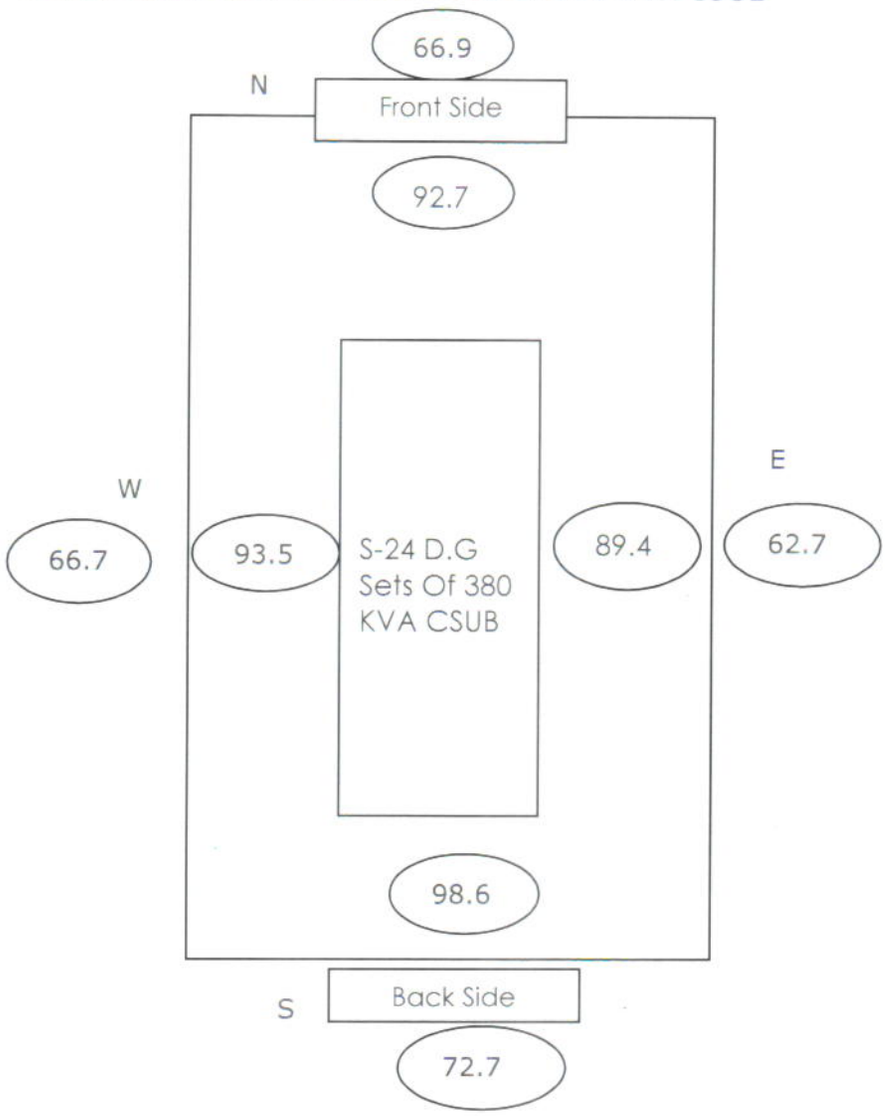
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Sample ID: N/06/24/3041	Report No. N/06/24/3041N	Report Date	06/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-24 D.G Sets Of 380 KVA CSUB



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/06/24/3024	Report No. N/06/24/3024N	Report Date	03/06/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	28/05/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-25 D.G Sets Of 380 KVA MLCP T1							
1	East	04:10	A1	95.7	B1	68.2	27.5
2	West	04:15	A2	97.8	B2	72.1	25.7
3	South	04:20	A3	93.2	B3	67.4	25.8
4	North	04:25	A4	91.0	B4	64.1	26.9
			Average	**94.42**	**Average**	**67.95**	**26.47**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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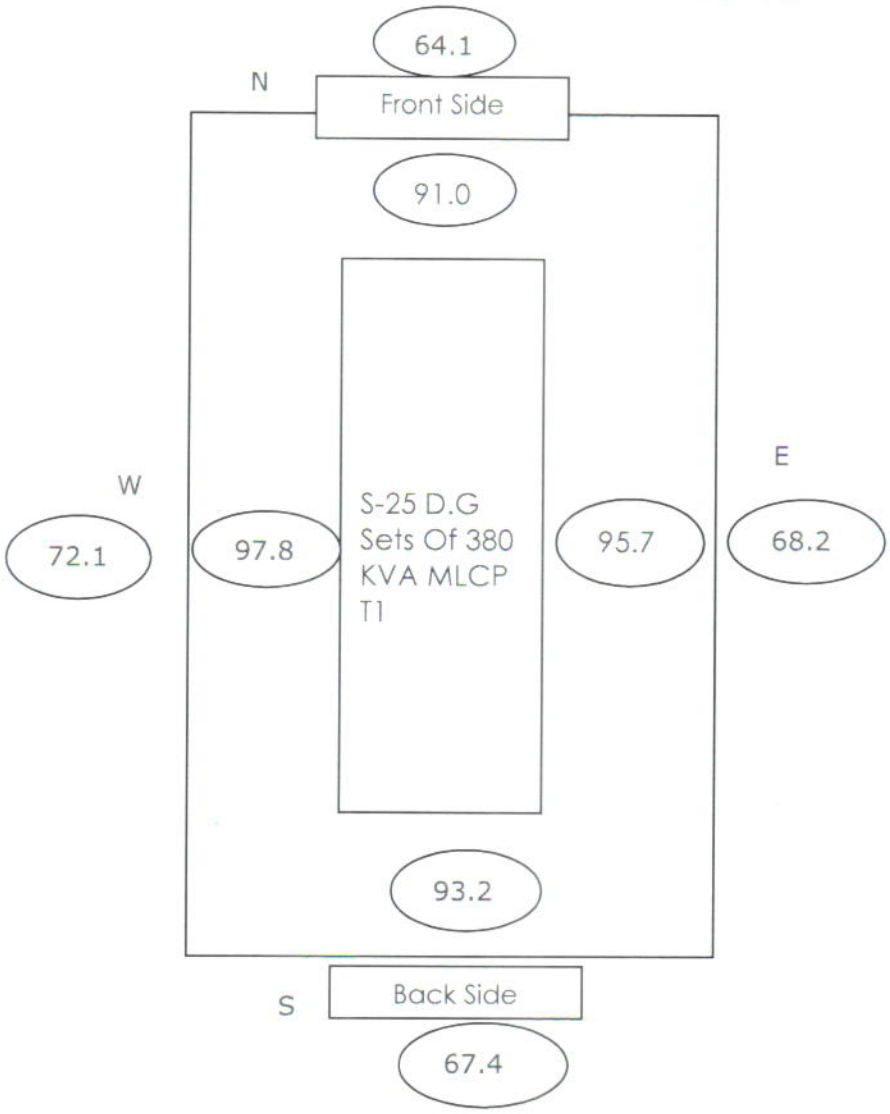
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Sample ID: N/06/24/3024	Report No. N/06/24/3024N	Report Date	03/06/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-25 D.G Sets Of 380 KVA MLCP T1



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3144	Report No.: N/08/24/3144N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-1 DG Utility T-2 S -1 (3000 KVA)							
1	East	11:25	A1	97	B1	72	25
2	West	11:30	A2	90	B2	65	25
3	South	11:35	A3	93	B3	67	26
4	North	11:40	A4	91	B4	66	25
			Average	**92.75**	**Average**	**67.5**	**25.25**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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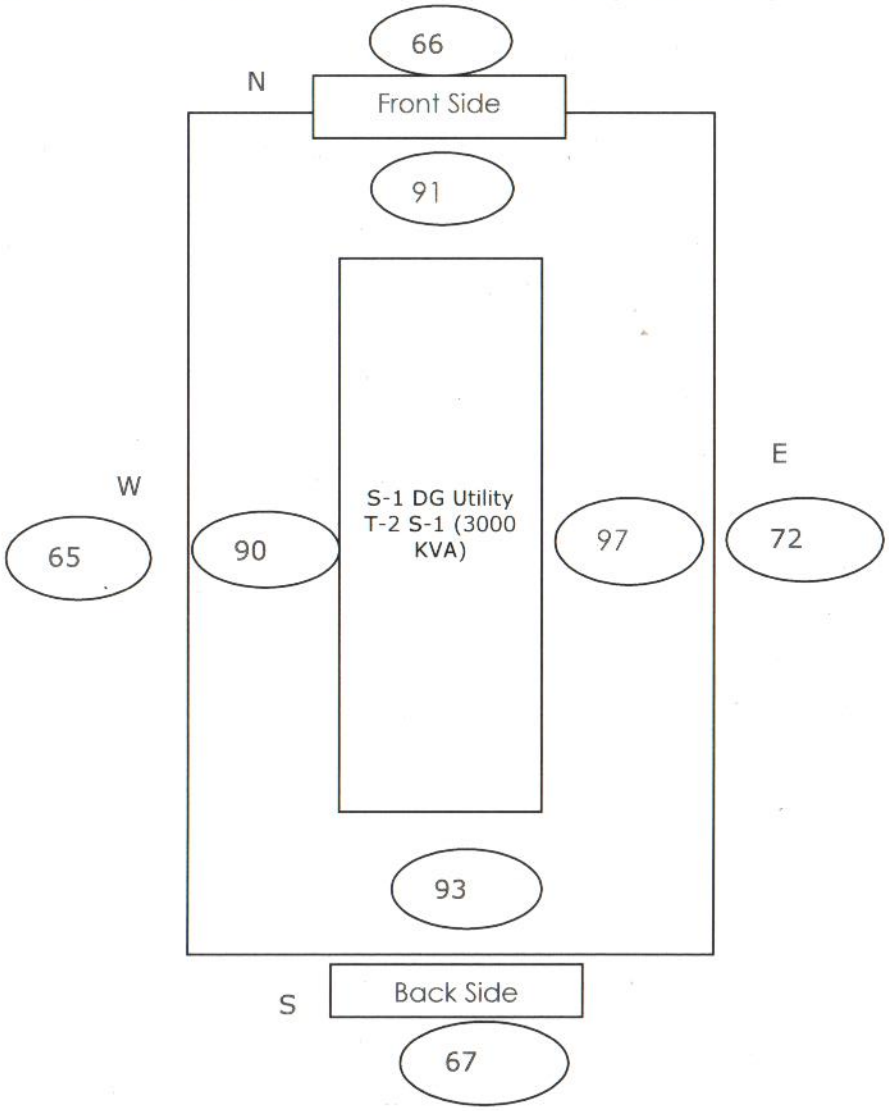
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Sample ID: N/08/24/3144	Report No.: N/08/24/3144N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-1 DG Utility T-2 S -1 (3000 KVA)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3145	Report No.: N/08/24/3145N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-2 DG Utility T-2 S -2 (3000 KVA)							
1	East	11:05	A1	98.2	B1	72.8	25.4
2	West	11:10	A2	97.8	B2	72.0	25.8
3	South	11:15	A3	90.4	B3	65.3	25.1
4	North	11:20	A4	93.5	B4	66.8	26.7
			Average	**94.97**	**Average**	**69.22**	**25.75**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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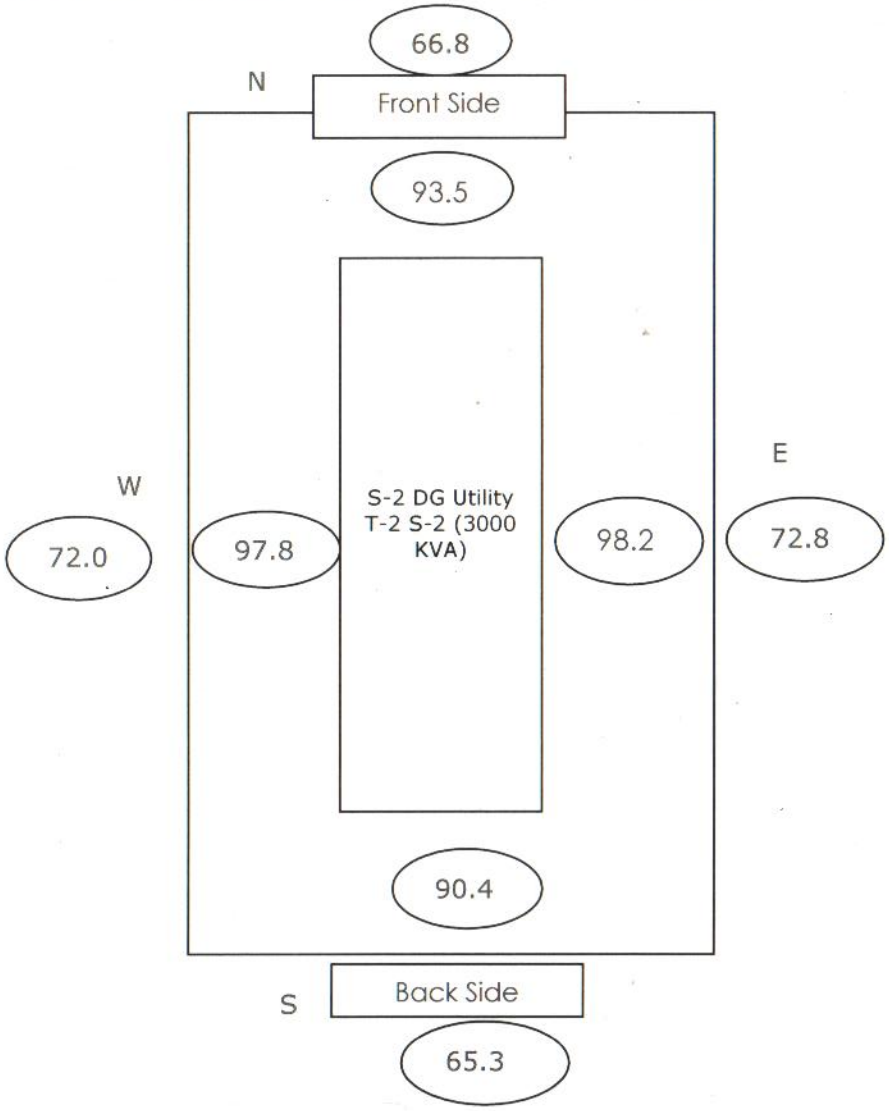
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Sample ID: N/08/24/3145	Report No.: N/08/24/3145N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-2 DG Utility T-2 S -2 (3000 KVA)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3146	Report No.: N/08/24/3146N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-3 DG Utility T-2 S -3 (3000 KVA)							
1	East	11:50	A1	93.7	B1	67.3	26.4
2	West	11:55	A2	90.2	65	63.4	26.8
3	South	12:00	A3	87.8	B3	62.4	25.4
4	North	12:05	A4	95.5	B4	69.3	26.2
			Average	**91.8**	**Average**	**65.6**	**26.2**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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Technical Manager (Chemical)
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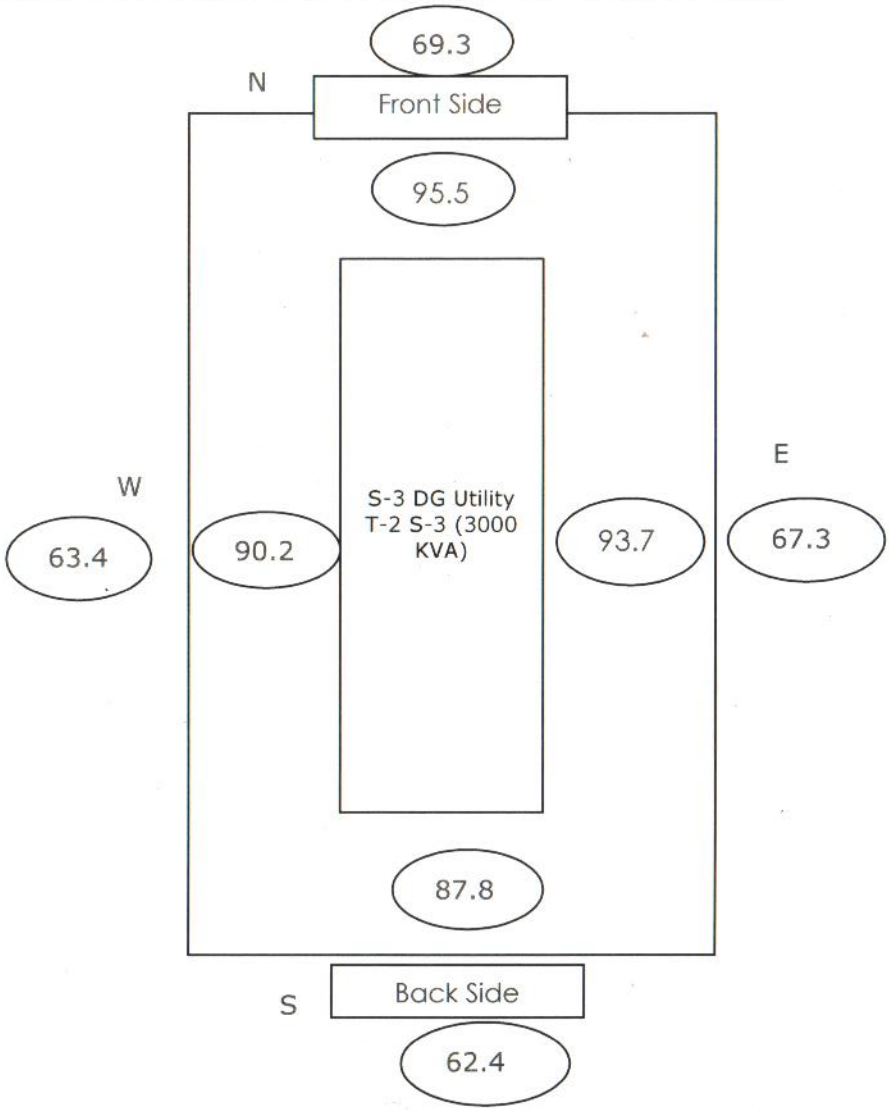
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Sample ID: N/08/24/3146	Report No.: N/08/24/3146N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-3 DG Utility T-2 S –3 (3000 KVA)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3147	Report No.: N/08/24/3147N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-4 DG Utility T-2 S-4 (3000 KVA)							
1	East	12:10	A1	90.7	B1	64.9	25.8
2	West	12:15	A2	95.9	B2	70.9	25.0
3	South	12:20	A3	97.1	B3	70.8	26.3
4	North	12:25	A4	92.2	B4	65.7	26.5
			Average	**93.97**	**Average**	**68.07**	**25.9**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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Technical Manager (Chemical)
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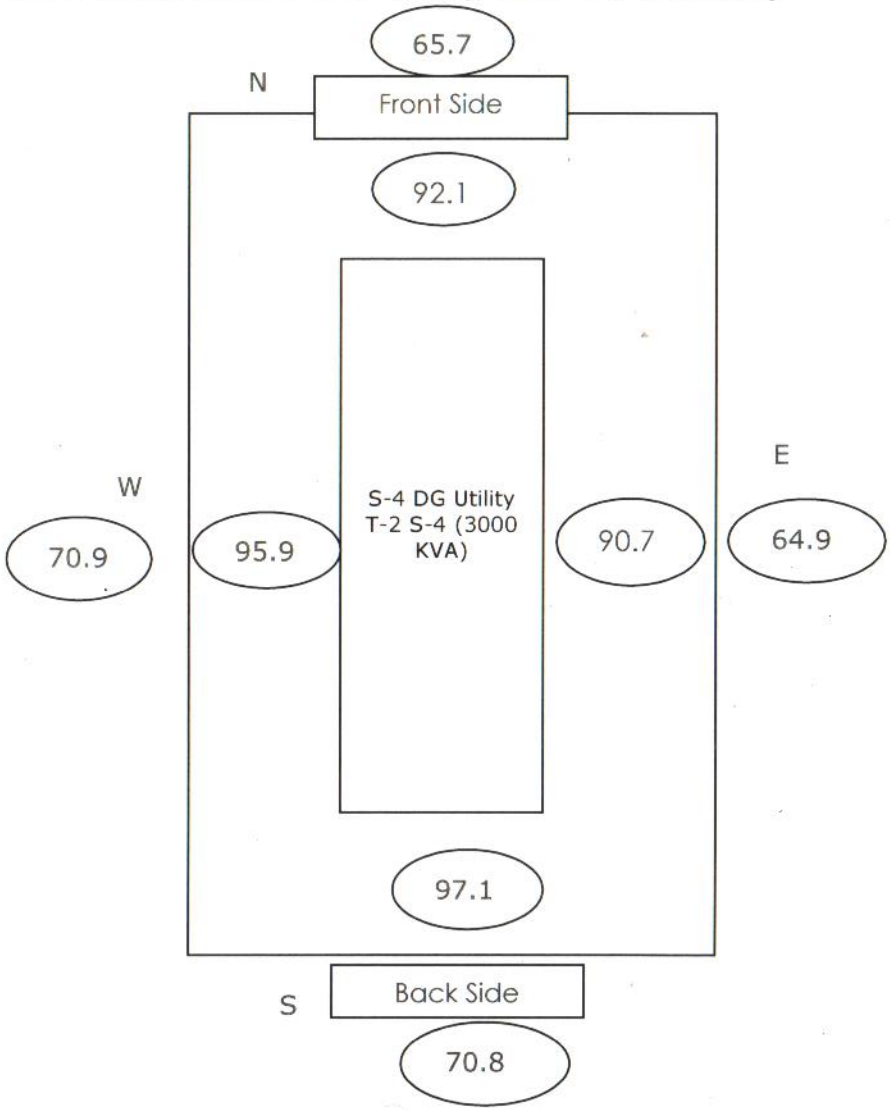
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Sample ID: N/08/24/3147	Report No.: N/08/24/3147N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION-S-4 DG Utility T-2 S-4 (3000 KVA)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3148	Report No.: N/08/24/3148N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-5 DG Utility T-2 S-5 (3000 KVA)							
1	East	12:30	A1	90.4	B1	64.7	25.7
2	West	12:35	A2	98.7	B2	73.6	25.1
3	South	12:40	A3	94.5	B3	67.7	26.8
4	North	12:45	A4	97.8	B4	70.8	27.0
			Average	**95.35**	**Average**	**69.2**	**26.15**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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Technical Manager (Chemical)
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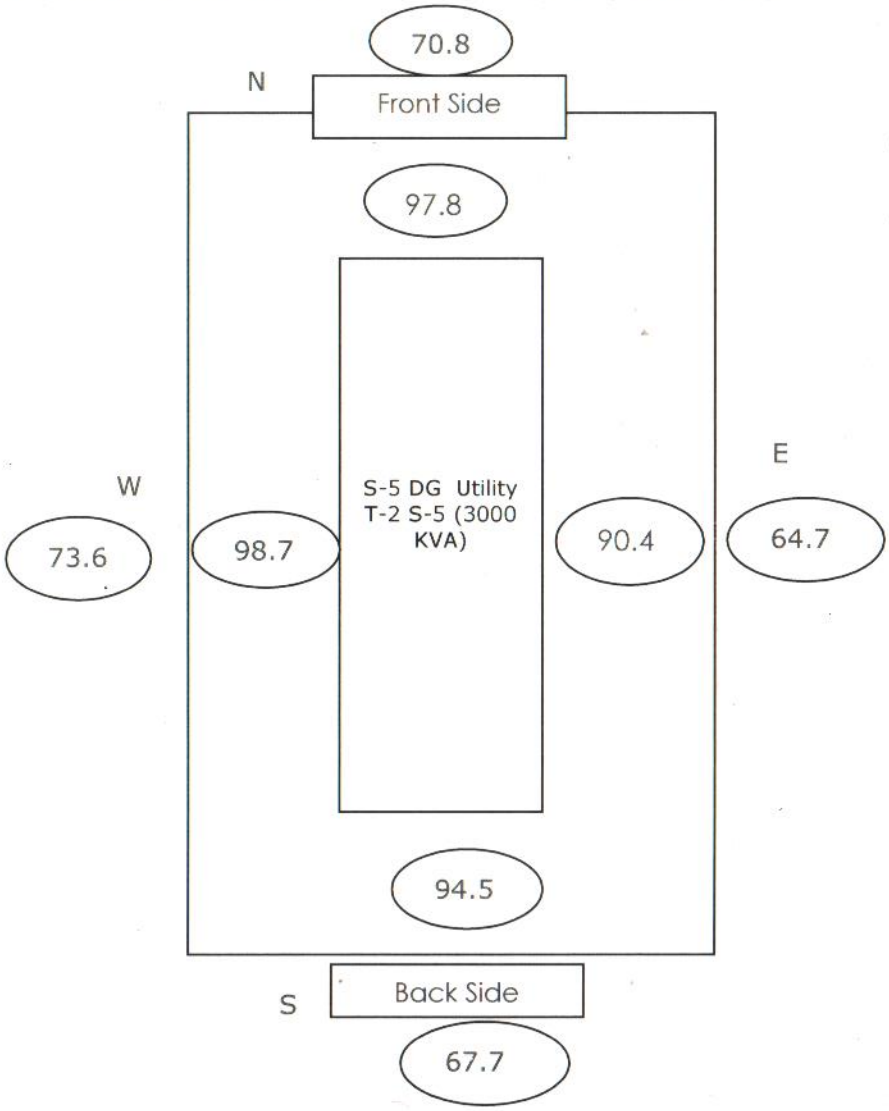
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Sample ID: N/08/24/3148	Report No.: N/08/24/3148N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-5 DG Utility T-2 S-5 (3000 KVA)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3149	Report No.: N/08/24/3149N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-6 DG Utility T-2 S-6 (3000 KVA)							
1	East	12:35	A1	89.7	B1	63.3	26.4
2	West	12:40	A2	93.0	B2	66.5	26.5
3	South	12:45	A3	95.7	B3	69.8	25.9
4	North	12:50	A4	92.5	B4	65.8	26.7
			Average	**92.72**	**Average**	**66.35**	**26.37**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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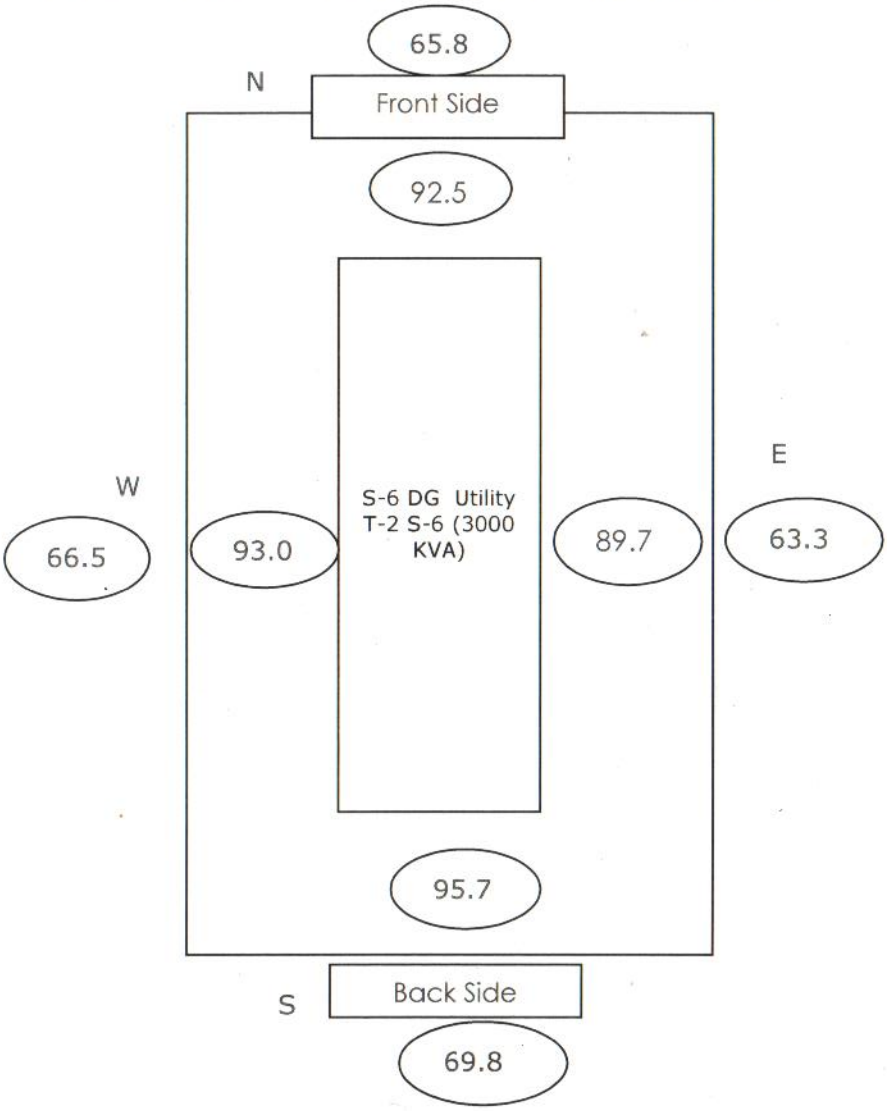
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Sample ID: N/08/24/3149	Report No.: N/08/24/3149N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-6 DG Utility T-2 S-6 (3000 KVA)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3150	Report No.: N/08/24/3150N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-7 D.G sets 625 KVA Terminal 1-A (1)							
1	East	10:05	A1	95.4	B1	68.0	27.4
2	West	10:10	A2	91.8	B2	66.8	25.0
3	South	10:15	A3	98.7	B3	72.6	26.1
4	North	10:20	A4	96.7	B4	70.9	25.8
			Average	**95.57**	**Average**	**69.57**	**26.0**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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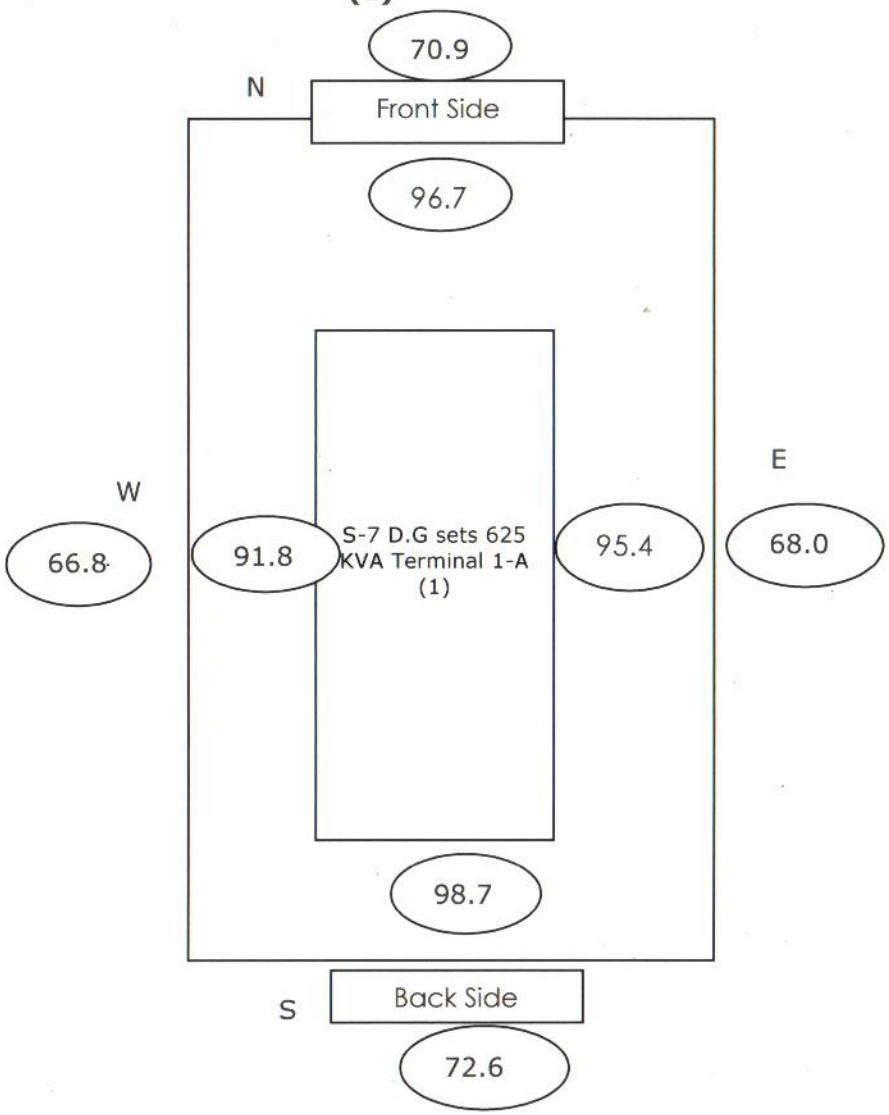
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Sample ID: N/08/24/3150	Report No.: N/08/24/3150N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-7 D.G sets 625 KVA Terminal 1-A (1)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3151	Report No.: N/08/24/3151N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-8 D.G sets 625 KVA Terminal 1-A (2)							
1	East	10:20	A1	91.4	B1	65.9	25.5
2	West	10:15	A2	87.2	B2	60.8	26.4
3	South	10:20	A3	95.4	B3	70.3	25.1
4	North	10:25	A4	98.2	B4	73.2	25.0
			Average	**93.05**	**Average**	**67.55**	**25.5**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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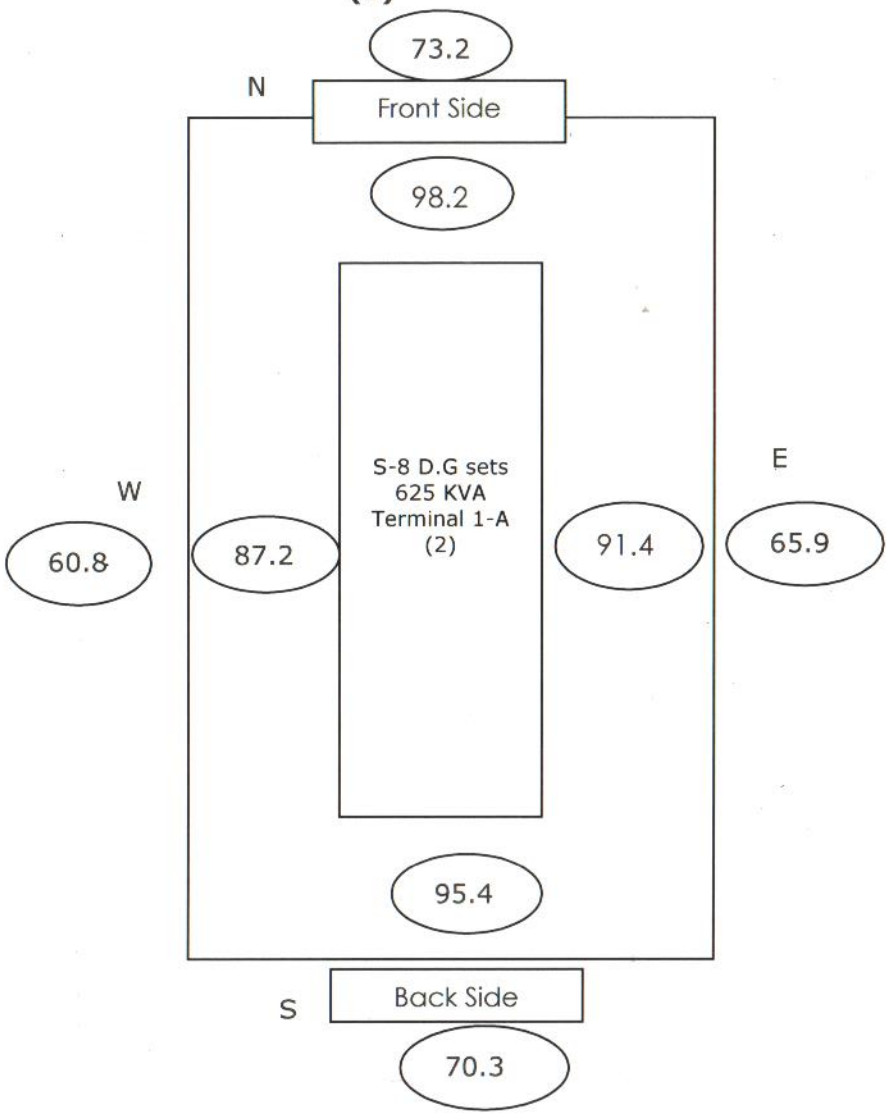
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Sample ID: N/08/24/3151	Report No.: N/08/24/3151N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-8 D.G sets 625 KVA Terminal 1-A (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3152	Report No.: N/08/24/3152N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-9 D.G Sets Of 1010 KVA Terminal 1-C (1)							
1	East	10:45	A1	92.1	B1	66.7	25.4
2	West	10:50	A2	98.5	B2	71.6	26.9
3	South	10:55	A3	90.2	B3	64.2	26.0
4	North	11:00	A4	95.6	B4	70.5	25.1
			Average	**94.10**	**Average**	**68.25**	**25.85**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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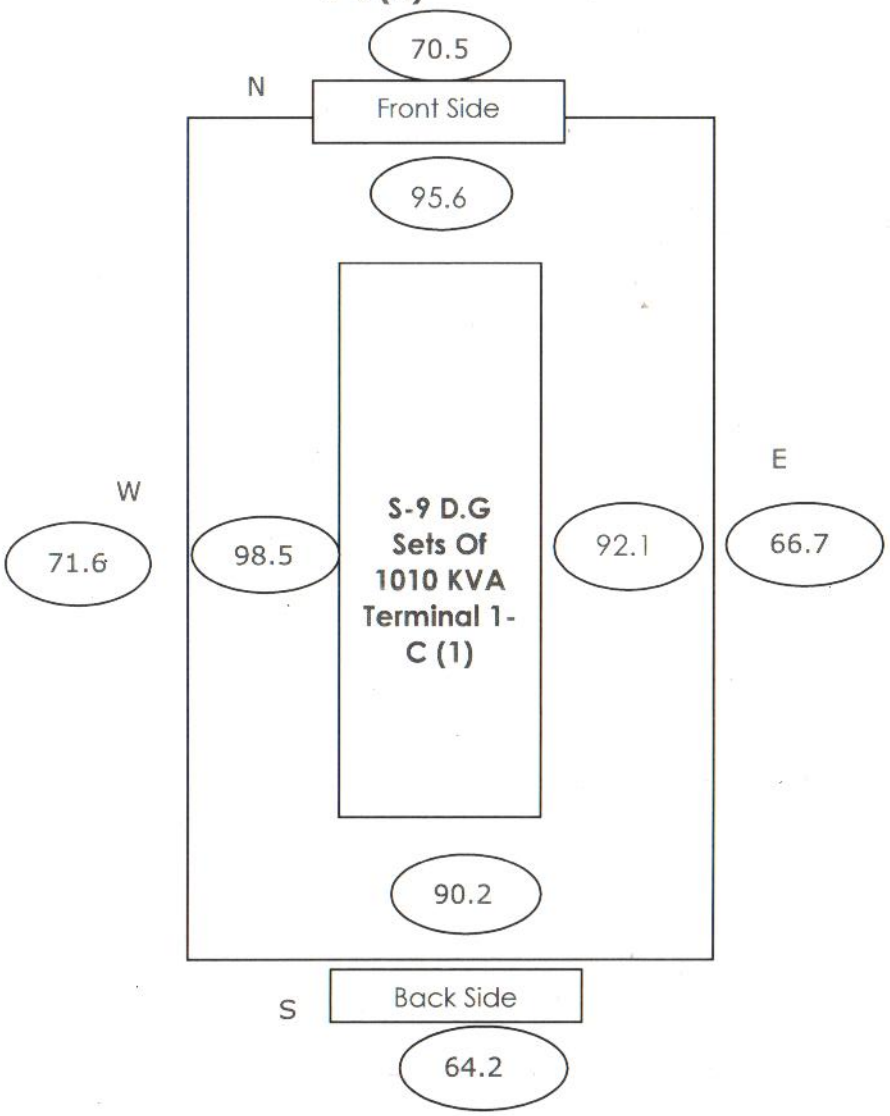
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Sample ID: N/08/24/3152	Report No.: N/08/24/3152N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-9 D.G Sets Of 1010 KVA Terminal 1-C (1)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3153	Report No.: N/08/24/3153N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-10 D.G Sets Of 1010 KVA Terminal 1-C (2)							
1	East	12:05	A1	91.7	B1	66.0	25.7
2	West	12:10	A2	90.5	B2	65.4	25.1
3	South	12:15	A3	94.6	B3	67.8	26.8
4	North	12:20	A4	97.2	B4	72.1	25.1
			Average	**93.5**	**Average**	**67.82**	**25.68**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

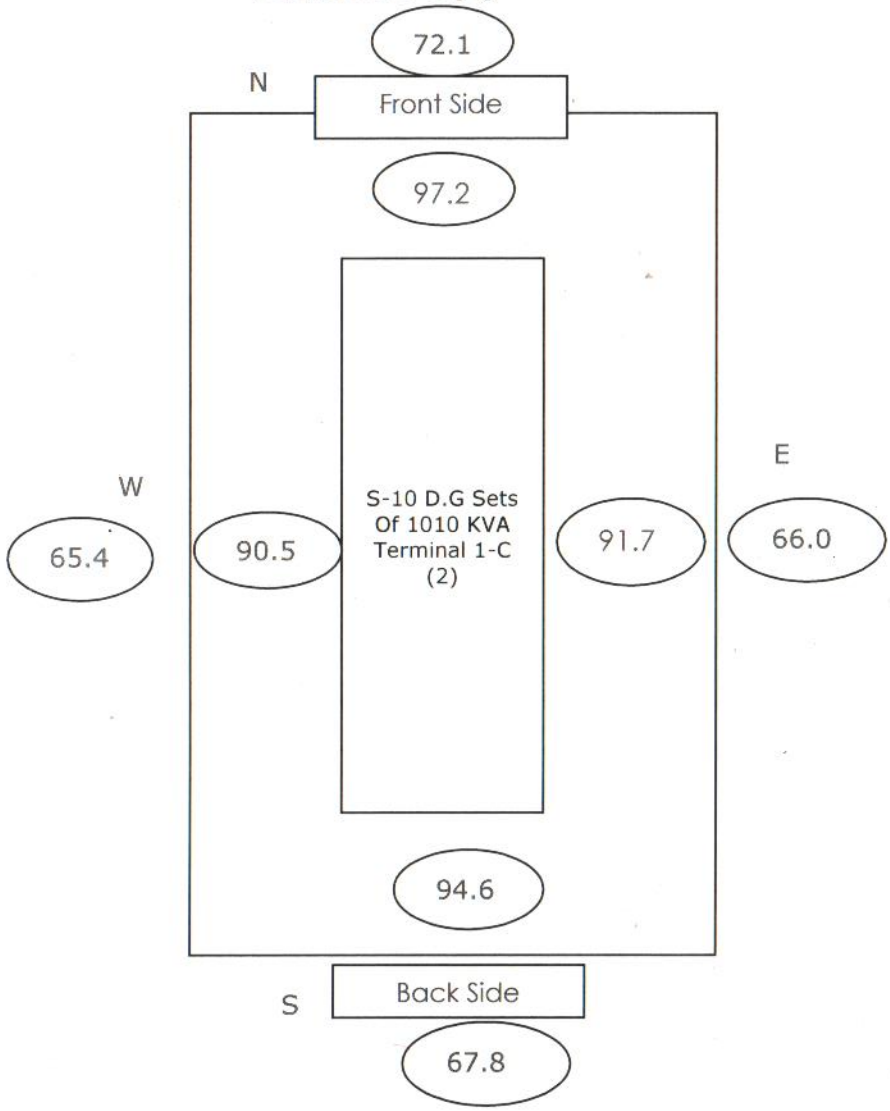
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Sample ID: N/08/24/3153	Report No.: N/08/24/3153N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-10 D.G Sets Of 1010 KVA
Terminal 1-C (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3154	Report No.: N/08/24/3154N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-11 D.G Sets Of 625 KVA Terminal 1-C							
1	East	11:15	A1	85.7	B1	59.7	26.0
2	West	11:20	A2	90.2	B2	64.8	25.4
3	South	11:25	A3	93.0	B3	67.1	25.9
4	North	11:30	A4	96.5	B4	69.7	26..8
			Average	**91.35**	**Average**	**65.33**	**26.02**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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Technical Manager (Chemical)
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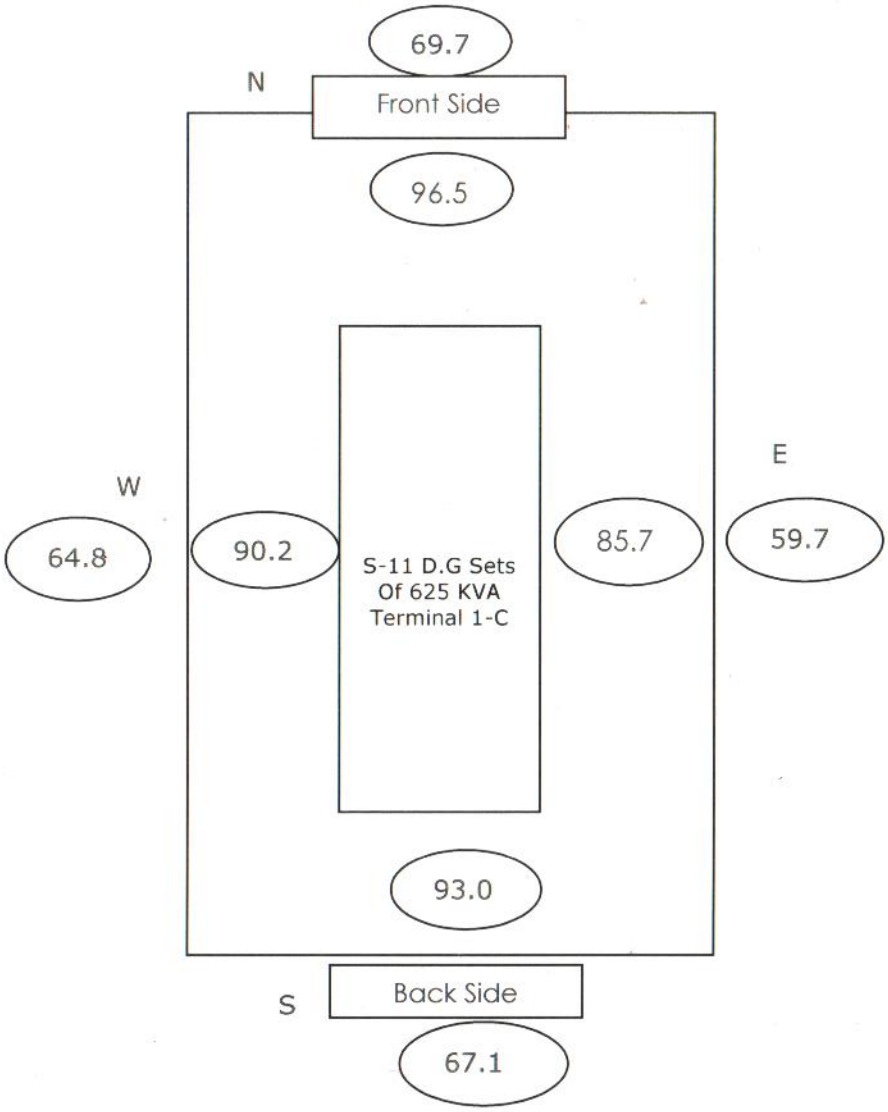
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Sample ID: N/08/24/3154	Report No.: N/08/24/3154N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-11 D.G Sets Of 625 KVA Terminal 1-C



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3155	Report No.: N/08/24/3155N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-12 D.G Sets Of 500 KVA – CCR 2 (1)							
1	East	12:10	A1	93.4	B1	67.4	26.0
2	West	12:15	A2	98.7	B2	73.2	25.5
3	South	12:20	A3	95.1	B3	69.2	25.9
4	North	12:25	A4	92.8	B4	67.5	25.3
			Average	**95.0**	**Average**	**69.33**	**25.67**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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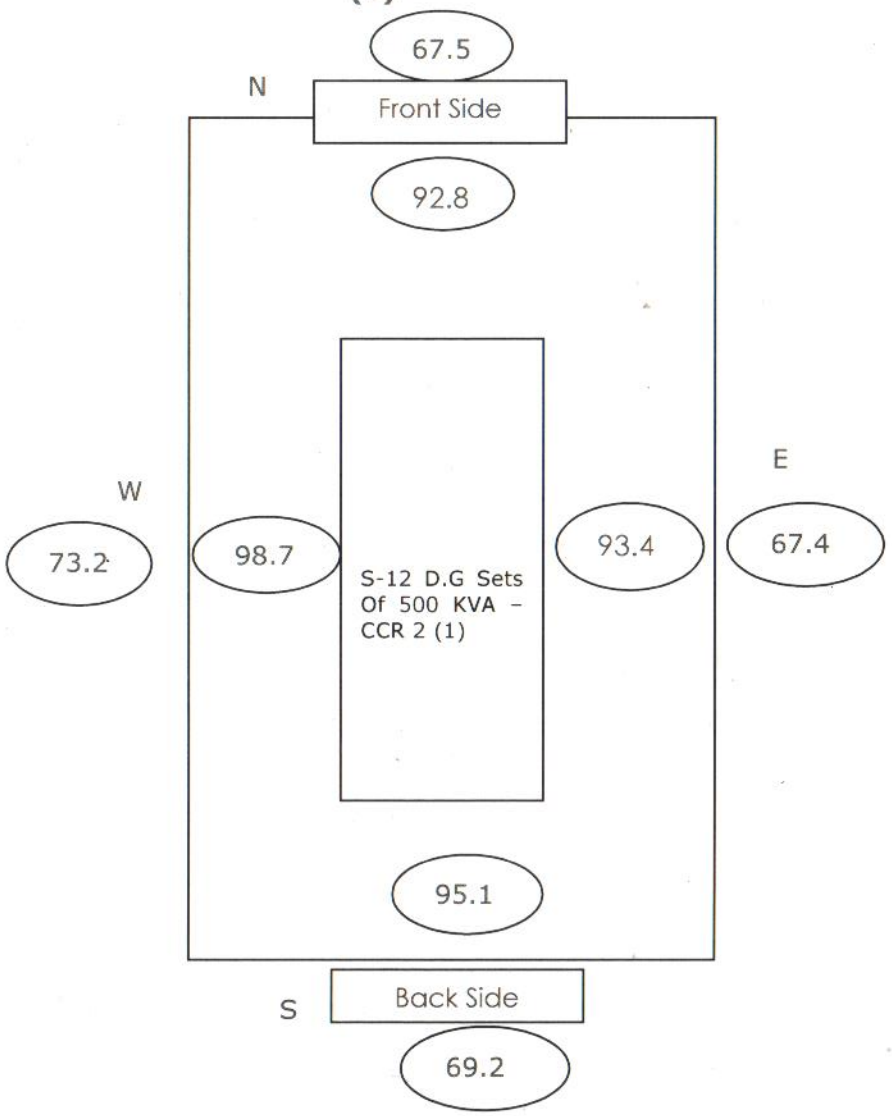
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Sample ID: N/08/24/3155	Report No.: N/08/24/3155N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-12 D.G Sets Of 500 KVA – CCR 2 (1)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3156	Report No.: N/08/24/3156N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000888F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-13 D.G Sets Of 625 KVA – CCR 2 (2)							
1	East	12:35	A1	98.4	B1	71.7	26.7
2	West	12:40	A2	96.8	B2	70.0	26.8
3	South	12:45	A3	90.7	B3	63.8	26.9
4	North	12:50	A4	93.2	B4	67.5	25.7
			Average	**94.77**	**Average**	**68.25**	**26.52**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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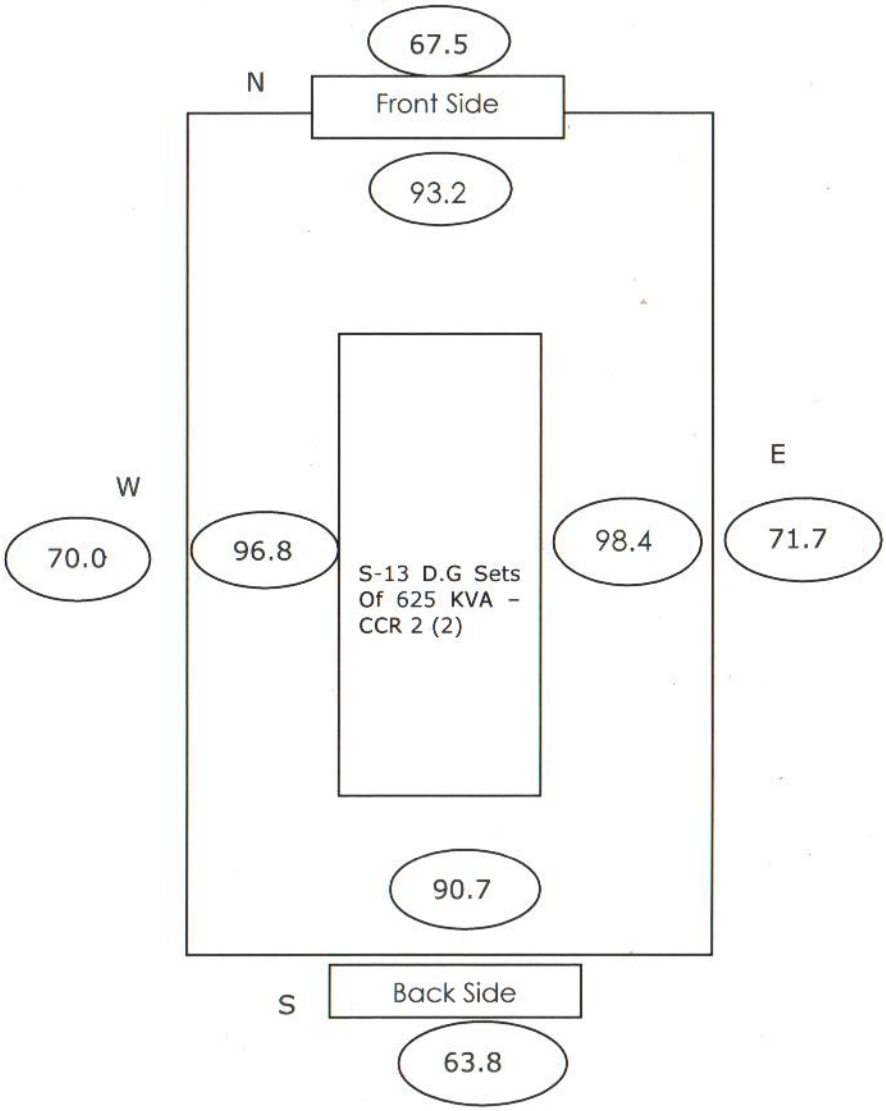
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Sample ID: N/08/24/3156	Report No.: N/08/24/3156N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-13 D.G Sets Of 625 KVA – CCR 2 (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

Ninad Soundankar
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3157	Report No.: N/08/24/3157N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-14 D.G Sets Of 750 KVA CCR 1 (1)							
1	East	01:10	A1	88.4	B1	63.4	25.0
2	West	01:15	A2	93.7	B2	67.9	25.8
3	South	01:20	A3	98.2	B3	72.3	25.9
4	North	01:25	A4	95.3	B4	69.7	25.6
			Average	**93.9**	**Average**	**67.8**	**25.58**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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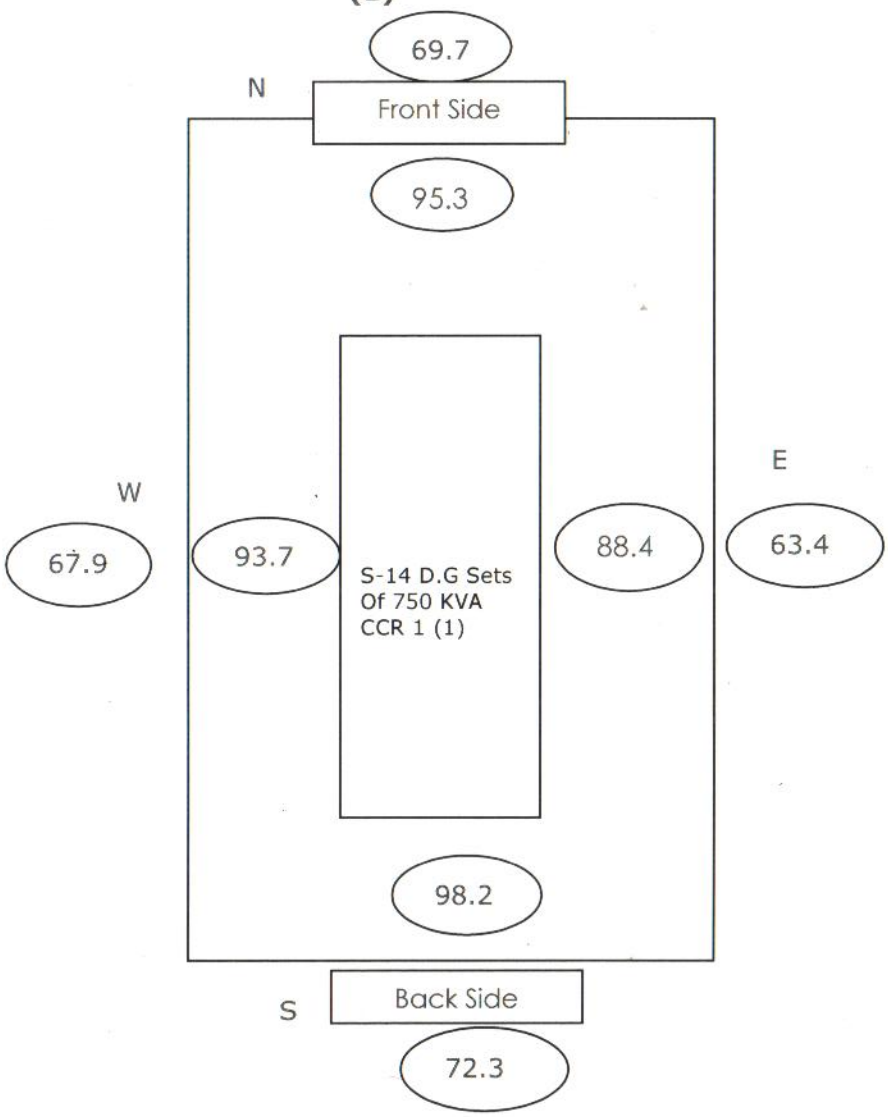
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Sample ID: N/08/24/3157	Report No.: N/08/24/3157N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-14 D.G Sets Of 750 KVA CCR 1 (1)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3158	Report No.: N/08/24/3158N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-15 D.G Sets Of 750 KVA CCR 1 (2)							
1	East	02:10	A1	89.7	B1	63.3	26.4
2	West	02:15	A2	95.2	B2	69.4	25.8
3	South	02:20	A3	90.5	B3	65.5	25.0
4	North	02:25	A4	93.3	B4	66.4	26.9
			Average	**92.17**	**Average**	**66.15**	**26.02**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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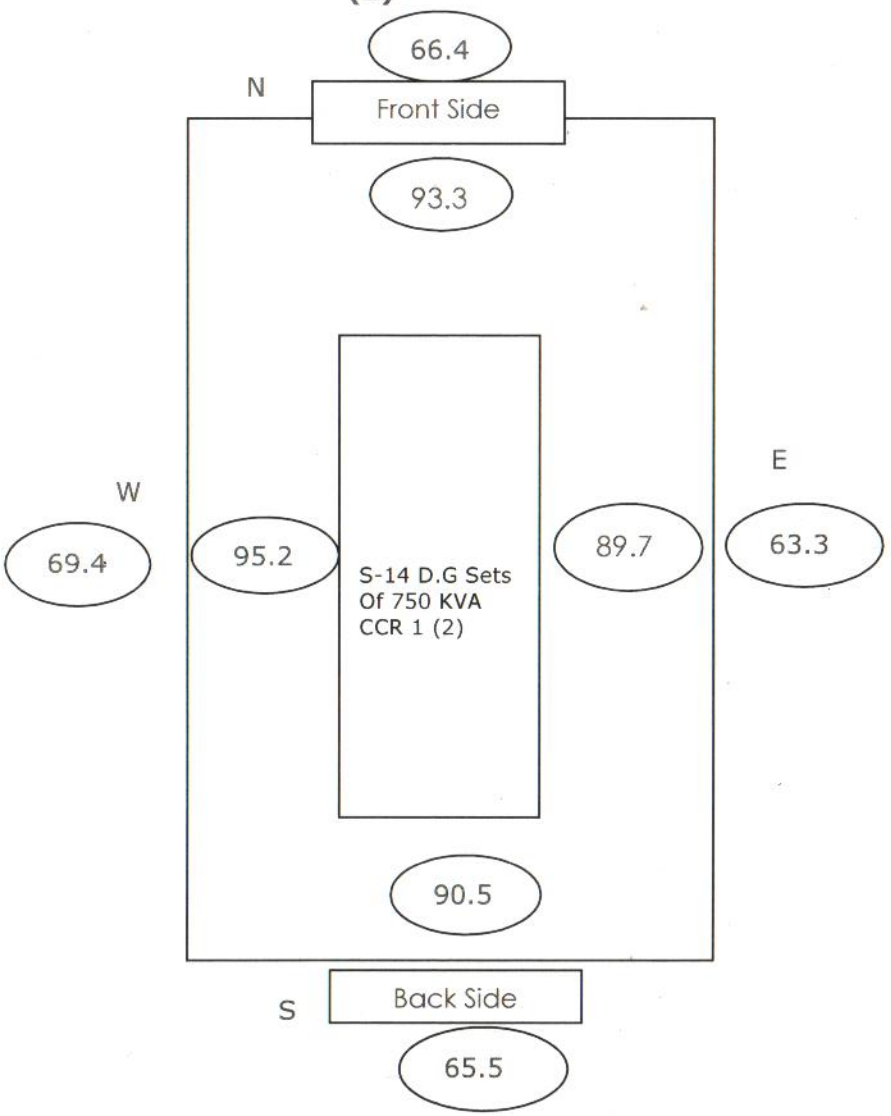
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Sample ID: N/08/24/3158	Report No.: N/08/24/3158N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-14 D.G Sets Of 750 KVA CCR 1 (2)



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3159	Report No.: N/08/24/3159N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	07/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

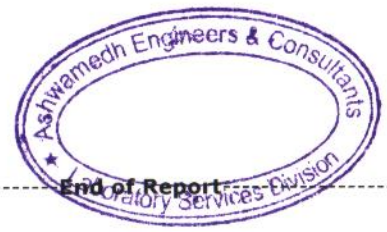
Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-16 D.G Sets Of 500 KVA Cargo Intake Point							
1	East	01:35	A1	93.1	B1	67.4	25.7
2	West	01:40	A2	98.7	B2	72.5	26.2
3	South	01:45	A3	95.9	B3	69.1	26.8
4	North	01:50	A4	99.0	B4	73.6	25.4
			Average	**96.67**	**Average**	**70.65**	**26.02**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

