



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

Stack Emission Monitoring Report

Report No.: ME-NG16881-191018-SA-RIPL-AMRAVATI		Date: 18.10.2019	
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	14.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	16.10.2019

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)	114			
Load (MW)	190			
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	113	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.3	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1306481	-	IS 11255 (Part 3):2008

ULR-TC748719000016881P

Report No.16881 cont...

Parameter	Unit	Result	#Limit	Method Reference
Particulate Matter (PM)	mg/Nm ³	43	50	IS 11255 (Part 1):1985, RA 2003
Sulphur Dioxide (SO ₂)	mg/Nm ³	594	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	18.6	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	234	-	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

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Kishor Yeole
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Note:

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Stack Emission Monitoring Report

Report No.: ME-NG17455-191031-SA-RIPL-AMRAVATI		Date: 31.10.2019	
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 CO: Bladder: 1 X 1 No.
Date of Sampling	24.10.2019	Date of Receipt of Sample	25.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	25.10.2019	Date of Completion of Analysis	31.10.2019

ULR-TC748719000017455P

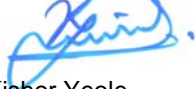
Discipline : Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-5		
Stack Identity		Boiler Unit 5		
Stack attached to		ESP of Boiler U#5		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		117		
Load (MW)		190		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	119	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.3	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1286484	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	48	50	IS 11255 (Part 1):1985, RA 2003

Report No.17455 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	596	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	18.4	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	244	-	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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Stack Emission Monitoring Report

Report No.: ME-NG17454-191031-SA-RIPL-AMRAVATI		Date: 31.10.2019	
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. 4	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle CO: Bladder: 1 X 1 No.
Date of Sampling	24.10.2019	Date of Receipt of Sample	25.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	25.10.2019	Date of Completion of Analysis	31.10.2019

ULR-TC748719000017454P

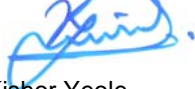
Discipline : Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-4		
Stack Identity		Boiler Unit 4		
Stack attached to		ESP of Boiler U#4		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		131		
Load (MW)		190		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	118	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.6	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1303447	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	45	50	IS 11255 (Part 1):1985, RA 2003

Report No.17454 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	596	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	18.6	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	244	-	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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Report No.: ME-NG17453-191031-SA-RIPL-AMRAVATI		Date: 31.10.2019	
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 CO: Bladder: 1 X 1 No.
Date of Sampling	24.10.2019	Date of Receipt of Sample	25.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	25.10.2019	Date of Completion of Analysis	31.10.2019

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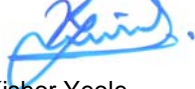
Discipline : Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-3		
Stack Identity		Boiler Unit 3		
Stack attached to		ESP of Boiler U#3		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		130		
Load (MW)		190		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	117	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.9	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1320497	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	42	50	IS 11255 (Part 1):1985, RA 2003

Report No. 17453 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	590	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	18.7	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	257	-	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				

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Stack Emission Monitoring Report

Report No.: ME-NG17452-191031-SA-RIPL-AMRAVATI		Date: 31.10.2019	
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	24.10.2019	Date of Receipt of Sample	25.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	25.10.2019	Date of Completion of Analysis	31.10.2019

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)		158		
Load (MW)		266		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	124	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.6	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1283748	-	IS 11255 (Part 3):2008

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Report No.17452 cont...

Parameter	Unit	Result	#Limit	Method Reference
Particulate Matter (PM)	mg/Nm ³	38	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)	t/day	18.0	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	226	-	IS 11255 (Part 7):2005
*CO ₂	%	12.6	-	Analyser Method

Remark: The tests marked with an * are not accredited by NABL;
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Stack Emission Monitoring Report

Report No.: ME-NG16881-191018-SA-RIPL-AMRAVATI		Date: 18.10.2019	
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 CO: Bladder: 1 X 1 No.
Date of Sampling	14.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	16.10.2019

ULR-TC748719000016884P

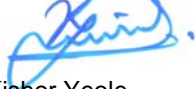
Discipline : Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-5		
Stack Identity		Boiler Unit 5		
Stack attached to		ESP of Boiler U#5		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		117		
Load (MW)		190		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	122	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.8	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1299270	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	44	50	IS 11255 (Part 1):1985, RA 2003

