



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-NG03106-200316-SA-RIPL-AMRAVATI		Date: 16.03.2020	
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. 3382017462 Dt.16.08.2019	
Sample Description/Type	Ambient Air Quality Monitoring	Sample Collected by	Laboratory
Sampling Location	1) Village Kapustalani 2) Village Dawargaon 3) Village Wagholi Gate	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 : 10 mL X72 No. PVC Bottle O ₃ : 10 mL X 72 No. PVC Bottle 3 X 6 No. Charcoal Tubes 3 X 3 No. Gas Bladder
Date of Sampling	28.02.2020 to 29.02.2020	Date of Receipt of Sample	29.02.2020
Sampling Procedure	As per Method reference		
Date of Start of Analysis	29.02.2020	Date of Receipt of Sample	14.03.2020

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
3.4 km/h	NE	Max.	Min.	Max.	Min.
		72	44	32	18
Location	1) Village Kapustalani			Duration of Survey: 24 hours	
Parameter	Unit	Result	#NAAQM Standard	Method Reference	
Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Ambient Air)					
Sulphur Dioxide (SO ₂)	µg/m ³	10.9	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	17.2	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	60	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	23	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)	$\mu\text{g}/\text{m}^3$	<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	1.02	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	$\mu\text{g}/\text{m}^3$	<20	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	$\mu\text{g}/\text{m}^3$	1.13	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	0.417	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	3.47	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Location	2) Village Dawargaon			Duration of Survey: 24 hours
Sulphur Dioxide (SO ₂)	$\mu\text{g}/\text{m}^3$	13.0	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6
Nitrogen Dioxide (NO ₂)	$\mu\text{g}/\text{m}^3$	16.5	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	$\mu\text{g}/\text{m}^3$	57	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}	$\mu\text{g}/\text{m}^3$	23	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	1.06	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	$\mu\text{g}/\text{m}^3$	<20	400	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.35-39
Benzene (C ₆ H ₆)	$\mu\text{g}/\text{m}^3$	1.10	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

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Report No.03106 Cont...

Parameter	Unit	Result	#NAAQM Standard	Method Reference
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
Location	3) Village Wagholi Gate			Duration of Survey: 24 hours
Sulphur Dioxide (SO ₂)	μg/m ³	12.0	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	18.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10μm) or PM ₁₀	μg/m ³	59	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	21	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	0.99	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	μg/m ³	<20	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	1.12	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	0.590	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	4.28	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Remarks: 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. Parameters marked with ## indicates Subcontracted testing.				

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.



Kishor C. Yeole

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Certificate Number TC-7487

Note:

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

Stack Emission Monitoring Report

Report No.: ME-NG03109-200312-SA-RIPL-AMRAVATI		Date: 12.03.2020	
Name and Address of Customer	RATTANINDIA POWER LIMITED (Formerly Indiabulls Power Limited) Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	Order Reference:	
		SO No. 3382017462 Dt.16.08.2019	
Sample Description/Type	Stack Emission Monitoring	Sample Collected by	Laboratory
Sampling Location	Boiler Unit 1	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle
Date of Sampling	28.02.2020	Date of Receipt of Sample	29.02.2020
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	02.03.2020	Date of Completion of Analysis	02.03.2020

Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-1		
Stack Identity		Boiler Unit 1		
Stack attached to		ESP of Boiler U#1		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		144		
Load (MW)		269		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	124	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.8	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1165068	-	IS 11255 (Part 3):2008

ULR-TC748720000002973F



Report No.03109 cont...

Parameter	Unit	Result	#Limit	Method Reference
Particulate Matter (PM)	mg/Nm ³	46	50	IS 11255 (Part 1):1985, RA 2003
Sulphur Dioxide (SO ₂)	mg/Nm ³	584	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	kg/day	16.3	-	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO _x)	mg/Nm ³	252	-	IS 11255 (Part 7):2005
Remark: # : Limit as per MPCB Consent				

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

Stack Emission Monitoring Report

Report No.: ME-NG03110-200312-SA-RIPL-AMRAVATI		Date: 12.03.2020	
Name and Address of Customer	RATTANINDIA POWER LIMITED (Formerly Indiabulls Power Limited) Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901	Order Reference:	
		SO No. 3382017462 Dt.16.08.2019	
Sample Description/Type	Stack Emission Monitoring	Sample Collected by	Laboratory
Sampling Location	Boiler Unit 2	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle
Date of Sampling	28.02.2020	Date of Receipt of Sample	29.02.2020
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	02.03.2020	Date of Completion of Analysis	02.03.2020

Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-2		
Stack Identity		Boiler Unit 2		
Stack attached to		ESP of Boiler U#2		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		145		
Load (MW)		268		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	124	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.4	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1160980	-	IS 11255 (Part 3):2008

ULR-TC748720000002974F



Report No.03110 cont...

