

Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

Phone: 91-712-2612162 T/Fax: 91-712-2612212 Email: nagpur@mahabal.com

Ambient Air Quality Monitoring Report

Report No.: ME-NG	4602-170406-SA-RIP	L-AMRAVATI	Date: 06.04.2017
Name and address of Customer		PART) at lage-Nandgaonpeth,	Order Reference: SO No. 3382012035 dtd. 21.09.2015.
Sample Description/Type	Tal & Dist: Amravat Ambient Air Quality Monitoring	Sample Collected by	Laboratory
Sampling Location	1) Near Plant Site Office 2) Terrace of WTP Plant Building 3) Terrace of Bachelor Guest House	Sample Quantity/Packing	Filter Paper (PM ₁₀): 3 X 3 No. Filter Paper (PM _{2.5}): 1 X 3 No. SO ₂ : 30mL X18 No. PVC Bottle NO ₂ : 30mL X18 No. PVC Bottle NH ₃ : 30 mL X18 No. PVC Bottle O ₃ : 10 mL X 72 No. PVC Bottle 3 X 12 No. Charcoal Tubes 3 X 3 No. Rubber Bladder
Date of Sampling	23.03.2017 & Date of Receipt of Sample		25.03.2017
Sampling Procedure	As per Method refer		
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	30.03.2017

	Meteorological Data/Environmental Conditions								
Avg. Wind Velocity		ninent Relative Humidity (%)		Temperature (⁰ C)					
2 E lena /h	CE	· NW	Max.	Min.	Max. Min.				
2.5 km/h	SE -	· IN VV	24	16	40.0	25.0			
Location	1) Near	Site Office			Duration of Survey	: 24 hours			
Parame	eter	Unit	Result	#NAAQM Standard	MATHON PATARANCA				
Sulphur Dioxid	de (SO ₂)	μ g /m³	11.8	80	CPCB Guidelines for the Measuremen Ambient Air Pollutants, Volume I, 20: Page No.1-6				
Nitrogen Diox	ide (NO ₂)	μ g /m³	13.4	80	CPCB Guidelines for the Measurement o Ambient Air Pollutants, Volume I, 2012- Page No.7-10				
Particulate Ma less than 10µı PM ₁₀	,	μ g /m³	84	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-: Page No.11-14				
Particulate Ma less than 2.5µ PM _{2.5}		μ g /m ³	44	60	CPCB Guidelines for th Ambient Air Pollutants 13,Page No.15-30				
Ozone (O ₃)		μ g /m³	24.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012 13,Page No.31-34				
Lead (as Pb)		μ g /m³	<0.02	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-1 Page No.48-55				

Report No.4602 Cont...

Para	meter	Unit	Result	#NAAQM Standard	Method Reference
Carbon Mo	noxide(CO)	mg/m ³	0.93	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (I	NH ₃)	μ g /m ³	24.3	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C	C ₆ H ₆)	μ g /m³	<1	5.0	IS 5182 (Part 11): 2006
Benzo (a) F (Particulate	Pyrene phase only)	ng/m³	<0.5	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.40-47
Arsenic (as	As)	ng/m³	<0.3	6.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Nickel (as N	Ni)	ng/m³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as	Hg)	μ g /m³	<0.06	-	Method of analysis of Hg & MoF Japan
Location	2) Terrace	of WTP Plant			Duration of Survey : 24 hours
Sulphur Dic	oxide (SO ₂)	μ g /m³	11.8	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Di	oxide (NO ₂)	μ g /m³	11.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate less than 10 PM ₁₀	Matter (size Oµm) or	μ g /m³	82	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate less than 2. PM _{2.5}	Matter (size 5µm) or	μ g /m ³	38	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012- 13,Page No.15-30
Ozone (O ₃)		μ g /m³	23.9	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012- 13,Page No.31-34
Lead (as Pl	o)	μ g /m³	<0.02	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Carbon Mo	noxide(CO)	mg/m³	0.88	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (I	NH ₃)	μ g /m ³	24.7	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C		μ g /m³	<1	5.0	IS 5182 (Part 11): 2006
Benzo(a)Py (Particulate	rene phase only)	ng/m³	<0.5	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.40-47
Arsenic (as	As)	ng/m³	<0.3	6.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Nickel (as N	Ni)	ng/m³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55

Report No.4602 Cont...

Parameter		Unit	Result	#NAAQM Standard	Method Reference	
Location 2) Ter		race of W	TP Plant		Duration of Survey : 24 hours	
Mercury (as Hg)		μ g/m ³	<0.06	-	Method of analysis of Hg & MoF Japan	
Paramete	r	Unit	Result	#NAAQM Standard	Method Reference	
Location	3) Ter	race of Bac	helor Guest	House	Duration of Survey: 24 hours	
Sulphur Dioxide (SO ₂)	μ g /m³	9.0	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide	(NO ₂)	μ g /m³	8.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10	
Particulate Matter less than 10µm) of PM ₁₀		μ g /m³	68	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14	
Particulate Matter less than 2.5µm) PM _{2.5}		μ g /m³	34	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012- 13,Page No.15-30	
Ozone (O ₃)		μ g /m³	22.9	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012- 13,Page No.31-34	
Lead (as Pb)		μ g /m³	<0.02	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55	
Carbon Monoxide	e(CO)	mg/m ³	0.76	4.0	IS 5182 (Part 10):1999 RA 2003	
Ammonia (NH ₃)		μ g /m³	22.6	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39	
Benzene (C ₆ H ₆)		μ g/m ³	<1	5.0	IS 5182 (Part 11): 2006	
Benzo(a)Pyrene (Particulate phase	e only)	ng/m³	<0.5	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.40-47	
Arsenic (as As)		ng/m³	<0.3	6.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55	
Nickel (as Ni)		ng/m³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55	
Mercury (as Hg)		μ g/m ³	<0.06		Method of analysis of Hg & MoF Japan	

Remarks: N.D. - Not Detected; TWA - Time Weighted Average., #- NAAQS specified as: 24h. TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM₁₀, PM_{2.5}, Lead and Ammonia; 1h. TWA in case of Carbon Monoxide and Ozone; Annual TWA in case of Benzene, Benzo (a) Pyrene, Arsenic and Nickel.

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

BRANCH MANAGER

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.



