



## ADITYA ENVIRONMENTAL SERVICES PVT. LTD.

Testing Laboratory is certified by ISO 9001:2015 & ISO 45001:2018

Recognized by MoEFCC as "Environmental Laboratory" valid up to 24.04.2025

Laboratory: P-1, MIDC Mohopada, P.O. Rasayani, Dist. Raigad Pin 410222

Tel: 9112844844, CIN: U74999MH2001PTC132091 UDYAM-MH-19-0029787

### Monitoring Period: March 2025

#### Purpose:

The objective of the monitoring is to understand the Ambient Air quality, Ambient Noise quality, Ground water quality at Navi Mumbai International Airport site and nearby villages.

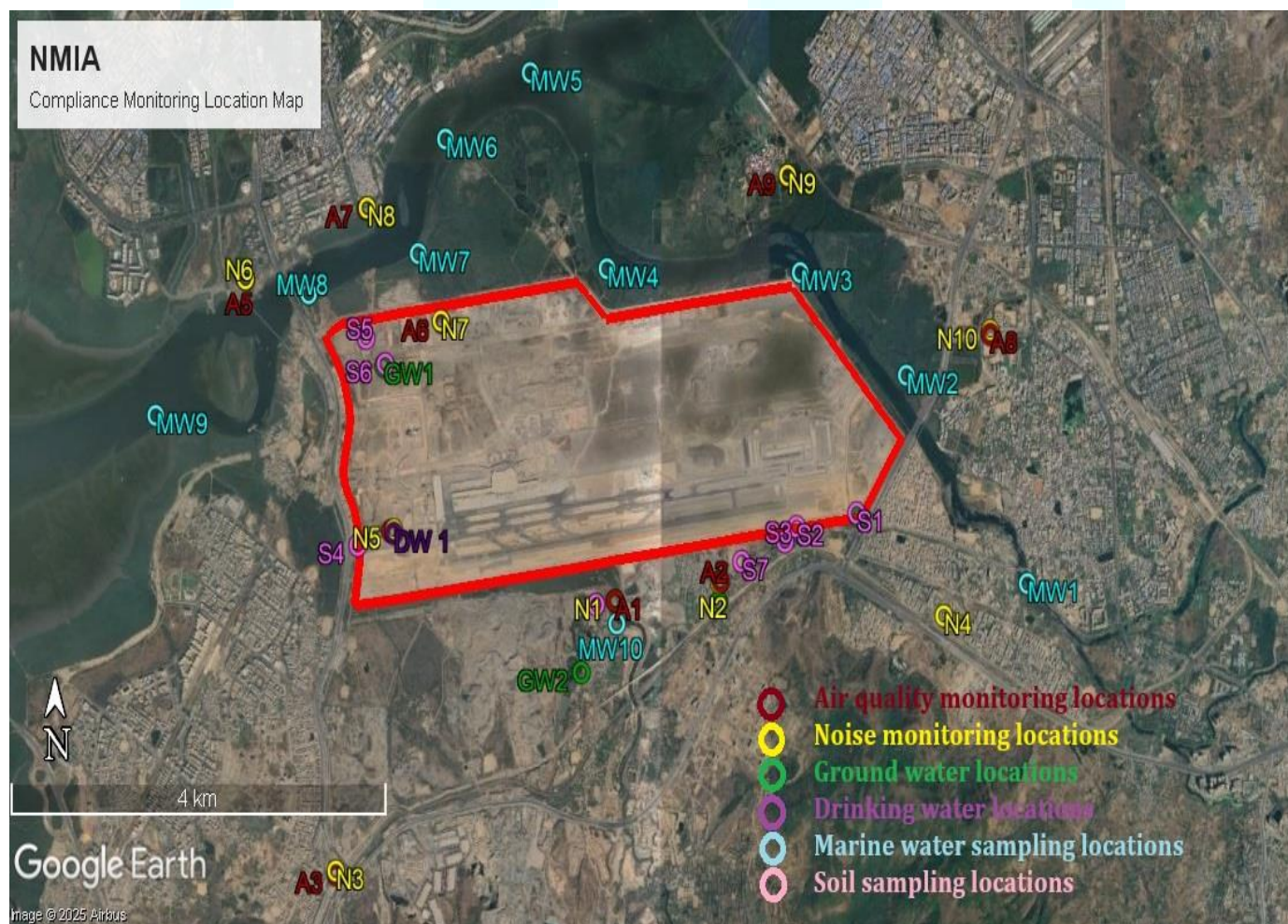
**Location of site:** Navi Mumbai International Airport, At Ulwe, Panvel Taluka, Raigad District, Maharashtra.

