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SI.	Product / Material	Specific Test Performed	Test Method Specification	Range of Testing /
	of Test		against which tests are	Limits of Detection
			performed	

BIOLOGICAL TESTING

I.	ENVIRONMENT AND POLLUTION			
1.	Effluents/ Waste Water	E.coli	IS 1622:1981 (RA 2014)	Qualitative :Present / Absent/100ml
		Faecal coliform	IS 1622:1981 (RA 2014)	2 MNP/100ml to 1600 MNP/100ml
		Total Coliform	IS 1622:1981 (RA 2014)	2 MPN/100 ml to 1600 MPN/100 ml
II.	WATER			
1.	Drinking Water	E.Coli	IS 1622:1981 (RA 2014)	Qualitative :Present / Absent/100ml
		Faecal Coliform	IS 1622:1981 (RA 2014)	2 MPN/100 ml to 1600 MPN/100 ml
		standard plate count	IS 1622:1981 (RA 2014)	1 cfu/ml to 10000 cfu/ml
		Total Coliform	IS 1622:1981 (RA 2014)	2 MPN/100 ml. to 1600 MPN/100 ml.
2.	Ground Water /	Standard Plate Count	IS 1622:1981 (RA 2014)	1 cfu/ml to 10000 cfu/ml
	Surface Water	Faecal coliform	IS 1622:1981 (RA 2014)	2 MPN/100ml to 1600 MPN/100ml
		Total Coliform	IS 1622:1981 (RA 2014)	2 MPN/100 ml. to 1600 MPN/100 ml.
		E.coli	IS 1622:1981 (RA 2014)	Qualitative :Present / Absent/100ml

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l	SI.	Product / Material	Specific Test Performed	Test Method Specification	Range of Testing /
l		of Test		against which tests are	Limits of Detection
İ				performed	

CHEMICAL TESTING

I.	ATMOSPHERIC PO	OLLUTION		
1.	Ambient Air	Ammonia (NH3)	JPT/CH/SOP/AIR-07 (issue 01 date: 19.10.2015)	7 μg/m³ to 400 μg/m³
		Lead (Pb)	IS 5182 (Part 22): 2004 (RA 2014)	0.5 μg/m³ to 5 μg/m³
		Nickel (Ni)	JPT/CH/SOP/AIR-08 (issue 01.10.2015)	10 ng/m³ to 50 ng/m³
		Nitrogen Dioxide (NO2)	IS 5182 (Part 6): 2006 (RA 2017)	6 μg/m³ to 100 μg/m3
		Ozone (O3)	IS 5182 (Part 9): 1974 (RA 2014)	5 μg/m³ to 200 μg/m³
		Particulate Matters, PM 2.5	JPT/CH/SOP/AIR-06 (issue 01.10.2015)	20 μg/m³ to 200 μg/m³
		Respirable Suspended Particulate Matters, PM10	IS 5182 (Part 23): 2006 (RA 2017)	20 μg/m ³ to 1000 μg/m ³
		Sulphur Dioxide (SO2)	IS-5182 (Part 2): 2006 (RA 2017)	5 μg/m³ to 100 μg/m³
2.	Ambient Noise	Ambient Noise Level	IS 9876:1981 (RA 2013)	30 dB(A) to 130 dB(A)
3.	Machine Noise	DG Set Noise	IS 9876:1981 (RA 2013)	30 dB(A) to 130 dB(A)
4.	Stack Emission	Carbon Dioxide (CO2)	IS 13270:1992 (RA 2014)	0.2 % v to 20 % v
		Carbon Monoxide (CO)	IS 13270:1992 (RA 2014)	0.2 % v to 8 % v
		Carbon Monoxide (CO)	IS 13270:1992 (RA 2014)	0.2 % v to 8 % v
		Oxide of Nitrogen (NOX	IS 11255 (Part 7): 2005	5 mg/Nm ³ to
 		as NO2)	(RA 2017)	400 mg/Nm ³
		Oxygen (O2)	IS 13270:1992 (RA 2014)	1 % v to 22 % v
		Particulate Matter (PM)	IS 11255 (Part 1): 1985	10 mg/Nm ³ to
			(RA 2014)	1000 mg/Nm ³
		Sulphur Dioxide (SO2)	IS 11255 (Part 2): 1985 (RA 2014)	5 mg/Nm ³ to 500 mg/Nm ³
l			<u> </u>	