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Ambient Air Quality Monitoring Report

Report No.: ME-NG	4603-170406-SA-RIPL	-AMRAVATI	Date: 06.04.2017		
Name and address of Customer	RATTANINDIA POV Plot No.D-2 & D-2 (P. Additional MIDC, Villa Tal & Dist: Amravati	ART) at age-Nandgaonpeth,	Order Reference: SO No. 3382012035 dtd. 21.09.2015.		
Sample Description/Type	Ambient Air Quality Monitoring Sample Collected by		Laboratory		
Sampling Location	1) Mr. Manoj Pandagale, House, Village- Wagholi 2) Mr.Rahul Nakade House Village- Dawargaon 3) Ramkirshna Temple, Village- Kapustalani	Sample Quantity/Packing	Filter Paper (PM _{10,}): 3 X 3 No. Filter Paper (PM _{2.5}): 1 X 3 No. SO ₂ : 30 mL X18 No. PVC Bottle NO ₂ : 30 mLX18 No. PVC Bottle NH ₃ : 10 mL X18 No. PVC Bottle O ₃ : 10 mL X72 No. PVC Bottle 3 X 12 No. Charcoal Tubes 3 X 3 No. Rubber Bladder		
Date of Sampling	24.03.2017 & Date of Receipt of Sample		25.03.2017		
Sampling Procedure	As per Method Reference				
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	30.04.2017		

Meteorological Data/Environmental Conditions							
Avg. Wind Velocity	Prominent Wind Direction Relative H		lumidity (%)	Temperature (⁰ C)			
2 E Iron /b	CE	NIVA	Max.	Min.	Max.	Min.	
3.5 km/h	SE -	- NW	32	18	38.0	22.0	
Location :1) Mr. Manoj Pandagale House, Village- Wagholi				Durat	ion of Surve	y 24 hours	
Parameter	Unit	Result	#NAAQM Standard	Method Reference			
Sulphur Dioxide (SO ₂)	μ g/m ³	10.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6			
Nitrogen Dioxide (NO ₂)	μ g /m³	11.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10			
Particulate Matter (size less than 10µm) or PM ₁₀	μ g /m³	80	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14			
Particulate Matter (size less than 2.5µm) or PM _{2.5}	μ g/m ³	38	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.15-30			
Ozone (O ₃)	μ g /m³	22.9	180			rement of Ambient 13,Page No.31-34	

Report No.4603 cont...

Carbon Monoxide (CO) m Ammonia (NH ₃) µ Benzene (C ₆ H ₆) ne Benzo(a)Pyrene (Particulate phase only) Arsenic (as As) ne Nickel (as Ni) ne	ng/m ³ ng/m ³ ng/m ³ ng/m ³ ng/m ³ ng/m ³	<0.02 0.70 23.4 <1.0 <0.5	180 4.0 400 5.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55 IS 5182 (Part 10):1999 RA 2003 CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39 IS 5182 (Part 11): 2006
CO) Ammonia (NH ₃) Benzene (C ₆ H ₆) Renzo(a)Pyrene (Particulate phase only) Arsenic (as As) Nickel (as Ni) ne	ng/m ³ ng/m ³ ng/m ³ ng/m ³	23.4 <1.0 <0.5	400 5.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆) ng Benzo(a)Pyrene (Particulate phase only) Arsenic (as As) ng Nickel (as Ni) ng	ng/m ³ ng/m ³ ng/m ³	<1.0	5.0	Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzo(a)Pyrene (Particulate phase only) Arsenic (as As) Nickel (as Ni)	.g/m³	<0.5		IS 5182 (Part 11): 2006
(Particulate phase only) Arsenic (as As) Nickel (as Ni)	ıg/m³		1 0	
Nickel (as Ni) no		.0.0	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.40-47
	. 2	<0.3	6.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
	ıg/m³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as Hg) μί	.g/m³	<0.06	-	Method of analysis of Hg & MoF Japan
Location : 2) Mr.Rahul Nakade House Village- Dawargaon			se Village-	Duration of Survey 24 hours
Parameter l	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO ₂) μι	.g/m³	7.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂) μι	.g/m³	10.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10μm) or PM ₁₀	.g/m³	68	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5μm) or PM _{2.5}	.g/m³	38	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.15-30
Ozone (O ₃) μι	.g/m³	23.9	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.31-34
Lead (as Pb) μι	.g/m³	<0.02	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Carbon Monoxide (CO)	ng/m³	0.70	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃) μ	.g/m³	22.6	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆) ne	ıg/m³	<1.0	5.0	IS 5182 (Part 11): 2006
Benzo(a)Pyrene (Particulate phase σοιly)	.g/m³	<0.5	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.40-47
Arsenic (as As)	ıg/m³	<0.3	6.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
	ıg/m³	<3	20.0	CPCB Guidelines for the Measurement of Ambient
Nickel (as Ni)	9,			Air Pollutants, Volume I, 2012-13, Page No.48-55



Report No.4603 cont...

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Location : 3) Rar Vill	nkirshna - Kapusta			Duration of Survey 24 hours
Sulphur Dioxide (SO ₂)	μ g /m³	9.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	μ g /m³	11.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM ₁₀	μ g /m³	66	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or PM _{2.5}	μ g /m³	34	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.15-30
Ozone (O ₃)	μ g /m³	23.4	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.31-34
Lead (as Pb)	μ g /m³	<0.02	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Carbon Monoxide (CO)	mg/m³	0.82	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	μ g/m ³	22.8	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	ng/m³	<1.0	5.0	IS 5182 (Part 11): 2006
Benzo(a)Pyrene (Particulate phase only)	μ g /m³	<0.5	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.40-47
Arsenic (as As)	ng/m³	<0.3	6.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Nickel (as Ni)	ng/m³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as Hg)	μ g /m³	<0.06	_	Method of analysis of Hg & MoF Japan

Remarks: N.D. - Not Detected; TWA - Time Weighted Average., #- NAAQS specified as: 24h. TWA in case of Sulphur Dioxide, Nitrogen Dioxide, PM₁₀, PM_{2.5}, Lead and Ammonia; 1h. TWA in case of Carbon Monoxide and Ozone; Annual TWA in case of Benzene, Benzo (a) Pyrene, Arsenic and Nickel.