#### Scope:

The scope of work includes:

Assessment of the present status of following components of environment:

- Ambient Air monitoring at 9 locations
- Ambient Noise monitoring at 10 locations
- Ground water monitoring at 4 locations.
- Drinking water monitoring at 1 location
- Soil sample monitoring at 8 locations
- Marine Water monitoring at 10 locations





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### Analysis Data: Ambient Air monitoring

<b>Monitoring Dates &amp; Duration</b>	:	10 <sup>th</sup> March 25 to 13 <sup>th</sup> March 25; 24 hourly monitoring.
<b>Analysis Dates</b>	:	10 <sup>th</sup> March 25 to 19 <sup>th</sup> March 25
<b>Locations covered</b> (AAQ 9 Locations)	:	Owale, Pargaon, Ulwe node, NMIA Project site, Kille Gavthan, L&T Project Office, Diwale Koliwada, Jui & Panvel.
<b>Parameters covered for AAQ</b>	:	12 Parameters as per National Ambient Air Quality Standards (NAAQS) 2009.

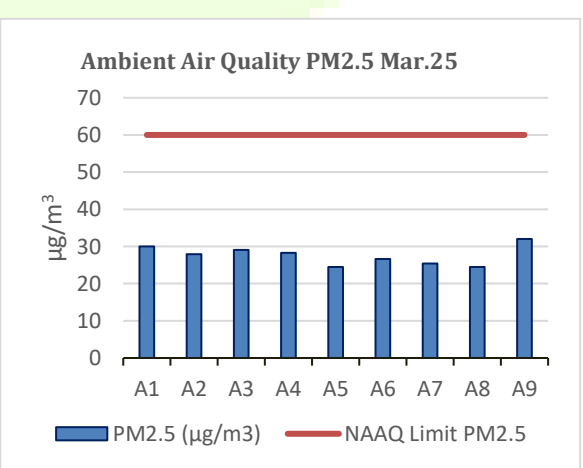
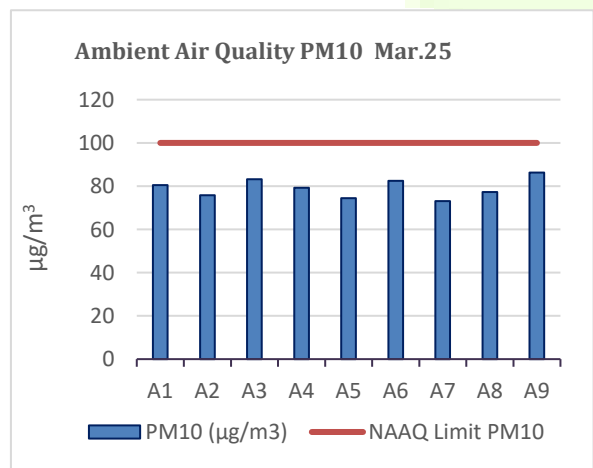
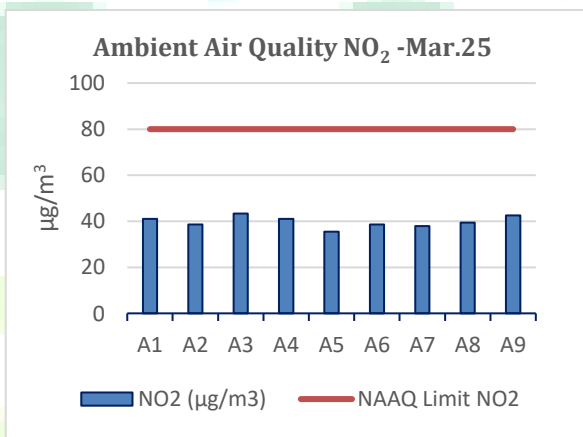
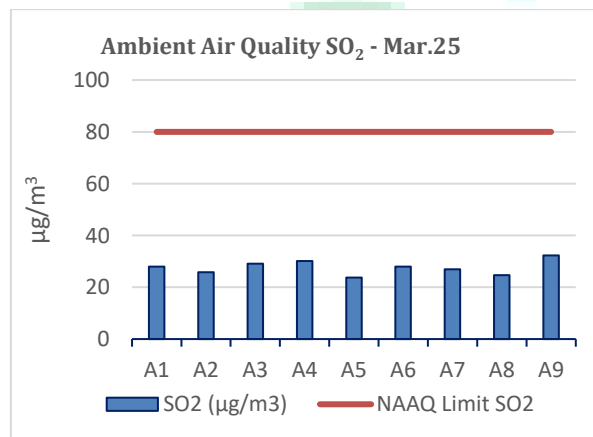
Analysis values except SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, Ozone, NH<sub>3</sub> and CO at all 9 locations are found below detection levels (BDL).