Report No.16884 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	590	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	18.4	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	230	-	IS 11255 (Part 7):2005
*CO ₂	%	12.8	-	Analyser Method
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			SO No. 3382017462 Dt.16.08.2019
Sample Description/Type	Stack Emission Monitoring	Sample Collected by	Laboratory
Sampling Location	Boiler Unit No. 4	Sample Quantity/Packing	Thimble:1 X 1 No. SO ₂ :30 mL X 1 No. PVC Bottle NO _x : 25mL X 1No. PVC Bottle CO: Bladder: 1 X 1 No.
Date of Sampling	14.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	16.10.2019

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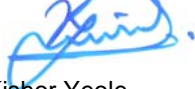
Discipline : Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-4		
Stack Identity		Boiler Unit 4		
Stack attached to		ESP of Boiler U#4		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		114		
Load (MW)		192		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	119	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	28.5	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1295576	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	46	50	IS 11255 (Part 1):1985, RA 2003

Report No. 16883 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	590	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	18.3	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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			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 CO: Bladder: 1 X 1 No.
Date of Sampling	14.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	As per Method Reference.		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	16.10.2019

ULR-TC748719000016882P

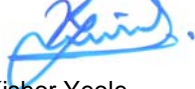
Discipline : Chemical Testing; Product Group: Atmospheric Pollution (Stack Emission)				
Stack Details		S-3		
Stack Identity		Boiler Unit 3		
Stack attached to		ESP of Boiler U#3		
Material of construction		M.S.		
Stack height above ground level (Meter)		275		
Stack diameter at sampling point (Meter)		4.6		
Stack shape at top		Round		
Type of fuel		Coal		
Fuel Consumption (t/h)		135		
Load (MW)		267		
Parameter	Unit	Result	#Limit	Method Reference
Flue gas Temperature	°C	132	-	IS 11255 (Part 3):2008
Flue gas Velocity	m/s	29.3	-	IS 11255 (Part 3):2008
Total gas quantity	Nm ³ /h	1289189	-	IS 11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm ³	45	50	IS 11255 (Part 1):1985, RA 2003

Report No. 16882 cont...

Parameter	Unit	Result	#Limit	Method Reference
Sulphur Dioxide (SO ₂)	mg/Nm ³	596	-	IS 11255 (Part 2):1985, RA 2003
Sulphur Dioxide (SO ₂)	t/day	18.4	52.32	IS 11255 (Part 2):1985, RA 2003
Oxides of Nitrogen(NO _x)	mg/Nm ³	234	-	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				

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

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Ambient Air Quality Monitoring Report

Report No.: ME-NG16902-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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) Terrace of WTP Plant 2) Near Site Office 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	14.10.2019 to 15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	As per Method reference		
Date of Start of Analysis	15.10.2019	Date of Receipt of Sample	22.10.2019

Meteorological Data/Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
3.8 km/h	NE	88	26	31.0	20.0

Location	1) Terrace of WTP Plant	Duration of Survey : 24 hours
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Parameter	Unit	Result	#NAAQM Standard	Method Reference
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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	68	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or PM _{2.5}	µg/m ³	28	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30
Ozone (O ₃)	µg/m ³	<19.6	180	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.31-34

Report No. 16902 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	1.07	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	1.05	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
Location	2) Near Site Office			Duration of Survey : 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	12.8	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	15.9	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	83	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or PM _{2.5}	µg/m ³	35	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	1.13	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	1.07	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.16902 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	10.0	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	15.2	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10
Particulate Matter (size less than 10µm) or PM ₁₀	µg/m ³	58	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14
Particulate Matter (size less than 2.5µm) or PM _{2.5}	µg/m ³	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	1.15	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	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.				

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 Kishor C. Yeole

BRANCH MANAGER


Note:

1. The result listed refers only to the tested sample(s) and applicable parameter(s).
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Ambient Air Quality Monitoring Report

Report No.: ME-NG17456-191104-SA-RIPL-AMRAVATI		Date: 04.11.2019	
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) Vill.Kapustalani 2) Vill.Wagholi 3) Vill.Dawargaon	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	24.10.2019 to 25.10.2019	Date of Receipt of Sample	25.10.2019
Sampling Procedure	As per Method reference		
Date of Start of Analysis	25.10.2019	Date of Receipt of Sample	04.11.2019

Meteorological Data/Environmental Conditions

Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
4.2 km/h	SE	84	36	32.0	19.0

Location	1) Vill Kapustalani	Duration of Survey : 24 hours
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Parameter	Unit	Result	#NAAQM Standard	Method Reference
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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	14.5	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	55	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

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Report No. 17456 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	1.10	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	1.09	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	3.17	20.0	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.48-55
Location	2) Vill. Wagholi			Duration of Survey : 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	12.8	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	15.9	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	87	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	0.96	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	1.09	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.17456 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) Vill. Dawargaon			Duration of Survey : 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	9.1	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	13.8	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	52	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	20	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	1.15	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	1.07	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.				