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Phone: 91-712-2612162 T/Fax: 91-712-2612212 Email: nagpur@mahabal.com

Stack Emission Monitoring Report

Report No.: ME-NG46	Report No.: ME-NG4625-170406 SA-RIPL-AMRAVATI				
Name and Address of Customer	Plot No.D-2 & D-	Village-Nandgaonpeth,	Order Reference: SO No. 3382012035 dtd. 21.09.2015.		
Sample Description / Type	Stack Emission Monitoring	Sample Collected by	Laboratory		
Sampling Location	Unit No.1	Sample Quantity/Packing	Thimble: 1 X 1 No. SO ₂ : 30 mL X 1No.PVC Bottle NO _X :25 mL X 1No.PVC Bottle Bladder: 1L X 1 No.		
Date of Sampling	30.03.2017 Date of Receipt of Sample		31.03.2017		
Sampling Procedure	As per Method Reference				
Date of Start of Analysis	01.04.2017	Date of Completion of Analysis	05.04.2017		

Stack No.			Unit No.1		
Stack attached to			ESP of Boiler Unit No.1		
Material of construction				M.S.	
Stack height above gro	und level (M	leter)		275.0	
Stack diameter (Meter)				4.6	
Stack shape at top				Round	
Type of fuel				Coal	
Fuel Consumption (t/h)			160		
ESP Fields (28 No's.)			In Service (28 No's)		
Load at the time of mo	nitoring		270 MW		
Parameter	Unit	Result	Limit as Per Consent	Method Reference	
Flue gas Temperature	°C	141	-	IS 11255 (Part 3):2008	
Flue gas Velocity	m/s	30.9	-	IS 11255 (Part 3):2008	
Total gas quantity	Nm³/h	1330032	-	IS 11255 (Part 3):2008	
Particulate Matter (PM)	mg/Nm³	22	50	IS 11255 (Part 1):1985 RA 2003	
Sulphur Dioxide (SO ₂)	mg/Nm ³	574	-	IS 11255 (Part 2):1985 RA 2003	



Report No 4625 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	18323	52320	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _X)	mg/Nm³	169	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	12.2	-	IS 13270:1992, RA 2009
Remarks :			1	

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Stack Emission Monitoring Report

Report No.: ME-NG46	Report No.: ME-NG4626-170406-SA-RIPL-AMRAVATI				
Name and Address	Plot No.D-2 & D-	` '	Order Reference: SO No. 3382012035 dtd.		
of Customer	Tal & Dist: Amra	Village-Nandgaonpeth, vati 444 901	21.09.2015.		
Sample Description / Type	Stack Emission Monitoring Sample Collected by		Laboratory		
Sampling Location	Unit No.2	Sample Quantity/Packing	Thimble: 1 X 1 No. SO ₂ : 30 mL X 1No.PVC Bottle NO _X :25 mL X 1No.PVC Bottle Bladder: 1L X 1 No.		
Date of Sampling	30.03.2017 Date of Receipt of Sample		31.03.2017		
Sampling Procedure	As per Method Reference				
Date of Start of Analysis	01.04.2017	Date of Completion of Analysis	05.04.2017		

Stack No.				Unit No.2	
Stack attached to			ES	ESP of Boiler Unit No.2	
Material of construction	1			M.S.	
Stack height above gro	und level (M	leter)		275.0	
Stack diameter (Meter)				4.6	
Stack shape at top				Round	
Type of fuel				Coal	
Fuel Consumption (t/h)			153		
ESP Fields (28 No's.)			In Service (28 No's)		
Load at the time of mo	nitoring		270 MW		
Parameter	Unit	Result	Limit as Per Consent	Method Reference	
Flue gas Temperature	°C	135	-	IS 11255 (Part 3):2008	
Flue gas Velocity	m/s	29.4	-	IS 11255 (Part 3):2008	
Total gas quantity	Total gas quantity Nm³/h 1284078			IS 11255 (Part 3):2008	
Particulate Matter (PM)	mg/Nm³ 30		50	IS 11255 (Part 1):1985 RA 2003	
Sulphur Dioxide (SO ₂)	mg/Nm ³	588	-	IS 11255 (Part 2):1985 RA 2003	



Report No.4626 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	18121	52230	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _X)	mg/Nm³	174	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	12.8	-	IS 13270:1992, RA 2009
Remarks :			1	-

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Stack Emission Monitoring Report

Report No.: ME-NG46	port No.: ME-NG4627-170406-SA-RIPL-AMRAVATI				
Name and Address	Plot No.D-2 & D-	` '	Order Reference:		
of Customer	Additional MIDC, Tal & Dist: Amra	Village-Nandgaonpeth, vati 444 901	SO No. 3382012035 dtd. 21.09.2015.		
Sample Description / Type	Stack Emission Monitoring	Sample Collected by	Laboratory		
Sampling Location	Unit No.3	Sample Quantity/Packing	Thimble: 1 X 1 No. SO ₂ : 30 mL X 1No.PVC Bottle NO _X :25 mL X 1No.PVC Bottle Bladder: 1L X 1 No.		
Date of Sampling	30.03.2017	Date of Receipt of Sample	31.03.2017		
Sampling Procedure	As per Method Reference				
Date of Start of Analysis	01.04.2017	Date of Completion of Analysis	05.04.2017		

Stack No.			Unit No.3		
Stack attached to			ESP of Boiler Unit No.3		
Material of construction	1			M.S.	
Stack height above gro	und level (M	leter)		275.0	
Stack diameter (Meter)				4.6	
Stack shape at top				Round	
Type of fuel				Coal	
Fuel Consumption (t/h)	Fuel Consumption (t/h)			143	
ESP Fields (28 No's.)			In Service (28 No's)		
Load at the time of mo	nitoring		240 MW		
Parameter	Unit	Result	Limit as Per Consent	Method Reference	
Flue gas Temperature	°C	130	-	IS 11255 (Part 3):2008	
Flue gas Velocity	m/s	29.4	-	IS 11255 (Part 3):2008	
Total gas quantity	Total gas quantity Nm³/h 1300009			IS 11255 (Part 3):2008	
Particulate Matter (PM)	mg/Nm³	28	50	IS 11255 (Part 1):1985 RA 2003	
Sulphur Dioxide (SO ₂)	mg/Nm³	551	-	IS 11255 (Part 2):1985 RA 2003	



Report No.4627 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	17191	52230	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _X)	mg/Nm³	152	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	12.2	-	IS 13270:1992, RA 2009
Remarks :	I		I	1

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

BRANCH MANAGER



Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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Stack Emission Monitoring Report

