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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. W	ATER			
1.	Ground Water,	pH at 25°C	4500-H+ B, APHA 22 <sup>nd</sup> Edition 2012	4-12
	surface water	Conductivity at 25°C	2510 B, APHA 22 <sup>nd</sup> Edition 2012	1-5000 (µS/cm)
		Turbidity	2130 B, APHA 22 <sup>nd</sup> Edition 2012	5 -500 NTU
		Colour	2120 B, APHA 22 <sup>nd</sup> Edition 2012	1- 500 Colour Units
		Alkalinity as CaCO <sub>3</sub>	2320 B, APHA 22 <sup>nd</sup> Edition 2012	2-2000 mg/l
		Hardness as CaCO <sub>3</sub>	2340 C, APHA 22 <sup>nd</sup> Edition 2012	2 -5000 mg/l
		Calcium as Ca	3500-Ca B, APHA 22 <sup>nd</sup> Edition 2012	5 - 2000 mg/l
		Magnesium as Mg	3500-Mg B, APHA 22 <sup>nd</sup> Edition 2012	5 - 1000 mg/l
		Sodium as Na	3500-Na B, APHA 22 <sup>nd</sup> Edition 2012	1-1500 mg/l
		Potassium as K	3500-K B, APHA 22 <sup>nd</sup> Edition 2012	1- 500 mg/l
		Phosphorous as P	4500-P D, APHA 22 <sup>nd</sup> Edition 2012	0.1 -100 mg/l
		Sulphide as S <sub>2</sub> -	4500 -S2- D, APHA 22 <sup>nd</sup> Edition 2012	0.1-100 mg/l
		Total Kjeldahl Nitrogen (TKN)	4500-N B, APHA 22 <sup>nd</sup> Edition 2012	5 -1000 mg/l
		Nitrate as NO <sub>3</sub>	4500 -NO <sub>3</sub> B, APHA 22 <sup>nd</sup> Edition 2012	0.1-500 mg/l
		Nitrite as NO <sub>2</sub>	4500-NO <sub>2</sub> B, APHA 22 <sup>nd</sup> Edition 2012	0.1 -100 mg/l

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Suspended Solids	2540 – B, APHA 22 <sup>nd</sup> Edition 2012	5 – 1000 mg/l
		Total Dissolved Solids (TDS)	2540 C, APHA 22 <sup>nd</sup> Edition 2012	10 - 20000  mg/l
		Fixed Solids ignited at 550°C	2540 C, APHA 22 <sup>nd</sup> Edition 2012	10 – 5000 mg/l
		Chlorides as Cl <sup>-</sup>	4500-Cl- B, APHA 22 <sup>nd</sup> Edition 2012	10 – 5000 mg/l
		Sulphates as SO <sub>4</sub> <sup>-2</sup>	4500-SO4, APHA 22 <sup>nd</sup> Edition 2012	4 - 5000 mg/l
		Fluorides as F	4500-F D, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 20 mg/l
		Oil & grease	5520 – B, APHA 22 <sup>nd</sup> Edition 2012	5 – 1000 mg/l
		Chemical Oxygen Demand (COD)	5220 B, APHA 22 <sup>nd</sup> Edition 2012	10-500 mg/l
		Biochemical Oxygen Demand (BOD) 3 days at 27 <sup>°</sup> C	IS 3025 (Part 44), 1993	1-300 mg/l
		Biochemical Oxygen Demand (BOD) 5 days @20 <sup>o</sup> C	5210B, APHA 22 <sup>nd</sup> Edition 2012	1-300 mg/l
		Ammonical nitrogen as	4500-NH <sub>3</sub> C, APHA 22 <sup>nd</sup> Edition 2012	5 – 500 mg/l
		NH <sub>3</sub> -N	4500-NH <sub>3</sub> F, APHA 22 <sup>nd</sup> Edition 2012	1-50 mg/l
		Phenolic compounds	5530 C, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 10 mg/l
		Total chromium as Cr	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.2 – 50 mg/l

