

AHMEDABAD AIR POLLUTION CONTROL ACTION PLAN



HARDIK SHAH
MEMBER SECRETARY
GUJARAT POLLUTION CONTROL BOARD

Ahmedabad Air Pollution Control Action Plan Background

- In 2001-02, the Hon'ble Supreme Court had identified sixteen cities of India including Ahmedabad as highly polluted
- Directed the MoEF to have the action plans prepared
- GoG prepared an action plan and submitted to the MOEF in 2002
- The Environment Pollution (Prevention & Control) Authority (EPCA) constituted under directions of Hon'ble Supreme Court of India by the MoEF, GoI under the Chairmanship of Shri Bhure Lal
- GPCB updated the Air Pollution Control Action Plan for Ahmedabad city in 2004 and submitted this plan to EPCA
- GoG constituted Task Force headed by Chief Secretary to review the progress of implementation of this action plan

Ahmedabad Air Pollution Control Action Plan

Background

- Through the implementation of the Air Pollution Control Action Plan, it has been possible to bring down air pollution in the city of Ahmedabad significantly in terms of RSPM (Respirable Suspended Particulate Matter)
- As per year 2001 data, Ahmedabad was 4th most polluted city in India as identified by Hon^{ble} Supreme Court
- Ranking of Ahmedabad improved to 13th in year 2005, 43rd in year 2006 and 66th in year 2009

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Achievements

As On June– 2011

■ Total vehicles on CNG	107024
■ CNG Auto Rickshaws	72937
■ AMC/AMTS	
■ CNG Buses on road	557
■ Ordered- feeder buses	650
■ low floor Euro-III buses	50
■ GSRTC - CNG buses	155
(Entire fleet on Ahmedabad-Gandhinagar route is on CNG buses)	
■ CNG stations -	
Operated by Adani & HPCL	66



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Achievements

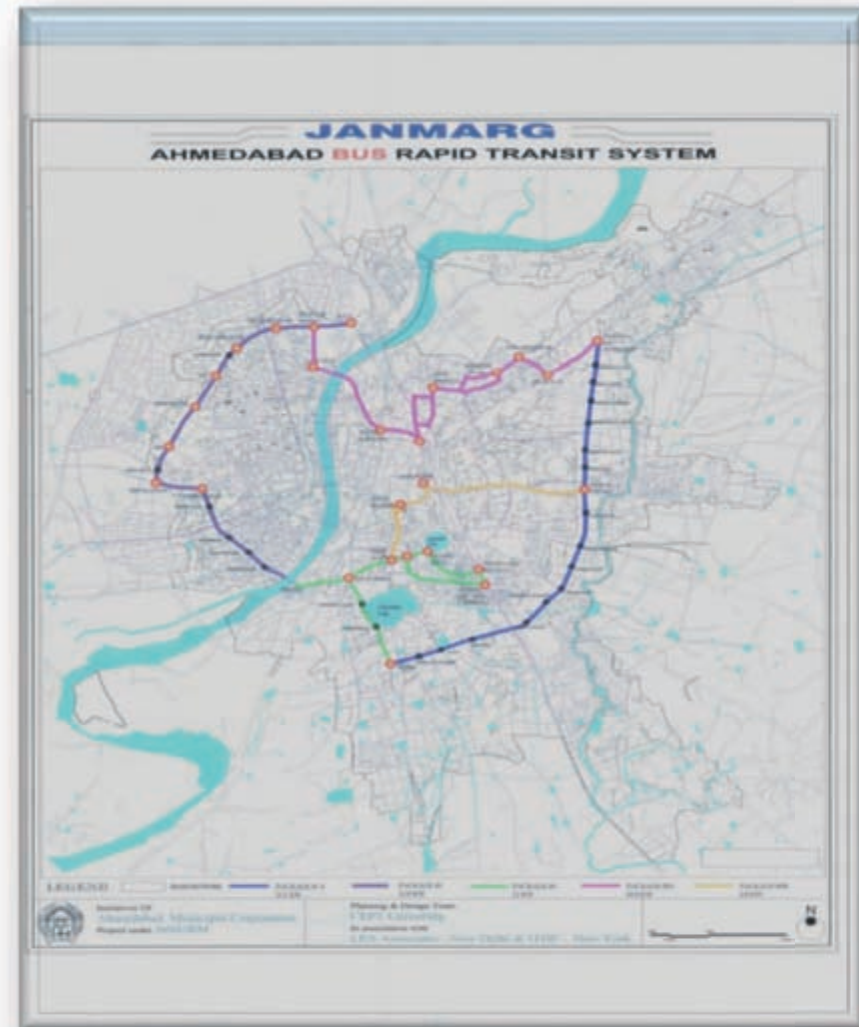
Data about CNG/ PNG vehicles

Vehicle	Numbers
CNG Rickshaw	72937
LPG Rickshaw	26
CNG LMV Car	29117
LPG LMV Car	32613
CNG Delivery Van	4258
LPG Delivery Van	259
LPG Motorbike	253
CNG Bus	712

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Achievements

- AMC and AUDA have undertaken **20** projects of construction of flyover, over bridges, underpass, River bridges, widening of road etc.
- AMC completed **40 KM** corridor from RTO to Naroda as a part of BRTS Phase-I.
- Public Transport increased up to **16 %**
- Under Vehicle Inspection Program, **112** new PUC Centres as per revised system are registered



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Janmarg Bus



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BRTS Bus stand



MODEL PARKING PROVISION by AMC

- Parking space near BRT bus shelters – autos, bicycles, two-wheelers
- Ticketing integration for BRT, AMTS and BRT feeder
- Multi-storied parking plots:
 1. Municipal plot located behind Navrangpura bus station
 2. Navrangpura Municipal Market Plot
 3. Vastrapur lakefront
 4. Kalupur octroi office
 5. Kalupur Railway station
 6. Sarangpur Bus terminal
 7. Sarangpur Anand market



Achievements- Industrial Air Pollution Control

- Identified industries having major boilers have upgraded APCM in form of ESP, Bag Filter and MCS.
- Out of **129** total industrial unit
- **70** units installed ESP or Bag Filters
- Remaining have modified APCM by providing MCS, Wet scrubber etc.
- **571** units switched over to Natural Gas as Fuel
- **175** Foundry units(Cupola furnace) carried out technological up gradation in APCM



Achievement- Progress planned

Up gradation of APCM to achieve revised AAQM norms

- L.D. College of Engineering, Ahmedabad had carried out study of 87 industrial units of Narol Industrial area. The report is under finalization stage
- Based on suggestions industrial units will Upgrade existing APCM

Ambient Air Quality Monitoring

- AAQM stations at different locations 13
 - AAQM stations are operated by GEMI 11
 - GPCB 01
 - Torrent Power 01
- From June, 2011 PM 2.5 is being measured
- AAQM stations are operated as per CPCB guidelines ie 104 samples per year (Twice in a week).
- Three more AAQM stations are provided in GIDC areas for monitoring of VOC only.
- One Continuous AAQM station is operated at Maninagar, result are planned to be displayed online on website of GPCB as well as CPCB, New Delhi

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Ambient Air Quality Monitoring Stations

S r . No.	Station location	Type of Zone	Operated by
1.	Above Police Chokey, Naroda GIDC	Industrial	GEMI
2.	Cadila Laboratory, Narol	Industrial	GEMI
3.	L . D . Engineering College, Navrangpura	Residential	GEMI
4.	Shardaben Hospital, Saraspur	Residential + Commercial	GEMI
5.	R.C. Technical School	Industrial	GEMI
6.	Referral Hospital, Behrampura	Residential + Commercial	GEMI
7.	Mukesh Industries, Narol	Industrial	GEMI
8.	S.P. Ring Road, Naroda	Residential + Commercial	GEMI
9.	Nava Vadaj Urban Health Centre, Nava Vadaj	Residential	GPCB
10.	Chinmay Seva Trust, Satelite	Residential	GEMI
11.	Vatva- Odhav S.P.Ring Road	Residential + Commercial	GEMI
12.	Above Police Chokey, Nehru Bride	Commercial	GEMI