Report No.: ME-NG46	28-170406-SA-RII	PL-AMRAVATI	Date : 06.04.2017		
Name and Address of Customer	Plot No.D-2 & D-	POWER LIMITED 2 (PART) at Village-Nandgaonpeth,	Order Reference: SO No. 3382012035 dtd.		
	Tal & Dist: Amra		21.09.2015.		
Sample Description / Type	Stack Emission Monitoring Sample Collected by		Laboratory		
Sampling Location	Unit No.4	Sample Quantity/Packing	Thimble: 1 X 1 No. SO ₂ : 30 mL X 1No.PVC Bottle NO _X :25 mL X 1No.PVC Bottle Bladder: 1L X 1 No.		
Date of Sampling	30.03.2017	Date of Receipt of Sample	31.03.2017		
Sampling Procedure	As per Method Reference				
Date of Start of Analysis	01.04.2017	Date of Completion of Analysis	05.04.2017		

Stack No.				Unit No.4	
Stack attached to			ES	ESP of Boiler Unit No.4	
Material of construction	1			M.S.	
Stack height above gro	und level (M	leter)		275.0	
Stack diameter (Meter)				4.6	
Stack shape at top				Round	
Type of fuel				Coal	
Fuel Consumption (t/h)			115		
ESP Fields (28 No's.)			In Service (28 No's)		
Load at the time of mo	nitoring		180 MW		
Parameter	Unit	Result	Limit as Per Consent	Method Reference	
Flue gas Temperature	°C	113	-	IS 11255 (Part 3):2008	
Flue gas Velocity	m/s	28.4	-	IS 11255 (Part 3):2008	
Total gas quantity	Total gas quantity Nm ³ /h 1311098			IS 11255 (Part 3):2008	
Particulate Matter (PM)	mg/Nm³	22	50	IS 11255 (Part 1):1985 RA 2003	
Sulphur Dioxide (SO ₂)	mg/Nm³	540	-	IS 11255 (Part 2):1985 RA 2003	



Report No.4628 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	16992	52230	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _X)	mg/Nm³	159	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	11.8	-	IS 13270:1992, RA 2009
Remarks :	1	1	1	-

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Stack Emission Monitoring Report

Report No.: ME-NG46	29-170404-SA-RII	Date : 04.04.2017			
Name and Address of Customer	Plot No.D-2 & D-	POWER LIMITED 2 (PART) at Village-Nandgaonpeth,	Order Reference: SO No. 3382012035 dtd.		
or customer	Tal & Dist: Amra		21.09.2015.		
Sample Description / Type	Stack Emission Monitoring	Sample Collected by	Laboratory		
Sampling Location	Unit No.5	Sample Quantity/Packing	Thimble: 1 X 1 No. SO ₂ : 30 mL X 1No.PVC Bottle NO _X :25 mL X 1No.PVC Bottle Bladder: 1L X 1 No.		
Date of Sampling	30.03.2017	Date of Receipt of Sample	31.03.2017		
Sampling Procedure	As per Method Reference				
Date of Start of Analysis	01.04.2017	Date of Completion of Analysis	05.04.2017		

Stack No.			Unit No.5		
Stack attached to			ES	ESP of Boiler Unit No.5	
Material of construction	1			M.S.	
Stack height above gro	und level (M	leter)		275.0	
Stack diameter (Meter)				4.6	
Stack shape at top				Round	
Type of fuel				Coal	
Fuel Consumption (t/h)	Fuel Consumption (t/h)			163	
ESP Fields (28 No's.)			In Service (28 No's)		
Load at the time of mo	nitoring		270 MW		
Parameter	Unit	Result	Limit as Per Consent	Method Reference	
Flue gas Temperature	°C	137	-	IS 11255 (Part 3):2008	
Flue gas Velocity	m/s	29.9	-	IS 11255 (Part 3):2008	
Total gas quantity	Total gas quantity Nm ³ /h 1299545			IS 11255 (Part 3):2008	
Particulate Matter (PM)	mg/Nm ³ 32		50	IS 11255 (Part 1):1985 RA 2003	
Sulphur Dioxide (SO ₂)	mg/Nm³	586	-	IS 11255 (Part 2):1985 RA 2003	



Report No.4629 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	18277	52230	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _X)	mg/Nm³	162	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	12.1	-	IS 13270:1992, RA 2009
Remarks :	1	ı	1	-

------END------FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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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.



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Water Sample Analysis Report

Report No.: ME-NG	4607-170406-SA-RIPL- <i>A</i>	Date : 06.04.2017	
Name and	RATTANINDIA POWE	Order Reference:	
Address of Customer	Plot No.D-2 & D-2 (PAF Additional MIDC, Villag Tal & Dist: Amravati 44	SO No. 3382012035 dtd. 21.09.2015.	
Sample Description/Type	Ground Water/Grab	Laboratory	
Sampling Location	Borewell- Gram Panchayat Digargoan Sample Quantity/Packing		3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle
Date of Sampling	25.03.2017	25.03.2017	
Sampling Procedure	IS:3025(Part I):1987 F	2012, 1060-В, 1-39;	
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	05.04.2017

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
1.	Colour	Hazen	<1	5 Max.	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	_	Agreeable	Agreeable	IS 3025 (Part 5):1983, RA 2006
3.	Taste	_	Agreeable	Agreeable	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	0.8	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	рН	-	7.0	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	468	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	18	-	APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	N.D.	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO₃)	mg/L	376	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	296	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as CI)	mg/L	48.6	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	22.1	200 Max	APHA 22 nd Ed. 2012, 4500- SO₄-E, 4-190
13.	Nitrate (as NO ₃)	mg/L	49.7	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ .E, 4-125
14.	Calcium (as Ca)	mg/L	93.8	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67



Report No.4607 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
15.	Magnesium (as Mg)	mg/L	33.2	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.636	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17.	Boron(as B)	mg/L	0.15	0.5 Max.	APHA 22 nd Ed.2012, 4500-B B,4-25
18.	Dissolved Oxygen	mg/L	5.8		APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139
19.	Oil and Grease	mg/L	N.D.		IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20.	Iron (as Fe)	mg/L	0.341	0.3 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
21.	Manganese (as Mn)	mg/L	< 0.04	0.1 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
22.	Cadmium (as Cd)	mg/L	N.D.	0.003 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
23.	Copper (as Cu)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
24.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.		APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
25.	Lead (as Pb)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
26.	Zinc (as Zn)	mg/L	0.048	5 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
27.	Arsenic (as As)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
28.	Mercury (as Hg)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 3112-B, 3-23
29.	Selenium (as Se)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
30.	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	APHA 22 nd Ed. 2012, 3500-Al-B, 3-61
31.	Cyanide (as CN)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
32.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47

