



# Mahabal Enviro Engineers Pvt. Ltd.

Engineer, Consultant , Environmental Monitoring Laboratory & Contractor

Plot No. 13/14, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist - Nagpur - 441 111.  
Phone : +91-0712-2612162, 07109-326999, Tele Fax - 0712 - 2612212, Email : [nagpur@mahabal.com](mailto:nagpur@mahabal.com)

## Ambient Air Monitoring Report

<b>Report No.</b>	<b>ME/NS/001353/11.04.28/SA/Indiabulls/Nashik</b>		<b>Date:</b> 28/04/2011
<b>Name and Address of Customer</b>	Indiabulls Industrial Infrastructure Ltd.(Multiproduct SEZ) , Village – Musalgaon & Gulvanch, Tal- Sinnar, Nashik.		<b>Order Reference</b> Your Work Order No. 3320000384 dt 28.10.2010
<b>Sample Description /Type</b>	Ambient Air	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Near weigh bridge	<b>Sample Quantity/Packing</b>	PM <sub>10</sub> , Bap, Metals: Filter Paper:1 x 3 no. PM <sub>2.5</sub> : Filter Paper:1 x 1 no. SO <sub>2</sub> : 30 ml x 6 no. plastic bottle NO <sub>2</sub> : 30 ml x 6 no. plastic bottle NH <sub>3</sub> : 30 ml x 6 no. plastic bottle CO: Plastic bulb 1 x 3 no. Ozone: 30 ml x 6 no. plastic bottle Benzene: Charcoal tubes: 1 x 12 no.
<b>Date of Sampling</b>	21/04/2011 To 22/04/2011	<b>Date of Receipt of Sample</b>	22/04/2011
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	23/04/2011	<b>Date of Completion of Analysis</b>	28/04/2011

Meteorological Data				
<b>Average Wind velocity</b> 1.4 km/h		<b>Relative Humidity</b> (Max/min) : 33/29 %		<b>Temperature</b> (Max/min) : 38/20 °C
<b>Location :</b> Near weigh bridge			<b>Duration of Survey :</b> 24 hours	
<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b># National Ambient Air Quality Standards (NAAQS)(Industrial, Residential, Rural and other Area)</b>	<b>Method Reference</b>
Sulphur Dioxide (SO <sub>2</sub> )	<3	µg/m <sup>3</sup>	80	IS 5182 ( Part 2): 2001, Reaffirmed 2006 & CPCB Guidelines
Nitrogen Dioxide (NO <sub>2</sub> )	33.2	µg/m <sup>3</sup>	80	IS 5182 (Part 6): 2006 & CPCB Guidelines
Particulate Matter (size less than 10 µm)or PM <sub>10</sub>	87	µg/m <sup>3</sup>	100	IS 5182 ( Part 23): 2006 & CPCB Guidelines
Particulate Matter (size less than 2.5µm)or PM <sub>2.5</sub>	41	µg/m <sup>3</sup>	60	Fine Particulate air sampler
Ozone (O <sub>3</sub> )	68	µg/m <sup>3</sup>	100	APHA , Method No. 820, Page No. 836
Lead (Pb)	0.04	µg/m <sup>3</sup>	1	US EPA Method: EPA/625/ R-96/0109/IO-3.1, 3.2



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<b>Sample Description /Type</b>	Ambient Air	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Near weigh bridge	<b>Sample Quantity/Packing</b>	PM <sub>10</sub> , Bap, Metals: Filter Paper:1 x 3 no. PM <sub>2.5</sub> : Filter Paper:1 x 1 no. SO <sub>2</sub> : 30 ml x 6 no. plastic bottle NO <sub>2</sub> : 30 ml x 6 no. plastic bottle NH <sub>3</sub> : 30 ml x 6 no. plastic bottle CO: Plastic bulb 1 x 3 no. Ozone: 30 ml x 6 no. plastic bottle Benzene: Charcoal tubes: 1 x 12 no.
<b>Date of Sampling</b>	21/04/2011 To 22/04/2011	<b>Date of Receipt of Sample</b>	22/04/2011
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	23/04/2011	<b>Date of Completion of Analysis</b>	28/04/2011