Parameter	Unit	Result	#Limit	Method Reference
Particulate Matter (PM)	mg/Nm ³	39	50	IS 11255 (Part 1):1985, RA 2003
Sulphur Dioxide (SO ₂)	mg/Nm ³	591	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	kg/day	16.5	-	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO _x)	mg/Nm ³	260	-	IS 11255 (Part 7):2005
Remark: # : Limit as per MPCB Consent				

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111

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

Stack Emission Monitoring Report

Report No.: ME-NG02092-200212-SA-RIPL-AMRAVATI			Date: 12.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Stack Emission Monitoring	Sample Collected by	Laboratory
Sampling Location	Boiler Unit No. 1	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	08.02.2020

Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-1		
Stack Identity		Boiler Unit 1		
Stack attached to		ESP of Boiler U#1		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		144		
Load (MW)		266		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	122	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.6	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1162836	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	48	50	IS 11255 (Part 1):1985, RA 2003

ULR-TC748720000002016P



Report No. 02092 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	594	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	16.6	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO _x)	mg/Nm ³	245	-	IS 11255 (Part 7):2005
*CO ₂	%	12.6	-	Analyser Method
Remark: The tests marked with an * are not accredited by NABL; #: Limit as per MPCB Consent				

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

Stack Emission Monitoring Report

Report No.: ME-NG02095-200212-SA-RIPL-AMRAVATI			Date: 12.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Stack Emission Monitoring	Sample Collected by	Laboratory
Sampling Location	Boiler Unit No. 5	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	08.02.2020

Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-5		
Stack Identity		Boiler Unit 5		
Stack attached to		ESP of Boiler U#5		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		115		
Load (MW)		190		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	119	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	29.6	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1345581	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	41	50	IS 11255 (Part 1):1985, RA 2003

ULR-TC748720000002019P



Report No. 02095 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	594	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	19.2	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO _x)	mg/Nm ³	256	-	IS 11255 (Part 7):2005
*CO ₂	%	12.6	-	Analyser Method
Remark: The tests marked with an * are not accredited by NABL; #: Limit as per MPCB Consent				

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Stack Emission Monitoring Report

Report No.: ME-NG02094-200212-SA-RIPL-AMRAVATI			Date: 12.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Stack Emission Monitoring	Sample Collected by	Laboratory
Sampling Location	Boiler Unit No. 3	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	08.02.2020

Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-3		
Stack Identity		Boiler Unit 3		
Stack attached to		ESP of Boiler U#3		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		112		
Load (MW)		190		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	125	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.9	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1166176	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	42	50	IS 11255 (Part 1):1985, RA 2003

ULR-TC748720000002018P



Report No. 02094 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	587	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	16.4	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO _x)	mg/Nm ³	250	-	IS 11255 (Part 7):2005
*CO ₂	%	12.8	-	Analyser Method
Remark: The tests marked with an * are not accredited by NABL; #: Limit as per MPCB Consent				

-----END-----

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ULR- TC7487200000002018P



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Stack Emission Monitoring Report

Report No.: ME-NG02093-200212-SA-RIPL-AMRAVATI		Date: 12.02.2020	
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. 3382017462 Dt.16.08.2019	
Sample Description/Type	Stack Emission Monitoring	Sample Collected by	Laboratory
Sampling Location	Boiler Unit 2	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	08.02.2020

Discipline: Chemical Testing; **Product Group:** Atmospheric Pollution (Stack Emission)

Stack Details		S-2		
Stack Identity		Boiler Unit 2		
Stack attached to		ESP of Boiler U#2		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		148		
Load (MW)		265		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	123	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	29.1	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1190946	-	IS 11255 (Part 3):2008

ULR-TC748720000002017P

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QF/SALE/04/Issue No 03 Dt 05.12.2019,Amd 00 Dt 00

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

*Report No.02093 cont...*

Parameter	Unit	Result	#Limit	Method Reference
Particulate Matter (PM)	mg/Nm ³	41	50	IS 11255 (Part 1):1985, RA 2003
Sulphur Dioxide (SO ₂)	mg/Nm ³	573	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	kg/day	16.2	-	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen (NO _x)	mg/Nm ³	241	-	IS 11255 (Part 7):2005
*CO ₂	%	12.8	-	Analyser Method
Remark: The tests marked with an * are not accredited by NABL; #: Limit as per MPCB Consent				

-----END-----

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor Yeole

BRANCH MANAGER

Note:

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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-NG02090-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Ground Water/Grab	Sample Collected by	Laboratory
Sampling Location	Wagholi Village	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Discipline: Chemical Testing; Product Group: Water (Ground Water)						
1	Colour	Hazen	<1	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	2.4	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.1	6.5 to 8.5	No relaxation	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6	Residual Free Chlorine	mg/L	<0.05	0.2 Min.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7	Total Dissolved Solids	mg/L	716	500 Max.	2000 Max.	IS 3025 (Part 16):1984 RA 2006, Ed.2.1(1999-12)
8	Total Suspended Solids	mg/L	<5	-	-	APHA 23 rd Ed. 2017, 2540-D, 2-69
9	Alkalinity Total (as CaCO ₃)	mg/L	180	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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QF/SALE/02/Issue No 03 Dt 05.12.2019,Amd 00 Dt 00

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR- TC748720000002014P



Report No.02090 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
10	Total Hardness (as CaCO ₃)	mg/L	456	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	60.4	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	274	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	35.9	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium (as Ca)	mg/L	122	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	36.9	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.454	1 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17	Boron (as B)	mg/L	<0.1	0.5 Max.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-B B, 4-27
18	Dissolved Oxygen	mg/L	5.8	-	-	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19	*Oil and Grease	mg/L	N.D.	-	-	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20	*Cyanide (as CN)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	0.002 Max.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.326	0.3 Max.	No relaxation.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23	Manganese (as Mn)	mg/L	<0.04	0.1 Max.	0.3 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	0.2 Max.	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25	Cadmium (as Cd)	mg/L	N.D.	0.003Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
26	Chromium Total (as Cr)	mg/L	<0.1	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
27	Copper (as Cu)	mg/L	<0.04	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