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Ambient Air Quality Monitoring Stations

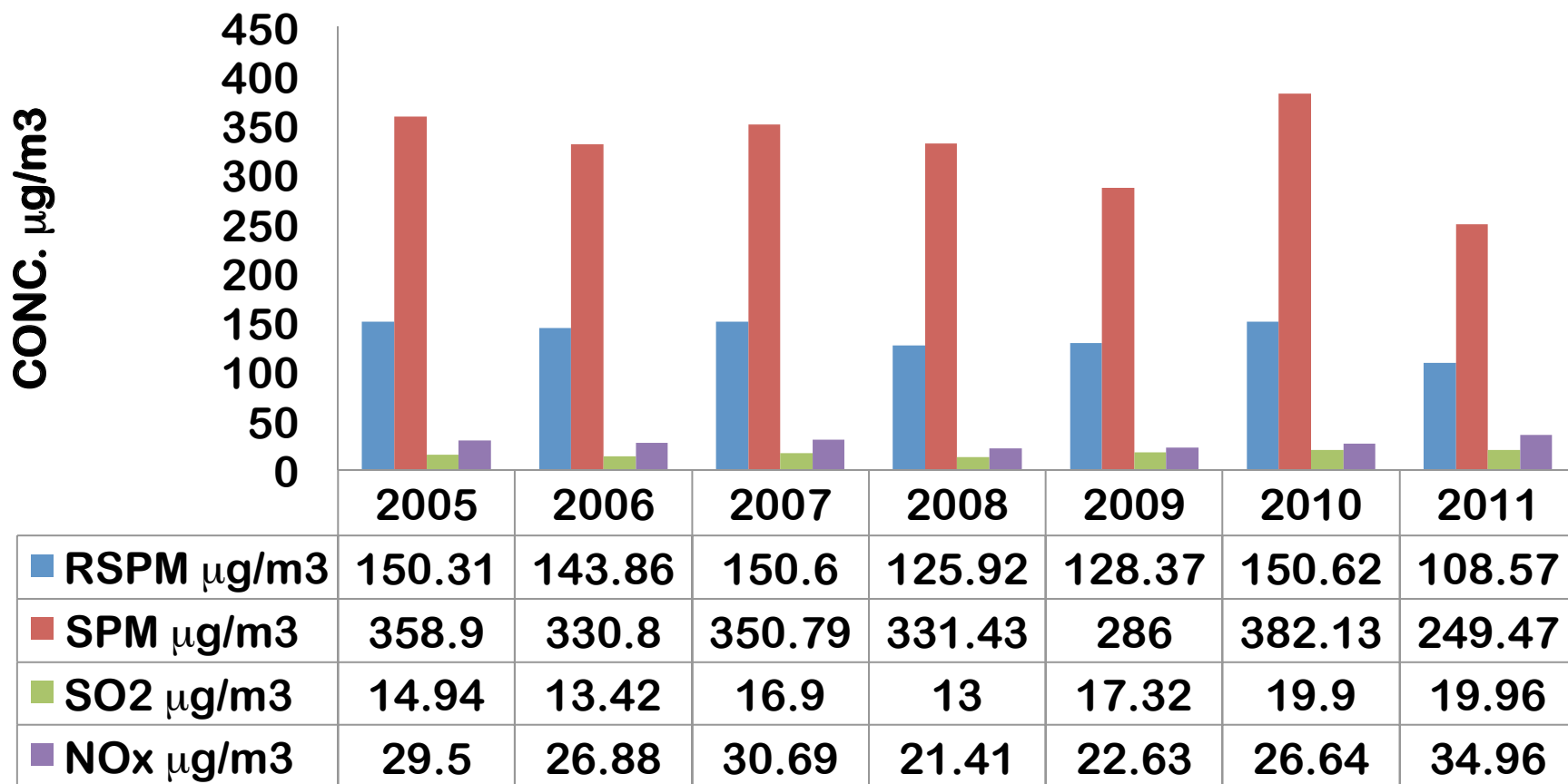
Ambient Air Quality Monitoring Stations for VOC only

Sr. No.	Station location	Type of Zone	Operated by
1.	Vatva Industrial Association, GIDC Vatva	Industrial	GEMI
2.	Odhav Industrial Association, GIDC Odhav	Industrial	GEMI
3.	Udhyognagar Police Chowky, GIDC Naroda	Industrial	GEMI

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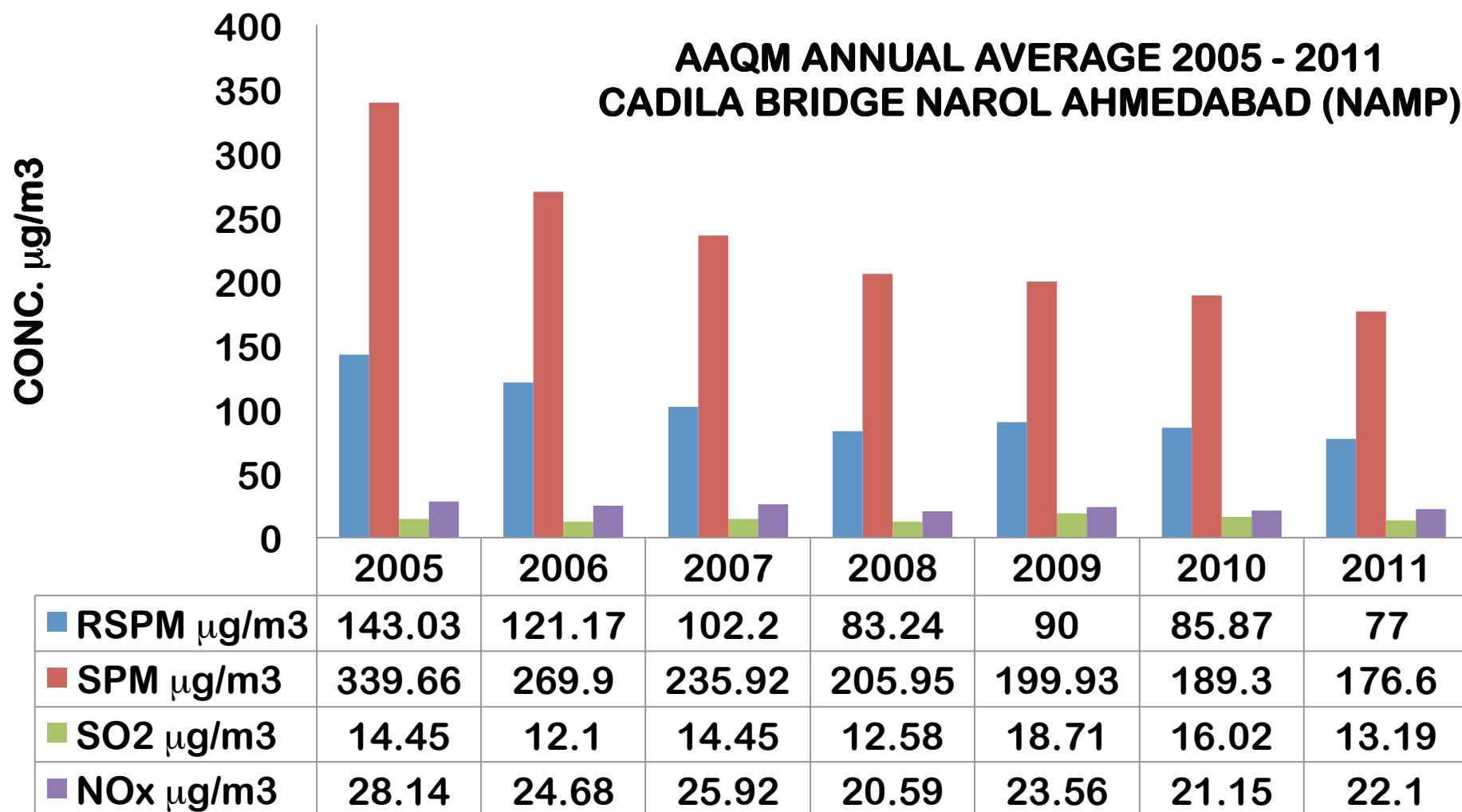
Ambient Air Quality Monitoring Results