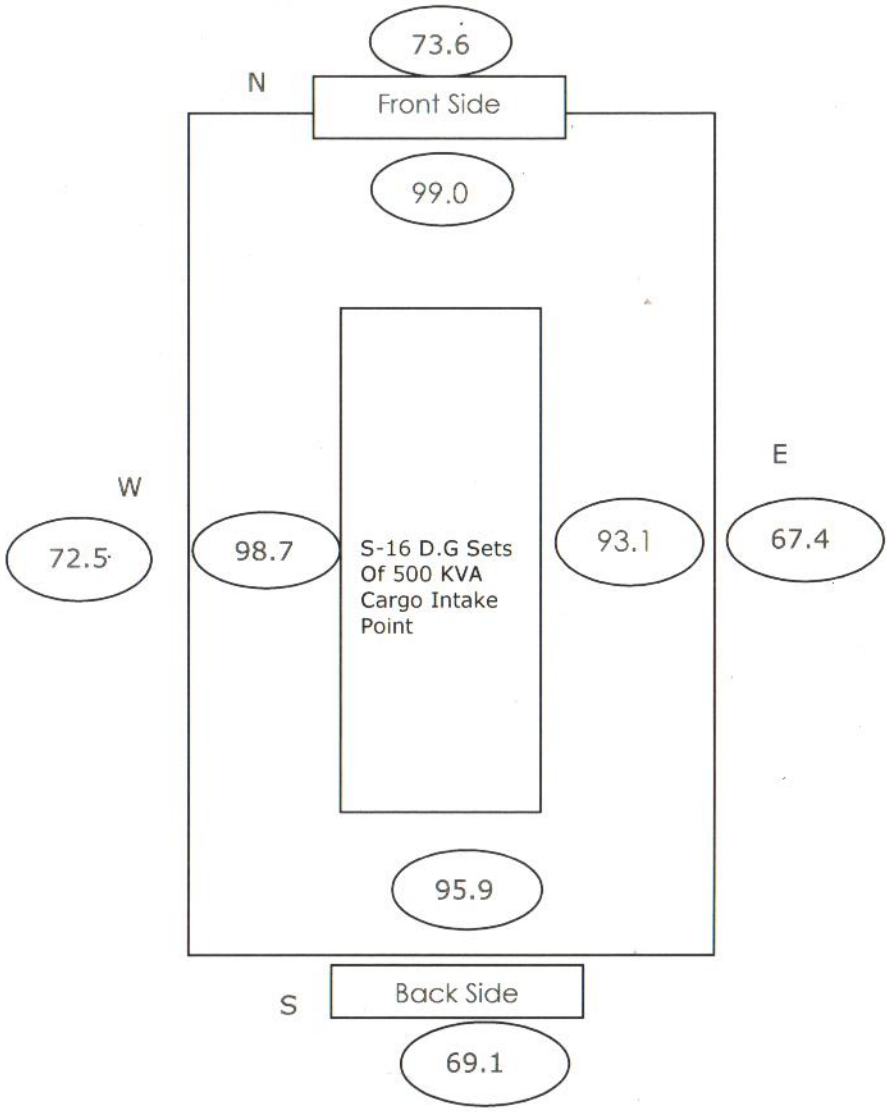
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Sample ID: N/08/24/3159	Report No.: N/08/24/3159N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-16 D.G Sets Of 500 KVA Cargo Intake Point



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3160	Report No.: N/08/24/3160N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-17 D.G Sets Of 437.5 KVA Cargo Intake Point							
1	East	02:05	A1	87.6	B1	61.4	26.2
2	West	02:10	A2	91.3	B2	65.6	25.7
3	South	02:15	A3	94.5	B3	69.4	25.1
4	North	02:20	A4	92.8	B4	66.7	26.1
			Average	**91.55**	**Average**	**65.77**	**25.78**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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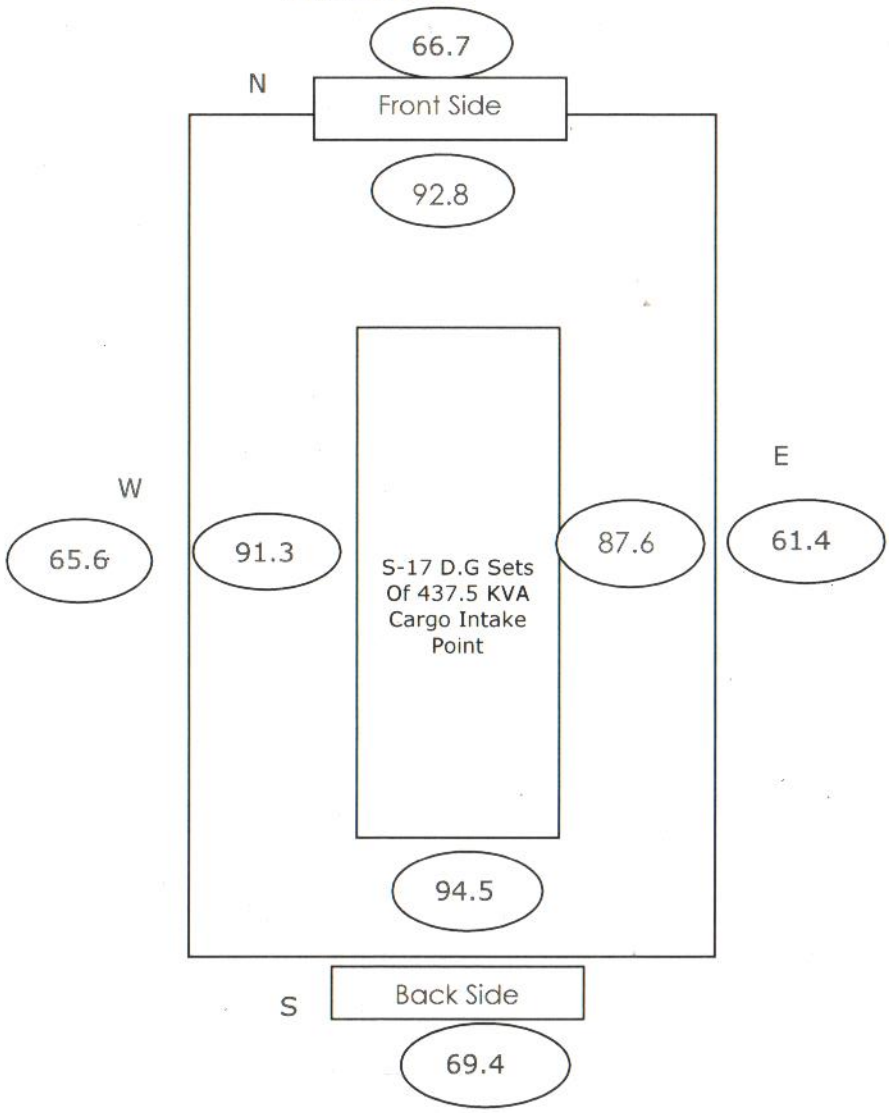
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Sample ID: N/08/24/3160	Report No.: N/08/24/3160N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-17 D.G Sets Of 437.5 KVA Cargo Intake Point



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3161	Report No.: N/08/24/3161N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-18 D.G Sets Of 250 KVA Import Warehouse							
1	East	02:05	A1	93.6	B1	67.5	26.1
2	West	02:05	A2	99.5	B2	74.1	25.4
3	South	02:10	A3	94.8	B3	69.7	25.1
4	North	02:20	A4	97.2	B4	71.3	25.9
			Average	**96.27**	**Average**	**70.65**	**25.62**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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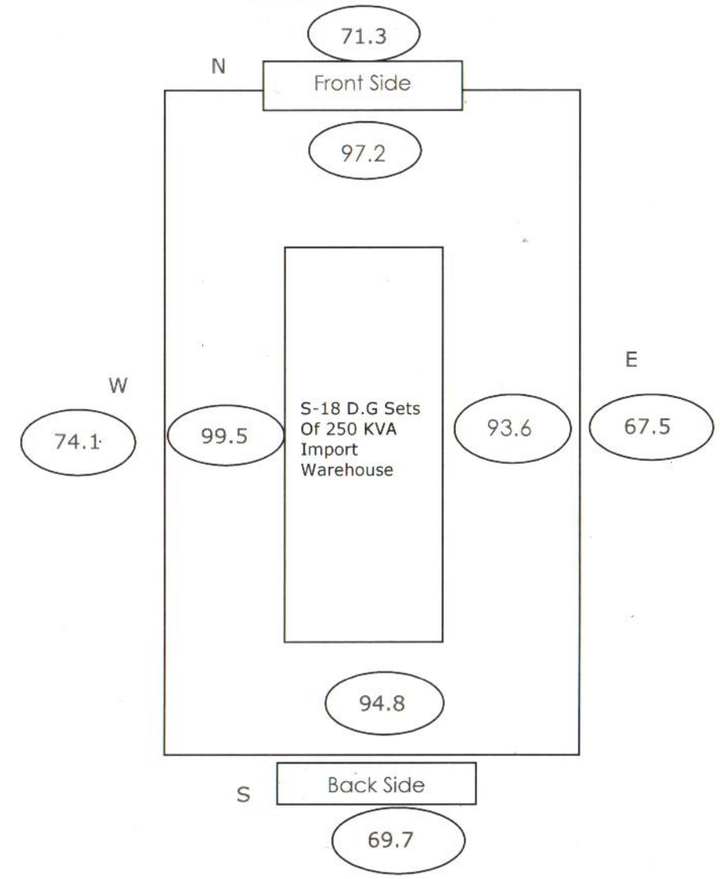
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Sample ID: N/08/24/3161	Report No.: N/08/24/3161N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-18 D.G Sets Of 250 KVA Import Warehouse



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3162	Report No.: N/08/24/3162N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-19 D.G Sets Of 650 KVA Terminal 1-A							
1	East	02:25	A1	88.5	B1	61.9	26.6
2	West	02:30	A2	91.6	B2	66.4	25.2
3	South	02:35	A3	90.3	B3	63.9	26.4
4	North	02:40	A4	95.4	B4	68.5	26.9
			Average	**91.45**	**Average**	**65.17**	**26.28**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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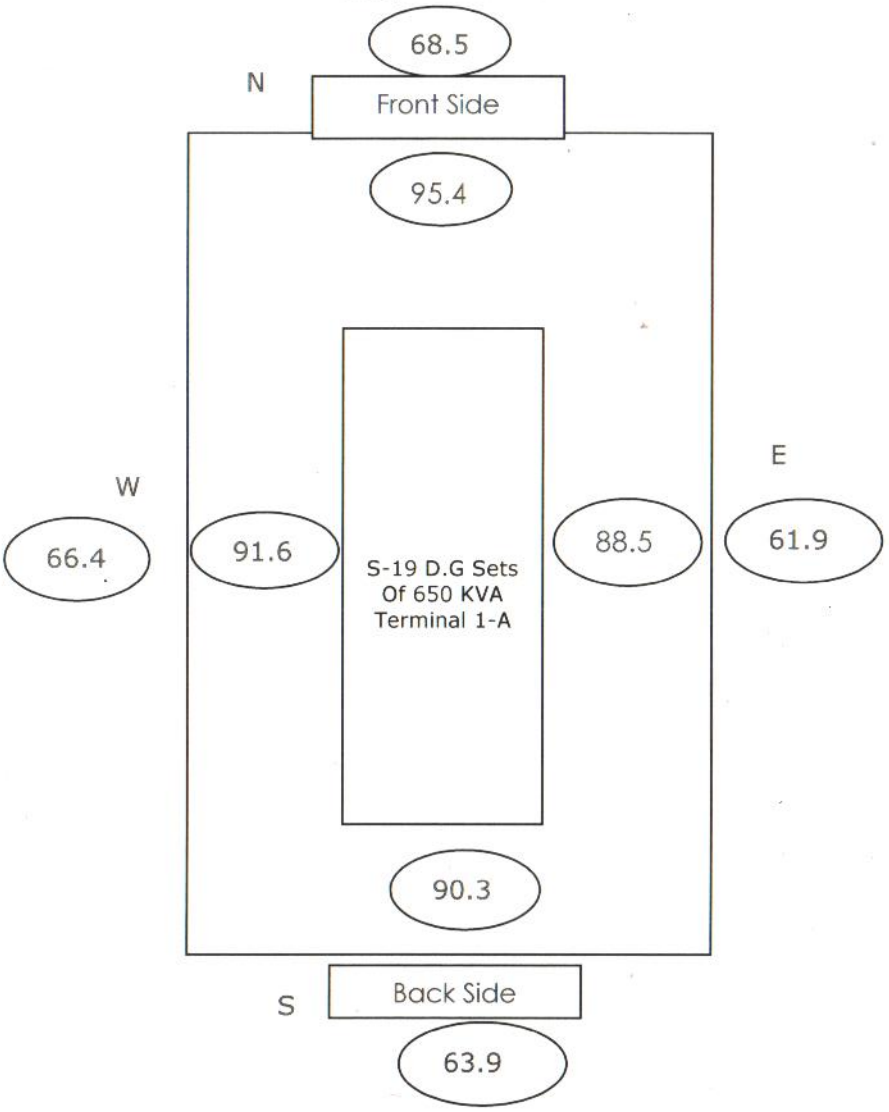
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Sample ID: N/08/24/3162	Report No.: N/08/24/3162N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-19 D.G Sets Of 650 KVA Terminal 1-A



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3163	Report No.: N/08/24/3163N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-20 D.G Sets Of 500 KVA Import Cold Zone							
1	East	02:25	A1	95.6	B1	68.4	27.2
2	West	02:30	A2	97.8	B2	71.5	26.3
3	South	02:35	A3	94.3	B3	68.8	25.5
4	North	02:40	A4	92.6	B4	65.7	26.9
			Average	**95.07**	**Average**	**68.6**	**26.47**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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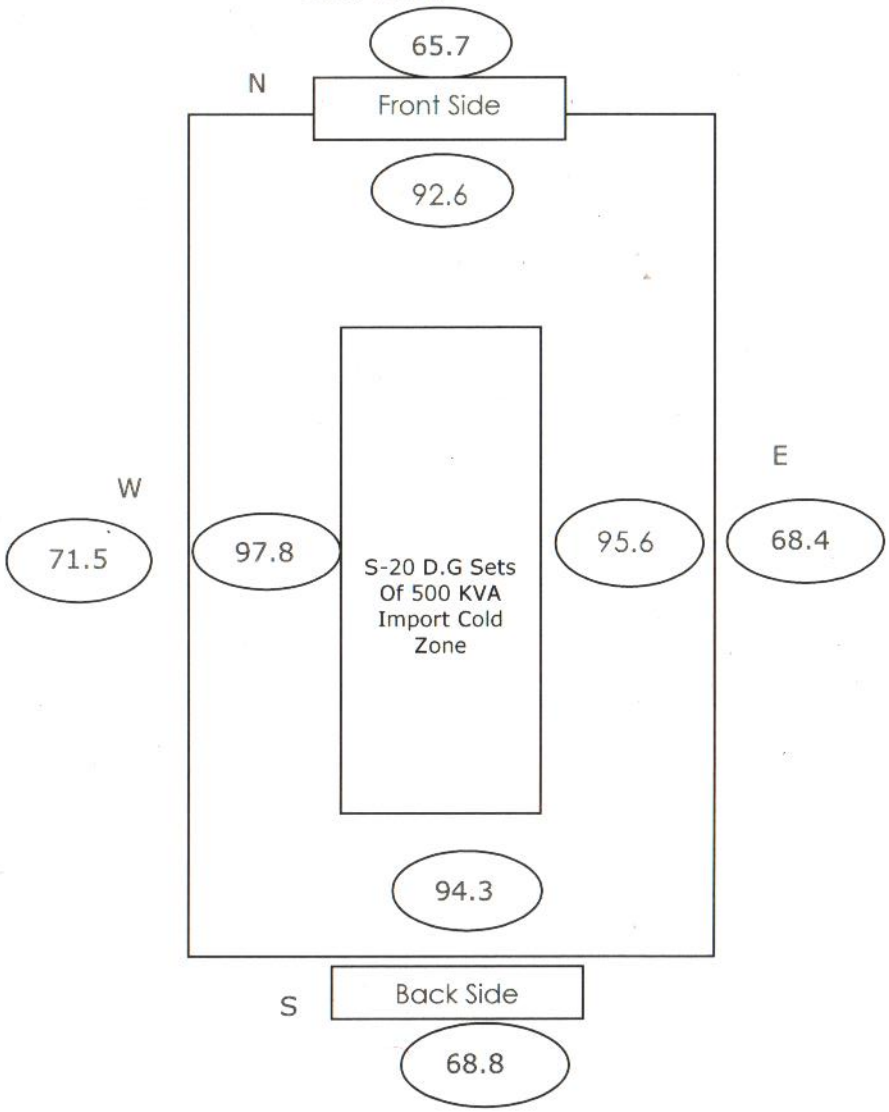
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(Near Guru Gobind Singh School, Near Pandav Nagari,
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Sample ID: N/08/24/3163	Report No.: N/08/24/3163N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-20 D.G Sets Of 500 KVA Import Cold Zone



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3164	Report No.: N/08/24/3164N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-21 D.G Sets Of 125 KVA Corporate Aviation Terminal							
1	East	02:40	A1	92.6	B1	66.2	26.4
2	West	02:45	A2	99.5	B2	71.7	27.8
3	South	02:50	A3	93.7	B3	67.6	26.1
4	North	02:20	A4	96.1	B4	68.9	27.2
			Average	**95.48**	**Average**	**68.6**	**26.88**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

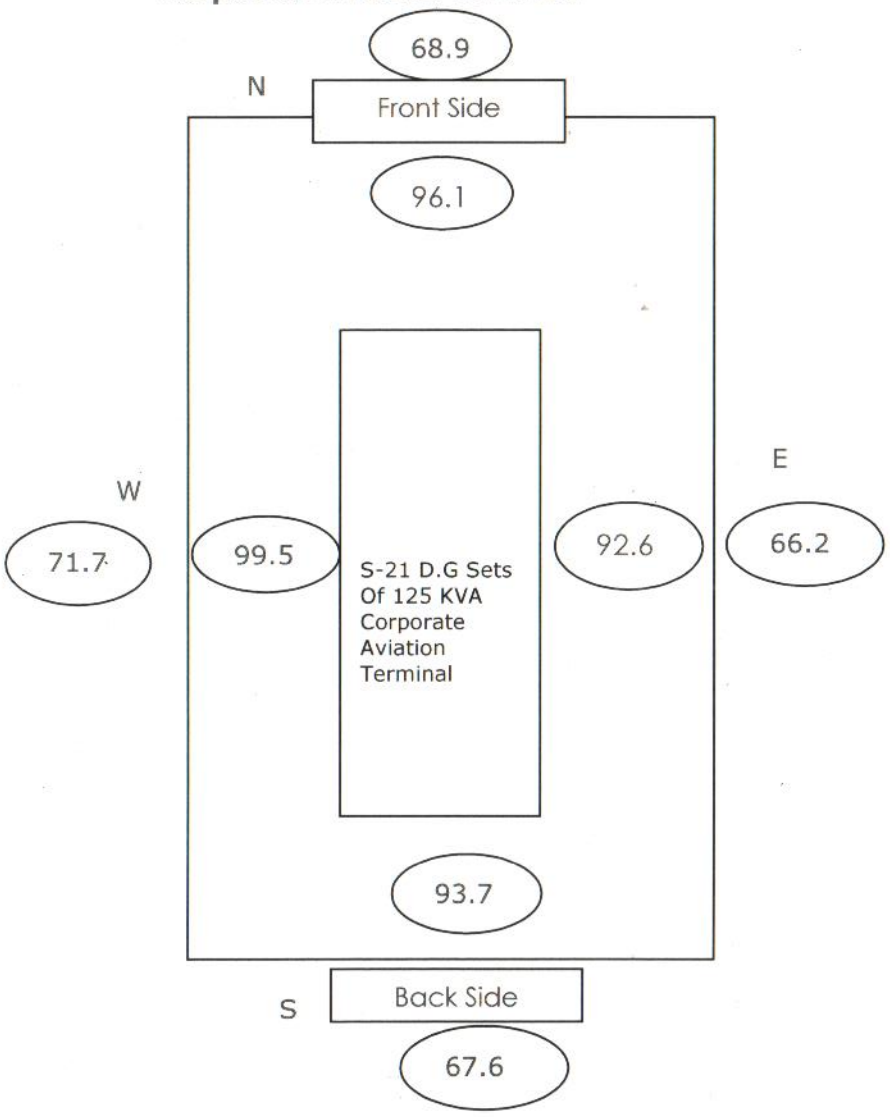
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Sample ID: N/08/24/3164	Report No.: N/08/24/3164N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-21 D.G Sets Of 125 KVA
Corporate Aviation Terminal



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3165	Report No.: N/08/24/3165N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-22 D.G Sets Of 2500 KVA Terminal 1-C							
1	East	03:05	A1	95.7	B1	69.8	25.8
2	West	03:10	A2	91.2	B2	63.9	27.3
3	South	03:15	A3	97.4	B3	71.8	25.6
4	North	03:20	A4	91.3	B4	63.8	27.5
			Average	**93.87**	**Average**	**67.32**	**26.55**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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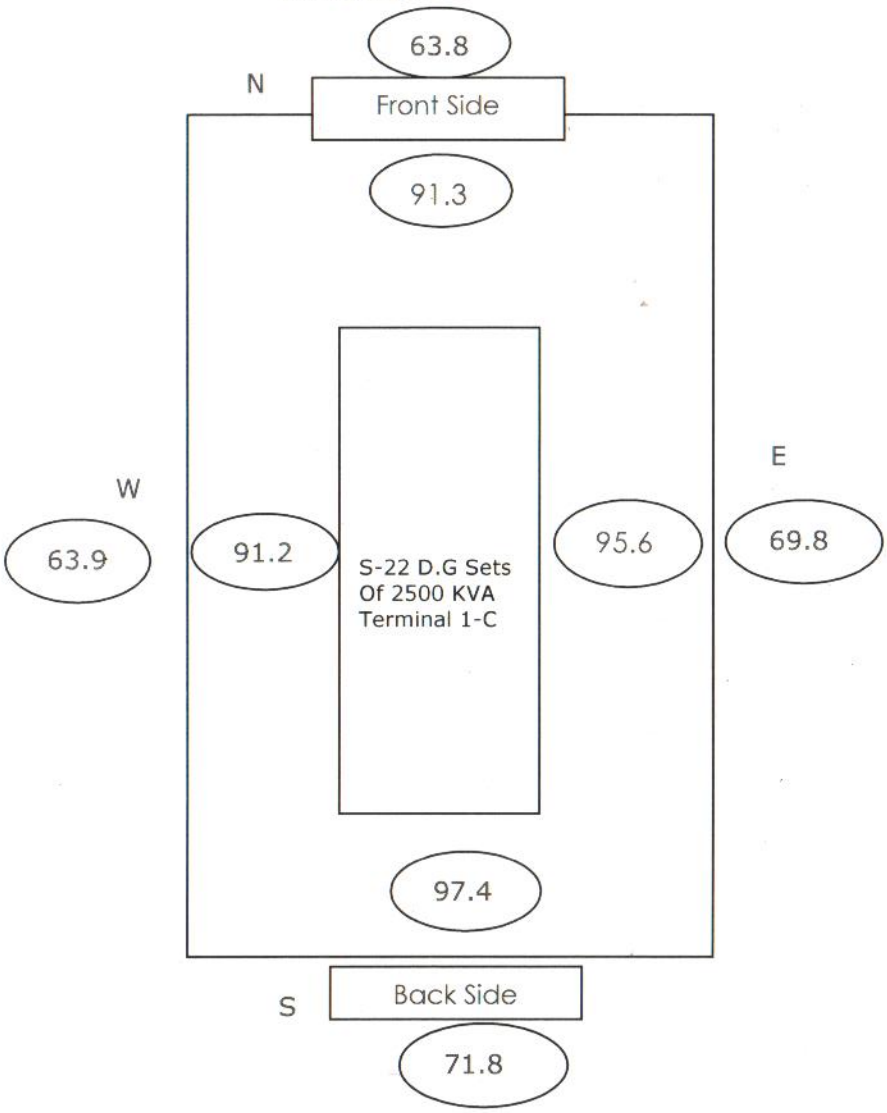
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Sample ID: N/08/24/3165	Report No.: N/08/24/3165N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-22 D.G Sets Of 2500 KVA
Terminal 1-C



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3166	Report No.: N/08/24/3166N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-23 D.G Sets Of 625 KVA Cargo Intake Point							
1	East	03:25	A1	97.2	B1	70.6	26.6
2	West	03:30	A2	93.3	B2	67.1	26.2
3	South	03:35	A3	95.6	B3	68.7	26.9
4	North	03:40	A4	98.2	B4	71.1	27.1
			Average	**96.07**	**Average**	**69.37**	**26.7**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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End of Report

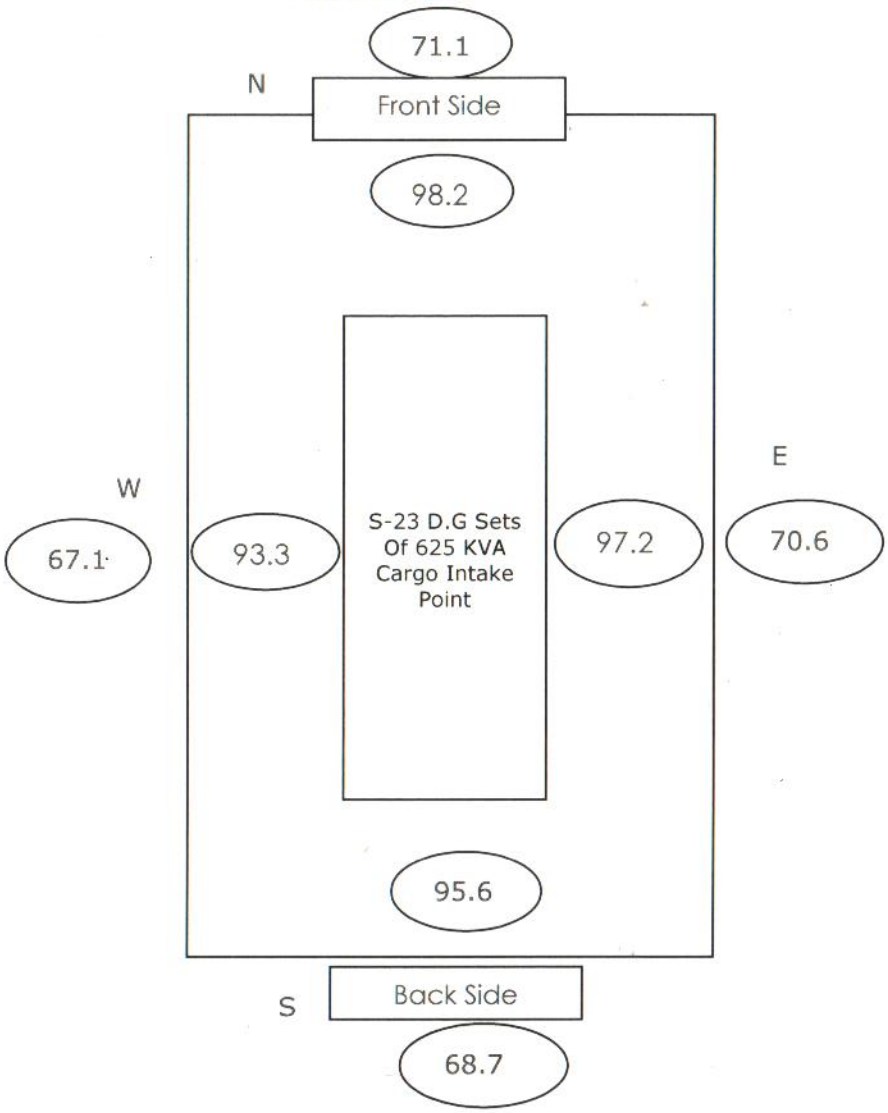
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Sample ID: N/08/24/3166	Report No.: N/08/24/3166N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-23 D.G Sets Of 625 KVA Cargo Intake Point



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3167	Report No.: N/08/24/3167N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-24 D.G Sets Of 380 KVA CSUB							
1	East	03:45	A1	90.5	B1	65.1	25.4
2	West	03:50	A2	94.6	B2	68.9	25.7
3	South	03:55	A3	99.3	B3	72.5	26.8
4	North	04:00	A4	93.8	B4	66.9	26.9
			Average	**94.55**	**Average**	**68.35**	**26.2**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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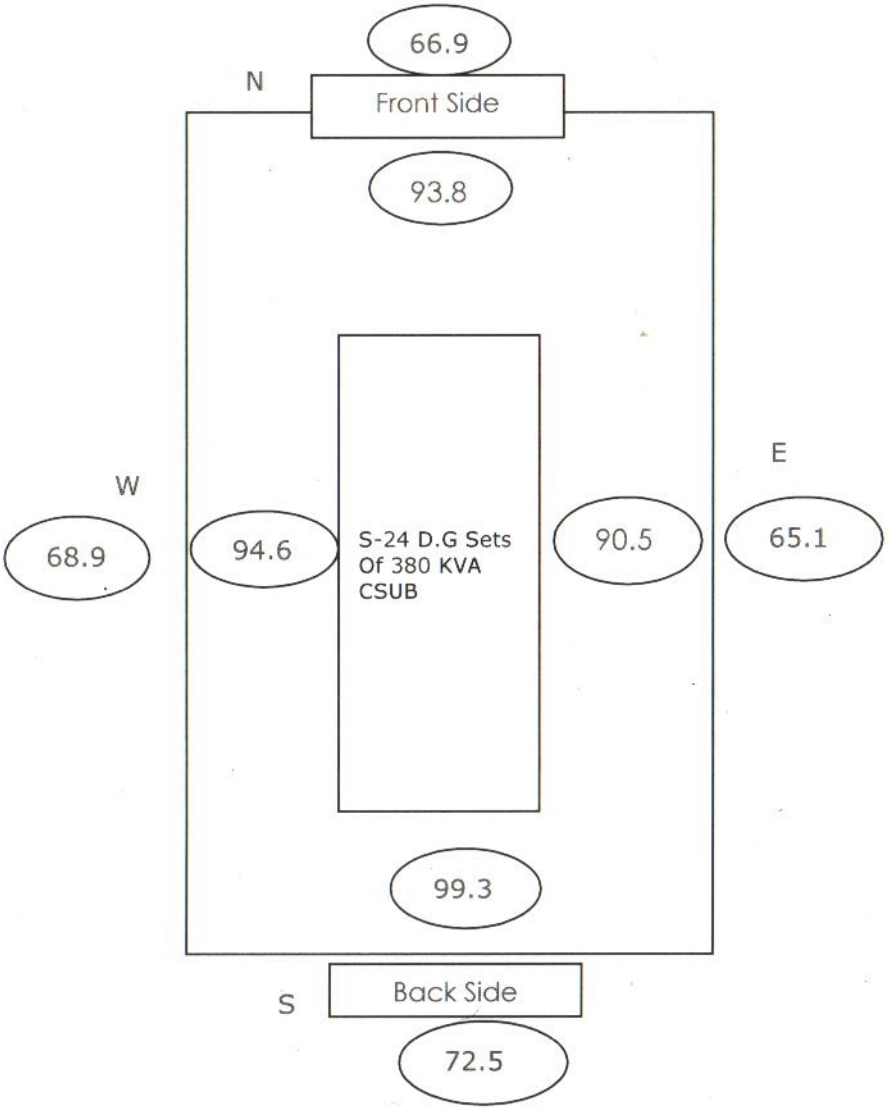
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Sample ID: N/08/24/3167	Report No.: N/08/24/3167N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-24 D.G Sets Of 380 KVA CSUB



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

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Technical Manager (Chemical)
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NOISE LEVEL MEASUREMENT REPORT

Sample ID: N/08/24/3168	Report No.: N/08/24/3168N	Report Date	14/08/2024
Name and Address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji International Airport, First Floor, Terminal 1B, Santacruz (E), Mumbai - 400099		
Monitoring Done By	Laboratory	Sample Description /Type	DG Noise Insertion Loss
Order Reference	Work Order No. 5700343880 Date-14.05.2024	Date-Monitoring	08/08/2024
Calibration Certificate	CC342223000000889F	Instrument Model	Mahabal & SLM 1699
Consent Number & Date.	1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022	Sr. No.	191207632

Chemical Testing; Group: Atmospheric Pollution

Sr No	Location	Time (h)	Sound Level dB (A) Fast Response				Difference
			A	Inside	B	Outside	
S-25 D.G Sets Of 380 KVA MLCP T1							
1	East	04:10	A1	96.6	B1	69.9	26.7
2	West	04:15	A2	98.4	B2	71.3	27.1
3	South	04:20	A3	95.1	B3	68.9	26.2
4	North	04:25	A4	92.8	B4	67.4	25.4
			Average	**95.72**	**Average**	**69.37**	**26.35**

Note: Standards as per MPCB Consent Condition Minimum 25 dB (A) insertion Loss.

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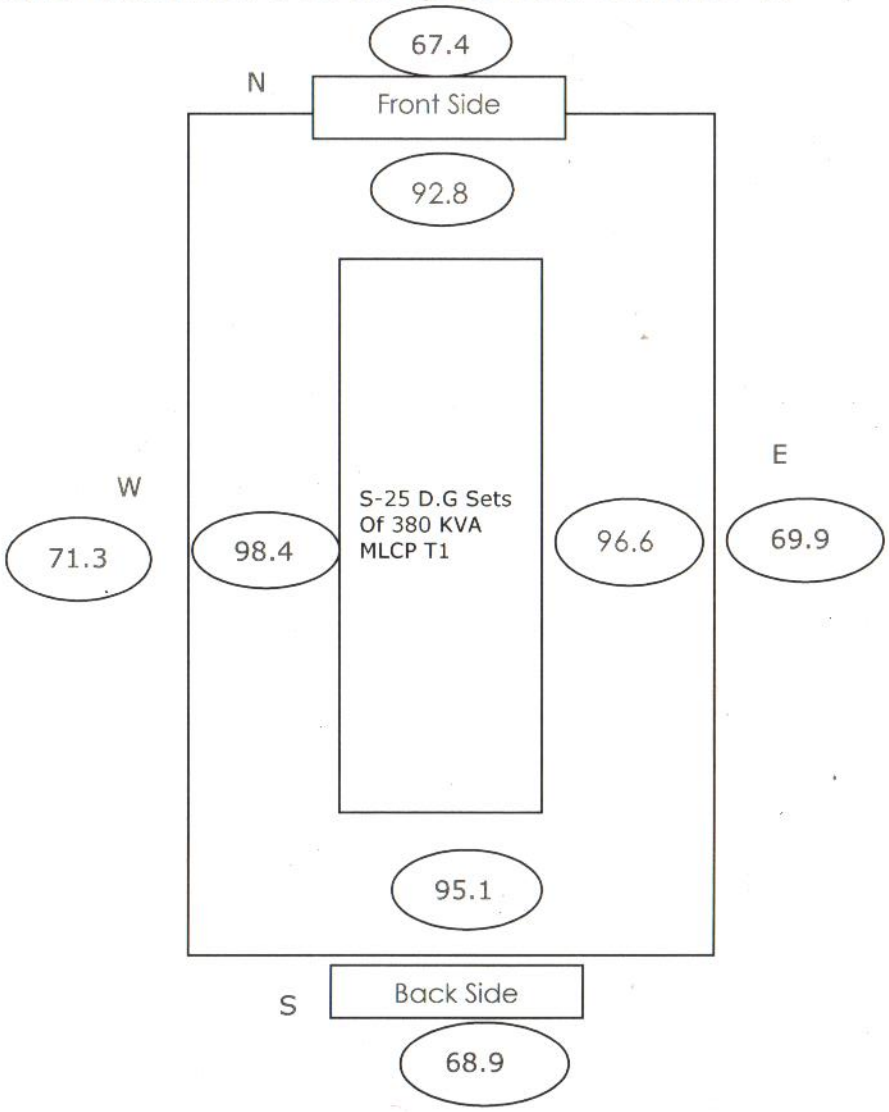
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Sample ID: N/08/24/3168	Report No.: N/08/24/3168N	Report Date	14/08/2024

Mumbai International Airport Ltd.
Chhatrapati Shivaji International Airport,
First Floor, Terminal 1B, Santacruz (E),
Mumbai – 400099.

NOISE LOCATION- S-25 D.G Sets Of 380 KVA MLCP T1



NOTE: = Readings taken from DG Set at the distance of 0.5 meter.

Ninad Soundankar
Technical Manager (Chemical)
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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5231	Report No. SA/08/24/5231	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-1
~ Stack attached to	DG Set-1 3000 KVA Utility T-2
~ Material of construction	M.S
~ Stack height above ground level	31 m
~ Stack diameter	0.50 m
~ Stack shape at top	Round
~ Type of Fuel	HSD
~ Fuel Consumption	330 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**125**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**12.76**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**6595**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**33**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**44.3**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**7**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**38.5**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5231 bears two Test Reports - SA/08/24/5231 and SA/08/24/5231N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
Technical Manager (Chemical)
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End of Report

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Sample ID : SA/08/24/5231	Report No. SA/08/24/5231	Report Date	17/08/2024

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5231	Report No. SA/08/24/5231N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-1			
~ Stack attached to	DG Set-1 3000 KVA Utility T-2			
~ Material of construction	M.S			
~ Stack height above ground level	31 m			
~ Stack diameter	0.50 m			
~ Stack shape at top	Round			
~ Type of Fuel	HSD			
~ Fuel Consumption	330 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.10**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.14**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5231 bears two Test Reports - SA/08/24/5231 and SA/08/24/5231N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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STACK EMISSION MONITORING REPORT

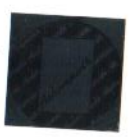
Sample ID : SA/08/24/5232	Report No. SA/08/24/5232	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-2
~ Stack attached to	DG Set-2 3000 KVA Utility T-2
~ Material of construction	M.S
~ Stack height above ground level	31 m
~ Stack diameter	0.50 m
~ Stack shape at top	Round
~ Type of Fuel	HSD
~ Fuel Consumption	330 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**114**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**12.99**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**6906**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**30**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**37.1**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**6.1**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**35.1**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5232 bears two Test Reports - SA/08/24/5232 and SA/08/24/5232N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
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Sample ID : SA/08/24/5232	Report No. SA/08/24/5232	Report Date	17/08/2024

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Sample ID : SA/08/24/5232	Report No. SA/08/24/5232N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-2			
~ Stack attached to	DG Set-2 3000 KVA Utility T-2			
~ Material of construction	M.S			
~ Stack height above ground level	31 m			
~ Stack diameter	0.50 m			
~ Stack shape at top	Round			
~ Type of Fuel	HSD			
~ Fuel Consumption	330 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.06**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.11**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5232 bears two Test Reports - SA/08/24/5232 and SA/08/24/5232N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5233	Report No. SA/08/24/5233	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-3
~ Stack attached to	DG Set-3 3000 KVA Utility T-2
~ Material of construction	M.S
~ Stack height above ground level	31 m
~ Stack diameter	0.50 m
~ Stack shape at top	Round
~ Type of Fuel	HSD
~ Fuel Consumption	330 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**125**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**13.75**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**6949**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**37**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**42.9**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**7.2**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**36.8**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5233 bears two Test Reports - SA/08/24/5233 and SA/08/24/5233N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5233	Report No. SA/08/24/5233	Report Date	17/08/2024

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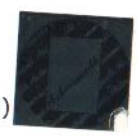
Sample ID : SA/08/24/5233	Report No. SA/08/24/5233N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

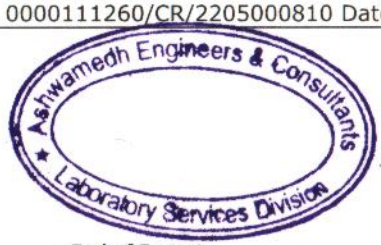
Stack Details	
~ Stack Identity	Stack-3
~ Stack attached to	DG Set-3 3000 KVA Utility T-2
~ Material of construction	M.S
~ Stack height above ground level	31 m
~ Stack diameter	0.50 m
~ Stack shape at top	Round
~ Type of Fuel	HSD
~ Fuel Consumption	330 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.23**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.12**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5233 bears two Test Reports - SA/08/24/5233 and SA/08/24/5233N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5234	Report No. SA/08/24/5234	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-4
~ Stack attached to	DG Set-4 3000 KVA Utility T-2
~ Material of construction	M.S
~ Stack height above ground level	31 m
~ Stack diameter	0.50 m
~ Stack shape at top	Round
~ Type of Fuel	HSD
~ Fuel Consumption	330 L/h

Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**112**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**13.97**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**7299**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**32**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**34.3**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**6**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**40.3**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5234 bears two Test Reports - SA/08/24/5234 and SA/08/24/5234N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5234	Report No. SA/08/24/5234	Report Date	17/08/2024

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5234	Report No. SA/08/24/5234N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-4			
~ Stack attached to	DG Set-4 3000 KVA Utility T-2			
~ Material of construction	M.S			
~ Stack height above ground level	31 m			
~ Stack diameter	0.50 m			
~ Stack shape at top	Round			
~ Type of Fuel	HSD			
~ Fuel Consumption	330 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.16**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.13**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5234 bears two Test Reports - SA/08/24/5234 and SA/08/24/5234N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
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Sample ID : SA/08/24/5235	Report No. SA/08/24/5235	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-5
~ Stack attached to	DG Set-5 3000 KVA Utility T-2
~ Material of construction	M.S
~ Stack height above ground level	31 m
~ Stack diameter	0.50 m
~ Stack shape at top	Round
~ Type of Fuel	HSD
~ Fuel Consumption	330 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**130**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**12.99**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**6631**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**30**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**31.4**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**5**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**42**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5235 bears two Test Reports - SA/08/24/5235 and SA/08/24/5235N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5235	Report No. SA/08/24/5235	Report Date	17/08/2028

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5235	Report No. SA/08/24/5235N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-5			
~ Stack attached to	DG Set-5 3000 KVA Utility T-2			
~ Material of construction	M.S			
~ Stack height above ground level	31 m			
~ Stack diameter	0.50 m			
~ Stack shape at top	Round			
~ Type of Fuel	HSD			
~ Fuel Consumption	330 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.14**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.13**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5235 bears two Test Reports - SA/08/24/5235 and SA/08/24/5235N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5236	Report No. SA/08/24/5236	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-6
~ Stack attached to	DG Set-6 3000 KVA Utility T-2
~ Material of construction	M.S
~ Stack height above ground level	31 m
~ Stack diameter	0.50 m
~ Stack shape at top	Round
~ Type of Fuel	HSD
~ Fuel Consumption	330 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**102**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**13.75**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**7545**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**36**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**37.1**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**6.7**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**33.3**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5236 bears two Test Reports - SA/08/24/5236 and SA/08/24/5236N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5236	Report No. SA/08/24/5236	Report Date	17/08/2024

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Sample ID : SA/08/24/5236	Report No. SA/08/24/5236N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-6			
~ Stack attached to	DG Set-6 3000 KVA Utility T-2			
~ Material of construction	M.S			
~ Stack height above ground level	31 m			
~ Stack diameter	0.50 m			
~ Stack shape at top	Round			
~ Type of Fuel	HSD			
~ Fuel Consumption	330 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.04**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.12**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5236 bears two Test Reports - SA/08/24/5236 and SA/08/24/5236N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
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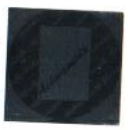
Sample ID : SA/08/24/5237	Report No. SA/08/24/5237	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-7
~ Stack attached to	DG Set 625 KVA Terminal 1A
~ Material of construction	M.S
~ Stack height above ground level	22.7 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**103**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**8.23**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**403**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**22**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**25.7**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.25**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**28**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5237 bears two Test Reports - SA/08/24/5237 and SA/08/24/5237N
Sampling Equipment ID: AEC/EQ/1611
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Sample ID : SA/08/24/5237	Report No. SA/08/24/5237	Report Date	17/08/2024

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Sample ID : SA/08/24/5237	Report No. SA/08/24/5237N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-7			
~ Stack attached to	DG Set 625 KVA Terminal 1A			
~ Material of construction	M.S			
~ Stack height above ground level	22.7 m			
~ Stack diameter	0.15 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	24 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.60**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.07**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5237 bears two Test Reports - SA/08/24/5237 and SA/08/24/5237N
Sampling Equipment ID: AEC/EQ/1611
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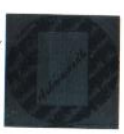
Sample ID : SA/08/24/5238	Report No. SA/08/24/5238	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-8
~ Stack attached to	DG Set 625 KVA Terminal 1A
~ Material of construction	M.S
~ Stack height above ground level	22.7 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**103**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**7.76**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**382**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**17**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**35.7**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.33**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**31.6**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5238 bears two Test Reports - SA/08/24/5238 and SA/08/24/5238N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
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Sample ID : SA/08/24/5238	Report No. SA/08/24/5238	Report Date	17/08/2024

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Sample ID : SA/08/24/5238	Report No. SA/08/24/5238N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-8			
~ Stack attached to	DG Set 625 KVA Terminal 1A			
~ Material of construction	M.S			
~ Stack height above ground level	22.7 m			
~ Stack diameter	0.15 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	24 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.91**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.17**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5238 bears two Test Reports - SA/08/24/5238 and SA/08/24/5238N
Sampling Equipment ID: AEC/EQ/1611
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Sample ID : SA/08/24/5239	Report No. SA/08/24/5239	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-9			
~ Stack attached to	DG Set 1010 KVA Terminal-1C			
~ Material of construction	M.S			
~ Stack height above ground level	24.7 m			
~ Stack diameter	0.30 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	55 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**123**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**11.47**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**2145**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**34**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**38.6**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**1.99**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**40.3**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5239 bears two Test Reports - SA/08/24/5239 and SA/08/24/5239N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5239	Report No. SA/08/24/5239	Report Date	17/08/2024

Ninad Soundankar
Technical Manager (Chemical)
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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5239	Report No. SA/08/24/5239N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-9
~ Stack attached to	DG Set 1010 KVA Terminal-1C
~ Material of construction	M.S
~ Stack height above ground level	24.7 m
~ Stack diameter	0.30 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	55 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.01**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.41**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5239 bears two Test Reports - SA/08/24/5239 and SA/08/24/5239N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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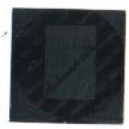
STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5240	Report No. SA/08/24/5240	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-10			
~ Stack attached to	DG Set 1010 KVA Terminal-1C			
~ Material of construction	M.S			
~ Stack height above ground level	24.7 m			
~ Stack diameter	0.30 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	55 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**131**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**12.87**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**2402**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**31**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**37.1**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**2.14**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**43.6**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5240 bears two Test Reports - SA/08/24/5240 and SA/08/24/5240N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5240	Report No. SA/08/24/5240	Report Date	17/08/2024

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Ninad Soundankar
Technical Manager (Chemical)
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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5240	Report No. SA/08/24/5240N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-10
~ Stack attached to	DG Set 1010 KVA Terminal-1C
~ Material of construction	M.S
~ Stack height above ground level	24.7 m
~ Stack diameter	0.30 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	55 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.1**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.16**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5240 bears two Test Reports - SA/08/24/5240 and SA/08/24/5240N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5241	Report No. SA/08/24/5241	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-11
~ Stack attached to	DG Set 625 KVA Terminal-1C
~ Material of construction	M.S
~ Stack height above ground level	22.7 m
~ Stack diameter	0.20 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	25 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**110**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**9.93**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**868**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**29**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**31.4**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.65**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**29.8**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5241 bears two Test Reports - SA/08/24/5241 and SA/08/24/5241N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
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Sample ID : SA/08/24/5241	Report No. SA/08/24/5241	Report Date	17/08/2028

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Technical Manager (Chemical)
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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5241	Report No. SA/08/24/5241N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-11			
~ Stack attached to	DG Set 625 KVA Terminal-1C			
~ Material of construction	M.S			
~ Stack height above ground level	22.7 m			
~ Stack diameter	0.20 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	25 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.80**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.21**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5241 bears two Test Reports - SA/08/24/5241 and SA/08/24/5241N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
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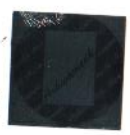
STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5242	Report No. SA/08/24/5242	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-12			
~ Stack attached to	DG Set 500 KVA CCR-2			
~ Material of construction	M.S			
~ Stack height above ground level	3 m			
~ Stack diameter	0.15 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	40 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**137**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**9.75**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**434**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**27**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**28.6**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.30**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**43.8**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5242 bears two Test Reports - SA/08/24/5242 and SA/08/24/5242N
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Sample ID : SA/08/24/5242	Report No. SA/08/24/5242	Report Date	17/08/2024

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Sample ID : SA/08/24/5242	Report No. SA/08/24/5242N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details				
~ Stack Identity	Stack-12			
~ Stack attached to	DG Set 500 KVA CCR-2			
~ Material of construction	M.S			
~ Stack height above ground level	3 m			
~ Stack diameter	0.15 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	40 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.97**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.10**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5242 bears two Test Reports - SA/08/24/5242 and SA/08/24/5242N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5243	Report No. SA/08/24/5243	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-13
~ Stack attached to	DG Set 625 KVA CCR-2
~ Material of construction	M.S
~ Stack height above ground level	3 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	45 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**122**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**8.75**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**410**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**24**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**24.3**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.24**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**36.8**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5243 bears two Test Reports - SA/08/24/5243 and SA/08/24/5243N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5243	Report No. SA/08/24/5243	Report Date	17/08/2024

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Sample ID : SA/08/24/5243	Report No. SA/08/24/5243N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-13
~ Stack attached to	DG Set 625 KVA CCR-2
~ Material of construction	M.S
~ Stack height above ground level	3 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	45 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.13**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.18**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5243 bears two Test Reports - SA/08/24/5243 and SA/08/24/5243N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5244	Report No. SA/08/24/5244	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-14
~ Stack attached to	DG Set-1 750 KVA CCR-1
~ Material of construction	M.S
~ Stack height above ground level	15 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	60 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**130**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**9.33**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**428**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**36**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**40**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.41**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**42**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5244 bears two Test Reports - SA/08/24/5244 and SA/08/24/5244N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5244	Report No. SA/08/24/5244	Report Date	17/08/2024

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Sample ID : SA/08/24/5244	Report No. SA/08/24/5244N	Report Date	17/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	07/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	16/08/2024

Stack Details	
~ Stack Identity	Stack-14
~ Stack attached to	DG Set-1 750 KVA CCR-1
~ Material of construction	M.S
~ Stack height above ground level	15 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	60 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.17**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.15**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5244 bears two Test Reports - SA/08/24/5244 and SA/08/24/5244N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
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Sample ID : SA/08/24/5245	Report No. SA/08/24/5245	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-15
~ Stack attached to	DG Set-2 750 KVA CCR-1
~ Material of construction	M.S
~ Stack height above ground level	15 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	60 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**135**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**9.50**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**429**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**33**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**25.7**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.26**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**40.3**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5245 bears two Test Reports - SA/08/24/5245 and SA/08/24/5245N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5245	Report No. SA/08/24/5245	Report Date	14/08/2024

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Sample ID : SA/08/24/5245	Report No. SA/08/24/5245N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-15
~ Stack attached to	DG Set-2 750 KVA CCR-1
~ Material of construction	M.S
~ Stack height above ground level	15 m
~ Stack diameter	0.15 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	60 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.09**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.27**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5245 bears two Test Reports - SA/08/24/5245 and SA/08/24/5245N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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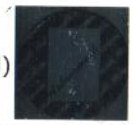
Sample ID : SA/08/24/5246	Report No. SA/08/24/5246	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-16
~ Stack attached to	DG Set 500 KVA Cargo Intake Point
~ Material of construction	M.S
~ Stack height above ground level	10 m
~ Stack diameter	0.30 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	20 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**130**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**10.10**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**1892**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**18**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**28.6**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**1.30**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**38.3**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5246 bears two Test Reports - SA/08/24/5246 and SA/08/24/5246N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5246	Report No. SA/08/24/5246	Report Date	14/08/2024

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Sample ID : SA/08/24/5246	Report No. SA/08/24/5246N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details				
~ Stack Identity	Stack-16			
~ Stack attached to	DG Set 500 KVA Cargo Intake Point			
~ Material of construction	M.S			
~ Stack height above ground level	10 m			
~ Stack diameter	0.30 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	20 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.84**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.24**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5246 bears two Test Reports - SA/08/24/5246 and SA/08/24/5246N
Sampling Equipment ID: AEC/EQ/1611
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STACK EMISSION MONITORING REPORT

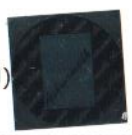
Sample ID : SA/08/24/5247	Report No. SA/08/24/5247	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-17
~ Stack attached to	DG Set 437.5 KVA Cargo Intake Point
~ Material of construction	M.S
~ Stack height above ground level	10 m
~ Stack diameter	0.20 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**136**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**10.80**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**886**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**28**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**18.6**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.40**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**45.4**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5247 bears two Test Reports - SA/08/24/5247 and SA/08/24/5247N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5247	Report No. SA/08/24/5247	Report Date	14/08/2024

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Sample ID : SA/08/24/5247	Report No. SA/08/24/5247N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-17
~ Stack attached to	DG Set 437.5 KVA Cargo Intake Point
~ Material of construction	M.S
~ Stack height above ground level	10 m
~ Stack diameter	0.20 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.68**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.21**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5247 bears two Test Reports - SA/08/24/5247 and SA/08/24/5247N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5248	Report No. SA/08/24/5248	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-18
~ Stack attached to	DG Set 250 KVA Import Ware House
~ Material of construction	M.S
~ Stack height above ground level	15 m
~ Stack diameter	0.25 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	25 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**124**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**9.04**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**1192**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**21**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**24.3**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.70**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**38.6**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5248 bears two Test Reports - SA/08/24/5248 and SA/08/24/5248N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5248	Report No. SA/08/24/5248	Report Date	14/08/2024

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Sample ID : SA/08/24/5248	Report No. SA/08/24/5248N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-18
~ Stack attached to	DG Set 250 KVA Import Ware House
~ Material of construction	M.S
~ Stack height above ground level	15 m
~ Stack diameter	0.25 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	25 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.59**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.18**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5248 bears two Test Reports - SA/08/24/5248 and SA/08/24/5248N
Sampling Equipment ID: AEC/EQ/1611
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Sample ID : SA/08/24/5249	Report No. SA/08/24/5249	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details				
~ Stack Identity	Stack-19			
~ Stack attached to	DG Set 650 KVA Terminal-1A			
~ Material of construction	M.S			
~ Stack height above ground level	3 m			
~ Stack diameter	0.10 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	110 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**140**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**9.87**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**200**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**29**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**27.1**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.13**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**43.6**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5249 bears two Test Reports - SA/08/24/5249 and SA/08/24/5249N
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Sample ID : SA/08/24/5249	Report No. SA/08/24/5249	Report Date	14/08/2024

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Sample ID : SA/08/24/5249	Report No. SA/08/24/5249N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-19
~ Stack attached to	DG Set 650 KVA Terminal-1A
~ Material of construction	M.S
~ Stack height above ground level	3 m
~ Stack diameter	0.10 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	110 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.06**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.23**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5249 bears two Test Reports - SA/08/24/5249 and SA/08/24/5249N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5250	Report No. SA/08/24/5250	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-20
~ Stack attached to	DG Set 500 KVA Import Cold Zone
~ Material of construction	M.S
~ Stack height above ground level	8 m
~ Stack diameter	0.25 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**132**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**12.41**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**1607**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**31**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**22.9**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.88**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**42**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5250 bears two Test Reports - SA/08/24/5250 and SA/08/24/5250N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5250	Report No. SA/08/24/5250	Report Date	14/08/2024

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5250	Report No. SA/08/24/5250N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-20
~ Stack attached to	DG Set 500 KVA Import Cold Zone
~ Material of construction	M.S
~ Stack height above ground level	8 m
~ Stack diameter	0.25 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.17**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.09**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5250 bears two Test Reports - SA/08/24/5250 and SA/08/24/5250N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Technical Manager (Chemical)
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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5251	Report No. SA/08/24/5251	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-21
~ Stack attached to	DG Set 125 KVA Coporate Aviation Terminal
~ Material of construction	M.S
~ Stack height above ground level	12 m
~ Stack diameter	0.10 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**122**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**10.50**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**223**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**16**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**15.7**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.08**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**36.7**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5251 bears two Test Reports - SA/08/24/5251 and SA/08/24/5251N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5251	Report No. SA/08/24/5251	Report Date	14/08/2024

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5251	Report No. SA/08/24/5251N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details				
~ Stack Identity	Stack-21			
~ Stack attached to	DG Set 125 KVA Coporate Aviation Terminal			
~ Material of construction	M.S			
~ Stack height above ground level	12 m			
~ Stack diameter	0.10 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	24 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.62**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.23**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5251 bears two Test Reports - SA/08/24/5251 and SA/08/24/5251N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5252	Report No. SA/08/24/5252	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-22
~ Stack attached to	DG Set 2500 KVA Terminal-1C
~ Material of construction	M.S
~ Stack height above ground level	22.7 m
~ Stack diameter	0.30 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	75 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**148**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**13.17**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**2357**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**41**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**39.3**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**2.22**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**47.2**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5252 bears two Test Reports - SA/08/24/5252 and SA/08/24/5252N
Sampling Equipment ID: AEC/EQ/1611
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Sample ID : SA/08/24/5252	Report No. SA/08/24/5252	Report Date	14/08/2024

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Sample ID : SA/08/24/5252	Report No. SA/08/24/5252N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-22
~ Stack attached to	DG Set 2500 KVA Terminal-1C
~ Material of construction	M.S
~ Stack height above ground level	22.7 m
~ Stack diameter	0.30 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	75 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.21**	Not specified	mg/Nm³	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.36**	Not specified	mg/Nm³	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5252 bears two Test Reports - SA/08/24/5252 and SA/08/24/5252N
Sampling Equipment ID: AEC/EQ/1611
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Sample ID : SA/08/24/5253	Report No. SA/08/24/5253	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-23
~ Stack attached to	DG Set 625 KVA Cargo Intake Point
~ Material of construction	M.S
~ Stack height above ground level	10 m
~ Stack diameter	0.20 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**134**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**11.34**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**917**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**30**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**34.3**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.75**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**40.1**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5253 bears two Test Reports - SA/08/24/5253 and SA/08/24/5253N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5253	Report No. SA/08/24/5253	Report Date	14/08/2024

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5253	Report No. SA/08/24/5253N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-23
~ Stack attached to	DG Set 625 KVA Cargo Intake Point
~ Material of construction	M.S
~ Stack height above ground level	10 m
~ Stack diameter	0.20 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	24 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**1.20**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.22**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5253 bears two Test Reports - SA/08/24/5253 and SA/08/24/5253N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5254	Report No. SA/08/24/5254	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-24
~ Stack attached to	DG Set 380 KVA (CSUB)
~ Material of construction	M.S
~ Stack height above ground level	10 m
~ Stack diameter	0.20 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	16 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**118**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**10.26**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**864**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**23**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**20**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.41**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**29.7**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5254 bears two Test Reports - SA/08/24/5254 and SA/08/24/5254N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format-1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : SA/08/24/5254	Report No. SA/08/24/5254	Report Date	14/08/2024

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5254	Report No. SA/08/24/5254N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission.
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-24
~ Stack attached to	DG Set 380 KVA (CSUB)
~ Material of construction	M.S
~ Stack height above ground level	10 m
~ Stack diameter	0.20 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	16 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.93**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis,(AWMA) 3rd Ed. Method No.128,page No.296
Hydrocarbons (HC)	**1.11**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5254 bears two Test Reports - SA/08/24/5254 and SA/08/24/5254N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

[redacted]

Ashwamedh Engineers & Consultants
Laboratory Services Division

End of Report

Note:
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Ashwamedh Engineers & Consultants
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TC-5509

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5255	Report No. SA/08/24/5255	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details	
~ Stack Identity	Stack-25
~ Stack attached to	DG Set 380 KVA MLCP T-1
~ Material of construction	M.S
~ Stack height above ground level	3 m
~ Stack diameter	0.10 m
~ Stack shape at top	Round
~ Type of Fuel	Diesel
~ Fuel Consumption	20 L/h

Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Atmospheric Pollution				
Flue Gas Temperature	**112**	-	°C	IS 11255 (Part 3) : 2018
Flue Gas Velocity	**8.51**	-	m/s	IS 11255 (Part 3) : 2018
Flue Gas Flow Rate	**185**	-	Nm^3/h	IS 11255 (Part 3) : 2018
Particulate Matter (PM)	**22**	150	mg/Nm^3	IS 11255 (Part 1): 2019
Sulphur Dioxide (SO_2)	**14**	Not specified	mg/Nm^3	IS 11255 (Part 2): 2019
Sulphur Dioxide (SO_2)	**0.06**	Not specified	kg/d	IS 11255 (Part 2): 2019
Oxides of Nitrogen (NO_2)	**26.2**	Not specified	mg/Nm^3	IS 11255 (Part 7): 2017

Note: Sample ID SA/08/24/5255 bears two Test Reports - SA/08/24/5255 and SA/08/24/5255N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ninad Soundankar
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End of Report

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Sample ID : SA/08/24/5255	Report No. SA/08/24/5255	Report Date	14/08/2024

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STACK EMISSION MONITORING REPORT

Sample ID : SA/08/24/5255	Report No. SA/08/24/5255N	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Stack Emission
Sample Quantity / Packing	PM: 1 x 1 no. thimble SO_2: 30 ml x 1 no. plastic bottle NO_2: 25 ml x 1 no. plastic bottle CO, HC: 1 x 2 no. bladder	Date - Sampling	08/08/2024
		Date - Receipt of Sample	10/08/2024
Sampling Procedure	IS 11255 (Part 1):2019, (Part 2):2019, (Part 3):2018, (Part 7):2017	Date - Start of Analysis	10/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	14/08/2024

Stack Details				
~ Stack Identity	Stack-25			
~ Stack attached to	DG Set 380 KVA MLCP T-1			
~ Material of construction	M.S			
~ Stack height above ground level	3 m			
~ Stack diameter	0.10 m			
~ Stack shape at top	Round			
~ Type of Fuel	Diesel			
~ Fuel Consumption	20 L/h			
Parameter	**Result**	**Limits as per MPCB Consent**	**Unit**	**Method**
Chemical Testing; Group: Atmospheric Pollution				
Carbon Monoxide (CO)	**0.78**	Not specified	mg/Nm^3	Intersociety Committee Methods of Air sampling & Analysis.(AWMA) 3rd Ed. Method No.128.page No.296
Hydrocarbons (HC)	**1.22**	Not specified	mg/Nm^3	IS 5182 (Part 17):1979

Note: Sample ID SA/08/24/5255 bears two Test Reports - SA/08/24/5255 and SA/08/24/5255N
Sampling Equipment ID: AEC/EQ/1611
Calibration Certificate No.: CC342223000001523F dated 12.12.2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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TEST REPORT

Sample ID : E/05/24/5002	Report No. E/05/24/5002	Report Date	07/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal 1 STP RO Outlet	Date - Sampling	30/04/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	02/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	06/05/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.5**	5.5 - 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**14**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**3**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**1.6**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**3.2**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.244**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**32**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
Reviewed & Authorised by

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End of Report

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Technical Manager (Chemical)
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Sample ID : E/05/24/5002	Report No. E/05/24/5002	Report Date	07/05/2024

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TEST REPORT

Sample ID : E/05/24/5004	Report No. E/05/24/5004	Report Date	07/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal 2 STP RO Outlet	Date - Sampling	30/04/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	02/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	06/05/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.7**	5.5-9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**12**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**4**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**13**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.2**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**5.3**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.240**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**40**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
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End of Report

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Sample ID : E/05/24/5004	Report No. E/05/24/5004	Report Date	07/05/2024

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TEST REPORT

Sample ID : E/05/24/5005	Report No. E/05/24/5005	Report Date	07/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Cargo STP Inlet	Date -Sampling	30/04/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	02/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	06/05/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.6**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**99**	mg/L	IS 3025 (Part 17) Amds 1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**173**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**520**	mg/L	APHA,24th Ed.,5220.B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520.B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**25.8**	mg/L	APHA,24th Ed.,4500- NH3.B & C,424 & 425: 2023
7	Total Nitrogen (as N)	**34.5**	mg/L	APHA,24th Ed.,4500.A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.248**	mg/L	APHA,24th Ed.,4500- Cl.G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**220**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
Reviewed & Authorised by

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Laboratory Services Division

End of Report

Ninad Soundankar
Technical Manager (Chemical)
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TEST REPORT

Sample ID : E/05/24/5006	Report No. E/05/24/5006	Report Date	07/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Cargo STP Outlet	Date - Sampling	30/04/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	02/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	06/05/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution &Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.65**	5.5-9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**13**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**5**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**16**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.4**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**5.1**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.228**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**27**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
Reviewed & Authorised by

Ashwamedh Engineers & Consultants
End of Report
Laboratory Services Division

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Technical Manager (Chemical)
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Sample ID : E/05/24/5006	Report No. E/05/24/5006	Report Date	07/05/2024

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TEST REPORT

Sample ID : E/05/24/5001	Report No. E/05/24/5001	Report Date	07/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal 1 STP Inlet	Date -Sampling	30/04/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	02/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	06/05/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**8.9**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**92**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**151**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**440**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**24.6**	mg/L	APHA,24th Ed.,4500- NH3,B & C,424 & 425: 2023
7	Total Nitrogen (as N)	**31.5**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.238**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**220**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
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Ninad Soundankar
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Reviewed & Authorised by

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TEST REPORT

Sample ID : E/05/24/5003	Report No. E/05/24/5003	Report Date	07/05/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal 2 STP Inlet	Date -Sampling	30/04/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	02/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	02/05/2024
Order Reference	SO No. 5700343880	Date - Completion of Analysis	06/05/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**6.9**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**104**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**191**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**540**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**31.4**	mg/L	APHA,24th Ed.,4500- NH3,B & C,424 & 425: 2023
7	Total Nitrogen (as N)	**38.7**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.232**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**240**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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TEST REPORT