Sr. No.	Parameter	Result	Limits as per NAAQS 2009	Unit
1.	Benzo(a) pyrene	< 0.5	01 ***	ng/m <sup>3</sup>
2.	Lead as Pb	< 0.5	1.0 *	µg/m <sup>3</sup>
3.	Nickel as Ni	< 5.0	20 ***	ng/m <sup>3</sup>
4.	Arsenic as As	< 5.0	06 ***	ng/m <sup>3</sup>
5.	Benzene [C <sub>6</sub> H <sub>6</sub> ]	< 0.2	05 ***	µg/m <sup>3</sup>

[\*] 24 hourly monitoring values; [\*\*\*] annually monitoring values.

**Conformity Statement:** The monitoring undertaken indicates that Ambient Air Quality Values for monitored parameters are within the levels stipulated under National Ambient Air Quality Standards (NAAQS) 2009 for all 9 locations.

### Analysis Data for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, Ozone, NH<sub>3</sub> and CO





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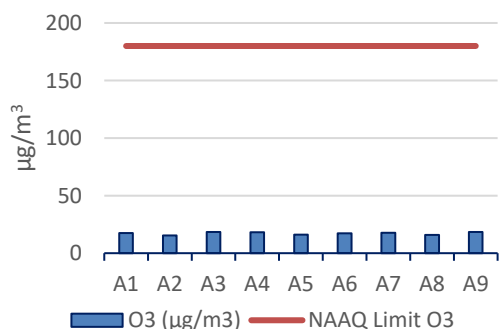
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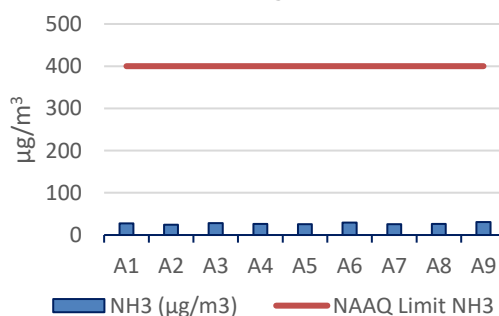
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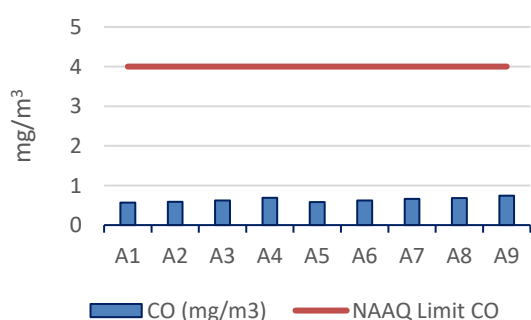
**Ambient Air Quality O<sub>3</sub> - Mar 25**