AAQM ANNUAL AVERAGE 2005 - 2011 NARODA GIDC AHMEDABAD (NAMP)



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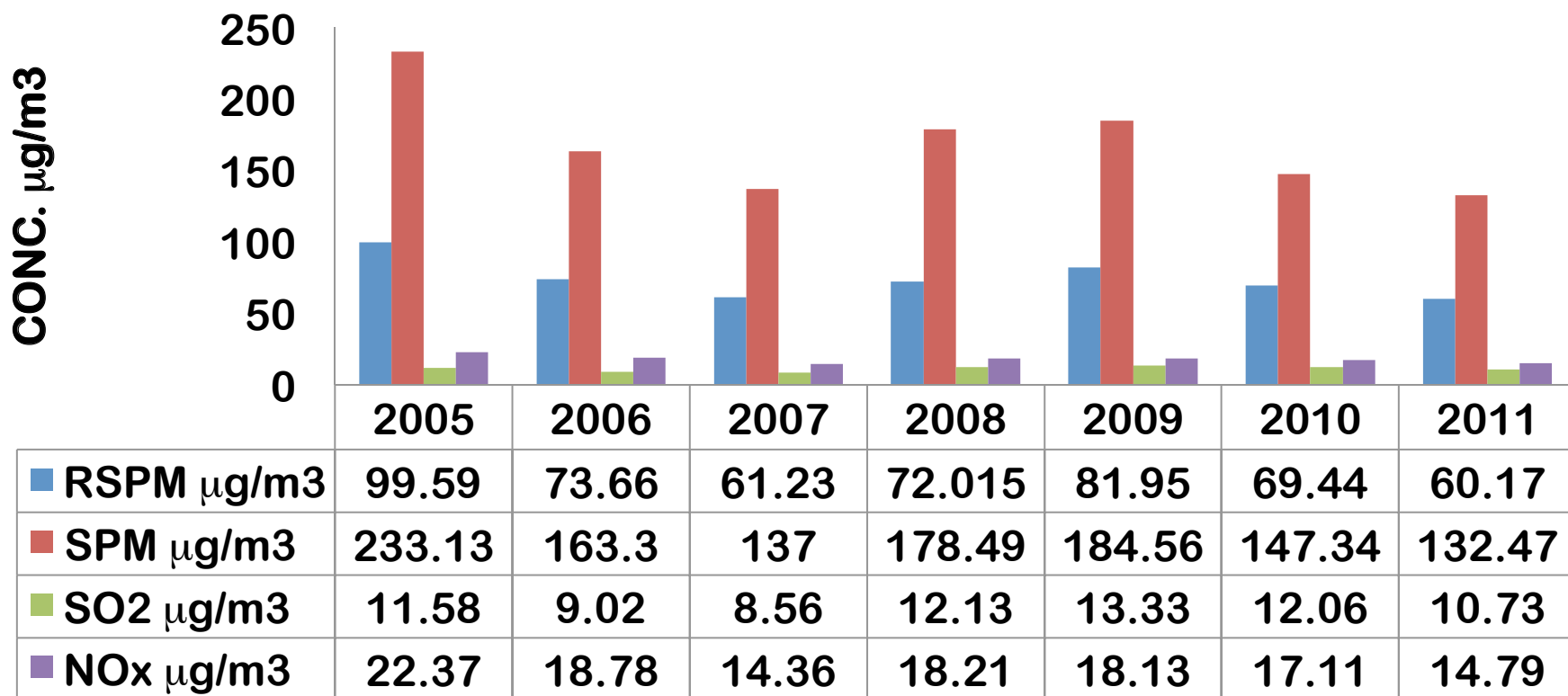
Ambient Air Quality Monitoring Results



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Ambient Air Quality Monitoring Results

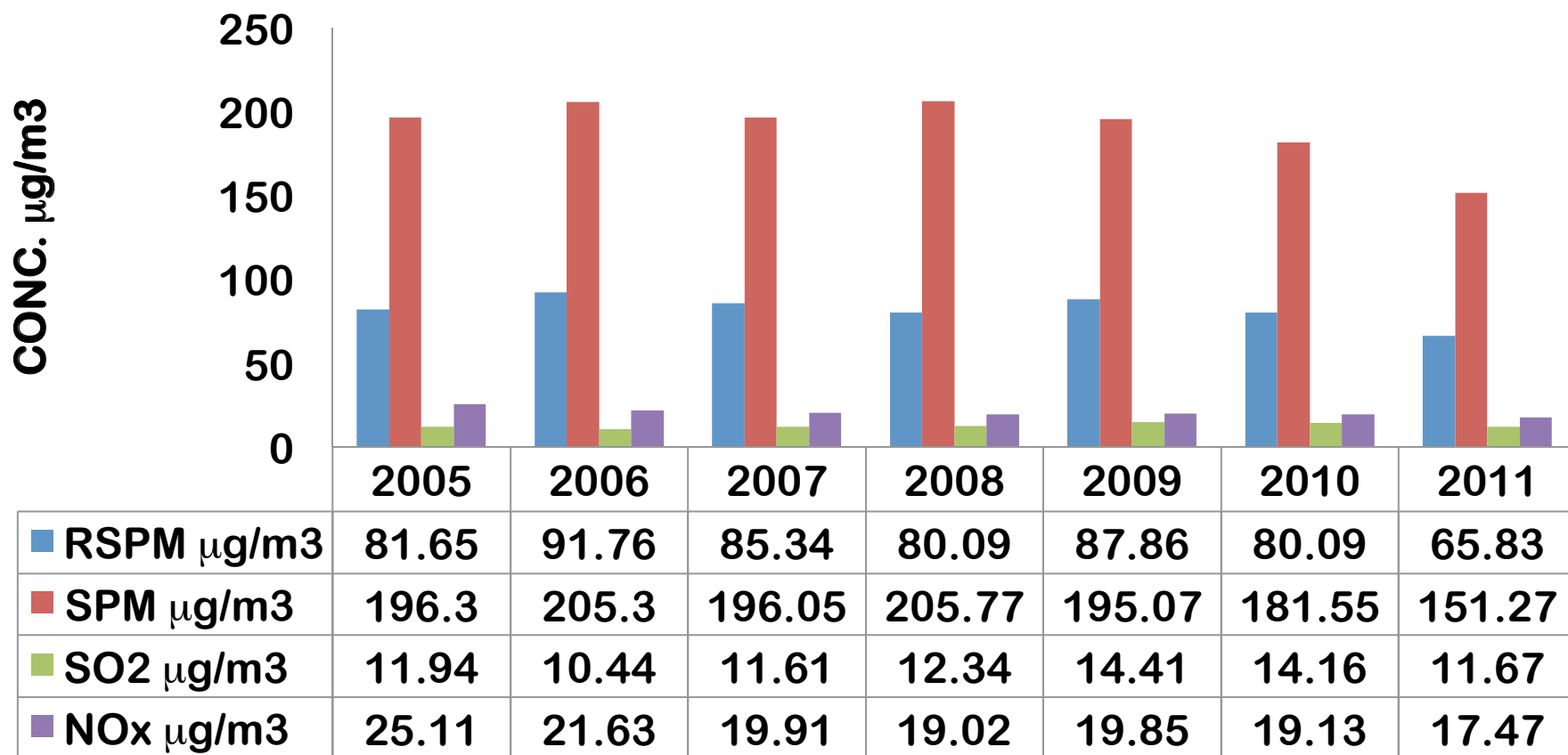
AAQM ANNUAL AVERAGE 2005-2011 L.D.ENG.COLLAGE AHMEDABAD (NAMP)