Sample ID : E/05/24/5153	Report No. E/05/24/5153	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-1 STP RO Outlet	Date - Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of Sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.58**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**12**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**3**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	Not to exceed 50	mg/L	APHA,24th Ed.,5220.B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520.B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**1.4**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3. F,429: 2023
7	Total Nitrogen (as N)	**3.0**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.208**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**39**	Less Than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/05/24/5153	Report No. E/05/24/5153	Report Date	04/06/2024

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TEST REPORT

Sample ID : E/05/24/5156	Report No. E/05/24/5156	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-2 STP RO Outlet	Date - Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of Sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.76**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**14**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**5**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**17**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.7**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**5.9**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.257**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**46**	Less Than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/05/24/5156	Report No. E/05/24/5156	Report Date	04/06/2024

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TEST REPORT

Sample ID : E/05/24/5157	Report No. E/05/24/5157	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Cargo STP Inlet	Date -Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.2**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**94**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**171**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**500**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**22.4**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**30.1**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.221**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**170**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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TEST REPORT

Sample ID : E/05/24/5158	Report No. E/05/24/5158	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Cargo STP Outlet	Date - Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of Sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.6**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**11**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**4**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**13**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.1**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**4.3**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.218**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**39**	Less Than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/05/24/5158	Report No. E/05/24/5158	Report Date	04/06/2024

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TEST REPORT

Sample ID : E/05/24/5154	Report No. E/05/24/5154	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Unreated Sewage Effluent
Sampling Location	Terminal-1 STP Inlet	Date -Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.0**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**88**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**144**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**420**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**20.2**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**28.1**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.208**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**170**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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TEST REPORT

Sample ID : E/05/24/5155	Report No. E/05/24/5155	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-2 STP Inlet	Date -Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**6.98**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**98**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**200**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**600**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**34.7**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**36.5**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.244**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**220**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
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Ashwamedh Engineers & Consultants
Laboratory Services Division

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

End of Report

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TC-5509

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TEST REPORT

Sample ID : E/05/24/5159	Report No. E/05/24/5159	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Effluent
Sampling Location	Terminal-1 RO Reject Water	Date -Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can	Date - Receipt of sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**8.4**	-	IS 3025 (Part 11): 2017
2	Chemical Oxygen Demand	**90**	mg/L	APHA,24th Ed.,5220,B,544: 2023
3	Total Dissolved Solids	**864**	mg/L	IS 3025 (Part 16) : 2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022				

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Technical Manager (Chemical)
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TEST REPORT

Sample ID : E/05/24/5160	Report No. E/05/24/5160	Report Date	04/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Effluent
Sampling Location	Terminal-2 RO Reject Water	Date -Sampling	29/05/2024
Sample Quantity / Packing	2 L x 1 no. plastic can	Date - Receipt of sample	30/05/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44	Date - Start of Analysis	30/05/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	03/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**8.9**	-	IS 3025 (Part 11): 2017
2	Chemical Oxygen Demand	**170**	mg/L	APHA,24th Ed.,5220,B,544: 2023
3	Total Dissolved Solids	**1398**	mg/L	IS 3025 (Part 16) : 2023
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022				

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TEST REPORT

Sample ID : E/06/24/5092	Report No. E/06/24/5092	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-1 STP Inlet	Date -Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.3**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**80**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**133**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**400**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Total Nitrogen (as N)	**30.3**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
7	Free Residual Chlorine (as Cl_2)	**0.236**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
8	Ammonical Nitrogen (as NH_3-N)	**24.6**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**130**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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TEST REPORT

Sample ID : E/06/24/5093	Report No. E/06/24/5093	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-1 STP RO Outlet	Date - Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.66**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**13**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**5**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**15**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Total Nitrogen (as N)	**3.5**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
7	Free Residual Chlorine (as Cl_2)	**0.243**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
8	Ammonical Nitrogen (as NH_3-N)	**1.2**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**34**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/06/24/5093	Report No. E/06/24/5093	Report Date	25/06/2024

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TEST REPORT

Sample ID : E/06/24/5094	Report No. E/06/24/5094	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-2 STP Inlet	Date -Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**6.82**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**87**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**192**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**560**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Total Nitrogen (as N)	**42.7**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
7	Free Residual Chlorine (as Cl_2)	**0.240**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
8	Ammonical Nitrogen (as NH_3-N)	**39.2**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**240**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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TEST REPORT

Sample ID : E/06/24/5095	Report No. E/06/24/5095	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-2 RO Outlet	Date - Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.8**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**15**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**4**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**12**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Total Nitrogen (as N)	**5.1**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
7	Free Residual Chlorine (as Cl_2)	**0.245**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
8	Ammonical Nitrogen (as NH_3-N)	**2.9**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**49**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/06/24/5095	Report No. E/06/24/5095	Report Date	25/06/2024

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TEST REPORT

Sample ID : E/06/24/5096	Report No. E/06/24/5096	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Cargo STP Inlet	Date -Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.8**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**86**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**157**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**460**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Total Nitrogen (as N)	**36.2**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
7	Free Residual Chlorine (as Cl_2)	**0.228**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
8	Ammonical Nitrogen (as NH_3-N)	**29.1**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**140**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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TEST REPORT

Sample ID : E/06/24/5097	Report No. E/06/24/5097	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Cargo STP Outlet	Date - Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	19/06/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.72**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**14**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**3**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Total Nitrogen (as N)	**4.8**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
7	Free Residual Chlorine (as Cl_2)	**0.231**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
8	Ammonical Nitrogen (as NH_3-N)	**2.4**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**47**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
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Reviewed & Authorised by

End of Report

Ashwamedh
Engineers & Consultants
Laboratory Services Division

TC-5509

Ashwamedh Engineers & Consultants
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Sample ID : E/06/24/5097	Report No. E/06/24/5097	Report Date	25/06/2024

Akshata Pagare
Senior Analyst (Biological)
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Ashwamedh Engineers & Consultants
Laboratory Services Division

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

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Laboratory Services Division

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TEST REPORT

Sample ID : E/07/24/5145	Report No. E/07/24/5145	Report Date	01/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-1 STP Inlet	Date -Sampling	26/07/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of sample	27/07/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	31/07/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.0**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**76**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**123**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**380**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**21.3**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**28.2**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.235**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Microbiological Parameters				
9	Faecal Coliforms	**110**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
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Laboratory Services Division

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TEST REPORT

Sample ID : E/07/24/5146	Report No. E/07/24/5146	Report Date	01/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-1 STP RO Outlet	Date - Sampling	26/07/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of Sample	27/07/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	31/07/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.5**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**11**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**4**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**12**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**1.05**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**3.1**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.237**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Microbiological Parameters					
9	Faecal Coliforms	**32**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
Reviewed & Authorised by

Ashwamedh Engineers & Consultants
Laboratory Services Division

Ninad Soundankar
Technical Manager (Chemical)
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End of Report

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Sample ID : E/07/24/5146	Report No. E/07/24/5146	Report Date	01/08/2024

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TEST REPORT

Sample ID : E/07/24/5147	Report No. E/07/24/5147	Report Date	01/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-2 STP Inlet	Date -Sampling	26/07/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of sample	27/07/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	31/07/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**6.96**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**94**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**200**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**600**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**42.6**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**46.5**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.239**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Microbiological Parameters				
9	Faecal Coliforms	**220**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
Senior Analyst (Biological)
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TEST REPORT

Sample ID : E/07/24/5148	Report No. E/07/24/5148	Report Date	01/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-2 STP RO Outlet	Date - Sampling	26/07/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of Sample	27/07/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	31/07/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.73**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**14**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**5**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**16**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.7**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**4.8**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.231**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Microbiological Parameters					
9	Faecal Coliforms	**46**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/07/24/5148	Report No. E/07/24/5148	Report Date	01/08/2024

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TEST REPORT

Sample ID : E/07/24/5149	Report No. E/07/24/5149	Report Date	01/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Cargo STP Inlet	Date -Sampling	26/07/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of sample	27/07/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	31/07/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.6**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**90**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**167**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**490**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**34.7**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**41.7**	mg/kg	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.233**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Microbiological Parameters				
9	Faecal Coliforms	**170**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Senior Analyst (Biological)
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TEST REPORT

Sample ID : E/07/24/5150	Report No. E/07/24/5150	Report Date	01/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Cargo STP Outlet	Date - Sampling	26/07/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 No. Sterile Bottle	Date - Receipt of Sample	27/07/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	27/07/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	31/07/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.6**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**10**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.I: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**3**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	Not to exceed 50	mg/L	APHA,24th Ed.,5220.B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520.B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.2**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3. F,429: 2023
7	Total Nitrogen (as N)	**5.1**	Not to exceed 10	mg/kg	APHA,24th Ed.,4500.A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.234**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Microbiological Parameters					
9	Faecal Coliforms	**40**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Senior Analyst (Biological)
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Sample ID : E/07/24/5150	Report No. E/07/24/5150	Report Date	01/08/2024

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TEST REPORT

Sample ID : E/08/24/5057	Report No. E/08/24/5057	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-1 STP Inlet	Date -Sampling	08/08/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	09/08/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	13/08/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**8.9**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**76**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**113**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**370**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**21.3**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**26.4**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.240**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**110**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ulka Belan
Quality Manager
Reviewed & Authorised by

Ashwamedh Engineers & Consultants
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Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

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End of Report

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Ashwamedh
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Laboratory Services Division

TC-5509

Ashwamedh Engineers & Consultants
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TEST REPORT

Sample ID : E/08/24/5058	Report No. E/08/24/5058	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-1 STP RO Outlet	Date - Sampling	08/08/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	09/08/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	13/08/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.5**	5.5-9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**10**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**3**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**14**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**1.1**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**3**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.235**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**27**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ulka Belan
Quality Manager
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Technical Manager (Chemical)
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Sample ID : E/08/24/5058	Report No. E/08/24/5058	Report Date	14/08/2024

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End of Report

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TEST REPORT

Sample ID : E/08/24/5059	Report No. E/08/24/5059	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-2 STP Inlet	Date -Sampling	08/08/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	09/08/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	13/08/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**6.94**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**92**	mg/L	IS 3025 (Part 17) Amds.I: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**195**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**620**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**33.6**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**46.3**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.236**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**220**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Quality Manager
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End of Report

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TEST REPORT

Sample ID : E/08/24/5060	Report No. E/08/24/5060	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-2 STP RO Outlet	Date - Sampling	08/08/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	09/08/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	13/08/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.73**	5.5-9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**12**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**5**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**22**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.62**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**4.4**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.246**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**40**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ulka Belan
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Sample ID : E/08/24/5060	Report No. E/08/24/5060	Report Date	14/08/2024

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TEST REPORT

Sample ID : E/08/24/5061	Report No. E/08/24/5061	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Cargo STP Inlet	Date -Sampling	08/08/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of sample	09/08/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	13/08/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**10.1**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**80**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**171**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**500**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**25.8**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**30.2**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.243**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**170**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Ulka Belan
Quality Manager
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Ninad Soundankar
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Reviewed & Authorised by

End of Report

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TEST REPORT

Sample ID : E/08/24/5062	Report No. E/08/24/5062	Report Date	14/08/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Cargo STP Outlet	Date - Sampling	08/08/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle 250 ml x 1 no. Sterile bottle	Date - Receipt of Sample	09/08/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	09/08/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	13/08/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.5**	5.5-9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**13**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**5**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**16**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.3**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**3.7**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.224**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**39**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/08/24/5062	Report No. E/08/24/5062	Report Date	14/08/2024

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TEST REPORT

Sample ID : E/09/24/5162	Report No. E/09/24/5162	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-1 STP RO Outlet	Date - Sampling	28/09/2024
Sample Quantity / Packing	2 L X 1 no. plastic can 1 L x 1 no. glass bottle 250ml x 1 No.Sterile Bottle	Date - Receipt of Sample	30/09/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.45**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**12**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**4**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**17**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**1.15**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**4**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.242**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**27**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/09/24/5162	Report No. E/09/24/5162	Report Date	05/10/2024

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TEST REPORT

Sample ID : E/09/24/5164	Report No. E/09/24/5164	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Terminal-2 STP RO Outlet	Date - Sampling	28/09/2024
Sample Quantity / Packing	2 L X 1 no. plastic can 1 L x 1 no. glass bottle 250ml x 1 No.Sterile Bottle	Date - Receipt of Sample	30/09/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.5**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**14**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**5**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**20**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.8**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**4.9**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.240**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**46**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

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Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/09/24/5164	Report No. E/09/24/5164	Report Date	05/10/2024

Akshata Pagare
Senior Analyst (Biological)
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Ashwamedh Engineers & Consultants
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Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

End of Report

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Laboratory Services Division

TC-5509

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TEST REPORT

Sample ID : E/09/24/5166	Report No. E/09/24/5166	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Treated Sewage Effluent
Sampling Location	Cargo STP Outlet	Date - Sampling	28/09/2024
Sample Quantity / Packing	2 L X 1 no. plastic can 1 L x 1 no. glass bottle 250ml x 1 No.Sterile Bottle	Date - Receipt of Sample	30/09/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Sr.No.	Parameter	Result	Limits as per MPCB Consent	Unit	Method
Chemical Testing; Group: Pollution & Environment					
Physical & Chemical Parameters					
1	pH (at 25°C)	**7.6**	5.5 to 9.0	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**13**	Not to exceed 20	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**4**	Not to exceed 10	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**15**	Not to exceed 50	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	Not specified	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**2.6**	Not to exceed 5	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**4.4**	Not to exceed 10	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.239**	Not specified	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution					
Bacteriological Parameters					
9	Faecal Coliforms	**39**	Less than 100	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Sample ID : E/09/24/5166	Report No. E/09/24/5166	Report Date	05/10/2024

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TEST REPORT

Sample ID : E/09/24/5161	Report No. E/09/24/5161	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-1 STP Inlet	Date -Sampling	28/09/2024
Sample Quantity / Packing	2 L X 1 no. plastic can 1 L x 1 no. glass bottle 250ml x 1 No.Sterile Bottle	Date - Receipt of sample	30/09/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.1**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**84**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**119**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**390**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**22.4**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**30.3**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.235**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**110**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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TEST REPORT

Sample ID : E/09/24/5163	Report No. E/09/24/5163	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Terminal-2 STP Inlet	Date -Sampling	28/09/2024
Sample Quantity / Packing	2 L X 1 no. plastic can 1 L x 1 no. glass bottle 250ml x 1 No.Sterile Bottle	Date - Receipt of sample	30/09/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**6.99**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**98**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**207**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**640**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**38.1**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**50.6**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.238**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**220**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

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Senior Analyst (Biological)
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Ashwamedh Engineers & Consultants
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Ninad Soundankar
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Reviewed & Authorised by

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TEST REPORT

Sample ID : E/09/24/5165	Report No. E/09/24/5165	Report Date	05/10/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Untreated Sewage Effluent
Sampling Location	Cargo STP Inlet	Date -Sampling	28/09/2024
Sample Quantity / Packing	2 L X 1 no. plastic can 1 L x 1 no. glass bottle 250ml x 1 No.Sterile Bottle	Date - Receipt of sample	30/09/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44, & 9060 A, 1094, 9060 B, 1097, ISO 19458:2006	Date - Start of Analysis	30/09/2024
Order Reference	SO No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	04/10/2024

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
Physical & Chemical Parameters				
1	pH (at 25°C)	**9.7**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**88**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**177**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**580**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Ammonical Nitrogen (as NH_3-N)	**29.1**	mg/L	APHA,24th Ed.,4500- NH3, F,429: 2023
7	Total Nitrogen (as N)	**35.5**	mg/L	APHA,24th Ed.,4500,A,415: 2023
8	Free Residual Chlorine (as Cl_2)	**0.232**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
Biological Testing; Group: Environment & Pollution				
Bacteriological Parameters				
9	Faecal Coliforms	**170**	MPN Index /100 ml	APHA, 24th Ed., 9221-E, 1142: 2023

BLQ: Below Limit of Quantification, LOQ: Limit of Quantification
Consent Number & Date: Format 1.0/CAC/UAN NO. 0000111260/CR/2205000810 Date 13.05.2022

Akshata Pagare
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TEST REPORT

Sample ID : E/06/24/0201	Report No. E/06/24/0201	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Effluent
Sampling Location	Oil Interceptor Sample - 5	Date -Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44	Date - Start of Analysis	19/06/2024
Order Reference	S.O. No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024
Consent Number & Date: Format 1.0/CAC/UAN No. 0000111260/CR/2205000810 Dated 13.05.2022			

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
1	pH (at 25°C)	**6.87**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**18**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**2**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Free Residual Chlorine (as Cl_2)	**0.23**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
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TEST REPORT

Sample ID : E/06/24/0202	Report No. E/06/24/0202	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Effluent
Sampling Location	Oil Interceptor Sample - M-4	Date-Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44	Date - Start of Analysis	19/06/2024
Order Reference	S.O. No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024
Consent Number & Date: Format 1.0/CAC/UAN No. 0000111260/CR/2205000810 Dated 13.05.2022			

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
1	pH (at 25°C)	**6.71**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**16**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**2**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Free Residual Chlorine (as Cl_2)	**0.23**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
BLQ: Below Limit of Quantification, LOQ: Limit of Quantification				

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TEST REPORT

Sample ID : E/06/24/0203	Report No. E/06/24/0203	Report Date	27/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Effluent
Sampling Location	Oil Interceptor Sample - M-7	Date-Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44	Date - Start of Analysis	19/06/2024
Order Reference	S.O. No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	26/06/2024
Consent Number & Date: Format 1.0/CAC/UAN No. 0000111260/CR/2205000810 Dated 13.05.2022			

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
1	pH (at 25°C)	**6.92**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**14**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**2**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Free Residual Chlorine (as Cl_2)	**0.24**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
BLQ: Below Limit of Quantification, LOQ: Limit of Quantification				

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TEST REPORT

Sample ID : E/06/24/0204	Report No. E/06/24/0204	Report Date	27/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Effluent
Sampling Location	Oil Interceptor Sample - K	Date-Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44	Date - Start of Analysis	19/06/2024
Order Reference	S.O. No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	26/06/2024
Consent Number & Date: Format 1.0/CAC/UAN No. 0000111260/CR/2205000810 Dated 13.05.2022			

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
1	pH (at 25°C)	**6.54**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**8**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**2**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**10**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Free Residual Chlorine (as Cl_2)	**0.24**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
BLQ: Below Limit of Quantification, LOQ: Limit of Quantification				

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TEST REPORT

Sample ID : E/06/24/0205	Report No. E/06/24/0205	Report Date	25/06/2024
Name and address of Customer	**Mumbai International Airport Ltd.** Chhatrapati Shivaji Maharaj International Airport, 1st Floor, Terminal 1-B, Santacruz(E), Mumbai-400099,Maharashtra		
Sampling done by	Laboratory	Sample Description / Type	Effluent
Sampling Location	Oil Interceptor Sample - G	Date-Sampling	18/06/2024
Sample Quantity / Packing	2 L x 1 no. plastic can 1 L x 1 no. glass bottle	Date - Receipt of sample	19/06/2024
Sampling Procedure	APHA,24th Ed.,2023, 1060 B, 44	Date - Start of Analysis	19/06/2024
Order Reference	S.O. No. 5700343880 dated 14.05.2024	Date - Completion of Analysis	24/06/2024
Consent Number & Date: Format 1.0/CAC/UAN No. 0000111260/CR/2205000810 Dated 13.05.2022			

Sr.No.	Parameter	Result	Unit	Method
Chemical Testing; Group: Pollution & Environment				
1	pH (at 25°C)	**7.40**	-	IS 3025 (Part 11): 2017
2	Total Suspended Solids	**7**	mg/L	IS 3025 (Part 17) Amds.1: 2017
3	Biochemical Oxygen Demand (3 days, 27°C)	**10**	mg/L	IS 3025 (Part 44): 1993
4	Chemical Oxygen Demand	**40**	mg/L	APHA,24th Ed.,5220,B,544: 2023
5	Oil & Grease	**BLQ (LOQ:1)**	mg/L	APHA,24th Ed.,5520,B,572: 2023
6	Free Residual Chlorine (as Cl_2)	**0.22**	mg/L	APHA,24th Ed.,4500- Cl,G,357 : 2023
BLQ: Below Limit of Quantification, LOQ: Limit of Quantification				

Ninad Soundankar
Technical Manager (Chemical)
Reviewed & Authorised by

Ashwamedh Engineers & Consultants * Laboratory Services Division

End of Report

Note:
1. The result listed refer only to the tested sample(s) and applicable parameter(s).
2. This report is not to be reproduced except in full, without written approval of the laboratory.
3. In case sampling is not done by laboratory, the results apply to the sample as received.
4. There are no additions to, deviations or exclusions from the method.

Annexure –5 DG Enclosures and stack







Annexure – 05 A - Consent to establish dated 21/09/2022.

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/24010437
Fax: 24023516
Website: http://mpcb.gov.in
Email: cac-cell@mpcb.gov.in

Kalpataru Point, 2nd and 4th floor, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai-400022

Infrastructure/RED/L.S.I
No:- Format1.0/CAC-CELL/UAN No.0000139579/CE/2209001403

Date: 21/09/2022

To,
Mumbai International Airport Ltd.,
Chhatrapati Shivaji Maharaj International Airport, 1st floor, CTS No. 2085 (Part), 1405 (Part) & 145-A(Part), 145-A(Part), Terminal 1-B, Santacruz (East), Mumbai-400099.

Your Service is Our Duty

Sub: Consent to Establish for proposed development of Chhatrapati Shivaji Maharaj International airport under Red/LSI category.

Ref:
1. Environment Clearance accorded by Env. Dept, GoM vide letter No. SIA/MH/MIS/127703/2019 dtd. 31/03/2020.
2. Renewal of Consent to Operate accorded by the Board vide letter Format1.0/CAC-Cell/UAN No. 0000116725/CR-2202000148 dtd. 02/02/2022.
3. Minutes of Consent Appraisal Committee meeting held on 30/08/2022.

Your application NO. MPCB-CONSENT-0000139579

For: Grant of Consent to Establish under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization / Renewal of Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundry Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I,II,III & IV annexed to this order:

1. **The Consent to Establish is granted for a period upto commissioning of project or up to 5 year whichever is earlier.**
2. **The capital investment of the project is Rs.1822 Cr. (As per undertaking submitted by pp).**
3. **The Consent to Establish is valid for proposed construction of Mumbai International Airport named as Mumbai International Airport Ltd., Chhatrapati Shivaji Maharaj International Airport, 1st floor, CTS No. 2085 (Part), 1405 (Part) & 145-A(Part), 145-A(Part), Terminal 1-B, Santacruz (East), Mumbai- 400099 on Total Plot Area of 17,06,100 SqMtrs for Construction BUA of 8,46,516.77 SqMtrs out of Total Construction BUA of 8,77,696.77 SqMtrs as per EC granted dated 31/03/2020 including utilities and services**

Sr.No	Permission Obtained	Plot Area (SqMtr)	BUA (SqMtr)
1	EC- dtd. 31/03/2020	1706100.00	877696.77
2	C to R - dtd. 02/02/2022	7700.00	31180.00

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr No	Description	Permitted (in CMD)	Standards to	Disposal
1.	Trade effluent	Nil	Nil	Nil

Sr No	Description	Permitted	Standards to	Disposal
2.	Domestic effluent	2129	As per Schedule - I	The treated sewage shall be 60% recycled for secondary purposes and remaining shall be utilized on land for gardening and/ or connected to local body sewer line with water metering system.

5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
S-1 to S-6	DG Sets of 2500 kVA x 6	06	As per Schedule -II
S-7 to S-16	DG Sets of 2000 kVA x 10	10	As per Schedule -II
S-17 to S-20	DG Sets of 1850 kVA x 4	04	As per Schedule -II
S-21 to S-25	DG Sets of 1500 kVA x 5	05	As per Schedule -II

6. **Conditions under Solid Waste Rules, 2016:**

Sr No	Type Of Waste	Quantity & UoM	Treatment	Disposal
1	Bio-degradable Waste	2.2 MT/Day	OWC followed by composting facility.	Used as Manure.
2	Non-biodegradable Waste	3.3 MT/Day	Segregation	Handed over to Auth. Vendor.

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for treatment and disposal of hazardous waste:**

Sr No	Category No.	Quantity	UoM	Treatment	Disposal
1	5.1 Used or spent oil	10000	Ltr/A	Recycle	Handed over to Auth. reprocessor.

8. This Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government agencies.
10. PP shall provide STP of adequate capacity to achieve the treated domestic effluent standard for the parameter BOD-10 mg/lit including disinfection facility.
11. The treated sewage shall be 60% recycled for secondary purposes such as toilet flushing, air-conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and/ or connected to local body sewer line with water metering system.
12. PP shall provide organic waste digester along with composting facility/bio-digester (biogas) for the treatment of wet garbage.
13. PP shall make provision of charging ports for electric vehicles at least 40% of total available parking slots.

14. PP shall submit BG of Rs. 25 Lakh towards compliance of EC and Consent conditions.

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e0e6c4c2
fcb6c706
7fa17215
579802c2

Signed by: Ashok Shingare
Member Secretary
For and on behalf of,
Maharashtra Pollution Control Board
ms@mpcb.gov.in
2022-09-21 14:44:27 IST

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	3644000.00	MPCB-DR-12557	27/06/2022	RTGS

Copy to:

1. Regional Officer, MPCB, Mumbai and Sub-Regional Officer, MPCB, Mumbai II
- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB,Sion, Mumbai

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1) A] As per your application, you have provided Sewage Treatment Plant of designed capacity 5500 CMD with SBR technology for the treatment of 2129 CMD of sewage.

B] The Applicant shall operate the sewage treatment plant (STP) to treat the sewage so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.

Sr.No	Parameters	Limiting concentration not to exceed in mg/l, except for pH
1	pH	5.5-9.0
2	BOD	10
3	COD	50
4	TSS	20
5	NH4 N	5
6	N-total	10
7	Fecal Coliform	less than 100

C] The treated sewage shall be 60% recycled for secondary purposes such as toilet flushing, air-conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and/ or connected to local body sewer line with water metering system.

2) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto.

3) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.

4) **The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act,1974 and as amended, and other provisions as contained in the said act.**

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	778.00
2.	Domestic purpose	2263.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00

5) The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time.

SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1) **As per your application, you have proposed to provide the Air pollution control (APC)system and also proposed to erect following stack (s) and to observe the following fuel pattern-**

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant	Standard
S-1 to S-6	DG Sets of 2500 kVA x 6	Acoustic Enclosure	10.00	HSD 2550 Ltr/Hr	1	SO2	1224 Kg/Day
S-7 to S-16	DG Sets of 2000 kVA x 10	Acoustic Enclosure	8.94	HSD 3400 Ltr/Hr	1	SO2	1632 Kg/Day
S-17 to S-20	DG Sets of 1850 kVA x 4	Acoustic Enclosure	8.60	HSD 1260 Ltr/Hr	1	SO2	604.80 Kg/Day
S-21 to S-25	DG Sets of 1500 kVA x 5	Acoustic Enclosure	7.75	HSD 1275 Ltr/Hr	1	SO2	612 Kg/Day

2) The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards.

Total Particular matter	Not to exceed	150 mg/Nm3

3) The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacemenalteration well before its life come to an end or erection of new pollution control equipment.

4) The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

5) **Conditions for utilities like Kitchen, Eating Places, Canteens:-**

a) The kitchen shall be provided with exhaust system chimney with oil catcher connected to chimney through ducting.

b) The toilet shall be provided with exhaust system connected to chimney through ducting.

c) The air conditioner shall be vibration proof and the noise shall not exceed 68 dB(A).

d) The exhaust hot air from A.C. shall be attached to Chimney at least 5 mtrs. higher than the nearest tallest building through ducting and shall discharge into open air in such a way that no nuisance is caused to neighbors.

SCHEDULE-III

Details of Bank Guarantees:

Sr. No.	Consent(C2E/C2O /C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	Consent to Establish	Rs. 25 Lakh	15 days	Towards Compliance of EC & C to E conditions.	Monthly	Commissioning of the project or 5 years whichever is earlier.

** The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional Office within 15 days of the date of issue of Consent. **# Existing BG obtained for above purpose if any may be extended for period of validity as above.**

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG imposed	Purpose of BG	Amount of BG Returned
NA				

SCHEDULE-IV

Conditions during construction phase

A	During construction phase, applicant shall provide temporary sewage and MSW treatment and disposal facility for the staff and worker quarters.
B	During construction phase, the ambient air and noise quality shall be maintained and should be closely monitored through MoEF approved laboratory.
C	Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

General Conditions:

1 The applicant shall provide facility for collection of samples of sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.

2 The firm shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act 1986 and Solid Waste Management Rule 2016, Noise (Pollution and Control) Rules, 2000 and E-Waste (Management & Handling Rule 2011.

3 Drainage system shall be provided for collection of sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No sewage shall be admitted in the pipes/sewers downstream of the terminal manholes. No sewage shall find its way other than in designed and provided collection system.

4 Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.

5 Conditions for D.G. Set

a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.

b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.

c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper sitting and control measures.

d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.

e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.

f) D.G. Set shall be operated only in case of power failure.

g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.

h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.

6 Solid Waste – The applicant shall provide onsite municipal solid waste processing system & shall comply with Solid Waste Management Rule 2016 & E-Waste (M & H) Rule 2011.

7 Affidavit undertaking in respect of no change in the status of consent conditions and compliance of the consent conditions the draft can be downloaded from the official web site of the MPCB.

8 Applicant shall submit official e-mail address and any change will be duly informed to the MPCB.

9 The treated sewage shall be disinfected using suitable disinfection method.

10 The firm shall submit to this office, the 30th day of September every year, the environment statement report for the financial year ending 31st march in the prescribed Form-V as per the provision of rule 14 of the Environmental (Protection) Second Amended rule 1992.

11 The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.

This certificate is digitally & electronically signed.

Annexure -06 Contingency plan for spills prevention.

Mumbai International Airport Ltd.

AIRSIDE OPERATIONS

AIRSIDE SAFETY

STANDARD OPERATING PROCEDURE

FUEL/ FLUID SPILLAGE

MIAL/AO-ASM/SOP/03/05

ACTIVITY	NAME AND DESIGNATION	SIGNATURE	DATE
Prepared by	Dilip Sonawane Associate Manager- Airside Safety		11/3/2024
Recommended by	Rajesh Jadhav General Manager-Airside Safety		11/3/2024
	Suryanarayanan Pichumani AVP-Airside Operations		2·3·2024
	Yadu Arora MR-IMS		11/03/24
Approved by	Ashwin Noronha COO-Aero Operations		12/03/24

TABLE OF CONTENTS

S. NO.	CONTENTS	PAGE NUMBER	REVISION STATUS
1	PURPOSE	03	YES
2	SCOPE	03	YES
3	OBJECTIVE	03	YES
4	RESPONSIBILITY	03	YES
5	DEFINITIONS & ABBREVIATIONS	03	YES
6	PROCEDURE	04	
7	FORMATS USED	07	
8	RECORDS GENERATED	07	
9	REFERENCES	07	
10	REVISION HISTORY	08	YES

1.0 PURPOSE

The purpose of this SOP is to establish the procedures for internal reporting, response, clean-up, documentation and subsequent notifications associated with surface contamination due to fuel, hydraulic oil, solid waste from toilet cart and hazardous chemical spillage at Airside.

2.0 SCOPE

The SOP is applicable for aircraft fuel spillage, hydraulic spillage, solid waste from toilet cart and hazardous chemical spillage on the apron or other aircraft movement area from aircraft, vehicles, equipment or fuel hydrant.
The scope of this procedure applies to the following agencies.

a) Aircraft operators.
b) Air Traffic Control Services- Airports Authority of India.
c) Airport Rescue and Fire Fighting- MIAL.
d) Airside Safety (Apron Control) - MIAL.
e) Airside Ground Maintenance- MIAL.
f) Ground Handling Agencies
g) Fuelling Service Providers.
h) Catering vehicles
i) All agencies operating vehicles/equipment at airside

3.0 OBJECTIVE

The main objective is to ensure that all relevant parties, both MIAL and other stake holders participating in airport operations are made aware of these procedures to ensure removal/clearance of the spillage as quickly as possible to restore normal operations.

4.0 RESPONSIBILITY

4.1 **Head-Airside Operations** is overall responsible for the implementation of procedures laid down in this SOP. Duty Manager of Apron Control is responsible to ensure that the procedures are carried out as per SOP.

4.2 **Head Airside Safety**: Shall be responsible for the compliance of the procedures laid down in this document. Duty Manager-Apron Control is responsible for strict implementation of the provisions contained in this SOP.

5.0 DEFINITIONS & ABBREVIATIONS

AGM	Airside Ground Maintenance
APSU	Airport Security Unit
ARFF	Aerodrome Rescue and Fire Fighting
ASM	Airside Safety Management
ATC	Air Traffic Control
CISF	Central Industrial Security Force
GHA	Ground Handling Agency
JCC	Joint Control Centre
MPCB	Maharashtra Pollution Control Board
NOTAM	Notice to Airmen
PIC	Pilot –in- Command

SMC	Surface Movement Control.
SOP	Standard Operating Procedure
MIAL	Mumbai International Airport Ltd

5.1 **Major fuel/Oil spillage**: A fuel/Oil spillage covering an area in excess of 02 Sqm, or quantity exceeding 22.5 Ltrs.(5 Gallons), or in the opinion of Duty Manager- Apron Control the spill constitutes a serious hazard is classified as a major fuel / Oil spillage.

5.2 **Apron:** A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or Maintenance.

6.0 PROCEDURE

6.1 Actions by person first noticing the Fuel spillage.

6.1.1 Inform the person involved in fueling process or attending that particular aircraft by quickest possible means.

6.1.2 Stop the fuel flow by pressing the fuel hydrant Emergency Shut off Button.

6.1.3 Inform Apron Control immediately.

6.2 Actions by Aircraft Operator

Following actions are to be undertaken by the concerned Airline/GHA/fuelling company immediately in case of a fuel/oil spill incident:

6.2.1 The PIC or the Engineer shall immediately report to ATC on VHF SMC Frequency when the aircraft is on the maneuvering area.

6.2.2 Stop the engine of the aircraft and shall not start if it is already switched off.

6.2.3 If required, do not allow any embarkation/disembarkation in case of a major spillage.

6.2.4 Shall not operate any other systems/doors and equipment.

6.2.5 Shall try to stop the leakage if possible from the aircraft.

6.2.6 If the incident takes place during fuelling process, then it shall be stopped immediately.

6.2.7 Ensure that the aircraft is properly bonded / grounded.

6.2.8 Shall immediately inform Apron control and concerned Ground Handling Agent about the incident.

6.2.9 To place tray under the engine/aircraft whenever maintenances work is in progress. To avoid fuel/oil spill on ground.

6.3 Air Traffic Control

Following actions are to be taken by Air Traffic Control if a fuel spillage message is received:

6.3.1 On receipt of the message of spillage, ATC will immediately inform Apron Control/JCC.

6.3.2 Monitor the situation.

6.3.3 If advised by JCC, by the way of Operational Memo, initiate NOTAM action.

6.3.4 If the spillage is on the stand, do not give start up to aircraft unless reported safe to do so.

6.3.5 Do not clear aircraft in an area where spillage is reported till the time the area is inspected and declared safe for operations.

6.4 Joint Control Centre (JCC)

Inform the following persons/organizations:

6.4.1 Apron Control
6.4.2 Concerned airline/ operator/GHA.
6.4.3 CISF
6.4.4 Head corporate communications (If required).
6.4.5 Intimate ATC for NOTAM if required.

6.5 Airport Rescue and Fire Fighting (ARFF)

On receiving information from Apron Control/JCC, following actions shall immediately be initiated by the Duty Manager ARFF:

6.5.1 One Crash Fire Tender with crew to be dispatched to the site.
6.5.2 After assessing the quantity of spillage in consultation with the Apron Manager/safety official cover the spillage area with foam if required.
6.5.3 Park the Crash Fire Tender at a safe place to prevent any impediment to the cleaning process.
6.5.4 Keep the Crash Fire Tender standby till 'ALL CLEAR' is received from Apron Manager.
6.5.5 Maintain listening out watch on R/T with ATC.

6.6 Apron Control

Apron Manager on receipt of information from any source about the spillage shall initiate the following actions:

6.6.1 Immediately get the area cordoned off if required.
6.6.2 The Apron Control on receipt of the information will immediately inform ARFF, Fueling Service Provider, the concerned Ground Handling Agency/Airlines, Duty Manager-Cargo (if required) and Duty Supervisor of AGM.
6.6.3 If necessary, advise JCC to initiate NOTAM action.
6.6.4 Manage vehicular traffic in such a manner that it doesn't affect the cleaning process/other operation.
6.6.5 Ensure that handling of hazardous material is done by an expert, trained & competent specialist from ARFF/ Cargo Department / Airline /Handling Agencies.
6.6.6 Make a record of the incident in the log-book and other relevant checklist.
6.6.7 The Apron Manager shall exercise his discretion for imposing service charges from the polluter for clearing the major spillages at Airside.
6.6.8 A service charge of Rs.10000/- + Rs.500 per saw dust bag used for cleaning the spillage (Rupees ten thousand + Rupees five hundred per saw dust bag) shall be levied from the polluter.
6.6.9 Service charges shall be levied in cases of where:

a. **Fuel spillage**: A fuel spillage covering an area in excess of 01 sq m, or in the opinion of Duty Manager- Apron Control the spill constitutes a serious hazard and contributes to surface damage.
b. **Oil/fluid spillage:** An oil/fluid spillage covering an area in excess of 25 sq centimeters, or in the opinion of Duty Manager- Apron Control the spill constitutes a serious hazard or and contributes to surface damage.

Note: In case oil / fuel spillage takes place from an aircraft which is moving on its own power or if the aircraft is making an emergency landing, service charges of Rs. 10,000/- will not be applicable,

6.7 Airside Ground Maintenance

6.7.1 Duty Supervisor of AGM shall get the spillage area covered by oil absorbing material as soon as practicable.

6.7.2 Cleaning of hazardous material shall be carried out as per the instructions of expert from Cargo/ARFF/GHAs/Airlines.

6.7.3 Ensure the spillage is not reaching the storm water drainage system.

6.7.4 Make all efforts to contain the area of spillage as much as possible.

6.7.5 Ensure the safe disposal of the absorbent material after cleaning the spillage to MPCB authorized agency for disposal.

6.8 Ground Handling Agency

Following actions are to be initiated immediately by the Shift Manager of the relevant Ground Handling Agency to minimize the danger of the spill:

6.8.1 Restrict the movement of the Ground Support Equipment in the spillage area.

6.8.2 Ground Power Units shall not be connected/removed or disconnected if oil spill is reported.

6.8.3 All Ground Support Equipment to be manually pushed out of the area.

6.8.4 No vehicle should be allowed to start in the area.

6.8.5 Position trays and empty containers for collection of the soaked/mopped fuel.

6.9 Fueling Service Providers

On receipt of the information the Shift manager of the Fuelling Service Providing Company shall initiate the following actions:

6.9.1 On receipt of information on oil spillage dispatch representative to observe and provide necessary assistance.

6.9.2 If the incident takes place during fuelling operations then stop the fuelling **immediately**.

6.9.3 In case of minor spillage it should be cleared using the facility available with them.

6.9.4 Keep de-fuelling bowser standby.

6.10 Action by Airport Security Force

6.10.1 Cordon off the area to protect it from potential hazards, if so requested by Duty Manager Apron Control.

6.10.2 Check all activities of vehicles and stop unauthorized persons in the vicinity of incident.

6.10.3 Provide adequate protection to the site and the operator.

6.11 Contact List

Agency	Designation	Means of Communication
ARFF	Duty Manager	Radio / Telephone
ATC	Duty Controller	Radio / Telephone
Apron Control	Apron Manager	Radio / Telephone
JCC	Duty Manager	Radio / Telephone
Engg & Maint Dept.	Duty Manager	Radio / Telephone

Ground Handling Agent	Shift Manager	Telephone
Fuelling Service Provider	Shift Manager	Telephone
APSU	Supervisor	Telephone
Cargo	Shift Manager	Telephone

7.0 FORMATS USED

MIAL/AO-ASM/FMT/16/01 Checklist for Fuel/Fluid Spillage

8.0 RECORDS GENERATED

MIAL/AO-ASM/REC/16 Record of Fuel/Fluid Spillage

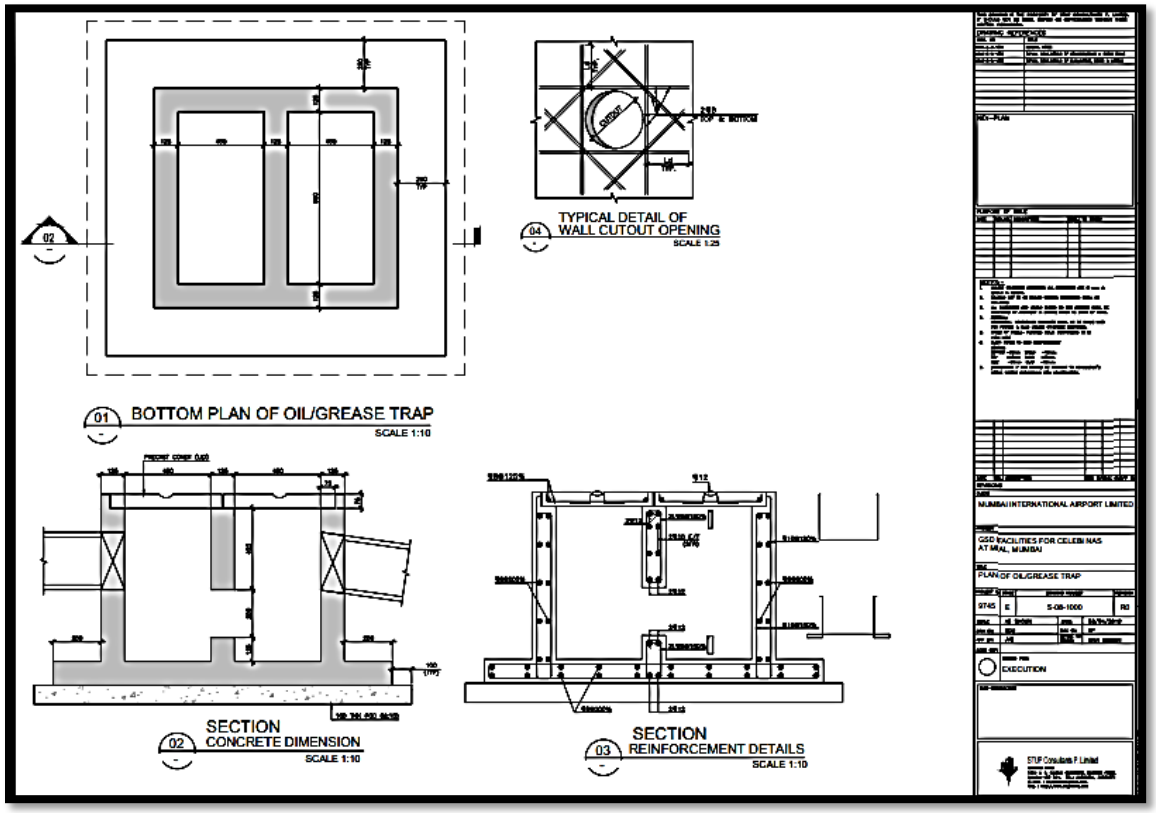
9.0 REFERENCES

NIL

10.0 REVISION HISTORY

Date	Rev. No.	Page No.	Revision Description
06/11/2012	01	6	Service charge for clearing spillage is included.
01/07/2014	02	3	New abbreviations are added, Responsibility changed.
01/07/2014	02	4	Definition of major fuel/oil/fluid spillage is revised
01/07/2014	02	6	Penalty charge is included under section 6.6
01/07/2014	02	3-7	AOCC replaced as JCC (Joint Control Center)
10/11/2015	03	6	Service charge for clearing spillage is reviewed for clarity.
11/01/2021	04	04	Para 6.2 (i) added in the SOP
11/02/2021	04	05	Para 6.6 charges for foam compound has been removed.
15/03/2024	05	03	Changes in Purpose, Scope, Objective & Responsibility
15/03/2024	05	04	Deletion of Definitions of MIAL Para 6.1 Procedures (word Fuel added). Para 6.2 Addition of GHA
15/03/2024	05	04 - 07	Numbered to all sub points

Annexure -07 Oil Interceptors Drawing.


02
01
BOTTOM PLAN OF OIL/GREASE TRAP
SCALE 1:10
04
TYPICAL DETAIL OF
WALL CUTOUT OPENING
SCALE 1:25
02
SECTION
CONCRETE DIMENSION
SCALE 1:10
03
SECTION
REINFORCEMENT DETAILS
SCALE 1:10
MUMBAI INTERNATIONAL AIRPORT LIMITED
GSD FACILITIES FOR CELEBI NAS
AT MIAL, MUMBAI
PLAN OF OIL/GREASE TRAP
S-08-1000
R0
EXECUTION
STUP Consultants Limited

Annexure -08 Green Existing Building (GEB) Rating Certificate by CII.

IGBC

Confederation of Indian Industry

Indian Green Building Council (IGBC)

hereby certifies that

Mumbai International Airport Limited (T-2)

(IGBC Registration No: GEB 15 0662)

has successfully achieved the Green Building Standards required for the following level of certification under the

IGBC Green Existing Buildings Rating System

Platinum

December 2021

(This certification is valid for next 3 years)

Gurmit Singh Arora
Chair, IGBC Green EB O&M

V Suresh
Chairman, IGBC

K S Venkatagiri
Executive Director, CII-Godrej GBC

Annexure -09 Letter of previous compliance report submission.

Chhatrapati Shivaji Maharaj

Ref: MIAL/ENV/F-25/15

28th May 2024

To,
Additional PCCF,
Ministry of Environment, Forest, & Climate Change,
Regional Office, WCZ, New Civil Lanes,
Nagpur - 440001.
s
Dear Sir,

Subject: Half yearly Environmental Compliance report of Environment Clearance received for Upgradation of Chhatrapati Shivaji Maharaj International Airport by Mumbai International Airport Limited

Ref: - Environment clearance File no. 10-5/2007-IA-III dated 2nd June 2017

With reference to find above, please enclosed herewith the compliance Report of EC conditions for the period from Oct 23 to Mar 24.

As per the Ministry of Environment, Forest and Climate Change notification vide no. F. No. IA3-22/1/2022-IA-III [E- 172624] dated 14th June 2022 six-monthly compliance report will be submitted through dedicated module in PARIVESH from the next reporting cycle.

Thanking you,

Yours faithfully,

For Mumbai International Airport Limited

Head - Environment & Sustainability

Encl: Half yearly Environmental Compliance report.

CC: 1) Zonal officer- Central Pollution Control Board, Vadodara

2) Regional officer - Maharashtra Pollution Control Board, Sion (E)

Mumbai International Airport Limited
Chhatrapati Shivaji Maharaj International Airport
1st Floor, Terminal 1B, Santacruz (E),
Mumbai 400 099,
Maharashtra, India
CIN: U45200MH2006PLC160164

Tel +91 22 6685 0900 / 6685 0901
camla.adanlairports.com

Registered office: Office of the Airport Director, Terminal-1B, CSIA Airport, Mumbai – 400099, Maharashtra, India

Annexure – 10 Environment statement Form- V.

Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2024

Unique Application Number	***Submitted Date***
MPCB-ENVIRONMENT_STATEMENT-0000069349	10-09-2024

PART A

Company Information

Company Name	***Application UAN number***	
Mumbai International Airport Ltd	MPCB-CONSENT-0000111260	
Address		
Terminal 1B, 1st floor, Chhatrapati Shivaji Interational Airport, Santacruz (E), Mumbai		
Plot no	***Taluka***	***Village***
Terminal 1, Santacruz east	Andheri	Santacruz
Capital Investment (In lakhs)	***Scale***	***City***
1574567	L.S.I	Mumbai city
Pincode	***Person Name***	***Designation***
400099	Vinay Bedekar	Head - Environment & Sustainability
Telephone Number	***Fax Number***	***Email***
9881103651	02266850291	vinay.bedekar@adani.com
Region	***Industry Category***	***Industry Type***
SRO-Mumbai II	Red	other
Last Environmental statement submitted online	***Consent Number***	***Consent Issue Date***
yes	MPCB-CONSENT-0000111260/CR/2205000810	2022-05-13
Consent Valid Upto	***Establishment Year***	***Date of last environment statement submitted***
2024-05-31	2006	Sep 12 2023 12:00:00:000AM
Industry Category Primary (STC Code) & Secondary (STC Code)		

Product Information

Product Name	***Consent Quantity***	***Actual Quantity***	***UOM***
NA	0	0	Nos./Y
/NA	0	0	Nos./Y

By-product Information

By Product Name	***Consent Quantity***	***Actual Quantity***	***UOM***
NA	0	0	Nos./Y

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for	Consent Quantity in m3/day	Actual Quantity in m3/day
Process	0.00	0.00
Cooling	0.00	0.00
Domestic	7100.00	3535.35
All others	0.00	0.00
Total	7100.00	3535.35

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Sewage generation at CSMIA	6615	2700.69	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
OTHERS	0	0	

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
NA	0	0	CMD

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Diesel For DG set	5483	50.69	Ltr/Hr

Part-C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

[A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
PH	7.3	7.6	0	5.5-9.0	Pollutant discharge within standard limit
Suspended Solids	16.20	12.9	0	20	Pollutant discharge within standard limit
BOD 3 days (27oC	5.4	4.3	0	10	Pollutant discharge within standard limit
COD	24.31	15.8	0	50	Pollutant discharge within standard limit

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason

SO2 (Kg/day)	1.1	0	0	295.2	Pollutant discharge within standard limit
Total Particulate matter (mg/Nm3)	0	17.4	0	150	Pollutant discharge within standard limit

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
5.1 Used or spent oil	0	6.31	MT/A
5.2 Wastes or residues containing oil	7.7	0.1	MT/A
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	1.84	1.97	MT/A
23.1 Wastes or residues (not made with vegetable or animal materials)	5.97	117.99	MT/A
23.1 Wastes or residues (not made with vegetable or animal materials)	0	49.05	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Plastic waste	796.83	1093.07	MT/A
Waste Paper	419.995	910.11	MT/A
Waste glass bottles	132.21	94.09	MT/A
Broken tins	134.66	139.96	MT/A
Other Misc. scrap	87.985	2.05	MT/A
Waste cotton	0	0	MT/A
Wet waste	555.1	121.56	MT/A
Organic / food waste	207.71	2959.5	MT/A
Waste wood	46.363	136.73	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
STP sludge	8.4	3.7	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

Part-F

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

1) Hazardous Waste

Type of Hazardous Waste Generated	*Qty of Hazardous Waste*	*UOM*	*Concentration of Hazardous Waste*
5.2 Wastes or residues containing oil	0.1	MT/A	Hazardous Waste is being disposed to M/s Mumbai Waste Management Limited (MWML)
5.1 Used or spent oil	6.31	MT/A	Sahara industries, Uchaad , Palghar
20.2 Spent solvents	0	MT/A	NA
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	1.97	MT/A	Hazardous Waste is being disposed to M/s Mumbai Waste Management Limited (MWML).
23.1 Wastes or residues (not made with vegetable or animal materials)	117.99	MT/A	Hazardous Waste is being disposed to M/s Mumbai Waste Management Limited (MWML)
23.1 Wastes or residues (not made with vegetable or animal materials)	49.05	MT/A	This hazardous Waste is being disposed to M/s Trans Thane creek waste management association, Mahape authorized disposal agency

2) Solid Waste

Type of Solid Waste Generated	*Qty of Solid Waste*	*UOM*	*Concentration of Solid Waste*
Waste plastic	1093.07	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Waste paper	910.11	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Waste glass bottle	94.09	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Waste wood	136.73	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Broken tin	139.96	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Wet garbage	121.56	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Other scrap	2.05	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Waste cotton	0	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary
Food waste (OWC) treated	2959.5	MT/A	The non-hazardous waste is collected, segregated and disposed by M/s Compost. Segregation of the waste is being done at the contractors end after the waste is taken outside of airport boundary

Part-G

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

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Energy saving measures at CSMIA	0	0	0	6099325	10.5	0

Part-H

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

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
CAAQMS, Solar projects, RVM machine	CAAQMS, Solar projects, RVM machine	143

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
EV charging station, replacement of AC etc	EV charging station, replacement of AC etc	150

Part-I

Any other particulars for improving the quality of the environment.

Particulars

Nil- The Form 5 is cumulative all the CTO (CSMIA & MLCP) both, Para no 4 DG fuel DG Diesel were not appear in the Tab so mentioned figure and submitted

Name & Designation

Vinay Bedekar

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000069349

Submitted On:

10-09-2024

Annexure – 11 Environment Management Plan

Environment Management Plan

v **IMS Certification:**

ü IMS certification (ISO 9001, ISO 14001, & ISO 45001) issued to Mumbai International Airport Limited.

ü MIAL has implemented the Environment Management Plan by taking more effective measures, across the location and has already achieved IMS certification (ISO 9001, ISO 14001, & ISO 45001).

v **Environment Monitoring**

ü Regular Environment Monitoring being carried out at site and all the parameters are within the standard norms.

ü MIAL is effectively implementing Environment Management Plan across the site and is regularly carrying out Environment monitoring with respect to Air, Noise, Wastewater and Water etc. and reports are being submitted to all the regulatory authorities, as a part of Six-Monthly Compliance report.

v **Wastewater Treatment and Disposal /Recycling**

ü The sewage generated at the Mumbai International Airport is treated in 15 MLD STP (1 MLD, 4 MLD, 10 MLD) SBR based STP.

ü The Treated wastewater is used for greenbelt development to conserve freshwater consumption.





STP plant





Photograph 1-4: Sewage Treatment Plant of 10 MLD, 4 MLD & 1 MLD, capacity under operation at MIAL

v **Solid Waste Management plan**

As a part of solid waste management plan, two collection points are provided (1 land side and 1 airside) and dustbins are provided at varies location airside and landside facilities for source segregation.

Waste collected from dustbin are taken to waste storage area and further it is being taken by outsourced agency on daily basis for processing inline to solid waste management rules 2016.

Waste generated is being planned to hand inline to 5R principles to attain zero waste to landfill.

Hazardous Waste at MIAL is managed inline to the Hazardous Waste Management Rules 2016.





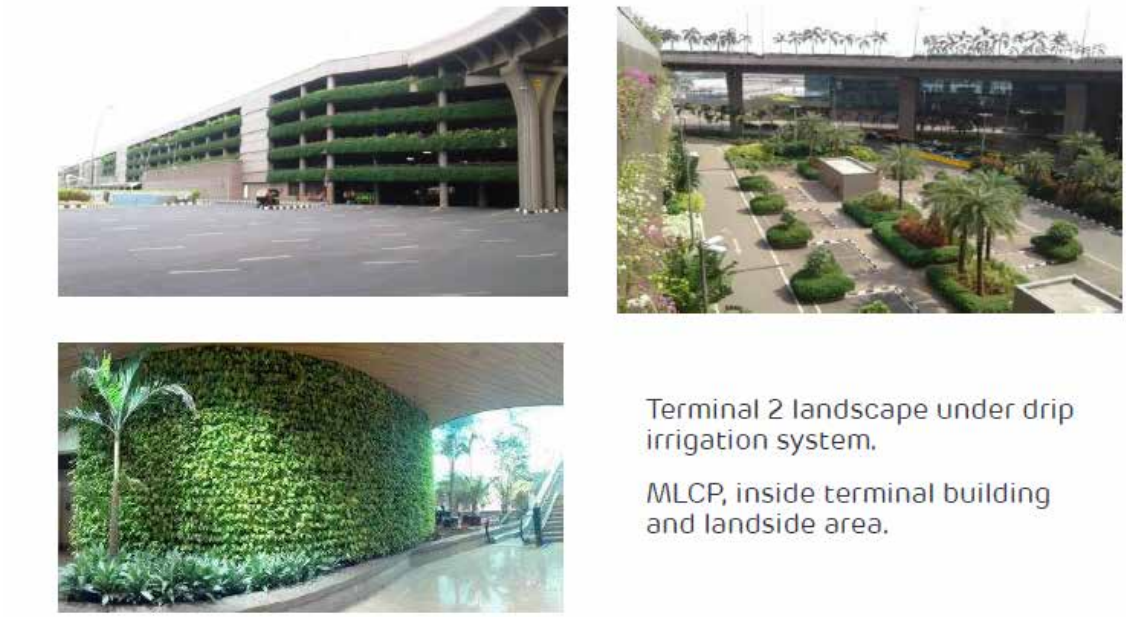
Photograph 5: Dustbins placed at various locations of MIAL.
Photograph 6: Hazardous Waste Collection at MIAL

v **Water Conservation:**

ü As part of water conservation sensor-based water taps have been installed in all the washrooms of the Terminal building at MIAL.
ü Dry cleaning of solar panels is being carried out at MIAL instead of water wash which saves about 15KL of water per month.
ü 295 number of ground water recharging pits are maintained as part of rainwater harvesting.
ü Treated Water from the STP is utilized for gardening & horticulture purpose.



Photograph 7: Sensor based Taps at MIAL



Photograph 8: Treated water used at MIAL landscaping & irrigation system.

v **Noise Control:**

Following safeguard measures are taken for abatement of dust and noise emissions:

- ü Regular cleaning of roads
- ü D.G. Set having acoustic enclosures.
- ü Adequate green cover of about 4.60Ha has been developed as part of MIAL.

ü Regular Noise Monitoring is being carried out at 04 locations through MoEF&CC NABL approved laboratory.





Photograph 9: Noise Monitoring station at Runway path carrying out continues noise monitoring at MIAL.

v **Air Management:**

- ü 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
- ü Environment Monitoring for D.G Stack Flue Gas Emissions will be carried out by MoEF&CC and NABL accredited laboratory.
- ü Adequate green cover of about 272 acres has been developed as part of MIAL.









Photograph 9: Dust Cleaning near Terminal at MIAL
Photograph 10: Dust Cleaning near Runway at MIAL
Photograph 11: Ambient Air Monitoring carrying out at MIAL.
Photograph 12: Green Area at MIAL

v Energy Savings

Key Initiatives are:

A) Implemented ESG Policy -2022
B) Implemented Green Procurement Policy -2022
C) 45 Fuel-vehicles replaced with EVs.
D) DC Fast Charging Stations- Installation of 18 charging points (DC fast-charging stations) for Electric Vehicles at T1, T2 MLCP and on Airside
E) Trees Planted: 3,884 nos.
F) 100% -Green Power implementation
G) Transition to Lower GWP refrigerant.
H) Non-CO2 based fire extinguisher.
I) Residual CO2 Offset through purchasing CER.

v **Energy Saving Initiatives:**

1. Replacement of conventional lights with LED lights completed in multiple locations at T2.
2. Installation of Sun Pipe for lighting.
3. Building Management system.
4. Chiller Management System.
5. Online water treatment system for chilled as well as condensate water.
6. Variable-frequency drive (VFD) for motors.
7. Lighting control and monitoring system.
8. Apron A, C, D, G High Mast light up-gradation completed for improved and uniform illumination in Airside.
9. Replaced cooling tower fan blades with FRP blades at T2.
10. De-scaling of chillers completed to improve equipment efficiency in T2.
11. Completed conversion of runway edge lights and airside signage board lights to LED light.
12. Replacement of old colling tower nozzle with newly designed nozzle.
13. Phase wise replacement of belt driven fans of AHUs with EC fans.
14. Optimization of AHU operations.
15. Implementation of other energy saving best practices like optimized scheduling of operation for Air Conditioning, Vertical Horizontal Transport and Lighting system, timers for streetlights, operational control, optimization of Lux Level.
16. Transition to EV vehicles and installation of EV charging stations.
17. Replacement of cooler tower fills 03 Nos at T2
18. Retrofit of Axial fans in AHU in T2
19. Switch from R22 refrigerant to R32 refrigerant.



Photograph 14: EV Charging stations at MIAL



Photograph 14: Solar Panel installed at MIAL.



Photograph 15: RVM winding machine.



Photograph 16: Electric vehicles at MIAL

v **Additional Measures**

ü Non-destructive Wildlife Hazard Management techniques are practiced at Mumbai Airport and as part of the same, organic chemical spray is carried out to control weeds & grass.

ü Airside inspection is practiced at regular intervals and accordingly the wild animals such as dogs, bird, cat. etc are relocated to the safer areas (forest areas) to protect them from any accidents.



Photograph 17: Passive techniques at MIAL to deal with airside wildlife hazards.

Master Plan – Mumbai International Airport Ltd & Green Initiatives:

Mumbai Airport has planned to be developed as a green airport, with key objective of Environmental Sustainability to be achieved through, optimization in resource consumption through following measures:

- Energy Optimization
- Utilization of Solar Energy
- Natural Day Lighting
- Zero Waste to Landfill
- Water Conservation
- Water Harvesting
- Environment Management

The approaches have planned to be adopted from planning & design stage, and hence demand for resources shall be optimized more efficiently.

v **Energy Optimization**

- At the proposed Terminals and Ancillary Buildings necessary Green Building measures will be followed for minimum conservation of energy in line with "Energy Conservation Building Code –2017", "National Building Code 2016". The Terminal is targeted to achieve LEED Certification from the United States Green Building Council (USGBC) or Green Rating for Integrated Habitat Assessment (GRIHA) rating, and all other building shall follow a minimum energy requirement as per ECBC.
- The solar plant will create significant environment benefits over its lifetime. Based on the availability of the land & feasibility solar plant will be planned at Mumbai Airport. Solar energy to the maximum extent will be used, and the possibility of wind energy will be explored to minimize the usage of conventional energy sources.

v **Air Emission Management**

- Battery/electrically charged vehicles would explore for usage at airport for ground service equipment and cargo so that air quality levels are maintained within the permissible limits.
- Air and noise mitigation options will be implemented by defining the approach landing and take-off procedures in a manner to minimize impact.
- MIAL aspire to achieve leadership position in the Airport Carbon International's (ACI) Accreditation Program.

v **Wastewater Management**

o The state-of-Art latest technology will be adopted for Sewage Treatment Plant 10 MLD, 4MLD and 1 MLD of wastewater will be generated from Airside & Landside areas, which will be treated through STP (SBR) of total capacity of 15MLD, which will be developed on modular basis. Treated wastewater will be used for Landscaping or other purposes.

v **Noise Management**

o MIAL as part of noise management will follow the International Civil Aviation Organization (ICAO) a four-point "balanced approach" that includes:

Reduction of noise at source:

The new and latest aircrafts which are designed with minimum source noise levels shall be allowed at the airports.

Land-use-planning.

Proper land use planning with super-imposition of probable noise contours will help reduce the noise induced health impacts.

Noise abatement operational procedures:

- Strict adherence to DGCA/ICAO prescribed environmental guidelines & circulars on airport operations.
- Restricted usage of ground engine run-ups to reduce noise.
- Restricted use of thrust reversal while landing of aircraft to minimize noise in lateral direction.
- Aircrafts with certified engines only shall be allowed to land and take-off to the extent possible to reduce the noise impacts on the surroundings.
- Dual nozzle in the aircraft will reduce the noise levels.
- Proper scheduling of the aircrafts so as to minimize the noise levels.
- Switching off as many engines as possible during idling and taxing.
- Proper maintenance of ground servicing equipment.

v **Rainwater Harvesting**

Recharge pits at every 10 m c/c all along West and East drains in airside along with runway. This amounts to about 295 recharge pits

v **Greenery Development / Open Space**

The principal airport level green space/ open area in the form of central linear green is located along the airport access road. Secondary open areas shall be planned in various locations in different land use zones. The total area under this zone shall be approximately 272 acres in land side and airside area.

Mumbai International Airport Limited has planted 1500 trees at state reserve police force ground of Goregaon Mumbai, the entire exercise has been undertaken by the State Reserved Police Force and MIAL horticulture department.

v **Carbon Accreditation**

MIAL recognizes the significance of conserving energy and reducing emissions for ensuring sustainable business operations. In our overall emission footprint, around 99.98% of emissions are of Scope 3 (Indirect emissions), Scope 2 is 0% (Indirect GHG emissions due to purchased electricity) and 0.02% is Scope 1 (Direct GHG emissions). Since, Scope 1 and 2 emissions are directly under our operational control, therefore, we have taken all the possible efforts to reduce its emissions.