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Noise Level Monitoring Report

Report No.: ME-NG16905-191018-SA-RIPL-AMRAVATI		Date: 18.10.2019	
Name and Address of Customer	RATTANINDIA POWER LIMITED		Order Reference:
	Plot No.D-2 & D-2 (PART) at Additional MIDC, Village-Nandgaonpeth, Tal & Dist: Amravati 444 901		SO No. 3382017462 Dt.16.08.2019
Sample Description/Type	Noise Level Monitoring	Sample Collected by	NA
Date of Sampling	14.10.2019		
Sampling Procedure	IS 9876:1981 & manufacturer Manual		

Location	Unit	Result	
		Max.	Min.
Near Main Gate	dB(A)	66.1	60.7
Near Compressor Room	dB(A)	68.4	64.3
Near CHP Crusher House	dB(A)	65.9	62.3
Near Colony	dB(A)	63.4	60.1
3 & 4 Turbine Area	dB(A)	70.7	67.9
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	
¾		107	
½		110	
¼		115	
Remark :			

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Water Sample Analysis Report

Report No.: ME-NG16893-191023-SA-RIPL-AMRAVATI		Date: 23.10.2019	
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 Borewell water	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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

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	-	NA	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	0.3	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.5	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	827	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	362	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Report No.16893 cont...

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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	564	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	167	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	58.5	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	43.2	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium(as Ca)	mg/L	125	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	61.2	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.331	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	6.8	-	-	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
Discipline : Chemical Testing; Product Group :Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.249	0.3 Max.	No relaxation.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23	Manganese (as Mn)	mg/L	N.D.	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	N.D.	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

Report No.16893 cont...

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	0.022	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	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


Kishor C. Yeole
BRANCH MANAGER



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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-NG16894-191023-SA-RIPL-AMRAVATI		Date: 23.10.2019	
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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

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Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
Discipline : Chemical Testing; Product Group: Water(Ground Water)					
1.	Colour	Hazen	<1	5 Max.	APHA 23 rd Ed. 2017, 2120-B, 2-6
2.	Odour	-	Agreeable	Agreeable	IS 3025 (Part 05):1984, Reaffirmed 2006
3.	Taste	-	NA	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4.	Turbidity	NTU	0.3	1 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5.	pH	-	7.4	6.5 to 8.5	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
6.	Residual Free Chlorine	ppm	<0.05	0.2 Min.	APHA 23 rd Ed. 2017, 4500-CI G, 4-72
7.	Total Dissolved Solids	mg/L	507	500 Max.	IS 3025 (Part 16):1984 Reaffirmed 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	292	200 Max	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
10.	Total Hardness (as CaCO ₃)	mg/L	360	200 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11.	Chloride(as Cl)	mg/L	49.5	250 Max.	APHA 23 rd Ed. 2017, 4500-CI-B, 4-75
12.	Sulphate (as SO ₄)	mg/L	28.9	200 Max	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199

Report No.16894 Cont...

Sr. No.	Parameter	Unit	Result	Acceptable Limit for Drinking water (IS 10500:2012)	Method Reference
13.	Nitrate (as NO ₃)	mg/L	44.3	45 Max	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14.	Calcium (as Ca)	mg/L	86.6	75 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15.	Magnesium (as Mg)	mg/L	35.0	30 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16.	Fluoride(as F)	mg/L	0.444	1.0 Max.	APHA 23 rd Ed. 2017, 4500-F, D, 4-90
17.	Boron(as B)	mg/L	<0.1	0.5 Max.	APHA 23 rd Ed. 2017, 4500-B B, 4-27
18.	Dissolved Oxygen	mg/L	6.9	-	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.	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.	APHA 23 rd Ed. 2017, 5530-B & C, 5-49, 5-50
Discipline : Chemical Testing; Product Group :Residues in water (Trace metal Element)					
22.	Iron (as Fe)	mg/L	0.283	0.3 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
23.	Manganese (as Mn)	mg/L	N.D.	0.1 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20 AAS Method
24.	Aluminium (as Al)	mg/L	<0.025	0.03 Max.	APHA 23 rd Ed. 2017, 3500-AI-B, 3-63
25.	Cadmium (as Cd)	mg/L	N.D.	0.003 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
26.	Chromium Total (as Cr)	mg/L	N.D.	0.05 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
27.	Copper (as Cu)	mg/L	N.D.	0.05 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
28.	Lead (as Pb)	mg/L	N.D.	0.01 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
29.	Zinc (as Zn)	mg/L	0.016	5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
30.	Arsenic (as As)	mg/L	N.D.	0.01 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
31.	Mercury (as Hg)	mg/L	N.D.	0.001 Max.	APHA 23 rd Ed. 2017, 3112-B, 3-25
32.	Selenium (as Se)	mg/L	N.D.	0.01 Max.	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D. – Not Detected; NA: Not Applicable; The tests marked with an * are not accredited by NABL					