Meteorological Data				
<b>Average Wind velocity</b> 1.4 km/h		<b>Relative Humidity</b> (Max/min) : 33/29 %		<b>Temperature</b> (Max/min) : 38/20 °C
<b>Location :</b> Near weigh bridge			<b>Duration of Survey :</b> 24 hours	
<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b># National Ambient Air Quality Standards (NAAQS)(Industrial, Residential, Rural and other Area)</b>	<b>Method Reference</b>
Sulphur Dioxide (SO <sub>2</sub> )	<3	µg/m <sup>3</sup>	80	IS 5182 ( Part 2): 2001, Reaffirmed 2006 & CPCB Guidelines
Nitrogen Dioxide (NO <sub>2</sub> )	33.2	µg/m <sup>3</sup>	80	IS 5182 (Part 6): 2006 & CPCB Guidelines
Particulate Matter (size less than 10 µm)or PM <sub>10</sub>	87	µg/m <sup>3</sup>	100	IS 5182 ( Part 23): 2006 & CPCB Guidelines
Particulate Matter (size less than 2.5µm)or PM <sub>2.5</sub>	41	µg/m <sup>3</sup>	60	Fine Particulate air-sampler
Ozone (O <sub>3</sub> )	68	µg/m <sup>3</sup>	100	APHA , Method No. 820, Page No. 836
Lead (Pb)	0.04	µg/m <sup>3</sup>	1	US EPA Method: EPA/625/R-96/0109/IO-3.1, 3.2



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**Report No. ME/NS/001353/11.04.28/SA/Indiabulls/Nashik Cont...**

Parameter	Result	Unit	# National Ambient Air Quality Standards (NAAQS)(Industrial, Residential, Rural and other Area)	Method Reference
*Carbon Monoxide (CO)	N.D.	mg/m <sup>3</sup>	2	APHA method no.130, Page 359
Ammonia ( NH <sub>3</sub> )	35	µg/m <sup>3</sup>	400	APHA method no. 401, Page 511
Benzene (C <sub>6</sub> H <sub>6</sub> )	<3.47	µg/m <sup>3</sup>	5	IS 5182 (Part 11):2006
Benzo (a) Pyrene (BaP) – particulate phase only	<0.5	ng/m <sup>3</sup>	1	IS 5182 (Part 12):2004
Arsenic (As)	<0.3	ng/m <sup>3</sup>	6	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2
Nickel (Ni)	6.1	ng/m <sup>3</sup>	20	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2
Mercury	N.D.	ng/m <sup>3</sup>	-	Inductively Coupled Plasma Spectrometer

## Notes:

N.D.: Not Detected.

TWA: Time Weighted Average.

\*: Denotes Grab Sampling

#: NAAQS specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, Lead and Ammonia, 8 hours TWA in case of Carbon Monoxide, 1 hour TWA in case of Ozone, Annual TWA in case of Benzene, Benzo (a) Pyrene, Arsenic and Nickel, Mercury.

-----End-----

for **Mahabal Enviro Engineers Pvt. Ltd.**

Harish Mendhi  
Technical Manager  
**AUTHORISED SIGNATORY**



## Note :

1. The result listed refers only to the tested sample(s) and applicable parameter(s).
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<b>Sample Description /Type</b>	Ambient Air	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Near IRL Office	<b>Sample Quantity/Packing</b>	PM <sub>10</sub> , Bap, Metals: Filter Paper:1 x 3 no. PM <sub>2.5</sub> : Filter Paper:1 x 1 no. SO <sub>2</sub> : 30 ml x 6 no. plastic bottle NO <sub>2</sub> : 30 ml x 6 no. plastic bottle NH <sub>3</sub> : 30 ml x 6 no. plastic bottle CO: Plastic bulb 1 x 3 no. Ozone: 30 ml x 6 no. plastic bottle Benzene: Charcoal tubes: 1 x 12 no.
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<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	23/04/2011	<b>Date of Completion of Analysis</b>	28/04/2011

Meteorological Data				
<b>Average Wind velocity</b> 1.4 km/h		<b>Relative Humidity</b> (Max/min) : 33/29 %		<b>Temperature</b> (Max/min) : 38/20 °C
<b>Location :</b> Near IRL Office			<b>Duration of Survey :</b> 24 hours	
Parameter	Result	Unit	# National Ambient Air Quality Standards (NAAQS)(Industrial, Residential, Rural and other Area)	Method Reference
Sulphur Dioxide (SO <sub>2</sub> )	<3	µg/m <sup>3</sup>	80	IS 5182 ( Part 2): 2001, Reaffirmed 2006 & CPCB Guidelines
Nitrogen Dioxide (NO <sub>2</sub> )	N.D.	µg/m <sup>3</sup>	80	IS 5182 (Part 6): 2006 & CPCB Guidelines
Particulate Matter (size less than 10 µm) or PM <sub>10</sub>	71	µg/m <sup>3</sup>	100	IS 5182 ( Part 23): 2006 & CPCB Guidelines
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	44	µg/m <sup>3</sup>	60	Fine Particulate air sampler
Ozone (O <sub>3</sub> )	68	µg/m <sup>3</sup>	100	APHA, Method No. 820, Page No. 836
Lead (Pb)	0.05	µg/m <sup>3</sup>	1	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2



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**Report No. ME/NS/001355/11.04.28/SA/Indiabulls/Nashik Cont...**