We are committed towards enhancing energy efficiency and absolute GHG emission reduction through various interventions and collaborative efforts with our stakeholders. Also, we aspire to achieve leadership position in the Airport Carbon International's (ACI) Airport Carbon Accreditation Program by grabbing ACI-ACA Level 4+ accreditation "Transition" in 2022.

Some of the indicative measures that we have taken our airport includes the following:

For Scope 1 emission reduction:

- Conversion of airport owned conventional vehicles (except fire tenders and tugs designated for towing of cargo and passenger transport) to Electric Vehicles (EVs) for Airport Operator's Fuel emission reduction.
- Conversion of high Global Warming Potential (GWP) refrigerants to lower GWP refrigerants
- Conversion of CO2 type fire extinguishers to non-CO2 based extinguishers (to the extent possible, considering mandatory safety requirements)
- Developing green belts to create carbon sinks (part of our long-term strategy)

For Scope 2 emission reduction:

- Installation of on-site solar/wind power plants/hybrid wind and solar plants.
- Purchase of green electricity via Power Purchase Agreements from renewable energy suppliers
- Purchase of Renewable Energy Certificate (REC)
- Undertaken energy audits to identify potential improvement areas for optimizing operations and conserving energy.
- Conversion of conventional lights with LEDs
- Implement zone monitoring system to improve air-conditioning efficiency.
- Use of variable frequency drives (VFDs) for pumps, motors & chillers for improving energy efficiency.

By implementing the above-mentioned initiatives, we have reduced our Scope 1 to the maximum extent and Scope 2 emissions as zero and we are in process to offset the residual emissions to achieve operational net zero.

In addition to these initiatives, we will endeavor to reduce our scope 3 emission footprint through the following measures:

- Engage with stakeholders to influence them to convert their existing GSEs and GSVs except for tugs designated for towing of cargo and passenger transport to EVs, optimize operations to reduce energy and ATF (Aviation Turbine Fuel) consumption.
- Provide Electric Vehicle (EV) charging infrastructure at our airports (both airside and landside).
- Install Bridge Mounted Equipment (BME) such as Fixed Electric Ground Power Units (FEGP) and Preconditioned Air (PCA) supply systems at Passenger Boarding Bridges.
- Adopted Airport Collaborative Decision Making (A-CDM) system to improve operational efficiency.

These interventions will assist us in reducing our environmental footprint, which is essential for ensuring sustainable operations and for making a positive impact.

v **CSR**

MIAL is committed to implemented CSR activity through Adani Foundation, inline to "The Company's Act 2013 in the field of Education, Community Health, Sustainable Livelihood Development, Community Infrastructure Development, Skill Development for the overall improvement of living standards in the region.

v **Other environment activates**

- Environmental awareness programs have been conducted during the year for employees at Mumbai Airport.
- World Environment Day Celebration from 4th June to 8th June 2022 (E-Banner Display at Main gate, Online Quiz competitions arranged during week, sapling are distributed among the passenger (terminal 1 and 2).
- Mumbai International Airport Limited has grabbed Prestigious **"Innovation champion awards"** under the **Wings India Awards,2024** for outstanding achievement in **environment Innovation.**

Annexure – 12 Organogram of environment management cell

ORGANIZATIONAL STRUCTURE- ENVIRONMENT AND SUSTAINABILITY



Annexure – 13 Environmental Expenditure

MIAL Environment Budget and Expenditure for the FY: 2024-25		
Sr. No.	**Activity / Category**	**Expenditure (Apr 24 to Sep 24)**
1	Opex	119,932,833.93
2	Capex	4,508,931.00
	Total Amount in Rs	124,441,764.93
	Total Amount (In Crores)	**12.44**

Annexure – 14 Details on water related works.

Provided Rainwater Harvesting system for the non-potable use/requirement of a Zilla Parishad School catering to majorly underprivileged students in Shahapur District of Maharashtra.

NGO Partner: Umang Foundation

Approximately 45 to 50 thousand liters of water percolated in a day by the installed RWH system which helped in increasing ground water table.









Annexure – 15 Emergency Preparedness Plan

MUMBAI INTERNATIONAL AIRPORT LTD

AIRSIDE OPERATIONS

AERODROME RESCUE AND FIREFIGHTING

DOCUMENT

AERODROME EMERGENCY RESPONSE PLAN

MIAL/AO-ARFF/DOC/01/00

Activity	Name	Signature	Date
Prepared By	K Unnikrishnan Emergency Planner		27.06.22
Recommended By	Sunil C Khapane DGM – ARFF		27.06.22
	Mohan H Kadam GM – ARFF		27.06.22
	Suryanarayanan Pichumani AVP - Airside Operations		29.06.2022
	Manoj Katar Head – Operations		02/07/2022
	Vinayak Sohani Management Representative		01/07/2022
Approved By	Prakash Tulsiani Chief Executive Officer		11/07/2022

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Foreword:

Chhatrapati Shivaji Maharaj International Airport – Mumbai is owned by Mumbai international Airport Limited and operated by a consortium led by M/s Adani Airport Holding Limited as a category 10 airport.
Under the Aircraft Rules 1937, Part XI, Rule 81 and Civil Aviation Requirements (CAR), Section 4, Series 'B', Part I, an aerodrome operator is required to establish an Aerodrome Emergency Plan (AEP) commensurate with the aircraft operations and other activities conducted at the aerodrome. To meet this requirement and other necessary obligations stipulated by Director General Civil Aviation (DGCA), Mumbai International Airport Ltd. (MIAL) who operates Chhatrapati Shivaji Maharaj International Airport, has established and promulgated this Aerodrome Emergency Response Plan (AERP) based on the standards set by DGCA in CAR, Section 4, Series 'B', Part I and ICAO's guidelines in Airport Service Manual, Doc. 9137, Part 7. The Aerodrome Emergency Response Plan (AERP) is an integral part of the Emergency Management developed with the prime objective of handling airport emergencies in a more systematic and holistic manner. The AERP, which serves as the Incident Management Plan deals with all kinds of incidents/accidents that, may occur at the airport or in its vicinity.

With over 40 million passengers and approximately 11000 movements annually, it is critical that this plan ensures an immediate, effective, and organized response to emergency situations. This plan is reviewed and updated on an annual basis to reflect changes in the policies, procedures, and/or operations at the airport.

Safety is the prime importance in aviation industry. As the field of operation of aviation industry is not confined only to airport, the safety concerns become more significant and hence it is classified as an extra high hazard industry. Air safety is provided in two phases that is up in the air and on the ground. Besides, there is a third phase of safety dealing with post-accident safety, which is also quite important.

The AERP spells out the types of emergencies anticipated at the Airport, the roles, and responsibilities of responding agencies that could be of support and the procedures involved in dealing with the emergencies. Aerodrome emergency planning is the process of preparing an aerodrome to cope with an emergency occurring at the aerodrome or in its vicinity. The objective of aerodrome emergency planning is to minimize the effects of emergency, particularly in respect of saving lives and maintaining aircraft operations. It does not include material on how an agency will carry out its functions during emergency. The complex nature of airport emergencies, however, makes it almost obligatory for each person/department/agency concerned to accomplish the necessary task, which is to be done in response to an emergency in the best possible manner, even though such tasks aren't specifically mentioned in the AERP.
For effective implementation of AERP it is essential to ensure that the procedures and information documented in this manual are up-to-date and adequate. For this purpose, the AERP will be reviewed and updated from time to time. To regularly test the AERP, a full-scale Aerodrome Emergency exercise (FSAEE) will be conducted at CSMIA at intervals not exceeding two years followed by a partial exercise in the

intervening year, and series of modular test as required under CAR, Section 4, Series 'B', Part I.

No airport has sufficient resources to respond to every emergency independently and must depend, to some extent, on the resources from its surrounding communities. Whilst it is impossible to anticipate and prepare for each airport emergency, a structured emergency plan can assist in limiting the negative impact of these emergencies, including liability and other post-emergency issues. It is, therefore, essential to be prepared for airport emergencies and to be able to respond quickly, efficiently, and effectively.

The Aerodrome Emergency Plan is being presented here for its wider applications and extensive use by all participating organizations. Please note that the AERP will be continuously improved based on experience gained through exercises and actual emergencies, and on comments and suggestions received from users of this manual. Therefore, users of this manual are invited to give their views, comments, and suggestions. These should be directed to CSMIA to the following address or email id:

Head - ARFF
Mumbai International Airport Ltd.
Chhatrapati Shivaji Maharaj International Airport,
1st Floor, Terminal 1B, Santacruz (E),
Mumbai 400099.
Sunil.Khapane@adani.com
emergencyplanner@adani.com

Abbreviations

AAI	Airports Authority of India
AAIB	Aircraft Accident Investigation Bureau
AEC	Airport Emergency Committee
AECC	Airport Emergency Control Centre
AEP	Aerodrome Entry Permit
AERA	Atomic Energy Regulatory Authority
AERP	Aerodrome Emergency Response Plan
AFAS	Airport Flight Announcement System
ANTS	Automated Notification and Transmission System
AME	Aircraft Maintenance Engineer
AOCC	Airport Operations Control Centre
ARFF	Aerodrome Rescue and Fire Fighting
ARO	ATS Reporting Office / Officer
APHO	Airport Health Officer
ASG	Aviation Security Group
ATA	Actual Time of Arrival
ATC	Air Traffic Control
ATS	Air Traffic Services
ATIS	Automatic Terminal Information Service
BARC	Bhabha Atomic Research Centre
BCAS	Bureau of Civil Aviation Security
CAR	Civil Aviation Requirements
CBR	Chemical, Biological, Radiological
CC	Casualty Centre
CCC	Crisis Control Centre
CFS	City Fire Service (Mumbai Fire Brigade)
CMG	Crisis Management Group
CMO	Chief Medical Officer
CNS	Communication Navigation and Surveillance System
CSMIA	Chhatrapati Shivaji Maharaj International Airport
CISF	Central Industrial Security Force
DAE	Department of Atomic Energy
DG	Dangerous Goods
DMO	Duty Medical Officer
DGCA	Director General of Civil Aviation
DVI	Disaster Victim Identification
DVR	Disaster Victim Registration

FCP	Forward Command Post
FWT	Fire Watch Tower
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IVRS	Interactive Voice Response System
JCC	Joint Control Center
MIAL	Mumbai International Airport Pvt. Ltd.
MFS	Main Fire Station
MRCC	Maritime Rescue coordination Centre
NDMA	National Disaster Management Authority
PAX	Passengers
PIC	Pilot In-Command
POB	Persons on Board (includes crew)
RCC	Rescue Coordination Centre
RA	Reunion Area
RERT	Radiation Emergency Response Team (BARC)
RWY	Runway
ROIP	Radio over Internet Protocol
SDMA	State Disaster Management Authority
SIC	Safety Investigation Coordinator
SRA	Survivors Reception Area
TMRS	Trunk Mobile Radio System
TWY	Taxiway
VoIP	Voice over Internet Protocol
WSO	Watch Supervisory Officer

Glossary of Terms

Terms used in this Aerodrome Emergency Response Plan (AERP), shall be interpreted as follows:

1. **Activation:** The process followed to initiate a specific Airport Emergency Response.

2. **Aircraft Accident:** Aircraft accident shall mean an occurrence associated with the operation of an aircraft which:

- In the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such Persons have disembarked; or
- In the case of an unmanned aircraft, takes place between the time the Aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which

a. A person is fatally or seriously injured as a result of:

- Being in the aircraft, or
- Direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
- Direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by the persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

b. The aircraft sustains damage or structural failure which

- Adversely affects the structural strength, performance, or flight
- Characteristics of the aircraft, and would normally require major repair or replac ement of the affected Component, except for failure of engine or damage, when the damage is limited to a single Engine, (including its cowlings or accessories), to propellers, wing tips, antenna probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those Resulting from hail or bird strike (including holes in the radar); or
- The aircraft is missing or is completely inaccessible.

Source: Annexure 13, Aircraft Accident, and Incident Investigation.

3. **Aircraft Incident:** An occurrence, other than an accident, associated with the operation of an aircraft, which affects or could affect continued safe operation if not corrected. An incident does not result in serious injury to persons or substantial damage to aircraft.

Source: Annexure 13, Aircraft Accident, and Incident Investigation.

4. Aircraft operator: A person, an organization or an enterprise engaged in or offering to engage in aircraft operations.

5.Airport / Aerodrome: A defined area on land or water (including any buildings, installations, and equipment) intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

6.Airport Agency: Those agencies associated with CSMIA and identified in this AERP as having responsibility for responding to an Airport Emergency.

7.Airport Contact Centre: The Airport Contact Centre is established by MIAL which operates 24/7 basis, which uses an automated system for registering complaints on facilities, infrastructure, and maintenance issues. It ensures that the issue is addressed in a systematic and transparent manner in a given time frame. The Airport Contact Centre is also accountable for maintaining an up to date call out list for Airport Emergency in accordance with the AERP document and on direction from JCC officer shall activate the automated notification and transmission system (ANTS). The MIAL Service Office which is operated 24/7 basis, where reports of any problem are received for dissemination and follow-up action is carried out. Office also ensures that the procedures of Automatic Notification and Transmission System are followed in case of an Emergency.

8.Airport Emergency: An airport related incident or accident, natural or man-made, which warrants action to save lives, protect property, maintaining aircraft operations and public health.

9.Aircraft: Any machine that can derive support in the atmosphere from the reactions of the air, other than the reactions of the air against the earth's surface.

10.Airport Emergency Control Centre (AECC): The AECC/CCC is established by MIAL as a control, coordination and communications center used during an Airport Emergency to be staffed by senior representatives of those organizations who are members of the AEC and the affected airline.

> **Note:** The AECC/CCC will be chaired by the Senior MIAL representative who is authorized to expend such funds on behalf of MIAL as are required for the successful conduct of relief and recovery operations in relation to the incident.

11.Aerodrome Emergency Response Plan: The laid down procedures for Aerodrome emergency response which includes-coordinating the response of airport services with other agencies in the surrounding community, which could assist in responding to an emergency occurring on or in the vicinity of the airport.

12.Airside: The movement area of the airport, adjacent terrain and buildings or portions, thereof access to which is controlled.

13.Apron: A defined area, on a land aerodrome, intended to accommodate aircraft for the purpose of loading or unloading passengers, mail or cargo, fueling, parking or maintenance.

14.ARFF Turnout Area: The area one kms in the approach path and one kms around the boundary of the Airport.

15.Bomb Threat: A communicated threat, anonymous or otherwise, which suggests, or infers, whether true or false that the safety of an aircraft in flight or on the ground, or any airport or civil aviation facility or any person may be in danger from an explosive or other item or device.

16.Bureau of Civil Aviation Security (BCAS): The State organization, responsible for regulating and overseeing aviation security in India.

17.Casualty Centre: A medical care center located on the airside to which casualties may be relocated from the incident site.

18.Combat Agency: the agency nominated in this plan as having primary responsibility for controlling the response to a particular emergency and who will provide the On-Scene Commander.

19.Combat Zone: The area around the site of the incident that is nominated by the On-Scene Commander to be a restricted area with access only to those who are approved by the On-Scene Commander for the purpose of rescue and firefighting operations. This area will normally be a circle with radius of 100 meters around the site and will be strictly enforced by CISF.

20.Command: Command is the direction to members and resources of an organization in the performance of the organization's role and tasks. Authority to command is established by individual organizations and operates vertically within organizations.

21.Control: Control means the overall direction of the activities, agencies or individuals concerned in an incident. Authority for control is established in this emergency plan and carries the responsibility for tasking and coordinating other agencies in accordance with the needs of the situation. In this context, tasking means telling people what to do but not how to do as that is the province of each organization involved in the incident.

22.Coordination: Coordination means the bringing together of organizations and elements to ensure the effective counter-emergency response and is primarily concerned with the systematic acquisition and application of resources (organization, manpower and equipment) in accordance with the requirements imposed by the threat or impact of an emergency.

23.Dangerous goods: Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are listed as such are in Technical Instructions or which are classified according to the Technical Instructions.

24.Dangerous goods accident: An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property damage.

25.Dangerous goods incident: An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, damage to property, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained and also includes any occurrence relating to the transport of dangerous goods which seriously jeopardizes the aircraft or its occupants.

26.Emergency: Emergency means any actual or imminent occasion or incident due to an occurrence such as fire, flood, storm, earthquake, terrorist act, accident, epidemic, or warlike action which:

a) Endangers, or threatens to endanger, the safety or health of person/s or animal/s.
b) Destroys or damages, or threatens to destroy or damage, property or being an emergency, which requires a significant and coordinated response.

27.Emergency Panel: Supporting medical, hospital and ambulance services that are available to provide emergency response and care to the injured in the event of an incident at the airport.

28.Environment: The components of earth, including.

a) Land, air, and water: and
b) Any layer of the atmosphere; and
c) Any organic or inorganic matter or living organism; and
d) Human made or modified structures and areas and includes Interacting natural ecosystems.

29.External Support Agencies: Any support agency with its normal operation located outside the boundaries of the airport.

30.Forward Command Post (FCP): The location at the scene of an emergency where the On-Scene Commander is located and where command, coordination, control, and communications are centralized.

Note: The On-Scene Commander will establish communications and provide regular situation reports to the ATC and AECC/CCC as required.

To enable the On-Scene Commander to adequately manage an incident it is imperative that a FCP management team be established. The FCP

management team should consist of representatives from organizations involved in the response to the incident. The MIAL FCP management team shall consist of the following:

- Head ARFF/Duty Manager - ARFF.
- CISF Representative.
- Civil Defense Coordinator.
- Airline Representative.
- Duty Manager Apron Control till the arrival of Head Airside Safety.
- Safety Investigation Coordinator, MIAL.
- AAIB /DGCA (Optional)
- Mumbai Police Representative

31.Full Emergency: A condition declared when an aircraft approaching or departing from the airport is known or suspected to be in such trouble that there is danger of an accident and notification to more than the airport based responding agencies is advisable.

32.Hijacking: Any person who on board an aircraft in flight:

i. Unlawfully, by force or threat thereof, or by any other form of intimidation, seizes, or exercises control of that aircraft, or attempts to perform any such act, or

ii. Is an accomplice of a person who performs or attempts to perform any such act, commits the offence of hijacking that aircraft?

33.Incident: An incident is a localized event, either accidental or deliberate, which may result in death or injury or damage to property which requires response from an agency, or agencies.

34.Incident Site: The physical location where an incident took place, the area will be included in the Combat Zone.

35.Internal Support Agencies: Any support agency with its normal operation located inside the boundaries of the Airport.

36.Joint Control Centre (JCC): The JCC is the Joint Operations Control center which is a coordination conduit for successful conduct of operations at the airport. The JCC is established by MIAL and partnered by stakeholders like Ground Handling Agents, Airlines, CISF and other concerned MIAL Dept ensures control, co-ordination, and communication for Airport Operations.

37.Landside: The portion of the airport not designated airside and to which the public normally has free access.

38.Local Standby: A condition declared when an aircraft approaching the airport is known or is suspected to have developed some defect, but the trouble is not such

that it would normally involve a serious difficulty in effecting the safe landing and thus does not require a response from external support agencies.

39.Manoeuvring Area: That part of an aerodrome used for takeoff, landing, and taxiing of aircraft, excluding aprons.

40.Meeters and Greeters Area: A pre-defined area within a terminal where people, who have relatives or friends on an aircraft involved in an incident or accident, can report for information and assistance.

41.Movement Area: That part of an aerodrome to be used for takeoff, landing, and taxiing of aircraft, consisting of the maneuvering area and the apron(s).

42.Automated Notification and Transmission System (ANTS): Notification of an emergency through an Automated Notification and Transmission System (ANTS) whereby all agencies as per SOP are notified through an automated dial-up system simultaneously.

43.On-Scene Commander: Person designated to take charge of the over-all emergency operation.

44.Pre-Determined Position (PDP)-ARFF Standby Positions: The predetermined location to where the Airport Fire Vehicles will respond to standby during a Local Standby or Full Emergency. The Shift-In-Charge will retain the prerogative to alter stand-by positions for operational reasons. Any change of location will be notified and coordinated through to ATC.

45.Rescue Coordination Centre (RCC): A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search rescue region.

46.Radiation Emergency Response Team: As coordinated and nominated from Crisis Management Group – DAE (CMG-DAE) the experts from BARC would render advice on radiation surveillance, technical advice on response to responders including security forces, medical doctors, and fire brigade personnel for providing assistance and radiation emergency response acts. On observation of normalcy, the message on calling off the emergency would be passed on through CMG-DAE to Airport authorities.

47.Reception Area: An assembly area located on the airport for non-hospitalized passengers and crew to assemble prior to Reunification with relatives or friends.

48.Recovery: Recovery in relation to an airport emergency covers the processes of returning CSMIA to its normal operational status after an emergency.

49.Rendezvous Point: A pre-arranged reference point, i.e., road junction, crossroad or other specified place to which personnel / vehicles responding to an emergency

initially proceed to receive directions to staging area and / or the accident / incident site.

50.Response: Response in relation to an airport emergency includes the process of reporting to, combating and of providing immediate relief for people affected by the emergency.

51.Sabotage: An act or omission, intended to cause malicious or wanton destruction of property, endangering, or resulting in unlawful interference with international civil aviation and its facilities.

52.Staging Area: A prearranged, strategically placed area where support response personnel, vehicles and other equipment can be held in readiness for use during an emergency.

53.Sub Plan: An action plan required for a specific hazard, critical task or special event. It is prepared when the management arrangements necessary to deal with the effects of the hazard, or critical tasks or special event differ from the general coordination arrangements set out in the main plan for the airport.

54.Support Agency: Agencies or organizations both internal and external to the Airport which can provide assistance to the airport in event of an incident that is beyond the resources of the airport. Support Agencies will operate in accordance with their Standard Operating Procedures under the auspices of the Combat Authority nominated in this plan.

55.Suspect Item: An object considered out of place, unattended or unusual for which an explanation cannot be readily determined, and which may constitute a threat.

56.Table-top Exercise: Tabletop exercises are table-based activities typically held in an informal setting and presented by the Facilitator. There is no hands-on practice or field work. Tabletop Exercises are conducted to evaluate the capability to execute one or more portions of an Emergency Management Plan

57.Triage: The sorting of casualties at an emergency according to the nature and severity of their injuries.

58.Triage Area: Location where triage operations are performed.

59.Vehicle Assembly Point: An area at the scene of an accident where all vehicles report prior to being called into active duty.

60."Vicinity of the Airport" for ARFF for aircraft related incidents: The vicinity of the airport for response purposes for the ARFF is an area up to one Km in the approach path and other areas up to one Km around the airport boundary.

61.Visibility Stand-by: Declared by ATC Tower when visibility reduces to 2500 meters or below &/or cloud base is 450 meters with more than 4/8.

62.Warning Agency: A Warning Agency is the agency that has information on an emergency or potential emergency and responsibility to advise other agencies.

63.Watch Supervisory Officer (WSO): The most senior officer on shift with AAI-ATC.

Distribution List

AERP is to be distributed to all operational units of MIAL, DGCA, Government Departments, Airline/ground Handlers, Supporting Agencies and Other Airport Organizations which are engaged in the operational functions of CSMIA.

Note: It is the responsibility of the individuals / agencies to refer the current version of the documents / charts etc. and share the same with team members. and to obsolete the old versions.

MIAL Internal Distribution List		
Sr. No.	**Designation/Office**	**Copy No.**
1	Chief Executive officer	
2	Management Representative Office	
3	Head – Operations	
4	Head - Engineering & Maintenance)	
5	Head - Airside Management	
6	Head – Cargo	
7	Head – IT	
8	Head – Legal	
9	Head - Material Management	
10	Head – HR	
11	Head – AOS	
12	Head - Corporate Communication	
13	Head – Security	
14	Head - Medical Services	
15	Head - Environment	
16	Head- ARFF	
17	Head -Terminal 1 & CA	
18	Head -Terminal 2 & Baggage Operations	
19	Head - JCC	
20	Head – Safety	
21	AECC	
22	Airport Contact Centre	

International/Domestic Airlines		
Sr. No.	**Designation/Office**	**Copy No.**
1	Air Arabia Airways	
2	Air Canada	
3	Air China	
4	Air Deccan	
5	Air France	
6	Air India	
7	Air Mauritius	
8	Air Seychelles	
9	Air Tanzania	
10	Air Vistara	
11	All Nippon Airways	
12	Bangkok Airways	
13	Blue Dart	
14	British Airways	
15	Cargolux Airlines Cargo	
16	Cathay Pacific Airways	
17	China Air Cargo	
18	China Eastern Airline NONSKED	
19	Delta Airlines	
20	Egypt Airlines	
21	El Al Israel Airlines Ltd.	
22	Emirates	
23	Ethiopian Airlines	
24	Etihad Airways	
25	FedEx Cargo	
26	Fly Dubai	
27	Go Airlines	
28	Gulf Air	
29	Indigo	
30	Iran Air	
31	Iraqi Airways	
32	Jazeera Airlines	
33	Kenya Airways	
34	KLM Royal Dutch Airlines	
35	Korean Air	
36	Kuwait Airways Corpn.	
37	Lufthansa Airlines	
38	Malaysia Airlines	
39	Malindo Air	
40	Nepal Airlines Corporation	
41	Oman Air	
42	Pakistan International	
43	Qatar Airways	

44	Royal Bhutan Airlines	
45	Royal Nepal Airlines	
46	Rwand Air	
47	Saudi Arabian Airlines	
48	Singapore Airlines	
49	Spice Jet	
50	Srilankan Airlines	
51	Star Air	
52	Swiss /Cross Airlines	
53	Sichuan Air Cargo	
54	Thai Airways	
55	The Lion	
56	The Smile	
57	Tru Jet	
58	Turkish Airlines	
59	United Airlines	
60	Ups Cargo	
61	Uzbekistan Airways	
62	Vistara	
63	Virgin Atlantic	
64	Yemen Airways	

List of Chartered Flight Operators		
S/N	**Operator / Company**	
1	Abg Resources Ltd	
2	Air One Aviation	
3	Airmid Aviation Services Pvt Ltd	
4	Aryan Aviation Services Pvt Ltd	
5	Ashley Aviation Ltd.	
6	Aviators (India) Pvt. Ltd	
7	Bajaj Auto Ltd	
8	Bajaj Hindustan Ltd	
9	Bharat Forge Ltd.	
10	Coromandel Travels Ltd	
11	Deccan Charters Ltd	
12	DLF Ltd	
13	EIH Ltd	
14	First Future Air Services Pvt Ltd	
15	Futura Travels Ltd / Essar	
16	GMR Aviation Pvt. Ltd.	
17	Government Of Chhattisgarh	
18	Government Of Gujarat	
19	Govt.Of Jammu & Kashmir	
20	Grasim Industries Limited / Birlas	
21	India Fly Safe Aviation Limited	
22	International Air Charter Ops (P) Ltd.	
23	Invision Air Services Pvt. Ltd.	
24	Jaiprakash Associates Ltd.	
25	JSW Steel Ltd	
26	Larsen And Toubro Ltd	
27	Mahindra & Mahindra	
28	Modern Road Makers Pvt Ltd	
29	MSPL Ltd	
30	Privilege Airways Pvt. Ltd.	
31	Quick Flight Ltd	
32	Reliance Commercial Dealers Ltd	
33	Reliance Transport & Travels Pvt Ltd	
34	Simm Samm Airways Pvt Ltd	
35	Sobha Puravankara Limited	
36	Span Air Ltd	
37	TAJ Air Ltd	

38	Taurian Iron & Steel Co. Pvt. Ltd.	
39	TVS Motor Company	
40	Venkateshwara Hatcheries Pvt Ltd.	
41	Zest Aviation Pvt. Ltd.	

External Organizations/ Agencies/ Services		
Sr. No.	**Designation/Office**	**Copy No.**
1	GM – ATM, Airports Authority of India, Mumbai	
2	RCC Mumbai	
3	Chairman – AOC, Mumbai	
4	3 AFMLU, Indian Air Force	
5	DIG, CISF	
6	Director, HSEG, BARC (Assistance / Advice on Radiation Safety and Emergency Response)	
7	RDCOS, BCAS	
8	ACP, Airport Police Station	
9	MCGM In-Charge Disaster Management Cell	
10	Chief, Mumbai Fire Brigade	
11	Additional Controller of Civil Defence, Mumbai	
12	State Disaster Management Authority	
13	DGCA	
14	Indian Navy	
15	Customs	
16	Bureau of Immigration	
17	APHO	
18	GHA Celibi-Nas	
19	GHA BWFS	
19	Hangar - Air Works	
20	Hangar -Indamer	
21	Hangar -Essar	
22	Hangar -Taj Air	
23	Hangar -Raymonds	

1. Introduction:

The CSMIA Aerodrome Emergency Response Plan defines general functions, roles, and responsibilities of MIAL operational units and of those agencies in the surrounding community that could be of assistance in order to ensure prompt response, rescue, and recovery actions in the event of an emergency at the Airport. Aerodrome Emergency Plan provides a formal record of the agreements reached between agencies that are expected to respond to an emergency at CSMI Airport. It contains details of type of emergencies anticipated at the airport and its vicinity, the agencies involved and their roles & responsibilities and the procedures for dealing with such emergencies.

It speaks about the command, communication, and coordination functions amongst the agencies responsible for providing emergency response to an airport emergency. The document does not detail the way in which agencies or departments responding to an emergency will carry out those actions.

For the purpose of this document, the accident / incident shall be deemed as stated in Aircraft (Investigation of Accidents and Incidents) Rules, 2017 (Published vide G.S.R. 1011(E) dated 7th August 2017) amended from time to time.

2. Responsibility:

Head Operations, MIAL will have the overall responsibility of ensuring compliance, preparation, updating, revision and implementation of AERP.

3. Objective:

Aerodrome Emergency Response Plan (AERP) defines procedures for timely and coordinated response, rescue and recovery operation while handling an airport emergency with the objective of minimizing the effects of emergency, particularly in respect of saving lives, properties, environment and maintaining aircraft operations / business continuity.

4. Purpose:

The purpose of this AERP is to set forth the procedures for coordinating the response of different agencies and services, both on and off the aerodrome, to handle various aircraft related and non-aircraft related emergencies anticipated at CSMI Airport. Other than the duties and responsibilities, AERP also spells out the following: -

- Orderly and efficient transition from normal to emergency operations.
- Assignment of emergency responsibilities.
- Co-ordination of efforts to cope with emergencies.
- Safe and continuation of aircraft operations or return to normal operations as soon as possible

5. Assumptions and Situations

This plan is prepared with a concept that all concerned responding agencies have appropriate set procedures and the required capability to respond and deal with any

emergencies at the airport and are in synergy with this AERP. Please note that it is not the plan's purpose to define policies or procedures of various organizations that would be implemented when responding to an emergency, but to define the types of emergencies that may arise and the options for dealing with and controlling them. The response will be varied depending upon the type and severity of the emergency. When a notification is made that a response is necessary, the appropriate resources will be activated to the incident. A request for resources outside airport will be notified but limited so as not to affect the ARFF category. Further the plan has been prepared on the belief that the responding agencies are well versed with the concept of human factor principle and shall consider the same while mobilizing their resources and responding to an emergency at the Airport.

Note: Airport construction projects could pose a potential problem relative to the response of emergency vehicles unless such issues are identified and resolved. The Airport operations department shall address all such concerns in the initial planning stages of construction projects with ARFF and Apron control and shall continue to monitor same till completion.

6. Scope:

The CSMIA AERP details the plans for command, communication, and coordination functions amongst the agencies responsible for providing response to emergencies that take place at CSMI Airport. The scope of AERP is limited to responding to airport emergencies within Airport and one (01) KM from the Airport Boundary with the extent practicable at the time of accident.

Procedures to deal and manage emergencies at CSMIA are drawn up under Nine (09) Chapters in Part 1 of this AERP as follow: -

Chapter 1 - Local Standby
Chapter 2 - Full Emergency
Chapter 3 - Aircraft Incident- Accident ON the Airport
Chapter 4 - Aircraft Accident OFF the Airport
Chapter 5 - Dangerous Goods Occurrences
Chapter 6 - In-flight Mass Casualties
Chapter 7 - Fire on the Ground (Fires involving airport terminals and other installations/equipment, including Drone)
Chapter 8 - Natural Disasters such as Flood, Storms and Earthquakes.
Chapter 9 - Standard Operating Procedure to deal with Mutiny of Large-Scale desertion by the Security personal

Note: Procedures for dealing with specific subjects related emergencies are developed under separate plans/Manuals/SOPs and are classified as detailed below:

- Planning and Notification of Full-Scale exercise
- Procedure for Immigration and Customs-dealing with Aircraft incident/accident involving International Flights.

- Public Health Emergencies of International Concern - Available with APHO, CSMIA.
- Plan for dealing with Adverse Weather at CSMI Airport is defined in ARFF working Instruction as "Procedure for Adverse Weather Condition Standby Doc No: MIAL/AO-ARFF/WI/16/00".
- Reporting and handling of passenger with suspected communicable disease at CSMI Airport is defined in MIAL- Medical Services SOP as Providing Emergency Medical Assistance / First Aid to Passenger/ Staff / Others Within the Airport Premises Doc No: MIAL/MS/SOP/01/00.
- Activation process of Survival Reception Area, Meeters and Greeters Area, Reunion Area, and Helpdesk for passenger's relatives and friends – Activation procedure of emergency coordination center is defined in SOP.Doc No: MIAL/TO/SOP/21/01

Note: Procedures for dealing with specific subjects are developed under separate plans/Manuals and are classified as detailed below:

- Monsoon Contingency Plan: A separate Contingency Plan is available and the same is not included in this document.
- Adverse Weather Operations Plan: separate Manual is available and the same is not included in this document.
- Disabled Aircraft Removal Plan: A separate Contingency Plan has been prepared to deal with removal of disabled aircraft and the same is not included in this document.
- Contingency Plan for Handling Unlawful Interference, Hijacking, bomb threat and other acts with Civil Aviation operations may be one or more of the following:
    - Aircraft Hijacking while in flight
    - Forcible seizure of aircraft on ground
    - Attacks on the vital ground installations, navigational aids, communication facilities, Terminal Buildings and such essential facilities on ground including attack on passengers and holding passengers/staff as hostages.
    - Bomb Threat to Aircraft/Airport installations and suspected baggage/articles
    - It is possible that one or more of the threats described above will occur at some point of time at our airport. As a result of our ongoing process and commitment towards various training, it is our belief that the employees as well as all involved tenants and agencies shall execute their assigned tasks and responsibilities in a prompt and efficient manner.

7. Amendment Procedure:

- AERP is a live document and revision to the AERP is mandatory due to changes in procedures and changes in contacts details of operational units. The contact details shall be updated once in every six months of a calendar year and the document shall be subject to review based on experience gained through exercises and actual emergencies, and on comments and suggestions received from users of this manual.
- A checklist of current pages will be issued with every replacement or update. The holder of each plan shall ensure that the amended pages are properly inserted, the old pages destroyed, and the amendment number logged on in the below mentioned format (Record of Amendments).
- Recommendations towards the AERP improvement should be forwarded to:

Head - ARFF
Mumbai International Airport Pvt. Ltd.
Chhatrapati Shivaji Maharaj International Airport,
1st Floor, Terminal 1B, Santacruz (E),
Mumbai 400099
sunil.khapane@adani.com
emergencyplanner@adani.com

8. Airport Emergency Committee (AEC):

The purpose of Airport Emergency Committee is to ensure that CSMI Airport, as a whole, is equipped to provide efficient and effective response to different types of airport emergencies. The Committee will consider all aspects of emergency planning including the following, which are not in order of priority.

- Identification of core components of AERP to identify how and when these are to be tested, whether in parts or the entire emergency plan, according to the DGCA/ICAO recommendations or if corrective actions are required.
- Develop comprehensive contingency plans.
- Review response capability and issues from external emergency services.
- Review external emergency services statutory obligation to respond to significant emergencies arising within their geographical area.
- Discuss and consider plans for external emergency services to become involved with the process of AERP planning and the resultant training requirements (including Radiological Safety Response Plans).
- Planning of annual emergency exercise to determine the scope of each exercise and the participants of each exercise.
- Committee Composition:
- Chairman & Convener - Head of Operations, MIAL-CSMIA
- Members - Senior Representatives of:

a) MIAL

- Aerodrome Rescue and Fire Fighting
- Airside Management
- Safety
- Joint Control Centre

- Medical Services
- Terminal Operations
- MIAL Security
- Engineering & Maintenance
- Safety
- Environment
- Corporate Communication
- Emergency Planner

b) External Agencies:

- DGCA
- ATC
- CISF
- Mumbai Fire Brigade
- State Police
- BCAS
- Immigrations
- Customs
- APHO
- Airlines Operators Committee
- Disaster Management Cell, Municipal Corporation Greater Mumbai (MCGM)
- State Disaster Management
- Civil Defense.
- Other members as invited by the AEC

Frequency of Meeting: Hold the meetings once a year or as and when situation demands but with consent of Chairman/Convener.

Part: 1: Type of Emergencies

Chapter 1: Local Standby

1.1 Definition:
Local Standby is declared when an aircraft approaching the airport is known or is suspected to have developed defects, but the trouble is not such as would normally involve any serious difficulty in effecting a safe landing.

1.2 Declaration of Local Standby:
Declared by:

- The Pilot In-Command by requesting declaration through ATC, or
- ATC when they are of opinion that the standby is warranted.

> **"Local stand By, Local standby, Local standby"**
> Local Stand by declared for **XYZ Airline**, Flight No **123**, Type of Aircraft **B - 721**, POB **XXX**, FOB **YYY**, Nature of Trouble **NNN**, RWY in use – 27, ETA **0000** IST. All concerns to take necessary actions.

1.3 Activation:
Activated through a notification process that needs to be initiated and confirmed as fast as possible. Notifications can be automated notification through ANTS or manual notification.

1.4 Notification Chart:
1.4.1 Automated Notification: Shall be carried out by JCC by activating ANTS as described in the notification chart for Local stand by.
1.4.2 Manual Notification: Shall be carried out by all concerned departments as determined in Appendix 14 for Local Stand By, after receiving information of the same.

1.4.3 Critical information to be provided in notification:
In the initial activation, following information must be provided and recorded for onward notification.

1	Aircraft Operator and Flight number:
2	Type of Aircraft:
3	Call-sign
4	Registration
5	Sector: From- To:
6	Nature of trouble:
7	ETA:
8	RWY to be used:
9	Persons on board: PAX CREW
10	Fuel on board:
11	Known HAZMAT on board

1.5 Responsibilities

1.5.1 Air Traffic Control:

Primary Responsibilities

On declaration of Local Standby, pass critical information, as defined above, on Hot Line to:

- MIAL- Fire Watch Tower
- MIAL- Apron Control

1.5.1.1 Tower supervisor shall notify:

- Watch Supervisory Officer; and
- ATS Reporting Officer

1.5.1.2 ATS reporting officer shall notify:

- MLU (Military Liaison Unit), IAF, if it's military aircraft.
- Notify DGCA about the Local Standby.

1.5.1.3 ATC Tower reporting officer shall notify:

- The position and status of "Affected aircraft" in emergency shall be informed to Fire Watch Tower.
- When "affected aircraft" is on final and number one to land, inform Fire Watch Tower.
- On receiving 'all ops normal' call from Pilot in-Command, terminate the emergency.

1.5.2 Aerodrome Rescue and Fire Fighting (ARFF):

- ARFF Will be the Command and Coordinating Authority for handling the 'Local Standby' on ground until the same is withdrawn by ATC.

1.5.2.1 Head ARFF:

Primary Responsibilities

- On receiving information of declaration of local stand by, obtain the relevant information pertaining to the emergency and co-ordinate with Duty Manager (ARFF) to optimize the situation.

Secondary responsibilities

- Remain on standby to respond in case emergency is escalated.

1.5.2.2 Fire Watch Tower (FWT):

Primary Responsibilities

- Acknowledge the declaration of Local Standby on receipt of critical information from ATC and note details of Local Standby as per Fire Watch Tower Activity Report.
- Make announcement on PA system.
- Notify critical information to all concerned personnel as per Notification Chart.
- Maintain extra vigil and quickly disseminate information (if any) by RT communication to all concerned departments.

- FWT In charge shall obtain information about the landing sequence of the emergency Aircraft and broadcast on RT (161.825 MHz) the position of the aircraft when it is number one in sequence to land.
- Positively maintain communication triangle with JCC and Apron Control about the status / position of aircraft which being informed by ATC.
- Maintain record of logs with respect to the emergency.

Secondary responsibilities

- Relay termination of Local Standby to all concerned.

1.5.2.3 Duty Manager:

Primary Responsibilities

- Duty Manager of ARFF will be the Coordinating authority for physical handling of the Local Standby on ground. He shall:
- Confirm critical details of Local Standby received from Fire Watch Tower.
- Ensure that crew is briefed about the situation.
- Maintain a listening watch on RT for any requirement pertaining to handling of emergency.
- Ensure that crew mounts on their designated fire and rescue appliance.
- When the aircraft is reported on final approach, give instruction that the entire rescue and fire appliance be started and kept on idle run-up for quick dispatch, if turnout is required at the last minute.

Secondary responsibilities

- Escalate Local Standby to Full Emergency if the situation worsens.

1.5.2.4 All ARFF Personnel's:

Primary Responsibilities

- On declaration of Local Standby, immediately mount on designated ARFF Vehicle as fast as possible.
- Listen to the critical details of Local Standby announced on PA system by FWT.
- CFT in-charge shall ensure that the vehicle is kept ready and inform to FWT that local standby is being maintained.

Secondary responsibilities

- CFT in-charge will start the vehicle on receiving information from FWT that emergency aircraft is number one to land.
- All other ARFF crew shall maintain standby in their respective turnout vehicles till the emergency is withdrawn by ATC.

1.5.3 JCC (Executive Manager Joint Operation):

Primary Responsibilities

- Acknowledge the declaration of Local Standby on receipt of critical information and note details of Local Standby – As per JCC Activity Report.
- Inform affected aircraft operator/airline.

Secondary responsibilities

- Inform all other concerned as per notification chart and activate ANTS.
- Notify critical information to all stakeholders at JCC through an email in prescribed template.
- Relay termination of Local Standby to all concerned.

1.5.4 Airside Safety:

1.5.4.1 Head – Airside safety:

Primary Responsibilities

- On receiving information of declaration of local stand by, obtain the relevant information pertaining to the emergency and co-ordinate with Duty Manager (Apron Control) to optimize the situation.

Secondary responsibilities

- Remain on standby to respond in case emergency is escalated.
- Ensure reporting of incidents to Authorities.

1.5.4.2 Duty Manager-Apron Control:

Primary Responsibilities

- Note details of Local Standby – As per Apron Control Activity Report.
- Notify critical information to all concerned as per Notification Chart (including JCC & ARFF).

Secondary responsibilities

- In-case it is required to obtain details on the reason that led to declaration of Local Standby, obtain the same from ATC/ Aircraft Crew.
- Ensure that 'follow me jeep' is ready to assist the affected aircraft and to carry out runway inspection if needed.
- Relay termination of Local Standby to all concerned.

1.5.5 Affected Airline / Ground Handling Agency (GHA):

Primary Responsibilities

- On receipt of information on local Standby, activate LERP.
- If notified by Apron, respond to the designated area with required equipment's i.e., tow-bar vehicle, step ladder, passenger coaches etc.

1.5.6 Airport Contact Centre:

Primary Responsibilities

- Receive critical information from JCC and note details of Local Standby.

Secondary responsibilities

- Keep updated situational information for responding to enquiries through IVRS.

1.5.7 Corporate Communications:

Primary Responsibilities

- Receive critical information and note details on local standby
- Evaluate the need and method for dissemination of information / address media queries

1.5.8 All concerned MIAL Managers receiving notice of Local Standby:
Primary Responsibilities

- Whether on or off airport, remain on standby to respond in case emergency is escalated.
- Activate subordinate staff at Airport to attend to emergency, if required.

1.6 Termination of Local Standby:

- Termination of Local Standby shall be done by ATC Tower once the Pilot in Command confirms that all operations are normal. ATC Tower shall notify Termination of Local standby on hotline to Fire Watch Tower, WSO and Apron Control.
- Fire Watch Tower will pass the information to JCC about termination of Local Standby
- JCC will pass notification through ANTS to all concerned agencies that "Local Standby emergency terminated".

Chapter 2: Full Emergency

2.1 Introduction:

Full emergency is declared when an aircraft approaching the airport is, or is suspected to be, in a situation that there is a possibility of an accident.

2.2 Declaration of Full Emergency:

Declared by:

- The pilot in command by requesting declaration through ATC, or
- ATC when they are of opinion that declaration of "Full Emergency" is warranted.

> **"Full Emergency, Full Emergency, Full Emergency"**
> Full emergency declared for **XYZ Airline**, Flight No **123**, Type of Aircraft **B - 721**, POB **XXX**, FOB **YYY**, Nature of Trouble **NNN**, RWY in use – 27, ETA **0000** IST. All concerns to take necessary actions.

2.3 Activation:

Activate through a notification process that needs to be initiated and confirmed as early as possible. Notifications can be automated notification through ANTS or manual notification.

2.4 Notification Chart:

2.4.1 Automated Notification: Shall be carried out by JCC by activating ANTS. **2.4.2 Manual Notification**: Shall be carried out by all concern departments as determined in Appendix 15 of AERP, after receipt of information of Full Emergency.

2.4.3 Critical information to be provided in notification:

In the initial activation following information must be provided and recorded for onward notification.

1	Aircraft Operator and Flight number
2	Type of Aircraft
3	Callsign
4	Registration
5	Sector: From- To:
6	Nature of trouble
7	ETA
8	RWY to be used
9	Persons on board: PAX CREW
10	Fuel on board
11	Known Hazardous Material (HAZMAT) on board

2.5 Command and Coordinating Authority:

- The Duty Manager of ARFF services will be the coordinating authority for physical handling of the emergency on ground until the Full Emergency is withdrawn by ATC.
- EMJO will be the coordinating authority for airport support agencies, including the affected airline.
- The Duty Manager, Airside Safety will be the coordinating authority at the designated Rendezvous Point to ensure efficient handling of External Support Agencies Reporting at the Airport in response of the emergency.

2.6 Support Agencies:

2.6.1 Internal Agencies:

- ARFF Services
- Airside Operations
- Landside Operations
- Medical Service
- JCC
- Terminal Operations
- E&M
- Safety
- Corporate Communication
- Security
- Affected Airline & its nominated Ground Handler
- ATC
- CISF

2.6.2 External Agencies:

- Mumbai Fire Brigade
- Hospital /Ambulance
- Doctors on Emergency Panel List
- State Police

2.7 Responsibilities:
2.7.1 Air Traffic Control:
Primary Responsibilities:
On declaration of Full Emergency, pass critical information, as defined above, on Hot Line or RT 121.9 MHz to:

- MIAL- Fire Watch Tower,
- MIAL - Apron Control

2.7.1.1 Tower Supervisor shall notify:

- Watch Supervisory Officer
- ATS Reporting Officer
- Met Duty Officer in ATC Tower

2.7.1.2 ATS Reporting Officer shall notify:

- MLU (Military Liaison Unit), IAF, if it's military aircraft.
- Notify DGCA about the Full Emergency.
- Notify RCC Officer on duty.

2.7.1.3 ATC Tower notify:

- The position and status of aircraft in emergency shall be informed to Fire Watch Tower.
- When "affected aircraft" is on final and number one to land, inform Fire Watch Tower.

2.7.2 Aerodrome Rescue & Fire Fighting (ARFF):

2.7.2.1 Head - ARFF:

Primary Responsibilities:

- On receiving information of declaration of Full Emergency, obtain the relevant information pertaining to the emergency and act judiciously to optimize in handling the situation.

Secondary Responsibilities

- Ensure reporting of incidents to appropriate Authorities.
- Remain in standby to respond in case emergency is escalated.

2.7.2.2 Fire Watch Tower:

Primary Responsibilities:

- Acknowledge and activate of Full Emergency procedures on receipt of critical information from ATC.
- Keep note of details of Full Emergency in Fire Watch Tower Activity Report.
- Make announcement on PA system to activate full emergency procedure.
- Positively maintain communication triangle with JCC and Apron Control about the status / position of aircraft which are being informed by ATC.
- Maintain extra vigil and quickly disseminate information (if any) by RT (161.825 MHz) communication to Apron Control & Duty Manager - ARFF.
- FWT In charge shall obtain information about the landing sequence of the emergency Aircraft and broadcast on RT (161.825 MHz) the position of the aircraft when it is number one in sequence to land.
- Positively maintain communication triangle with JCC and Apron Control about the status / position of aircraft which are being informed by ATC.

Secondary Responsibilities

- On receiving information from ATC that Full Emergency is withdrawn, announce the Termination of Full emergency on RT (161.825 MHz) for all stations.
- Maintain record of logs with respect to the emergency.

2.7.2.3 Duty Manager:

Primary Responsibilities:

- Confirm critical details of Full emergency received from Fire Watch Tower.
- Ensure that ARFF crew is briefed about the situation.
- Maintain a listening watch on RT (121.9 MHz) for any requirement pertaining to handling of emergency.
- Ensure that crew mounts on their designated fire and rescue appliances and proceeds to the respective PDPs via established access routes.
- Stay in contact with ATC for further communication on RT (121.9 MHz) and monitor the same for responding to further developments.
- Ensure that RV Point and Casualty center has been activated, Mumbai Fire Brigade has reported.
- When the emergency aircraft is on final, inform ATC that all ARFF Vehicles will enter RWY soon after landing and follow the emergency Aircraft up to the designated parking stand.

Secondary Responsibilities

- Co-ordinate with aircraft ground engineer / pilot in-command for final safety clearance.
- Ensure all ARFF appliances returns to fire stations via established routes.
- In-case of Aircraft accident on or off the Airport, escalate Full Emergency to Aircraft accident.

2.7.3.4 All ARFF Personnel:

Primary Responsibilities:

- Immediately on declaration of Full Emergency turnout on designated ARFF Vehicle as fast as possible.
- Listen to the critical details of Full Emergency announced on PA system by FWT.
- CFT in-charge with crew shall mount on their designated fire and rescue appliance and proceeds to the respective PDPs via established access routes and inform the same to FWT through RT (161.825 MHz).
- CFT in-charge will inform to FWT on RT (161.825 MHz) after positioning CFT at Predetermine position of designated RWY.
- Follow Emergency Aircraft after landing up to the designated parking stand or act as directed by duty manager (ARFF).
- FCP and Triage vehicles shall take position as per the directives of duty manager.

Secondary Responsibilities

- All other ARFF crew shall maintain standby at station in their respective turnout vehicle till the termination of emergency.

- On receiving information about termination of full emergency, return to respective Fire Stations.

2.7.4 JCC (Executive Manager Joint Operation):
Primary Responsibilities:

- Acknowledge and activate Full Emergency procedures on receipt of critical information (Refer Para 4).
- Inform all as per notification chart including Affected Aircraft operator/ Airline (Appendix 15 in AERP) and activate ANTS.
- Coordinate with stakeholders for activation of Emergency response.
- In-case of Aircraft accident on or off Airport, escalate Full Emergency to Aircraft accident.

Secondary Responsibilities

- Notify critical information to all stakeholders at JCC through an email in prescribed template.
- Relay termination of full emergency to all concerned.

2.7.5 Airside Safety:
2.7.5.1 Head-Airside Safety:
Primary Responsibilities:

- On receipt of information on Full Emergency, keep close co-ordination with Duty Officer – Apron Control.

Secondary Responsibilities

- Remain in standby to respond in case emergency is escalated.
- Ensure reporting of incidents to appropriate Authorities.

2.7.5.2 Duty Manager Apron Control:
Primary Responsibilities:

- Note details of Full Emergency – As per Apron Control Activity Report.
- Notify critical information to all concerned as per Notification Chart
- Ensure that the triangle with ARFF and JCC are maintained.
- Inspect alternate RWY and handover to ATC for operation.
- Activate Rendezvous Point and execute controlled movement of vehicles and supporting staff reporting at RV point in response to the full emergency.
- Confirm with Security at Gates 1 and 5 that access to external emergency vehicles have been accorded. Follow Me vehicles are to be placed at Gate 1 & 5 to provide follow me service to external vehicles and agencies up to RV point.
- Ensure the availability of step ladder along with towbar and push back vehicle at the end of operational runway, if required

Secondary Responsibilities

- Deploy external agencies as requested by FCP.
- Maintain extra vigil and quickly disseminate additional information to appropriate authority

- After landing of full emergency aircraft, apron control shall inspect runway and handover to ATC again

2.7.5.3 Safety Officer's on "Follow Me":
Primary Responsibilities:

- Activate RV Point.
- Safety Officer shall report to Gate 1 and Gate 5 and co-ordinate with CISF personnel for immediate entry of emergency vehicles toward airside.
- Safety Officer Shall update status of all reported external agencies to Duty Manager – ARFF.
- Provide "Follow Me" service to responding emergency vehicles up to RV Point, if required, up to incident/accident site.

Secondary Responsibilities

- Safety Officer on follow me vehicle shall manage the routing to and from accident site.

2.7.6 Terminal Management:
2.7.6.1 Duty Terminal Manager (Terminal 1 & 2 and CA Terminal):
Primary Responsibilities:

- Receive critical information from JCC and note details of Full Emergency.
- Duty Terminal manager of Terminal 2 must inform (Head) - Medical services, Duty medical officer, Doctors on emergency panel (for alertness), Head of Terminal operations – T2, Concerned airlines, Immigration and Customs as per appendix 16
- Duty Terminal Manager of Terminal 1 shall inform Ambulance services, hospitals on emergency panel (for alertness), Head of Terminal Operations T1 as per appendix 16

Secondary Responsibilities

- Keep alertness in anticipation and maintain preparedness in case the full emergency is escalated to aircraft accident / incident.

2.7.7 Medical Department (Duty Medical Officer):
Primary Responsibilities:

- Receive critical information from JCC and note details of full emergency.
- T1 Medical Officer to proceed for activating casualty center.
- T2 Medical officer will report to RV Point.

Secondary Responsibilities

- Confirm with terminal operations that hospitals and doctors in emergency panel are informed about the emergency.

2.7.8 CISF
2.7.8.1 Security Operation Control Center:
Primary Responsibilities:

- Receive critical information from Fire Control room and note details of full emergency.
- Notify critical information to all concerned as per Departmental Notification Chart and ensure post notification action.
- Instruct security personal at Gate 1 and Gate 5 to allow Mumbai Fire brigade / Radiation Emergency Response Team (RERT) vehicle's access into airside to report at Rendezvous Point.
- Alert Quick Response Teams for immediate response.

- Secondary Responsibilities
- Keep additional manpower on standby for requirement to cordon off site in case the full emergency is escalated to Aircraft accident / incident.

2.7.8.2 CISF (Quick Response Team):
Primary Responsibilities:

- Quick Response Team personnel should coordinate with Apron Control, which could provide immediate support if full emergency converted to incident/accident.

2.7.8.3 CISF (In charge Gate 1 & Gate 5):

- On arrival of Mumbai fire Brigade vehicles, allow the access to airside in coordination with Follow Me vehicle.

2.7.9 Airport Contact Centre:

- Receive critical information from JCC and note details of Full Emergency.
- Keep updated situational information for responding to enquiries through IVRS.

2.7.10 MIAL Corporate Communications:

- Receive critical information and note all the details of full emergency.
- Evaluate the need and method for dissemination of information / address media queries

2.7.11 All MIAL Officials receiving notice of Full Emergency:

- Receive critical information through ANTS or from respective department and note the details of full emergency.
- Liaise with concerned departments/agencies.
- If on or off airport, remain on stand-by to respond in-case emergency is escalated.

2.8 Termination of Full Emergency:

- Termination of Full Emergency shall be done by ATC Tower once the Pilot in command confirms that all operations are normal. ATC Tower shall notify Termination of Full Emergency on hotline or RT 121.9 MHz to Fire Watch Tower, and Apron Control.
- Fire Watch Tower will pass the information to JCC about termination of Full Emergency

- JCC will pass notification through ANTS to all concerned agencies that "Full Emergency Terminated".

Chapter -3: Aircraft Incident / Accident at the Airport

3.1 Introduction:

- An aircraft accident may not be as serious as a crash on the first instance. However, the presence of large quantity of fuel may turn the situation as crash. So, we are prepared for handling both the situation in the same procedure as crash handling, so that fire control and rescue mission can be accomplished without delay. This chapter defines the roles and responsibilities of internal and external stakeholders including MIAL in case of aircraft accident / incident.

3.2 Declaration of Emergency:

- On witnessing of aircraft incident / accident or on being notified by pilot in-command, ATC will activate the Crash siren for 2 Minutes and fire bell for 20 seconds. Inform the same on R/T 121.9 MHz or hotline to Fire Watch Tower mentioning that aircraft has met with an incident / accident at the Airport with exact location.
- Fire Watch Tower or Sub fire station on observing the aircraft incident /accident, will activate the Fire bell and intimate the same to ATC, Apron Control and JCC if not already informed.
- The airport rescue and firefighting services will take action in the same manner as if the Air Traffic Control Services have initiated the call and a full turnout shall be initiated by Duty Manager (ARFF) with a positive coordination with ATC and ensure that crossing of runway in all cases will be after taking clearance from the ATC. All pertinent information at crash site should be relayed to ATC Tower promptly.
- ATC shall activate the crash siren when the aircraft accident is imminent.

> **"Aircraft Accident, Aircraft Accident, Aircraft Accident"**
> Aircraft Accident at Location **AAA (grid reference)** as well as nearby location such as (RWY beginning/end, TWY name, parking bay/apron etc.), Type of Aircraft **B - 721**, Aircraft Operator - **XYZ Airline**, POB (If known) All concerned to take necessary actions.

3.3 Activation:

The plan will be activated on receipt of the information of Aircraft accident / incident by ATC / ARFF / JCC / Apron control within and on the airport boundary.

3.4 Notification:

Notification of an incident / accident shall be made immediately by ATC or ARFF as mentioned above, subsequently a triangle of information shall be maintained between ARFF, Apron Control and JCC.

3.4.1 Automated Notification: Shall be carried out by JCC by activating ANTS.

3.4.2 Manual Notification: Shall be carried out by all concern departments as determined in Appendix 16 of AERP, after receipt of information of Aircraft Accident.

3.4.3 Critical information to be provided in notification:

In the initial activation, following information must be provided and recorded for onward notification.

1	Grid Location of accident
2	Aircraft operator
3	Type of aircraft
4	Call-sign
5	Registration
6	Sector
7	Nature of trouble
8	POB
9	Fuel onboard

3.5 Command and coordinating authority:

- The ARFF being the first responder to reach the incident / accident site the Duty Manager ARFF shall act as the Officer in Command on site until the arrival of on-scene commander. The Head of ARFF shall assume duties of on-scene commander on arrival at site.
- Coordinators from police, medical, affected Airline, and city fire brigade (in case radiological incident the safety expert from DAE BARC) at the accident site will report to the on-scene commander. The designation of the coordinators is available in the appendix 17 in AERP.
- Overall command of the accident Management shall be done by Chairman-AECC

3.6 Support Agencies:

3.6.1 Internal Agencies:

- MIAL - ARFF Services
- MIAL - Airside Operations
- MIAL - Landside Operations
- MIAL - Medical Service
- MIAL - JCC
- MIAL - Terminal Operations
- MIAL - E&M
- MIAL - Safety
- MIAL - Corporate Communication
- MIAL - Security
- MIAL - IT
- MIAL - Cargo Operations
- Affected Airline & its nominated Ground Handler
- ATC
- CISF
- Customs
- Immigration

3.6.2 External Agencies:

- Civil Defense
- Mumbai Fire Brigade
- Radiation Safety and Emergency Response Expert (BARC)
- Hospital and Ambulance services
- Quarantine department
- State Police
- MCGM – Disaster Management Cell
- State Disaster Management Authority
- NDRF
- NDMA

3.7 Responsibilities:

3.7.1 Air Traffic Control – ATC

Primary Responsibilities:

- Activate the crash siren and fire bell if aircraft accident / incident is imminent or occurred.
- Pinpoint the exact incident/accident location and provide unobstructed access to ARFF vehicles.
- Pass critical information, as defined above, on Hot Line to:
  MIAL- Fire Watch Tower,
  MIAL - Apron Control
- The relevant communication with regards to any aircraft accident/incident shall be communicated to **Fire Watch Tower on Primary frequency (121.9MHz) only.**
- Manage the ground movements of aircrafts in the area of the accident/incident, including issuance of NOTAM.

3.7.1.1 Tower Supervisor shall notify:

- Watch Supervisory Officer
- ATS Reporting Officer.
- Duty Met Officer at ATC Tower
- SSO

3.7.1.2 ATS Reporting Officer shall notify:

- MLU (Military Liaison Unit), IAF, if it's military aircraft.
- Notify DGCA about the Incident / Accident.
- RCC Mumbai

3.7.2 Head Operations (MIAL):

Primary Responsibilities:

- Shall be responsible for overall management of the incident/accident.
- Shall respond to AECC and manage the activities to establish a positive co-ordination between events that are unfolding at the Combat Zone and other areas involved with the handling of the Incident/accident.

Secondary responsibilities

- Initiate the recovery and restoration process.

3.7.3 Aerodrome Rescue & Fire Fighting:

3.7.3.1Head - ARFF:

Primary responsibilities

- On receiving information about Aircraft incident / Accident, obtain the relevant information and act judiciously to optimize in handling of the situation.
- He shall be the on-scene commander and will take over the charge from officer in command (Duty Manager – ARFF) after arriving at site. The following procedure shall be adopted for transfer of command and control between them.
- Briefing pertaining to P1, P2, and P3 shall be exchanged.
- Exchange any other relevant briefing and contact no of coordinators.
- Entry of handing over/taking shall be done in the logbook available with FCP.
- Keep inform the AECC chairperson or his representative about the developments and critical information.

Secondary responsibilities

- Exchange any other pertinent briefing.
- Post-accident Management
- In the case of a serious and vital aircraft accident, arrange a counselling session for all responding officials before they resume their normal operational duties.

3.7.3.2 Fire watch Tower:

Primary responsibilities:

- FWT shall coordinate with ATC, ARFF, JCC, Apron Control, SOCC and Mumbai Fire Brigade for instant response.
- Acknowledge and activate of Aircraft incident / Accident procedures.
- Activate fire bell if not done by ATC and relay information to ATC, Apron control and JCC.
- Keep note of details of Aircraft incident / accident in Fire Watch Tower Activity Report.
- Provide critical information on RT (161.825 MHz), and PA system to ARFF personnel.
- Notify critical information to all concerned as per the Notification Chart at Appendix 16.
- Positively maintain communication triangle with JCC and Apron Control about the position of aircraft/status at the site which are being informed by ATC/received from incident site.

Secondary responsibilities

- Fire watch tower to be in constant touch with ATC, FCP & AECC and disseminate information by RT (if any) to all concerned.
- Fire Watch tower In-charge shall brief external agencies about the key terminologies used, while relaying an aircraft related emergency, incident / accident.

3.7.3.3 Duty Manager - ARFF:

Primary responsibilities

- On sounding of ARFF fire bell, proceed to accident / incident site along with CFT.
- Acknowledge critical details of Aircraft accident / incident from FWT.
- Continuously monitor 121.9 MHz and take clearance from ATC for crossing of RWY/TWYs, if required.
- Ensure that ARFF appliances proceed via the shortest and safest route, preferably RWY or nearest taxiway, if aircraft incident/accident is imminent. Inform the routing of fire vehicles to incident site to ATC at the earliest.
- If aircraft incident is converted into an accident, immediately ensure full turn out of ARFF appliances.
- On reaching at accident/ incident site evaluate the situation and activate AERP as per requirement and if situation demands, instruct ARFF crew to immediately commence firefighting and rescue operations.
- Contact the Pilot in-command of affected aircraft and ATC. Immediately provide the SITREP, stating if there is any visible sign of Smoke, Fire, Spillage and Engine status.
- Remember that final decision regarding evacuation from the Aircraft shall be made by the PIC with input from the ARFF Duty Manager and if pilot in-command decide of evacuation at incident / accident site, ensure ARFF team is deployed to assist evacuation.
- If in-case, the PIC is incapacitated, or not in a position to initiate the evacuation, the Duty Manager ARFF will gain access into the Aircraft by best possible means for initiating the evacuation.
- Inform ATC regarding any reduction in ARFF category during the period of handling aircraft accident.
- If any short fall in ARFF category, after consultation with chairman-AECC, inform Fire Watch Tower to coordinate with EMJO-JCC to issue a NOTAM regarding the same.
- Ensure that all survivors and deceased passengers (if any) are shifted to safe place from accident site.
- Regarding removal of DFDR of an airline whose representative is not available at site, Duty Manager to ensure that the DFDR will only be removed in presence of DGCA/AAIB official and as per their direction, except that it may be removed immediately by ARFF officials to prevent any further damage to DFDR, and further it should be handed over to DGCA/AAIB as per procedures.