ULR- TC748720000002014P



Report No.02090 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
28	Lead (as Pb)	mg/L	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
29	Zinc (as Zn)	mg/L	0.051	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
30	Arsenic (as As)	mg/L	N.D.	0.01 Max.	0.05 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31	Mercury (as Hg)	mg/L	N.D.	0.001Max.	No relaxation	APHA 23 rd Ed. 2017, 3112-B, 3-25
32	Selenium (as Se)	mg/L	<0.01	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						
Remarks: The tests marked with an * are not accredited by NABL						

-END-

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

BRANCH MANAGER



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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-NG02089-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Ground Water/Grab	Sample Collected by	Laboratory
Sampling Location	Kapustalni Village	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Discipline: Chemical Testing; Product Group: Water (Ground Water)						
1	Colour	Hazen	<1	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	0.2	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.0	6.5 to 8.5	No relaxation	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6	Residual Free Chlorine	mg/L	<0.05	0.2 Min.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7	Total Dissolved Solids	mg/L	600	500 Max.	2000 Max.	IS 3025 (Part 16):1984 RA 2006, Ed.2.1(1999-12)
8	Total Suspended Solids	mg/L	<5	-	-	APHA 23 rd Ed. 2017, 2540-D, 2-69
9	Alkalinity Total (as CaCO ₃)	mg/L	202	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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QF/SALE/02/Issue No 03 Dt 05.12.2019,Amd 00 Dt 00

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR-TC748720000002013P



Report No.02089 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
10	Total Hardness (as CaCO ₃)	mg/L	298	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	103	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	116	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	43.4	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium (as Ca)	mg/L	52.1	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	40.8	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.448	1 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17	Boron (as B)	mg/L	<0.1	0.5 Max.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-B B, 4-27
18	Dissolved Oxygen	mg/L	5.8	-	-	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19	*Oil and Grease	mg/L	N.D.	-	-	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20	*Cyanide (as CN)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	0.002 Max.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.454	0.3 Max.	No relaxation.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23	Manganese (as Mn)	mg/L	<0.04	0.1 Max.	0.3 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	0.2 Max.	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25	Cadmium (as Cd)	mg/L	N.D.	0.003Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
26	Chromium Total (as Cr)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
27	Copper (as Cu)	mg/L	<0.04	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

ULR-TC748720000002013P



Report No.02089 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
28	Lead (as Pb)	mg/L	<0.1	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
29	Zinc (as Zn)	mg/L	0.102	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
30	Arsenic (as As)	mg/L	0.364	0.01 Max.	0.05 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31	Mercury (as Hg)	mg/L	N.D.	0.001Max.	No relaxation	APHA 23 rd Ed. 2017, 3112-B, 3-25
32	Selenium (as Se)	mg/L	<0.01	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						
Remarks: The tests marked with an * are not accredited by NABL						

-END-

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole

BRANCH MANAGER



Note:

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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-NG02088-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Ground Water/Grab	Sample Collected by	Laboratory
Sampling Location	Well Water of Mr. Narayan Lomte Farm back side of Ash Dyke Area	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Discipline: Chemical Testing; Product Group: Water (Ground Water)						
1	Colour	Hazen	<1	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	1.7	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.2	6.5 to 8.5	No relaxation	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6	Residual Free Chlorine	mg/L	<0.05	0.2 Min.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7	Total Dissolved Solids	mg/L	580	500 Max.	2000 Max.	IS 3025 (Part 16):1984 RA 2006, Ed.2.1(1999-12)
8	Total Suspended Solids	mg/L	<5	-	-	APHA 23 rd Ed. 2017, 2540-D, 2-69
9	Alkalinity Total (as CaCO ₃)	mg/L	284	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

Page 1 of 3

QF/SALE/02/Issue No 03 Dt 05.12.2019,Amd 00 Dt 00

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR-TC748720000002012P



Report No.02088 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
10	Total Hardness (as CaCO ₃)	mg/L	272	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	40.3	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	112	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	44.1	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium (as Ca)	mg/L	60.1	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	29.6	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.435	1 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17	Boron (as B)	mg/L	<0.1	0.5 Max.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-B B, 4-27
18	Dissolved Oxygen	mg/L	6.4	-	-	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19	*Oil and Grease	mg/L	N.D.	-	-	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20	*Cyanide (as CN)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	0.002 Max.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.535	0.3 Max.	No relaxation.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23	Manganese (as Mn)	mg/L	0.053	0.1 Max.	0.3 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	0.2 Max.	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25	Cadmium (as Cd)	mg/L	N.D.	0.003Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
26	Chromium Total (as Cr)	mg/L	<0.1	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
27	Copper (as Cu)	mg/L	<0.04	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

