



Mahabal Enviro Engineers Pvt. Ltd.

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

Stack Emission Monitoring Report

Report No.: ME-NG3332-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			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	13.12.2017	Date of Receipt of Sample	14.12.2017
Sampling Procedure	As per Method Reference		
Date of Start of Analysis	15.12.2017	Date of Completion of Analysis	22.12.2017

Stack No.		Unit No.3		
Stack attached to		ESP of Boiler Unit No.3		
Material of construction		M.S.		
Stack height above ground level (Meter)		275.0		
Stack diameter (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		112		
ESP Fields (28 No's.)		In Service (28 No's)		
Load at the time of monitoring		194 MW		
Parameter	Unit	Result	Limit as Per Consent	Method Reference
Flue gas Temperature	°C	121	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	29.3	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1325182	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	38	50	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO ₂)	mg/Nm ³	572	-	IS 11255 (Part 2):1985 RA 2003

Report No. 3332 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	18192	52230	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	168	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	11.8	-	IS 13270:1992, RA 2009
Remarks :				

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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

Stack Emission Monitoring Report

Report No.: ME-NG3374-180106-SA-RIPL-AMRAVATI		Date: 06.12.2018	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			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	28.12.2017	Date of Receipt of Sample	29.12.2017
Sampling Procedure	As per Method Reference		
Date of Start of Analysis	29.12.2017	Date of Completion of Analysis	03.01.2018

Stack No.	Unit No.3			
Stack attached to	ESP of Boiler Unit No.3			
Material of construction	M.S.			
Stack height above ground level (Meter)	275.0			
Stack diameter (Meter)	4.6			
Stack shape at top	Round			
Type of fuel	Coal			
Fuel Consumption (t/h)	117			
ESP Fields (28 No's.)	In Service (28 No's)			
Load at the time of monitoring	192 MW			
Parameter	Unit	Result	Limit as Per Consent	Method Reference
Flue gas Temperature	°C	123	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	29.3	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1318489	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	34	50	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO ₂)	mg/Nm ³	572	-	IS 11255 (Part 2):1985 RA 2003

Report No. 3374 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	18100	52230	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	167	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	12.3	-	IS 13270:1992, RA 2009
Remarks :				

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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

Stack Emission Monitoring Report

Report No.: ME-NG3333-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			SO No. 3382012035 dtd. 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	13.12.2017	Date of Receipt of Sample	14.12.2017
Sampling Procedure	As per Method Reference		
Date of Start of Analysis	15.12.2017	Date of Completion of Analysis	23.12.2017

Stack No.	Unit No.4			
Stack attached to	ESP of Boiler Unit No.4			
Material of construction	M.S.			
Stack height above ground level (Meter)	275.0			
Stack diameter (Meter)	4.6			
Stack shape at top	Round			
Type of fuel	Coal			
Fuel Consumption (t/h)	107			
ESP Fields (28 No's.)	In Service (28 No's)			
Load at the time of monitoring	194 MW			
Parameter	Unit	Result	Limit as Per Consent	Method Reference
Flue gas Temperature	°C	129	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	29.7	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1316541	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	46	50	IS 11255 (Part 1):1985 RA 2003
Sulphur Dioxide (SO ₂)	mg/Nm ³	583	-	IS 11255 (Part 2):1985 RA 2003

Report No. 3333 cont...