Secondary responsibilities

- Ensure at least one CFT is parked in such a position that it is in direct view of the PIC for immediate communication.
- Shall obtain status from Rendezvous point about all reported external agencies. He shall call the support agencies to site, as and when required.
- If required, co-ordinate with Apron Manager and Duty Medical officer in-charge as per requirement.

- Duty Manager – ARFF shall ensure that the FCP logbook is maintained with updated flow of events. Normally the logbook shall be written by FCP in-charge.
- If required, shall depute Rescue Stair in-charge as transportation officer to assist medical officer in transporting injured passengers to hospital/ causality center / SRA, once his assigned duties are over.
- Update AECC about the accident site Management and requirement of logistic help if any.

3.7.3.4 ARFF Crew:

Primary responsibilities

- On activation of Fire bell proceed to Incident/Accident site in their dedicated fire appliances.
- While approaching the scene of incident / accident, exercise extreme caution. Watch for evacuating occupants, wreckage debris, fuel ponding and other hazards.
- Carry out rescue and firefighting operation under the supervision of Officer in Command as per requirement.
- Triage crew shall Setup Triage Area.
- FCP In charge to establish FCP at suitable location as guided by Duty Manager-ARFF and shall maintain the FCP logbook with updated flow of events.

Secondary responsibilities

- Make use of masks and hand gloves available at FCP, while handling of casualties and Dangerous Goods.
- MFS Fire Control Room will activate Classroom as flight crew holding area.
- Rescue Stair in-charge will act as transportation officer and assist medical officer in transporting injured passengers to hospital/ causality center/SRA on completion of his primary responsibilities.
- When emergency evacuation is initiated, provide assistance to passengers / crew members, and ensure their safety.

3.7.4 MIAL Airside Safety

3.7.4.1 Head - Airside Safety

- The Head-Airside Safety shall report at aircraft accident / incident site and liaise with on-scene commander for making critical decisions.

3.7.4.2 Duty Manager – Apron Control:

Primary responsibilities

- The Duty Manager, Airside Safety will be the coordinating authority at the Rendezvous Point to ensure efficient handling of External Support Agencies those who are reporting at the airport in response to the emergency.
- Receive critical information and note details of aircraft accident.
- Notify Critical Information to all concern as per Appendix 16 of AERP.
- Advice Follow Me vehicle to activate RV point and report at Gates 1 and 5 for escorting of external emergency vehicles.

- Apron control shall inspect all area affected by accident and inform ATC about limitation/continuation of airport operation.
- Assist CISF QRT team to reach the incident / accident site.
- Until the arrival of Safety Investigation Coordinator (SIC), the initial action of SIC shall be taken by Duty Manager-Apron Control.
- Co-ordinate with all GHA for provision of transportation for survival passengers and flight crew members at airside (crash site to SRA and Casualty center).
- Escort of pilot and co-pilot for medical examination from crash site to casualty center.
- Provide ground services support.

Secondary responsibilities

- Apron control shall intimate JCC to co-ordinate with GHA to provide ADP holders at Gate no 1 and Gate No 5 to escort external responding agencies to incident / accident site, as and when required.
- Apron control will co-coordinate with all other GHAs for additional support for transportation
- Ensure that maneuvering area is re-commissioned on termination of emergency.
- If required, arrange photography/video shooting of the aircraft.
- Co-ordinate with Stakeholders/External Agencies for smooth & effective handling of emergency and restoration of operations.
- Ensure completion of necessary airport inspections upon emergency termination.
- Activate Disabled Aircraft Removal Plan, if required.
- Assist AAIB AND DGCA Authorities in Investigation and preservation of Evidence.

3.7.4.3 Safety Officer's on "Follow Me":

Primary responsibilities

- Activate RV Point.
- Safety Officer shall report to Gate 1 and Gate 5 and co-ordinate with CISF personnel for immediate entry of emergency vehicles toward airside.
- Safety Officer Shall update status of all reported external agencies to Duty Manager – ARFF.
- Provide "Follow Me" service to responding emergency vehicles up to RV Point further, if required provide the same up to incident/accident site.
- Escort of pilot and co-pilot for medical examination from crash site to casualty center.

Secondary responsibilities

- Safety Officer at follow me vehicle shall manage the routing to and fro from accident site.
- Safety official on the Follow Me jeep to ensure that the beacon and siren of all the emergency responders' vehicles are in ON and wailing while responding to and from the site.

3.7.5 JCC

Primary responsibilities

- Provide necessary communication network and do the initial emergency notification through ANTS.

Secondary responsibilities

- Coordinate with stakeholders for effective handling of emergency and maintaining business continuity.

3.7.5.1 (Executive Manager Joint Operation):

Primary responsibilities

- Acknowledge and activate Aircraft incident / Accident procedures on receipt of critical information
- Activate AECC and coordinate with FCP till arrival of Chairman-AECC.
- Inform all as per notification chart including Affected Aircraft Operator / Airline (Appendix 16 in AERP) and activate ANTS.
- Notify critical information to all stakeholders at JCC including RCC Mumbai through an email in prescribed template.
- EMJO will be the coordinating authority for airport support agencies, including the affected airline.
- Initiation of NOTAM action in consultation with respective Duty managers such as short fall in ARFF category and / or closure of any operational area with concurrence of chairman-AECC.
- Communication and coordination with Hospitals will be done by EMJO or by the official nominated by EMJO/Chairman of the AECC.
- Should there be any pandemic scenario, during an accident, the passenger details, as well as the responders' details will be shared with the APHO & MIAL Head – Medical for their expert advice.

Secondary responsibilities

- If requirement received from Apron Control, EMJO shall intimate the GHA to provide ADP holders to Gate no. 1 and Gate no 5.
- Implement Airport business continuity plan.
- Relay termination of Aircraft incident / Accident to all concerned.

3.7.6 Medical Department

3.7.6.1 HEAD (Medical Services)

Primary responsibilities

- On receiving information about Aircraft incident / Accident, immediately report to AECC and act judiciously to optimize in handling of causalities by directing medical officers those who are present at incident site and other various emergency centers.

- Make sure that the casualty center, casualty collecting area and triage area are established and activated.

Secondary responsibilities

- Ensure that hospital care is accessible to all required injured person.
- Shall co-ordinate with hospitals, external ambulances, and doctors/ panel doctors for additional medical recourses as required.
- Ensure that communication and coordination with hospitals are established.

3.7.6.2 Duty Medical officer

- **Primary responsibilities**
- Receive critical information from JCC and note details of Aircraft incident / Accident.
- T1 Medical Officer to proceed for activating casualty center.
- T2 Medical officer will report to the accident / incident site and provide assistance to Incident commander for making decision for activation of AERP in relation with causality handling.
- Make use of masks and hand gloves available at FCP, while handling of casualties and Dangerous Goods.
- Medical team shall establish triage area and carry out triage and medical treatment to the injured passengers / flight crew.
- Shall be responsible for quick dispatching of category P1 passengers/ flight crew to hospital with intimation to transport officer.
- Shall be responsible for providing medical treatment to category P2 passengers / flight crew at casualty center.
- The MIAL Medical officer shall obtain pathological sample (blood and urine) of flight crew, in the presence of airline representative / CISF / police personnel.
- Preserve the pathological sample (blood and urine) for onward submission to SIC /DGCA/ AAIB.

- **Secondary responsibilities**
- Provide information to AECC with respect to the destination of the injured persons.
- Provide medical assistance in SRA, Meeters & Greeters area, as and when required.

3.7.7 Terminal Operations

3.7.7.1 Duty Terminal Manager (Terminal 1 & 2 and CA Terminal):

Primary responsibilities

- Acknowledge and activate Aircraft incident / Accident procedures on receipt of critical information.
- Establish Help Desk at affected terminal.
- Inform all as per notification chart (Appendix 16 in AERP)

- Activate M&G area, SRA, Reunion area, and Reception and take care of uninjured passengers at SRA.
- Co-ordinate with immigration and customs authorities for further clearance procedure.
- **Secondary responsibilities**
- Shall provide transportation from terminal to meters and greeters' area for passenger's relatives and friends.
- With support of the affected airline staff, render assistance to Meeters and Greeters as well as passengers of the accident.
- Co-ordinate with Air India in case the affected flight is non-schedule /over flying flight (Airline not operating from CSMIA) for passenger facilitation including immigration. In such cases Air India will act as the coordinating airline at site.
- Passengers' facilitation and business recovery at terminal building.
- Public information announcements as and when required.
- Log entry of aircraft incident / accident accordingly.

3.7.8 MIAL -Safety Investigation Coordinator (SIC):

- The roles and responsibilities of Safety Investigation Coordinator in preservation of evidence following an accident/incident mentioned in Air Safety Circular No. 4 of 2013 is reproduced below.
- He will be the single point of contact in case of an accident/incident.
- The Safety Investigation Coordinator (SIC) shall initiate immediate actions required to facilitate investigation, till the arrival of investigator nominated by the DGCA/AAIB, while the search and rescue operations are still under-way. He shall:
- Ensure that the initial actions are carried out at the accident site in a coordinated manner and the evidence are not destroyed. Initial actions will include video recording of the firefighting operation, rescue operation, steps in removing of wreckage, opening or cutting apart components; photographs of damage to any electric pole/cables or other like structure due to aircraft impact before they are restored, etc.
- Initiate immediate actions required to facilitate investigation, till the arrival of Investigator nominated by the DGCA/AAIB
- Immediate sealing of the ATC/RADAR/Video recording devices pertinent to the accident/incident in accordance with Air Safety Circular 3 of 2013.
- The location of flight crew and the passengers alive or dead should be recorded, and the necessary photographs must be taken prior to the removal. The rescue/ removal actions should be such as to cause minimum of the disturbance to the aircraft wreckage/parts and any such disturbance should be fully recorded. However, removal of the injured to the nearest hospital must not be delayed for want of formalities with regard to the recording stated as above.
- Coordinate with the police authorities and district authorities to ensure compliance of Air Safety Circular 06 of 2010 and guarding of the wreckage so as to:

  1. Protect the public from the hazards in the wreckage.

  2) Prevent disturbance of the wreckage (including bodies and contents of the aircraft.

3) Protect property.
4) Permitting only authorized persons in coordination with the Investigator.
5) Protect and preserve any ground marks of the aircraft.
6) Record the names and addresses of all the eyewitnesses and others who may have firsthand knowledge of the accident and supply such a list to the Investigator on his arrival for the purpose of investigation and facilitate production of such witnesses before him.
7) Stop the movement of ambulances and fire vehicles along the wreckage trail, once the survivors have been rescued and the fire risk has been eliminated as far as practicable.
8) Liaise with the local population, particularly with regard to locating outlying pieces of wreckage.

- Any movement of the controls/cutting of wires, cables, component parts etc. must be made note of for submission to the investigator.
- In the event of an accident at the airport vicinity, Samples of blood, urine etc. should be taken at the Airport medical center, when the condition of crew members requires immediate hospitalization, or if the accident occurs outside the airport boundary, SIC shall ensure that the samples of blood, urine etc. are taken at the nearest hospital and the sample should be suitably preserved and handed over to the Investigator (DGCA / AAIB).
- Until the arrival of SIC, the initial action of SIC shall be carried out by Duty Manager-Apron Control.
- SIC shall conduct training for ARFF and CISF personnel on regular basis regarding their role and responsibilities in preservation and documentation of the wreckage.

3.7.9 MIAL Security & Landside Operation:

Primary responsibilities

- On receipt of information, Inform all as per notification chart **(Appendix 16 in AERP)**
- Crowd Management at Gate 1, Gate 5 and crash gates of Landside areas along with smooth flow of vehicular traffic shall be taken care by Duty Manager - Landside.
- Send representatives at respective gates to facilitate prompt entry of external responding agencies to airside.
- Security (MIAL) will provide TAEP for all external emergency responders at entry Gate 1, Gate 5 and T1, T2 pass section. As per procedure define in AERP Part-2 Chapter No- 04.
- Co-Ordinate with Mumbai Traffic Police for providing Green Corridor to Ambulance and Fire Brigade Vehicles.

Secondary responsibilities

- Assist Mumbai Police and CISF wherever necessary as requested by these agencies.
- Liaise with Govt, agencies, trade unions, taxi unions, etc. for smooth passenger movement at landside.

3.7.10 MIAL Engineering & Maintenance:

Primary responsibilities

- On receipt of information, Engineering Team shall quickly disseminate information to all concerned as per notification chart.
- Shall put on all standby generators for lighting purposes during hours of darkness and to ensure minimum disruption to power supply.

Secondary responsibilities

- Mobilize resources on instructions from On-scene commander.

3.7.11 MIAL Cargo-Duty Manager:

Primary responsibilities

- On receipt of information about the DGR, same shall quickly disseminate to all concerned as per standard practice.
- If DGR on board, send DGR instructor to the accident/incident site as quickly as possible to provide his expert advice on the physical and chemical characteristics of the dangerous goods and the potential hazards, as well as the necessary precautionary measures to be taken.

Secondary responsibilities

- To keep the mortuary container ready for keeping dead bodies, when instructed by on-scene Commander.

3.7.12 MIAL Environment Department:

Primary responsibilities

- On receipt of information, shall note all relevant details of the occurrence.
- Shall depute a representative to the incident site for evaluating the need and requirements for controlling environmental pollution caused by the incident and appraise statutory agencies.

Secondary responsibilities

- Assist Cargo Team / NDRF for the disposal of hazardous material as per the statutory requirements.
- Liaise with AECC for updated information and necessary instructions.

3.7.13 MIAL Corporate Communications:

Primary responsibilities

- Receive critical information and note details of aircraft accident.
- Notify critical information to all concerned as decided by Head of Corporate Communications
- Activate the Media Centre with help of Duty Manager - GA Terminal.
- Liaise with affected Airline and concerned agencies for quick and authentic dissemination of information.
- Liaise with AECC, if activated for updated information and necessary instructions.

Secondary responsibilities

- Conduct Media briefing and provide NEWS releases in consultation with affected Airline representative and chairman AECC.

3.7.14 MIAL IT Department

- On receiving of information, depute team members to AECC, SRA, Meeters and Greeters area and re-union area and ensure that internet / temporary Wi-Fi is available for passengers to contact their relatives and next-of-kin. The IT team shall ensure that the system which is kept at SRA for the above said activity is in operational condition.

3.7.15 CISF

3.7.15.1 Security Operation Control Center:

Primary responsibilities

- Receive critical information from Fire watch tower and note details of Aircraft incident / Accident.
- Notify critical information to all concerned as per Departmental Notification Chart and ensure post notification action.
- Mobilize the forces and ensure its dispatch to Accident site and report to forward command post.
- Alert Quick Response Teams for immediate response and co-ordinate with ARFF Duty – Manager for providing any assistance.
- Immediately provide minimum 50 trained staff to assist rescue work at the accident site.
- Issue appropriate instructions to Gate No. 1 and 5 to ensure the responding agencies (Mumbai fire brigade, Ambulances, doctors etc.) are allowed to enter the operational area immediately under the guidance of the "Follow Me" service or escort provided by the Apron Control / GHA
- Issue appropriate instructions for opening of Crash Gate immediately in case ambulance required exit along with injured passengers.
- Depute senior representative to attend the AECC when established.
- Ensure CISF official deputed at AECC to handle access control.

Secondary responsibilities

- Deploy security personal at various emergency centers like Rendezvous point, help desk, SRA, Meeters and Greeters area, reunion area, AECC, Transportation area and Forward command post for controlling access to unauthorized personnel.
- Ensure that the entry to the Forward command post is restricted only to those personnel, whose names are displayed at the door of command post.
- Mobilize extra forces and ensure its dispatch to accident site and direct them to report to forward command post.

3.7.15.2 CISF In charge Gate 1 & Gate 5:

- On arrival, allow emergency responding vehicles to access airside in coordination with Follow Me vehicle.

3.7.15.3 CISF - Quick Response Team:

Primary responsibilities

- Quick Response Team personnel shall coordinate with Apron control and take assistance of Follow Me Vehicles to reach the incident site.
- Quick Response Team personnel shall secure / cordon off the incident / Accident site and Trained personnel would cordon off the site for radiological considerations, (if any)
- Ensure that the operations of the Aerodrome Rescue and Fire Fighting services are facilitated and not interfered with, hindered or obstructed in any way.
- Restrict access to essential services/personnel only in the site.
- Ensure that ground marks associated with the accident are not eliminated.
- Quick Response Team In-charge will ensure that cordon off of an area of approximate 100 square meter is carried out and the access to incident / accident site is restricted to responding teams only. (Representative of Fire Brigade, Ambulances, Doctors, Radiation safety expert from BARC and MIAL Safety team and appropriate authorities those who are permitted by the on- scene commander).
- Assist ARFF team in carryout rescue operations.

Secondary responsibilities

- Isolate the cabin/cockpit crew from passengers
- Help the medical team for providing medical assistance to the injured personal at the triage area and causality center.
- Make use of masks and hand gloves available at FCP, while handling of casualties and Dangerous Goods.
- When the area has been declared safe, ensure that only authorized officials are permitted to enter the cordoned off area until instructed by on-scene Commander.

3.7.16 Affected Airline / Ground Handling Agent (GHA):

Primary responsibilities

- Send representative to FCP, AECC, Casualty Centre, Survivors Reception Area, Reunion Area, Meeters & Greeters Area and Hospitals.
- On receipt of notification from JCC, GHA shall send their ADP holders to Gate no 1 and gate no 5 at the earliest, to provide escort to the responding agencies.
- Shall be ready with required equipment/manpower and co-ordinate with airside safety for further instructions/assistance.
- The affected airline's representative shall immediately be available with full and comprehensive passenger and cargo manifest at AECC, and details of any dangerous goods shall be communicated immediately to FCP.
- Provide technical and engineering support to the FCP for safety advice and salvage of the aircraft.
- Ensure that the Blackbox (FDR/CVR) is safely removed and handed over to DGCA/AAIB.
- Affected airline /GHA will be responsible for providing transportation to passengers / flight crew from incident/accident site to activated emergency response centers.

- Ensure that uninjured passengers are transported only after assessed by an attending doctor if possible.
- Affected airline / GHA will be responsible for medical examination of flight crew. Ensure that flight crew is escorted to the Casualty Centre, for pathological samples, in presence of DGCA/CISF / Police in coordination with airside safety department. (Refer AERP Part-2 Chapter No- 02)

Secondary responsibilities

- Ensure that care and wellbeing of passengers are taken care at all emergency centers such as Survivors Reception Area, Reunion Area, Help Desk and Meeters and Greeters area, in coordination with Duty Terminal Manager and CISF
- Provide necessary requirements for onward passenger's i.e., hotel accommodations, air transportation or other mode of transportation etc.
- Make a list of uninjured passengers including address and contact details for accountability, care and counseling and submit the same to AECC.
- Co-ordinate with the Police to provide necessary support to next of kin of the passengers
- Provide Counseling, pastoral care & chaplaincy services to passengers.
- Provide representatives with valid AEP at gate no.1,5 and T2, T1 pass section for provision of Temporary Airport entry passes for airline external responders.
- Provide a Public Relations Liaison Officer and Media Coordinator to work in coordination with the MIAL Authorities.
- Coordinate with immigration and customs to minimize delays in the process of clearing of passengers and crew.
- Coordinate for collection of all baggage's from the Customs and Police after obtaining clearance from the AAIB.
- Coordinate with local police in handling of deceased passengers. Provide wooden coffins and transportation for the deceased in coordination with police.
- Quarantine and seal all documents pertaining to the flight crew and aircraft.

3.7.17 All other Ground Handling Agencies of CSMIA:

On receipt of information regarding an accident at the airport, the GHA shall:

- Provide staff with valid airside driving permit at gate no. 1 & 5 for escorting external responders up to accident site.
- Provide coaches at accident site, SRA, Casualty Center for transportation of passengers.
- Provide required equipment's, manpower as per notification of Apron Control.

3.7.18 Immigration and Custom:

- Immigration and Custom procedures for international flight will be completed at SRA as per SOP MIAL/AO-ARFF/SOP/13/00.

3.7.19 Mumbai Fire Brigade / Ambulance Services:

Primary responsibilities

- Provide mutual aid resources to the ARFF when required in an airport emergency. They should provide sufficient no. of Fire Fighters, Appliances and equipment as per their standard operating procedure.
- Shall report at gate No 1 and 5, Further they will be escorted to Rendezvous Point/ incident/accident site by "Follow Me" service as per requirement.
- The Senior Mumbai Fire Brigade Officer on-site will liaise with the ARFF Senior Officer on-site at the Forward Command Post to assist emergency operations.
- Take command and control if aircraft accident take place at difficult terrain (MITHI RIVER)

Secondary responsibilities

- Assist in any other response or recovery operations for which Mumbai Fire Brigade equipment is suitable.

3.7.20 Duty APHO Doctors:

Primary responsibilities

- Provision of Medical Response teams and ambulances for immediate and effective evacuation of victims to appropriate hospitals.
- On arrival at the crash site, report to the Medical Team, MIAL.

Secondary responsibilities

- Provide information to passengers in relation to quarantine matters.
- Help MIAL Medical team for emergencies pertaining to communicable disease

3.7.21 Mumbai Police

Primary responsibilities

On receipt of information regarding an emergency at the airport, the Sr. Inspector /Officer in Charge of the Airport and Sahar Police stations shall:

- Immediately mobilize the Force to the Accident Site and report to Forward command post for assistance.
- Liaise with CISF.
- Depute a Senior Officer to AECC when established.
- Take appropriate steps to maintain law and order on the landside of the terminals and Airport boundary.
- Coordinate with the traffic police and develop a "Traffic Plan" to ensure access and egress to/from the airport for emergency service vehicles.

Secondary responsibilities

- Ensure a representative is available at all concerned hospitals.
- Provide necessary support to the concerned staff of airlines & MIAL for handling of deceased passengers
- To carry out "Panch-Nama" and to assist postmortem of the deceased accident victims.

- To assist the airline staff in informing the next of kin about the information of deceased passengers.
- To co-operate in Post-Accident Management.

3.7.22 Bureau of Civil Aviation Security (BCAS):

- BCAS is the state organization, responsible for regulating and overseeing aviation security in India. The BCAS is the regulatory authority and will provide the Aerodrome Entry Permits to the approved Emergency Responding Agency, Representatives, such as Police, Civil Defense, Customs, Immigration, Mumbai Fire Brigade, Defense Forces (Army, Navy and Air Force), State Disaster Management Authority, MCGM Disaster Management Cell, and Hospitals & Coast Guard during an aircraft/airport emergency/accident/incident. The responsibility of BCAS for issuance of AEP's is delegated to MIAL Security AEP Section during an aircraft/airport emergency/accident/incident.
- In-case of aircraft/airport accident, where emergency responding agencies are from other nations, the BCAS/MIAL Security shall provide Aerodrome Entry Permits depending on case-to-case basis.

3.7.23 DGCA and AAIB:

- Set standards and directions for dealing with all aviation related emergencies
- Aircraft accident/incident investigation
- Authorize removal of crash/disabled aircraft
- In case of any aircraft accident / incident, the DGCA / AAIB will carry out functions as mentioned in the Aircraft (Investigation of Accidents and Incidents) Rules, 2012.

3.7.24 State Disaster Management Cell:

On receipt of information regarding an emergency at the airport, the SDMA (EOC) Emergency Operation Centre In-charge shall:

- Immediately inform the concerned response agencies such as NDMA, NDRF, Collector's Office and other State and National Government Emergency Responding Agencies to respond to the accident site and report to Forward Command post.
- Immediately inform to the MCGM (EOC) for necessary action and co-ordination.
- Depute a senior official as its representative to report to AECC for coordination.
- Remain in constant touch with the AECC or concerned officials for any assistance or requirements.

3.7.25 MCGM Disaster Management Cell:

On receipt of information regarding an emergency at the airport, the MCGM Emergency Operation Centre (EOC) In-charge shall:

- Immediately inform the concerned response agencies such as Fire, Police, NDRF, Doctors and Ambulances to respond to the accident site and report to Forward Command post.
- Immediately inform respective ward level EOC for necessary action and co-ordination.

- Intimate the concerned MCGM representative to report to AECC for coordination.
- Remain in contact with the AECC or concerned officials for any assistance or requirements.

3.7.26 National Disaster Response Force (NDRF):

On receipt of information regarding an emergency at the airport which requires NDRF assistance, the NDRF Emergency Operation Centre In-charge shall:

- If the incident is related with Nuclear, Biological, Radiological, Chemical etc, immediately depute the nearest Quick Response Team (QRT) to respond to the accident site and report to Forward Command post.
- Inform to concerned NDRF Sr. official to report to CSMI Airport AECC for coordination.
- Remain in constant touch with the AECC or concerned officials for any assistance or requirements.

3.7.27 Crisis Management Group (CMG), DAE- Department of Atomic Energy (For Radiological emergency only)

On receipt of information regarding an emergency at the airport, CMG, DAE will:

- Immediately dispatch the Quick Response Team to the airport for handling the emergency.
- Depute the concerned functional expert to report to AECC of CSMI Airport for expert advice.
- Remain in constant touch with AECC or concerned officials for any

3.8 Termination:

- The termination of emergency shall be declared by AECC in phases after consultation with on scene commander, Medical, Terminal Operations, Airline, and Airside safety.
- Post declaration of phases of termination, the assisting staff and support system shall be withdrawn in phases.
- Final Termination will be declared by the Chairman AECC in consultation with all agencies involved in emergency management.
- JCC will pass notification through ANTS to all concerned agencies including RCC Mumbai that "aircraft incident / accident emergency terminated".

Chapter 4: Aircraft Accident off the Airport

4.1 Introduction:

The primary responder to an Aircraft accident beyond the boundary of CSMI Airport shall be the Greater Mumbai Disaster Management Authority (GMDMA). The jurisdiction of GMDMA extends within the boundary of Municipal Corporation of Greater Mumbai (MCGM).

Aircraft Accidents beyond the boundary of CSMI Airport wherein the site of the affected aircraft is located is in sea, it shall be attended according to the agreed plan between the ATC Mumbai and Coast guard. MIAL ARFF may provide assistance if requested by the agencies dealing with such accidents.

In case of an Aircraft Accident which has occurred outside airport boundary, ARFF will proceed with required equipment's and appliances to the site if it is located within one KM from the Airport boundary or to the extent practicable. It may however be mentioned that the responsibility of dealing with accidents beyond the boundary of airport lies with the GMDMA. Therefore, the role of ARFF beyond the airport boundary is to provide the initial response in order to control Fire and save lives as far as practicable. However, the ARFF Officials shall proceed to the site of accident if the site is located within the limits of MCGM to assist local authorities in dealing with the accident.

4.2 Notification of Aircraft Accident beyond the Airport boundary:

- The notification of Aircraft Accident beyond boundary of CSMIA will normally be made by ATC, subsequently a triangle of information shall be maintained between ARFF, Apron Control and JCC.
- In case of any information of accident outside the boundary of CSMIA is received by MIAL from any source, the same shall be intimated immediately to ATC (Aerodrome operator shall be acting as an Alerting Post to RCC). The ATC shall confirm the authenticity of the information based on available flight data and notify accordingly. The telephone nos. of RCC are available in Appendix 5 of AERP.
- Rescue coordination centers may play a significant role when aircraft accidents occur in the vicinity of Airport, but the accident site is not known, or rescue facilities additional to those available at or near the airport are required to be brought into action. Rescue co-ordination centers have means of immediate communication with all rescue units within their areas of responsibility including units providing aircraft, helicopters, and special rescue teams. Coastal radio stations are capable of alerting and communicating with surface vessels. Assistance from some of these units can be essential in responding to an accident in the vicinity of the airport.
- Normally the assistance of RCC will be required for accident/or report of Aircraft in distress occurring beyond the immediate vicinity of CSMIA.
- RCC shall organize communication, co-ordination and full-scale exercise schedule plan as issued by AAI, CHQ.

- Indian Coast Guard carries out National level search and rescue (SAR) exercise once in every two years with international participation, and local SAR exercises in every quarterly.

The standard text and format used for the Aircraft Accident is as follows: -

"Aircraft Accident outside Airport"

Aircraft Accident at Location: **approximate location**, Aircraft Operator - **XYZ Airline,** Flight No **123,** Type of Aircraft **B – 721,** POB **XXX**, FOB **YYY**, any Dangerous Goods On Board, including quantity & location, if known, Time of Accident **0000 hrs.**, All concerns to take necessary actions.

4.3 Command and Coordinating Authority

4.3.1 Aircraft Accident on Land:
Primary responsibility

- **MCGM Disaster Management Department** is the Command and Coordinating authority for accidents beyond the physical boundary of CSMIA and within MCGM area limits. Rescue Operation shall be in accordance with the procedure of GMDMA. However, if location of accident is beyond limits of MCGM, RCC Mumbai shall be the coordinating authority.

4.3.2 Aircraft Accident at Mithi River:
Primary responsibility

- **MCGM Disaster Management Department** is the Command and Coordinating authority. The Rescue Operation shall be in accordance with the procedure of GMDMA, and MIAL-ARFF will be the support agency.

4.3.3 Aircraft Accident on Arabian Sea:
Primary responsibility

- **Indian Coast Guard** is the Command and Coordinating authority. The Rescue Operation shall be in accordance with the Indian Coast Guard (MRCC) procedure. The RCC Mumbai and MCGM Disaster Management Department will be the support agency.

Support Agencies:

- State Police
- Affected Airline
- ATC
- RCC Mumbai
- Coast Guard
- Indian Navy
- Indian Air Force
- DAE – Crisis management Group and Experts from BARC
- AAIB
- DGCA
- Customs

- Immigration
- Greater Mumbai Disaster Management Authority (GMDMA)
- National Disaster Management Authority (NDMA)
- National Disaster Response Force (NDRF)
- Doctor/Hospital/Ambulance
- MIAL depts. such as ARFF, JCC etc.
- Mumbai Fire Brigade
- Mumbai Port Authority
- Quarantine
- State Disaster Management Authority
- Civil Defence

4.3.4 Activation and Action:

- In case of receipt of confirmed information of an accident beyond the ARFF responding area, and within the jurisdiction of MCGM, ARFF (Duty Manager) shall inform GMDMA on Hotline giving all available details. Also, in case of an unconfirmed information, the same shall be relayed to disaster management control room on hotline for confirmation.
- On receipt of the information, JCC shall inform the concerned operator even if the flight was a departure from Mumbai or an arrival to Mumbai wherever the crash site may be.
- The activation of SRA and AECC will depend on the location of accident site, for example, if an accident occur just outside the boundary wall, may require activation of SRA. The GMDMA being the primary responder outside airport, all such acts may be informed to disaster management control room until GMDMA takes over command and control at the site.

4.4 Responsibilities:

4.4.1 Air Traffic Services:

Primary Responsibilities:

- ATC shall provide the available information about the accident to Fire watch Tower and to JCC whenever information on such accidents is requested by JCC.
- Activate RCC

4.4.2 Greater Mumbai Disaster Management Authority (GMDMA):

- The GMDMA shall be a single point of command, control and communication as defined in the Disaster Management Plan. (Refer Appendix-23 of AERP for actions of GMDMA).

4.4.3 Aerodrome Rescue & Firefighting:

4.4.3.1 Head ARFF:

Primary Responsibility:

- On receipt of information of an aircraft accident in near vicinity, shall report at the accident site at the earliest for necessary actions.
- Extend support to city Fire Brigade in managing the accident site.

- **Secondary Responsibilities**
- Assess the situation and if felt necessary, obtain permission from Director – Operations, MIAL for deployment of additional ARFF resources at the accident site.
- Inform AVP-Airside Management and brief about accident.
- Keep in constant touch with disaster management control room / AECC (If activated) for relevant information.

4.4.3.2 Fire Watch Tower In charge:

Primary Responsibilities:

- Provide critical information (which are received from ATC) on RT (161.825 MHz), and PA system to ARFF personnel in case the accident has occurred within the immediate vicinity (approx. 1 Km from Airport boundary).
- Inform SOCC about the aircraft accident within the vicinity of CSMI Airport. Instruct SOCC for opening of required crash gate when decision is taken by Duty Manager-ARFF to dispatch ARFF team to the site in the vicinity of CSMI Airport.
- Inform MCGM Disaster Management Cell.
- Positively maintain communication triangle with JCC and Apron Control about the status / position of aircraft which are being informed by ATC/being received from accident site.

Secondary Responsibilities

- Be in constant touch with Disaster Management Control room for relevant information.
- Fire watch tower to be in constant touch with ATC, RCC & and SMDMA site coordinator and disseminate information to all concerned
- Obtain the name and contact number of the GMDMA site coordinator and same is to be informed to Head ARFF.
- All received information regarding aircraft accident/incident from time to time must be entered in fire watch tower logbook.

Note: Concerned personnel from Mumbai Fire Brigade/Disaster Management shall be briefed about the key terminologies used while passing an aircraft related emergency.

4.4.3.3 Duty Manager – ARFF:

Primary Responsibilities:

- If the accident occurs, within the Airport Boundary, ensure a full turnout of ARFF appliances.
- It the accident occurs outside the Airport Boundary, but within One Kilometer of response area, on receiving information, seek permission from Head ARFF and dispatch Asst. Duty Manager along with Small Fire Tender with suitable equipment to the accident location to assist City Fire Brigade.
- Provide ARFF Fire Fighting category status to ATC.
- Seek approval from Head (ARFF) if deployment of additional manpower/ARFF vehicles are needed at the site.
- Inform JCC, for activation of AECC, if required.

- Update AECC on aircraft accident status, if activated.
- If Aircraft Accident takes place at Mithi River (Runway 32 approach), send rescue boats at site along with water tender crew through emergency gate – RWY 32.

Secondary Responsibilities

- Assist Mumbai Fire Brigade in rescue and firefighting operations at the crash site and support to mitigate the situation
- Co-ordinate with AECC and Terminal Operation to make provision of SRA for uninjured passengers.
- Co-ordinate with AECC and CISF for entry from crash gates or other appropriate entry gate.
- Inform off-duty ARFF crew to report for duty if required.

4.4.4 JCC (Executive Manager Joint Operation):

Primary Responsibilities:

- Acknowledge aircraft accident notification outside the airport boundary on receipt of information from ATC and Note details of accident in JCC Logbook.
- Notify information about the accident to Airport Contact Centre and all concerned as appropriate.
- Activate AECC, if required.
- If the aircraft is in distress or met with an accident, whether it was departed from CSMIA or is scheduled to land at CSMIA, inform to affected Airline to activate Help Desks at Airport.

Secondary Responsibilities

- Initiation of NOTAM action in consultation with duty manager (ARFF) incase a short fall in ARFF category

4.4.5 Airport Emergency Control Centre (AECC):

- Duty Manager, ARFF shall assess the situation and determine the need to activate AECC and inform the JCC accordingly. AECC will be activated and managed by EMJO till arrival of Head-Operations or Head-JCC, to provide the necessary support and assistance to help in mitigating the effects of the accident.
- All MIAL and external members of AECC shall report to AECC on receipt of aircraft accident notification.
- Ensure CISF official deputed at AECC to handle access control.
- Airline's representatives will arrive and take-charge of all coordinating functions as per the individual departmental SOP's and functional check lists.
- AECC shall maintain constant coordination with RCC.
- Maintain constant RT and hotline communication with MIAL response Team and On-Scene Commander.
- Arrange and mobilize ground service resources, if required.
- Provide technical support needed at the crash site.

4.4.6 CISF (Security Operation Control Center):
Primary Responsibilities:

- On receipt of information about aircraft accident, alert security personal and QRT to be standby and open crash gate, if message received from JCC or ARFF Fire Watch Tower.
- On receipt of information about aircraft accident shall notify CISF Senior Officer.
- Ensure CISF official deputed at AECC to handle access control, if activated.

Secondary Responsibilities

- CISF shall mobilize its personnel for crowd control at City side of Terminal Building in anticipation of large groups of friends and relatives swarming to the airport.

4.4.7 Terminal Management: Duty Terminal Manager (Terminal 1 & 2 and CA Terminal):
Primary Responsibilities:

- Acknowledge aircraft accident notification outside the airport boundary on receipt of critical information from JCC and Note details of accident.
- Establish Information desk outside the affected terminal for provision of information.

Secondary Responsibilities

- Assess the situation, and determine the necessity to establish SRA, M&G area, in consultation with affected airlines/ on-scene commander/Duty Manager(ARFF).
- Activate Media Center, if required.

4.4.8 Corporate Communications:

- Receive critical information and note details of aircraft accident.
- Notify critical information to all concerned as decided by Head of Corporate Communications
- Activate the Media Centre as per department SOP.
- Liaise with affected Airline and concerned govt. agencies for quick and authentic dissemination of information.
- Liaise with AECC, if activated for updated information and necessary instructions.

4.4.9 MIAL Security:

- Liaise with CISF and State Police for necessary assistance.

4.4.10 MIAL Safety Investigation Coordinator (SIC):

- Receive critical information from JCC, note details of aircraft accident.
- Inform AAIB / DGCA as per the requirements of the Aircraft Rules, 2012 (Investigation of Accidents and Incidents)
- Coordinate with the GMDMA to ensure compliance of Air Safety Circular 06 of 2010
- For further details, refer para 3.7.8 of Chapter3

4.4.11 Affected Airlines:

Primary Responsibilities:

- Send airline representatives to MIAL information counter, and M&G area if activated, to assist in the process of the coordination and facilitation of next-of-kin needs.
- Send airline representatives to AECC if activated.
- Send Engineer to the Accident Site/Command Center to Co-ordinate with City Fire personal for extrication / safeguarding of CVR/DFDR.
- If it is an international flight, liaise with the Immigration and Customs department for expeditious clearance of its passengers and crew members as well as their baggage.
- Provide technical support which are needed at the crash site.

Secondary Responsibilities

- In Coordination with RCC, track casualties evacuated to various hospitals and obtain information from the hospitals.
- Provide staff to take care / pacify the surviving passengers in SRA / GMDMA Shelter.
- Provide staff for reconciliation of surviving passengers.
- Provide staff at various hospitals so that tracking of passengers coming to the respective hospitals can be done.
- Provide passenger manifest to AECC, if activated.
- If required, liaise with GHA and JCC for provision of manpower, mobilization of ground services equipment's such as steps, coaches, etc.

4.4.12 Indian Coast Guard:

Primary Responsibilities:

- On notification of an accident at seacoast line, the Indian Coast Guard will assume command and control of the search and rescue operation.
- Notify and coordinate with Indian Navy and other support agencies for search and rescue operation.
- Coordinate with AAI RCC, Mumbai for necessary support.
- Notify MCGM Disaster control room for necessary support.
- Notify the Mumbai Port Authority, Naval Hospital for necessary logistic support.

Secondary Responsibilities

- Facilitate AAIB to carryout investigation process.
- The Maritime Rescue Coordination Centre Mumbai (MRCC) should regularly update the AECC/JCC and the Airlines local emergency control center about emergency Operations and survivors.

4.4.13 Indian Navy:

Primary Responsibilities:

- On notification of an accident at deep sea the Indian Navy will assume command and control of the search and rescue operation.
- Notify and coordinate with Indian coast Guard and other support agencies for search and rescue operation.
- Notify the MCGM & State Disaster Management, Mumbai Port Authority and Naval Hospital for necessary logistic support.

Secondary Responsibilities

- Facilitate AAIB to carryout investigation process.
- The Navy Emergency Coordination Centre Mumbai should regularly update the AECC/JCC and the Airlines local emergency control center about emergency Operations and survivors.

4.4.14 City Fire Brigade:

- On receipt of information regarding an Aircraft incident / accident City Fire Brigade Shall:
- Respond to the Accident site with appropriate fire tenders and manpower as per their procedure
- The Senior Mumbai Fire Brigade Officer on-site will take the command and control of the incident and liaise with the ARFF Senior Officer at site for any assistance.
- The officer in-charge to make sure that his team members are not removing/ disturbing the CVR, FDR and other aircraft components without clearance from AAIB/DGCA team, as this may destroy various evidence which can help in future enquiries/investigation.

4.4.15 State Police:

- On receipt of information regarding an Aircraft incident / accident, State police shall:
- Immediately mobilize the Force and ensure its dispatch to the Accident Site and act as per procedure.
- Depute a Senior Officer to liaise and coordinate the emergency response operation and to follow the procedures as per DGCA Air Safety Circular 6 of 2010 on "Action Required of Police Authorities In Case Of Aircraft Accidents"
- The officer in-charge to make sure that his team members are not removing/ disturbing the CVR, FDR and other aircraft components without clearance from AAIB/DGCA team, as this may destroy various evidence which can help in future inquiries/investigation.
- Preserve incident / accident site till the arrival of DGCA /AAIB officials.
- To cooperate in Post-Accident Management.

4.4.16 DGCA and AAIB:

- Set standards and directions for dealing with all aviation related emergencies
- Authorize removal of crash/disabled aircraft.

4.4.17 Bureau of Immigrations, CSMIA:

In the event of an emergency involving an international aircraft:

- If requested provide a mobile clearance team.
- Provide immigration control and clearance facilitation.
- Ensure responsibilities are fulfilled as detailed in Procedure for Immigration and Customs - dealing with Aircraft incident/accident involving International Flights; MIAL/AO-ARFF/SOP/13)

4.4.18 Customs, CSMIA:

In the event of an emergency involving an international aircraft.

- If requested provide mobile clearance team.
- Provide Custom control and clearance facilitation.
- Liaise with the Incident Management Team in relation to processing baggage and cargo.
- Ensure responsibilities are fulfilled as detailed in Procedure for Immigration and Customs - dealing with Aircraft incident/accident involving International Flights; MIAL/AO-ARFF/SOP/13)

4.4.19 State Disaster Management Cell:

- Immediately inform the concerned response agencies such as NDMA, NDRF, Collector's Office and other State and National Government Emergency Responding Agencies to respond to the accident.
- Immediately inform to the MCGM (EOC) for necessary action and co-ordination.
- Depute a senior official as its representative to report to AECC for coordination. (If activated)

4.4.20 MCGM Disaster Management Cell:

- Immediately inform the concerned response agencies such as Fire, Police, NDRF, Doctors, Hospitals and Ambulances to respond to the accident site.
- Immediately inform respective ward level EOC for necessary action and co-ordination.
- Intimate the concerned MCGM representative to report to AECC for coordination (If activated).

4.4.21 BARC – Radiation Safety Expert Team:

- On receiving information on suspected radiological adversary acts through Crisis Management Group (CMG-DAE) at / around airport premises, ensure: -
- Support from BARC DAE.
- Radiation Emergency Response Team deputed from BARC.
- Status appraisal by Incident Command Post
- Radiological Status updates and advice as required

4.5 Termination:

- Termination of the emergency situation shall be declared by Indian Coast Guard/ MCGM Disaster Management /State Disaster Management /RCC Mumbai depending upon the location of crash site.
- Chairman AECC will terminate emergency in consultation with Indian Coast Guard/ MCGM Disaster Management /State Disaster Management/ RCC Mumbai.
- JCC will pass notification through ANTS to all concerned agencies that "aircraft accident emergency terminated".

Chapter 5: Dangerous Goods Occurrences

5.1 Definition

Dangerous goods are articles or substances which can pose a risk to health, safety, property, or the environment and which are listed as such and are classified according to the ICAO Doc. 9284-AN/905, Technical Instructions for Safe Transport of Dangerous Goods by Air and subsequent Aircraft (Carriage of Dangerous Goods) Rules 2003 framed by DGCA. Since Dangerous Goods are Chemical, Biological, Radiological and Nuclear in nature, its occurrences can be referred to as **CBRN Incident**.

A Dangerous goods incident or CBRN incident is defined as an incident, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft incident where dangerous goods are found in passengers checked baggage after checking in, or in carry-on baggage following the security screening process, are also classed as dangerous goods incidents.

Dangerous goods or CBRN incidents include but are not limited to:

- Spillage or leakage of the dangerous goods contents from a package or baggage.
- Escape of fumes or gases or emission of smoke from a package or baggage.
- Breakage or failure of inner or outer receptacles.
- Radiation leakage.
- Corrosion, contamination, or combustion.
- Damage to property or equipment caused by contents.
- Injury to person caused by contents.
- Failure of the shipper or passenger to declare or correctly identify dangerous goods.
- Stowage of dangerous goods on an aircraft, contrary to the regulations.
- Dangerous goods carried as surplus freight on an aircraft and not notified to the commander.
- Fire, breakage, spillage, leakage of a fluid or gas or other evidence that the integrity of the package has not been maintained.
- Any occurrence relating to the transport of dangerous goods that seriously jeopardizes an aircraft or its occupants is also deemed to be a dangerous goods incident.

Dangerous goods incidents or CBRN incidents are incident associated with the transport of dangerous goods, which are capable of posing a significant risk to health, property or environment when exposed or if the packing is in an unsafe condition which result in a fatal or serious injury to a person or major damage to property.

Dangerous goods or CBRN accidents may occur:

- During an "Aircraft Crash" in which the concerned aircraft is carrying dangerous goods.
- During a "Full Emergency" in which the aircraft concerned is carrying dangerous goods.

- During "Fires on the Ground" in which the aircraft is carrying or in the process of loading/unloading dangerous goods; or
- When consignments of dangerous goods are damaged during loading or unloading from the aircraft or during delivery or collection from cargo terminals/warehouses within the airport.
- When an incident involving dangerous goods occurs on the ground, be it inside an aircraft cargo hold, on the apron, or in a cargo warehouse, it is the responsibility of the ground handling Agency or cargo operator concerned to immediately notify about the incident to ARFF.

5.2 Declaration of Dangerous Goods incident:

- The Pilot In-Command by requesting declaration through ATC, when in-flight.
- Duty Manager, ARFF after proper evaluation of the situation, declare dangerous good incident to ATC / ARFF / JCC / Apron control / Cargo department.

The standard message format used for declaring "Dangerous Goods incident "shall be as provided in the example below: -

"Dangerous Goods incident" "Dangerous Goods incident" "Dangerous Goods incident Pillar no 25. **All concerns to initiate Dangerous Goods occurrence actions.**

(In addition, all information as detailed below in 5.3.2 shall be provided when available during declaring emergency)

5.3 Activation:

The plan is activated on receipt of the information of Dangerous Goods incident by ATC / ARFF / JCC / Apron control / Cargo department within CSMIA premises.

5.3.1 Notification Chart:

- Notification of Dangerous Goods incident shall be made immediately by ATC/ ARFF/Apron Control/JCC/ Cargo Department as per para 1, subsequently a triangle of information shall be maintained between ARFF, Apron Control and JCC.
- Notification as appropriate (ref Appendix 21 of AERP) shall be made by the concern teams.

5.3.2 Critical Information o Be Provided In Notification:

In the initial activation following information wherever possible must be provided and recorded for onward notification.

1	The Proper Shipping name
2	UN or ID number
3	Class or Division
4	Subsidiary risks
5	Quantity of each item
6	Location of these items
7	ERG CODE

5.4 Command and Coordinating Authority:

- The ARFF being the first responder to reach the incident site the Assistant Duty Manager ARFF shall act as the incident commander at the site until the arrival of on scene commander. The Head of ARFF shall assume duties as On Scene commander on arrival at site.
- After due assessment and understanding the gravity of an incident, the on-scene commander shall call NDRF/BARC.
- On arrival of NDRF, the officer in-charge NDRF shall be the command, control and coordinating authority.

5.5 Support Agencies

5.5.1 Internal Agencies

- MIAL – ARFF Services
- MIAL –Airside Operations
- MIAL - Landside Operations
- MIAL - Medical Service
- MIAL - JCC
- MIAL – Terminal Operations
- MIAL -E&M
- MIAL - Safety
- MIAL- Corporate Communication
- MIAL – Security
- MIAL – Cargo Operations
- MIAL-Environment Department
- Affected Airline & its nominated Ground Handler
- ATC
- CISF
- Customs
- APHO

5.5.2 External Agencies:

- CMG, DAE (BARC)
- NDRF
- AERB
- Mumbai fire Brigade
- Hospital and Ambulance services
- State Police
- MCGM – Disaster Management Cell
- Civil Defense

5.5.3 Assembly Areas:

- All external responding agencies shall report to gate no 1 & 5 and further they will be escorted by Follow Me jeep to the designated Rendezvous point. As per

requirement received from on scene commander, they will be further escorted to incident site by "Follow Me" jeep.
- If the incident takes place at Cargo terminal, the external responding agencies shall be communicated to report to main gate of Cargo Terminal. They will be further escorted to incident site by Cargo security department.

5.6 Duties and Responsibilities:
5.6 1 Air Traffic Control:
Primary responsibilities
When ATC is notified by the pilot of arrival aircraft that the dangerous goods are onboard, then pass the critical information, as defined above on hotline to ARFF fire watch tower.

5.6.1.1 Tower Supervisor shall notify:
- Watch Supervisory Officer; and
- ATS Reporting Officer.

5.6.1.2 ATS Reporting Officer shall notify:
- MLU (Military Liaison Unit), IAF, if it's military aircraft.
- Notify DGCA about the Incident / Accident.

5.6.2 JCC (Executive Manager Joint Operation):
Primary responsibilities

- Acknowledge and activate Dangerous Goods incident procedures on receipt of critical information (Refer Para 4 above).
- Inform all concerned including affected Airline as per notification chart (**Appendix 21** in AERP) and activate ANTS.

Secondary responsibilities
- Activate AECC, if message received from incident commander
- Notify critical information to all stakeholders at JCC through an email in prescribed template.
- Relay termination of Dangerous Goods incident to all concerned.

5.6.3 Aerodrome Rescue & Firefighting:
5.6.3.1 Fire Watch Tower:
Primary responsibilities
- Acknowledge and activate of Dangerous Goods incident procedures.
- Provide critical information on RT (161.825 MHz), and PA system to ARFF personnel.
- Notify critical information to all concerned (as per the Notification Chart at (Appendix 21 in AERP).

Secondary responsibilities
- Keep note of details of Dangerous Goods incident in Fire Watch Tower Activity Report.

- Relay termination of Dangerous Goods incident to all concerned.

5.6.3.2 Duty manager – ARFF:
Primary responsibilities

- On receipt of initial information, ensure that Assistant Duty Manager along with one CFT and HAZMAT equipment responds to the site for the initial turnout. Evaluate the situation and depending on the severity and impact, take a call to declare a "Dangerous Goods incident"
- On declaration of incident, ensure that FWT quickly disseminate information to all concerned as per notification chart.

5.6.3.3 Asst. Duty Manager (ARFF)
Primary responsibilities

- On reaching at the site, act as on-scene commander.
- Make sure that only properly attired rescue and firefighting personnel should remain on the scene. All other persons should be kept as far from the scene as possible.
- ARFF personnel shall quickly control and contain the incident until the arrival of CFB/NDRF/BARC Team.
- Pass the sitrep to ARFF Duty Manager and FWT. If situation demands, instruct activation of AECC and establishment of FCP.
- In case dangerous goods packages observed signs of leakage, fumes or other evidence of damage, following precautions should be taken:
- Damaged packages should be isolated.
- No attempt shall be made to open the damaged package.
- Contents of packages should be identified by marking/labeling on the packages and/or referring appropriate documents.
- Emergency Response Guide should be referred for appropriate actions based on the type of contents involved.

Secondary responsibilities

- After due assessment and understanding the gravity of an incident shall call NDRF and if any radioactive material is involved, call BARC Crisis Management Group (CMG), Department of Atomic Energy (DAE),
- ARFF will handed over the charge to NDRF/BARC (DAE) and assist them in mitigating the incident.
- Be in constant touch with AECC (if activated) to provide necessary updates.

5.6.3.4 Head ARFF:
Primary responsibilities

- On receipt of information of Dangerous Goods incident, shall report at the incident site at the earliest for necessary actions.
- Inform AVP-Airside Management and brief about accident.

Secondary responsibilities

- Extend support to NDRF/BARC DAE/city Fire Brigade in managing the incident site.

- Be in constant touch with AECC (if activated) to provide necessary updates.

5.6.4 Mumbai Fire Brigade:

- Shall respond with the necessary resources needed for mitigating the dangerous goods incident.

5.6.5 BARC

Primary responsibilities

- Shall respond with the necessary resources needed for mitigating the CBRN incident.
- Take updated briefing from ARFF On Scene commander
- Upon arrival, the Radiation Safety Expert, BARC would take charge on response to 'CBRN' incidents.

Secondary responsibilities

- Assist the NDRF team on their arrival.

5.6.6 NDRF:

Primary responsibilities

- Shall respond with the necessary resources needed for mitigating the CBRN incident.
- Take updated briefing from the On Scene commander
- On arrival, NDRF shall take over the mitigating role and the senior most officer from NDRF will be the overall command, control and coordinating authority of the incident.

Secondary responsibilities

- Coordinate with Head-ARFF/Asst. Duty Manager (ARFF) for local logistic support

5.6.7 MIAL Airside Safety:

5.6.7.1 Head - Airside Safety Shall report at Dangerous Goods incident site and liaise with Officer on Command for making critical decisions.

5.6.7.2 Duty manager – Apron Control:

Primary responsibilities

- The Duty Manager, Airside Safety will be the coordinating authority at the Rendezvous Point to ensure efficient handling of External Support Agencies Reporting at the Airport in response to the emergency.
- Receive critical information and note details of Dangerous Goods incident.
- Notify Critical Information to all concern as per notification chart.
- Advice Follow Me to activate RV point and report at Gates 1 and 5 for escorting of external emergency vehicles.
- Assist CISF QRT team to reach the incident / accident site.

Secondary responsibilities

- Apron control shall intimate JCC to co-ordinate with GHA to provide ADP holders at Gate no 1 and Gate No 5 to escort external responding agencies to incident site, as and when required.
- Apron control will co-coordinate with all other GHA for additional support for transportation.

5.6.7.3 Safety Officer's on "Follow Me":

Primary responsibilities

- Activate RV Point.
- Safety Officer shall report to Gate 1 and Gate 5 and co-ordinate with CISF personnel for immediate entry of emergency vehicles toward airside.

Secondary responsibilities

- Provide "Follow Me" service to responding emergency vehicles up to RV Point, if required up to incident/accident site.

5.6.8 CISF

5.6.8.1 (Security Operation Control Center):

- Receive critical information from Fire watch tower and note details of Dangerous Goods incident.
- Notify critical information to all concerned as per Departmental Notification Chart and ensure post notification action.
- Instruct security personal at Gate 1 & Gate 5 for allowing quick entry of emergency responding vehicles.
- Inform security personal to open required Crash gate
- Alert Quick Response Teams for immediate response and co-ordinate with ARFF Duty Manager /on-scene Commander for providing any assistance.

5.6.8.2 CISF (Quick Response Team):

Primary responsibilities

- Quick Response Team personnel shall coordinate with Apron control and take assistance of Follow Me Vehicles to reach the incident site.
- Quick Response Team personnel shall secure / cordon off the incident / Accident site and ensure that trained personnel should cordon off the site for radiological considerations, (if any).
- Restrict access to essential services/personnel only in the site.
- Secondary responsibilities
- Assist ARFF team in carryout rescue operations.
- Make use of masks and hand gloves available at FCP, while handling of casualties and Dangerous Goods.

5.6.9 MIAL Security and Landside Operation:

- Facilitate issuance of TAEP for access of external resources into the airside through pre-designated gate with proper identification by concerned department.
- Liaise with CISF and State Police for necessary assistance at the occurrence site.

5.6.10 MIAL Medical Team:

Primary responsibilities

- Dispatch Medical Officer to the incident site for immediate medical assistance.
- Supplement the medical aid requirements at the incident site

Secondary responsibilities

- Activate Casualty Centre..
- Coordinate with Panel doctors and ambulances, if required.
- Advice concerned hospital to activate Internal SOP's for receiving casualties. In case of any radioactive incidents are involved, specific information shall convey to hospitals for establishment of appropriate area in hospitals for decontamination of the survivors.

5.6.11 APHO, Mumbai:

- Will assist in provision of Medical Response teams and ambulances for immediate and effective evacuation of victims to appropriate hospitals.
- On arrival at the site, report to the On-scene commander with details of resources in place.

5.6.12 MIAL Cargo:

- Duty Cargo Manager shall notify to Dangerous Goods Specialist, Sr. VP Cargo, DAE-BARC, Mumbai (Tele: +91-22-25505300) immediately if radioactive material is involved as per requirement under Air Safety Circular No. 2 of 1989.
- When a major accident involving any hazardous substance such as explosive, flammable, toxic, corrosive, and radioactive materials occur, the concerned authority shall be notified.

5.6.12.1 Dangerous Goods Specialist shall:

- Proceed to the accident/incident site as quickly as possible and on reaching, report to on-scene commander.
- Help identify the type of dangerous goods involved and provide his expert advice on the physical and chemical characteristics of the dangerous goods and the potential hazards, as well as the necessary precautionary measures to be taken.
- Ensure that the disposal of damaged package/consignment shall be carried out as directives received from Head, DAE and BARC.

5.6.13 Terminal Management:

5.6.13.1 Duty Terminal Manager (Terminal 1 & 2 and CA Terminal):

- On receipt of information in case DG incident involves in passenger Aircraft quickly disseminate information as per notification chart.
- Liaise with affected airline/GHA operating through concerned terminal.
- If situation demands, in co-ordination with MIAL security, make necessary arrangements for entry passes and transportation of emergency responders and external support agencies.

5.6.14 MIAL Landside Management:

- On receipt of information, notify the information to all concerned as per notification chart.
- Ensure smooth flow of traffic and proper crowd management at landside.

5.6.15 MIAL Engineering & Maintenance:

- On receipt of information, Engineering Team shall quickly disseminate information to all concerned as per notification chart.
- Shall put on all standby generators for lighting purposes during hours of darkness and to ensure minimum disruption to power supply.
- Mobilize resources on instructions from On-scene commander.

5.6.16 MIAL Corporate Communication:

- On receipt of information, Corporate Communication shall note all relevant details of the occurrence.
- If situation demands, activate the Media Centre as per dept. SOP.
- Liaise with affected airlines and concerned govt. agencies for quick and authentic dissemination of information.
- Liaise with AECC if activated for updated information and necessary instructions.

5.6.17 MIAL Environment Department:

Primary responsibilities

- On receipt of information, shall note all relevant details of the occurrence.
- Shall depute representative to the incident site for evaluating the need and requirements for controlling environmental pollution caused by incidence and inform statutory agencies as per the requirement under the environment(protection) rules 1986, for all accidents/incidents involving hazardous materials. .

Secondary responsibilities

- Assist Cargo Team / NDRF in the disposal of hazardous material as per the statutory requirements.
- Liaise with AECC if activated for updated information and necessary instructions.

5.6.18 Affected Airline & Ground handling agency:

Primary responsibilities

- When damaged consignments of dangerous goods are discovered during loading / unloading from an aircraft, the Airline or the Ground Handling Agency shall notify the ARFF, stating the parking bay number, type of aircraft and airline, and type of dangerous goods (if known).
- If dangerous goods consignments are damaged in a cargo warehouse, the Ground Handling Agency, or the Cargo operator, shall notify the ARFF, stating the location, any landmark and type of dangerous goods (if known) and the extent of damage.
- The concerned Airline or Ground Handling Agency shall initiate other precautionary measures such as isolate the affected area, keep people and vehicles away from the hazard until the arrival of the ARFF.

Secondary responsibilities

- In case of any Dangerous Goods incident which takes place at cargo, the concerned consignments shall be shifted to the identified isolation areas (if safe to do so) as follows: -
- For export shipment, the identified area is opposite to International Courier Terminal (ICT), beside Export Terminal 2.
- For import shipment, the identified area is opposite to Import Cold Zone (ICZ) in Heavy cargo Building.
- If any DG occurrence takes place at airside, Isolation Aircraft Parking Position (IAPP) has been identified as an isolation area for shifting of DG consignments.
- Once the incident has been contained by the ARFF, the Airline or Ground Handling Agency shall arrange for the removal of hazardous materials from the site in consultation with MIAL Environment team.

5.7 Termination of Dangerous Goods Occurrence:

- Asst. Duty Manager, ARFF will declare the termination of Dangerous Goods incident to JCC, Fire Watch Tower and Apron Control and ATC, in consultation with Mumbai Fire Brigade/NDRF when involved.
- JCC will pass notification through ANTS to all concerned agencies that "aircraft incident / accident emergency terminated".

Chapter 6: In-Flight Mass Casualty Incident

6.1 Definition:

In a mass casualty incident (MCI) rapid assessment and treatment of patients is a critical factor. Mass casualties onboard will usually result from incidents such as when an aircraft encounters severe air turbulence during flight and during mass food poisoning.

In an MCI where there are 15 injured/sick passengers or less, the resources within the airport at CSMIA are adequate to handle the incident. If there are more than 15 injured/sick passengers, the external medical resources such as ambulances, hospitals and doctors will have to be notified for immediate assistance.

6.2 Declaration of In-Flight Mass Casualty:

Declared By:

- The Pilot In-Command by requesting declaration through ATC, or
- MIAL Duty Medical Officer, after evaluating the incident they are of opinion that the medical emergency is warranted.

The standard message format used for declaring "In-flight Mass casualty incident" shall be as provided in the example below: -

"Mass casualty Incident" "Mass casualty Incident" "Mass casualty Incident"

Mass Casualty incident has taken place at XYZ. **All concerns to initiate In-flight Mass Casualty Incident actions.**

(In addition, all information as detailed in point 4 shall be provided when available during declaring emergency)

6.3 Activation:

The plan is activated on receipt of the information of Mass Casualty incident by ATC / ARFF / JCC / Apron control/ Duty Medical officer / Head-Medical Services. A notification process that needs to be initiated as fast as possible.

6.3.1 Notification Chart:

Notification shall be made by ATC or only be carried out once the incident has been evaluated as MCI by Duty "medical officer" or "Head – Medical Department" on his arrival. Notification as appropriate (ref Appendix 18 of AERP) shall be made by the concern teams. Subsequently a triangle of information shall be maintained between ARFF, Apron Control and JCC.

6.3.2 Critical Information to Be Provided In Notification:

In the initial activation following information must be provided and recorded for onward notification.

1	Aircraft Operator and Flight number
2	Type of Aircraft
3	Persons on board: PAX CREW
4	Sector: From - To -
5	Parking Bay Allocated
6	ETA:

6.4 Command and Coordinating Authority:

- On Duty Medical Officer being the first responder to reach the Mass Casualty Incident site shall act as the Officer in Command on site until the arrival of MIAL Head-Medical Services. However, understanding the gravity of Mass Casualty, he will declare Mass Casualty incident and coordinate with JCC for necessary support and advice JCC to activate appropriate notification.

6.5 Support Agencies:

6.5.1 Internal Agencies:

- MIAL – ARFF Services
- MIAL – Airside Safety
- MIAL - Landside Operations
- MIAL - Medical Service
- MIAL - JCC
- MIAL – Terminal Operations
- MIAL -E&M
- MIAL - Safety
- MIAL- Corporate Communication
- MIAL – Security
- Affected Airline & its nominated Ground Handler
- ATC
- CISF
- Customs
- Immigration

6.5.2 External Agencies:

- Hospital and Ambulance services
- State Police
- APHO

6.6 Duties and Responsibilities:

6.6.1 Air traffic Control:

- When ATC is notified by the pilot-in-command regarding an incident wherein passengers onboard have suffered injuries or fallen sick during the flight, the ATC shall try to obtain from the pilot the number of injured/sick casualties onboard and immediately notify to Apron Control. Apron Control shall inform JCC.

6.6.2 JCC (Executive Manager Joint Operation):
Primary responsibilities

- On receipt of notification from ATC/Apron Control, JCC Duty manager shall confirm the parking bay to be assigned to the emergency aircraft and quickly disseminate information to Duty Medical Officer and all concerned as per notification chart.
- Inform all as per notification chart (**Appendix 18** in AERP) and activate ANTS.
- **Secondary responsibilities**
- Should there be any pandemic scenario, the passenger details, as well as the responders' details will be shared with the APHO & MIAL Head – Medical for their expert advice.
- Activate AECC if required.