------END-------FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

BRANCH MANAGER



Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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Water Sample Analysis Report

Report No.: ME-NG4	Report No.: ME-NG4609-170406-SA-RIPL-AMRAVATI Date: 06.04.2017						
Name and	RATTANINDIA POW	Order Reference:					
Address of Customer	Plot No.D-2 & D-2 (P) Additional MIDC, Villa Tal & Dist: Amravati	ige-Nandgaonpeth,	SO No. 3382012035 dtd. 21.09.2015.				
Sample Description/Type	Ground Water/Grab	Laboratory					
Sampling Location	Well Water of Shri Madhukarrao Dhote field, Village- Kapustalni	Sample Quantity/Packing	3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle				
Date of Sampling	25.03.2017	Date of Receipt of Sample	25.03.2017				
Sampling Procedure	IS:3025(Part I):1987	RA 2003; APHA 22 nd Ed	I. 2012, 1060-B, 1-39;				
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	05.04.2017				
Water Level Depth	5.12 meter from grou	ınd level					

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
1.	Colour	Hazen	<1	5 Max.	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	_	Agreeable	Agreeable	IS 3025 (Part 5):1983, RA 2006
3.	Taste	-	Agreeable	Agreeable	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	0.4	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	рН	-	7.4	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	470	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	<5		APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	<0.05	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO ₃)	mg/L	346	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	234	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	54.2	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	40.9	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	74.2	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃₋ E, 4-125

Report No.4609 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
14.	Calcium (as Ca)	mg/L	72.1	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	40.3	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.483	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17.	Boron(as B)	mg/L	< 0.1	0.5 Max.	APHA 22 nd Ed.2012, 4500-B B,4-25
18.	Dissolved Oxygen	mg/L	6.0		APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139
19.	Oil and Grease	mg/L	N.D.		IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20.	Iron (as Fe)	mg/L	0.293	0.3 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
21.	Manganese (as Mn)	mg/L	<0.06	0.1 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
22.	Cadmium (as Cd)	mg/L	N.D.	0.003 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
23.	Copper (as Cu)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
24.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.		APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
25.	Lead (as Pb)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
26.	Zinc (as Zn)	mg/L	0.001	5 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
27.	Arsenic (as As)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
28.	Mercury (as Hg)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 3112-B, 3-23
29.	Selenium (as Se)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
30.	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	APHA 22 nd Ed. 2012, 3500-AI-B, 3-61
31.	Cyanide (as CN)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
32.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47
Ren	narks: N.D. – Not De	tected			
	MALARAI ENVIRO ENGINE			END	

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

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Note:

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Water Sample Analysis Report

Report No.: ME-NG4	Report No.: ME-NG4608-170406-SA-RIPL-AMRAVATI Date: 06.04.2017						
Name and Address of Customer	Plot No.D-2 & D-2 (PAdditional MIDC, Villa Tal & Dist: Amravati	Order Reference: SO No. 3382012035 dtd. 21.09.2015.					
Sample Description/Type	Ground Water/Grab	Laboratory					
Sampling Location	Well Water Gram Panchayat Pimpal Vihar	Sample Quantity/Packing	3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle				
Date of Sampling	25.03.2017	Date of Receipt of Sample	25.03.2017				
Sampling Procedure	IS:3025(Part I):1987	l. 2012, 1060-B, 1-39;					
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	05.04.2017				
Water Level Depth	3.6 meter from groun	nd level					

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
1.	Colour	Hazen	<1	5 Max.	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	_	Agreeable	Agreeable	IS 3025 (Part 5):1983, RA 2006
3.	Taste	_	Agreeable	Agreeable	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	1.0	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	рН	-	7.6	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	337	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	<5	-	APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	0.06	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO₃)	mg/L	284	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	284	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	13.3	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	19.6	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	9.74	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃₋ E, 4-125



Report No.4608 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference	
15.	Calcium (as Ca)	mg/L	57.7	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67	
14.	Magnesium (as Mg)	mg/L	34.0	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84	
16.	Fluoride(as F)	mg/L	0.420	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87	
17.	Boron(as B)	mg/L	<0.1	0.5 Max.	APHA 22 nd Ed.2012, 4500-B B,4-25	
18.	Dissolved Oxygen	mg/L	5.8	-	APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139	
19.	Oil and Grease	mg/L	N.D.	-	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1	
20.	Iron (as Fe)	mg/L	0.311	0.3 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
21.	Manganese (as Mn)	mg/L	< 0.04	0.1 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
22.	Cadmium (as Cd)	mg/L	N.D.	0.003 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
23.	Copper (as Cu)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
24.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.	-	APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69	
25.	Lead (as Pb)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
26.	Zinc (as Zn)	mg/L	0.034	5 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
27.	Arsenic (as As)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38	
28.	Mercury (as Hg)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 3112-B, 3-23	
29.	Selenium (as Se)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38	
30.	Aluminium (as Al)	mg/L	0.025	0.03 Max.	APHA 22 nd Ed. 2012, 3500-Al-B, 3-61	
31.	Cyanide (as CN)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44	
32.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47	
Ren	Remarks: N.D. – Not Detected					

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

BRANCH MANAGER



Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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Water Sample Analysis Report

Report No.: ME-NG4	Report No.: ME-NG4604-170406-SA-RIPL-AMRAVATI Date: 06.04.2017							
Name and Address of Customer	Plot No.D-2 & D-2 (PA Additional MIDC, Villa Tal & Dist: Amravati	Order Reference: SO No. 3382012035 dtd. 21.09.2015.						
Sample Description/Type	Ground Water/Grab	Laboratory						
Sampling Location	Well Water of Shri Arun Ghathode Vill. Rasalpur	Sample Quantity/Packing	3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle					
Date of Sampling	25.03.2017	Date of Receipt of Sample	25.03.2017					
Sampling Procedure	IS:3025(Part I):1987	RA 2003; APHA 22 nd Ed	l. 2012, 1060-B, 1-39;					
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	05.04.2017					
Water Level Depth	14.8 meter from grou	ınd level						

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
1.	Colour	Hazen	<1.1	5 Max.	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	_	Agreeable	Agreeable	IS 3025 (Part 5):1983, RA 2006
3.	Taste	_	Agreeable	Agreeable	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	0.7	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	рН	-	7.7	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	899	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	<5		APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	<0.05	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO ₃)	mg/L	334	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	476	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	30.8	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	122	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190