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
II.	WATER			
1.	Construction Water	Chloride	IS 3025 (Part 32): 1988 (RA 2014)	2 mg/l to 10000 mg/l
		Fixed (Inorganic) solids	IS 3025 (Part 18): 1984	5 mg/l to 5000 mg/l
		Neutralization Value with 0.02 N H2SO4	IS 3025 (Part 23): 1986	0.1 ml to 50 ml
		Neutralization Value with 0.02 N NaOH	IS 3025 (Part 22): 1986	0.1 ml to 20 ml
		рН	IS 3025 (Part 11): 1983	1 to 14
		Sulphate (SO3)	IS 3025 (Part 24): 1986	1 mg/ l to 1000 mg/ l
		Total Suspended Solids	IS 3025(Part 17): 1984	5 mg/l to 10000 mg/l
		Volatile Solids (organic solids)	IS 3025 (Part 18): 1984	5 mg/L to 500 mg/L
2.	Drinking Water	Alkalinity	IS 3025 (Part 23): 1986 (Reaffirmed 2014)	2 mg/l to 1000 mg/l
		Cadmium as Cd	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l
		Calcium as Ca	IS 3025 (Part 40): 1991 (RA 2014)	2 mg/l to 1000 mg/l
		Chloride as Cl	IS 3025 (Part 32): 1988 (RA 2014)	2 mg/l to 5000 mg/l
		Chlorine, Residual	IS 3025 (Part 26): 1986 (RA 2014)	0.1 mg/l to 10 mg/l
		Chlorine, Residual	IS 3025 (Part 26): 1986 (RA 2014)	10 mg/l to 100 mg/l
		Chromium (Hexavalent)	IS 3025 (Part 52): 2003 (RA 2014)	0.05 mg/l to 10 mg/l
		Chromium (Total)	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 50 mg/l
		Colour	IS-3025 PT-4 : 2017	5 Hazen units to 70 Hazen units
•••••		Copper as Cu	APHA 23rd Ed., 3111: 2017	0.1 mg/l to 10 mg/l

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Fluoride as F	APHA 23rd Ed, 4500F (D): 2017	0.1 mg/l to 5 mg/l
		Iron as Fe	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 100 mg/l
		Lead as Pb	APHA 23rd Ed., 3111: 2017	0.1 mg/l to 20 mg/l
		Magnesium as Mg	APHA 23rd Ed., 3500 Mg (B): 2017	2 mg/l to 1000 mg/l
		Manganese as Mn	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 50 mg/l
		Nickel as Ni	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l
		Nitrate as NO3	IS 3025 (Part 34): 1988 (RA 2014)	1 mg/l to 5 mg/l
<u> </u>		Nitrate as NO3	IS 3025 (Part 34): 1988 (RA 2014)	5 mg/l to 50 mg/l
		рН	IS 3025 (Part 11): 1983 (RA 2017)	2 to 12
		Sulphate as SO4	IS 3025 (Part 24): 1986 (RA 2014)	1 mg/ l to 1000 mg/ l
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2017)	5 mg/L to 10000 mg/L
		Total Hardness as CaCO3	IS 3025 (Part 21): 2009 (Reaffirmed 2014)	2 mg/l to 5000 mg/l
		Turbidity	IS 3025 (Part 10): 1984 (RA 2017)	1 NTU to 1000 NTU
		Zinc as Zn	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 50 mg/l
3.	Ground Water	Acidity as CaCO3	IS 3025 PT 22: 1986	5 mg/l to 500 mg/l
		Alkalinity (total & Phenophthalein)	IS 3025 PT 23: 2003	2 mg/L to 1000 mg/L
		Cadmium as Cd	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l
		Calcium as Ca	IS 3025 (Part 40): 1991 (RA 2014)	2 mg/l to 1000 mg/l

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chloride as Cl	IS 3025 (Part 32): 1988 (RA 2014)	2 mg/l to 5000 mg/l
		Chromium (Hexavalent)	IS 3025 PT 52: 2003	0.05 mg/l to 10 mg/l
		Chromium (Total)	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 50 mg/l
		Colour	IS 3025 (Part 4): 1983 (RA 2017)	5 Hazen units to 70 Hazen units
		Copper (as Cu)	APHA 23rd Ed., 3111 : 2017	0.1 mg/l to 10 mg/l
		Dissolved Oxygen	IS 3025 PT 38 : 1989	0.1 mg/l to 8 mg/l
•••••		Fluoride as F	APHA 23rd Ed, 4500F (D): 2017	0.2 mg/l to 5 mg/l
		Iron as Fe	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 100 mg/l
		Lead as Pb	APHA 23rd Ed., 3111 : 2017	0.1 mg/l to 20 mg/l
		Magnesium as Mg	APHA 23rd Ed., 3500 Mg (B): 2017	2 mg/l to 1000 mg/l
		Manganese (as Mn)	APHA 23rd Ed., 3111 : 2017	0.05 mg/l to 50 mg/l
•••••		Nickel as Ni	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l
•••••		Nitrate as NO3	IS 3025 PT 34 section 3.1b: 1988	1 mg/l to 5 mg/l
		Nitrate as NO3	IS 3025 PT 34 section 3.1c: 1988	5 mg/l to 50 mg/l
		рН	IS 3025 (Part 11): 1983 (RA 2017)	2 to 12
		Potassium as K	IS 3025 PT 45: 1993	5 mg/l to 1000 mg/l
		Sodium as Na	IS 3025 (Part 45): 1993	10 mg/l to 1000 mg/l
		Sulphate as SO4	IS 3025 (Part 24): 1986 (RA 2014)	1 mg/ l to 1000 mg/ l
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2017)	5 mg/L to 10000 mg/L