6.6.3 ARFF:
6.6.3.1 Fire Watch Tower
Primary responsibilities

- On receipt of information, ARFF shall quickly disseminate information to all concerned as per notification chart.
- Dispatch Ambulances to the incident site/allocated parking bay for immediate assistance
- Maintain communication triangle.

Secondary responsibilities

- Relay the termination of emergency to all concerned.

6.6.3.2 Duty Manager (ARFF)

- Duty Manager ARFF to proceed along with FCP to the incident site/allocated bay and immediately activate the FCP.

Secondary responsibilities

- Evaluate the situation and coordinate with duty medical officer at the site to determine and notify the requirement regarding activation of AECC..
- Assist Medical Team in evacuation of the injured and triage activities.

6.6.4 MIAL Airside Safety:
6.6.4.1 Duty manager (Apron Control):
Primary responsibilities

- The Duty Manager, Airside Safety will be the coordinating authority at the Rendezvous Point to ensure efficient handling of External Support Agencies Reporting at the Airport in response to the emergency.
- Advice Follow Me to activate RV point and report at Gates 1 and 5 for escorting of external emergency vehicles.

Secondary responsibilities

- Apron control shall intimate JCC to co-ordinate with GHA to provide ADP holders at Gate no 1 and Gate No 5 to escort external responding agencies to incident site, as and when required.
- Apron control will co-coordinate with all other GHA for additional support for transportation.
- Provide transportation to responding doctors in case they require the same.

6.6.4.2 Safety Officer's on "Follow Me":

Primary responsibilities

- Activate RV Point.
- Safety Officer shall report to Gate 1 and Gate 5 and co-ordinate with CISF personnel for immediate entry of emergency vehicles towards airside.

Secondary responsibilities

- Provide "Follow Me" service to responding emergency vehicles up to RV Point, and further up to incident site, if required.

6.6.5 Medical Department: Duty Medical Officer:

Primary responsibilities

- Dispatch one Medical Officer/report to the incident site or assigned bay for immediate medical assistance.
- Evaluate the situation and take a call to declare it as Mass Casualty incident.
- Call doctors from other terminals/airlines if required.
- Activate the Casualty Centre if required.
- Shall co-ordinate with hospitals, external ambulances, and doctors/ panel doctors for additional medical recourses, if required.
- Medical team (MIAL) shall carry out triage and medical treatment to the injured passengers / flight crew.
- Shall be responsible for quick dispatching of category P1 passengers/ flight crew to hospital.
- Shall be responsible for providing medical treatment to category P2 passengers / flight crew at casualty center.
- Supplement the medical aid requirements at the incident site.

Secondary responsibilities

- Maintain records of action taken at the incident site.
- Determine the termination of Mass Casualty Emergency.

6.6.6 APHO, Mumbai:

On receiving information, immediately report to the designated bay with help of Follow Me

- Assist in provision of Medical Response teams and ambulances for immediate and effective dispatch of victims to appropriate hospitals.
- On arrival at the site, report to the MIAL Head-Medical services with details of resources in place.

6.6.7 Terminal Management:

6.6.7.1 Duty Terminal Manager (Terminal 1 & 2 and CA Terminal):

Primary responsibilities

- On receipt of information, quickly disseminate information to designated hospitals, Panel Doctors & Ambulance services as per notification chart.
- Liaise with affected airline operating through concerned terminal.
- In co-ordination with MIAL security make necessary arrangements for entry passes and transportation of emergency responders and external support agencies. Send emergency responders to required areas in consultation with Head-Medical Services.

Secondary responsibilities

- Set up a help desk outside the terminal to guide the relatives of the passengers to Meeters and Greeters area.
- Activate Meeters and Greeters Area, Reunion area and Survivor reception area if required.
- Provide assistance to the airline staff in handling emergency.
- Coordinate with customs and immigration for facilitating the passengers.
- Make necessary arrangements for food and water.

6.6.8 MIAL Security & Landside Operation:

Primary responsibilities

- On receipt of information, Inform all as per notification chart (**Appendix 18** in AERP)
- Crowd Management at Gate 1, Gate 5 and crash gates of Landside areas shall be taken care by Duty Manager - Landside.
- Security (MIAL) will provide TAEP for all external emergency responders at entry Gate 1, Gate 5 and T1, T2 pass section. As per procedure define in AERP Part-2 Chapter No- 04,

Secondary responsibilities

- Liaise with CISF and State Police for necessary assistance at the occurrence site.

6.6.9. MIAL Engineering:

- On receipt of information, Engineering Team shall quickly disseminate information to all concerned as per notification chart.
- All standby generators shall put on for lighting purposes during hours of darkness and to ensure minimum disruption to power supply.

6.6.10 MIAL Corporate Communication:

- On receipt of information, Corporate Communication shall note all relevant details of the emergency.
- If situation demands, activate the Media Centre.
- Liaise with affected airlines and concerned govt. agencies for quick and authentic dissemination of information.

- Liaise with AECC if activated for updated information and necessary instructions.

6.6.11 CISF (Security Operation Control Center):

- Notify critical information to all concerned as per Departmental Notification Chart and ensure post notification action.
- Instruct security personal at Gate 1 & Gate 5 for allowing quick entry of emergency responding vehicles.
- Alert Quick Response Teams for immediate response for providing any assistance.
- Inform to security personal to open required Crash gate.
- Cordon off site and carry out access control. NOT TO ALLOW anybody without authorized access.

6.6.12 Affected Airline & Ground handling agency:

Primary responsibilities

- Airline concerned shall send a representative to report the incident site/assigned parking bay.
- Provide the necessary assistance and support for dealing with the injured/sick passengers.

Secondary responsibilities

- Establish Survivor reception area, Reunion area and Meeters and greeters' area in support with MIAL Terminal Management Team, if required.
- Depute representative to different hospital, where passengers are admitted.
- Liaise with Immigration and Customs for clearance of the injured/sick passengers and their baggage if an international flight is involved.
- Provide desired reservation requirements for onward passenger's i.e., hotel accommodations, air transportation or other mode of transportation, etc.

6.7 Termination Of In-Flight Mass Casualty Emergency:

- MIAL Head-Medical Officer will inform regarding termination of Mass casualty Incident to JCC.
- If AECC activated, Final Termination will be declared by the Chairman AECC in consultation with all agencies involved in emergency management.
- JCC will pass notification through ANTS to all concerned agencies including ATC that "Mass Casualty incident terminated".

Chapter 7: Fire on the Ground
(Fires involving airport terminals and other installations/equipment, including Drone)

7.1 Definition:
Fire may occur at any of the airport installations or buildings/equipment (including **Drone** related incidents) or any portion of airside, which includes grass fire. If out of control, such a fire may hamper the key airport facilities and disrupt the normal airport operations. This chapter outlines the general procedures to be followed by the parties concerned during such a fire occurrence.

7.2 Declaration of Emergency:
Any person,

- On witnessing of Smoke or fire, immediately initiate one of the below actions with exact location: -
- Raise the fire alarm via the nearest manual call point. If, no manual call point is available, raise the alarm by other available means.
- Inform the Fire Control Room/Central Alarm Control Facility of respective Terminals.
- Inform Fire Watch Tower/MFS/ SFS/Customer Help Desk/JCC immediately.

The standard message format used for declaring "Fire Emergency "shall be as provided in the example below: -

"Fire, Fire, Fire" Fire at Terminal/ Cargo Complex /Complex /another installations/equipment/drone. Location _____ (Specify location), Near/ Beside _____ (landmark, if any)

7.3 Activation:
The plan will be activated on receipt of the information of Fire by ATC / ARFF / JCC / Apron control or any other reliable source within CSMI Airport.

Note - If an incident involving **dangerous goods** occurs, whether it is in the airside or in any of the terminal's buildings, including cargo terminal, it is the responsibility of the ground handling agency or cargo operator concerned to immediately notify about the incident as per the notification mentioned in appendix 21**.** If **Dangerous Goods** are involved in fire in any of the Terminals, procedure mentioned in Chapter 5 (Dangerous goods Incident) of this AERP shall be activated.

7.4 Notification Chart:
Notification of fire shall be made immediately by ATC / ARFF / JCC / Apron control or any other reliable source, subsequently a triangle of information shall be maintained between ARFF, Apron Control and JCC.
The process of notification for "Fire in Terminal/Cargo Complex/Other Installations" as appropriate (ref Appendix 21 A of AERP) shall be made by the concerned teams.

7.4.1 Critical Information to Be Provided In Notification:

In the initial activation following information must be provided and recorded for onward notification.

1	Location of fire
2	Any Landmark
3	Type of fire (general description)
4	Name of the informer
5	Contact No. of the informer

7.5 Command and Coordinating Authority:

- The ARFF being the first responder to reach the incident site Assistant Duty Manager ARFF shall act as the on-scene commander until the arrival of Head of ARFF and he will be the coordinating authority for facilitating the requirements of the responding agencies.

7.6 Support Agencies:

7.6.1 Internal Agencies:

- MIAL – ARFF Services
- MIAL – Airside Operation
- MIAL - Landside Operations
- MIAL - Medical Service
- MIAL - JCC
- MIAL – Terminal Operations
- MIAL -E&M
- MIAL - Safety
- MIAL- Corporate Communication
- MIAL – Security
- MIAL – Cargo Operations
- Affected Airline & its nominated Ground Handler
- ATC
- CISF
- Customs
- Immigration

7.6.2 External Agencies:

- Mumbai Fire Brigade
- Hospital and Ambulance services
- State Police
- MCGM – Disaster Management Cell
- NDRF

7.7 Duties and Responsibilities:

7.7.1 Air Traffic Control:

- Notify ARFF/JCC/ Apron Control with exact location of fire.

- ATC in consultation with JCC and Apron Control shall take action to close the aircraft movement areas if the fire is spreading or there is a dangerous situation to any part of movement area due to the fire.

7.7.2 ARFF:

7.7.2.1 Head - ARFF:

Primary responsibilities

- On receiving information about incident, obtain the relevant information and act judiciously to optimize the handling of the situation.
- He shall be the on-scene commander and will take over the charge from on scene commander (Asst. Duty Manager – ARFF) after arriving at site.

Secondary responsibilities

- Brief AVP- Airside about the incident.
- If City Fire Brigade is involved in incident, extend support to them in managing the incident site.
- Be in constant touch with AECC (if activated) to provide necessary updates.

7.7.2.2 Fire Watch Tower:

Primary responsibilities

- On receipt of message, note down the details and immediately make an announcement on P.A. System with exact location of fire.
- On receipt of information, FWT in-charge shall quickly disseminate information to all concerned as per notification chart (ref Appendix 21 A of AERP).
- Immediately dispatch one Fire Tender from the nearest Fire Station to the reported fire location.
- The triangle shall be maintained between Apron control and JCC.
- Ensure that JCC has taken initiative to send an ambulance along with medical officer/paramedics to the site.

7.7.2.3 Duty Manager- ARFF:

Primary responsibilities

- On receipt of message, deploy Assistant Duty Manager- ARFF to the site to take charge of the situation.
- Ensure ARFF CAT-10 is maintained, if any deviation, Inform JCC for initiating NOTAM.
- If the fire incident is related to or involves a drone, the duty manager ARFF shall ensure that the firefighting process is carried out keeping in view the security aspects of such situation

Secondary responsibilities

- Maintain constant communication with ARFF team at the site for updates.
- Make proper log of event in occurrence book.

7.7.2.4 Assistant Duty Manager – ARFF:

Primary responsibilities

- Will be responsible to Carry out firefighting and rescue operation.
- Assess the situation and inform Fire Watch Tower for assistance from city fire brigade, NDRF or DAE if needed.

Secondary responsibilities

- Keep constant touch with Duty Manager (ARFF) for any required assistance at the site.
- Assess the situation and if required, call CISF to cordon off the area.
- Assist and guide city fire brigade about the layout, if required.

Note: - When a non-aviation incident occurred, which is beyond the capacity of resources available with ARFF and may affect the category of the airport, then ARFF On-Scene Commander may request Mumbai Fire Brigade to take control of the situation.

7.7.3 City Fire Brigade:

- On receipt of information, report to the incident site with required resources.
- Take all situational report from Asst. Duty Manage-ARFF MIAL.
- Provide the incident report to MIAL- ARFF.
- Assist in any other response or recovery operations for which Mumbai Fire Brigade equipment is suitable.

7.7.4 Terminal Management:
Duty Terminal Manager (Terminal 1 & 2 and CA Terminal):
Primary responsibilities

- On receipt of notification Duty Manager shall quickly disseminate information to all concerned.

Secondary responsibilities

- If situation demands, carry out evacuation process in consultation with ARFF Asst. Duty manager.
- If evacuation is declared, ensure that the head counting is carried out at the assembly point.

7.7.5 JCC (Executive Manager Joint Operation):
Primary responsibilities

- On receipt of notification JCC Duty manager shall quickly disseminate information to all concerned as per notification chart (ref Appendix 21 A of AERP).
- Activate ANTS.

Secondary responsibilities

- In consultation with Airside safety, determine the areas or parking bays, if any to be closed or to be declared as unavailable for normal aircraft operations due to the fire and notify ATC accordingly.
- After receiving call from Apron Control, EMJO shall intimate the GHA to provide ADP holders to Gate no. 1 and Gate no 5.
- Activate AECC in consultation with Asst. Duty manager-ARFF.

7.7.6 MIAL Airside Safety

7.7.6.1 Duty manager – Apron Control:

Primary responsibilities

- The Duty Manager, Airside Safety will be the coordinating authority at the Rendezvous Point to ensure efficient handling of External Support Agencies Reporting at the Airport in response to the emergency.
- Advice Follow Me to activate RV point and report at Gates 1 and 5 for escorting of external emergency vehicles.
- Inform Air Traffic Control and JCC regarding the areas or parking bays, if any to be closed or to be declared as unavailable for normal aircraft operations due to the fire.
- Assist CISF QRT team to reach the incident site.

Secondary responsibilities

- Apron control shall intimate JCC to co-ordinate with GHA to provide ADP holders at Gate no 1 and Gate No 5 to escort external responding agencies to incident site, as and when required.
- Apron control will co-coordinate with all other GHA for additional support for transportation.

7.7.6.2 Safety Officer's on "Follow Me":

Primary responsibilities

- Activate RV Point.
- Safety Officer shall report to Gate 1 and Gate 5 and co-ordinate with CISF personnel for immediate entry of emergency vehicles towards airside.

Secondary responsibilities

- Provide "Follow Me" service to responding emergency vehicles up to RV Point, and if required, up to incident/accident site.

7.7.7 Medical Department (Duty Medical Officer):

Primary responsibilities

- Dispatch one Medical Officer to the incident site for immediate medical assistance.
- Supplement the medical aid requirements at the incident site.

Secondary responsibilities

- Coordinate with Panel doctors and ambulances if situation demands.
- Activate the Casualty Centre, if required.
- Set up and activate Triage area, if required.

7.7.8 MIAL Environment Department:

Primary responsibilities

- On receipt of information, shall note all relevant details of the occurrence.
- Shall depute representative to the incident site for evaluating the need and requirements for controlling environmental pollution caused by incidence and appraise statutory agencies.

Secondary responsibilities

- Assist in the disposal of hazardous material as per the statutory requirements.
- Liaise with AECC if activated for updated information and necessary instructions.

7.7.9 Corporate Communications:

- Receive critical information and note details of fire.
- Notify critical information to all concerned as decided by Head of Corporate Communications
- Liaise with all concerned departments and govt. agencies for quick and authentic dissemination of information.

7.7.10 CISF (Security Operation Control Center):

Primary responsibilities

- On receipt of information, notify the information to all concerned as per Departmental notification chart/procedure.
- Instruct Security at Gate 1 /gate 5/Terminal (as the case may be) to allow external emergency responding vehicles/officials access onto airside after identification by concerned department.
- Cordon off site and carry out access control. Entry shall be restricted to authorized personal only.
- If the fire incident is related to or involves a drone, the CISF personal shall give due diligence to the security aspects in accordance with the situation.

- **Secondary responsibilities**
- If evacuation is declared, facilitate in clearing passengers and Staff.

7.7.11 MIAL Security & Landside Operation:

Primary responsibilities

- On receipt of information, Inform all as per departmental notification chart/procedure.
- If the fire incident is related to or involves a drone, the MIAL Security shall provide all due support to CISF personal to take care of the security aspects of such incidents.
- Security (MIAL) will provide TAEP for all external emergency responders at entry Gate 1, Gate 5 and T1, T2 pass section, as per procedure defines in AERP Part-2 Chapter No- 04,

Secondary responsibilities

- Crowd Management at Gate 1, Gate 5 and crash gates of Landside areas shall be taken care by Duty Manager - Landside.

7.8 Termination of Emergency:

- The termination of emergency shall be declared by respective Terminal/Cargo Complex/Other Installation Duty Manager in consultation with ARFF Asst. Duty Manager.

- If AECC activated, Final Termination will be declared by the Chairman AECC in consultation with all agencies involved in emergency management.
- JCC will pass notification through ANTS to all concerned agencies that "Fire Emergency at ---------- (area. eg. Terminal1, cargo ccx etc.) terminated".

Chapter 8: Natural Disaster

8.1 Definition:

Natural Disasters are often, sudden & intense and results in considerable destruction, injuries & death, disrupting normal life as well as the process of development. The natural disasters to which airport is likely to be exposed are:

- Earthquake
- Flood
- Storm/ Cyclone
- Cloud burst/ lightning/ extreme weather conditions.

- As per the guidelines provided by Ministry of Civil Aviation, Government of India, the Earthquake vulnerability factor for CSMIA, Mumbai is as detailed below:

Airport	Owner	Risk Zone	PAX movement/Annum	Traffic Index	Combined Index
CSMIA	**MIAL**	**3**	**47130791**	**5**	**3X5=15**

- A "Local Scale Disaster" is one that can be controlled and managed within the capability of the airport and local communities.

- A "Large Scale Disaster" is one which is beyond the capability of the airport and local communities and requires involvement of state.

- Depending on the intensity, such acts of nature may cause severe destruction to the aircraft, airport buildings and installations, and even loss of life. While very less can be done to avert them, timely actions by identified agencies can minimize the impact and expedite restoration of airport operations during emergency.

- This section explains the airport's overall approach to the emergency situation, i.e., what should be done, and at whose direction. The flow of accurate and timely information is critical to the protection of lives and property following a natural disaster.

- Because of the unique nature of this type of emergencies and its potential for involving a wide geographic area and potentially limiting the availability of resources, there may be a need for adjusting and coordinating the resources management and mutual aid.

- It is essential that emergency personnel take immediate action based upon information received, particularly in decision making.

- Every effort has been put in to ensure that the activities mentioned herein are in synergy with local community emergency management plan and at the same time

it dovetails with the **MCGM, Disaster Management Plan, The State Disaster Management Plan, Maharashtra State** and **National Disaster Management Plan** developed by Government of India, Ministry of Home Affairs.

- MCGM, Disaster Management Plan Provide some guideline for Community for Surviving Earthquake in Urban Areas (extract is enclosed for ready reference)

8.2 Before the Earthquake

- It is essential that always we must be prepared for facing an earthquake, which can occur at any time. Seismic experts do not rule out the possibility of an earthquake anywhere in Maharashtra including Mumbai.
- When an earthquake occurs, your first warning may be a shaking sensation if you are in a building. It may also be followed with a sudden noise or roar. You may find yourself completely topsy-turvy. It may be a scary situation! It may last for a few seconds or will continue for a few minutes. Breaking glass and things falling around could hurt you. Be prepared for aftershocks.
    - We can't prevent an earthquake. But we can:

- Be prepared to avoid injury.
- Be prepared to minimize damage.
- After the earthquake, be prepared to manage for a survival aimed at least 72 hours without help.
- Your preparedness for such a situation is a must. You must prepare and practice what to do during and after an earthquake.
- Plan your needs in such a situation. Write down and exercise your safety plan.
- You should know the safe and dangerous places of your office premises.

Safe: -Under heavy tables or desks, inside corridor, corners of rooms or archways.

Dangerous: - Near window or mirrors, under any objects that can fall, the kitchen-where the stove, refrigerator or contents of cupboards may move violently, doorways, because the shaking may slam the door on you. Practice taking cover.

- Train members of your department to use fire extinguisher.
- Plan and practice evacuation.
- Talk to your colleagues about the earthquake: what to do if they are at home, at school, if the quake separates your family.
- Arrange an alternative place if your present area is out of bound. Each member should carry the emergency contact phone numbers and address.
- Remind your members to relay on emergency authorities for guidance. Broadcast reports on radio and television will have instructions.
- Make sure each member of your department knows how to shut off the utilities-gas, electricity and water. (Don't shut off the gas unless there is a leak or a fire. If

the gas is turned off, don't turn it on again-that must be done by a qualified technician.)

- Your plan should include the list of places, from where you can receive emergency supplies and equipment.
- Share your emergency plan with rescue departments.

8.3 During the Earthquake

- Preparations for facing an earthquake includes what to do while it is happening. By learning and practicing what you should try to do, you will be more able to remain calm enough to protect yourself and help others. Know what to do, wherever you are. In summary, you should take cover and stay there.
- If you're inside your office, stay there. Get to a safer place such as inside a hall, in corners, in archways. Take cover under a heavy table, desk or any solid furniture that you can get under and hold onto. Protect your head and face. Doors may slam you if you are in a doorway. Avoid areas near windows.
- If you are in a yard outside your office, stay there and get clear of buildings and wires that could fall on you.
- Don't go outside where you may be hit by falling debris - pavements next to tall buildings are particularly dangerous.
- Avoid lifts - if you are in a lift when an earthquake happens, press all floors buttons and get out when you can. High - rise residents will hear fire alarms go off and electricity may fail.
- If you are in a vehicle, pull over to an area (leave the road clear) away from bridges, over bridges and buildings. Stay in your vehicle.
- If you are in a crowed public place, take cover and ensure that you don't get trampled and not become a victim of a stampede. In shopping centers, take cover in the nearest store and keep away from windows, neon signs and display shelves of heavy objects.
- Remain in protected place until the shacking stops. Anticipate aftershocks - they may occur after the first quake.
- Try to remain calm and help others.

8.4 After the earthquake

- Preparation of an earthquake also include a better understanding of what to do and what not to do. Once the shaking stops, always there is a danger from aftershocks, fire, falling building materials, debris, etc. Remain calm. You may have to take charge of others. As far as practicable, take care of life-threatening situations. Remember, you may be on your own care for 72 hours or more.

- Check your office for structural damage and other hazards.
- Check yourself and others nearby for injuries. If so, provide first aid quickly and carefully.
- If you are evacuating, locate and take your pack of emergency supplies with you.

- Use a torch to check utilities and not shut them off unless damaged. Leaking of gas will give you a foul smell. Don't light matches or turn on/off light switches-until you are sure there are no gas leaks or flammable liquids.
- Wear sturdy shoes, if there's debris, particularly broken glass.
- Carefully cleanup any spilled hazardous material.
- Secure your office against trespassers.
- Turn on your battery-power radio (or car radio) and listen for broadcast emergency instructions.
- Don't use your telephone, expect it an extreme emergency.
- Don't use your vehicle, expect in an extreme emergency.
- Stay at least ten meters from downed power lines.
- Avoid sea line because of the threat of large waves.

8.5 Adverse Weather Conditions

Mumbai typically faces the following adverse weather conditions: -

- Strong winds
- Rain (causing flooding in some cases)
- Thunderstorm
- Low visibility (due to rain / fog / smog)

These types of Emergencies are handled as per Adverse Weather Operations Manual and Monsoon Contingency Plan and it will take mitigation control activities.

8.6 Declaration of Natural Disaster:

- JCC in consultation with IMD, in case of local scale disaster.
- SDMA in case of Large-Scale Disaster.

8.7 Activation:

Activate through a notification process that needs to be initiated and confirmed as fast as possible.

8.7.1 Notification:

Notification of Natural Disaster shall be done by JCC or SDMA as per para 1, subsequently a triangle of information shall be maintained between ARFF, Apron Control and JCC.

- JCC shall inform ATC about Natural Disaster.
- Notification as appropriate shall be made by the JCC to all concern as per scale of disaster (Local Scale disaster - As determined in Appendix 19 and Large-Scale disaster – As determined in Appendix 20

8.7.2 Critical Information To Be Provided In Notification:

All detailed information available must be provided and recorded for onward notification.

"Disaster, Disaster, Disaster"

Disaster at Terminal/ Cargo Complex /other installations. Location _____ (Specify location), Near/ Beside _____ (landmark, if any)

8.8 Command and Coordinating Authority:

- The ARFF being the first responder to reach the incident site the Duty Manager ARFF shall act as the Officer in Command on site until the arrival of Head of ARFF and he will be the coordinating authority for facilitating the requirements of the responding agencies.
- On understanding the gravity of the incident, the City Fire Brigade will be called, and on arrival, hand over the charge to city fire brigade and assist them in mitigating the incident.
- After taking over the charge by City Fire Brigade, the senior most officer from CFB will be the command and coordinating authority.
- In a large-scale disaster, MCGM Disaster Management shall be called and MCGM Disaster Management Department is the Command and Coordinating authority. Operation shall be in accordance with the local authority procedure.

8.9 Support Agencies:

8.9.1 Internal Agencies

- MIAL – ARFF Services
- MIAL –Airside Operations
- MIAL - Landside Operations
- MIAL - Medical Service
- MIAL - JCC
- MIAL – Terminal Operations
- MIAL -E&M
- MIAL - Safety
- MIAL- Corporate Communication
- MIAL – Security
- MIAL – Cargo Operations
- Affected Airline & its nominated Ground Handler
- ATC
- CISF
- Customs
- Immigration

8.9.2 External Agencies

- Civil Defence
- Mumbai Fire Brigade
- Hospital and Ambulance services
- State Police
- MCGM – Disaster Management Cell
- State Disaster Management Authority
- NDRF
- NDMA

8.10 Duties And Responsibilities:

8.10.1 Air traffic Control

Primary responsibilities

As soon as the warning is received from IMD, ATC shall inform Fire Watch Tower, JCC and Apron Control.

- **Secondary responsibilities**
- Advise aircraft in flight to divert to an alternate destination, if needed.
- Initiate the NOTAM actions, with inputs from JCC if any, to inform all incoming aircrafts to the airport, regarding the warning.

8.10.2 JCC (Executive Manager Joint Operation):

Primary responsibilities

- On receipt of notification, JCC shall quickly disseminate information to all concerned as per notification chart (Appendix 19/20 in AERP).
- Activate ANTS.

- **Secondary responsibilities**
- Liaise with airlines operating at CSMIA and disseminate all necessary information.

8.10.3 Aerodrome Rescue and Fire Fighting:

Primary responsibilities

- On receipt of information, ARFF shall quickly disseminate information to all concerned as per notification chart (Appendix 19/20 in AERP).
- FWT shall keep surveillance of the aircraft movement areas and report to ATC and JCC immediately regarding any FOD.
- If a storm warning is received, the Duty manager shall ensure that all the equipment carried on the vehicles, especially the loose items are firmly secured in the vehicle lockers.

- Vehicle's in-charge to ensure that there is no loose equipment or objects on the vehicle roof top.
- Vehicle's in-charge to ensure that the roof monitor is properly locked into its original position.
- Airport Rescue and Fire Fighting team shall conduct fire suppression and rescue operations as needed.

Secondary responsibilities

- Check for potential hazardous materials.
- Assist in providing emergency medical assistance, as needed.
- Determine integrity of the building.
- Assist in support operations, which include search operations, inspections, personnel accountability, and implementation of protective actions.
- Coordinate activities with local community emergency response agencies, if necessary.

8.10.4 Airside Safety:

Primary responsibilities

- On receipt of information, Apron Control shall quickly disseminate information to all concerned as per notification chart (Appendix 19/20 in AERP).
- Advice all Airline and GHA to chock all the aircraft and ground equipment's.
- Ensure that there is no bamboo structure or scaffolding at the airside, which may create a harm to the aircraft.
- Apron Control shall keep surveillance of the aircraft movement areas and report to ATC and JCC immediately regarding any type of FOD.

Secondary responsibilities

- Activate Rendezvous Point to facilitate responding vehicles and crew.
- Confirm with Security at Gates 1 that access to external emergency vehicles has been accorded.
- Arrange for runway/taxiway inspections at frequent intervals to ensure the surface condition is optimum and free of FOD.
- Ensure that aerobridges are retracted and secured during the storm.

8.10.5 MIAL Medical Team:

Primary responsibilities

- On receipt of information, Medical Team shall quickly disseminate information to all concerned as per notification chart.
- Be ready with medical kit to procced to any of the incident site as situation demands.

Secondary responsibilities

- If call received, dispatch one Medical Officer to the incident site for immediate medical assistance.,
- Evaluate the situation and keep the external medical team on standby.
- Activate the Casualty Centre if required.

- Supplement the medical aid requirements.

8.10.6 Terminal Management:
Duty Terminal Manager (Terminal 1 & 2 and CA Terminal):
Primary responsibilities

- On receipt of information, quickly disseminate information to designated hospitals, Panel Doctors & Ambulance service providers to keep them in stand by and follow notification chart.
- In case of an Earthquake, evaluate the situation, and accordingly implement terminal evacuation plan.

Secondary responsibilities

- Liaise with airline's operating at CSMIA and disseminate all necessary information.
- In co-ordination with MIAL security, make necessary arrangements for entry passes and transportation of emergency responders and external support agencies if required.
- Make necessary arrangements for food and water.

8.10.7 MIAL Engineering:
Primary responsibilities

- On receipt of information, Engineering Team shall quickly disseminate information to all concerned as per notification chart.
- Respond to address any engineering related emergency issues.

Secondary responsibilities

- Ensure that all aerobridges are retracted and secured during the warning period.
- Shall put on all standby generators for lighting purposes during hours of darkness and to ensure minimum disruption to power supply.

8.10.8 MIAL Security and Landside operation:
Primary responsibilities

- On receipt of information, Inform all as per departmental notification chart.
- Crowd Management at Gate 1, Gate 5 and crash gates of Landside areas shall be taken care by Duty Manager - Landside.
- Security (MIAL) will provide TAEP for all external emergency responders at entry Gate 1, Gate 5 and T1, T2 pass section. As per procedure define in AERP Part-2 Chapter No- 04,

Secondary responsibilities

- Liaise with CISF and State Police for necessary assistance at the occurrence site.

8.10.9 MIAL Corporate Communications:

- Receive critical information and note details of disaster and its impact at the airport.
- Notify critical information to all concerned as decided by Head of Corporate Communications
- Liaise with concerned departments and agencies for quick and authentic dissemination of information.

8.10.10 CISF (Security Operation Control Center):

- On receipt of information, notify the information to all concerned as per Departmental notification chart/procedure.
- Instruct Security at Gate 1 /gate 5/Terminal (as the case may be) to allow external emergency responding vehicles/officials access onto airside after identification by concerned department.
- Ensure that all Senior CISF Officers are informed regarding Natural Disaster Emergency.
- Ensure that Quick Response Teams are on alert to respond to any untoward incidents.

8.10.11 Airline & Ground handling agency:

Primary responsibilities

On receipt of the natural disaster emergency warning, all Airlines and/or Ground Handling agencies concerned shall take the necessary action to ensure:

- Chokes are positioned on both sides of all the wheels of the aircraft, so as to arrest any type of movements.
- All the propeller driven aircraft blades are properly secured.
- All the helicopters are be moored/secured from all sides.
- All the turbine blades of jet engine aircrafts are secured.
- No loose chokes should be left on the apron.
- All the containers and ULDs are fully fastened to prevent them from flying around and damaging the aircraft and ground installations.
- All the ground equipment including dolly-trolleys, trestles, and step ladders are checked for serviceability and proper braking.
- Temperature permitting parking brakes be kept “ON” during the warning period.
- High-rise vehicles be parked and moved in low-down position, and
- Immediately after use removed away from the aircraft.
- No equipment left unattended at the airside.
- No loose pieces of cargo should be left on apron or left out in the open area.
- In case any damage to the aircraft, installations or equipment is observed, report it immediately to the Apron control.

Secondary responsibilities

- The equipment should be positioned at the aircraft parking stand as required basis only. When not in use, it should be removed to the designated equipment staging area and hydraulic/manual jacks/chocks should be applied to them to prevent them from rolling.

8.11 Termination Of Natural Disaster:

- The termination of emergency situation shall be declared by JCC in consultation with IMD in case of Local Scale Disaster.
- If AECC activated, Final Termination will be declared by the Chairman AECC in consultation with all agencies involved in emergency management.
- JCC will pass notification through ANTS to all concerned agencies that "Natural Disaster Emergency Terminated".

Chapter -9: SOP to deal with mutiny of large-scale desertion by the security personnel (as received from CISF)

OFFICE OF THE DIG/CASO-MUMBAI AIRPORT
CENTRAL INDUSTRIAL SECURITY FORCE
MINISTRY OF HOME AFFAIRS

OPS Branch
CISF CSIA MUMBAI

No: O-42099/CISF/CSIA(M)/OPS-CELL(66/A)/2017/- 342 Date: 28 /04/ 2017

To

The General Manager & Head Security,
(MIAL) 1st floor, Terminal 1 B,
CSI Airport Mumbai

Sub: Disaster Management Plan: Reg.

Kindly refer to your office E-mail dated 24.04.2017 on the above mentioned subject.

As requested vide email under reference, the Standard Operating Procedure to deal with Mutiny Of Large Scale Desertion By The Security Personnel is enclosed herewith for further necessary action at your please.

Encl : As above.

DY. COMMANDANT/OPS
CISF CSI AIRPORT MUMBAI

F. MAJOR / LARGE SCALE MUTINY OR DESERTIONS IN THE FORCE

EXPLANTION OF THE TERM AND THREAT ASSESSMENT

MUTINY, the **forceful defiance of authority or the deliberate attack upon the immediate leadership of a unit** , occurred throughout history and undoubtedly influenced the organizations and institutions of armed forces to the present day.

The absence of force by the unit in question, such as in a strike or a refusal to follow the military schedule, but in other ways obeying their superiors, may not be construed as a mutiny, owing to the lack of violence or threat of the same.

Mutinies occur when the subordinates in a unit **lose confidence in the ability of their superior officers** to satisfy their grievances, order legal actions, avoid the unnecessary risk or sacrifice of their lives, or when the leaders otherwise present a hazard to their condition or well-being.

Thus soldiers and sailors often **mutinied in past epochs over** the lack of pay, or the proper provisioning of food and shelter. In face of danger, the sensing in the unit that they were better off without their leaders than with them also produced mutinies, frequently including the killing or incapacitating of the leaders.

Military organizations and institutions responded to mutiny or its latent threat by requiring positive leadership and responsibility from its commissioned officers and by better enforcement of lawful regulations regarding the handling of subordinates, especially by the non-commissioned officers, the sergeants, who could frequently cause or avert outbreaks of indiscipline.

Mutinies were more **common in the pre modern era** when pay and support of troops was irregular, as in the case of Spanish units serving in the Netherlands in the late sixteenth century. The refinement of military administration served to correct problems of pay and provisions, provided greater comforts in garrison and on board ships as technology and social cohesion improved. In fact, the technical challenges of modern weaponry, ships and aircraft forced a wholesale change in the manner by which persons were recruited, trained and indoctrinated for military service. No longer could a ship be crewed by landlubbers seized ashore by ships' press gangs and forced to labor as seamen under iron discipline and the enforcement of marines and masters at arms. The seaman in the age of steam and steel had become an artificer, carefully recruited and trained for skilled tasks for which he was paid, led and cared for in a way uncommon to the age of sail.

During the modern era mutinies were most common during World War I, especially 1917-19. In addition to the aforementioned German Navy mutiny, the Russian army mutinied (February 1917) and the French (May-June 1917); Italian troops feigned collapse at Caporetto (November 1917) as did British troops in March 1918. World War I mutinies frequently saw politicization by the radical left, which organized soldiers and sailors "soviets" on the Bolshevik model to fan the flames of revolution.

Modern management, communications and leadership practices and the power of the modern state have brought a halt to the occurrence of mutiny. This is one reason perhaps why air forces have mutinied so little, as they are more creations of the post-industrial era than armies and navies in their respective heydays. The fact that no stalemate developed during World War II like in the previous war also contributed to the lack of mutinies.

However , in the Indian context , the CISF has witnessed a large scale mutinous activity in 1970s

RESPONSIBILITY

Mutiny by the CISF personnel would require to be handled by the CISF primarily on its own . Any assistance of any external agencies including the police or armed forces , if any , would be secondary .

POTENTIAL TARGETS

As the mutiny is characterized by willful and forceful defiance of the superior for being successful ,it is reasonable to believe that the Arms ; Ammunition Kote would be an important target of the mutineers . It is likely to presume that the armed mutineers may seek to unlawfully seize the Kote or hold hostage important functionaries , attack or hold to ransom other vital installations of the Airport for hard bargaining.

CONDUCT STAGE

PRECAUTIONARY STAGE

INTELLIGENCE COLLECTION

It is reasonable to presume that situation leading to mutiny is unlikely to arise in an unit all of a sudden . Normally such a situation is likely to be fallout of long standing , brewing discontent amongst the personnel . The role of the intelligence is therefore very significant .

Intelligence on any such major discontent amongst personnel must be shared with the CASO .

CIW personnel must identify the leaders amongst the personnel.

CASO may convene meeting of the Unit Crisis Management Group and share the information on need to know basis with other officers/ Sub officers .

CASO may hold Sainik Sammelans and try to allay the apprehensions or the discontent of the personnel , without showing any anxiety

CASO may order for much greater inter personal interactions of the officer-men

ADMINSTRATIVE MEASURES

Covert surveillance be kept on those who are identified as main instigators

Efforts be taken to marginalize the identified leaders

Those identified may be split and kept at disparate locations. Effect changes in the duty shift , sector of deployment , barrack .

Identified Instigators who are family members may be asked to report to barracks on administrative grounds

Instigators may , with the coordination of higher formations be dispatched for temporary duty , training or attachment or even transferred to any other unit.

REVIEW OF PERSONNEL :

A complete review of all personnel holding key duty post including those as Reserve Inspector Kalina ; Reserve Inspector Taloja ; Crime and intelligence be done .

A thorough screening of other extremely crucial duty post viz. Kote incharge / Sub officer ; Kote Hawaldar should be conducted .

Replace , if required, and place only those with proven and redoubtable record of integrity and loyalty

REVIEW OF ARRANGEMENTS AT KOTE

Review the Kote security arrangement and weapons issue procedure

Replace if necessary with more stringent physical security and weapons issue/ receipt system.

The Kote SO / NCO may be directed to secretly remove and keep at some remote confidential location some important parts of the arms / accessories which will effectively disarm the weapons.

CASO may coordinate with other agencies including police and armed forces and part or large part of the arms and ammunition may be shifted to Kotes of Local Police , Armed Forces in the vicinity of the unit.

The UCMG may also shift a number of weapons from the Main Unit Kote at Kalina to other subsidiary Kotes like QRT barracks and enhance guard at such location

The CASO with the UCMG may also shift part of the arms ammunition to some other confidential location

OTHER ADMINSTRATIVE MEASURES

Alert Sector in charges , sector inspectors and the duty company commanders to consciously identify disgruntled personnel and maintain a confidential list of loyal personnel .

Organize reshuffle of personnel with a view to ensure that disgruntled persons are kept apart.

Issue weapons only to those personnel with impeccable integrity and loyalty.

Recall some personnel from family accommodation to barracks if the strength of loyal personnel specially in barracks is to be enhanced.

Conduct stage:

1.In the event of a mutiny breaking out despite precautionary steps recounted above

1. Assess the level of the participation and arms ammunition , if any held by the mutineers
2. Try to ascertain and identify the leaders and the demands

3.Inform the higher formations and request to enlist assistance from other CISF Units in Mumbai, civil and police , Armed forces intervention , if felt necessary.

4.Obtain reinforcement and assistance from other CISF units, Indian Army etc . and loyal CISF personnel on duty

7. Inform the Airport management, medical wing , Ambulance , Hospitals
8. Review the security of the airport .

9.Position loyal personnel and others who have enlisted from other organizations at all important vital duty posts inside the Airport

6.Try to communicate to the leaders the willingness to resolve reasonable demands

9. Press for giving up armed resistance and settle for talks.
10.
11. Try to disarm
12. Use force only as a last recourse
13. Take suitable action against defaulters

Part 2:

Chapter 1: Emergency operation and coordination centres established for mitigation of airport emergencies

1. Activation of co-ordination centers for mitigation of emergency during aircraft incident/accident

I. Forward Command Post (FCP)

Circumscribed	The Forward Command Post is a Vehicle which is parked at accident site, where Sr. officials of emergency response agencies assemble to receive and disseminate information and make decisions pertinent to co-ordinate emergency response.
Purpose	The Forward Command Post serves as Command, Co-ordination, and Communication Centre at the Combat Zone in case of an airport emergency.
Responsible for	• The assigned ARFF crew shall be responsible for positioning the Forward Command Post near the incident/ accident site. The Forward Command Post is required to be correctly located at a safe distance from the site keeping in view of wind and terrain conditions. • Manning of Command Post: ARFF Duty Manager shall act as On-Scene Commander till arrival of Head- ARFF, he shall hand over the command with briefing, who will then be On-Scene Commander. The representative of affected airline and all agencies shall report to the FCP and will receive direction from On-Scene Commander about further course of action. • Command and control of incident/accident site through incident commander for smooth transaction of handling emergency situation, compliance with all regulatory norms, co-ordination, and liaison with other agencies for additional recourses to mitigate the emergency situation. • Establish communication between emergency co-ordination centers for handling of emergency situation. i.e., AECC, SRA, Casualty Center, CMO, Transportation Officer, rendezvous point,
Control	Head- ARFF through Duty Manager shall be responsible for the control of all responsibilities to ensure proper functioning of Forward command post
Facilities	Air conditioning cabin, Drinking water, conference table, Dish TV, display presentation facility, live coverage and recording of incident site, Video conference, Binocular, Hand gloves and Masks.

Communication	The Forward Command Post will use following communication media. TMR (MIAL), two-way VHF communication facilities as follows: 118.1 MHz, 121.75 MHz, 121.9 MHZ, 161.825 MHz, WLL landline – 8657534257, P.A. System and Loud Hailer, Fax and printer
Location	Main Fire Station

II. Airport Emergency Control Centre (AECC)

Circumscribed	The AECC shall perform overall control, command, communication, and coordination functions amongst the agencies responsible for providing emergency response and restoration of normal operation.
Purpose	AECC is activated to provide necessary logistics support to the On-Scene Commander and to coordinate with various government and non- government agencies during an airport emergency. It is the highest emergency managing authority at the airport.
Responsible for	• Activation of AECC: In the event of any airport emergency, AECC will be activated by the Duty Terminal Manager, T1B. • Initial Manning of AECC: Duty Terminal Manager, T1 will manage the AECC initially until arrival of Director-operation MIAL designated as Chairman of the AECC. The Responsibility shall be handed over to him with briefing, who then takes over the command and control. • Manning of AECC: The AECC shall be manned by representatives of all the agencies / MIAL Departments responsible to ensure the smooth handling of the emergency and recovery back to normal operations.
Control	Director–operations (MIAL), who is the Chairman of AECC, shall be responsible for ensuring proper function of AECC through Emergency Planner-ARFF.
Facilities	Air conditioning Room, Drinking water, Washroom facility, Seating arrangement for all AECC members, display Boards, FIDS, live coverage of incident site
Communication	Facility is equipped with:- Internet, RT - 121.9 MHz, 161.825 MHz, Hot Line With ATC, Fire Watch Tower, JCC and below phones

Telephones	Agency
66852076 66851269 66851270 66851271	AECC Main/help desk
66851241	Airline
66851242	Chairman AECC
66851243	AAI - ATC

	66851244	Corporate Communication (MIAL)
	66851245	Functional Expert
	66851246	Medical Services
	66851247	Head Security (MIAL)
	66851248	CISF
	66850901	Mumbai Police
	66851250	Civil Defence
	66851251	Disaster Management Cell (MCGM)
	66851252	Mumbai Fire Brigade
	66851253	Head Procurement (MIAL)
	66851254	Head (E & M)
	66851240	Support Staff
Location	Terminal 1B, second floor	

III. Casualty Centre:

Circumscribed	It is a dedicated medical center established at Sub-Fire Station next to fire control room with Examination room, 11 Bed, 100 Stretcher, Dedicated Ambulance parking, Toilet facility and required medicines and medical equipment's.
Purpose	Causality Center is activated by Duty Medical Officer, terminal 1 and provide first aid to injured passengers and crew, collection, and preservation of urine & blood sample of flight crew.
Responsible for	Shall be responsible for providing medical treatment to category P2 passengers / flight crew and if category P2 passengers / flight crew became P1, then send to hospital immediately. Collecting blood and urine sample of flight crew and same to be preserved and handed over to DGCA/AAIB official.
Control	The control of all operations at the Casualty Centre and those associated with Medical Services shall vest with the MIAL Head-Medical services
Facilities	Patient examination room, beds, stretchers, blankets, pillows, Medicines, medical equipment's, washroom facility, drinking water facility.
Communication	Facility is equipped with Internet, Telephone No- 26264490, 66852189, RT 161.825 MHz
Location	Sub-Fire Station, Below Apron Control

IV. Survival Reception Area:

Circumscribed	A dedicated area in the Terminal- 1 bus lounge (boarding gate 29 to 31) is use as survival reception area for passengers during an airport emergency involving an aircraft accident. Non-hospitalized passengers to be relocated to this area to have all required administrative procedures completed.
Purpose	The creation of a separate area within the terminal where passengers can be received in order to carryout reconciliation and finalize processes prior to unification with their friends and relatives.
Responsible for	In the event of any airport emergency involving an aircraft accident the Survivor Reception Area will be activated by the Terminal Management team of Terminal1. Uninjured passengers will be brought to SRA, where the passenger's reconciliation process will be carried out by the affected airlines/GHA and further unification with their friends and relatives.
Control	Head-Terminal management through Duty Manager – Terminal shall be responsible for controlling all tasks with regards to providing the infrastructure. Coordinate with affected Airline's representative for arrangement of refreshment for passengers
Facilities	227 chairs + additional 100 plastic chairs, Announcement system, Washroom Facility, Refreshment, basis Clothing (Mattress, Blankets, T-shirts, Track pants, Slippers, tooth pest etc.), **Facilitation for immigrations, customs** Immigration - 5 desk, Customs – one desk
Communication	VOIP phones (66851188, 66850982, 668551180) RT 161.825 MHz, Telephone with STD/ISD facility and internet facility
Location	Terminal 1A: Bus Boarding gate No. 29 to 31.

V. Reunion Area:

Circumscribed	A dedicated area in the Airport, TAJ Hotel in front of Terminal-1 is use as reunion area during an Airport Emergency involving an aircraft accident.
Purpose	The creation of a separate area at GVK TAJ Hotel in front of Terminal-1 where passengers can be reunited with their loved ones.

Responsible For	In the event of any Airport Emergency involving an aircraft accident the Re-union Area will be prepared by the Duty Terminal Manager-Terminal 1 in coordination with Hotel GVK TAJ staff and assist affected airlines/GHA staff in unification process and arrange refreshment for passengers and relatives.
Control	Head-Terminal management through Duty Manager – Terminal shall be responsible for controlling of all tasks with regards to providing infrastructure. Coordinate with affected airline's representative for arrangement of refreshment for passengers
Facilities	Air condition room with Seating arrangement, Washroom Facility, Refreshment,
Communication	Telephone with STD/ISD facility and internet facility, Announcement system
Location	**Hotel TAJ**: Business lounge, first floor

VI. Meeters and Greeters Area:

Circumscribed	A dedicated area in the, TAJ Hotel in front of Terminal-1 to be used as Meeters and Greeters Area for loved ones of passenger of aircraft involved in accident.
Purpose	The creation of a separate area Airport- GVK TAJ Hotel in front of Terminal-1 where loved ones of passenger and crew shall gather for necessary information and further unification process.
Responsible For	In the event of any airport emergency involving an aircraft accident, the Meeters and Greeters Area will be prepared by the Duty Terminal Manager of the affected Terminal. A help desk will set up and same will maintain by affected Airline representative to identify the loved ones of passengers and flight crew.
Control	Head-Terminal management through Duty Manager – Terminal shall be responsible for control of all responsibilities with regard to providing the infrastructure. Assist affected Airline representative for arrangement of refreshment for passengers
Facilities	Air condition room with Seating arrangement, Announcement system, Washroom Facility, Refreshment
Communication	Loudhailer, internet, Telephone
Location	**Hotel TAJ**: Grand ball room, ground floor

VII. Media Centre:

Circumscribed	Media Centre (MC) is activated after an accident/incident to disseminate information to the media.
Purpose	For providing continuous flow of authentic information to the media, so that the information is further disseminated to the general public on the status of the accident/incident.
Responsible for	In the event of any airport emergency involving an aircraft accident, the Media center will be activated by Duty Manager, Corporate Aviation Terminal. He shall assist the Media Management team and make arrangements for refreshment.
Control	Head-Corporate communication will control the responsibilities in consultation with affected Airline's representative.
Facilities	Air conditioning Room with seating arrangement, Drinking water, Washroom facility, and refreshment.
Communication	PA system, internet, telephone
Location	**GA Terminal,** Conference Room.

VIII. Casualty Collecting Area:

Circumscribed	Casualty Collecting area (CCA) will be established strategically at the accident site for initial classification of casualties.
Purpose	Before sending the casualties to triage area, initial classification of casualties is carried out at CCA to determine the order of priority and the mode of transportation required. If required, the casualties can be directly sent to transportation area to avoid delay.
Responsible for	Activation of CCA – In event of an accident/incident, the CCA will be activated by ARFF Team. It will be manned and established by Medical Team.
Control	The control of all operations at Casualty Collection Area and those associated with Medical Services shall vest with the MIAL Head-Medical services
Facilities	Stretchers, blankets, pillows, Medicines, medical equipment, triage equipment
Communication	RT 161.825 MHz, mobile phone
Location	**Accident Site** (Safe distance from the accident site).

IX. Transportation Area:

Circumscribed	Transportation area is established strategically at the accident site for control and accountability of vehicles to/from the accident site.
Purpose	As per requirement from the accident site, vehicles from the rendezvous point will be called at the transportation area and

	dispatched as per need of the situation. The purpose is to avoid traffic congestion and manage smooth flow of vehicles to/from the accident site.
Responsible for	In event of an accident/incident, the Transportation area will be activated by ARFF Team. It will be manned and established by Transportation Officer. The Rescue Stair in-charge will act as transportation officer on completion of his assigned duties. He shall coordinate with medical team in accounting and transportation of casualties to appropriate areas.
Control	Head – ARFF will control the responsibilities through Rescue Stair in-charge.
Facilities	Ambulances, display boards
Communication	RT 161.825 MHz, mobile phone.
Location	**Accident Site** (Safe distance from the accident site).

X. Rendezvous Point:

Circumscribed	A predetermined area where the responding agencies and personnel assemble.
Purpose	A predetermined area where the responding agencies and personnel assemble prior to being directed to the required area. The purpose is to avoid unnecessary congestion at the accident site by allowing only the resources demanded by the incident commander.
Responsible for	Airside safety department shall be responsible for activating the rendezvous point in case of an aircraft accident/incident.
Control	Head-Airside Management will control the responsibilities through Duty Manager-Apron in maintaining the RV point
Facilities	Air-conditioning porta cabin with seating arrangement, drinking water
Communication	RT 161.825 MHz, Mobile phone
Location	**Terminal 1,** Near Gate-1 Airside

XI. Temporary Morgues:

Circumscribed	A location where deceased passengers and crew members are kept temporarily.
Purpose	A location where deceased passengers and crew members are kept temporarily before being transferred to hospital for postmortem.

Responsible for	Head-Cargo Terminal is responsible through Duty Manager Cargo for activation and maintaining of Temporary Morgue in case of an aircraft accident/incident.
Control	Head Cargo will control the responsibilities through Duty Manager Cargo
Facilities	20 X 40 Feet two refer container maintaining with -4° temperature and lighting facility
Communication	Mobile phone
Location	**Cargo Terminal**

XII. Help Desk at Terminal:

Circumscribed	A location at landside of affected Terminal, where provision of facilitation for relatives of passengers and crew members are made.
Purpose	A location where relatives of passengers and crew members are identified and retained temporarily before being transferred to Meeters and Greeters area at Hotel TAJ.
Responsible for	Head- Terminal Management is responsible through Duty Manager of affected terminal for activation and up keeping of help desk in case of an aircraft accident/incident.
Control	Head- Terminal Management will control the responsibilities through Duty Terminal Manager and will make arrangements of transportation for relatives from help desk to Meeters and Greeters' area at Hotel -TAJ. Affected airline representative will identify the passenger's relatives at help desk and escort them to Meeters and Greeters' area at Hotel -TAJ.
Facilities	Help desk, loudhailer
Communication	Mobile phone
Location	**Terminal -2 Arrival** (for International Flight) **Terminal -1 Arrival** (for Domestic Flight)

Chapter 2: Medical Examination of Flight Crew members

Reference: - office of the director general of civil aviation (air safety directorate) circular no.6 OF 2010, (File No. AV-15011/2/2010 -AS)

This chapter deals with the humanitarian side of an Incident / Accident. It sets out the procedures to be followed to minimize suffering of victims but at the same time to meet the requirements of official investigation and the basic right to information. However, the injured crew and passengers who need immediate hospitalization must not be delayed for any formalities about the medical examinations as stated below.

1. Rescue Of Passengers, Crew And Others:

- Any aircraft incident/accident on airport ARFF, Medical services, CISF shall be responsible for removal of the person dead or alive from the wreckage.
- If any aircraft incident/accident take place at off airport, Mumbai Fire Brigade, NDRF and police shall be responsible for removal of the person dead or alive from the wreckage.
- Authorities shall initiate action even prior to arrival of the DGCA/AAIB:
  a) Extricate persons from the aircraft.
  b) Arrange for immediate First Aid and medical attention and hospitalization.
  c) Extinguish fire

2. Preservations Of Evidence During Rescue Of Passengers, Crew And Others:

- Whilst rescuing the injured flight crew members, their identification and location in or around the aircraft must be carefully observed and recorded.
- In the event of flight crew members being found dead, the necessary photographs must be taken prior to the removal. The removal action should be such as, which cause minimum disturbance to the aircraft wreckage/parts and any such disturbance should be fully recorded.
- The location of the passengers alive or dead should be recorded immediately during rescue/removal operation. However, removal of the injured to the nearest hospital must not be delayed for completion of formalities with regard to the recording as stated above.
- Removal of the person dead or alive from the wreckage is the responsibility of Fire Fighting Services as in any other accident.

3. On Airport Aircraft Accident Procedures for Flight and Cabin Crew:

3.1 Priority -1 - injured (immediate hospitalization required):

- All injured flight and cabin crew shall immediately transfer to nearest hospital for further treatment as directed by medical officer.
- Hospitals shall be responsible for collection of blood, urine samples of flight crew members for checking the consumption of alcohol, without any loss of time.

- Hospital shall be responsible for preservation of medical examination samples and hand over to the DGCA/AAIB for detailed laboratory examination.
- Hospitals shall register every received patient as Medical Legal Case (MLC) as per defined procedure and will inform to area police station.
- The Police authorities and affected airline shall ensure that the samples of blood, urine etc. are taken at the hospital without fail and hand over to DGCA/AAIB.
- All crew shall be released from hospital after clearance from police and DGCA.

3.2 Priority -2 – injured (delayed care, may require hospitalization or treatment in casualty center):

- If hospitalization recommended, all process shall be followed as specify for priority-1 crew.
- All flight and cabin crew shall immediately transfer to casualty center for further treatment as directed by medical officer.
- Medical team of casualty center shall collect the urine and blood samples of flight crew members for checking the consumption of alcohol, in presence of CISF/Police and affected airline representative.
- The sample should be suitably preserved and handed over to DGCA/AAIB with detailed laboratory examination report.
- All crew shall be released after clearance from police and DGCA.

3.3 Priority -3 uninjured and minor injured (only first aid required):

- All cabin crew shall immediately transfer to crew holding area for further procedure and first aid treatment.
- Flight crew members shall immediately transfer under the escort of CISF to casualty center for collection of urine and blood samples for laboratory test.
- Medical team of casualty center shall collect the urine and blood samples of flight crew members for checking the consumption of alcohol, in presence of CISF/Police and affected airline representative.
- The sample should be suitably preserved and handed over to the DGCA/AAIB with detailed laboratory examination report.
- All crew shall be released after clearance from police and DGCA.

3.4 Priority -4 Deceased Flight and cabin Crew Members:

Do not judge any passengers/crew as dead, till a declaration is made by medical officer. Tagging should be done immediately as they may be in need of immediate medical care and not actually dead.

- In the event of death of the crew members, the Police authorities shall ensure that the bodies are subjected to detailed postmortem examination immediately to ascertain the precise cause of death including the presence of extent of alcohol, drugs, carbon monoxide etc. in the system.

- The blood, urine and the viscera of the dead should be properly preserved by the doctor carrying out the postmortem examination for further detailed chemical analysis.
- No bodies of the dead crew members especially of flight crew members are to be released even after the postmortem examination has been completed, by the Police authorities or any other authority.
- The DGCA/AAIB investigator In charge/the Civil Aviation Department Headquarters (Director Air Safety) is the only authorized Officer(s) to issue instructions for the release of dead bodies of crew.

4. On Airport Aircraft Accident Procedures for Passengers

4.1 Priority -1 - injured (immediate hospitalization required):

- All Injured passengers shall immediately transfer to nearest hospital for further treatment as directed by medical officer.
- Hospitals shall register every received patient as Medical Legal Case (MLC) as per defined procedure and will inform to area police station.
- All passengers shall be released from hospital after clearance from police and DGCA.

4.2 Priority -2 – injured (delayed care, may be hospitalization required or treatment required in casualty center):

- If hospitalization recommended, all process shall be followed as specified for priority-1 passengers.
- All passengers shall immediately transfer to casualty center for further treatment as directed by medical officer.
- If possible, passengers shall be transferred to SRA for further procedure.
- All passengers shall be released after general clearance from police and DGCA and completion of immigration and custom procedure (in case of international flights).

4.3 Priority -3 uninjured/minor injured (requiring first aid only):

- All passengers shall immediately transfer to SRA for further procedure and first aid treatment if any.
- All passengers shall be released after general clearance from police and DGCA and completion of immigration and custom procedure (in case of international flights).

4.4 Priority -4 Deceased passengers:

- All passengers on board the aircraft who received fatal injury would be subjected to post-mortem examination indicating the nature and extent of injury as well as cause of death with special reference to carbon mono-oxide.
- However, this requirement may be waived off by Inspector of Accident/Investigator, DGCA, AAIB, In-charge of Civil Aviation Department Headquarters (Director of Air Safety) if the nature of accident so warrants.

- After the requirements of DGCA have been complied with, the Police authorities may dispose of the dead bodies of passengers in accordance with their procedures and in consultation with Airlines/operator/owner (of the aircraft) concerned.

5. Off Airport Aircraft Accident Procedures for Passengers and Crew:

- MGGM-Disaster Management Department, Mumbai fire brigade and Mumbai police shall be responsible to initiate rescue work, first aid treatment and hospitalization of survivals.
- Both the agencies shall follow the circular of - office of the director general of civil aviation (air safety directorate) circular no.6 of 2010, (File no. AV-15011/2/2010 - AS) to carry out the process at accident site.

Chapter 3: Media Management and Photography at Accident Site

1. Media Management:

The MIAL Corporate Communications Department has a well-defined Media Handling Plan in place. The Media Handling Plan is automatically activated when the following emergency responses are activated or as felt necessary by Head Corporate Communication:

2. Activation of Media Plan:

Accident on Airport:

- Accident off airport where CSMIA is Airport of origin or where the destination was CSMIA.
- Unlawful Seizure
- Bomb Explosion
- Major Fire at Airport
- Dangerous Goods Accident leading to mass destruction at CSMIA.
- Natural Disaster leading to mass destruction at CSMIA.

3. Press or Media Centre:

A Media Centre will be established to provide up-to-date information of the incident. The Head of Operations together with the Head Corporate Communications are the authorized spokespersons, who will provide press releases and conduct press briefings in conjunction with the affected airline and other regulatory bodies functioning at the airport.

4. Photography- Video shooting of accident site:

- Photography and video recording of accident sites should be done in accordance with Rule 7 (2) (a) of the Aircraft (Investigation of Accidents and Incidents) Rules, 2012 and Para 3.2 of the DGCA Air Safety Circular 4 of 2013. The official photographer of MIAL or any photographer authorized by MIAL, shall only be permitted to undertake photography / videography of the accident site.
- The photographer shall also give an undertaking to maintain the secrecy of the film. All charges relating to photography and videography shall be borne by the affected airline.

5. Termination/Stand down:

Media Centre is deactivated / terminated by the Chairman AECC in consultation with the State Police and the affected airline following an assessment of the media interest in recovery operations.

Chapter 4: Temporary Airport Entry Permit for Emergency Responders.

1. Purpose

The purpose of this chapter is to define the procedures to be followed by MIAL & CISF staff for enabling expeditious entry of External Emergency Responders to the airside at times of emergency.

2. Scope

The scope of the chapter applies to the Aircraft incident/accident taking place at CSMI Airport. These procedures will be applicable to MIAL, CISF and the external responding agencies reporting at CSMIA during aircraft incident/accident for assisting MIAL in mitigating the effects of aircraft incident/accident.

3. Objective

The objective of this chapter is to ensure expeditious entry of external emergency responders to the airside to support MIAL in responding to aircraft incidents/accidents.

4. Issuances of "Temporary Airport Entry Permit" During Emergency

MIAL Security (pass section) will issue "**Temporary** Airport Entry Permit" as per BCAS guidelines at airport entry gate no. 1, 5 and MIAL T2 pass section only.

Temporary Airport Entry Permit shall have access to all the areas activated during emergency.

Contact details for MIAL AEP Section for issuance of "Temporary Airport Entry Permit" during emergency only.

- Gate No. 1 : 022 26264734/26264634 - CISF
- Gate No. 5 : 022 66851075 - CISF
- T1 AEP Section :022 66851000
- T2 AEP Section : 022 66851325/1327/1328
- Security JCC :022 66852525/022 66852505

4.1 Process for issuance of Temporary Airport Entry Permit in case of an emergency–

4.1.1 City fire Services:

On receipt of information regarding any incident/accident, CISF at gate no 1 & 5 will allow direct entry to City fire brigade vehicles under the escort of Follow Me vehicle.

4.1.2 Panel Hospitals, Ambulance Services and Doctors as per AERP:

MIAL security will issue Temporary Airport Entry Permit at gate no. 1 & 5.
All medical responders shall be issued TAEP on exchange of valid Govt. ID i.e., Aadhar Card /PAN Card /Voter ID/Driving License.

4.1.3 Affected Airline Responders:

Indian Nationality – MIAL security will issue Temporary Airport Entry Permit at T1 and T2 pass section for airline emergency responders after authentication by representative of affected Airline holding valid AEP.

Foreign Nationality – MIAL security will issue Temporary Airport Entry Permit at T1 and T2 pass section on exchange of valid passport for airline emergency responders after authentication by representative of affected Airline holding valid AEP. (Original valid passport will be kept with MIAL- security until TAEP handed over to pass section)

4.1.4 Other Emergency Responders:

MIAL security will issue Temporary Airport Entry Permit at T1 and T2 pass section for any other emergency responders after authentication/ telephonic permission from Chairman – AECC or his representative.

5. Responsibility

5.1 Head-Security, MIAL:

- Overall responsibility of ensuring compliance with the procedures laid down in this chapter for expeditious entry of emergency responders during incidents/accidents at CSI Airport.
- Responsible for issuance of Temporary Airport Entry Permit to the emergency responders to ensure their expeditious entry to the airside during incident/accident at CSMIA through MIAL Security pass section Personnel.
- Responsible to ensure smooth flow of vehicular traffic at the landside and to ensure that landside areas in front of the entry gates (Gate No. 1 & 5) are free of obstructions

5.2 Head-CISF:

Overall responsibility to facilitate the expeditious entry of external emergency responders to the airside during Aircraft incident/accident at CSMIA.