ULR-TC748720000002012P



Report No.02088 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
28	Lead (as Pb)	mg/L	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
29	Zinc (as Zn)	mg/L	0.076	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
30	Arsenic (as As)	mg/L	N.D.	0.01 Max.	0.05 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31	Mercury (as Hg)	mg/L	N.D.	0.001Max.	No relaxation	APHA 23 rd Ed. 2017, 3112-B, 3-25
32	Selenium (as Se)	mg/L	<0.01	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected Remarks: The tests marked with an * are not accredited by NABL						

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C.Yeole

BRANCH MANAGER



Note:

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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-NG02087-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Ground Water/Grab	Sample Collected by	Laboratory
Sampling Location	Talkhanda Village	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Discipline: Chemical Testing; Product Group: Water (Ground Water)						
1	Colour	Hazen	<1	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	1.4	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.2	6.5 to 8.5	No relaxation	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6	Residual Free Chlorine	ppm	<0.05	0.2 Min.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7	Total Dissolved Solids	mg/L	557	500 Max.	2000 Max.	IS 3025 (Part 16):1984 RA 2006, Ed.2.1(1999-12)
8	Total Suspended Solids	mg/L	<5	-	-	APHA 23 rd Ed. 2017, 2540-D, 2-69
9	Alkalinity Total (as CaCO ₃)	mg/L	284	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR-TC748720000002011P



Report No.02087 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
10	Total Hardness (as CaCO ₃)	mg/L	344	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	39.3	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	114	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	43.6	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium (as Ca)	mg/L	72.1	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	39.8	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.429	1 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17	Boron (as B)	mg/L	<0.1	0.5 Max.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-B B, 4-27
18	Dissolved Oxygen	mg/L	6.0	-	-	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19	*Oil and Grease	mg/L	N.D.	-	-	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20	*Cyanide (as CN)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	0.002 Max.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.180	0.3 Max.	No relaxation.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23	Manganese (as Mn)	mg/L	0.045	0.1 Max.	0.3 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	0.2 Max.	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25	Cadmium (as Cd)	mg/L	N.D.	0.003Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
26	Chromium Total (as Cr)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
27	Copper (as Cu)	mg/L	<0.04	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

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Report No.02087 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
28	Lead (as Pb)	mg/L	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
29	Zinc (as Zn)	mg/L	0.074	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
30	Arsenic (as As)	mg/L	N.D.	0.01 Max.	0.05 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31	Mercury (as Hg)	mg/L	N.D.	0.001Max.	No relaxation	APHA 23 rd Ed. 2017, 3112-B, 3-25
32	Selenium (as Se)	mg/L	<0.01	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						
Remarks: The tests marked with an * are not accredited by NABL						

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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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-NG02086-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Ground Water/Grab	Sample Collected by	Laboratory
Sampling Location	Pimpalvihirgaon Village	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Discipline: Chemical Testing; Product Group: Water (Ground Water)						
1	Colour	Hazen	<1	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	<0.1	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.1	6.5 to 8.5	No relaxation	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6	Residual Free Chlorine	mg/L	<0.05	0.2 Min.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7	Total Dissolved Solids	mg/L	395	500 Max.	2000 Max.	IS 3025 (Part 16):1984 RA 2006, Ed.2.1(1999-12)
8	Total Suspended Solids	mg/L	<5	-	-	APHA 23 rd Ed. 2017, 2540-D, 2-69
9	Alkalinity Total (as CaCO ₃)	mg/L	316	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR-TC748720000002010P



Report No.02086 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
10	Total Hardness (as CaCO ₃)	mg/L	200	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	15.1	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	27.1	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	10.8	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium (as Ca)	mg/L	54.5	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	15.5	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.416	1 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17	Boron (as B)	mg/L	<0.1	0.5 Max.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-B B, 4-27
18	Dissolved Oxygen	mg/L	6.2	-	-	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19	*Oil and Grease	mg/L	N.D.	-	-	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20	*Cyanide (as CN)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	0.002 Max.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.197	0.3 Max.	No relaxation.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23	Manganese (as Mn)	mg/L	<0.04	0.1 Max.	0.3 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	0.2 Max.	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25	Cadmium (as Cd)	mg/L	N.D.	0.003Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
26	Chromium Total (as Cr)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
27	Copper (as Cu)	mg/L	<0.04	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

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Report No.02086 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
28	Lead (as Pb)	mg/L	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
29	Zinc (as Zn)	mg/L	0.081	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
30	Arsenic (as As)	mg/L	N.D.	0.01 Max.	0.05 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31	Mercury (as Hg)	mg/L	N.D.	0.001Max.	No relaxation	APHA 23 rd Ed. 2017, 3112-B, 3-25
32	Selenium (as Se)	mg/L	<0.01	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected Remarks: The tests marked with an * are not accredited by NABL						

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


 Kishor C. Yeole

BRANCH MANAGER


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Certificate Number TC-7487



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Engineers, Consultants, Environmental Monitoring Laboratory & Contractors

Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,

Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagapur-441111

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

Water Sample Analysis Report

Report No.: ME-NG02085-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Ground Water/Grab	Sample Collected by	Laboratory
Sampling Location	Digargaon Village	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Discipline: Chemical Testing; Product Group: Water (Ground Water)						
1	Colour	Hazen	<1	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 2120-B, 2-6
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 5):1984, Reaffirmed 2006
3	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	1.9	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	8.0	6.5 to 8.5	No relaxation	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6	Residual Free Chlorine	mg/L	<0.05	0.2 Min.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7	Total Dissolved Solids	mg/L	761	500 Max.	2000 Max.	IS 3025 (Part 16):1984 RA 2006, Ed.2.1(1999-12)
8	Total Suspended Solids	mg/L	<5	-	-	APHA 23 rd Ed. 2017, 2540-D, 2-69
9	Alkalinity Total (as CaCO ₃)	mg/L	380	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR-TC748720000002009P



Report No.02085 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
10	Total Hardness (as CaCO ₃)	mg/L	548	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	109	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	98.4	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	19.3	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium (as Ca)	mg/L	105	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	69.0	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.448	1 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17	Boron (as B)	mg/L	<0.1	0.5 Max.	1.0 Max.	APHA 23 rd Ed. 2017, 4500-B B, 4-27
18	Dissolved Oxygen	mg/L	5.8	-	-	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19	*Oil and Grease	mg/L	N.D.	-	-	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20	*Cyanide (as CN)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	0.001 Max.	0.002 Max.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.100	0.3 Max.	No relaxation.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23	Manganese (as Mn)	mg/L	0.049	0.1 Max.	0.3 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	0.2 Max.	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25	Cadmium (as Cd)	mg/L	N.D.	0.003Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
26	Chromium Total (as Cr)	mg/L	N.D.	0.05 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
27	Copper (as Cu)	mg/L	<0.04	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

ULR-TC748720000002009P



Report No.02085 cont...

Sr. No.	Parameter	Unit	Result	Limit for Drinking water as per IS 10500:2012		Method Reference
				Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
28	Lead (as Pb)	mg/L	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3111-B, 3-20
29	Zinc (as Zn)	mg/L	0.130	5 Max.	15 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
30	Arsenic (as As)	mg/L	N.D.	0.01 Max.	0.05 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31	Mercury (as Hg)	mg/L	N.D.	0.001Max.	No relaxation	APHA 23 rd Ed. 2017, 3112-B, 3-25
32	Selenium (as Se)	mg/L	<0.01	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						
Remarks: The tests marked with an * are not accredited by NABL						

END

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C.Yeole

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Engineers, Consultants, Environmental Monitoring Laboratory & Contractors

Plot Nos. 13,14,17,18, Grampanchayat Bokhara, 8 km from Nagpur City,

Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111

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

Water Sample Analysis Report

Report No.: ME-NG02084-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019	
Sample Description/Type	Surface Water	Sample Collected by	Laboratory
Sampling Location	Wagholi Pond	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Method Reference
Discipline: Chemical Testing; Product Group: Water(Surface Water)				
1.	Colour	Hazen	<1	APHA 23 rd Ed. 2017, 2120-B, 2-6
2.	Odour	-	Agreeable	IS 3025 (Part 05):1984, Reaffirmed 2006
3.	Taste	-	N.A.	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4.	Turbidity	NTU	6.7	APHA 23 rd Ed. 2017, 2130-B, 2-13
5.	pH	-	8.1	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6.	Residual Free Chlorine	mg/L	<0.05	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7.	Total Dissolved Solids	mg/L	540	IS 3025 (Part 16):1984 Reaffirmed 2006, Ed.2.1(1999-12)
8.	Total Suspended Solids	mg/L	14	APHA 23 rd Ed. 2017, 2540-D, 2-69
9.	Alkalinity Total (as CaCO ₃)	mg/L	130	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
10.	Total Hardness (as CaCO ₃)	mg/L	316	APHA 23 rd Ed. 2017, 2340-C, 2-48
11.	Chloride (as Cl)	mg/L	57.4	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12.	Sulphate (as SO ₄)	mg/L	220	APHA 23 rd Ed. 2017, 4500- SO ₄ -E, 4-199
13.	Nitrate (as NO ₃)	mg/L	<0.5	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14.	Calcium (as Ca)	mg/L	64.9	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15.	Magnesium (as Mg)	mg/L	37.4	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16.	Fluoride (as F)	mg/L	0.429	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17.	Boron (as B)	mg/L	<0.1	APHA 23 rd Ed. 2017, 4500-B B, 4-27

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR-TC748720000002008P



Report No.02084 Cont...

Sr. No.	Parameter	Unit	Result	Method Reference
18.	Dissolved Oxygen	mg/L	6.3	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19.	*Oil and Grease	mg/L	N.D.	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20.	*Cyanide (as CN)	mg/L	N.D.	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21.	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)				
22.	Iron (as Fe)	mg/L	0.567	APHA 23 rd Ed. 2017, 3111-B, 3-20
23.	Manganese (as Mn)	mg/L	0.049	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24.	Aluminium (as Al)	mg/L	<0.025	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25.	Cadmium (as Cd)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3111-B, 3-20
26.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3500- Cr-B, 3-71
27.	Copper (as Cu)	mg/L	<0.04	APHA 23 rd Ed. 2017, 3111-B, 3-20
28.	Lead (as Pb)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3111-B, 3-20
29.	Zinc (as Zn)	mg/L	0.072	APHA 23 rd Ed. 2017, 3111-B, 3-20
30.	Arsenic (as As)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31.	Mercury (as Hg)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3112-B, 3-25
32.	Selenium (as Se)	mg/L	<0.01	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected; NA: Not Applicable				
Remarks: The tests marked with an * are not accredited by NABL				