Parameter	Result	Unit	# National Ambient Air Quality Standards (NAAQS)(Industrial, Residential, Rural and other Area)	Method Reference
*Carbon Monoxide (CO)	N.D.	mg/m <sup>3</sup>	2	APHA method no.130, Page 359
Ammonia ( NH <sub>3</sub> )	89	µg/m <sup>3</sup>	400	APHA method no. 401, Page 511
Benzene (C <sub>6</sub> H <sub>6</sub> )	4.1	µg/m <sup>3</sup>	5	IS 5182 (Part 11):2006
Benzo (a) Pyrene (BaP) – particulate phase only	N.D.	ng/m <sup>3</sup>	1	IS 5182 (Part 12):2004
Arsenic (As)	<0.3	ng/m <sup>3</sup>	6	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2
Nickel (Ni)	3.84	ng/m <sup>3</sup>	20	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2
Mercury	N.D.	ng/m <sup>3</sup>	-	Inductive Coupled Plasmamembrane Spectrometer

## Notes:

N.D.: Not Detected.

TWA: Time Weighted Average.

\*: Denotes Grab Sampling

#: NAAQS specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, Lead and Ammonia, 8 hours TWA in case of Carbon Monoxide, 1 hour TWA in case of Ozone, Annual TWA in case of Benzene, Benzo (a) Pyrene, Arsenic and Nickel, Mercury.

-----End-----

for **Mahabal Enviro Engineers Pvt. Ltd.**

Harish Mendhi  
Technical Manager

**AUTHORISED SIGNATORY**



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<b>Sample Description /Type</b>	Ambient Air	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Near Boiler House	<b>Sample Quantity/Packing</b>	PM <sub>10</sub> : Bap, Metals: Filter Paper:1 x 3 no. PM <sub>2.5</sub> : Filter Paper:1 x 1 no. SO <sub>2</sub> : 30 ml x 6 no. plastic bottle NO <sub>2</sub> : 30 ml x 6 no. plastic bottle NH <sub>3</sub> : 30 ml x 6 no. plastic bottle CO: Plastic bulb 1 x 3 no. Ozone: 30 ml x 6 no. plastic bottle Benzene: Charcoal tubes: 1 x 12 no.
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Meteorological Data				
<b>Average Wind velocity</b> 1.4 km/h		<b>Relative Humidity</b> (Max/min) : 33/29 %		<b>Temperature</b> (Max/min) : 38/20 °C
<b>Location :</b> Near Boiler House			<b>Duration of Survey :</b> 24 hours	
<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b># National Ambient Air Quality Standards (NAAQS)(Industrial, Residential, Rural and other Area)</b>	<b>Method Reference</b>
Sulphur Dioxide (SO <sub>2</sub> )	<3	µg/m <sup>3</sup>	80	IS 5182 ( Part 2): 2001, Reaffirmed 2006 & CPCB Guidelines
Nitrogen Dioxide (NO <sub>2</sub> )	38.2	µg/m <sup>3</sup>	80	IS 5182 (Part 6): 2006 & CPCB Guidelines
Particulate Matter (size less than 10 µm) or PM <sub>10</sub>	78	µg/m <sup>3</sup>	100	IS 5182 ( Part 23): 2006 & CPCB Guidelines
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	42	µg/m <sup>3</sup>	60	Fine Particulate air sampler
Ozone (O <sub>3</sub> )	51	µg/m <sup>3</sup>	100	APHA , Method No. 820, Page No. 836
Lead (Pb)	0.03	µg/m <sup>3</sup>	1	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2



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Ammonia (NH <sub>3</sub> )	23	µg/m <sup>3</sup>	400	APHA method no. 401, Page 511
Benzene (C <sub>6</sub> H <sub>6</sub> )	4.12	µg/m <sup>3</sup>	5	IS 5182 (Part 11):2006
Benzo (a) Pyrene (BaP) – particulate phase only	N.D.	ng/m <sup>3</sup>	1	IS 5182 (Part 12):2004
Arsenic (As)	<0.3	ng/m <sup>3</sup>	6	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2
Nickel (Ni)	6.12	ng/m <sup>3</sup>	20	US EPA Method: EPA/625/R-96/0109/ IO-3.1, 3.2
Mercury	N.D.	ng/m <sup>3</sup>	-	Inductively Coupled Plasma Spectrometer

**Notes:**

N.D.: Not Detected.

TWA: Time Weighted Average.

\*: Denotes Grab Sampling

#: NAAQS specified as: 24 hours TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, Lead and Ammonia, 8 hours TWA in case of Carbon Monoxide, 1 hour TWA in case of Ozone, Annual TWA in case of Benzene, Benzo (a) Pyrene, Arsenic and Nickel, Mercury.

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for **Mahabal Enviro Engineers Pvt. Ltd.**



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