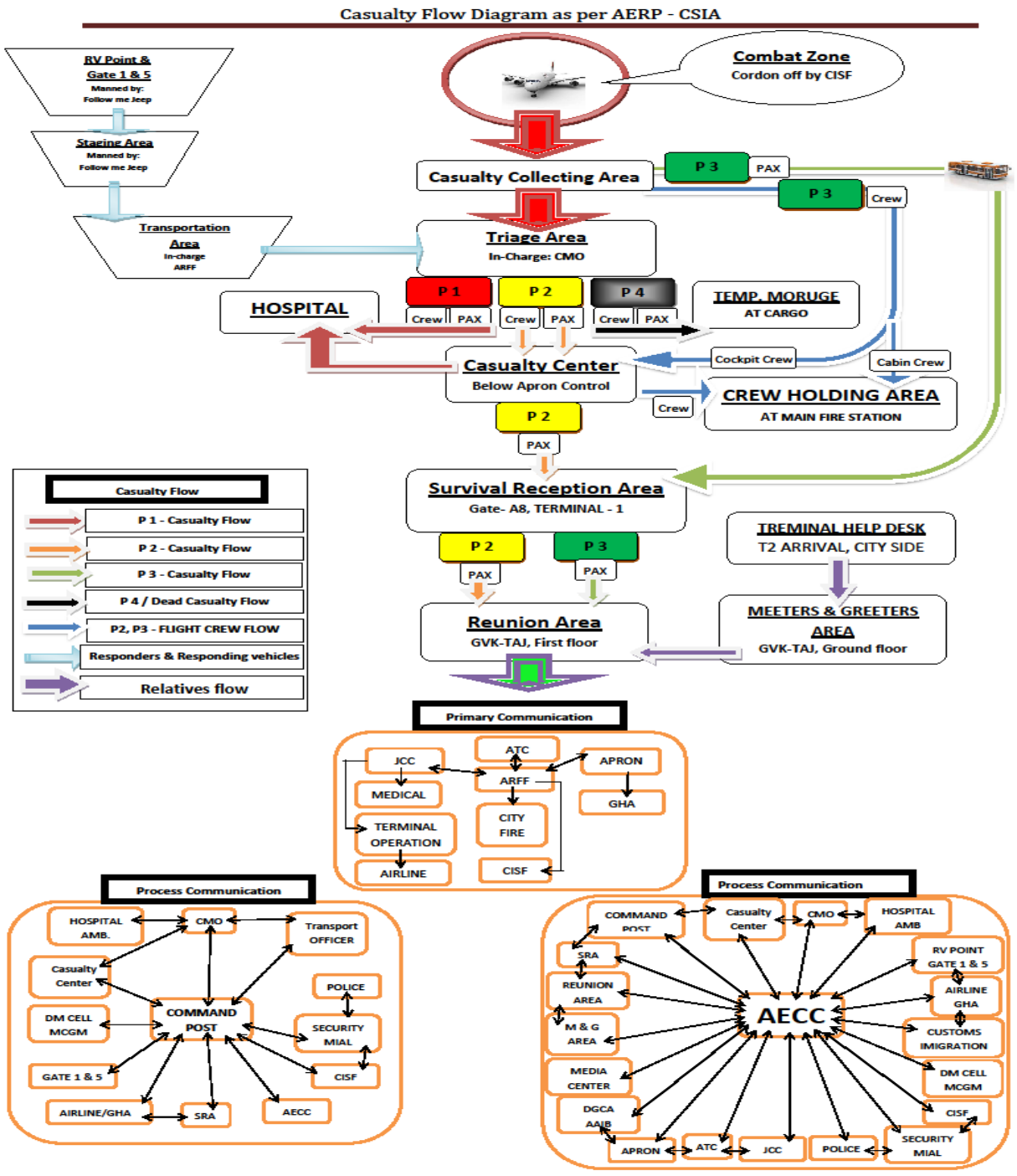
5.3 Head-Medical Services, MIAL:

Responsible to provide updated/ revised list of panel Hospitals, Ambulance Services and Doctors to MIAL Security & Chairman -AECC.

6. Procedure

- In case of an aircraft incident/accident at CSI Airport, MIAL through ARFF, Apron Control & JCC shall inform all concern agencies determined as per notification chart.
- On receipt of incident/ accident information, SOCC will ensure that all CISF check posts including Gate No. 1 & 5 are intimated about the Aircraft incident/accident.
- On receipt of incident/ accident, Gate No. 1 & 5 CISF in-charge allow direct entry for Mumbai fire brigade vehicles, along with conformation of escorting with follow-me jeep at airside.
- MIAL security shall send representatives at gate No. 1 & gate No. 5 for issuance of Temporary Airport Entry Permits to external emergency responders.
- Temporary Airport Entry Permits will be issued to External Emergency Responders according to defined process.
- While issuance of Temporary Airport Entry Permits, MIAL Security shall brief the external emergency responders to return the permits during their exit to the CISF personnel posted at respective Airport gate. However, returning of such TAEP will be the responsibility of concern agencies.
- CISF shall ensure that the emergency responding vehicles/personnel other than Mumbai Fire Brigade are permitted entry to the airside through gates 1 and 5 based on the Temporary Airport Entry Permits issued to them by MIAL security department.
- On receipt of information, the external emergency responders, taking into consideration of their response time, shall report to gate No. 1 or Gate no. 5. CISF staff at respective gates shall direct emergency responders without passes to MIAL-Security desk at gates for obtaining their TAEP.

Chapter 5: Emergency Response Flowchart



Part-3: General Information

Chapter 1: CSMIA Emergency Exercises

Periodic emergency exercises and Modular tests shall be conducted at CSMIA in order to ensure the adequacy and the effectiveness of the AERP and the action by individual participating agencies/organizations. The exercises/tests shall be conducted in accordance with the requirements laid down in DGCA, CAR, Section 4, series B, Part 1.

The Exercises shall be conducted on the following schedule:

6.1 Full-Scale Exercise -At least once every two years.

6.2 Partial Exercise - At least once every year that a full-scale exercise is not held or as required to maintain proficiency.

6.3 Modular Tests – As detailed below:

Sr. No	Modular Test	Test Parameters	Objective
1.	**ARFF Response to aircraft incident / accident**	**1.** PPE & TOG donning time by ARFF crew. **2.** Station Turn out time. **3.** CFT acceleration check. **4.** Familiarization of ARFF crew with the topography of movement area.	The objective of this test is to ensure that ARFF team meets its stipulated response time.
2.	**Triage Area set up & establishment of FCP**	**1.** Familiarization of ARFF crew with the procedure involved in inflation of Tents. **2.** Time taken in inflating the tent. **3.** Time taken to activate all components of FCP.	The objective of this test is to ensure that ARFF team is familiar with the procedure involved in timely setting up of triage and establishment of FCP.
3.	**Strategic planning for Rescue &firefighting operation.**	**1.** Evaluation of the situation. **2.** Positioning of CFT's. **3.** Protection of egress route to facilitate self-evacuation. **4.** Fire Fighting operation using monitor and side lines.	The objective of this test is to ensure that ARFF crew are well versed with: • The hazards associated with specific incident/ accident. • Skills required in initiating Rescue & firefighting operations.
4.	**Tabletop exercise**	1. Familiarization of all concerned departments /agencies with their roles as defined in AERP. 2. Effectiveness of Communication	The objective of this test is to ensure that of all concerned departments/agencies are familiar with their roles as defined in AERP.

6.4 **Radiological emergency mock exercise as per DG-BCAS circular**: once in every year

6.5 The emergency exercises must be coordinated by MIAL ARFF and involve all the operational units of MIAL, Airline/ Ground Handlers, AAI, CISF, DGCA, BCAS, Police, Customs, Immigrations, Medical Services, Municipal Corporation units and other supporting agencies. The planning, notification and the post exercise processes to be followed are detailed in a separate SOP i.e., Planning and Notification of Emergency Exercises, MIAL/AO-ARFF/SOP/03.

Review of the emergency exercises must be conducted after each exercise so as to identify deficiencies/ weakness and to ascertain improvement measures

Chapter -2: Human Factors Principles for Aerodrome Emergency Response Plan

The Para 9.1.6 of Civil Aviation Requirement Section 4, Series B, Part I mandates the aerodrome operators to observe the human factors principles for Aerodrome Emergency Plan at all aerodromes in India. With Reference to the CAR and subsequently issued Aerodrome Advisory Circular No. 1 of 2017 by Government of India, Office of Director General of Civil Aviation, this chapter determines the human factor principles applied during preparation of this plan and implementation of the same, in order to ensure that concerned personnel are conversant with the application of human factors.

1. Human Factors

The subject of human factors is about people. It is about people in their working and living environments. It is about their relationship with equipment, procedures and the environment. Just as importantly, it is about their relationships with other people. Human Factors involve the overall performance of human beings within the aviation system; it seeks to optimize people's performance through the systematic application of the human factors. Its twin objectives can be seen as safety & efficiency and well-being of operational personnel.

Human Factors are essentially a multidisciplinary field, including but not limited to; psychology, engineering, physiology, sociology, and anthropometry. Indeed, it is a multidisciplinary nature which overlapping fundamental disciplines that make a comprehensive definition of Human Factors challenging.

2. The SHEL Model

The SHEL model provides a conceptual framework which help to understand Human Factors. It illustrates the various constituents and the interfaces - or points of interaction - which comprise the subject. Human Factors elements can be divided into four basic conceptual categories:

a) **Software**: plans, procedures, documentation etc.

b) **Hardware**: machine, equipment, etc.

c) **Environment**: internal (e.g., workplace), external (e.g., surroundings) etc.

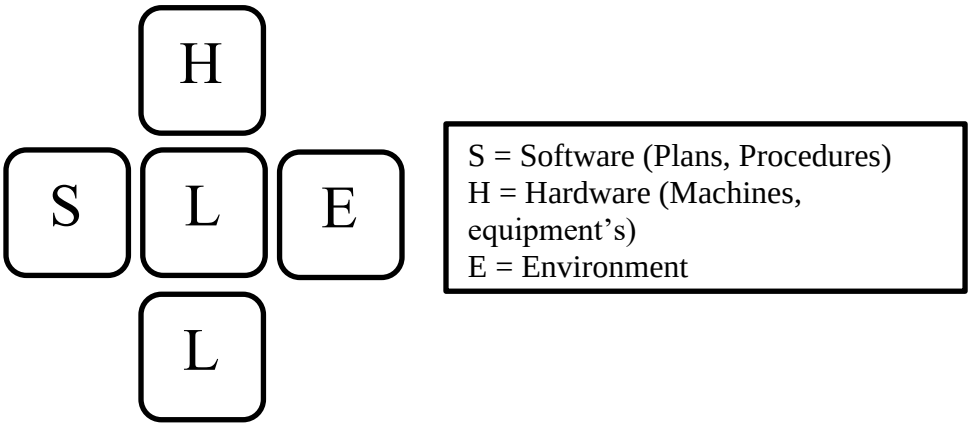
d) **Live ware**: the human factor

Interactions between people and the other elements of the SHEL model are at the heart of Human Factors, which involves the interfaces between:

a) People and machines - "Live ware vs. Hardware"

b) People and procedures - "Live ware vs. Software"
c) People and colleagues - "Live ware vs. Live ware"

d) People and workplace - "Live ware vs. Environment"



3. The Need For Human Factors In Aerodrome Emergency Planning

The overall safety and efficiency of the civil aviation system depends on human operators as the ultimate integrators of the numerous system-elements. This dependence is unlikely to decrease, and may even increase in unanticipated ways, as additional advanced technology is implemented. To a greater extent, understanding and accounting for the role of humans, including their positive and negative contributions, will be important in maintaining and improving safety while improving efficiency.

The human sciences study the structure and nature of human beings, their capabilities and limitations, and their behaviors both singly and in groups. Human Factors uses this information based on its relevance to practical problems.

Emergency planning being the process of preparing the aerodrome to cope with an emergency with the objective of minimizing its effect particularly in respect of saving lives and maintaining aircraft operation, implementation of human factors principles becomes an integral part of it.

4. Application of Human Factors Principles:

The Human Factors Principles that are taken into account while developing procedure and guidelines for Aerodrome Emergency Response Plan can be classified into two broad pillars as follows:

a. Operational effectiveness and standards of ARFF services.
b. Safety and well-being of ARFF services personnel.

5. Operational effectiveness and standards of ARFF services:

Following measures have been adopted to achieve desired operational effectiveness and standards of ARFF services:

- As the success of any ARFF services rely very much on teamwork, the importance of building mutual trust and team coordination amongst staff during training cannot be overstressed **(Live ware vs. Live ware).**

- In order to achieve this objective, the ARFF training module has been designed in such a way that it incorporates activities that require team co-ordination to achieve its goals. Drills such as tactical and strategic planning require ARFF crew to demonstrate good teamwork to achieve their objective.

- In order for ARFF training to be as realistic as possible, live fire training is crucial in helping ARFF personnel acclimatize to a heat and smoke-filled environment **(Live ware vs. Environment),** so that in the event of an actual emergency, ARFF personnel will be able to execute their tasks more confidently and effectively.

- Hot fire drills on monthly basis and smoke Chamber drill at regular intervals are conducted to check the efficiency and efficacy of ARFF crew and to accustom them to a heat and smoke-filled environment respectively.

- ARFF operations require firefighting personnel to be proficient in the operation of fire vehicles and other rescue equipment **(Live ware vs. Hardware).** This is crucial as it would enable the ARFF service to control any aircraft fires swiftly and effectively and facilitate the evacuation and rescue of survivors.

- The Crash Fire tenders (CFT) available with ARFF services has been designed taking into account of the human character and intuition of the vehicle operator. In order to optimize human performance during training and operations, sufficient emphasis has been laid on the design ergonomics of CFT's during the pre-fabrication stage.

- In addition, a CFT Driving Certification program has been designed which requires an ARFF official to undergo specific hours of training on CFT to be eligible for driving Certification. Important parameters such as technical knowledge, Operational familiarization and driving skills are considered during certification process which plays an important role in inducing confidence of the ARFF crew while driving CFT's.

- The design of fire stations is another important factor that could affect the human performance of ARFF personnel when responding to aircraft accidents or incidents **(Live ware vs. Environment).**

- Both the fire stations available at CSMIA, including Main fire station and the satellite station (Sub fire station) are designed in such a manner so as to reduce the travel distance required to reach the CFT's, and subsequently facilitate to meet the stipulated response time in the event of an aircraft emergency.

- Communication is possibly the most important human factor in ARFF operations **(Live ware vs. Hardware and Live ware vs. Live ware)**. Operational readiness and

safety standards will be compromised without effective communication amongst ARFF personnel, air traffic control and pilots.

- In order to ensure seamless communication amongst ARFF personnel, with air traffic control, pilots, and other relevant departments, ARFF services have been provided with three channels of VHF Radio Telephony facilities in the form of 161.825, 121.9/121.75 & 118.1 (Mhz.) or TMRS communication facilities to facilitate intra department as well as inter department communication. In order to avoid delay in communication, the ARFF service has a direct hotline with ATC and a crash bell to alert the services immediately. As a local mode of communication, the MFS is provided with a Public Announcement system to alert the crew and pass on important information's. In addition, the ARFF training programs, which are conducted at regular intervals, incorporate necessary components to ensure the ARFF crew are well versed with the utilization of the communication facilities and are appropriately trained in accurate and timely transmission of information.

- It is important for ARFF personnel to be well acquainted with the different configurations of various aircraft types operating at the particular aerodrome **(Live ware vs. Hardware)**. Boosting the knowledge of ARFF personnel in these areas would indirectly enhance human performance during a response to any aircraft emergency.

- In this view ARFF training program includes familiarization of Aircraft at regular intervals with special emphasis on type of Aircrafts that are new at the Airport.

- The ARFF industry is a highly specialized one which compels the management and leadership team of ARFF services to promulgate a system of self-evaluation.

- At CSMIA, the evaluation process of ARFF involves individual performance as well as performance of the overall team. Various individual drills are carried out to check the performance of an individual and a tactical drill is conducted wherein coordinated efforts of team is essential to achieve better results. Physical efficiency of an individual is evaluated under the guidance of a professional and results are utilized to bring in positive changes. Such drills/tests not only include the ratings and revalidation of individual standards but place heavy emphasis on the collective performance of ARFF department as a team **(Live ware vs. Live ware).**

- Strategic planning drills are conducted wherein unforeseen situations are injected to highlight human reactions to such circumstances which are further used to modify and improve training programs in order to enhance human performance during ARFF operations.

6. Safety and well-being of ARFF services personnel:

- In the aftermath of an aircraft accident, it is often necessary to provide psychological treatment for the survivors. However, airport operators and ARFF services must also not neglect the mental and psychological well-being of emergency responders such as ARFF personnel who may suffer from post-traumatic stress disorders. Appropriate counseling of psychological therapy may need to be provided to ARFF personnel who responded to such emergencies and who subsequently not able to cope with the stress they face thereafter. Such situations may arise from the shocking sight of a crash scene that made them not being able to carry on with their normal lives.

- It will therefore be essential to provide psychological treatment for ARFF personnel after a major crisis **(Live ware vs. Live ware)** both from a welfare perspective and also from a business continuity standpoint. Taking into consideration the post-traumatic stress disorders that the emergency responders may suffer, and to ensure their mental and psychological well-being, MIAL has entered into memorandum of understanding with hospitals in near vicinity of Airport, to provide Psychiatric, doctors and other required medical resources in a timely manner. The arrangement also takes care of the medical resources required to handle the overall operations.

- The job nature of ARFF personnel poses numerous potential hazards **(Live ware vs. Environment).** The risk of inhalation of carbon or smoke particles when extinguishing a fire, either during an incident or during training, is very high. In order to ensure personal safety, all ARFF officials have been provided with individual personal protective equipment (PPE) which includes overall suit, helmet, hand gloves and safety boots. Sufficient number of self-containing breathing apparatus (SCBA) have been made available in CFT's to meet any situational demand. In addition to it, the uniform worn by ARFF personnel has been designed to suit the local climatic conditions.

- To ensure that ARFF personnel are able to perform their roles effectively, they need to be involved into designing appropriate physical fitness program to prepare them for the physical difficulties of the job **(Live ware vs. Environment).** In the process of designing the annual based Endurance test program for ARFF crew at MIAL, due considerations have been given to individual human limitations. Considering the fact that not all personnel can perform at the same level, the endurance test program replicates minimum physical fitness requirements of a fire fighter. In addition to this, recreational programs are organized at regular intervals which include sports and cultural activities to take care of the physical as well as the mental stress.

- Noise is an important human factor **(Live ware vs. Environment)** that is omnipresent in an airport environment and cannot be ignored. Most fire stations are located within close proximity of the runway and aircraft movement areas, thus exposing ARFF personnel to constant loud noises. To address this issue, all officials of ARFF services have been issued with suitable hearing protection devices with a mandate

to use the same. In addition, ARFF personnel are required to undergo Medical examinations which include noise induced deafness (NID) hearing tests.

- Fatigue is one important factor that directly affects human performance and is greatly influenced by the shift system of ARFF services **(Live ware vs. Software).** In compliance to the Local Labour rules and despite the need to be on 24-hour operational readiness, the duty pattern of ARFF officials has been designed in such a manner that it allows sufficient rest period to the official between two shifts. In addition, if rest becomes inevitable during working hours, rest rooms with adequate facilities have been provided to ARFF services.

- A leader is an individual whose ideas and actions influence the thought and behavior of others **(Live ware vs. Live ware).** Through the use of motivation and persuasion, and an understanding of the goals and desires of the team, the leader becomes an agent of change and influence. Considering the fact that skilled leadership may be needed to understand and handle various operational, training, and administrative aspects, the ARFF Training Module includes various advanced courses that are conducted externally at DGCA recognized Training institutes and which are mandatory for the ARFF officials to clear in order to attend higher position in the department.

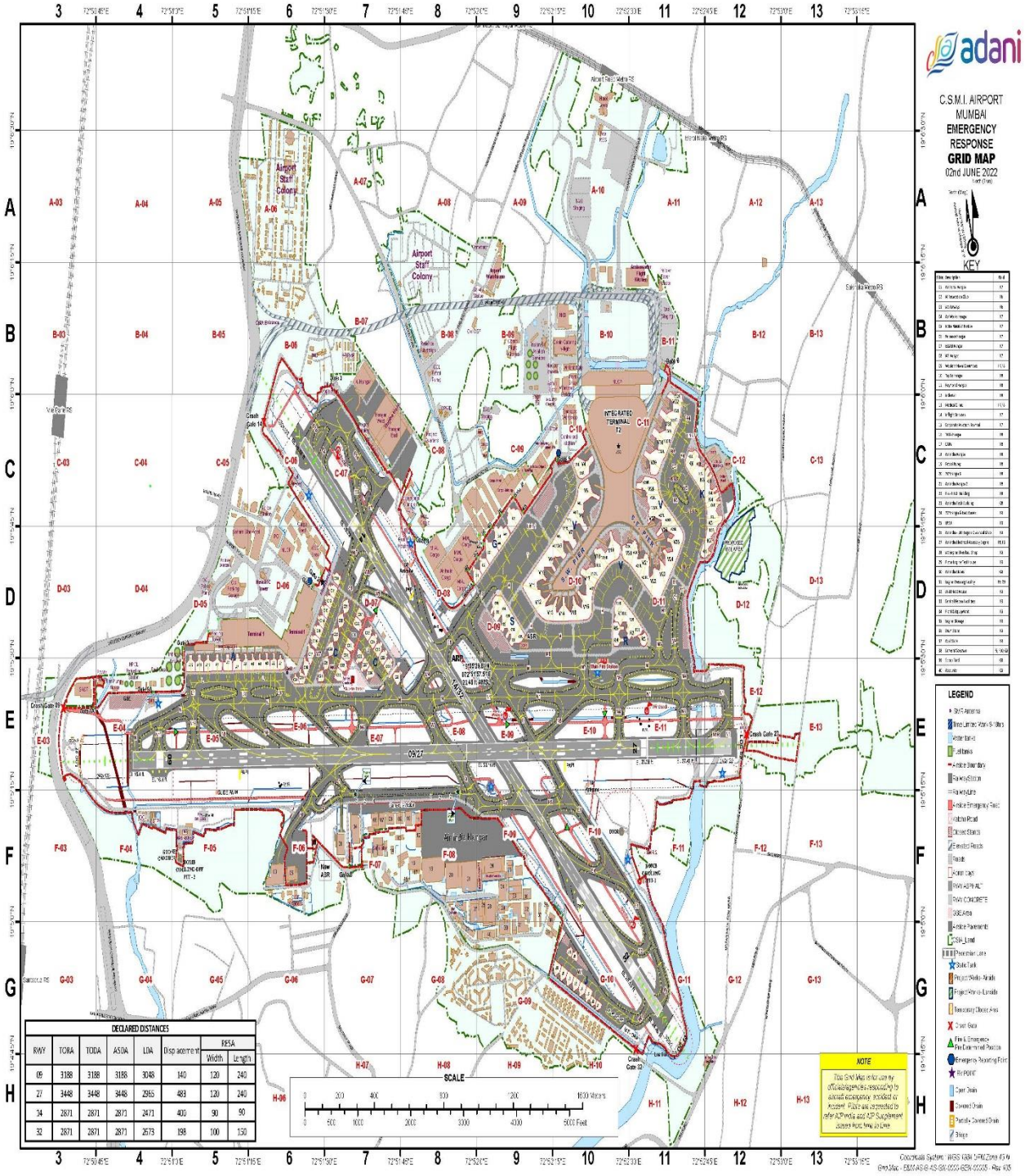
Chapter 3 :RT Call Signs

Sl. No	DESIGNATION	CALL SIGN
1	Director- Operations	ALFA DELTA
2	Head- Airside Management	ALFA VICTOR
3	AECC	ECHO CHARLIE
4	Apron Control	ALPHA CHARLIE
5	Duty Manager Airside Safety	SIERRA MIKE
6	Asst. Manager Airside Safety 1 Or 2	SIERRA ALFA 1 OR 2
7	Safety Officer - Airside Safety	SIERRA OSCAR
8	Follow Me Jeep 1, 2....	FOLLOW ME 1, 2 ...
9	Airside Works Safety	WHISKY SIERRA
10	Wildlife Vehicle	WHISKY LIMA
11	Manager Airside Maintenance	MIKE MIKE
12	Airside Cleaning Supervisor	MIKE CHARLIE
13	Airside Maintenance Supervisor	MIKE SEIRRA
14	Operational Jeep	OSCAR JULIET
15	Head ARFF	FOXTROT GOLF
16	Sr. Manager, ARFF	FOXTROT SIERRA
17	Duty Manager, ARFF	FOXTROT MIKE
18	Fire Watch Tower	FOXTROT WHISKY
19	Main Fire Control	FOXTROT FOXTROT
20	Fire Control Room 1C	FOXTROT CHARLIE 1
21	Fire Control Room CCX	FOXTROT CHARLIE 2
22	Fire Control Room Import Warehouse	FOXTROT CHARLIE 3
23	Crash Fire Tender-1, 2....	FOXTROT TANGO 1, 2....
24	Forward Command Post	FOXTROT CHARLIE PAPA
25	Rescue Stair	FOXTROT ROMEO
26	Small Fire Tender- 1,2	FOXTROT SIERRA TANGO
27	Water Tender	WHISKY TANGO
28	Ambulance -1, 2...	ALFA BRAVO 1, 2...
29	Fire Jeep	FOXTROT BRAVO
30	Pick Up 1, 2...	FOXTROT UNIFORM 1, 2...
31	Fire Prevention Officer	FOXTROT PAPA OSCAR
32	CACF Room (Fire Control Room T -2)	FOXTROT PAPA
33	Fire Prevention Operator At Level 1, 2....	FOXTROT PAPA 1, 2...
34	JCC	OSCAR CHARLIE
35	Head, Medical Services	CHARLIE MIKE OSCAR
36	Medical Officer 1	MIKE OSCAR 1
37	Medical Officer, SW Pier, T2	MIKE OSCAR 2
38	Medical Officer SE Pier, T2	MIKE OSCAR 3
39	Medical Officer Level 4, T2	MIKE OSCAR 4
40	Shift Engineer CCR	CHARLIE CHARLIE

41	CCR 1	CHARLIE CHARLIE ONE
42	CCR 2	CHARLIE CHARLIE TWO
43	CCR Jeep	CHARLIE CHARLIE JULIET
44	Head Terminal Operations	TANGO VICTOR
45	General Manager Terminal (1)	TANGO GOLF (1)
46	DGM Terminal 1&2	TANGO DELTA 1,2
47	Duty Terminal Manager – Terminal 1	TANGO MIKE 1
48	Duty Terminal Manager – Terminal 2	TANGO MIKE 2
49	Terminal Officer Int. (Arrival/ Dep.)	TANGO OSCAR 2 (ALPHA/ DELTA)
50	Head Landside Operation	LIMA GOLF
51	DGM Landside Operations	LIMA DELTA
52	JCC Landside Operations	LIMA CHARLIE
53	Shift Manager Landside Operations	LIMA MIKE
54	Duty Landside Manager Terminal 1	LIMA MIKE 1
55	Duty Landside Manager Terminal 2, Departure	LIMA MIKE 2 DELTA
56	Duty Landside Manager Terminal 2, Arrival	LIMA MIKE 2 ALPHA
57	Head – Airside Safety	SIERRA DELTA

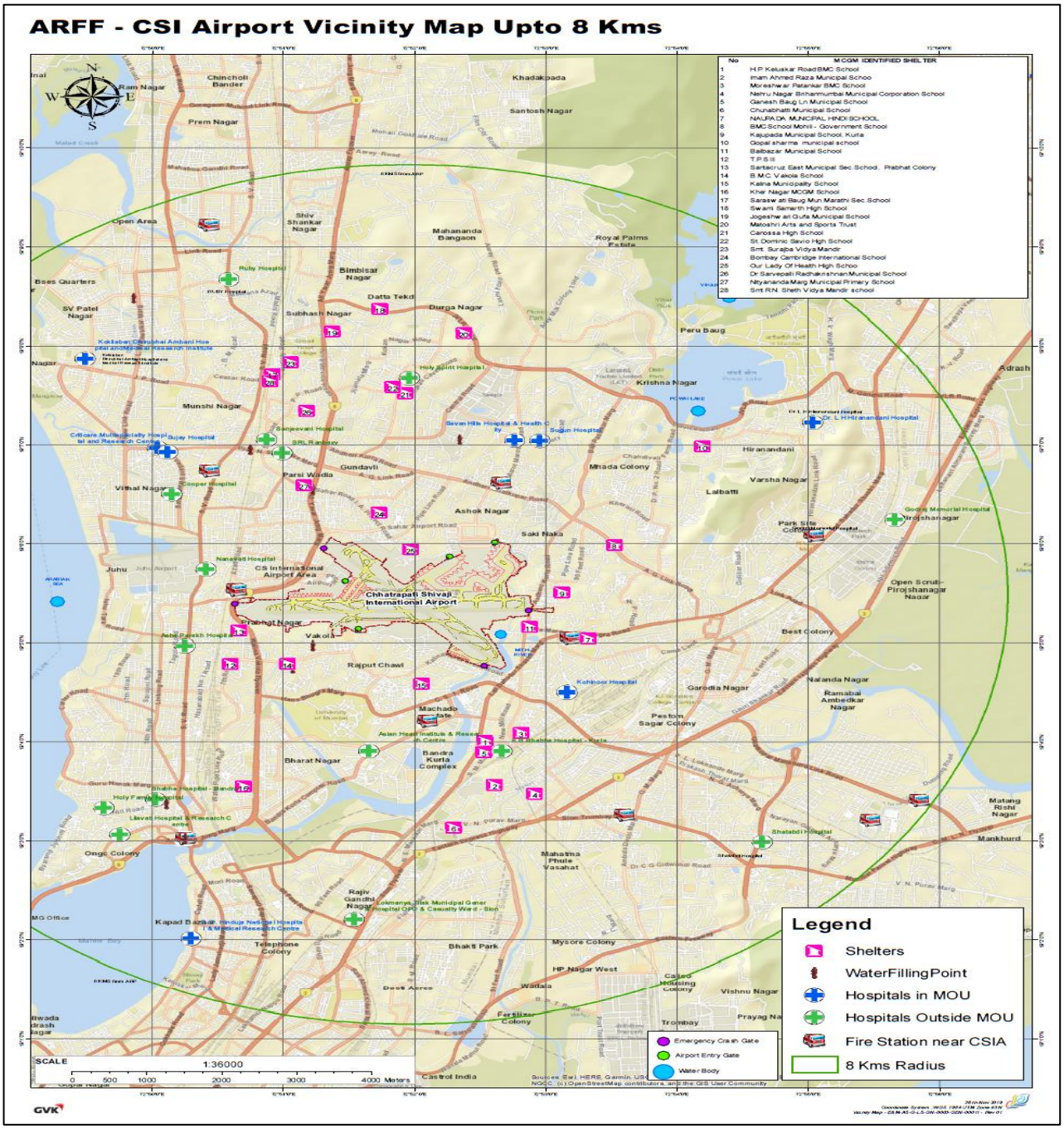
Part 4: Appendices

APPENDIX 1: CSMIA - Grid Map (Refer updated Grid map)



Refer Updated Grid Map

APPENDIX 2 : Vicinity Map



APPENDIX 3 :Accountability Matrix For Activation Of Emergency Co-Ordination Centers And Response Of Designated Authorities

Particular	Minimum Activation/ Response Time	Responsible	Contact No.	Location
ARFF				
Forward Command Post	10 minutes	ARFF	9920682101	Accident site
Triage Setup	20 minutes	ARFF	9920682101	Accident site
Flight Crew Holding Area	15 minutes	ARFF	66850267	Main Fire Station Classroom at 1st floor
Designated Transportation Officer	30 minutes	ARFF Rescue Stair vehicle in-charge	9920682101	Accident site
Designated on Scene Commander	45 minutes	Head – ARFF	9930670964	N/A
Medical				
Medical Team at Accident Site	10 minutes	Medical	9833301322	Accident site
Casualty Center	15 minutes	Medical	9833301317	Below Apron Control
Designated Medical Officer	45 minutes	Head – Medical	9167213701	N/A
Apron Control				
Rendezvous Point	10 minutes	Apron Control	0226725602	Gate No. 1 Airside
Escort at Gate 1 & Gate 5	10 minutes	Apron Control	02226264444	Gate no-1 & 5
Terminal Operations				
Survival Reception Area	20 minutes	Terminal Operation - 1	9833301321	Terminal – 1, Boarding Gate -29 to 31
AECC	20 minutes	Terminal Operation - 1	9833301321	Terminal – 1, 2nd floor
Helpdesk for passengers friends and relatives at T2 Arrival	30 minutes	Terminal Operation - 2	9833301319	T-2 Landside Arrival(International Flight)

				T-1 Landside Arrival(Domestic Flight)
Meeters and Greeters Area	45 minutes	Terminal Operation - 1	9833301321	GVK TAJ Hotel, Grand ball Room ground floor
Reunion Area	45 minutes	Terminal Operation - 1	9833301321	GVK TAJ Hotel, meeting rooms at 1st floor
Immigration Counters at SRA	60 minutes	Terminal Operation - 1	9833301321	Terminal – 1, Boarding Gate -29 to 31
Designated Passenger and Family Co-coordinator	45 minutes	Head – Terminal Operations	9833301536	N/A
Designated AECC Chairman	45 minutes	Head – Airside Management	9930144191	N/A
Corporate communications				
Media Center	90 minutes	Corporate Communications	9582944202	CA terminal, Conference Room
Designated Media Center Co-coordinator	45 minutes	Head – Corporate Communications	9582944202	N/A
Cargo Operations				
Temporary Morgue	120 minutes	Cargo Operations	9167213667	Cargo Building
Designated DGR Experts	45 minutes	Cargo Operations	9967654411	N/A
Safety Team				
Designated Safety coordinator	45 minutes	Safety Department	9029266499	N/A
Security – MIAL				
TAEP Passes issuance at gate – 1 & 5	15 minutes	Security - MIAL	9930144240	N/A
CISF				
CISF QRT Team	10 minutes	CISF	66851290 / 66851298	Accident site
CISF Add. Support Team	30 minutes	CISF	66851290 / 66851298	Accident site

APPENDIX 4: Contact Numbers of MIAL Responding Officials / Department

Contact Details mentioned in Appendix 4 to 13 shall be checked/updated once in every six month of a Calendar year and circulated to all concern as a soft copy.

Mr. Prakash Tulsiani, Chief Executive Officer	9821751916 / 66852021
Mr. Manoj Katar, Head (Operations)	9879614724/ 66852146
Mr. Suryanarayanan Pichumani, AVP-ASM	9426206472 / 66850397
Mr. Rajesh Bobde, DGM- JCC	9833301568 , 66851226, 28500013
Ms. Vera Sardesai – Head AOCC	9833301569 / 66851225,
Airport Operation Control Centre(AOCC)	26264900 / 6850550/51/52561/52554/ 52555
Joint Control Center-EMJO	9819190494 / 66852558
Apron Control	930144135, 9930144136, 26264444, 66852398, 26156637
Mr. Rajesh Jadhav, Associate GM -Airside Safety	9833301441 / 26264965 / 66850263
Rendezvous Point (Attended only on activation)	65725602
Mr. Walter Rumao, Dy General. Manager-Airside Ground Maintenance	9833159066/66851081, 26264417
Airside Maintenance Executive	9930144207/9930144206 / 26264771
Mr. Sanjeev Kumar Gupta, GM- Safety	9029266499 / 668 52046,
Chairman AECC (Attend only on activation)	66851242
Supporting staff (Attend only on activation)	66851282, 26264944/45
Terminal 1 MIAL Reception Centre	66852200 , 66850900
Terminal 2 MIAL Information Desk	66850222/50221
Airport Contact Center	66851010
Cargo Export Terminal	9167213623 / 66851391
Cargo Imports	66851379 / 9167213667/51337
For Activation of Temporary Morgue	66851379 / 81, 9167213667,66851337
Mial Dangerous Goods Experts/ D G Instructors :	9930144166/ 9820442209/ 9869356187 / 66851363
Mr. Mohan H. Kadam, GM - ARFF	9930670964, 66850266

Mr. Sunil Khapane, DGM - ARFF	9930144310, 66850266
Mr. K. Unnikrishnan, Emergency Planner-ARFF	9619903165 /66850387
Duty Manager – ARFF	9920682101, 66850264
Fire Watch Tower – ARFF	9619892674, 66850268, 66851280
Main Fire Station Control Room	66850267
Sub Fire Station Control Room	9930144320, 66852391
Fire Control Room 1 : Terminal 1	9930144321, 9930144324,66850340
Fire Control Room 2 :Cargo	9930144323, 66850311
Fire Control Room 3 : Import Warehouse	9930144312
Fire Control Room 4: Terminal 2	50102, 9920431327
Mr. Pravind Kumar , Head- E & M	66850589 , 9833301478
Mr. K Kumar, Head - Projects	6383759655
Mr. Sunil Patil, GM Project construction	66852078, 9892277156
Subramanian Shekar, GM- Project Operations	66852396, 9167213641
Mr. Suresh Thakre, Associate GM- E & M Terminal 1	66850399, 9833301487
Mr. Hemant Gaikwad, In-charge MT Pool	9167213605/ 66850775
Shift Engineer Terminal 1	9833301512, 26264621
Shift Engineer Terminal 2	9833301513, 66852556, 66850402
CCR – 1	9833301618, 66850306
CCR - 2	66850947
Mr. Veera B Rao, Associate GM – Facilities	9833301316, 66850624
Ms. Muthulaxmi H Rai, DGM – Facilities	66852054, 9833301315, 66850174
Shift Mobile Facilities Terminal 1A	9930144147
Shift Mobile Facilities Terminal 1B	9930144148
Shift Mobile Facilities Terminal 2	9167213664
Mr. Zon K Edamuttath, AVP- Security	9833301459, 66852323
Duty Manager - Security Terminal 1	9930144131 , 66852056
Duty Manager - Security Terminal 2	9930144132 , 66850262

Ms. Komal Desai, Associate GM- Guest Relation	66850143, 9833301582
Mr. Manish Naniskar Vehicle Pool	9833301411, 022 66851502
Dr. Anand More GM-Medical Service	26264461 , 66852394, 9167213701
Medical Inspection Room - Terminal 1	9833301317, 26264525/4460/ 4680
Medical Inspection Room - Terminal 2 Level 2	66850782, 9833301322
Medical Inspection Room - Terminal 2 Level 4	66850781, 9930144140
Casualty Center (Attend only on activation)	66852189
Mr. Jayesh Kumar Gehlot Head – Environment	9425602488 /
AEP Section Terminal 1	66851000
AEP Section Terminal 2	66851320/27
Airside Security	9930144240, 66852295
Ms. Suchita Shetty, AVP – Terminals Management & Baggage Operations	66851185, 9833301536
Mr. Balvir Bhatia, GM – Terminal Operations (T1)	66852317, 9833301377
Duty Manager Terminal 1	9833301321, 9833301581, 66852053, 66852336
Duty Manager Terminal 2	9833301319 , 8879992371/2/3/4
Mr. Bikesh Advani, Head GA Terminal	66850191, 9819344373
Duty Manager CA Terminal	9167213698, 66852376/7
Duty Manager Baggage Handling System	8879992363, 66851151/23, 66850679
Ms. Mallika Dasgupta, Head- Corporate Communications	9582944202
Priyanka Rajan, Corporate Communications	7710009910
Information Technology (IT)	66850555
Mr. Jayesh Kumar Gehlot, Head – Environment	9001894544

Appendix 5: Contact Details of External Emergency Responding Agencies

Air Traffic Services:	
Control Tower Supervisor	26164621
Control Tower Assistant	26816501
Watch Supervisory Officer	26828088;9869062250
OCC (SUP)	26819568
GM (ATM) Rajiv Mehta	26819444/45, 9870566606
Jt. GM	9765405408
Jt. GM (SAR)	28389558, 9969425955
Rescue Co-ordination Centre (RCC)	26819421/20889985
FCR Old ATC	26819660, 26819580
Juhu ATC Tower	26616721, 9820607716
FCR New ATC building	26816555, 26816115
Bureau Of Civil Aviation Security (BCAS)	
Mr. Ved Parkash, Regional Director	29264301/02/07, 9868795692
BCAS Control Room	011 23311443, 011 23738394
Central Industrial Security Force (CISF)	
Mr. Shrikant Kishor, DIG - Chief Airport Security Officer (CASO)	26264729, 8879903531
Mr., Mamta Rahul, IPS Sr. Commandant – OPS	26156411, 9309347740
Mr. Pauliankap, Commandant Terminal-1, Perimeter & Cargo	26264539, 7982642126
Mr. Dhiraj Kumar Shukla, Sr. Commandant Terminal 2	66851275, 8657425533
SOCC – Terminal 2	66851290, 66851298, 9930144130
CISF Control Room – Terminal 2	66851333 ,66851300
SOCC – Terminal 1	66852086
CISF Control Room Terminal 1	66851292, 66851296
In charge Gate No.1	26264734
In charge Gate No.5	65283378, 66851075
CISF - BDDS	26157058, 66851168, 9930144284, 9930144341
In-charge Airside	66852387, 7045656482, 2624777
Customs	
Asst. Commissioners ,Deputy Commissioners	66850688
P.R.O	26828719, 66850838, 66850928
GROUND HANDLING AGENTS	

Celebi-nas Ground Handling	
Celebi-nas Ground Handling	66859395, 7738892018
Celebi-nas Ground Handling- CA Terminal	66859389, 9870007823
BWFS	
Operations	91 82912 85144, 6685 9444
DM Ramp	91 82912 85142
DO Ramp	91 82912 85146
Air India	
Air India Ground Handling	66858058/8063
Director – GSD	26829615,28318391
General Manager	26263233
Engineering (shift In charge) Line Maintenance	28318289 /8314, 26829601
Capt. S. Velraj Emergency Response Director	011 2462 8957 097910 14607
Mr. Sachin Jadhav, Officer Emergency Response	9819836969, 26263032
Immigration	
AFRRO on Duty Duty Officer	26829494 , 9819067043, 66850776, 26828098(Fax), 26829002
Indian Air Force	
Movement Liaison Unit, Mumbai Airport	26828005 , 26828006 , 26828007
Chief Operations Officer	26157177
Co.32, Movement Control unit	26156243,
Commanding Officer Mr. V K Sharma	8454892301
Indian Navy:	
Capt. Sanjay Shukla	26157274, 26157237
Officer In-charge Duty room	26157315/14,26157188
Indian Army:	
Indian Army Exchange	26660247
Indian Coast Guard Western Region:	24332554
Marine Rescue Coordination Centre	24316558 , 24388065, 24383592
Metrological Department	
Director	26828008
Control room Met services	26819493 /4
Oil Companies	
Mumbai Airport Fuel Farm Facility ltd. MAFFFL(Sahar)	26829761/9167833160
Mumbai Airport Fuel Farm Facility ltd. MAFFFL(Santacruz)	9969031640
Bharat Star Services	26829324/25, 9892328089/ 7045924399
Indian Oil Skytanking Limited	Sahar – 65814777, 65344777,

	Santa Cruz - 64526111, 65366111
Mumbai Police:	
Mumbai Police Control Room	100 , 22623054 /1855/ 0081 22641752/5020
Police Office Bandra West	26457900 , 26412021, 26407970
Traffic	24937746 /7747 /9717/7755
Airport Police(Santacruz) T1B	022-26156315
Mr. B. Garande, Sr. PI- Mumbai Police	9870557676
Sahar Police Station	26817485, 26829784/85
Mr. Dinkar Shilavte, Sr. PI- Mumbai Police	9870260328
Ms. Kalpana Gadekar, ACP- Airport Mumbai Police	9870213389
Adani Electricity :	
Helpline	19122
Municipal Corp. Of Greater Mumbai:	
Head of MCGM	22610088
Municipal Commissioner	22620251, 22620525
Head - Disaster Management	9820702525
Dy Chief- Disaster Management	9833806408
Disaster Management Control Room	22694725, 22704403, 22694727, 022-1916, 22718630
Mumbai Fire Brigade:	
Byculla Head Office Control Room	23076111
Chief Fire Officer	23074923, 23001393, 9930464820
D F O Marol	29200940 /1, 9930464812, 23085991
Station Officer Vile Parle	26112121 , 9930464757
Station Officer Marol	29200940 , 9987093859
Civil Defence And Home Guards:	
Additional Controller	22013411
Civil Defence and Home Guards	22844171 / 22843667
Private Crane Operators :	
Express Crain	25227629, 22618765
Indra Forklift	23780577 , 23730832
Sainy/Pyrasingh & sons Crane Service	24046708 / 6788 , 9820026917
Indus Container Line Service (Gujrat) Pvt. Ltd.	40410000
Aircraft Accident Investigation Bureau (AAIB)	
AAIB control room	11-24610843 /48
DGCA	
Mr. Deepak K Das, Dy Director General	08826611717
Mr. Snajay Bramhane, Director Air Safety	26265311, 8500163693(Primary No) 9969625585(Secondary No)
Ms. Suvrita Saxena, Director Ops.	9920450122

QUARANTINE AUTHORITY	28392429
BARC	25505222, 25592222/2952
CMG-DAE	22023978, 9969201364
NDRF	09423578447
Motor Transport Department - Akbar Travels	9833550445
APHO	28392429

Appendix 6 : Contact Details of Hospitals and Nursing Homes

Sr No.	Name of Hospitals/Nursing Home	Telephone No.
1	Nanavati Hospital, Vile Parle	26267539, 9769948839
2	Dr R N Cooper Hospital	6210041/40/43/46,26207254,26207256, 26207258,26205892,96
3	Kokilaben Dhirubhai Ambani Hospital, Andheri (W).	30919191
4	Criticare hospital, Andheri (E)	9820635910 / 9819025705, 67756600/ 30103020
5	Criticare hospital, Andheri (W)	9820635910 / 9819025705, 67756600/ 30103020
6	Lilavati Hospital	9930602086,26666666, 26568000
7	Sugun hospital, Andheri	9320531818, 66869907, 66869906,66869900
8	National Burns Center, Airoli	2779 6661 / 62 / 63
9	Hinduja Hospital, Khar (W)	61746000 / 26469999 Ext 6099, 6098 24452440,24451515, 39818181, 26469999
10	Kohinoor hospital, Kurla(W)	67556766, 30553066, 30553055, 9320177330
11	Holy spirit Hospital , Andheri (E)	28248500, 42478888
12	Sujay hospital, Andheri (W)	9819878657 (Duty mobile) 26212233, 26212244, 26212255
13	Holy Family, Bandra	30610555
14	D.Y.Patil Hospital, Nerul, Navi Mumbai.	27735901
15	Hiranandani Hospital (fortis Hospital), Vashi	25763333 , 25763300
16	Apollo hospital, Navi Mumbai	33503030(Casualty), 33503350(board)
17	Meeti Lifeline Hospital, Malad (W)	28905577
18	Lifeline Hospital Heart Institute & Diagnostics Centre,Malad (W)	28074040, 28073109
19	Apex Multispeciality Hospital, Dattapada Road Borivali (W),	022-28703375/6/7/8 , Vivek Shah 9323567008, Dr. Vishal Singh-8928385279, Dr Tanvi Shah-9320110700
20	Apex Hospital, Vaishali Heights, Chandavarkar Road, Borivali (W),	022-42457000 , 9321337000,
21	Apex Superspeciality Hospital, L.T. Road, Babhai Naka, Borivali (W),	022-28986677/46/47,
22	Apex Hospital, Veena Nagar, Phase –II, Tulsi Pipe line Road, Mulund (W),	022-41624000 (100 lines), 9321348990, Dr. Vishal Survanshi 9867299635
23	Shah life line Hospital & Heart Institute Pvt Ltd., Mira Road (E).	28131120 / 24 / 25

24	Bhakti Vedanta Hospital, Mira Road	29452400/28459885/61882500/501 /9321996800
25	Terna Specialty Hospital Research Centre, Plot No.12, Sector 22, Opp. Nerual Railway Station, Nerual (W).	022-61578300, 9820634474,9819414072
26	Global Hospital, Super Speciality & Transplant Centre, Building No .35, Dr. E. Borges Road, Hospital Avenue, Parel Mumbai -12	02267670101
27	K B Bhabha Hospital, Bandra (W)	26422541 , 26422542 , 26422775
28	Sanjeevani Hospital, Andheri	26840647,26833939 , 26834141, 26841969
29	Guru Nanak hospital, Bandra (E)	42227777
30	Babasaheb Gawde hospital, Vile Parle (E)	26102277, 26102280,
31	Mukund hospital,	28221936 , 28328456
32	Fortis Raheja, Mahim	66529888
33	Bhabha Hospital, Kurla (W)	26503145, 26500241
34	Paramount hospital	28590606,28590064
35	Sion (LTMG) Hospital	24063000 / 24076381 / 24049023
36	P D Hinduja Hospital, Mahim	24452575 Ext 3006(casualty), 67668181
37	K E M Hospital	24136053 , 24107000,
38	Nair Hospital	23081490, 23027000
39	J J Hospital	23735555 , 23739031
40	Fortis Hospital, Mulund	43654365, 02243654365
41	Jaslok Hospital	66573333 , 40173333
42	Sir H. N. Reliance Foundation Hospital	61305005 / 1800221166
43	G T Hospital, Fort	22621464 , 22621465 , 22621466
44	Bombay Hospital	22067676 Extn. 260
45	Mallika Hospital	9819419256, 9820302367
46	Breach Candy Hospital	23671888,23672888,23667809, 23667780
47	Seven Hills hospital, Andheri (E)	67676788,67676766, 67676767

Appendix 7 : List of MOU Hospitals and Nursing Homes

1	Sugun Hospital, Plot 236, Military Road, Marol, Andheri(E)
2	Kokilaben Dhirubhai Ambani Hospital. Four Bungalow, Andheri (W)
3	PD Hinduja national hospital and Medical Research centre.,11th Road, Khar (W)
4	Kohinoor Hospital Pvt. Ltd. Senapati Bapat Marg, Dadar (W)
5	Seven Hills Healthcare Pvt. Ltd. Andheri (E)
6	Shah Life Line Hospital & Heart Institute, Geeta Nagar, Phase 7, Mira Road (E).
7	Lifeline Hospital Heart Institute & Diagnostics Centre
8	Lifeline Hospital Heart Institute & Diagnostics Centre, S.V. Road, Malad (W)
9	Meeti Lifeline Hospital, Sainath Road off, S.V. Road, Malad (w)
10	Sujay Hospital, Gulmohar Road, JVPD, Vile Parle (W)
11	Criticare Multispeciality Hospital & Research Center, JVPD Scheme, Andheri (W)
12	Dr. Balabhai Nanavati Hospital, S.V. Road, Vile Parle (W),
13	Indian Burn Research Society (National Burns Centre)
14	D.Y. Patil Hospital, Nerul, Navi Mumbai
15	Apollo Hospital, Sector 23, CBD Belapur, Navi Mumbai
16	Hiranandani Health care Pvt. Ltd. (A Fortis Network Hospital), Sector 10 A, Vashi, Navi Mumbai
17	Bhakti Vedant Hospital, Sector -1, Near Royal College, Mira Road.
18	Apex Hospitals, Veena Nagar, Tulsi Pipe Line Road, Mulund(W), Mumbai - 400 080
19	Apex Multispecialty Hospital, off. Western Express Highway, Next to Suswagat Road, Dattapada Road, Borivali (E)- 400 066
20	Apex Multispecialty Hospital, Vaishali Heights, Chandavarkar Road, Borivali (W)
21	Apex Superseciality Hospitals, L.T Road, Besides Punjab & Sind Bank,Babhai Naka, Borivali (W)
22	Terna Speciality Hospital & Research Centre, Plot No.12, Sector 22, Opp.,Nerul Railway Station, Phase II, Nerul (W)
23	Global Hospital, Super Speciality & Transplant Centre,35, Dr. E. Borges Road, Hospital Avenue, Parel Mumbai -12

Appendix 8 : Contact details of Ambulance Service providers

Sr No.	Name	No. of Ambulances	Telephone No.
1	Maharashtra Emergency Medical Services (108)	112	108
2	Human care &Cardiac Ambulance	3	9324239926 , 9821144245, 9833166697,9833266697
3	Topsline Emergency Response Service	30	1252,9821531252
4	Mumbai Fire Brigade	14	23085991,92,93,94, 23076111,12,13 26205301 , 101
5	Vishal Emergency Ambulance, Khar	8	9821144245, 9324239926, 9821191876
6	Lonica Ambulance Service	2 +4 hearse	26131245 , 9892192439 9821182100 , 69566251
7	Ziqitza healthcare Ltd	21	1298
8	Vmedo Ambulance Service	21	08067335555
9	The Swastik League, Lamington Road, Grant Road	1	23821532 , 9224702731
10	City ambulance	1	22014295, 9773563291
11	Crticare cardiac ambulance Vile Parle (W)	2	9819025705 , 9869976968
12	Nulife Cardiac Ambulance	15+2 hearse	9222062124 9323466267 (Dr Kumar)
13	Sanjeevani Nursing Home	1	26840647 , 9819074461
14	Bombay Samarpan Relief Service, Bandra	1	26422076
15	St John Ambulance Service (Parsi Ambulance)	5	22621666, 22620401
16	Saifee Ambulance Service	2	23471189
17	Life Jet Cardiac Ambulance, Bandra	1	9821106489
18	Ambucare ambulance service	1	982 064 4429 / 982 064 8900 /982 042 9100 / 982 064 4421

Appendix 9 :Contact details of Emergency Panel Doctors

Sr No.	Name of Doctor	Contact No.
1	Dr. Farida Plasticwala	8879517803
2	Dr. Naveen Gupta	9224449993
3	Dr. Champaklal Variava	9820243954
4	Dr. Nikita Charinia	7738452545
5	Dr. Shruti Suresh	9645145205
6	Dr. Fasihur Rahman	9028492879
7	Dr. Smita Chavan	9757442305
8	Dr. Danish Hasan	9773443717
9	Dr. Nausheen Memon	9892346930
10	Dr. Sheetal Gupta	8898130892
11	Dr. Narayan Mishra	9867070789
12	Dr. Rajendra Chataule	9619729173
13	Dr. Hemant Chavan	9869116908
14	Dr. Afreen Khan	8779113302
15	Dr. Dheera Sharma	9920734611
16	Dr. Ravindra Mahajan	8104690763
17	Dr. Reedha Shaikh	9773978691

Appendix 10: Contact details of Approved Psychiatrists

Sr.No	Name of Doctor	Contact No. & Clinic Address
1	Dr Ruksheda Syed	9820033095 Sheffield Bungalow No.9, 2nd Cross Road (Rajput Dairy Lane), Lokhandwala, Andheri (W).
2	Dr Vihang Vahia	9821284555 IV Pariwar Co Operative Hsg, Society,S.V. Road, Opp. Reliance Mart, Santacruz (W)
3	Dr Y A Machiswal a	9820081884 Masina Hospital, Near Gloria School, Sant Savata Mali Marg, Byculla (E)
4	Dr. Ashutosh Shah	9820191182 IV Pariwar Co Operative Hsg, Society, S.V. Road, Opp. Reliance Mart, Santacruz (W).