Report No.4604 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
13.	Nitrate (as NO ₃)	mg/L	40.6	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃₋ E, 4-125
14.	Calcium (as Ca)	mg/L	73.7	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	36.4	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.523	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17.	Boron(as B)	mg/L	0.16	0.5 Max.	APHA 22 nd Ed.2012, 4500-B B,4-25
18.	Dissolved Oxygen	mg/L	5.8		APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139
19.	Oil and Grease	mg/L	N.D.		IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20.	Iron (as Fe)	mg/L	0.523	0.3 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
21.	Manganese (as Mn)	mg/L	N.D.	0.1 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
22.	Cadmium (as Cd)	mg/L	N.D.	0.003 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
23.	Copper (as Cu)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
24.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.		APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
25.	Lead (as Pb)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
26.	Zinc (as Zn)	mg/L	0.020	5 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
27.	Arsenic (as As)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
28.	Mercury (as Hg)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 3112-B, 3-23
29.	Selenium (as Se)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
30.	Aluminium (as Al)	mg/L	0.015	0.03 Max.	APHA 22 nd Ed. 2012, 3500-Al-B, 3-61
31.	Cyanide (as CN)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
32.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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- ${\bf 1.} \quad \hbox{The result listed refers only to the tested sample(s) and applicable parameter(s).}$
- This report is not to be reproduced except in full, without written approval of the laboratory.



Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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Water Sample Analysis Report

Report No.: ME-NG4	Date : 06.04.2017		
Name and Address of Customer	RATTANINDIA POW Plot No.D-2 & D-2 (PA Additional MIDC, Villa Tal & Dist: Amravati 4	Order Reference: SO No. 3382012035 dtd. 21.09.2015.	
Sample Description/Type	Ground Water/Grab	Laboratory	
Sampling Location	Well Water of Shri Shyamroaji Zode House Village- Talkhanda	Sample Quantity/Packing	3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle
Date of Sampling	25.03.2017	Date of Receipt of Sample	25.03.2017
Sampling Procedure	IS:3025(Part I):1987	RA 2003; APHA 22 nd Ed	I. 2012, 1060-B, 1-39;
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	05.04.2017
Water Level Depth	4.2 meter from groun	nd level	

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
1.	Colour	Hazen	<1.1	5 Max.	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	1	<1	Agreeable	IS 3025 (Part 5):1983, RA 2006
3.	Taste	1	Agreeable	Agreeable	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	0.6	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	рН	-	7.2	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	407	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	15		APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	0.08	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO₃)	mg/L	344	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO₃)	mg/L	300	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	20.8	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	11.8	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO₃)	mg/L	55.3	45 Max	APHA 22 nd Ed. 2012, 4500-NO₃.E, 4-125



Report No.4606 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
14. C	Calcium (as Ca)	mg/L	84.2	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15. N	Magnesium (as Mg)	mg/L	32.6	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16. F	Fluoride(as F)	mg/L	0.500	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17. E	Boron(as B)	mg/L	< 0.1	0.5 Max.	APHA 22 nd Ed.2012, 4500-B B,4-25
18.	Dissolved Oxygen	mg/L	6.2		APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139
19.	Oil and Grease	mg/L	N.D.		IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20. lr	ron (as Fe)	mg/L	0.290	0.3 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
21. N	Manganese (as Mn)	mg/L	<0.04	0.1 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
22. C	Cadmium (as Cd)	mg/L	N.D.	0.003 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
23. C	Copper (as Cu)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
24.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.		APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
25. L	₋ead (as Pb)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
26. Z	Zinc (as Zn)	mg/L	0.029	5 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
27. A	Arsenic (as As)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
28. N	Mercury (as Hg)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 3112-B, 3-23
29. S	Selenium (as Se)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
30. A	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	APHA 22 nd Ed. 2012, 3500-AI-B, 3-61
	Cyanide (as CN)	mg/L	N.D.	0.05 Max.	APHA 22 rd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
	Phenolic Compounds as C ₆ H₅OH)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47
32.		•	N.D.	0.001 Max.	

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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Water Sample Analysis Report

Report No.: ME-NG	Report No.: ME-NG4605-170404-SA-RIPL-AMRAVATI Date : 04.04.2017						
Name and	RATTANINDIA POWE		Order Reference:				
Address of Customer	Plot No.D-2 & D-2 (PAF Additional MIDC, Villag Tal & Dist: Amravati 44	e-Nandgaonpeth,	SO No. 3382012035 dtd. 21.09.2015.				
Sample Description/Type	Ground Water/Grab	Laboratory					
Sampling Location	Dugwell of Wagholi Village Sample Quantity/Packing		3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle				
Date of Sampling	25.03.2017	Date of Receipt of Sample	25.03.2017				
Sampling Procedure	IS:3025(Part I):1987 F	2012, 1060-В, 1-39;					
Date of Start of Analysis	27.03.2017	04.04.2017					

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
1.	Colour	Hazen	1.5	5 Max.	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	-	Agreeable	Agreeable	IS 3025 (Part 5):1983, RA 2006
3.	Taste	-	Agreeable	Agreeable	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	0.8	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	рН	-	7.1	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	350	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	162	-	APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	N.D.	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO ₃)	mg/L	304	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO₃)	mg/L	200	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	29.8	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	37.8	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	22.2	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ .E, 4-125
14.	Calcium (as Ca)	mg/L	94.6	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67



Report No.4605 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
15.	Magnesium (as Mg)	mg/L	16.5	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.579	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17.	Boron(as B)	mg/L	0.14	0.5 Max.	APHA 22 nd Ed.2012, 4500-B B,4-25
18.	Dissolved Oxygen	mg/L	5.8		APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139
19.	Oil and Grease	mg/L	N.D.		IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20.	Iron (as Fe)	mg/L	0.361	0.3 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
21.	Manganese (as Mn)	mg/L	< 0.04	0.1 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
22.	Cadmium (as Cd)	mg/L	N.D.	0.003 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
23.	Copper (as Cu)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
24.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.		APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
25.	Lead (as Pb)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
26.	Zinc (as Zn)	mg/L	0.019	5 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18
27.	Arsenic (as As)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
28.	Mercury (as Hg)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 3112-B, 3-23
29.	Selenium (as Se)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38
30.	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	APHA 22 nd Ed. 2012, 3500-Al-B, 3-61
31.	Cyanide (as CN)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
32.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47

