



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-NG4267-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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 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	23.02.2017 & 24.02.2017	Date of Receipt of Sample	24.02.2017
Sampling Procedure	As per Method reference		
Date of Start of Analysis	24.02.2017	Date of Completion of Analysis	02.03.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
5.4 km/h	NW - SE	54	38	34.0	20.0
Location	1) Near Site Office			Duration of Survey : 24 hours	
Parameter	Unit	Result	#NAAQM Standard	Method Reference	
Sulphur Dioxide (SO ₂)	µg/m ³	12.7	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	13.9	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	92	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	46	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	

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Parameter	Unit	Result	#NAAQM Standard	Method Reference
Carbon Monoxide(CO)	mg/m ³	0.76	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	μg/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)	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	9.0	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	11.3	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	84	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	40	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	0.80	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	μg/m ³	22.9	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

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Parameter	Unit	Result	#NAAQM Standard	Method Reference
Location	2) Terrace of WTP Plant			Duration of Survey : 24 hours
Mercury (as Hg)	$\mu\text{g}/\text{m}^3$	<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)	$\mu\text{g}/\text{m}^3$	7.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	$\mu\text{g}/\text{m}^3$	8.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10 μm) or PM ₁₀	$\mu\text{g}/\text{m}^3$	64	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5 μm) or PM _{2.5}	$\mu\text{g}/\text{m}^3$	30	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30
Ozone (O ₃)	$\mu\text{g}/\text{m}^3$	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.31-34
Lead (as Pb)	$\mu\text{g}/\text{m}^3$	<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	0.74	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	$\mu\text{g}/\text{m}^3$	23.2	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	$\mu\text{g}/\text{m}^3$	<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)	$\mu\text{g}/\text{m}^3$	<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.				

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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-NG4268-170306-SA-RIPL-AMRAVATI		Date: 06.03.2017	
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) 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	24.02.2017 & 25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	As per Method Reference		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	02.03.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
5.5 km/h	NE – SW	62	38	34.0	22.0
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	8.3	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	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	µg/m ³	72	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	

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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	0.70	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/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/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
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	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	10.9	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	64	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	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Carbon Monoxide (CO)	mg/m ³	0.72	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	23.6	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.4268 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	6.9	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	8.8	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	62	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	0.70	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	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)	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.				

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


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Note:

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Water Sample Analysis Report

Report No.: ME-NG4275-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017
Water Level Depth	5.12 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	3.8	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.7	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	512	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	313	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	226	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	58.4	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	42.6	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	54.2	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125

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Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
14.	Calcium (as Ca)	mg/L	72.6	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	32.1	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.56	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	0.29	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	0.03	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
Remarks: N.D. – Not Detected					

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Water Sample Analysis Report

Report No.: ME-NG4273-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017

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	1	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.9	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	354	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	22	--	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	315	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	216	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride (as Cl)	mg/L	23.6	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	62.8	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	12.4	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125
14.	Calcium (as Ca)	mg/L	92.4	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67

Report No.4273 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
15.	Magnesium (as Mg)	mg/L	20.6	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.26	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17.	Boron(as B)	mg/L	0.11	0.5 Max.	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.	--	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20.	Iron (as Fe)	mg/L	0.28	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	0.03	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
Remarks: N.D. – Not Detected					

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Water Sample Analysis Report

Report No.: ME-NG4271-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017

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	3.2	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.9	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	536	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	12	--	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	384	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	352	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride (as Cl)	mg/L	38.8	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	29.6	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	38.8	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125
14.	Calcium (as Ca)	mg/L	88.4	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67

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Report No.4271 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
15.	Magnesium (as Mg)	mg/L	39.8	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.386	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17.	Boron(as B)	mg/L	0.11	0.5 Max.	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.	--	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20.	Iron (as Fe)	mg/L	0.52	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	0.15	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
Remarks: N.D. – Not Detected					

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Water Sample Analysis Report

Report No.: ME-NG4270-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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 Vihar	Sample Quantity/Packing	3 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle
Date of Sampling	23.02.2017	Date of Receipt of Sample	24.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	25.02.2017	Date of Completion of Analysis	06.03.2017
Water Level Depth	3.6 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	0.12	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	402	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	0.1	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO ₃)	mg/L	329	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	336	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	11.4	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	13.6	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	12.8	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125