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Hexavalent Chromium as Cr <sub>6</sub> +	3500-Cr B, APHA 22 <sup>nd</sup> Edition 2012	0.1 - 30 mg/l
		Boron	4500-B B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 100 mg/l
		Lead as Pb	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.2 – 50 mg/l
		Nickel as Ni	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 50 mg/l
		Copper as Cu	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 50 mg/l
		Cadmium as Cd	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 50 mg/l
		Mercury as Hg	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.01 – 50 mg/l
		Zinc as Zn	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 2000 mg/l
		Arsenic as As	3113 B, APHA 22 <sup>nd</sup> Edition 2012	0.02 - 50  mg/l
		Barium as Ba	3113 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 50 mg/l
		Selenium as Se	3113 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 - 50 mg/l
II. P	OLLUTION & ENV	IRONMENT		
1.	Waste Water,	pH at 25°C	4500-H+ B, APHA 22 <sup>nd</sup> Edition 2012	1 - 12
	Industrial Effluents	Conductivity at 25°C	2510 B, APHA 22 <sup>nd</sup> Edition 2012	5-50,000 (µS/cm)
		Turbidity	2130 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 1000 NTU
		Colour	2120 B, APHA 22 <sup>nd</sup> Edition 2012	Hue (400–700 nm)
		Alkalinity as CaCO <sub>3</sub>	2320 B, APHA 22 <sup>nd</sup> Edition 2012	2 – 5000 mg/l

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6.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Hardness as CaCO <sub>3</sub>	2340 C, APHA 22 <sup>nd</sup> Edition 2012	1 – 10000 mg/l
		Calcium as Ca	3500-Ca B, APHA 22 <sup>nd</sup> Edition 2012	1 - 5000 mg/l
		Magnesium as Mg	3500-Mg B, APHA 22 <sup>nd</sup> Edition 2012	1 - 2500 mg/l
		Sodium as Na	3500-Na B, APHA 22 <sup>nd</sup> Edition 2012	1-5000 (mg/l)
		Potassium as K	3500-K B, APHA 22 <sup>nd</sup> Edition 2012	1 - 1000 mg/l
		Phosphorous as P	4500-P D, APHA 22 <sup>nd</sup> Edition 2012	0.1 - 100 mg/l
		Sulphide as S <sub>2</sub> -	4500- S <sub>2</sub> - D, APHA 22 <sup>nd</sup> Edition 2012	0.1 - 100 mg/l
		Total Kjeldahl Nitrogen (TKN)	4500-N B, APHA 22 <sup>nd</sup> Edition 2012	1 - 1000 mg/l
		Nitrate as NO <sub>3</sub>	4500-NO <sub>3</sub> B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 1000 mg/l
		Nitrite as NO <sub>2</sub>	4500-NO <sub>2</sub> B, APHA 22 <sup>nd</sup> Edition 2012	0.1 - 1000 mg/l
		Total Suspended Solids	2540- B, APHA 22 <sup>nd</sup> Edition 2012	5-5000 mg/l
		Total Dissolved Solids (TDS)	2540 C, APHA 22 <sup>nd</sup> Edition 2012	10-80,000 mg/l
		Fixed Solids ignited at 550°C	2540 C, APHA 22nd Edition 2012	10-50,000 mg/l
		Chlorides as Cl <sup>-</sup>	4500-Cl- B, APHA 22nd Edition 2012	10-50,000 mg/l
		Sulphates as SO <sub>4</sub> <sup>-2</sup>	4500-SO <sub>4</sub> , APHA 22nd Edition 2012	4-5000 mg/l
		Fluorides as F	4500-F D, APHA 22nd Edition 2012	0.1 – 50 mg/l