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Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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Water Sample Analysis Report

Report No.: ME-NG	Report No.: ME-NG4610-170406-SA-RIPL-AMRAVATI					
	RATTANINDIA POV	VER LIMITED	Order Reference:			
Name and Address of Customer	Plot No.D-2 & D-2 (P. Additional MIDC, Villa Tal & Dist: Amravati	age-Nandgaonpeth,	SO No. 3382012035 dtd. 21.09.2015.			
Sample Description/Type	Surface water/Grab	Sample Collected by	Laboratory			
Sampling Location	Malegaon Pond	Sample Quantity/Packing	3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle			
Date of Sampling	25.03.2017	Date of Receipt of Sample	25.03.2017			
Sampling Procedure	IS:3025(Part I):1987	' RA 2003; APHA 22 nd Ed	d. 2012, 1060-B, 1-39			
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	05.04.2017			

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22 nd Ed. 2012, 2120-B, 2-6
2	Odour	_	Agreeable	IS 3025 (Part 5):1983, RA 2006
3	Taste	-	NA	IS 3025 (Part 7):1984, RA 2006
4	Turbidity	NTU	15.7	APHA 22 nd Ed. 2012, 2130-B, 2-13
5	рН	-	7.9	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6	Total Dissolved Solids	mg/L	190	IS 3025 (Part 16):1984 RA 2006
7	Total Suspended Solids	mg/L	16	APHA 22 nd Ed. 2012, 2540-D, 2-66
8	Free Chlorine (Residual)	mg/L	<0.05	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9	Total Hardness (as CaCO ₃)	mg/L	152	APHA 22 nd Ed. 2012, 2340-C,2-44,45
10	Alkalinity Total (as CaCO ₃)	mg/L	150	IS 3025 (Part 23):1986 RA 2009
11	Chloride (as CI)	mg/L	13.9	APHA 22 nd Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate (as SO ₄)	mg/L	14.8	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13	Nitrate (as NO ₃)	mg/L	<0.5	APHA 22 nd Ed. 2012, 4500-NO ₃₋ E, 4-125



Report No.4610 cont.

Sr. No.	Parameter	Unit	Result	Method Reference
14	Calcium(as Ca)	mg/L	39.3	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15	Magnesium (as Mg)	mg/L	13.1	APHA 22 nd Ed. 2012, 3500-Mg- B, 3-84
16	Fluoride(as F)	mg/L	0.437	APHA 22 nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
17	Boron(as B)	mg/L	0.15	APHA 22 nd Ed. 2012, 4500-B B, 4-25
18	Dissolved Oxygen	mg/L	5.8	APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139
19	Oil and Grease	mg/L	N.D.	IS 3025 (Part 39): 1991, Reaffirmed 2003, Ed. 2.1
20	Iron (as Fe)	mg/L	1.55	APHA 22 nd Ed. 2012, 3111-B, 3-18
21	Manganese (as Mn)	mg/L	0.034	APHA 22 nd Ed. 2012, 3111-B, 3-18
22	Cadmium (as Cd)	mg/L	<0.1	APHA 22 nd Ed. 2012, 3111-B, 3-18
23	Copper (as Cu)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3111-B, 3-18
24	Chromium Hexa (as Cr ⁶⁺)	mg/L	<0.02	APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
25	Lead (as Pb)	mg/L	<0.1	APHA 22 nd Ed. 2012, 3111-B, 3-18
26	Zinc (as Zn)	mg/L	0.034	APHA 22 nd Ed. 2012, 3111-B, 3-18
27	Arsenic (as As)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3114-C, 3-38
28	Mercury (as Hg)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3112-B, 3-23
29	Selenium (as Se)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3114-C, 3-38
30	Aluminium (as Al)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3500-Al-B, 3-61
31	Cyanide (as CN)	mg/L	N.D.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
32	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47
Rema	ırks: N.D. – Not Detected,			

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Note:



Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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Water Sample Analysis Report

Report No.: ME-NG	4611-170406-SA-RIPL	-AMRAVATI	Date : 06.04.2017	
Name and Address of Customer	RATTANINDIA POV Plot No.D-2 & D-2 (P. Additional MIDC, Villa Tal & Dist: Amravati	ART) at age-Nandgaonpeth,	Order Reference: SO No. 3382012035 dtd. 21.09.2015.	
Sample Description/Type	Surface water/Grab	Sample Collected by	Laboratory	
Sampling Location	Wagholi Pond Sample Quantity/Packing		3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle	
Date of Sampling	25.03.2017	Date of Receipt of Sample	25.03.2017	
Sampling Procedure	IS:3025(Part I):1987	7 RA 2003; APHA 22 nd Ed	d. 2012, 1060-B, 1-39	
Date of Start of Analysis	27.03.2017	Date of Completion of Analysis	05.04.2017	

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22 nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, RA 2006
3	Taste	-	NA	IS 3025 (Part 7):1984, RA 2006
4	Turbidity	NTU	8.2	APHA 22 nd Ed. 2012, 2130-B, 2-13
5	рН	-	7.8	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6	Total Dissolved Solids	mg/L	337	IS 3025 (Part 16):1984 RA 2006
7	Total Suspended Solids	mg/L	16	APHA 22 nd Ed. 2012, 2540-D, 2-66
8	Free Chlorine (Residual)	mg/L	<0.05	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9	Total Hardness (as CaCO ₃)	mg/L	248	APHA 22 nd Ed. 2012, 2340-C,2-44,45
10	Alkalinity Total (as CaCO ₃)	mg/L	140	IS 3025 (Part 23):1986 RA 2009
11	Chloride (as Cl)	mg/L	40.9	APHA 22 nd Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate (as SO ₄)	mg/L	89.5	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13	Nitrate (as NO ₃)	mg/L	<0.5	APHA 22 nd Ed. 2012, 4500-NO ₃₋ E, 4-125



Report No.4611 cont.