**Ambient Air NH<sub>3</sub> - March 25**



**Ambient Air Quality CO - Mar.25**



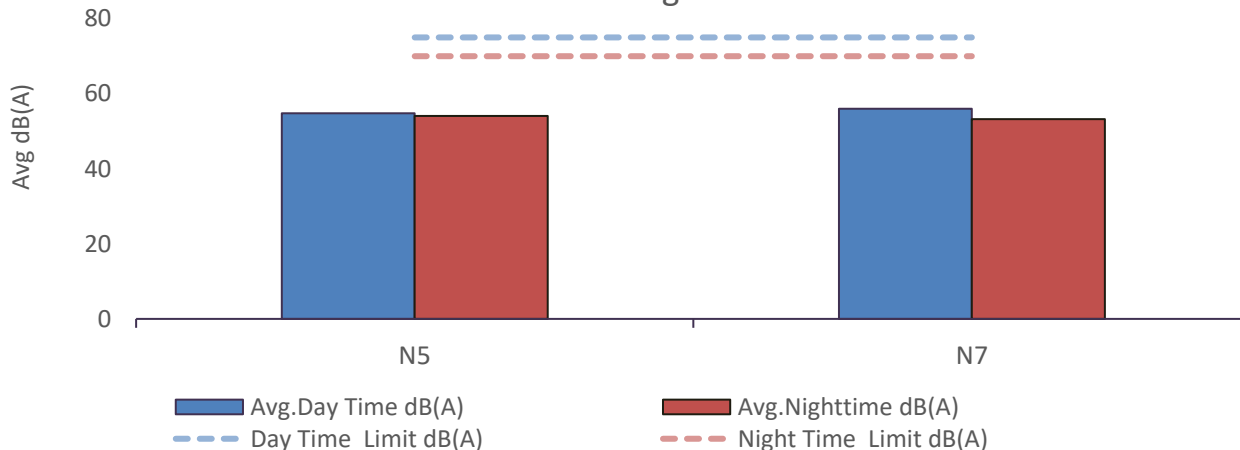
Location Code	Name of the Location
A1	Owale
A2	Pargaon
A3	Ulwe Node
A4	NMIA Project Site
A5	Kille Gavthan
A6	L&T Site Office
A7	Diwale Koliwada
A8	Panvel
A9	Jui

### • Ambient Noise

<b>Monitoring Dates &amp; Duration</b>	:	10 <sup>th</sup> March 25 to 13 <sup>th</sup> March 25; 24 hourly monitoring
<b>Locations covered (10 Locations)</b>	:	Owale, Pargaon, Ulwe node, NMIA Project site, Kille Gavthan, L&T site Office, Diwale Koli Wada, Jui, Panvel & Karanjade