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Oil & grease	5520 – B, APHA 22nd Edition 2012	5-1000 mg/l
		Chemical Oxygen Demand (COD)	5220 B, APHA 22nd Edition 2012	10-1,00,000 mg/l
		Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44), 1993	2-50,000 mg/l
		Biochemical Oxygen Demand (BOD) 5 days @20°C	5210B, APHA 22 <sup>nd</sup> Edition 2012	2-50,000 mg/l
		Ammonical nitrogen as NH <sub>3</sub> -N	4500-NH3 C, APHA 22 <sup>nd</sup> Edition 2012 4500-NH3 F, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 500 mg/l 1-50 mg/l
		Phenolic compounds	5530 C, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 10 mg/l
		Total chromium as Cr	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.2 – 1000 mg/l
		Hexavalent Chromium as Cr <sub>6</sub> +	3500-Cr B, APHA 22 <sup>nd</sup> Edition 2012	0.1 - 100 mg/l
		Boron	4500-B B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 100 mg/l
		Lead as Pb	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.2 - 1000 mg/l
		Nickel as Ni	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 1000 mg/l
		Copper as Cu	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.01 - 1000 mg/l
		Cadmium as Cd	3111 B, APHA 22 <sup>nd</sup> Edition 2012	0.1 – 1000 mg/l

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2 – 500 mg/l – 5000 mg/l 2 – 500 mg/l – 1000 mg/l
2 – 500 mg/l
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		Mercury as Hg	SW 846, 7470A/7471A	0.1 – 10 mg/l
		Barium as Ba	SW 846, 7080A	0.1 – 10 mg/l
		Arsenic as As	SW 846, 7061A/7062	0.1 – 10 mg/l
		Chromium as Cr	SW 846, 7190	0.2 – 20 mg/l
III. A	AIR, GASES, ATMO	SPHERE		
1.	Ambient Air	Respirable Particulate Matter $(PM_{10})$	IS:5182 (Part-23) 2006 / CPCB Manual, May 2011	5 to 1000 $\mu\text{g}/\ensuremath{\text{m}}^3$
		Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> )	CPCB Guidelines for measurement of ambient air pollutants, Volume-I / Instrument Manual (SOP No.01/APPCB)	5 to 500 $\mu g/\ m^3$
		Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (Part-2) 2001/704 A, Methods of Air Sampling and Analysis, 3 <sup>rd</sup> Edition / CPCB Manual, May 2011	4 to 1000 $\mu g/\ m^3$
		Oxides of Nitrogen (NO <sub>2</sub> )	IS:5182 (Part-6) 2006/ 818 of Methods of Air Sampling and Analysis, 3 <sup>rd</sup> Edition / CPCB Manual, May 2011	9 to 750 $\mu g/\ m^3$
		Lead as Pb (in RSPM)	IS:5182 (Part-22) 2004/ 303A, Methods of Air Sampling and Analysis, 3 <sup>rd</sup> Edition / CPCB Manual by AAS	0.07 to 7.5 $\mu\text{g}/\text{ m}^3$

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Ammonia as NH <sub>3</sub>	Method No. 401, Methods of Air Sampling and Analysis, 3rd Edition, Indophenol Method (SOP No.04/APPCB)	20 to 700 $\mu g/\ m^3$
2.	Stack Emissions / Source Emissions	Particulate Matter	IS: 11255 (Part-1) 1985 (Reaffirmed 2003) / CPCB Manual, May 2011	10- 5000 mg/ Nm <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	IS: 11255 (Part-2) 1985 (Reaffirmed 2003)/ CPCB Manual, May 2011	3.4-3000 mg/ Nm <sup>3</sup>
		Oxides of Nitrogen (NO <sub>2</sub> )	IS: 11255 (Part-7) 2005/ CPCB Manual, May 2011	2 - 400 mg/Nm <sup>3</sup>
		Carbon Di Oxide (CO <sub>2</sub> )	IS:13270 – 1992 Revision 2003, May 2011	0.2 – 25%

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