Parameter	Unit	Result	Method Reference
alcium (as Ca)	mg/L	52.1	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
agnesium (as Mg)	mg/L	28.7	APHA 22 nd Ed. 2012, 3500-Mg- B, 3-84
uoride(as F)	mg/L	0.32	APHA 22 nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
oron(as B)	mg/L	<0.1	APHA 22 nd Ed. 2012, 4500-B B, 4-25
issolved Oxygen	mg/L	5.8	APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139
il and Grease	mg/L	N.D.	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
on (as Fe)	mg/L	0.567	APHA 22 nd Ed. 2012, 3111-B, 3-18
anganese (as Mn)	mg/L	0.05	APHA 22 nd Ed. 2012, 3111-B, 3-18
admium (as Cd)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3111-B, 3-18
opper (as Cu)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3111-B, 3-18
hromium Hexa (as r ⁶⁺)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
ead (as Pb)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3111-B, 3-18
nc (as Zn)	mg/L	0.040	APHA 22 nd Ed. 2012, 3111-B, 3-18
rsenic (as As)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3114-C, 3-38
ercury (as Hg)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3112-B, 3-23
elenium (as Se)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3114-C, 3-38
luminium (as Al)	mg/L	<0.025	APHA 22 nd Ed. 2012, 3500-Al-B, 3-61
yanide (as CN)	mg/L	N.D.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44
henolic Compounds (as ₆ H ₅ OH)	mg/L	N.D.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47
henoli ₆ H₅O⊦	c Compounds (as	c Compounds (as mg/L	c Compounds (as mg/L N.D.

-----END-----FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

BRANCH MANAGER

Note:



Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

Phone: 91-712-2612162 T/Fax: 91-712-2612212 Email: nagpur@mahabal.com

Water Sample Analysis Report

Report No.: ME-NG4	Report No.: ME-NG4614-170406-SA-RIPL-AMRAVATI Date : 06.04.2017						
Name and	RATTANINDIA POWER Plot No.D-2 & D-2 (PART	Order Reference:					
Address of Customer	Additional MIDC, Village- Tal & Dist: Amravati 444	SO No. 3382012035 dtd. 21.09.2015.					
Sample Description/Type	Ground Water/Grab	Laboratory					
Sampling Location	Back side of Ash Dyke area well of Mr. Vasant Pachghare Sample Quantity/Packing		3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle				
Date of Sampling	25.03.2017 Date of Receipt o Sample		25.03.2017				
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;						
Date of Start of Analysis	27.03.2017	05.04.2017					
Water Level Depth	4.0 meter from ground le	evel					

Sr. No.	Parameter	Unit	Result	Inland Surface water (EPA rule 1986)	Method Reference
1.	Colour	Hazen	<1	-	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	-	Agreeable	-	IS 3025 (Part 5):1983, RA 2006
3.	Taste	-	Disagreea ble	-	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	3.2	-	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	рН	-	7.5	5.5 to 9.0	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	432	-	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	28	100 Max.	APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	N.D.	1.0 Max.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO ₃)	mg/L	254	-	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	268	-	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	19.4	-	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	18.9	-	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190



Report No.4614 Cont...

Sr. No.	Parameter	Unit	Result	Inland Surface water (EPA rule 1986)	Method Reference	
13.	Nitrate (as NO ₃)	mg/L	22.8	10 Max.	APHA 22 nd Ed. 2012, 4500-NO ₃₋ E, 4-125	
15.	Calcium (as Ca)	mg/L	42.8	-	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67	
14.	Magnesium (as Mg)	mg/L	35.8	_	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84	
16.	Fluoride(as F)	mg/L	0.22	2.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87	
17.	Boron(as B)	mg/L	< 0.1	_	APHA 22 nd Ed.2012, 4500-B B,4-25	
18.	Dissolved Oxygen	mg/L	5.6	-	APHA 22 nd Ed. 2012, 4500-O, B & C, 4-136, 4-139	
19.	Oil and Grease	mg/L	N.D.	10 Max.	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1	
20.	Iron (as Fe)	mg/L	0.34	3.0 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
21.	Manganese (as Mn)	mg/L	<0.04	2.0 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
22.	Cadmium (as Cd)	mg/L	N.D.	2.0 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
23.	Copper (as Cu)	mg/L	N.D.	3.0 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
24.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.	0.1 Max.	APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69	
25.	Lead (as Pb)	mg/L	N.D.	0.1 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
26.	Zinc (as Zn)	mg/L	0.08	5.0 Max.	APHA 22 nd Ed. 2012, 3111-B, 3-18	
27.	Arsenic (as As)	mg/L	N.D.	0.2 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38	
28.	Mercury (as Hg)	mg/L	N.D.	0.01 Max.	APHA 22 nd Ed. 2012, 3112-B, 3-23	
29.	Selenium (as Se)	mg/L	N.D.	0.05 Max.	APHA 22 nd Ed. 2012, 3114-C, 3-38	
30.	Aluminium (as Al)	mg/L	0.025	-	APHA 22 nd Ed. 2012, 3500-AI-B, 3-61	
31.	Cyanide (as CN)	mg/L	N.D.	0.2 Max.	APHA 22 nd Ed. 2012, 4500-CN, C & E, 4-39 & 4-44	
32.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	1.0 Max.	APHA 22 nd Ed. 2012, 5530- B & C, 5-47	

Remarks: Limit is EPA Rule 1986 of Schedule VI (rule 3A) of General Standard for Discharge of Environmental Pollutants Part A Effluents Detected.

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.



Kishor C. Yeole BRANCH MANAGER



Engineers, Consultants, Environmental Monitoring Laboratory & Contractors Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City, Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111 Phone: 91-712-2612162 T/Fax: 91-712-2612212 Email: nagpur@mahabal.com

Noise Level Monitoring Report

Report No.: ME-NG46	Date: 04.04.2017				
Name and Address of Customer	RATTANINDIA POWEI Plot No.D-2 & D-2 (PAR' Additional MIDC, Village Tal & Dist: Amravati 444	Order Reference: SO No. 3382012035 dtd. 21.09.2015.			
Sample Description/Type	Noise Level Monitoring	Sample Collected by	Laboratory		
Date of Sampling					
Sampling Procedure	Instrument Catalogue & User manual				

	Unit	Res	sult	Norms as per factory Act.	
Location		Min.	Max.	Maximum Exposure duration per Day	Limit
Green Point gate	dB(A)	68.8	73.2		
Wagholi gate	dB(A)	69.8	72.8		
Near Material gate	dB(A)	68.4	73.7	8 h	90 Max.
Near Labour Colony	dB(A)	67.4	70.8		
Near Bachelor Colony Building	dB(A)	64.1	69.4		

Remark: : Limit from The Factories Act, 1948, The Maharashtra Factory Rules, 1963, Schedule XXIV Page No. 283-284

------END----------FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

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Note:

The result listed refers only to the tested sample(s) and applicable parameter(s).

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