### Industrial Area: Noise Location

**Noise Monitoring-Mar-25**





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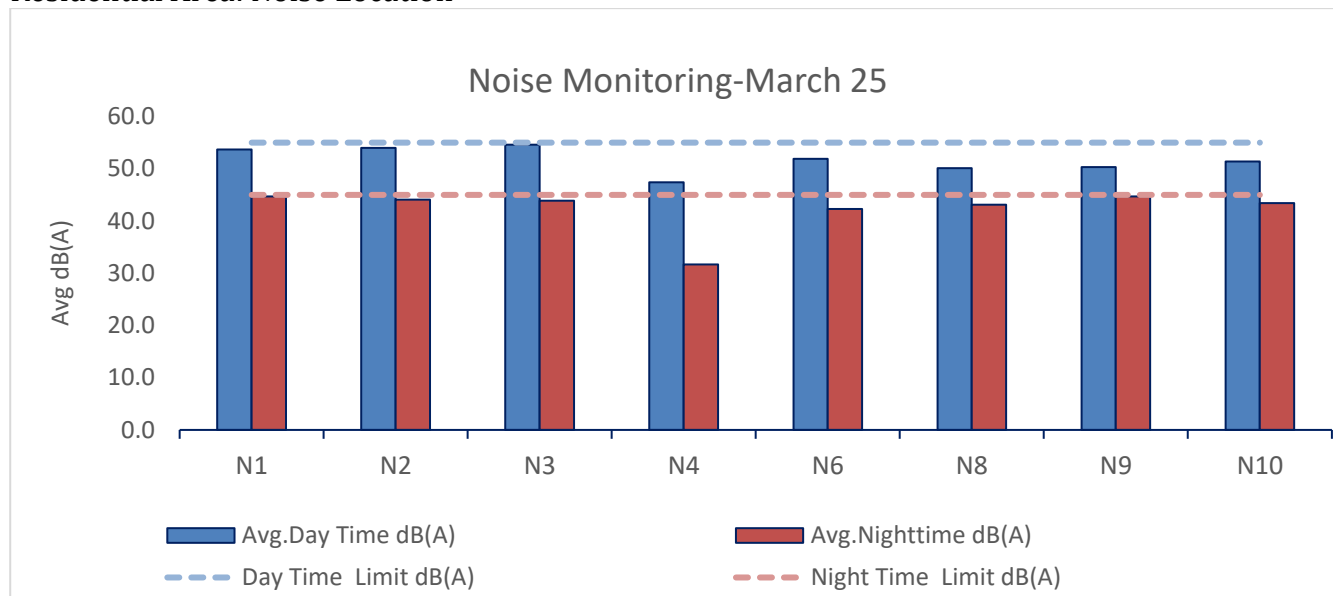
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### Residential Area: Noise Location



Location Code	Name of the Location	Noise Levels dB (A)			
		L-day	L-night	Leq Day	Leq Night
Industrial Zone					
N5	NMIA Project Site	54.8	54.1	54.7	54.0
N7	L&T Site Office	56.0	53.2	56.3	52.9
Residential Zone					
N1	Owale	53.7	44.7	54.6	44.9
N2	Pargaon	54.0	44.1	53.6	44.1
N3	Ulwe Node	54.6	43.9	55.5	44.0
N4	Karanjade	47.4	31.7	51.7	31.7
N6	Kille Gavthan	51.9	42.3	54.3	42.3
N8	Diwale Koliwada	50.1	43.1	54.2	42.9
N9	Jui	50.3	44.7	49.9	44.9
N10	Panvel	51.4	43.4	53.7	42.9

Sr. No.	Sources	Noise Levels dB (A)	
		Leq Day	Leq Night
	limits as per EPA Standard		
1.	Rural/Residential Zone (R)	55.0	45.0
2.	Commercial Zone (C)	65.0	55.0
3.	Industrial Zone (I)	75.0	70.0
4.	Silence Zone (S)	50.0	40.0

**Conformity Statement:** Noise Levels at all the locations were within the stipulated limits as per EPA Standard for Industrial & Residential Areas.



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- Ground & Drinking Water**

<b>Monitoring Dates</b>	:	10 <sup>th</sup> March 25
<b>Analysis Dates</b>	:	10 <sup>th</sup> March 25 to 18 <sup>th</sup> March 25
<b>Locations covered</b> (5 Locations)	:	Dug well water at Kombadbhuje, Owale, Dapoli & Chinchpada & Drinking water at NMIA Project Office.
<b>Parameters covered</b>	:	59 Parameters as per IS 10500:2012 Drinking water Specification (Except Radioactive materials).

<b>Sampling Code</b>	<b>Name of the Location</b>
GW - I	Open well at Kombadbhuje (Depth of water 20 Feet)
GW - II	Open well at Owale (Depth of water 5.0 Feet)
GW - III	Open well at Dapoli (Depth of water 9.0 Feet)
GW - IV	Open well at Chinchpada (Depth of water 5.0 Feet)
DW1	Tap Water – NMIA Project Office

**Conformity Statement:** All Ground water samples are **Pass** as per IS 10500:2012 w. r. t. Chemical analysis & **Fail** for Microbiological analysis. Drinking water sample is **Pass** as per IS 10500:2012 w. r. t. chemical & Microbiological analysis.