ULR-TC748720000002008P

-----END-----

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C.Yeole

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

Water Sample Analysis Report

Report No.: ME-NG02083-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Surface Water	Sample Collected by	Laboratory
Sampling Location	Malegaon Pond	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1No. PVC Can 500mL X 1No.Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Method Reference
Discipline: Chemical Testing; Product Group: Water (Surface Water)				
1.	Colour	Hazen	<1	APHA 23 rd Ed. 2017, 2120-B, 2-6
2.	Odour	-	Agreeable	IS 3025 (Part 05):1984, Reaffirmed 2006
3.	Taste	-	N.A.	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4.	Turbidity	NTU	8.8	APHA 23 rd Ed. 2017, 2130-B, 2-13
5.	pH	-	7.8	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6.	Residual Free Chlorine	mg/L	<0.05	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
7.	Total Dissolved Solids	mg/L	570	IS 3025 (Part 16):1984 Reaffirmed 2006, Ed.2.1(1999-12)
8.	Total Suspended Solids	mg/L	10	APHA 23 rd Ed. 2017, 2540-D, 2-69
9.	Alkalinity Total (as CaCO ₃)	mg/L	132	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
10.	Total Hardness (as CaCO ₃)	mg/L	320	APHA 23 rd Ed. 2017, 2340-C, 2-48
11.	Chloride (as Cl)	mg/L	59.4	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12.	Sulphate (as SO ₄)	mg/L	235	APHA 23 rd Ed. 2017, 4500- SO ₄ -E, 4-199
13.	Nitrate (as NO ₃)	mg/L	0.602	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14.	Calcium (as Ca)	mg/L	57.7	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15.	Magnesium (as Mg)	mg/L	42.7	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16.	Fluoride (as F)	mg/L	0.416	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17.	Boron (as B)	mg/L	<0.1	APHA 23 rd Ed. 2017, 4500-B B, 4-27

Report No.02083 Cont...

Sr. No.	Parameter	Unit	Result	Method Reference
18.	Dissolved Oxygen	mg/L	6.4	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
19.	*Oil and Grease	mg/L	N.D.	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
20.	*Cyanide (as CN)	mg/L	N.D.	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
21.	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)				
22.	Iron (as Fe)	mg/L	0.631	APHA 23 rd Ed. 2017, 3111-B, 3-20
23.	Manganese (as Mn)	mg/L	0.060	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24.	Aluminium (as Al)	mg/L	<0.025	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
25.	Cadmium (as Cd)	mg/L	<0.05	APHA 23 rd Ed. 2017, 3111-B, 3-20
26.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3500- Cr-B, 3-71
27.	Copper (as Cu)	mg/L	<0.04	APHA 23 rd Ed. 2017, 3111-B, 3-20
28.	Lead (as Pb)	mg/L	<0.1	APHA 23 rd Ed. 2017, 3111-B, 3-20
29.	Zinc (as Zn)	mg/L	0.090	APHA 23 rd Ed. 2017, 3111-B, 3-20
30.	Arsenic (as As)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31.	Mercury (as Hg)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3112-B, 3-25
32.	Selenium (as Se)	mg/L	<0.01	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected; NA: Not Applicable				
Remarks: The tests marked with an * are not accredited by NABL				

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

Noise Level Monitoring Report

Report No.: ME-NG02091-200214-SA-RIPL-AMRAVATI		Date: 14.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Noise Level Monitoring	Sample Collected by
		NA
Date of Sampling	07.02.2020	
Sampling Procedure	IS 9876:1981 & manufacturer Manual	

Discipline : Chemical Testing; Product Group: Atmospheric Pollution			
Location	Unit	Result	
		Min.	Max.
Near Main Gate	dB(A)	64.04	68.04
Near Compressor Room	dB(A)	65.01	67.02
Near CHP Crusher House	dB(A)	65.03	69.02
Near Colony (Industry Premises)	dB(A)	63.02	66.04
3 & 4 Turbine Area	dB(A)	69.08	72.03
Limit as per The Factories Act, 1948, The Maharashtra Factory Rules, 1963, Schedule XXIV			
Total time of exposure per day, in hours.		Max. Sound pressure level in dB (A)	
8		90	
6		92	
4		95	
3		97	
2		100	
1 ½		102	
1		105	
3/4		107	
1/2		110	
1/4		115	
Remark :			

-----END-----

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR- TC748720000002015F



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

Effluent Sample Analysis Report

Report No.: ME-NG02082-200217-SA-RIPL-AMRAVATI			Date: 17.02.2020
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. 3382017462 Dt.16.08.2019	
Sample Description/Type	Industrial Effluent	Sample Collected by	Laboratory
Sampling Location	Ash Dyke Leachates	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	17.02.2020