Report No.4270 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
15.	Calcium (as Ca)	mg/L	78.2	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
14.	Magnesium (as Mg)	mg/L	32.6	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.184	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	0.29	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	N.D.	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					

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


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Water Sample Analysis Report

Report No.: ME-NG4274-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017
Water Level Depth	14.8 meter from ground level		

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	1.5	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	8	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	758	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	369	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	478	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	20.6	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	68.4	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190

Report No.4274 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
13.	Nitrate (as NO ₃)	mg/L	26.5	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ .E, 4-125
14.	Calcium (as Ca)	mg/L	70.4	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	47.1	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.586	1.0 Max.	APHA 22 nd Ed. 2012, 4500-F ⁻ B & D, 4-84, 4-87
17.	Boron(as B)	mg/L	0.12	0.5 Max.	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.	--	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
20.	Iron (as Fe)	mg/L	0.68	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	0.015	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

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Water Sample Analysis Report

Report No.: ME-NG4272-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017
Water Level Depth	4.2 meter from ground level		

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
1.	Colour	Hazen	Feb-17	5 Max.	APHA 22 nd Ed. 2012, 2120-B, 2-6
2.	Odour	-	<1	Agreeable	IS 3025 (Part 5):1983, RA 2006
3.	Taste	-	Agreeable	Agreeable	IS 3025 (Part 7):1984, RA 2006
4.	Turbidity	NTU	Agreeable	1 Max.	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	1.7	6.5 to 8.5	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	7.5	500 Max.	IS 3025 (Part 16):1984, RA 2006
7.	Suspended Solids	mg/L	422	--	APHA 22 nd Ed. 2012, 2540-D, 2-66
8.	Residual Free Chlorine	ppm	16	0.2 Min.	APHA 22 nd Ed. 2012, 4500-Cl G, 4-69
9.	Total Hardness (as CaCO ₃)	mg/L	<0.05	200 Max.	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	367	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride(as Cl)	mg/L	324	250 Max.	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	20.8	200 Max	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190
13.	Nitrate (as NO ₃)	mg/L	18.8	45 Max	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125

Report No.4272 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
14.	Calcium (as Ca)	mg/L	106	75 Max.	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15.	Magnesium (as Mg)	mg/L	24.8	30 Max.	APHA 22 nd Ed. 2012, 3500-Mg-B, 3-84
16.	Fluoride(as F)	mg/L	0.254	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	--	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	0.33	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	N.D.	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
Remarks: N.D. – Not Detected					

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Kishor C. Yeole

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Water Sample Analysis Report

Report No.: ME-NG4278-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39;		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017
Water Level Depth	4.0 meter from ground level		

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	4.2	-	APHA 22 nd Ed. 2012, 2130-B, 2-13
5.	pH	-	7.3	5.5 to 9.0	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6.	Total Dissolved Solids	mg/L	422	-	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	261	-	APHA 22 nd Ed. 2012, 2340-C, 2-44, 45
10.	Alkalinity Total (as CaCO ₃)	mg/L	282	-	IS 3025 (Part 23):1986 Reaffirmed 2009
11.	Chloride (as Cl)	mg/L	18.2	-	APHA 22 nd Ed. 2012, 4500-Cl ⁻ B, 4-72
12.	Sulphate (as SO ₄)	mg/L	22.6	-	APHA 22 nd Ed. 2012, 4500- SO ₄ -E, 4-190

Report No.4278 Cont...

Sr. No.	Parameter	Unit	Result	Inland Surface water (EPA rule 1986)	Method Reference
13.	Nitrate (as NO ₃)	mg/L	24.2	10 Max.	APHA 22 nd Ed. 2012, 4500-NO ₃ -E, 4-125
15.	Calcium (as Ca)	mg/L	43.9	-	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
14.	Magnesium (as Mg)	mg/L	36.9	-	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	5.5	-	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	0.42	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	0.09	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	0.03	-	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.					