Parameter	Unit	Result	Limit as Per Consent	Method Reference
Sulphur Dioxide (SO ₂)	kg/day	18421	52230	IS 11255 (Part 2):1985 RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	178	-	IS 11255 (Part 7):2005
Carbon Dioxide (CO ₂)	%	12.1	-	IS 13270:1992, RA 2009
Remarks :				

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3334-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	Order Reference:	
		SO No. 3382012035 dtd. 21.09.2015.	
Sample Description/Type	Ambient Air Quality Monitoring	Sample Collected by	Laboratory
Sampling Location	1) Near 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	13.12.2017 & 14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	As per Method reference		
Date of Start of Analysis	15.12.2017	Date of Completion of Analysis	22.12.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
2.8 km/h	NW	74	38	30.0	16.0
Location	1) Near Site Office			Duration of Survey : 24 hours	
Parameter	Unit	Result	#NAAQM Standard	Method Reference	
Sulphur Dioxide (SO ₂)	µg/m ³	9.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO ₂)	µg/m ³	10.4	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	µg/m ³	83	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}	µg/m ³	38	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.15-30	
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.31-34	
Lead (as Pb)	µg/m ³	<0.02	1.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55	

Report No.3334 Cont...

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Carbon Monoxide(CO)	mg/m ³	0.88	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	27.4	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	µg/m ³	<1	5.0	IS 5182 (Part 11): 2006
Benzo (a) Pyrene (Particulate phase only)	ng/m ³	<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/m ³	<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/m ³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as Hg)	µg/m ³	<0.06	-	Method of analysis of Hg & MoF Japan
Location	2) Terrace of WTP Plant			Duration of Survey : 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	7.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	µg/m ³	10.4	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	µg/m ³	73	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}	µg/m ³	36	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.31-34
Lead (as Pb)	µg/m ³	<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/m ³	0.78	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	26.4	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	µg/m ³	1.2	5.0	IS 5182 (Part 11): 2006
Benzo(a)Pyrene (Particulate phase only)	ng/m ³	<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/m ³	<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/m ³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55

Report No.3334 Cont...

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Location	2) Terrace of WTP Plant			Duration of Survey : 24 hours
Mercury (as Hg)	µg/m ³	<0.06	-	Method of analysis of Hg & MoF Japan
Parameter	Unit	Result	#NAAQM Standard	Method Reference
Location	3) Terrace of Bachelor Guest House			Duration of Survey : 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	7.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	µg/m ³	8.3	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	µg/m ³	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}	µg/m ³	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.31-34
Lead (as Pb)	µg/m ³	<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/m ³	0.68	4.0	IS 5182 (Part 10): 1999 RA 2003
Ammonia (NH ₃)	µg/m ³	24.3	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	µg/m ³	<1	5.0	IS 5182 (Part 11): 2006
Benzo(a)Pyrene (Particulate phase only)	ng/m ³	<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/m ³	<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/m ³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as Hg)	µg/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, PM ₁₀ , 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.				

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3375-180106-SA-RIPL-AMRAVATI		Date: 06.01.2018	
Name and address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	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 : 30mL X18 No. PVC Bottle NO ₂ : 30 mLX18 No. PVC Bottle NH ₃ : 10mL 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	28.12.2017 & 29.12.2017	Date of Receipt of Sample	29.12.2017
Sampling Procedure	As per Method Reference		
Date of Start of Analysis	30.12.2017	Date of Completion of Analysis	05.01.2018

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
2.7 km/h	NE	72	44	30.0	12.0
Location : 1) Mr. Manoj Pandagale House, Village- Wagholi			Duration of Survey 24 hours		
Parameter	Unit	Result	#NAAQM Standard	Method Reference	
Sulphur Dioxide (SO ₂)	µg/m ³	7.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO ₂)	µg/m ³	8.3	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	µg/m ³	83	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}	µg/m ³	42	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.15-30	
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.31-34	

Report No.3375 cont...