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Ambient Air Quality Monitoring Results

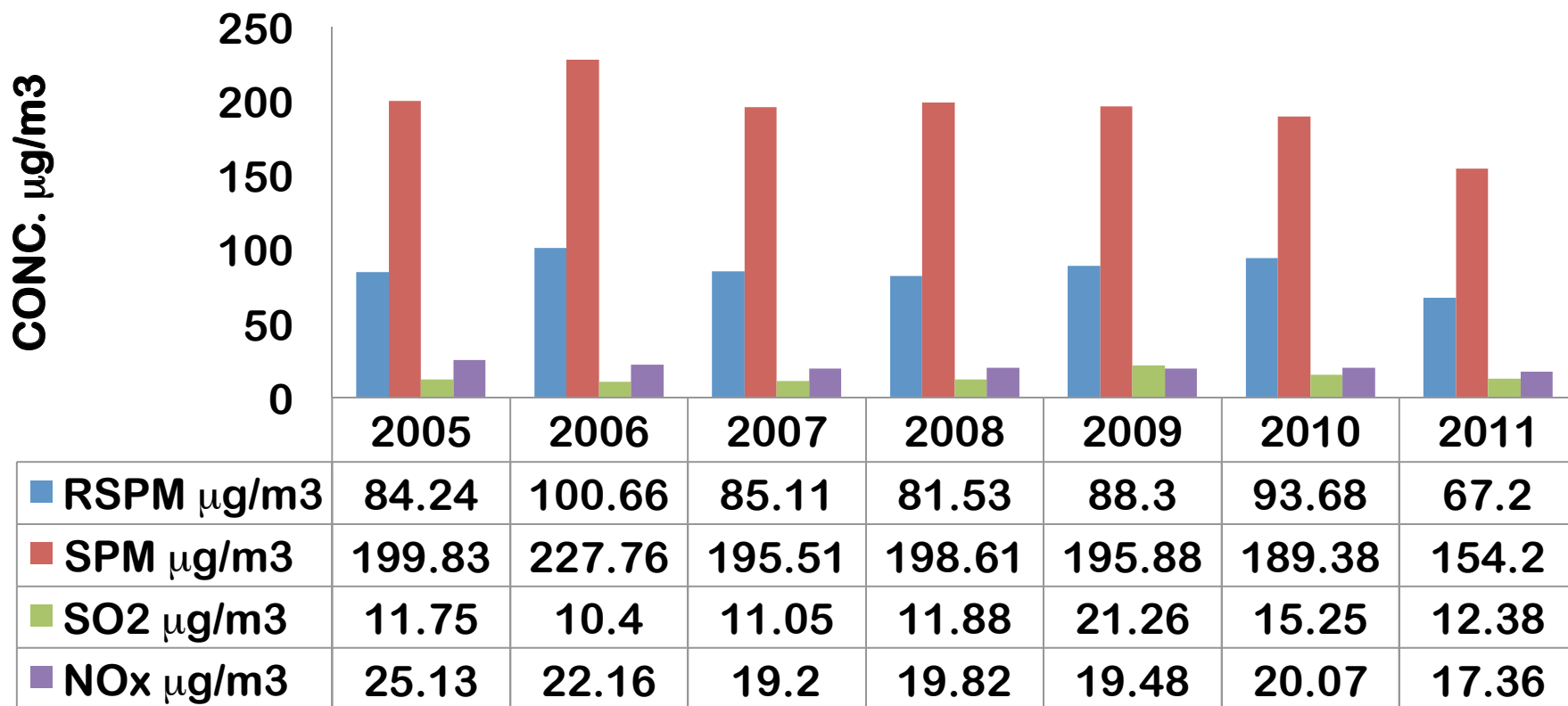
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SARDABEN HOSPITAL SARASPUR AHMEDABAD (NAMP)