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Water Sample Analysis Report

Report No.: ME-NG4276-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017

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	38.8	APHA 22 nd Ed. 2012, 2130-B, 2-13
5	pH	-	8.1	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6	Total Dissolved Solids	mg/L	236	IS 3025 (Part 16):1984 RA 2006
7	Total Suspended Solids	mg/L	14	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	173	APHA 22 nd Ed. 2012, 2340-C,2-44,45
10	Alkalinity Total (as CaCO ₃)	mg/L	167	IS 3025 (Part 23):1986 RA 2009
11	Chloride (as Cl)	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.4276 cont.

Sr. No.	Parameter	Unit	Result	Method Reference
14	Calcium(as Ca)	mg/L	42.8	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15	Magnesium (as Mg)	mg/L	16.2	APHA 22 nd Ed. 2012, 3500-Mg- B, 3-84
16	Fluoride(as F)	mg/L	0.118	APHA 22 nd Ed. 2012, 4500-F- B & D, 4-84, 4-87
17	Boron(as B)	mg/L	0.12	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	0.35	APHA 22 nd Ed. 2012, 3111-B, 3-18
21	Manganese (as Mn)	mg/L	0.03	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	0.018	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
Remarks: N.D. - Not Detected,				

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Water Sample Analysis Report

Report No.: ME-NG4277-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22 nd Ed. 2012, 1060-B, 1-39		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	06.03.2017

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	12.1	APHA 22 nd Ed. 2012, 2130-B, 2-13
5	pH	-	7.7	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92
6	Total Dissolved Solids	mg/L	316	IS 3025 (Part 16):1984 RA 2006
7	Total Suspended Solids	mg/L	22	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	223	APHA 22 nd Ed. 2012, 2340-C,2-44,45
10	Alkalinity Total (as CaCO ₃)	mg/L	148	IS 3025 (Part 23):1986 RA 2009
11	Chloride (as Cl)	mg/L	35.2	APHA 22 nd Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate (as SO ₄)	mg/L	52.6	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.4277 cont.

Sr. No.	Parameter	Unit	Result	Method Reference
14	Calcium (as Ca)	mg/L	42.6	APHA 22 nd Ed. 2012, 3500-Ca-B, 3-67
15	Magnesium (as Mg)	mg/L	28.4	APHA 22 nd Ed. 2012, 3500-Mg- B, 3-84
16	Fluoride(as F)	mg/L	0.38	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	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	0.5	APHA 22 nd Ed. 2012, 3111-B, 3-18
21	Manganese (as Mn)	mg/L	0.05	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	N.D.	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	0.021	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	<0.025	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,				

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Effluent Sample Analysis Report

Report No. : ME-NG4280-170310-SA-RIPL-AMRAVATI		Date: 10.03.2017	
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	Domestic Effluent/Grab	Sample Collected by	Client
Sampling Location	1) STP Plant Outlet 2) STP Colony Outlet	Sample Quantity/Packing	2 L X 2 No. PVC Can
Date of Sampling	25.02.2017	Date of Receipt of Sample	25.02.2017
Sampling Procedure	Sample tested as received		
Date of Start of Analysis	26.02.2017	Date of Completion of Analysis	02.03.2017

Sr. No.	Parameter	Unit	Result		E(P)A standard for Treated effluent disposal in inland surface water	Method Reference
			1	2		
1	Biochemical Oxygen Demand (3 days 27°C)	mg/L	14	12	30 Max.	IS 3025 (Part 44): 1993, RA 2003, Amds.1
2	Chemical Oxygen Demand	mg/L	44	38	250 Max.	APHA 22 nd Ed. 2012, 5220-B, 5-17

Remarks:

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Noise Level Monitoring Report

Report No.: ME-NG4269-170306-SA-RIPL-AMRAVATI		Date: 06.03.2017
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	23.02.2017	
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)	67.4	72.9	8 h	90 Max.
Wagholi gate	dB(A)	70.2	75.9		
Near Material gate	dB(A)	67.3	72.6		
Near Labour Colony	dB(A)	65.6	69.2		
Near Bachelor Colony Building	dB(A)	63.6	68.9		

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

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