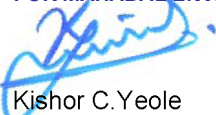
Parameter	Unit	Result	#NAAQM Standard	Method Reference
Lead (as Pb)	µg/m ³	<0.02	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Carbon Monoxide (CO)	mg/m ³	0.83	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	30.4	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	ng/m ³	1.3	5.0	IS 5182 (Part 11): 2006
Benzo(a)Pyrene (Particulate phase only)	µg/m ³	<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/m ³	<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/m ³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as Hg)	µg/m ³	<0.06	-	Method of analysis of Hg & MoF Japan
Location : 2) Mr.Rahul Nakade House Village-Dawargaon				Duration of Survey 24 hours
Parameter	Unit	Result	#NAAQM Standard	Method Reference
Sulphur Dioxide (SO ₂)	µg/m ³	6.3	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	µg/m ³	7.2	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	µg/m ³	58	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}	µg/m ³	28	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.15-30
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13,Page No.31-34
Lead (as Pb)	µg/m ³	<0.02	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Carbon Monoxide (CO)	mg/m ³	0.63	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	24.2	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	ng/m ³	<1.0	5.0	IS 5182 (Part 11): 2006
Benzo(a)Pyrene (Particulate phase only)	µg/m ³	<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/m ³	<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/m ³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as Hg)	µg/m ³	<0.06	-	Method of analysis of Hg & MoF Japan

Report No.3375 cont...

Parameter	Unit	Result	#NAAQM Standard	Method Reference
Location : 3) Ramkirshna Temple Vill- Kapustalani			Duration of Survey 24 hours	
Sulphur Dioxide (SO ₂)	µg/m ³	7.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	µg/m ³	8.9	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	µg/m ³	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}	µg/m ³	34	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.31-34
Lead (as Pb)	µg/m ³	<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/m ³	0.62	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	24.1	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	ng/m ³	<1.0	5.0	IS 5182 (Part 11): 2006
Benzo(a)Pyrene (Particulate phase only)	µg/m ³	<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/m ³	<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/m ³	<3	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Mercury (as Hg)	µg/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, PM ₁₀ , 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.				

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3335-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			SO No. 3382012035 dtd. 21.09.2015.
Sample Description/Type	Noise Level Monitoring	Sample Collected by	Laboratory
Date of Sampling	14.12.2017		
Sampling Procedure	Instrument Catalogue & User manual		

Location	Unit	Result		Norms as per factory Act.	
		Min.	Max.	Maximum Exposure duration per Day	Limit
Green Point gate	dB(A)	67.1	74.8	8 h	90 Max.
Wagholi gate	dB(A)	74.5	78.6		
Near Material gate	dB(A)	73.4	76.9		
Near Labour Colony	dB(A)	65.2	73.1		
Near Bachelor Colony Building	dB(A)	64.6	70.8		
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

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.

Page 1 of 1



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3336-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			SO No. 3382012035 dtd. 21.09.2015.
Sample Description/Type	Ground Water/Grab	Sample Collected by	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	14.12.2017	Date of Receipt of Sample	14.12.2017
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	15.12.2017	Date of Completion of Analysis	26.12.2017
Water Level Depth	6.14 meter from ground 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	0.18	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	6.9	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	598	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	302	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 Cl)	mg/L	36.1	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	45.1	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	19.2	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125



Report No.3336 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
14.	Calcium (as Ca)	mg/L	76.2	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	27.2	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.582	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	6.8	--	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	0.132	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	0.064	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	<0.020	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
Remarks: N.D. – Not Detected					

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3337-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			SO No. 3382012035 dtd. 21.09.2015.
Sample Description/Type	Ground Water/Grab	Sample Collected by	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	14.12.2017	Date of Receipt of Sample	14.12.2017
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	16.12.2017	Date of Completion of Analysis	26.12.2017

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	0.48	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	6.9	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	723	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	422	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	390	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	86.5	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	43.2	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	7.84	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125
14.	Calcium (as Ca)	mg/L	103	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67

Page 1 of 2



Report No.3337 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
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	0.345	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	6.4	--	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	0.289	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	0.056	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	<0.005	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
Remarks: N.D. – Not Detected					