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Hardness as CaCO3	IS 3025 (Part 21): 2009 (RA 2014)	2 mg/l to 5000 mg/l
		Turbidity	IS 3025 (Part 10) : 1984	1 NTU to 1000 NTU
		Zinc as Zn	APHA 23rd Ed., 3111 : 2017	0.05 mg/l to 50 mg/l
4.	Surface Water	Acidity as CaCO3	IS 3025 (Part 22): 1986 (RA 2014)	5 mg/l to 500 mg/l
		Alkalinity	IS 3025 (Part 23): 1986 (RA 2014)	2 mg/L to 1000 mg/L
		Biological Oxygen Demand At 270C For 3 Days	IS: 3025 (Part 44): 2014	2 mg/l to 1000 mg/l
		Cadmium as Cd	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l
		Calcium as Ca	IS 3025 (Part 40): 1991	2 mg/l to 1000 mg/l
		Chemical Oxygen Demand	IS 3025 (Part 58): 2006 (RA2017)	5 mg/l to 50000 mg/l
		Chloride as Cl	IS 3025 (Part 32): 1988 (RA 2014)	2 mg/l to 5000 mg/l
		Chlorine, Residual	IS 3025 (Part 26): 1986 (Reaffirmed 2014)	0.1 to 10
		Chromium (Hexavalent)	IS 3025 (Part 52): 2003	0.05 mg/l to 10 mg/l
		Chromium (Total)	APHA 23rd Ed., 3111 : 2017	0.05 mg/l to 50 mg/l
		Colour	IS 3025 (Part 4): 1983 (RA 2017)	5 Hazen to 70 Hazen
		Copper (as Cu)	APHA 23rd Ed., 3111 : 2017	0.1 mg/l to 10 mg/l
		Dissolved Oxygen	IS 3025 (Part 38): 1989	0.1 mg/l to 8 mg/l
		Fluoride as F	APHA 23rd Ed, 4500F (D): 2017	0.3 mg/l to 5 mg/l
		Iron as Fe	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 100 mg/l

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Lead as Pb	APHA 23rd Ed., 3111 : 2017	0.1 mg/l to 20 mg/l
		Magnesium as Mg	APHA 23rd Ed., 3500 Mg (B): 2017	2 mg/l to 1000 mg/l
		Manganese (as Mn)	APHA 23rd Ed., 3111 : 2017	0.05 mg/l to 50 mg/l
		Nickel as Ni	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l
		Nitrate as NO3	IS 3025 (Part 34): 1988 (RA 2014)	5 mg/l to 50 mg/l
		Nitrate as NO3	IS 3025(Part 34) section3.1b: 1988	1 mg/l to 5 mg/l
		pH	IS 3025 (Part 11): 1983 (RA 2017)	2 to 12
		Potassium as K	IS 3025 (Part 45): 1993	5 mg/l to 1000 mg/l
		Sodium as Na	IS 3025 (Part 45): 1993 (RA 2014)	10 mg/l to 1000 mg/l
		Sulphate as SO4	IS 3025 (Part 24): 1986	1 mg/ l to 1000 mg/ l
		Total Dissolved Solids	IS 3025 (Part 16): 1984	5 mg/L to 10000 mg/L
		Total Hardness as CaCO3	IS 3025 (Part 21): 2009 (RA 2014)	2 mg/l to 5000 mg/l
		Turbidity	IS 3025 (Part 10): 1984 (Reaffirmed 2017)	1 NTU to 1000 NTU
		Zinc as Zn	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 50 mg/l
5.	Swimming Pool	Alkalinity	IS 3025 (Part 23): 1986	2 mg/L to 1000 mg/L
	Water	aluminium	APHA 23rd Ed., 3500: 2017	0.02 mg/ l to 2 mg/ l
		Chloride	IS 3025 (Part 32): 1988	2 mg/l to 5000 mg/l
		color	IS 3025 (Part 4) : 1983	5 Hazen to 70 Hazen
		Iron as Fe	APHA 23rd Ed., 3111 : 2017	0.05 mg/l to 10 mg/l
		Oxygen absorbed	IS 3025 (Part 63): 2007	0.2 mg/ l to 5 mg/ l
		pH	IS 3025 (Part 11): 1983	2 to 12