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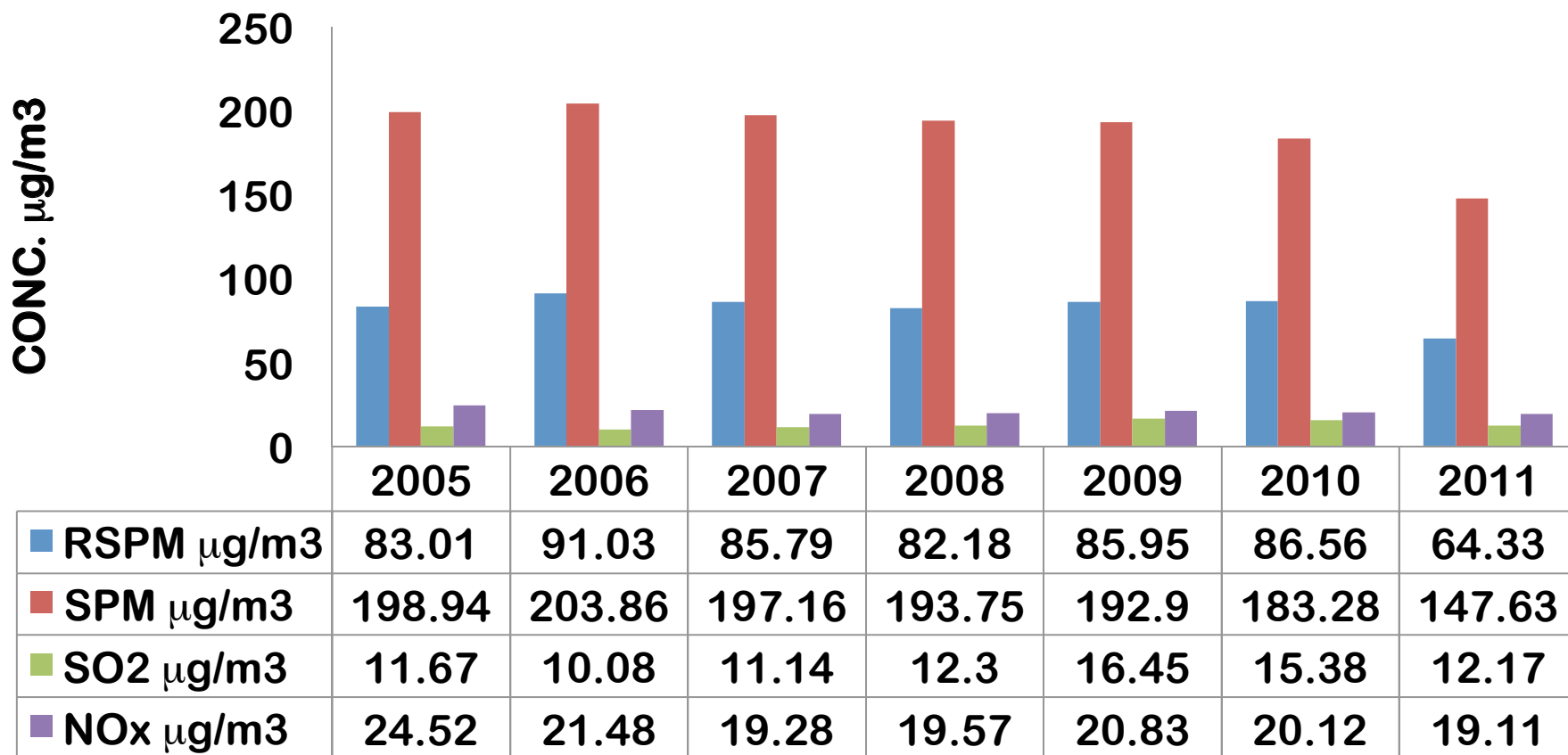
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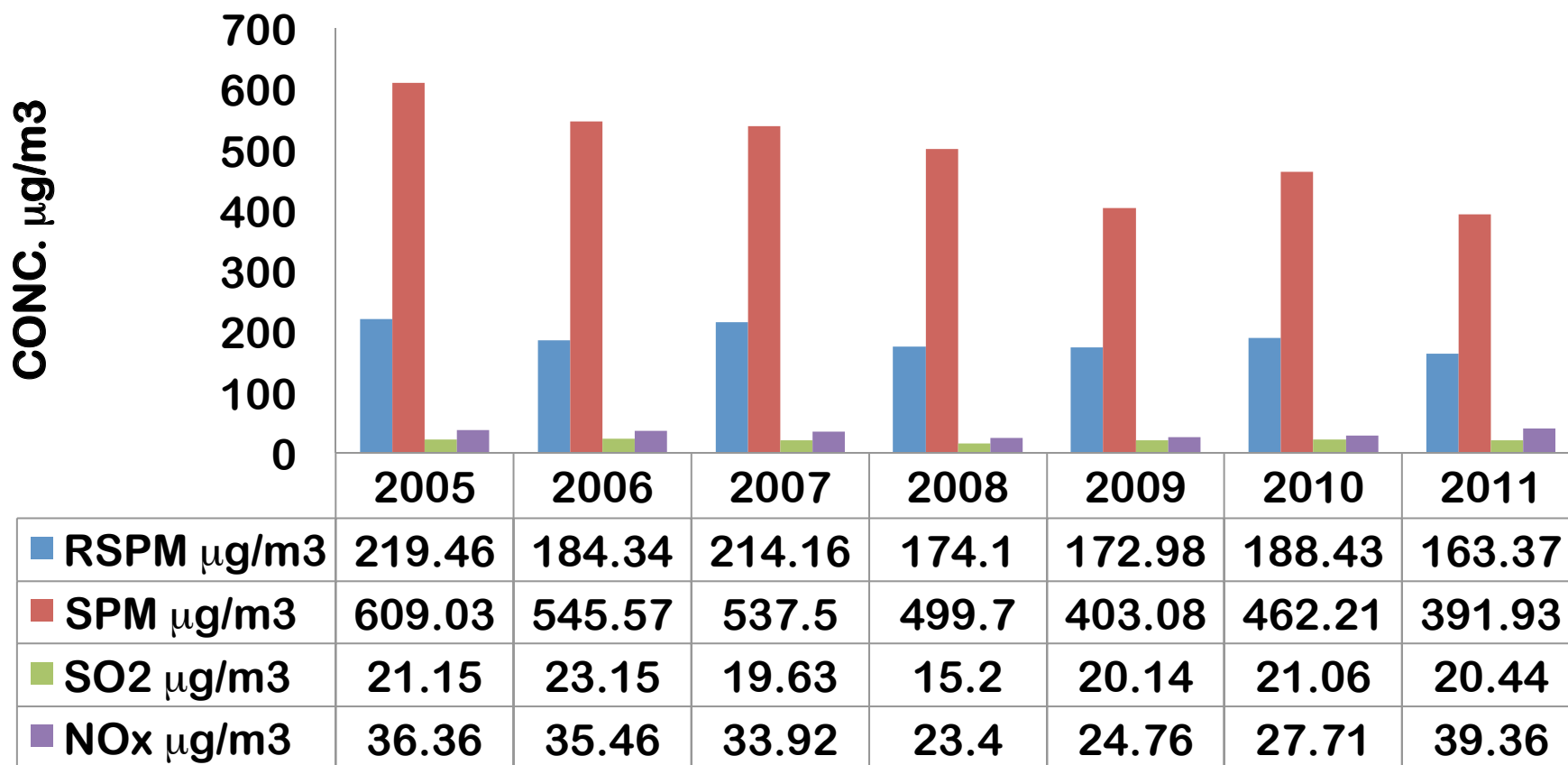
**AAQM ANNUAL AVERAGE 2005-2011
BEHRAMPURA REFRAH HOSPITAL AHMEDABAD (NAMP)**