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3338-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			SO No. 3382012035 dtd. 21.09.2015.
Sample Description/Type	Ground Water/Grab	Sample Collected by	Laboratory
Sampling Location	Well Water Gram Panchayat Pimpal Vihargaon	Sample Quantity/Packing	3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle
Date of Sampling	14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	16.12.2017	Date of Completion of Analysis	26.12.2017
Water Level Depth	3.60 meter from ground 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	0.32	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.4	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	383	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	270	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 Cl)	mg/L	12.4	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	13.0	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	6.84	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125

Report No.3338 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
15.	Calcium (as Ca)	mg/L	60.9	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
14.	Magnesium (as Mg)	mg/L	28.7	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.302	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	6.1	-	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	0.163	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	0.072	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	0.003	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
Remarks: N.D. – Not Detected					

-----END-----

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


Kishor C. Yeole
BRANCH MANAGER



Note:

- 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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3339-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			SO No. 3382012035 dtd. 21.09.2015.
Sample Description/Type	Ground Water/Grab	Sample Collected by	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	14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	16.12.2017	Date of Completion of Analysis	26.12.2017
Water Level Depth	12.4 meter from ground 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	0.28	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.8	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	734	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	323	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	438	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	32.6	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	104	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190

Report No.3339 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
13.	Nitrate (as NO ₃)	mg/L	32.2	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125
14.	Calcium (as Ca)	mg/L	65.9	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	38.6	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.358	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	6.2	--	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.	Iron (as Fe)	mg/L	0.317	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	0.023	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	0.018	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
Remarks: N.D. – Not Detected					

-----END-----

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.
- 3.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3340-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		Order Reference:
			SO No. 3382012035 dtd. 21.09.2015.
Sample Description/Type	Ground Water/Grab	Sample Collected by	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	14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	16.12.2017	Date of Completion of Analysis	26.12.2017
Water Level Depth	4.62 meter from ground 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	0.28	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.4	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	503	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	252	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 Cl)	mg/L	16.2	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	53.4	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	8.32	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125

Report No.3340 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
14.	Calcium (as Ca)	mg/L	65.7	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	21.4	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.328	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	6.3	--	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	0.247	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	0.052	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	<0.012	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
Remarks: N.D. – Not Detected					

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3341-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	Order Reference:	
		SO No. 3382012035 dtd. 21.09.2015.	
Sample Description/Type	Ground Water/Grab	Sample Collected by	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	14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	16.12.2017	Date of Completion of Analysis	26.12.2017

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	<0.1	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.0	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	474	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	280	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	194	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	31.4	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	71.2	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	17.8	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

Page 1 of 2

Report No.3341 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
15.	Magnesium (as Mg)	mg/L	11.2	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.328	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	6.6	--	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	0.215	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	0.047	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	<0.02	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
Remarks: N.D. – Not Detected					

-----END-----

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.



Kishor C. Yeole

BRANCH MANAGER



Note:

- 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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3342-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	Order Reference:	
		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	14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39		
Date of Start of Analysis	16.12.2017	Date of Completion of Analysis	26.12.2017

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	16	APHA 22 nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.8	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	42	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	147	APHA 22 nd Ed. 2012, 2340-C,2-44,45
10	Alkalinity Total (as CaCO ₃)	mg/L	130	IS 3025 (Part 23):1986 RA 2009
11	Chloride (as Cl)	mg/L	15.7	APHA 22 nd Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate (as SO ₄)	mg/L	14.5	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13	Nitrate (as NO ₃)	mg/L	0.716	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125

Report No.3342 cont.

Sr. No.	Parameter	Unit	Result	Method Reference
14	Calcium(as Ca)	mg/L	33.7	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15	Magnesium (as Mg)	mg/L	15.2	APHA 22 nd Ed. 2012, 3500-Mg- B, 3-84
16	Fluoride(as F)	mg/L	0.426	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	6.6	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	0.428	APHA 22 nd Ed. 2012, 3111-B, 3-18
21	Manganese (as Mn)	mg/L	0.138	APHA 22 nd Ed. 2012, 3111-B, 3-18
22	Cadmium (as Cd)	mg/L	0.012	APHA 22 nd Ed. 2012, 3111-B, 3-18
23	Copper (as Cu)	mg/L	0.005	APHA 22 nd Ed. 2012, 3111-B, 3-18
24	Chromium Hexa (as Cr ⁶⁺)	mg/L	0.009	APHA 22 nd Ed. 2012, 3500- Cr-B, 3-69
25	Lead (as Pb)	mg/L	N.D.	APHA 22 nd Ed. 2012, 3111-B, 3-18
26	Zinc (as Zn)	mg/L	0.0214	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	0.003	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
Remarks: N.D. – Not Detected,				