Sr. No.	Parameter	Unit	Result	Method Reference
Discipline: Chemical Testing; Product Group: Pollution & Environment (Waste Water)				
1.	Colour	Hazen	<1	APHA 23 rd Ed. 2017, 2120-B, 2-6
2.	Odour	-	Agreeable	IS 3025 (Part 05):1984, Reaffirmed 2006
3.	Turbidity	NTU	3.9	APHA 23 rd Ed. 2017, 2130-B, 2-13
4.	pH	-	7.7	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
5.	Residual Free Chlorine	mg/L	<0.05	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
6.	Total Dissolved Solids	mg/L	1300	IS 3025 (Part 16):1984 Reaffirmed 2006, Ed.2.1(1999-12)
7.	Total Suspended Solids	mg/L	<5	APHA 23 rd Ed. 2017, 2540-D, 2-69
8.	Alkalinity Total (as CaCO ₃)	mg/L	230	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
9.	Total Hardness (as CaCO ₃)	mg/L	876	APHA 23 rd Ed. 2017, 2340-C, 2-48
10.	Chloride (as Cl)	mg/L	98.7	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
11.	Sulphate (as SO ₄)	mg/L	646	APHA 23 rd Ed. 2017, 4500- SO ₄ -E, 4-199

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Report No.02082 Cont...

Sr. No.	Parameter	Unit	Result	Method Reference
12.	Nitrate (as NO ₃)	mg/L	0.908	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
13.	Calcium (as Ca)	mg/L	239	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
14.	Magnesium (as Mg)	mg/L	68.0	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
15.	Fluoride (as F)	mg/L	0.903	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
16.	Boron (as B)	mg/L	<0.1	APHA 23 rd Ed. 2017, 4500-B B, 4-27
17.	Dissolved Oxygen	mg/L	5.2	APHA 23 rd Ed. 2017, 4500-O, B & C, 4-144, 4-146
18.	Oil and Grease	mg/L	N.D.	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
19.	*Cyanide (as CN)	mg/L	N.D.	APHA 23 rd Ed. 2017, 4500-CN, C & E, 4-44 & 4-46
20.	*Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	N.D.	APHA 23 rd Ed. 2017, 5530- B & C, 5-49, 5-50
Residues in water (Trace metal Element)				
21.	Iron (as Fe)	mg/L	0.567	APHA 23 rd Ed. 2017, 3111-B, 3-20
22.	Manganese (as Mn)	mg/L	0.053	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
23.	Aluminium (as Al)	mg/L	<0.025	APHA 23 rd Ed. 2017, 3500-Al-B, 3-63
24.	Cadmium (as Cd)	mg/L	<0.05	APHA 23 rd Ed. 2017, 3111-B, 3-20
25.	Chromium Hexa (as Cr ⁶⁺)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3500- Cr-B, 3-71
26.	Copper (as Cu)	mg/L	<0.04	APHA 23 rd Ed. 2017, 3111-B, 3-20
27.	Lead (as Pb)	mg/L	<0.1	APHA 23 rd Ed. 2017, 3111-B, 3-20
28.	Zinc (as Zn)	mg/L	0.055	APHA 23 rd Ed. 2017, 3111-B, 3-20
29.	Arsenic (as As)	mg/L	<0.01	APHA 23 rd Ed. 2017, 3114-C, 3-40
30.	Mercury (as Hg)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3112-B, 3-25
31.	Selenium (as Se)	mg/L	<0.01	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected				
Remarks: The tests marked with an * are not accredited by NABL				

END

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Effluent Sample Analysis Report

Report No.: ME-NG02079-200214-SA-RIPL-AMRAVATI			Date: 14.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Industrial Effluent	Sample Collected by	Laboratory
Sampling Location	DM Plant Effluent	Sample Quantity/Packing	2 L X 1 No. PVC Can 100mL X 1 No. PVC Can 1 L X 1 No. Glass Bottle
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	14.02.2020

Sr. No.	Parameter	Unit	Result	Limit as per Consent	Method Reference
Discipline: Chemical Testing; Product Group: Pollution & Environment(Waste Water)					
1	pH	-	7.8	5.5 to 9.0	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
2	Total Dissolved Solids (TDS)	mg/L	541	2100 Max.	IS 3025 (Part 16): 1984 Reaffirmed 2006, Ed.2.1(1999-12)
3	Suspended Solids	mg/L	<5	100 Max.	APHA 23 rd Ed. 2017, 2540-D, 2-69
4	Biochemical Oxygen Demand (BOD at 3 days at 27°C)	mg/L	17	30 Max.	IS 3025 (Part 44): 1993, Reaffirmed 2009
5	Chemical Oxygen Demand (COD)	mg/L	56	250 Max.	APHA 23 rd Ed. 2017, 5220-B, 5-18
6	Oil & Grease	mg/L	N.D.	10 Max.	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
Remarks: N. D.- Not Detected					

-----END-----

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QF/5.10/1-A/Issue No.01,Dt.01.02.2009, Amd.01Dt.25.05.2018

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ULR-TC748720000002003F



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

Effluent Sample Analysis Report

Report No.: ME-NG02081-200212-SA-RIPL-AMRAVATI			Date: 12.02.2020
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Industrial Effluent	Sample Collected by	Laboratory
Sampling Location	Condensers Cooling Water Discharge	Sample Quantity/Packing	2 L X 1 No. PVC Can
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	07.02.2020

Sr. No.	Parameter	Unit	Result	Limit as per Consent	Method Reference
1	pH	-	7.9	6.5 to 8.5	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
2	Temperature	°C	34	Not to exceed 5°C higher than the intake water temp.	APHA 23 rd Ed. 2017, 2550-B, 2-74
3	Free Available Chlorine	mg/L	<0.05	0.5 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72

Remarks: Temp. & Free Available Chlorine recorded at the time of sampling.