Appendix 11 :Contact Details of Airlines operating at CSMIA

Sl. No	Airline	Airline Representative	Contact Number	Email ID
1	Air Asia	Ajeesh Puthupura Gopalan	9008721880	ajeeshpgopalan@airasia.co.in
2	Air China	Mr Vinay Kumar	9819212438	vinay@airchina.com
3	British Airways	Bhavesh Raj	9930306134 / 9819230024	bhavesh.raj@ba.com / sharon.dsouza@ba.com
4	Fly Dubai	Craig Fernandes	7304501736	craig.fernandes@flydubai.com
5	Nepal Airlines Corporation	Navraj Koirala	8879776136	bomra@nac.com.np
6	Air Arabia	Rajesh Ahuja	7506406007	rajesh@airarabia.ind.in
7	Air France	Pereira Renuka	9769334820	repereira@airfrance.fr
8	Air India	Prakash Mangtali		emergencyresponse@airindia.in
9	Air Mauritius	Daisy Jesia	9820085718	djesia@airmauritius.com
10	Air Seychelles	Samir Saxena	9833160714	dutymangerbom@airseychelles.com; ssamir@etihad.ae
11	Air Tanzania	Madan Solanki	7400084680	madan.solanki@airtanzania.co.tz
12	All Nippon Airways	Saira Pereira	9820220342	s.pereira@ana.co.jp
13	Bangkok Airways	Ramesh Patel	9819983457	pgbomapm@bangkokair.com
14	Cathay Pacific	Victor Dsouza	9136133836	victor_dsouza@cathaypacific.com
15	Delta Air	Suresh Anthoney	9820009793	suresh.anthoney@delta.com
16	Egypt Airways	Hossam Badr	9920583077	bombay_kk@egyptair.com / Bombay_DM@egyptair.com
17	El Al Airlines	Arnold Francis Florindo	9820040988	arnoldf@elal.co.il
18	Emirates	Lloyd Ferreira	9820020016	khaleel.yammahi@emirates.com bomapt@emirates.com
19	Ethiopian Airlines	Daniel Melaku	9820142130	danielmel@ethiopianairlines.com bomapt@ethiopianairlines.com
20	Etihad Airways	Samir Saxena	9833160714	ssamir@etihad.ae
21	Go Air	Mr. Ashley Periera	9004920675	ashley.pereira@goair.in
22	Gulf Air	Keith Vaz	9821321666 9769205700	keith.vaz@gulfair.com
23	Indigo	Mr. Amit Tibrewala Ms. Sangeeta Sawant	9833591343 9967636039	amit.tibrewala@goindigo.in sangeeta.sawant@goindigo.in

24	Iran Air	Shahbaaz Busheri	9930711631	iranairbom@yahoo.com
25	Iraqi Airways	Aliya Sharif	8425858786	ia.mumbaistation@yahoo.in
26	Al Jazeera Airlines	Abdulla Ansari	8879114455	kaushik.deb@jazeeraairways.com
27	Kenya Air	Ms Viha Upadhyay	9819446120	viha.upadhyay@kenya-airways.com
28	KLM	Pereira Renuka	9769334820	repereira@airfrance.fr
29	Korean Air	Ajay Singh	9821258397	ajayks@koreanair.com
30	Kuwait Airways	Bharat Kumar	9769555976	bomkzku@kuwaitairways.com
31	Lufhtansa	Warren Alves	982026831 9920789190 / 66859898	warren.alves@dlh.de / bomstmail@dlh.de
32	Malaysia Airlines	Aafreen Khan	9820536945	aafreen.khan@malaysiaairlines.com
33	Malindo Airways	Subroto Sarkar	7506335470	subroto.sarkar@ops.malindoair.com
34	Oman Air	Manju Tullu	2266859556	Manju.Tullu@omanair.com
35	Qatar Airways	Gavin White	9820074467	bomkzqr@in.qatarairways.com
36	Rwand Airlines	Christian Gatete	9833647722	christian.gatete@rwandair.com
37	Saudia Airlines	Paresh Shirodkar	9819352566	pshirodkar@saudia.com stnmgrbom@saudia.com
38	Singapore Airline	Chee Siong Goh	9819860983 9820141699	cheesiong_goh@singaporeair.com.sg
39	Spice Jet	Mr. Hemanth Kumar	9886019007	sm.bom@spicejet.com
40	Srilankan Airlines	Noel Pinto	9820262058	noel.pinto@srilankan.com
41	Star Air	Yusuf H Azmi	9820484582 / 8956347034	apm.bom@starair.in
42	Swiss	Warren Alves	982026831 / 9930130346 66859051	warren.alves@swiss.com / warren.alves@dlh.de / bomkplx@swiss.com
43	Thai Airways	Pongpanata Phongsathienkul	9820238384	bomkk@thaiairways.co.in
44	Thai Lion	Subroto Sarkar	7506335470	subroto.sarkar@ops.malindoair.com,
45	Thai Smile	Rajiv Rao	9769929364	narsimha.r@thaismileair.com
46	Tru Jet	Sunanda Mandal (CSE)	8668470998	Sunanda5mandal@gmail.com
47	Turkish Airline	Nimesh Asher	66 859314/15 9167640566	BOMOPS@THY.COM / oastan@thy.com
48	United	Chetan Bhansali	9920758011	chetan.bhansali@united.com
49	Uzbekistan Airways	Eldorbek Ortikboev	9818344339	apmbom@airarabia.com

50	Virgin Atlantic	Arul Raj / Suresh Anthoney	965066656/ 9820009793	arul.raj@fly.virgin.com / suresh.anthoney@fly.virgin.com
51	Vistara	Sandeep Pandit	7776914838 7428091266	Sm.bom@airvistara.com
52	VietJet	Triloki Nath Sinha	8976469161	trilokisinha@vietjetair.com
53	Royal Nepal	Navraj Koirala	8879776136	bomra@nac.com.np

Appendix 12: Contact Details of Cargo Airlines operating at CSMIA

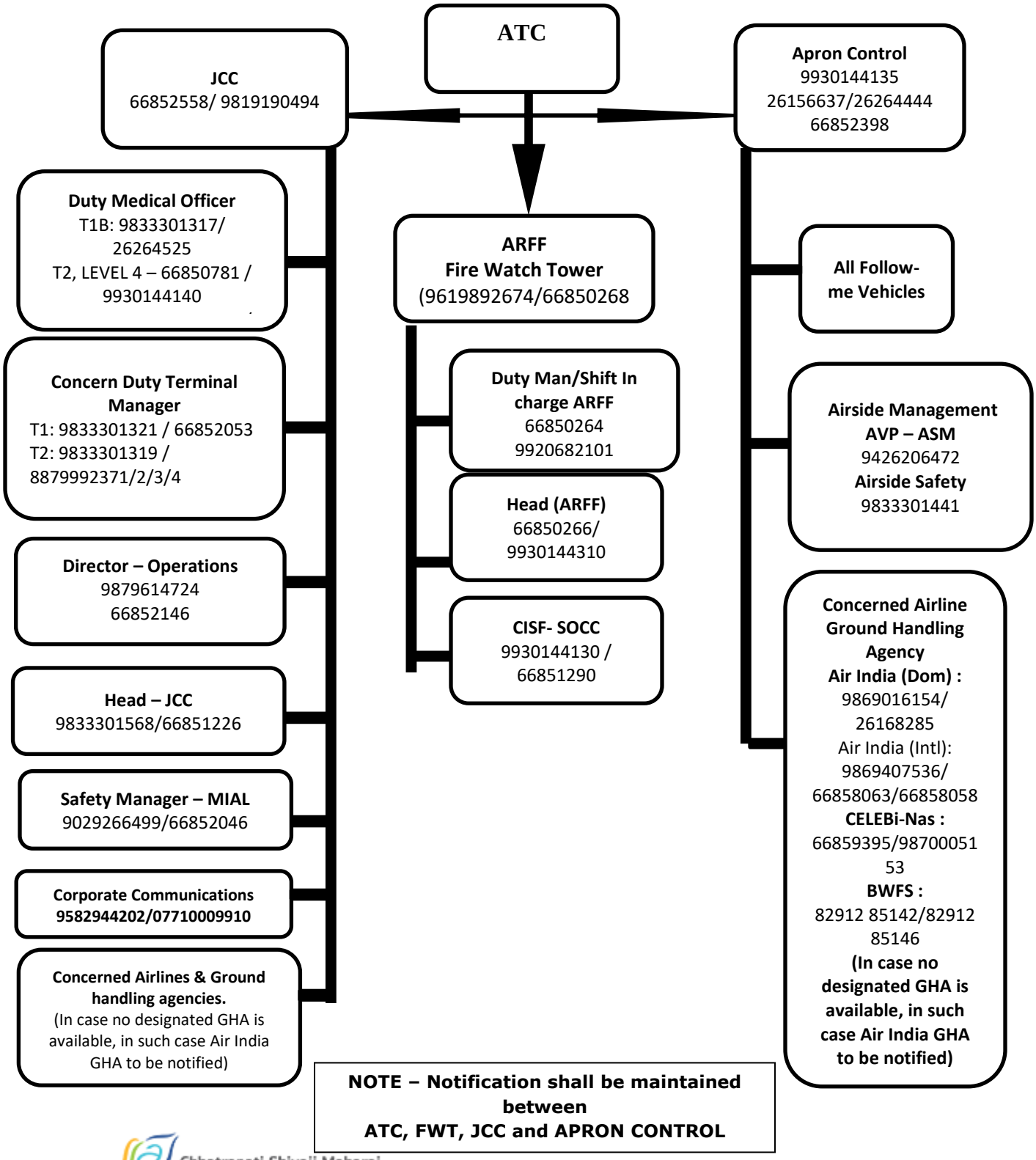
CARGO	Airline Representative	Contact Number
1. ETHIOPIAN AIRLINES	Daniel Melaku	9820142130
2. CATHAY PACIFIC	Victor dsouza	9136133836
3. EGYPT AIRLINES	HOSSAM BADR	9920583077
4. QATAR AIRWAYS	Harshal Lavande	9820074467
5. SINGAPORE AIRLINES	Ellser Chan/Cheesiong	9819860983
6. TURKISH AIRLINES	Ozgur Astan	7208971948
7. CHINA AIR CARGO	TUSHAR (DUTY MANGER)	9820544056
8. SICHUAN AIR CARGO	Chen Yuanbin	9910567238
9. FEDEX	James Noronha	9833082993
10. SAUDIA	DENZIL DSOUZA	9769280996
11. China Eastern Airline NONSKED	*	*
NON-SCHEDULED		
1. UNITOP	*	*
2. AIR SHAGOON	AARTI	9819398815
3. ATLAS AIR	*	*
4. HERCULES AVIATION	SHAKTI	9833320933
5. MOON AVIATION	AMAR (DUTY MANAGER)	8779042792
6. CARGOLUX	*	*
7. FREEDOM AIR	Bhushan Raidas (DUTY MANAGER	9870244451
8. FLY TAG		*
9. MSPL	DEEPAK (CO-ORDINATOR)	8667239657
10. QUICK AVIATION SERVICES	RAJESH	9821821218
11. WAMOS AIR	*	*
12. SARC Aviation	*	*
13. AURORA AVIATION	*	*
14. Poonawalla Ops	Parikshit Mantri	7021755638

Appendix 13 : Contact Details of Chartered Flight Operators at CSMIA

S/N	Operator / Company	Representative	Contact Number	Email ID
1	International Air Charter Ops (P) Ltd.	Afshas Abdul Aziz	7738892986	internationalaircharter@yahoo.co.in
2	Airmid Aviation Services Pvt Ltd	Amit Tipnis	9819899455	flightoperations@indiabulls.com
3	Modern Road Makers Pvt Ltd	Anup Vidvans	7738146051	anup.vidvans@irb.co.in
4	Span Air Ltd	Arun Kumar Maini	9717873111	harish.sharma@span-air.com
5	Taj Air Ltd	Rajesh Ajgaonkar	9820546456	Rajesh.Ajgaonkar@tajhotels.com
6	Deccan Charters Ltd	Bhuprndra Kumar	9969137144	mumbaiops@deccanair.com
7	Taurian Iron & Steel Co. Pvt. Ltd.	Brijesh Kumar	9833228488	brijesh.kumar@tauriansteel.com
8	India Fly Safe Aviation Limited	Bs Rana	9654109992	bhoop.singh@indiaflysafe.com
9	Govt.Of Jammu & Kashmir	Capt. Himanshu	9906031494	himanshu.katoch@yahoo.co.in
10	Quick Flight Ltd	Capt. Mankaran Singh	9898790150	mankaransingh3@yahoo.com
11	Government Of Gujarat	Capt. Vishal Chaudhary	8140000006	operation@cadgog.org
12	Mspl Ltd	Capt. Anuraag Mehta Arun	9972073963	capt.anuraag@mspllimited.com
13	BAJAJ AUTO LTD	D B SHINDE	9766600269	dbshinde@bajajauto.co.in
14	Venkateshwara Hatcheries Pvt Ltd.	Debasish Sarkar		ops.vhpl@yahoo.com
15	Coromandel Travels Ltd	Gopinath Vasantharaj	9841413060	askgopi@gmail.com
16	Air One Aviation	Deepak Bhatt	9582428249	deepakbhatt0489@gmail.com
17	Tvs Motor Company	K Santhosh	9840013004	KS.Santhosh@scl.co.in
18	Aviators (India) Pvt. Ltd	K. Sathya Narayana	9845174055	sathya@aviatorsindia.com
19	First Future Air Services Pvt Ltd	Kishor Chaugule	9967954895	ffasmovement@gmail.com

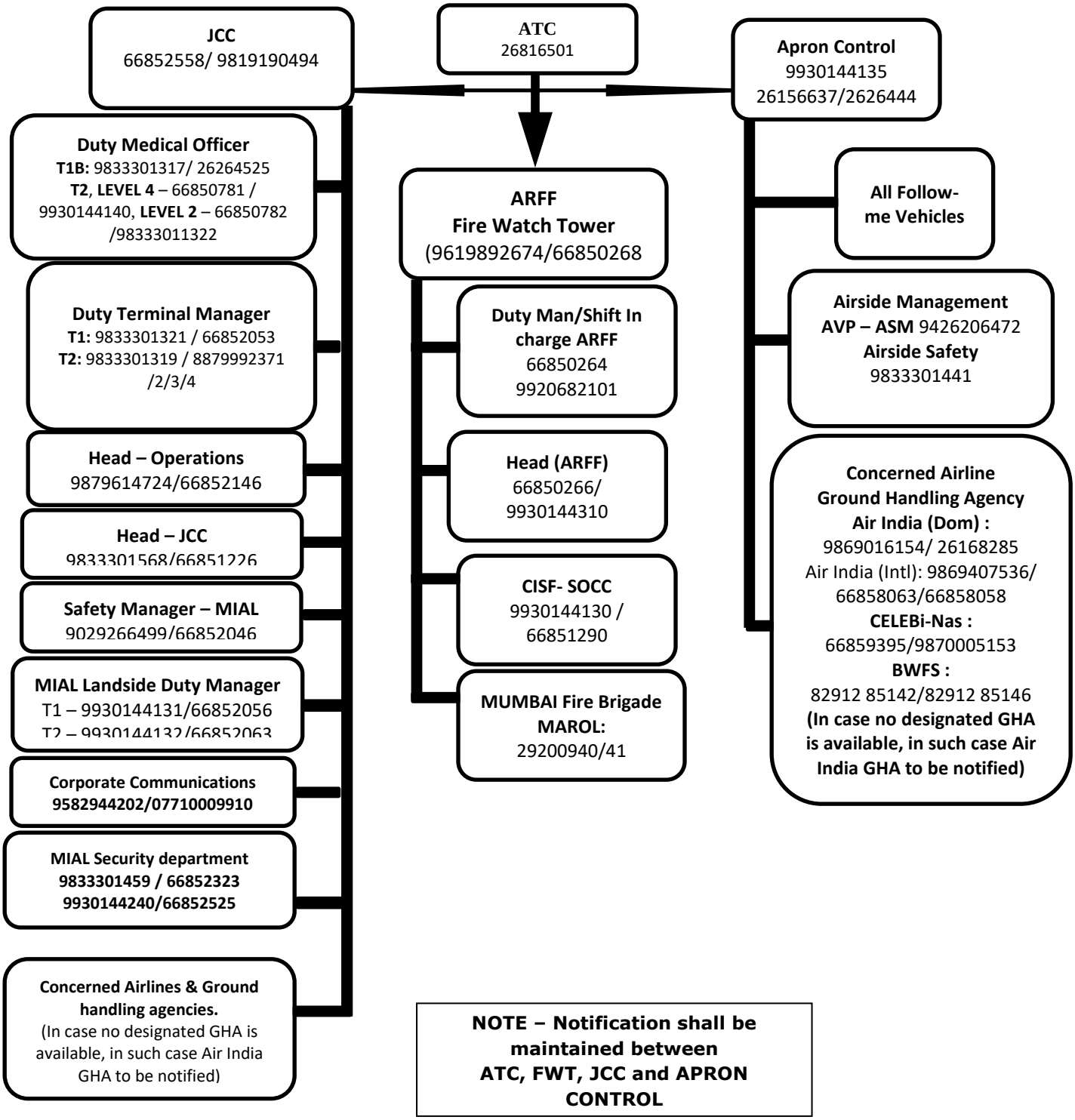
20	Ashley Aviation Ltd.	Krishnendu Das	9619591134	kd.aviation@hindujagroup.com
21	Jsw Steel Ltd	Kriti Sodha	9821099499	kirti.sodha@jsw.in
22	Jaiprakash Associates Ltd.	Ks Tomar	9810758608	ks.tomar@jalindia.co.in
23	Larsen And Toubro Ltd	Mac Donald	9821111991	Macdonald.Creado@larsentoubro.com
24	Bajaj Hindustan Ltd	Manik Trambak Hire	9867303538	mthire@bajajhindusthan.com
25	Government Of Chhattisgarh	Munesh Pan	9755550747	munesh_pan3@rediffmail.com
26	Reliance Transport & Travels Pvt Ltd	Rajesh Gupta	9987561897	aviationadag.ops@gmail.com
27	Abg Resources Ltd	Naveen Kumar	9821053538	naveen@abgindia.com
28	Reliance Commercial Dealers Ltd	Manoj.S.Jadhav	9920842373	rcdlops.aviation@ril.com
29	Dlf Ltd	Nitin Mahajan	9971566060	mahajan-nitin@dlf.in
30	Mahindra & Mahindra	Nitin Nisal	9930026256	nisal.nitin@mahindra.com
31	Sobha Puravankara Limited	Poonacha.M.P	9900039828	poonacha.m@spal.co.in
32	Zest Aviation Pvt. Ltd.	Pradeep Kumar A	9722300310	pradeepkumar@zestaviation.com
33	Simm Samm Airways Pvt Ltd	Pradeep Saini	9833896818	captpsaini@gmail.com
34	Bharat Forge Ltd.	Prashant Chavan	9920444866	p11_chavan@yahoo.co.in
35	Aryan Aviation Services Pvt Ltd	Praveen Dixit	9987029554	aryanaviationservices@yahoo.com
36	Gmr Aviation Pvt. Ltd.	Rajender Singh	9717199786	Rajender.Singh@gmrgroup.in
37	Grasim Industries Limited // Birlas	Rajesh Fernandes	8108372776	rajesh.fernandes@adityabirla.com
38	Futura Travels Ltd // Essar	Vallabh Wagle	9819731844	Vallabh.Wagle@essar.com
39	Privilege Airways Pvt. Ltd.	Tanmay Ginde	9870399943	tanmay@privilegeair.net
40	Invision Air Services Pvt. Ltd.	Vijay Sengar	9167772050	vijay.sengar@invisionair.co.in
41	EIH Ltd	Vikas Dhall	9873707927	Operations.Aviation@oberoigroup.com
42	Taj Air	Niraj Anand		Niraj.anand@tajair-tata.aero

APPENDIX 14: Notification of Local Standby



NOTE – Notification shall be maintained between ATC, FWT, JCC and APRON CONTROL

Appendix 15 :Notification of Full Emergency



Appendix: 16: Notification on Activation of Aircraft Incident/Accident at Airport

JCC
66852558/ 9819190494

ATC
26816501

Apron Control
9930144135, 26156637/26264444
66852398

Duty Medical Officer
T1B: 9833301317/ 26264525
T2, LEVEL 4 – 66850781 /
9930144140,**LEVEL 2** – 66850782
/98333011322

Concern Duty Terminal Manager
T1: 9833301321 / 66852053
T1: 983301318/ 66850438
T2: 9833301319 /

Director – Operations
9879614724/66852146

Head – JCC
9833301568/66851226

Safety Manager – MIAL
9029266499/66852046

MIAL Landside Duty Manager
T1 – 9930144131/66852056
T2 – 9930144132/66852063

Corporate Communication
9582944202/07710009910

MIAL Security department
9833301459 / 66852323
9930144240/66852525

Head – Engg. & Maintenance
9833301478 / 66850589

GM – Project Operation
9167213641 / 52396

Affected Airlines & GHA

ARFF
Fire Watch Tower
(9619892674/66850268

MUMBAI Fire Brigade
MAROL: 29200940/41

CISF- SOCC
9930144130 / 66851290

Head (ARFF)
66850266/9930144310

MCGM (EOC)
22694725/22704403/
22694727/022-1916

Civil Defence Room
22844171/22843667

CBRN incident only
NDRF – 09423578447

MIAL Dangerous Goods Instructor
9930144166/66851340
9869356187/66851373

Radiological Incident only
Department of Atomic Energy
ECR 1- 22023978, 9969201364
ECR 2 – 25991070, 969201365
BARC – 25505222/5151,
25592222/2952
Chief Fire Officer – 25595336
Duty Officer ICCM - 25595333

All Follow-me Vehicles

Affected GHA
Air India (Dom) :
9869016154/ 26168285
Air India (Intl): 9869407536/
66858063/66858058
CELEBi-Nas :
66859395/9870005153
BWFS :
82912 85142/82912 85146

Airside ground maintenance
9930144207/9833159066

Airside Management
AVP – ASM 9426206472
Airside Safety
9833301441

MIAL Admin,
9820392875/ 66852195

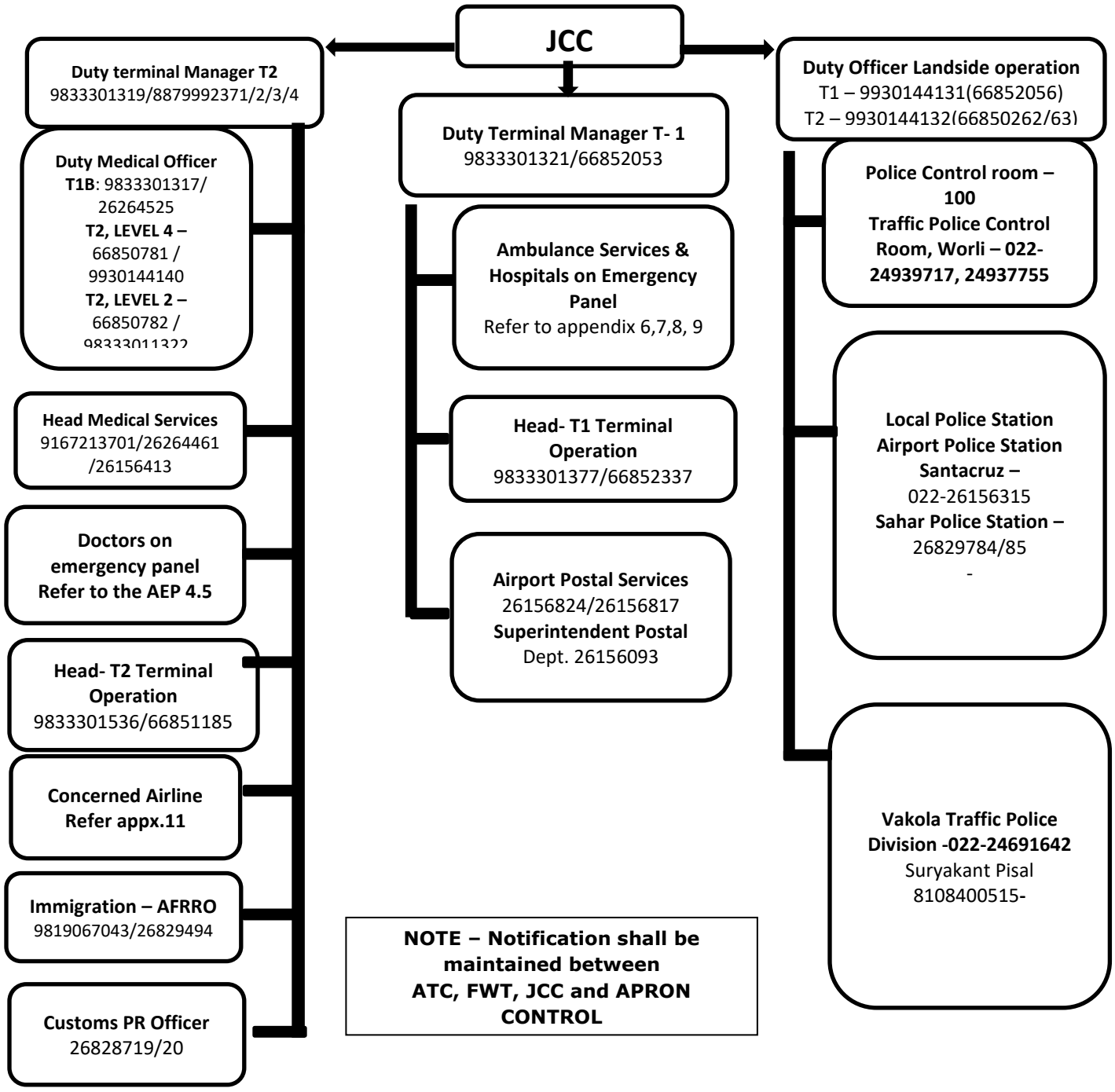
In charge MT Sec
9930144393/ 66850775

CCR (Constant Current Regulator)
SIC – 9833301618/
CCR 1 – 66850306

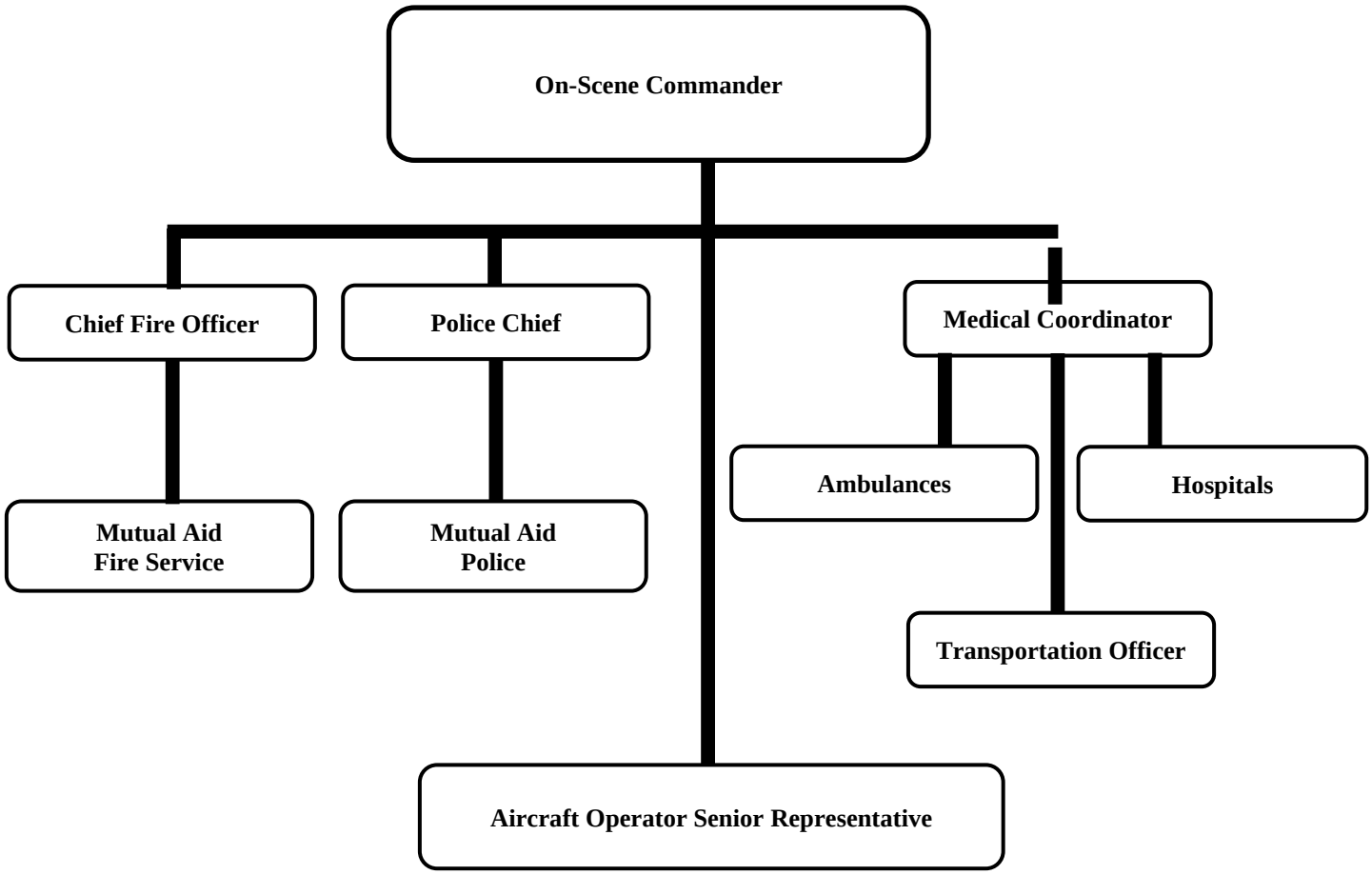
Concern Oil Companies
MAFFFL-
26829761/9167833160
BS Services 26156706 /
9892328089

NOTE – Notification shall be maintained between
ATC, FWT, JCC and APRON CONTROL

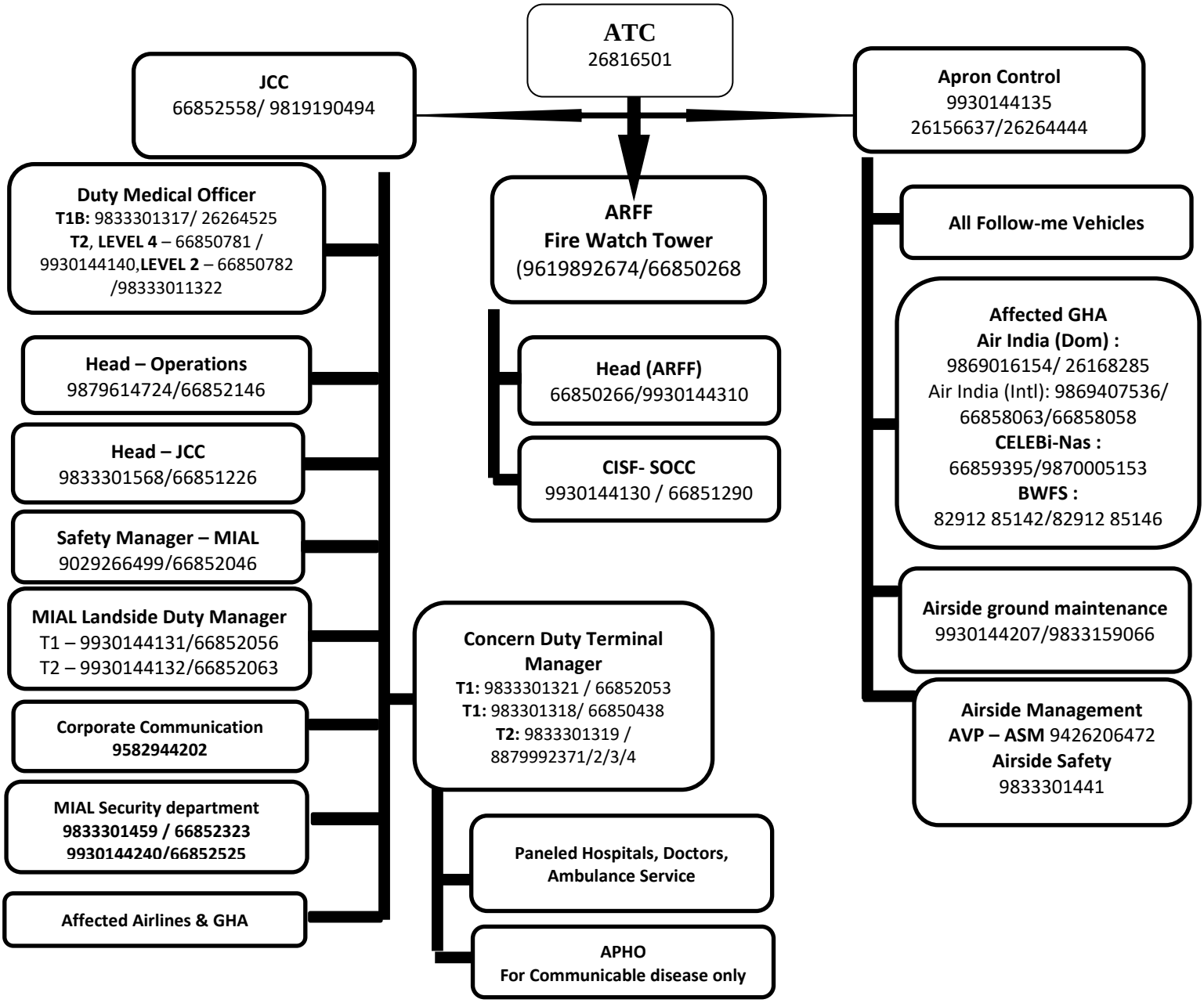
Appendix 16 continued.



Appendix 17: Command and Co-ordination Chart

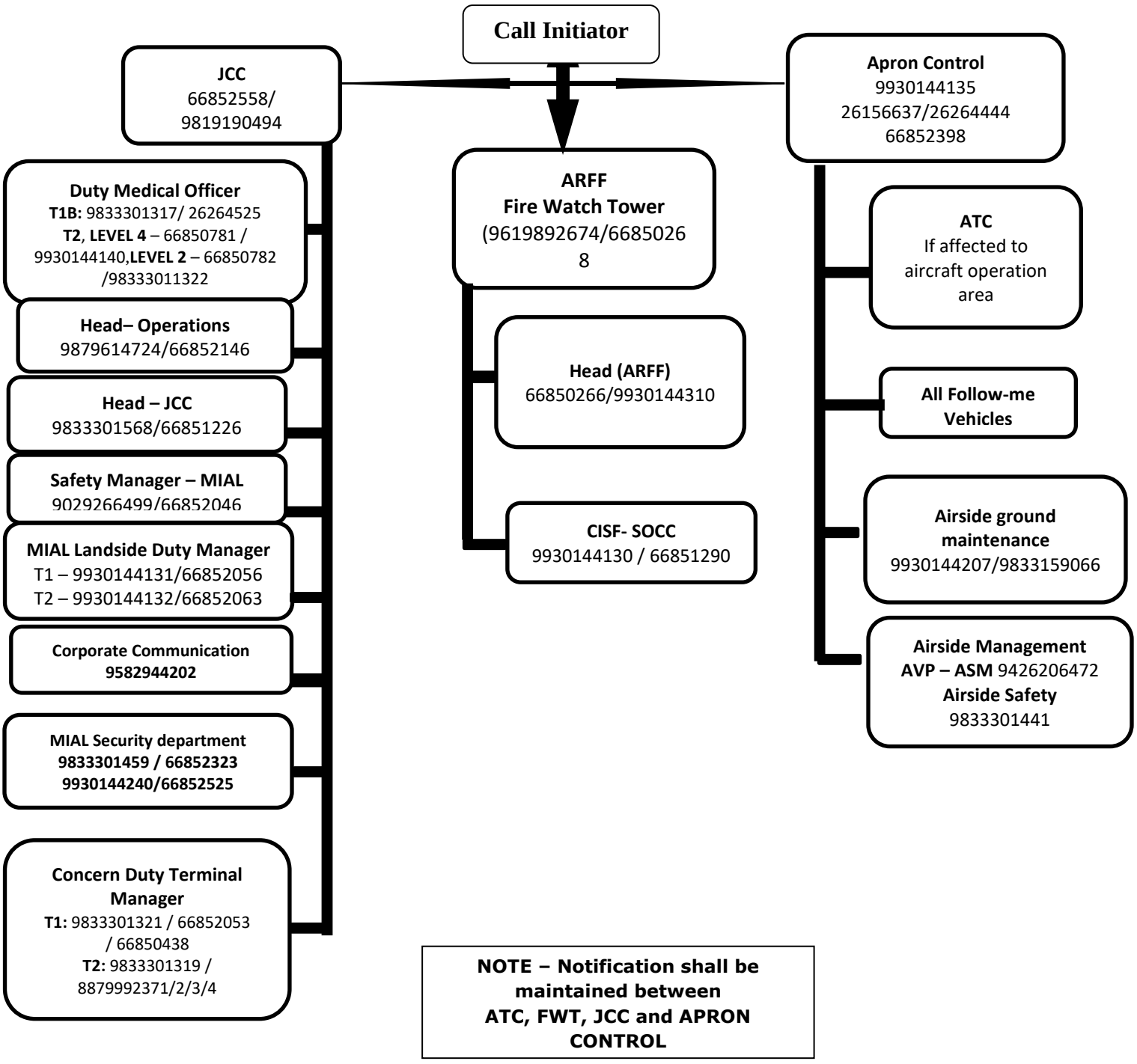


APPENDIX 18: Notification on Mass Casualty Incident

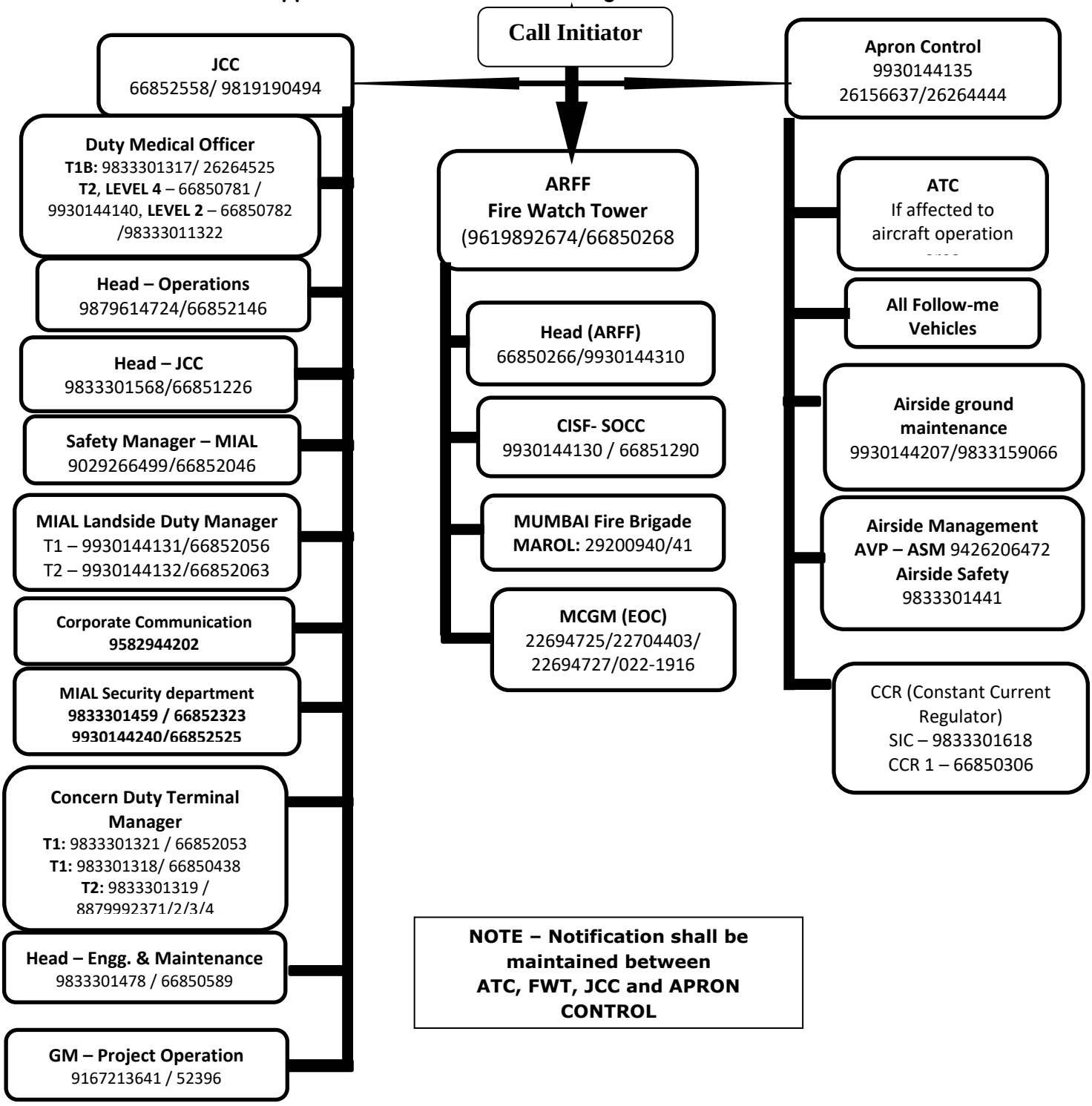


NOTE – Notification shall be maintained between ATC, FWT, JCC and APRON CONTROL

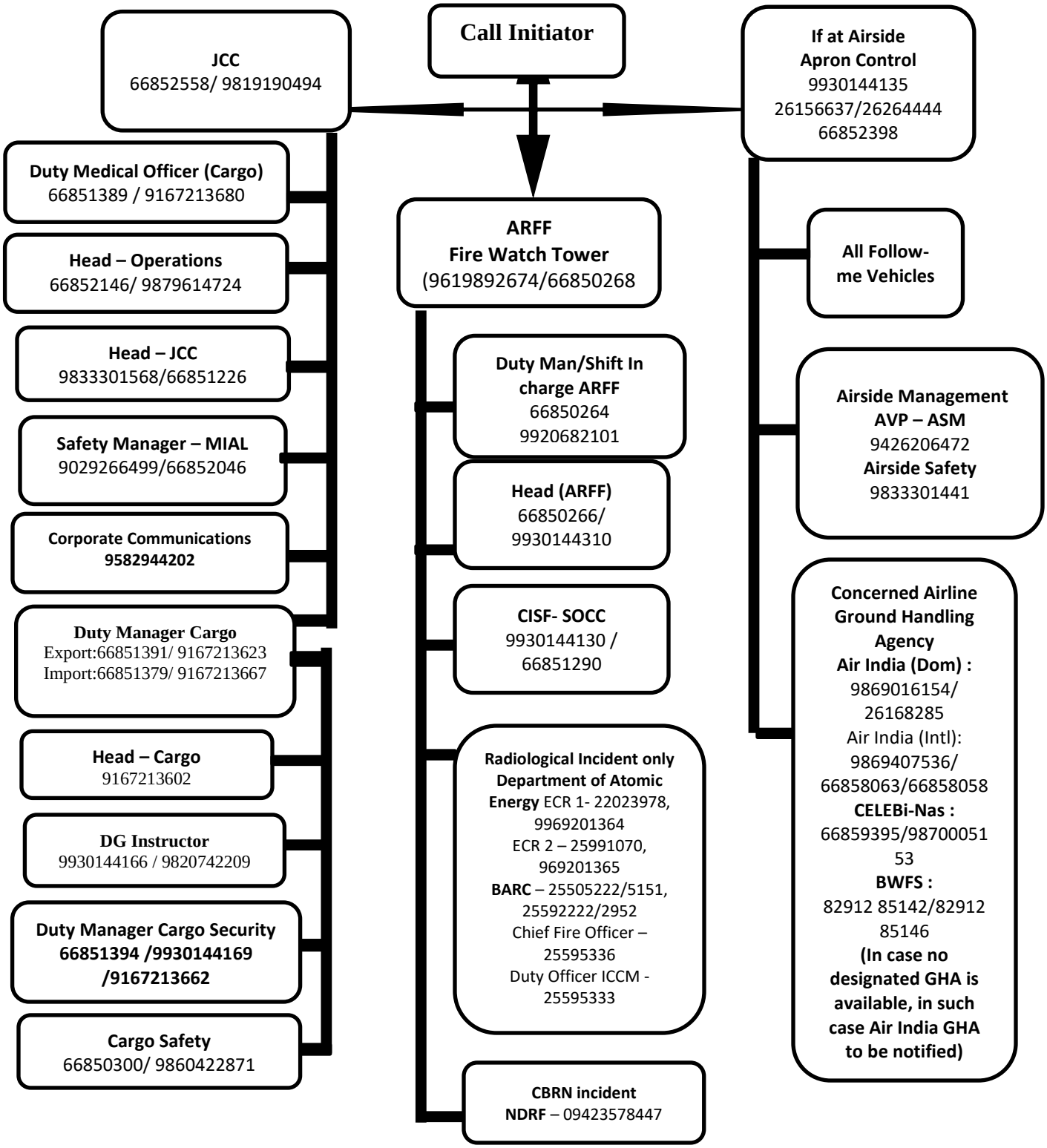
APPENDIX 19: Notification on Local Scale Natural Disaster



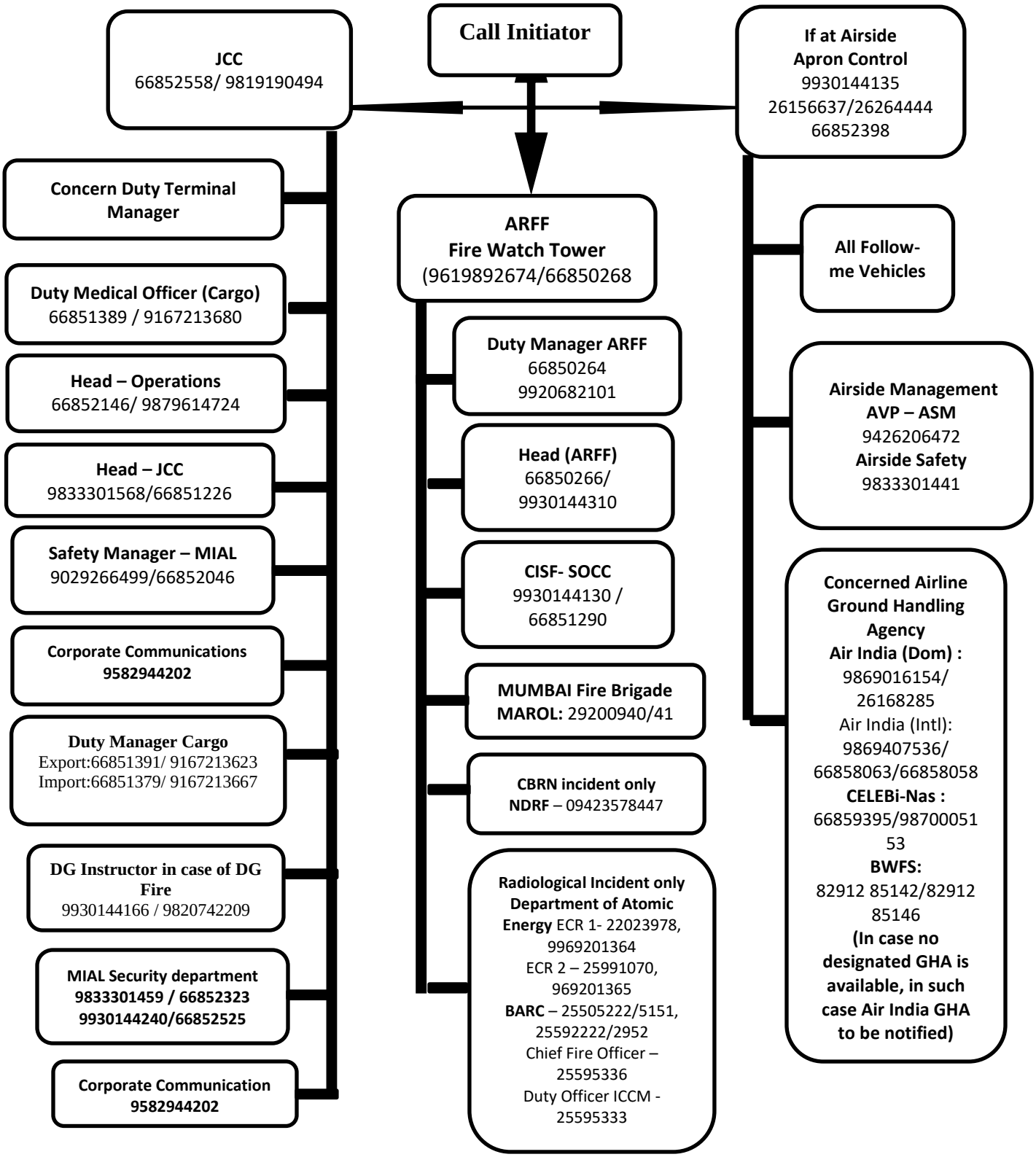
Appendix 20:Notification on Large Scale Natural Disaster



APPENDIX 21: Notification of Dangerous Goods Occurrences



APPENDIX 21 A: Notification of Fire on the Ground



Appendix 22: Facility & Equipment's for Post Incident/Accident Management

1. Facility & Equipment at Crash site

1.1 Medical Services.

1.1.1 Four Cardiac ambulances with necessary medical equipment & medicines.

1.1.2 Emergency medical bags along with AED & portable oxygen cylinders with medical team

1.1.3 Triage medical container(trunk) in Command post having following items

- Inj Dynapar AQ
- IV fluids- DNS, RL
- Disposable syringe
- I V set
- Spirit swabs
- Savalon
- Pulv Electral
- Soframycin cream
- Disposable Gloves
- Cotton
- Roller bandage
- Triangular bandage
- Scalp vein set
- Airway tube
- Crepe bandage
- Micropore
- Sterile gauze
- Nobel gel

1.1.4 Basic ambulance with ARFF contains oxygen cylinder and big First Aid box. The content of first aid box is as follows:

- Inj Dynapar AQ
- IV fluids- DNS, RL, NS
- Disposable syringe
- IV set
- Spirit swabs
- Electral sachets
- Savlon Liquid
- Soframycin cream/Betadine cream
- Cotton
- Silverex/Burnheal
- Roller bandage
- Triangular bandage
- Disposable gloves

- Scalp vein
- Airway tube
- Crepe bandage
- Micropore
- Nobel gel

2. Facility & Equipment's with ARFF

- 07 nos. Crash Fire Tender
- 01 no. Water Tender
- 01 no. Rescue Stair
- 02 nos. Small Fire tender
- 03 nos. of crash ambulances
- 04 nos. of triage tent
- 02 nos. of rescue boat
- 250 nos. of stretchers at Main Fire Station
- 250 nos. blankets at Main Fire Station
- 150 nos. bed sheets at Main Fire Station

3. Facility & Equipment's at Casualty Centre

- beds in which 2 beds are meant for Cock pit crew whose blood & urine samples will be collected
- 45 stretchers
- 50 chairs
- 2-wheel chairs
- 1 stretcher trolley
- 2 AED machines
- 2 Examination table
- 2 trunks with splints of all sizes
- Washroom facility
- Extra Medicine stock
- One Cardiac monitor
- One Nebulizer
- Oxygen cylinders
- One Oxygen Concentrator
- 2 Emergency light lamp
- Refrigerator
- Body bags for dead bodies
- 20 Resuscitation chest. Each containing following items:
- Endo tracheal tube
- Laryngoscope
- Scissor
- Airway
- IV set

- Scalp vein set
- Intracath
- 3 ways
- IV fluids D5%, DNS, RL, Haemaccel
- Micropore
- Portable oxygen cylinder
- Scalpel with blade

4. Facility & Equipment's at Survival Reception Area (SRA)

- Seating capacity – (227 + additional 100 plastic chairs will be placed) and Mattress
- Facilitation for immigrations, customs- Immigration - 5 desk, Customs – one desk
- Provision of refreshment – water/tea
- Packaged water bottles (stock kept at SRA)
- Tea/snacks will be arranged as per actual.
- Availability of blankets/ cloths for survival passengers
- Blankets/T-shirts, Track pants/ Slippers are stored at SRA.
- Telephones facilities for passengers and affected airline - Domestic/international calls

Appendix 23: Greater Mumbai District Disaster Management Plan

MUNICIPAL CORPORATION OF GREATER MUMBAI

GREATER MUMBAI DISTRICT DISASTER MANAGEMENT PLAN

2018

Greater Mumbai Disaster Management Authority
Disaster Management Department, MCGM

District Disaster Management Plan

About this Document

The Mumbai Emergency Operations Plan provides planning assumptions, emergency management policies, common operating procedures, administrative and financial policies, information on roles and responsibilities, and supplemental references (including the Emergency Support Functions) on how emergency management in Greater Mumbai is organized and managed during response operations. These assumptions, policies, procedures, and roles and responsibilities are based on MCGM and national authorities, legal authorities, as well as known flood and earthquake hazards and risks.

Prepared by
Mahesh Narvekar, Chief Officer, DM

Airport Emergency

1) What is Airport Emergency?

Airports differ in complexity, but each has unique features. Some are small, uncomplicated facilities serving a more rural environment, while others represent a good-sized community complete with industrial and commercial installations serving major metropolitan areas. Airports are operated by the local government such as a city or county; or by an Authority representing multiple local governments; and even some are operated by the State. However, one thing they all have in common is that they are all subject to emergencies.

An airport emergency is any occasion or instance, natural or man-made that warrants action to save lives and protect. An airport emergency is any occasion or instance, natural or man-made that warrants action to save lives and protects property and public health.

Virtually no airport has sufficient resources to respond to every emergency situation independently. Each airport must depend to some degree on the resources from its surrounding communities. It is essential to prepare for emergencies that face an airport in order to be able to respond quickly, efficiently and effectively. While every contingency cannot be anticipated and prepared for, a strong emergency preparedness program can assist in limiting the negative impact of these events, including liability and other post-emergency issues.

2) How vulnerable is Mumbai to Airport Emergency?

The Chhatrapati Shivaji International Airport (formerly Sahar International Airport) is the main aviation hub in the city and the busiest airport in India in terms of passenger traffic. CSIA handled traffic of 29.1 million passengers and around 670,235 tonnes of cargo in the FY 2010–2011. An upgrade plan was initiated in 2006, targeted at increasing the capacity of the airport to handle up to 40 million passengers annually. The Juhu Aerodrome was India's first airport, and now hosts a flying club and a heliport.

3) Probable disasters:

a) Aircraft incidents and Accidents: Any occurrence associated with the operation of an aircraft that takes place between the time a person boards the aircraft with the intention of flight and the time such person has disembarked, in which a person suffers death or serious injury as a result of the occurrence or in which the aircraft receives substantial damage.

Aircraft Incident. Any occurrence associated with the operation of an aircraft that is not considered and "aircraft accident."

Incident Classification System

Level 1. Accident may happen. Landing Gear Problem. A situation or emergency exists or is perceived to exist, that may result in an incident or accident. This includes situations where it is not known if an incident or accident emergency has actually occurred.

Level 2. An aircraft is known or suspected to have an operational defect that affects normal flight operations to the extent that there is danger of an accident.

Level 3. An aircraft accident has occurred on or in the vicinity of the Airport.

b) **Natural Disasters:** In the event of a natural disaster such as tornadoes, hailstorms, flooding, severe thunderstorms, high winds, or other natural disasters, the Emergency Management Plan and the Hazardous Weather Emergency Operations Plan will be followed. The IMD should be monitored to ascertain the conditions that will affect the airport.

c) **Bomb incidents:** Should anyone receive a bomb threat directed towards any airport building, structure, or an aircraft, the person receiving the call should contact 1916 immediately, and notify the Airport Director. Use the BDS (Bomb Disposal Squad), "Bomb Threat" checklist by asking the caller the following questions.

a) When is the bomb going to explode?
b) Where is it right now?
c) What does it look like?
d) What kind of bomb is it?
e) What will cause it to explode?
f) Did you place the bomb?
g) What is your address:
h) What is your name?
i) Note the exact wording of the threat.
j) What is the sex, race, and age of the caller.
k) What was the length in time of the call?
l) What was the number at which the call was received:
m) List the time and date received.
n) Was the caller's voice familiar? If so, who did it sound like:
o) Was the caller's voice calm, angry, excited, slow, rapid, soft, loud, laughter, crying, normal, distinct, slurred, nasal, stutter, lisp, raspy, deep, ragged, clearing throat, deep breathing, cracking, disguised, accent, familiar, or whispered?
p) Did you hear any background sounds?
q) Was the threat language well spoken, foul, irrational, incoherent, taped or read like a rehearsed message?

d) **Hazardous Materials Incidents:** This emergency situation involves the possible spillage of radiological or hazardous material on a commercial, military or private aircraft in flight.

e) **Structural Fires:** This emergency situation involves fires occurring at or in airport buildings such as terminals or hangars.

f) **Failure of Power for Movement Area Lighting**: This emergency situation involves failure of power for movement area lighting.

Standard Operating Procedure

ESF – I – Communication

Lead Agency: Disaster Management Unit

Before	During	After
• Conduct Coordination meetings with the representatives of Airport Authority • Update telephone numbers of all agencies • Check and maintain communication facilities • Link EOC and other control rooms with necessary communication devices • Organize a communication facility that can be transported to affected sites • Identify and rectify damaged communication facilities • Check the maintenance of equipment of private communication operators • Establish temporary communication facilities like HAM radio, mobiles, VHF, landline etc on priority wherever required • Coordinate with other ESFs as p[illegible]rocedures for restoration of communication	• Receive and process disaster alerts and warnings from nodal agencies and other sources and communicate the same to all designated authorities and stakeholders. • Facilitate coordination among primary and secondary ESF Departments/Agencies • Provide regular updates & coordinate with support agency staff, other ESFs and higher authorities • Monitor emergency operations • Perform such other functions and duties as may be entrusted by Chief Officer, Disaster	• Maintain records containing all relevant information relating to action points and contact points • Conduct debriefing meetings with all agencies • Prepare an After Action Report to identify lessons learnt and improvements needed

ESF – 2 – Public Safety Law & Order

Lead Agency: Mumbai Police

Before	During	After
• Conduct a mock drill for the law & order situation during Aircraft emergency • Arrange First Responder Training for Police personnel • Keep rescue ropes & other lifesaving material ready • Coordinate with public and private sector establishment for protecting critical infrastructure and telecommunication system • Identify alternative routes for traffic in aircraft emergency area • Undertake any other activity considered necessary	• On receipt of an emergency call, operationalize level activation based on nature and severity of incident • The Lead agency representative will reach the EOC at the earliest and take briefings and updates about the incident from the EOC staff • Assess the available resources and determine the need for additional resources • Provide extra police personnel at traffic diversions • Provide information about traffic flow to the public through media, public address system, sign boards and display boards • Transport / Shift stranded or affected persons through Police and other vehicles • Organise towing of stranded vehicles if any with the help of volunteers • Maintain a log of reports / action taken, needs and capabilities • Undertake any other activity as per site condition	• Maintain records containing all relevant information relating to action points and contact points • Prepare an After Action Report to identify lessons learnt and improvements needed

ESF – 3 – Fire Fighting

Lead Agency: Mumbai Fire Brigade

Before	During	After
• Train newly recruited officers and firemen • Prepare plans for the utilization of resources, personnel, equipment and supplies in the most effective manner • Repair and maintain ancillary equipment • Conduct Training and Refresher Courses for Rescue Teams. • Keep fire stations and Regional Command Centers fully equipped with manpower and machinery • Keep communication devices in a state of readiness • Conduct mock drills, awareness programs etc. • Undertake any other activity as per site condition.	• On receipt of emergency call, operationalize level of activation depending on the nature and severity of the incident. • Determine needs and available resources. • Dispense resources required based on need and augment men and machinery if necessary. • Locate the incident command post and staging areas appropriately • Direct operations from a safe distance and ensure ability to escape. • Ensure safety from electrical installations or power supply at the disaster site. • If required establish communication from the incident site with other tactical operators • Monitor activities and regularly update support agencies • Organise rescue, evacuation and salvage operations. • Transport injured persons to hospitals.	• Maintain records containing all relevant information relating to action points and contact points • Prepare an After Action Report to identify lessons learnt and improvements needed

ESF – 4 – Search & Rescue

Lead Agency: Mumbai Fire Brigade

Before	During	After
• Train newly recruited officers and firefighters in basic search & rescue operations. • Prepare a plan to utilize resources of personnel, equipment, and supplies in the most effective manner. • Repair and maintain rescue Equipment. • Conduct Training and Refresher Courses for Search & Rescue Teams. • Keep fire stations and Regional Command Centers fully equipped with manpower and machinery for Search & Rescue. • Keep communication devices in a state of readiness. • Recce disaster prone areas along with other agencies. • Conduct mock drills, awareness programs etc. • Undertake any other activity required.	• The Lead Agency representative will establish operations at the EOC as soon as possible after the notification of the disaster and implement existing SOPs. • Operationalize level of activation depending on the nature and severity of the incident • Determine needs and available resources. • Locate incident command post and staging areas appropriately. • Direct operations from a safe distance, with capability of escape. • Augment men and machinery if necessary • Establish communications from the incident site with other tactical operations, and EOC • Monitor activities and update support agency staff. • Transport injured persons to hospitals. • Shift victims to temporary shelters as per requirement.	• Maintain records containing all relevant information relating to action points and contact points • Prepare an After Action Report to identify lessons learnt and improvements needed

ESF – 5 – Transport

Lead Agency: Transport Commissioner

Before	During	After
• If required prepare alternate transport arrangement plan in consultation with Supporting Agencies. • Coordinate operations as directed by the MCGM EOC for the maintenance and repair of primary transportation Infrastructure throughout Mumbai. • Provide and assign emergency transportation resources to the requesting organizations. • Update information of available transportation and resources owned in and around Mumbai.	• The Lead Agency representative will establish operations at the EOC as soon as possible after notification of the disaster. • The lead agency representative reaches EOC he will take briefings and updates about the incident from the EOC staff. • Monitor activities and update support agency staff. • Determine transportation needs and available resources. • Establish and maintain public transportation and resources. • Disseminate updated information to passengers through Public Address System. • Organize transportation of sick or injured persons in need of medical attention. • Maintain a log of actions taken, reports, and transportation resources needed along with the capacity and capabilities.	• Prepare an After-Action Report to identify lessons learnt and improvements needed.

ESF – 6 – Public Health & Sanitation.

Lead Agency: Executive Health Officer, MCGM

Before	During	After
• Arrange training programmes for Doctors, Paramedical Staff to handle mass casualty. • Conduct coordination meetings with private & public sector hospitals, dispensaries, medical institutions, blood banks, ambulance services etc. • Assess need for additional clinical services and staff. • Stock emergency drugs, surgical equipment, potable water, food packets, insecticides etc. • • Reserve beds in hospitals. •	• The Lead Agency representative will establish operations at EOC on notification of the disaster and take briefings. • Assess the situation, forecast public health & sanitation response needs. • Deploy medical teams on site for emergency medical support. • Provide technical assistance to the EOC and validate requests for medical services. • Establish communication with other ESFs and provide technical assistance on public health and sanitation. • Validate requests from affected areas for public health and sanitation resources. • Provide reports to the EOC & anticipate future public health & sanitation requirements. • Deploy emergency medical teams where people cannot be shifted from the site. • Provide medicines, water and food in temporary shelters. • Liaise with secondary & tertiary medical institutions for care of critically wounded. • Liaise with local blood banks and ambulance services. • Establish temporary morgue facilities & coordinate with police for early disposal of dead.	• Compile information about injured & deaths • Prepare an After-Action Report to identify lessons learnt and improvements needed.

ESF- 7- Coordination for Resource Management

Lead Agency: Disaster Management Unit

Before	During	After
• Locate, procure, and issue resources to other support agencies for use in emergency operations necessary to support the emergency response or to promote public safety. • Locate the required resources in the community • Locate and coordinate the use of available space disaster management activities. • Procure required stocks from vendors or suppliers when items are not readily available. • Coordinate the procurement of various equipment in coordination with respective ESF. • Identify resources that are not available locally and find their nearest location. • Participate in exercises and drills to train personnel in the proper allocation of resources, and procedural arrangements. • Analyse the potential of the emergency situation to know what types of resources would be needed. • Coordinate activities with other response agencies to ensure a coordinated and efficient allocation of resources.	• The Lead Agency representative will establish operations at the EOC as soon as possible after the notification of the disaster. • The Lead Agency representative will receive and give briefings and updates about the incident from the EOC staff. • Update Support Agency staff and monitor activities. • Assess the impact of the disaster on the community. • Determine needs and available resources. • Establish priorities and allocate resources after activation. • Report on status and actions taken, to the EOC staff. • Protect resources from possible damage resulting from the disaster. • Secure a workable location for the storage and distribution of goods and services required during the disaster. • Develop lists of resources not available locally. • Coordinate resource requirements and requests of other ESF. • Work closely with other ESF's to minimize duplication of efforts. • Commit all local resources assistance requesting from neighboring jurisdictions or upper levels of government. • Maintain complete log of actions taken and report on needed resources along with their capacities and capabilities.	• Review damage assessment and make an estimate of resources needed for recovery. • Prepare an After-Action Report to identify learnt and improvements

ESF – 8 – Information Management

Lead Agency: Public Relations Officer

Before	During	After
• Update list of public information media (print, radio and TV). • Participate in Mock Drills, Table Top exercises	• The representative of the Lead Agency will establish operations at the EOC as soon as possible after notification and activation. • The Lead Agency representative will give and receive briefings and updates about the incident from the EOC staff. • Disseminate evacuation information to the affected people through media. • Provide mass notifications to the populace and provide periodic media updates. • Organize a press briefing in EOC as appropriate. • Maintain a log of actions taken, reports of resources needs and capabilities.	• Continue public information activities and update citizen on recovery efforts. • Prepare an After-Action Report to identify lessons learnt and improvements needed.

ESF – 9 – Mass Care, Housing and Human Services

Lead Agency: Education Officer, MCGM

Before	During	After
• Identify adequate and appropriate shelters in each ward. • Ensure functionality & stability of shelters. • Identify clear open spaces close to traffic and transport links for setting up relief camps. • Enter into a contract with the Civil Suppliers for immediate arrangement of food and relief materials during a crisis. • Ensure coordination of activities related to emergency provisions of temporary shelters, emergency mass feeding and bulk distribution of relief supplies to the disaster victims, disaster managers and relief workers. • Develop alternate arrangements of shelter for population living in structures that might be affected after the disaster.	• The Lead Agency representative will establish operations at the EOC immediately after notification of the disaster. • The Lead Agency representative will take briefings and updates about the incident. • Provide technical assistance to the EOC and validate requests for mass care resources. • Assess the disaster situation and determine mass care response needs. • Coordinate disaster response operations through identified nodal officer in respective wards. • Locate adequate relief camps based on damage assessment. • Coordinate shifting of population from affected sites to safe sites. • Alert schools for shelter readiness. • Provide adequate and appropriate shelter to the affected population. • Make emergency food supplies available to the affected population. • Assess the disaster situation and determine the adequacy of mass care response activities. • Provide reports to the EOC response structure and anticipate future mass care requirements. • Provide technical assistance to the other agencies providing mass care.	• Prepare an After-Action Report to identify lessons learnt and improvements needed

ESF – 10 – Relief Supplies

Lead Agency: Collector

Before	During	After
• Review and revise the plan on an annual basis or as needed. • Identify suppliers of relief materials. • Coordinate procurement and allocation of relief supply. • Coordinate and liaise with the Support Agencies.	• The Lead Agency representative will establish operations at the EOC as soon as possible after the notification of the disaster. • The Lead Agency representative will receive and give briefings and updates about the incident to the EOC staff. • Update Support Agency staff and monitor activities. • Assess relief supply needs and available resources. • Coordinate to receive stock and distribute relief supplies within the laid down guidelines. • Coordinate relief supplies for mass care and medical facilities. • Appeal to the public to cooperate with emergency relief supply measures. • Requisition to organizations for required personnel and support to achieve the required level of response. • Oversee distribution of relief supply of food and other essential supplies. • Maintain a log of actions taken, reports, and transportation resources needs and capabilities.	• Prepare briefings on status of response operations. • Compile and maintain the information of relief supply and submit these to ESF Coordination for Resource Management upon request. • Prepare an After-Action Report to identify lessons learnt and improvements needed.

ESF – 11 – Energy (Power, Fuel & Gas)

Lead Agency: Brihanmumbai Electric Supply & Transport Undertaken

Before	During	After
• Serve as the focal point for issues and policy decisions related to energy in all response and restoration efforts. • Monitor energy system likely to be damaged during a disaster and in need of repair work. • Provide separate lines and separate sources of power for critical substations. • Collect, assess, and provide information on energy supply and demand. • Identify resources needed to restore energy systems. • Train staff to attend to emergencies. • Ensure sufficient stocks of essential spares such as cables. • Conduct awareness programmes for consumers. • Undertake any other activity as per site condition.	• The Lead Agency representative will establish operations at the EOC as soon as possible after the notification of the disaster. • The Lead Agency representative reaches EOC, will receive and give briefings and updates to EOC staff. • Update Support Agency staff and monitor activities. • Determine needs and available communication means. • Deploy emergency response teams as needed to affected area(s) to assist in response and restoration efforts. • Switch off power supply if necessary. • Officers at site to coordinate with fault engineers and mains engineers. • Maintain a log of actions taken, reports of communication resource needs and capabilities	• Prepare an After-Action Report to identify lessons learnt and improvements needed

ESF – 12 – Utility Services

Lead Agency: Deputy Municipal Commissioner (Special Engineering), MCGM

Before	During	After
• Maintain liaison with local utilities and provide 24-hour emergency contact information including critical personnel, emergency chain of command, and notification procedures. • Identify the needs and appropriate responses and facilitate interactions between different utilities during an emergency. • Appoint additional contractual labour as per requirement.	• The Lead Agency representative will establish operations at the EOC as soon as possible after notification of the disaster. • The Lead Agency representative will receive and give briefings and updates to the EOC staff • Update support agency staff and monitor activities • Determine needs and available resources.	• Prepare an After-Action Report to identify lessons learnt and improvements needed.

ESF – 13 – Public Works & Infrastructure

Lead Agency: Director, Engineering Services & Special Project, MCGM

Before	During	After
• Assess gaps in equipment support before any disaster. • Prioritise equipment to be used during disasters. • Keep a log of safety of buildings and structures. • Coordinate training of engineers on damage assessment and restoration. • Maintain flyovers, subways, bridges and allied structures. • Keep tools in working condition. • Appoint staff & vehicles to attend the emergency • Provide names & contact numbers of officers to EOC who deployed on emergency vehicles. • Conduct awareness programmes for the population resides near refineries	• Lead Agency representative will establish operations at EOC immediately after notification of the disaster. • Lead Agency representative reaches EOC, will receive and give briefings and updates about the incident from to EOC staff. • Establish communication with other ESFs. • Provide communication facility at disaster site. • Assess disaster situation and determine public works & infrastructure response needs. • Validate requests for public works and infrastructure resources from affected area through EOC. • Provide technical assistance to EOC and public works and infrastructure agencies • Provide reports to the EOC on response structure and anticipate future public works and infrastructure requirements. • Provide for emergency clearance of debris to enable reconnaissance. • Provide alternative routes if necessary. • Restore infrastructure like health centers, schools, important buildings, roads, drainage etc.	• Restore all damaged infrastructure. • Prepare an After-Action Report to identify lessons learnt and improvements needed.

ESF – 14 – Oil & Hazardous Materials

Lead Agency: Director, Industrial Safety & Health

Before	During	After
• Organize mock drills, table top exercise for MARG group, fire personals & other staff. • Prepare & update inventory of resources available with government as well pvt agencies like HPCL, BPCL, IOL etc. • Prioritise equipment to be used during disasters.	• Lead Agency representative will establish operations at EOC immediately after notification of the disaster. • Lead Agency representative reaches EOC, will receive and give briefings and updates about the incident from to EOC staff. • Establish communication with other ESFs. • Deployment of personnel and resources will take place within the framework of the EOC direction and control decision-making process. • Update support agency staff and monitor activities. • Determine response needs and available resources. • Coordinate with EOC for need of decontamination and decontamination activities; • seek cooperation of response teams, owner/shipper and environmental personnel during clean-up operations. • Provide area security and prohibit unauthorized personnel from area with assistance from ESF Public Safety and Law &Order. • Determine with the help of appropriate agencies guidelines for re-entry of emergency personnel & residents. • Conclude clean-up operations when the area is declared safe by responsible personnel. • If necessary communicate directly with media/public on tactical operations and matters affecting public health and safety from the scene of an incident • Maintain log of actions taken, reports, resources needs and capabilities.	• Prepare an After-Action Report to identify lessons learnt and improvements needed.

Dos and Don'ts

- Follow instructions and pay attention to notices or announcements.
- Take extra care of children, women and the elderly.
- Contact staff on duty immediately if you see anything suspicious.
- Use emergency and safety equipment only in case of emergency. Any misuse causing damage will result in legal action against the offender.

Don'ts

- Smoke; carry inflammable materials, hazardous chemicals or animals.
- Push or play on the Airport.
- Cause damage to Airport property. It may lead to prosecution.

Revision History

Date	Revision No	Page No	Description
27/06/2022	Re-issue	All	1. Periodicity defined to review contact details. 2. Drone related incidents added in chapter No. 7 3. Primary and Secondary responsibilities identified for each role. 4. Procedural changes made to comply with the observations of FSAEE-2021 and DGCA Surveillance audit – Feb, 2022