Ahmedabad Air Pollution Control Action Plan

Ambient Air Quality Monitoring Results

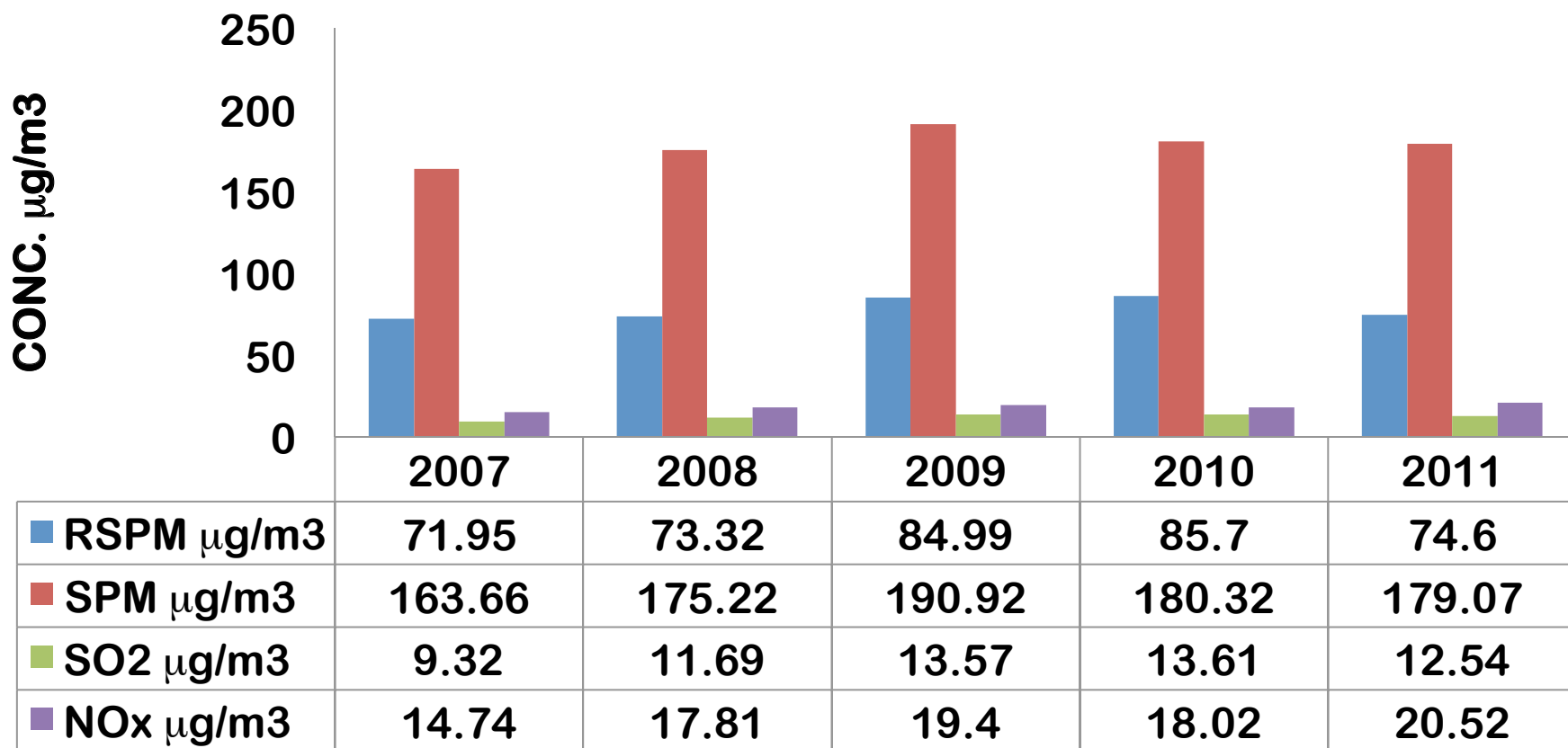
**AAQM ANNUAL AVERAGE 2005-2011
MUKESH INDUSTRIES NAROL AHMEDABAD(SAMP)**



Ahmedabad Air Pollution Control Action Plan

Ambient Air Quality Monitoring Results

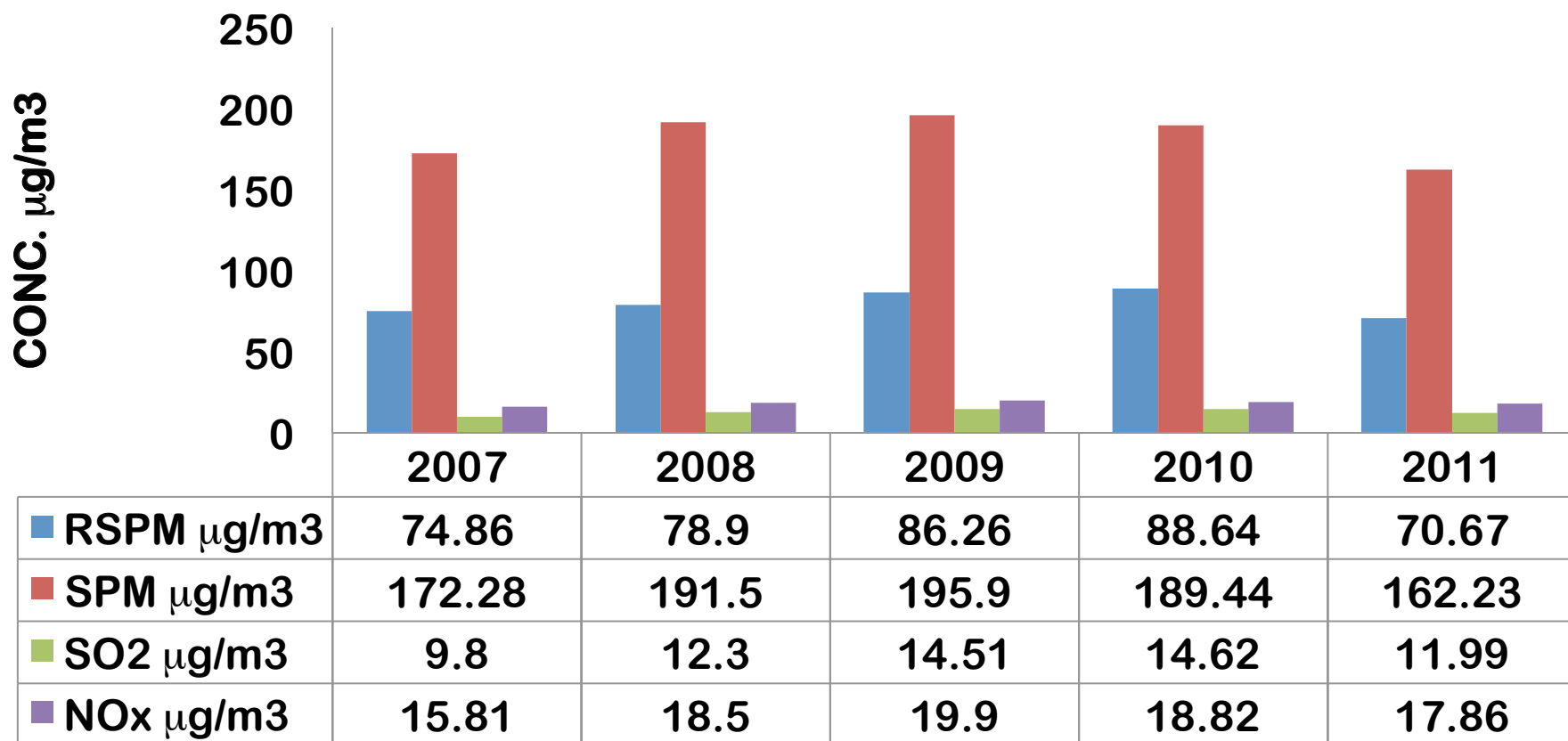
**AAQM ANNUAL AVERAGE 2005-2011
S.P.RING ROAD NARODA AHMEDABAD (SAMP)**