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole
BRANCH MANAGER



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Water Sample Analysis Report

Report No.: ME-NG16892-191023-SA-RIPL-AMRAVATI			Date: 23.10.2019
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	Rasalpur village Well water	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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

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	-	NA	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	0.3	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.7	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	527	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	328	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Report No.16892 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	372	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	37.9	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	22.8	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	44.0	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium(as Ca)	mg/L	81.8	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	0.546	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	6.9	-	-	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
Discipline : Chemical Testing; Product Group :Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.306	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	N.D.	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

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Report No.16892 cont...

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	0.028	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	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


Kishor C. Yeole
BRANCH MANAGER



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Water Sample Analysis Report

Report No.: ME-NG16891-191023-SA-RIPL-AMRAVATI		Date: 23.10.2019	
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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

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	-	NA	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	0.3	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	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	492	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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Report No.16891 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	352	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	48.6	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	27.9	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	42.6	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium(as Ca)	mg/L	96.2	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	27.2	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.654	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
Discipline : Chemical Testing; Product Group :Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.249	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	N.D.	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

ULR-TC748719000016891P

Report No.16891 cont...

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	0.041	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	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


Kishor C. Yeole
BRANCH MANAGER



Note:

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Water Sample Analysis Report

Report No.: ME-NG16890-191023-SA-RIPL-AMRAVATI		Date: 23.10.2019	
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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

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	-	NA	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	0.4	1 Max.	5 Max.	APHA 23 rd Ed. 2017, 2130-B, 2-13
5	pH	-	7.9	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	471	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	310	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Report No.16890 cont...

ULR-TC748719000016890P

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	338	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	22.3	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	32.8	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	20.4	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium(as Ca)	mg/L	76.2	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	36.0	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.444	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	6.5	-	-	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
Discipline : Chemical Testing; Product Group :Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.204	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	N.D.	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

Report No.16890 cont...

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	0.041	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	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


Kishor C. Yeole
BRANCH MANAGER



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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

Water Sample Analysis Report

Report No.: ME-NG16889-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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	Kapustalini 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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	22.10.2019

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	0.3	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	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	463	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	240	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Report No.16889 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	302	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	70.9	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	26.8	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	29.8	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium(as Ca)	mg/L	72.9	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	29.2	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.331	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	7.1	-	-	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
Discipline : Chemical Testing; Product Group :Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.294	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	N.D.	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

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Report No.16889 cont...

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	0.026	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	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Kishor C. Yeole
Kishor C. Yeole
BRANCH MANAGER



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Water Sample Analysis Report

Report No.: ME-NG16888-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	22.10.2019

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	-	NA	Agreeable	Agreeable	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4	Turbidity	NTU	0.3	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	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	477	500 Max.	2000 Max.	IS 3025 (Part 16):1984 RA 2006, Ed.2.1(1999-12)
8	Total Suspended Solids	mg/L	8	-	-	APHA 23 rd Ed. 2017, 2540-D, 2-69
9	Alkalinity Total (as CaCO ₃)	mg/L	272	200 Max.	600 Max.	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1

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Report No.16888 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	336	200 Max.	600 Max.	APHA 23 rd Ed. 2017, 2340-C, 2-48
11	Chloride (as Cl)	mg/L	54.4	250 Max.	1000 Max.	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12	Sulphate (as SO ₄)	mg/L	38.8	200 Max.	400 Max.	APHA 23 rd Ed. 2017, 4500-SO ₄ -E, 4-199
13	Nitrate (as NO ₃)	mg/L	18.6	45 Max.	No relaxation	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14	Calcium(as Ca)	mg/L	77.0	75 Max.	200 Max.	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15	Magnesium (as Mg)	mg/L	35.0	30 Max.	100 Max.	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16	Fluoride (as F)	mg/L	0.624	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	6.8	-	-	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
Discipline : Chemical Testing; Product Group :Residues in water (Trace metal Element)						
22	Iron (as Fe)	mg/L	0.328	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	N.D.	0.05 Max.	1.5 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20

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Report No.16888 cont...