-----END-----

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

Effluent Sample Analysis Report

Report No.: ME-NG02078-200214-SA-RIPL-AMRAVATI		Date: 14.02.2020	
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. 3382017462 Dt.16.08.2019
Sample Description/Type	Industrial Effluent	Sample Collected by	Laboratory
Sampling Location	Cooling Tower - Blow Down	Sample Quantity/Packing	2 L X 1 No. PVC Can 500mL X 1 No. PVC Can
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	14.02.2020

Sr. No.	Parameter	Unit	Result	Limit as per Consent	Method Reference
Discipline: Chemical Testing; Product Group: Pollution & Environment(Waste Water)					
1	Total Free Chlorine (Residual)	mg/L	<0.05	0.5 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72
2	Phosphate Total (as PO ₄)	mg/L	1.71	5.0 Max.	APHA 23 rd Ed. 2017, 4500-P B, 4-160, E, 4-164
Residues in water (Trace metal Element)					
3	Chromium Total (as Cr)	mg/L	<0.1	0.2 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
4	Zinc (as Zn)	mg/L	0.207	1.0 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
Remarks: Free Available Chlorine tested on field.; N.D. Not Detected					

END

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[Signature]

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Effluent Sample Analysis Report

Report No.: ME-NG02080-200214-SA-RIPL-AMRAVATI		Date: 14.02.2020	
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. 3382017462 Dt.16.08.2019	
Sample Description/Type	Industrial Effluent	Sample Collected by	Laboratory
Sampling Location	Boiler Blow down	Sample Quantity/Packing	2L X 1 No. PVC Can 500mL X 1 No. PVC Can 1L X 1 No. Glass Bottle
Date of Sampling	06.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	07.02.2020	Date of Completion of Analysis	14.02.2020

Sr. No.	Parameter	Unit	Result	Limit as per Consent	Method Reference
Discipline: Chemical Testing; Product Group: Pollution & Environment (Waste Water)					
1	Suspended Solids	mg/L	<5	100 Max.	APHA 23 rd Ed. 2017, 2540-D, 2-69
2	Oil & Grease	mg/L	N.D.	10 Max.	IS 3025 (Part 39): 1991, Reaffirmed 2009, Amds.1
Residues in water (Trace metal Element)					
3	Copper total (as Cu)	mg/L	N.D.	1.0 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
4	Iron total (as Fe)	mg/L	0.374	1.0 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
Remarks: N.D. – Not Detected					

-END-

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QF/SALE/02/Issue No 03 Dt 05.12.2019,Amd 00 Dt 00

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra
(600 m from Hotel Rukhmini Palace Turn Opp Toyota Show Room. Next to Ashida Electrical - near J B Sawant Bus Stop)
Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

ULR-TC748720000002004F



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.Nagpur-441111

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

Ambient Air Quality Monitoring Report

Report No.: ME-NG02072-200214-SA-RIPL-AMRAVATI		Date: 14.02.2020	
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. 3382017462 Dt.16.08.2019	
Sample Description/Type	Ambient Air Quality Monitoring	Sample Collected by	Laboratory
Sampling Location	1) Near Site Office 2) Terrace of WTP Plant 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 : 10 mL X72 No. PVC Bottle O ₃ : 10 mL X 72 No. PVC Bottle 3 X 6 No. Charcoal Tubes 3 X 3 No. Gas Bladder
Date of Sampling	06.02.2020 to 07.02.2020	Date of Receipt of Sample	07.02.2020
Sampling Procedure	As per Method reference		
Date of Start of Analysis	08.02.2020	Date of Receipt of Sample	13.02.2020

Meteorological Data/Environmental Conditions

Meteorological Data/ Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
3.2 km/hr	SE	Max.	Min.	Max.	Min.
		58	36	30.0	15.0
Location	1) Near Site Office			Duration of Survey: 24 hours	
Parameter		Unit	Result	#NAAQM Standard	Method Reference
Discipline: Chemical Testing; Product Group: Atmospheric Pollution (Ambient Air)					
Sulphur Dioxide (SO ₂)		µg/m ³	15.2	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	17.4	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	56	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	21	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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QF/SALE/03/Issue No 03 Dt 05.12.2019,Amd 00 Dt 00

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Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 thane@mahabal.com

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Report No.02072 Cont...

Parameter	Unit	Result	#NAAQM Standard	Method Reference
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	1.13	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	<20	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	1.46	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	3.53	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Location	2) Terrace of WTP Plant			Duration of Survey: 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	19.6	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	20.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM ₁₀	µg/m ³	63	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	24	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	1.16	4.0	IS 5182 (Part 10):1999 RA 2003
Ammonia (NH ₃)	µg/m ³	21.7	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	1.27	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

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Report No.02072 Cont...

Parameter	Unit	Result	#NAAQM Standard	Method Reference
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
Location	3) Terrace of Bachelor Guest House			Duration of Survey: 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	14.1	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	16.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM ₁₀	µg/m ³	59	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	22	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	1.10	4.0	IS 5182 (Part 10): 1999 RA 2003
Ammonia (NH ₃)	µg/m ³	23.1	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	1.32	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
Remarks: 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



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