Ahmedabad Air Pollution Control Action Plan

Ambient Air Quality Monitoring Results

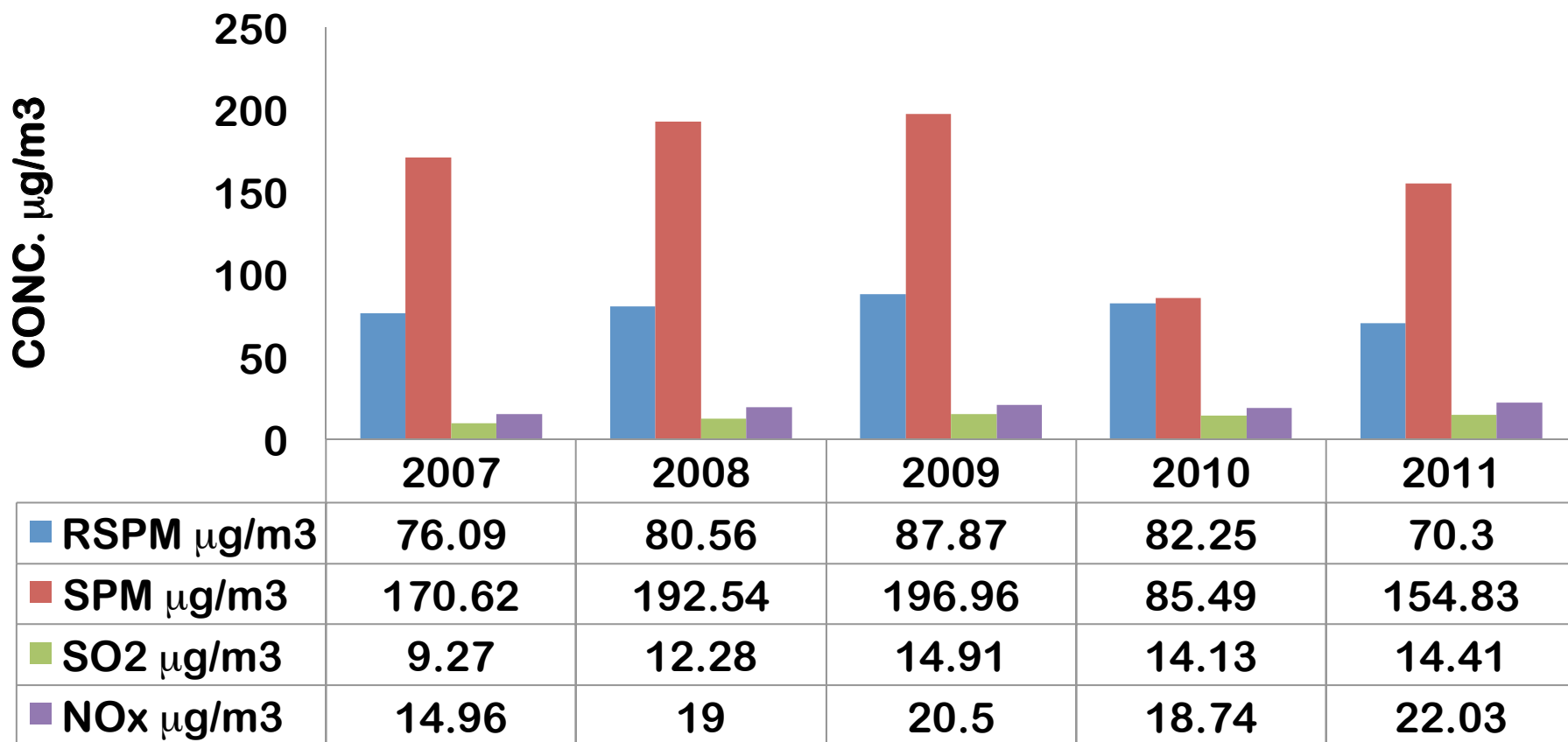
**AAQM ANNUAL AVERAGE 2005-2011
NAVA VADAJ URBEN HEALTH AHMEDABAD (SAMP)**



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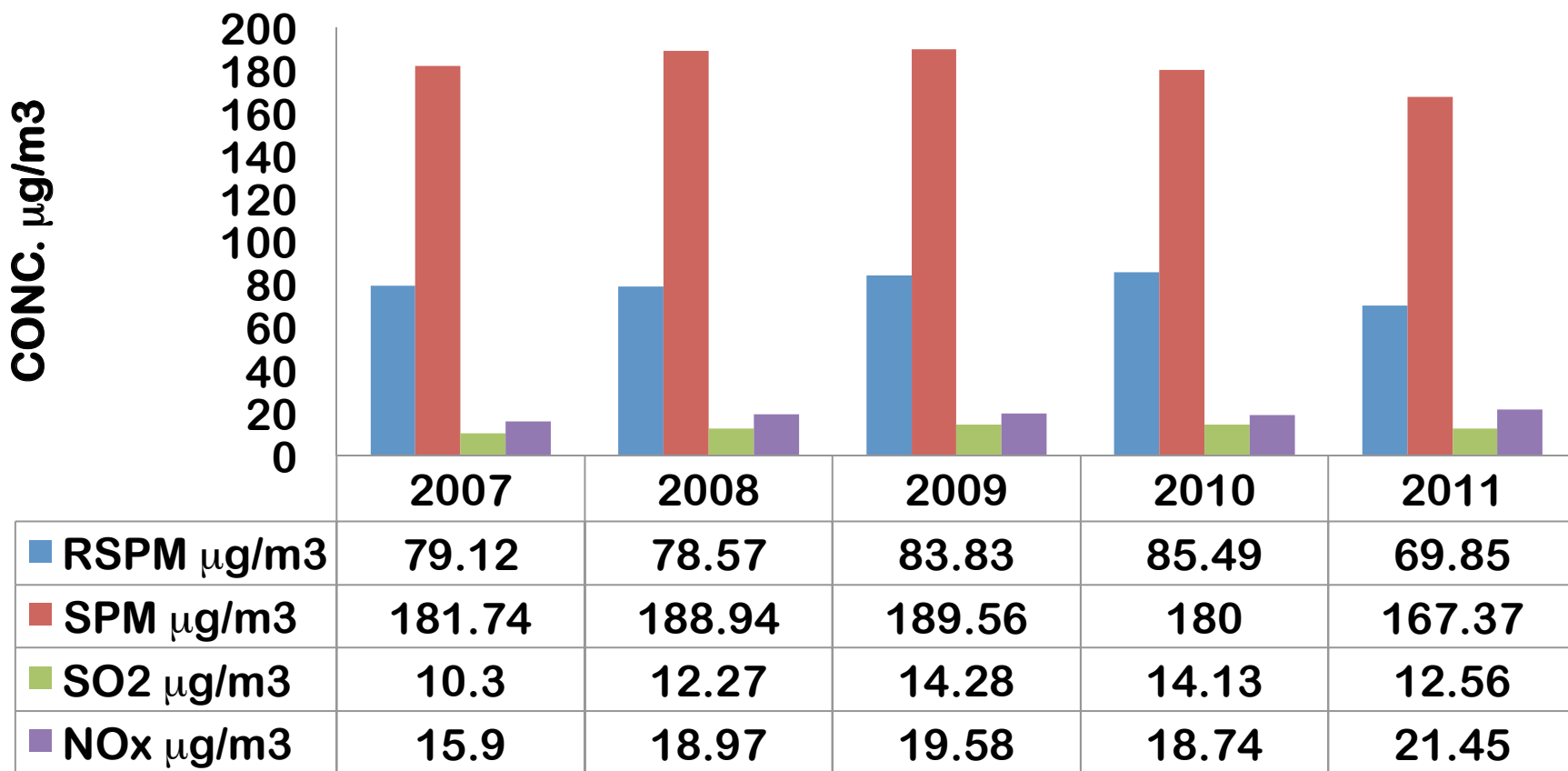
AAQM ANNUAL AVERAGE 2005-2011 SATELLITE AREA AHMEDABAD (SAMP)



Ahmedabad Air Pollution Control Action Plan

Ambient Air Quality Monitoring Results

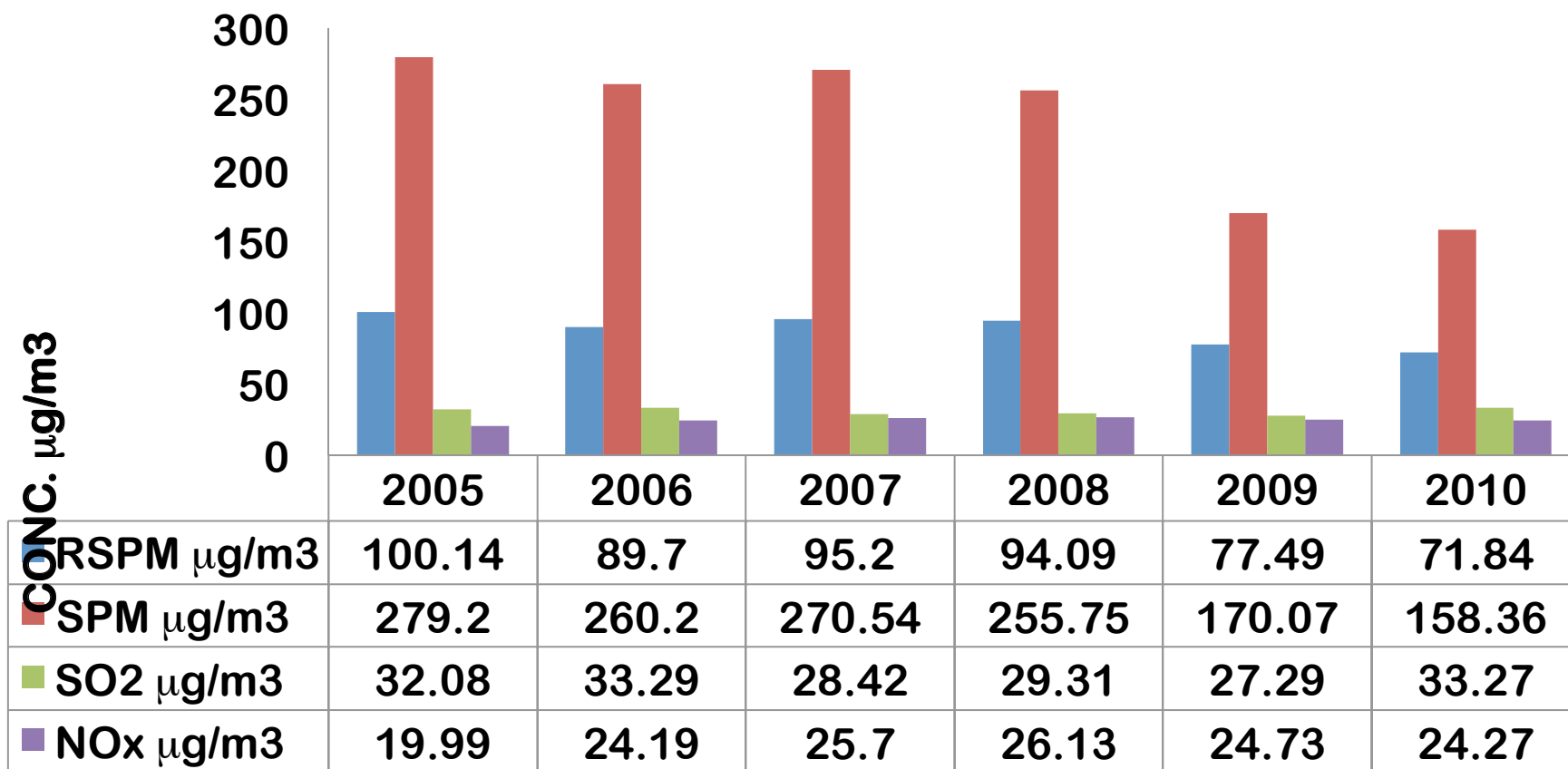
AAQM ANNUAL AVERAGE 2005-2011
VATVA - ODHAV S.P.RING ROAD AHMEDABAD (SAMP)