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	0.043	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	N.D.	0.01 Max.	No relaxation	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D.: Not Detected						

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


Kishor C. Yeole
BRANCH MANAGER



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Water Sample Analysis Report

Report No.: ME-NG16886-191023-SA-RIPL-AMRAVATI		Date: 23.10.2019	
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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

ULR-TC748719000016886P

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	-	NA	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4.	Turbidity	NTU	0.4	APHA 23 rd Ed. 2017, 2130-B, 2-13
5.	pH	-	8.0	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	449	IS 3025 (Part 16):1984 Reaffirmed 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	192	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
10.	Total Hardness (as CaCO ₃)	mg/L	304	APHA 23 rd Ed. 2017, 2340-C, 2-48
11.	Chloride(as Cl)	mg/L	56.3	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12.	Sulphate (as SO ₄)	mg/L	107	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	73.7	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15.	Magnesium (as Mg)	mg/L	29.2	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16.	Fluoride(as F)	mg/L	0.624	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.16886 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	0.182	APHA 23 rd Ed. 2017, 3111-B, 3-20
23.	Manganese (as Mn)	mg/L	<0.04	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 Total (as Cr)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3111-B, 3-20
27.	Copper (as Cu)	mg/L	N.D.	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	0.039	APHA 23 rd Ed. 2017, 3111-B, 3-20
29.	Arsenic (as As)	mg/L	N.D.	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	N.D.	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D. – Not Detected; NA: Not Applicable The tests marked with an * are not accredited by NABL				

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FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.


 Kishor C. Yeole

BRANCH MANAGER


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Water Sample Analysis Report

Report No.: ME-NG16885-191023-SA-RIPL-AMRAVATI		Date: 23.10.2019	
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 1 No. PVC Can 500mL X 1 No. Glass Bottle
Date of Sampling	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

ULR-TC748719000016885P

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	-	NA	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4.	Turbidity	NTU	0.3	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	430	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	166	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
10.	Total Hardness (as CaCO ₃)	mg/L	312	APHA 23 rd Ed. 2017, 2340-C, 2-48
11.	Chloride(as Cl)	mg/L	54.4	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12.	Sulphate (as SO ₄)	mg/L	122	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	81.8	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15.	Magnesium (as Mg)	mg/L	26.2	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16.	Fluoride(as F)	mg/L	0.511	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.16885 Cont...

Sr. No.	Parameter	Unit	Result	Method Reference
18.	Dissolved Oxygen	mg/L	6.9	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	0.227	APHA 23 rd Ed. 2017, 3111-B, 3-20
23.	Manganese (as Mn)	mg/L	<0.04	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 Total (as Cr)	mg/L	N.D.	APHA 23 rd Ed. 2017, 3111-B, 3-20
27.	Copper (as Cu)	mg/L	N.D.	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	0.034	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	N.D.	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D. – Not Detected; NA: Not Applicable The tests marked with an * are not accredited by NABL				

ULR-TC748719000016885P

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Effluent Sample Analysis Report

Report No.: ME-NG16887-191023-SA-RIPL-AMRAVATI		Date: 23.10.2019	
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	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	14.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS: 3025(Part I):1987 RA 2003; APHA 23 rd Ed. 2017, 1060-B, 1-40;		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	23.10.2019

ULR-TC748719000016887P

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.	Taste	-	NA	IS 3025 (Part 7 & 8):1984, Reaffirmed 2006
4.	Turbidity	NTU	0.5	APHA 23 rd Ed. 2017, 2130-B, 2-13
5.	pH	-	7.7	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	891	IS 3025 (Part 16):1984 Reaffirmed 2006, Ed.2.1(1999-12)
8.	Total Suspended Solids	mg/L	6	APHA 23 rd Ed. 2017, 2540-D, 2-69
9.	Alkalinity Total (as CaCO ₃)	mg/L	172	IS 3025 (Part 23):1986 Reaffirmed 2009 Amds 1
10.	Total Hardness (as CaCO ₃)	mg/L	728	APHA 23 rd Ed. 2017, 2340-C, 2-48
11.	Chloride(as Cl)	mg/L	69.9	APHA 23 rd Ed. 2017, 4500-Cl-B, 4-75
12.	Sulphate (as SO ₄)	mg/L	502	APHA 23 rd Ed. 2017, 4500- SO ₄ -E, 4-199

Report No.16887 Cont...