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Residual Free Chlorine	IS-3025 (Part 26/Section 4): 1986	0.1 mg/l to 10 mg/l
		Total Dissolved Solids	IS 3025 (Part 16): 1984	5 mg/l to 10000 mg/l
		Turbidity	IS 3025 (Part 10) : 1984	1 NTU to 1000 NTU
III.	POLLUTION & ENV	IRONMENT		
1.	Soil/Sediments	Conductivity	IS:14767-200 : 2010	10 µmhos/cm to 1000 µmhos/cm
		Exchangeable calcium	JPT/CH/SOP/SIL-05: 2015	10 mg/kg to 10000 mg/kg
		Exchangeable magnesium	JPT/CH/SOP/SIL-06: 2015	10 mg/kg to 5000 mg/kg
		Exchangeable potassium	JPT/CH/SOP/SIL-07: 2015	10 mg/kg to 1000 mg/kg
		Exchangeable Sodium	JPT/CH/SOP/SIL-08: 2015	10 mg/kg to 1000 mg/kg
		Moisture	IS 2720 (Part 2): 1973	0.1 % to 50 %
		Organic matter	IS 2720 (Part 22): 1972	0.1 mg/kg to 500 mg/kg
		рН	IS 2720 (Part 26): 1987	1 to 13
		Phosphorous (Olsen)	JPT/CH/SOP/SIL-9: 2015	0.1 mg/kg to 500 mg/kg
		copper	JPT/CH/SOP/SIL-20: 2017	0.1 % to 50 %
		DTPA extractable copper	JPT/CH/SOP/SII-19: 2017	0.05 mg/kg to 10 mg/kg
		DTPA extractable Iron	JPT/CH/SOP/SIL-19: 2017	0.5 mg/kg to 50 mg/kg
		DTPA extractable	JPT/CH/SOP/SII-19: 2017	0.1 mg/kg to 50 mg/kg
		manganese		
		DTPA extractable zinc	JPT/CH/SOP/SII-19: 2017	0.1 mg/kg to 50 mg/kg
		iron	JPT/CH/SOP/SII/20: 2017	1 mg/kg to 5000 mg/kg
		manganese	JPT/CH/SOP/SIL-20: 2017	0.1 % to 50 %
		zinc	JPT/CH/SOP/SIL-20: 2017	0.1 % to 50 %
2.	Waste Water (Effluent/Sewage)	total kjeldahl nitrogen (TKN)	IS 3025 (Part 34): 2014	0.1 mg/l to 100 mg/l
		ammonical nitrogen	IS 3025 (Part 34): 2014	0.1 mg/l to 100 mg/l
		Chromium (Hexavalent)	IS 3025 (Part 52): 2014	0.05 mg/l to 10 mg/l
]		fluoride	APHA 23rd Ed, 4500F (D): 2017	0.1 mg/l to 5 mg/l

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		Nitrate as NO3-N	IS 3025 (Part 34: 2014	0.1 mg/l to 50 mg/l
		Biological Oxygen Demand At 27 °C For 3 Days	IS 3025 (Part 44): 1993	2 mg/l to 10000 mg/l
		Cadmium (Cd)	APHA 23rd Ed., 3111 : 2017	0.02 mg/l to 10 mg/l
		Lead as Pb	APHA 23rd Ed., 3111 : 2017	0.1 mg/l to 10 mg/l
		Manganese (as Mn)	APHA 23rd Ed., 3111 : 2017	0.05 mg/l to 10 mg/l
		Nickel (as Ni)	APHA 23rd Ed., 3111 : 2017	0.05 mg/l to 10 mg/l
		Nitrite	IS 3025 (Part 34): 1988	0.01 mg/l to 50 mg/l
		Oil & Grease	IS 3025 (Part 39): 1991	5 mg/l to 100 mg/l
		рH	IS 3025 (Part 11): 1983	2 to 12
		Phosphate	IS 3025 (Part 31): 1988	0.4 mg/l to 20 mg/l
		Specific Conductivity	IS 3025 (Part 14): 2013	5 µmhos/cm to 50000 µmhos/cm
		Total Suspended Solids	IS 3025 (Part 17): 1984	5 mg/l to 1000 mg/l
		Zinc (as Zn)	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l
		Total Dissolved Solids	IS 3025 (Part 16): 1984	5 mg/l to 10000 mg/l
		Chemical Oxygen Demand	IS 3025 (Part 58): 2006	5 mg/l to 50000 mg/l
		Copper (as Cu)	APHA 23rd Ed., 3111 : 2017	0.1 mg/l to 10 mg/l
		Dissolved Oxygen	IS 3025 (Part 38): 1989	0.1 mg/l to 10 mg/l
		Iron (as Fe)	APHA 23rd Ed., 3111: 2017	0.05 mg/l to 10 mg/l