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Ambient Air Quality Monitoring Results

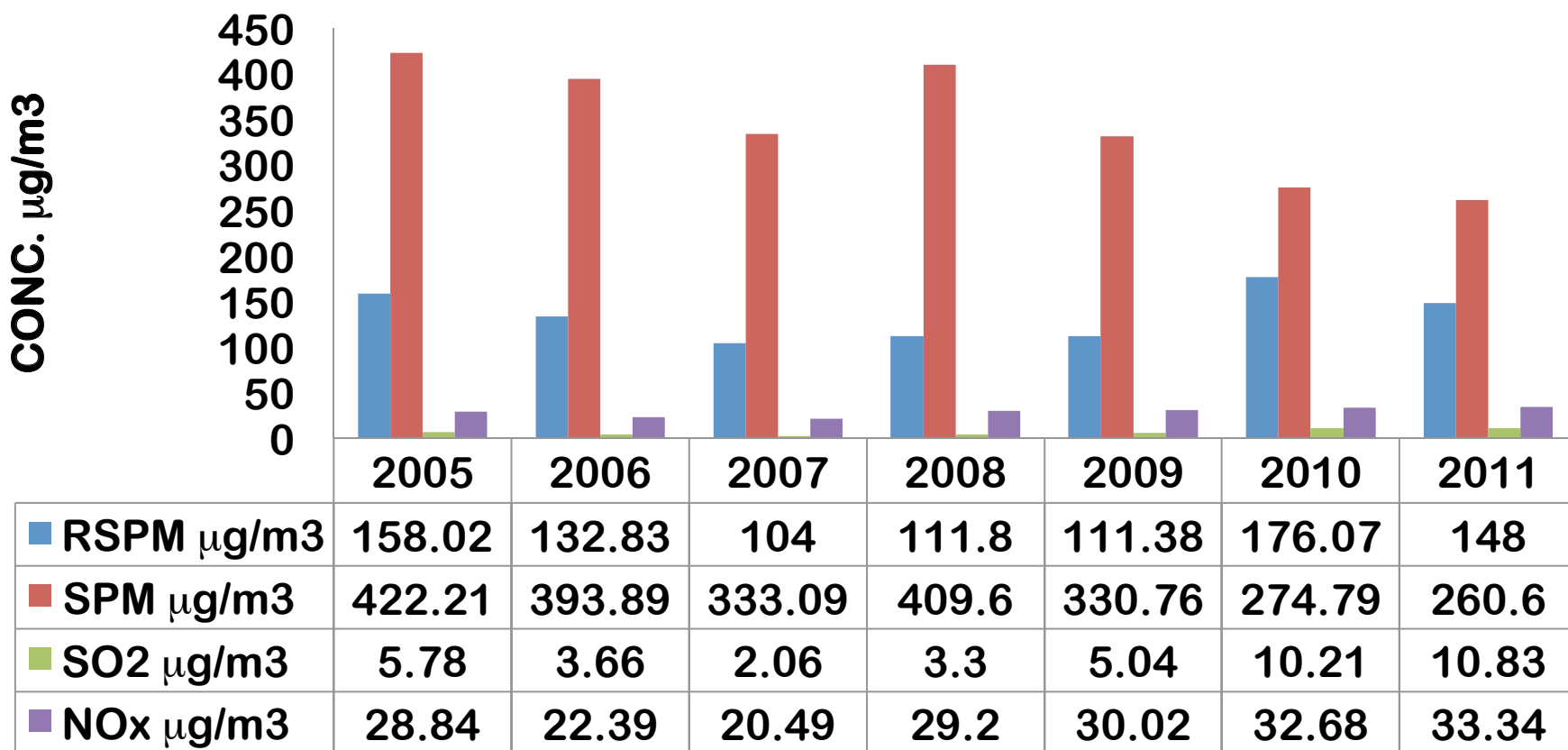
**AAQM ANNUAL AVERAGE 2005-2010
TORRENT POWER, SABARMAT AHMEDABA(SAMP)**



Ahmedabad Air Pollution Control Action Plan

Ambient Air Quality Monitoring Results

**AAQM ANNUAL AVERAGE 2005-2011
NEHRU BRIDGE ASHRAM ROAD AHMEDABAD (SAMP)**



Ahmedabad Air Pollution Control Action Plan

Continuous Ambient Air Quality Monitoring

Location:	Central Medical Store, Opp. Old Pilot Dairy, Kankaria, Maninagar, Ahmedabad
Started operation :	since March 2010
Parameters analysed:	SPM, Ozone, CO, SO ₂ , NO, NO ₂ , NOX, Benzene, Toluene, Ethyl Benzene, Meta Para Xylene, OrthoXylene, Temperature, Relative Humidity, Wind Direction, Solar Radiation, Vertical Wind speed, Wind Speed, Atm. Pressure planned to be displayed on website of GPCB & CPCB, New Delhi
Result:	
Operated by:	Environment S.A.
Cost :	approx 1 crore

OTHER ACTIONS

- In day time (9 AM to 8 PM) big private vehicles (Luxuries) are not allowed on the arterial roads.
- Wall to Wall carpeting of the road is now inbuilt design component on BRTS route to prevent secondary emission of Particulates Matter (PM)
- In large construction projects, barricading around the site is enforced to contain fugitive emission
- Scientific Land Fill Site for the disposal of the MSW is now functional in AMC- Open burning of the MSW is stopped through better collection system
- Massive tree plantation in the urban area by the AMC in open plots and along the BRTS corridor
- Public Information and Awareness-Announcement of traffic situation during peak hours on local FM radio stations, Display Boards at Traffic Junctions etc.

A WAY FORWARD

- Metro Rail Project connecting APMC-Vasna to Gandhinagar – A MRTS project-Survey work initiated
- Sabarmati River Front Project- In advance stage of its construction-will relieve the traffic pressure on Arterial roads in addition to give new mode of transportation-ferry boats
- Integration of Metro Rail Project & BRTS will convert more people to the common transport modes
- Increase in public awareness through various campaigns-involvement of specialized institutes like MICA for preparing programs
- Use of PNG and other cleaner fuel in industries
- Strengthening of the ambient air quality monitoring network

Thank you