Sr. No.	Parameter	Unit	Result	Method Reference
13.	Nitrate (as NO ₃)	mg/L	1.34	APHA 23 rd Ed. 2017, 4500-NO ₃ , E 4-131
14.	Calcium (as Ca)	mg/L	199	APHA 23 rd Ed. 2017, 3500-Ca-B, 3-69
15.	Magnesium (as Mg)	mg/L	56.4	APHA 23 rd Ed. 2017, 3500-Mg- B, 3-86
16.	Fluoride(as F)	mg/L	0.677	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
18.	Dissolved Oxygen	mg/L	6.5	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	0.261	APHA 23 rd Ed. 2017, 3111-B, 3-20
23.	Manganese (as Mn)	mg/L	<0.04	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	N.D.	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	0.067	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	N.D.	APHA 23 rd Ed. 2017, 3114-C, 3-40
Remarks: N.D. – Not Detected; The tests marked with an * are not accredited by NABL				

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-----END-----

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Effluent Sample Analysis Report

Report No.: ME-NG16898-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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	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	14.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	18.10.2019

ULR- TC748719000016898F

Sr. No.	Parameter	Unit	Result	Limit as per Consent	Method Reference
Discipline : Chemical Testing; Product Group: Pollution & Environment (Waste Water)					
1	pH	-	8.2	5.5 to 9.0	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
2	Total Dissolved Solids (TDS)	mg/L	418	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 ^o C)	mg/L	7.5	30 Max.	IS 3025 (Part 44): 1993, Reaffirmed 2009
5	Chemical Oxygen Demand (COD)	mg/L	24	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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Effluent Sample Analysis Report

Report No.: ME-NG16899-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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	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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	15.10.2019

Sr. No.	Parameter	Unit	Result	Limit as per Consent	Method Reference
1	pH	-	8.0	6.5 to 8.5	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
2	Temperature	°C	31	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	0.060	0.5 Max.	APHA 23 rd Ed. 2017, 4500-Cl G, 4-72

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

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Effluent Sample Analysis Report

Report No.: ME-NG16900-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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	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	14.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	21.10.2019

ULR- TC748719000016900F

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	0.121	0.5 Max.	APHA 23 rd Ed. 2017, 4500-CI G, 4-72
2	Phosphate Total (as PO ₄)	mg/L	2.03	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	0.041	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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Effluent Sample Analysis Report

Report No.: ME-NG16901-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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	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	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	21.10.2019

ULR-TC748719000016901F

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
Discipline : Chemical Testing; Product Group :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	0.126	1.0 Max.	APHA 23 rd Ed. 2017, 3111-B, 3-20
Remarks: N.D. – Not Detected					

-----END-----

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Effluent Sample Analysis Report

Report No.: ME-NG16896-191022-SA-RIPL-AMRAVATI		Date: 22.10.2019	
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	Domestic Effluent	Sample Collected by	Laboratory
Sampling Location	1.STP Plant Outlet 2.STP Colony Outlet	Sample Quantity/Packing	2 L X 2 No. PVC Can 100mL X 2 No. PVC Can
Date of Sampling	15.10.2019	Date of Receipt of Sample	15.10.2019
Sampling Procedure	IS:3025(Part I): 1987 RA2003, APHA 23 rd Ed. 2017, 1060-B, 1-40		
Date of Start of Analysis	15.10.2019	Date of Completion of Analysis	18.10.2019

ULR- TC748719000016896F

Sr. No.	Parameter	Unit	Result		Limit as per MPCB Consent	Method Reference
			1	2		
Discipline : Chemical Testing; Product Group: Pollution & Environment (Waste Water)						
1	pH	-	6.8	6.6	6.5 to 8.5	APHA 23 rd Ed. 2017, 4500-H ⁺ -B, 4-95
2	Biochemical Oxygen Demand (3 days 27°C)	mg/L	7.5	10	30 Max.	IS 3025 (Part 44): 1993, Reaffirmed 2009
3	Chemical Oxygen Demand	mg/L	24	36	100 Max.	APHA 23 rd Ed. 2017, 5220-B, 5-18
Remarks:						

END

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