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3343-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	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	14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39		
Date of Start of Analysis	16.12.2017	Date of Completion of Analysis	26.12.2017

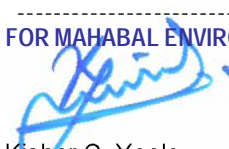
Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	15	APHA 22 nd Ed. 2012, 2120-B, 2-6
2	Odour	-	Disagreeable	IS 3025 (Part 5):1983, RA 2006
3	Taste	-	NA	IS 3025 (Part 7):1984, RA 2006
4	Turbidity	NTU	1.2	APHA 22 nd Ed. 2012, 2130-B, 2-13
5	pH	-	6.8	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6	Total Dissolved Solids	mg/L	459	IS 3025 (Part 16):1984 RA 2006
7	Total Suspended Solids	mg/L	29	APHA 22 nd Ed. 2012, 2540-D, 2-66
8	Free Chlorine (Residual)	mg/L	0.082	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9	Total Hardness (as CaCO ₃)	mg/L	276	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	39.0	APHA 22 nd Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate (as SO ₄)	mg/L	83.5	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13	Nitrate (as NO ₃)	mg/L	0.574	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125

Report No.3343 cont.

Sr. No.	Parameter	Unit	Result	Method Reference
14	Calcium (as Ca)	mg/L	63.3	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15	Magnesium (as Mg)	mg/L	28.7	APHA 22 nd Ed. 2012, 3500-Mg- B, 3-84
16	Fluoride(as F)	mg/L	0.362	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	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	1.06	APHA 22 nd Ed. 2012, 3111-B, 3-18
21	Manganese (as Mn)	mg/L	<0.04	APHA 22 nd Ed. 2012, 3111-B, 3-18
22	Cadmium (as Cd)	mg/L	N.D.	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	0.028	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	0.017	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	<0.004	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

Remarks: N.D. – Not Detected,

-----END-----

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.



Mahabal Enviro Engineers Pvt. Ltd.

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-NG3344-171230-SA-RIPL-AMRAVATI		Date: 30.12.2017	
Name and Address of Customer	RATTANINDIA POWER LIMITED Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	Order Reference:	
		Service Order No. 3382014804 dtd. 19.08.2017	
Sample Description/Type	Surface Water/Grab	Sample Collected by	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	14.12.2017	Date of Receipt of Sample	15.12.2017
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	15.12.2017	Date of Completion of Analysis	26.12.2017
Water Level Depth	-		

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	-	Disagreeable	-	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	1.8	-	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.7	5.5 to 9.0	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	438	-	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	26	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	266	-	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	250	-	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride (as Cl)	mg/L	20.8	-	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	18.3	-	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190

Report No.3344 Cont...

Sr. No.	Parameter	Unit	Result	Inland Surface water (EPA rule 1986)	Method Reference
13.	Nitrate (as NO ₃)	mg/L	19.8	-	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125
15.	Calcium (as Ca)	mg/L	40.6	-	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
14.	Magnesium (as Mg)	mg/L	36.1	-	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.243	2.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 6-87
17.	Boron(as B)	mg/L	<0.1	-	APHA 22 nd Ed.2012, 4500-B B,4-25
18.	Dissolved Oxygen	mg/L	5.8	-	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	0.278	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	0.014	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-Al-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.

-----END-----

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.