- Soil Samples**

<b>Monitoring Dates</b>	:	10 <sup>th</sup> March 25
<b>Analysis Dates</b>	:	11 <sup>th</sup> March 25 to 18 <sup>th</sup> March 25
<b>Locations covered</b> (8 Locations)	:	Soil samples at Ulwe, Koli, Kopar, Kombadbhuje, Pargaon, NMIA project office, Chinchpada, Owale.
<b>Parameters covered</b>	:	27 Parameters: pH, Texture class, organic carbon, Electrical Conductivity, Available nitrogen, Available phosphorus, Available K, S <sub>04</sub> , Chloride, Calcium, Magnesium, Fe, Mn, Cu, Hg, Cd, As, Pb, Zn, Al, Ni, Co, Cr, Na, Class

<b>Sampling Code</b>	<b>Name of the Location</b>
S1	Chinchpada
S2	Koli
S3	Kopar
S4	Ulwe
S5	NMIA project Office
S6	Kombadbhuje
S7	Pargaon
S8	Owale

**Conclusions:** The classification of soil in the study area is mostly clay. The pH in the soil is neutral in nature. As per the results we can infer that the soils have medium phosphorus content and very less quantity of potassium in the collected samples.



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### • Marine water

<b>Monitoring Dates</b>	:	13 <sup>th</sup> March 25 & 15 <sup>th</sup> March 25
<b>Analysis Dates</b>	:	13 <sup>th</sup> March 25 to 21 <sup>st</sup> March 25
<b>Locations covered (10 Locations)</b>	:	Marine water at Extreme End of Gadhi River, Near Chinchpada Village, Near Jui Village, at Junction Ulwe & Gadhi River, Near Vaghivali River, Near CBD Belapur, Near Vaghivali Creek Junction, Near Rathi Bandar in Panvel creek, Mouth of Panvel Creek, Ulwe River near Ulwe Village.
<b>Parameters covered (chemical)</b>	:	26 Parameters: pH, Temperature, Turbidity, EC, Salinity, DO, BOD, COD, Magnesium, hardness, Alkalinity, Chloride, Sulphate, Fluoride, Sodium, Potassium, total nitrogen, Total phosphorus, Phenol. Fe, Zn, Mg, Mn, Cd, Cr, Hg, Pb
<b>Parameters covered (Biological)</b>	:	Phytoplankton, Zooplankton, Chlorophyll, Diversity Indices of Phytoplankton, Diversity Indices of Zooplankton, phaeophytin
<b>Parameters covered (Microbiological)</b>	:	Coliform by MPN

Sampling Code	Name of the Location
MW1	Extreme end of Gadhi River
MW2	Near Chinchpada village (2 km from W1) in Gadhi River
MW3	Near Jui Village (1.8 km from W2) in Gadhi River
MW4	At Junction of Ulwe and Gadhi Rivers (1.8 km from W3) in Gadhi River
MW5	Near Vaghivali village (2 km from W4) in Gadhi River
MW6	Near CBD Belapur (1.2 km from W5) in Panvel Creek
MW7	Vaghivali Creek Junction (800m from W6) in Gadhi River
MW8	Near Rathi Bunder in Panvel Creek
MW9	Mouth of Panvel Creek
MW10	Ulwe River Near Ulwe Village

**Conclusions:** The pH in the water samples were observed to be neutral. The marine environment is moderate around NMIA and supports life in it which is evident from studies of Phytoplankton, zooplankton and Benthic organism. Phosphates, & Phenols are within the expected range.

*Himani*

**Himani P. Joshi.**  
(Report Reviewed By)



*R. S. Patil*

**Reshma S. Patil.**  
(Authorized Signatory)

-End of Test Report-