

Laboratory **Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh**
 Accreditation Standard **ISO/IEC 17025: 2005**
 Certificate Number **TC-6518 (in lieu of T-3600)** Page 1 of 16
 Validity **24.09.2017 to 23.09.2019** Last Amended on **15.11.2017**

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

CHEMICAL TESTING

<u>At Laboratory</u>				
I.	WATER			
1.	Drinking Water/ Ground Water/ Surface Water/Packaged Drinking Water	pH	IS 3025 (Part 11)	4 to 10
		Specific Conductance	IS 3025 (Part 14)	1 µmhos to 5000 µmhos/cm
		Color	IS 3025 (Part 4)	5 Hazen to 30 Hazen
		Odor	IS 3025 (Part 5)/ APHA 2150B	Qualitative
		Taste	IS 3025 (Part 07 & Part 08): / APHA 2160B	Qualitative
		Turbidity	IS 3025 (Part 10)	1 NTU to 1000 NTU
		Total Dissolved Solid	IS 3025 (Part 16)	1 mg/l to 10000 mg/l
		Total Suspended Solid	IS 3025 (Part 17)	1 mg/l to 1000 mg/l
		Total Hardness	IS 3025 (Part 21)	5 mg/l to 10000 mg/l
		Acidity	IS 3025 (Part 22)	5 mg/l to 10000 mg/l
		T. Alkalinity/ P. Alkalinity	IS 3025 (Part 23)	5 mg/l to 10000 mg/l
		Sulphates as SO ₄ /SO ₃	IS 3025 (Part 24)	5 mg/l to 5000 mg/l
		Chloride as Cl	IS 3025 (Part 32)	5 mg/l to 10000 mg/l
		Nitrate as NO ₃ /N	IS 3025 (Part 34)	1 mg/l to 500 mg/l
		Phosphorus as P/PO ₄	IS 3025 (Part 31)	0.01 mg/l to 100 mg/l
		Calcium as Ca & CaCO ₃	IS 3025 (Part 40)	1 mg/l to 10000 mg/l
		Magnesium as Mg & CaCO ₃	IS 3025 (Part 46)/ APHA 3500mg:B 2012	1 mg/l to 10000 mg/l
		Carbonates and Bicarbonates	IS 3025 (Part 51)	1 mg/l to 10000 mg/l
		Iron as Fe	IS 3025 (Part 53)	0.05 mg/l to 500 mg/l
		Fluoride as F	IS 3025 (Part 60) /APHA 4500 F: 2012	0.01 mg/l to 30 mg/l

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6518 (in lieu of T-3600)

Page 2 of 16

Validity 24.09.2017 to 23.09.2019

Last Amended on 15.11.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Ammonia as NH ₃ /N	IS 3025 (Part 34) APHA 4500B,C	1 mg/l to 1000 mg/l
		Anionic Detergents	Annexure K of IS 13428/ APHA 5540C	0.1 mg/l to 100 mg/l
		Barium as Ba	IS 3025 (Part 02) APHA 3120B	0.1 mg/l to 10 mg/l
		Boron as B	IS 3025 (Part 02) IS 3025 (Part 57) APHA 3120B	0.1 mg/l to 10 mg/l
		Chloramines as Cl ₂	IS 3025 (Part 26) APHA 4500-Cl G	0.1 mg/l to 100 mg/l
		Phenolic Compound	IS 3025 (Part 43) APHA 5530 C	0.01 mg/l to 10 mg/l
		Silica as SiO ₂	IS 3025 (Part 35) APHA 4500 SiO ₂ C	0.1 mg/l to 1000 mg/l
		Oxygen Absorbed in 4 hrs.	IS 3025 (Part 63)	0.01 mg/l to 10 mg/l
		Residual Chlorine	IS 3025 (Part 26)	0.05 mg/l to 2 mg/l
		T. Chromium as Cr	IS 3025 (Part 52) APHA 3120 B IS 3025 (Part 02)	0.03 mg/l to 100 mg/l
		Zinc as Zn	IS 3025 (Part 49) APHA 3120B: 2012 IS 3025 (Part 02)	0.05 mg/l to 100 mg/l
		Copper as Cu	IS 3025 (Part 42) APHA 3120 B IS 3025 (Part 02)	0.02 mg/l to 100 mg/l
		Cadmium as Cd	IS 3025 (Part 41) IS 3025 (Part 02) APHA 3120 B	0.001 mg/l to 100 mg/l
		Lead as Pb	IS 3025 (Part 47) IS 3025 (Part 02) APHA 3120 B	0.005 mg/l to 100 mg/l
		Mercury as Hg	IS 3025 (Part 48) IS 3025 (Part 02) APHA 3120 B	0.001 mg/l to 100 mg/l

Vinay Kumar Tyagi
Convenor

N. Venkateswaran
Program Director

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6518 (in lieu of T-3600)

Page 3 of 16

Validity 24.09.2017 to 23.09.2019

Last Amended on 15.11.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Nickel as Ni	IS 3025 (Part 54) IS 3025 (Part 02) APHA 3120 B	0.01 mg/l to 100 mg/l
		Aluminum as Al	IS 3025 (Part 55) IS 3025 (Part 02) APHA 3120 B	0.01 mg/L to 100mg/L
		Selenium as Se	IS 3025 (Part 56) IS 3025 (Part 02) APHA 3120 B	0.01 mg/l to 100mg/l
		Manganese as Mn	IS 3025 (Part 59) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100mg/l
		Silver as Ag	IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100mg/l
		Sulphide as H ₂ S	IS 3025 (Part 29)	0.02 mg/l to 100mg/l
		Cyanide as CN	IS 3025 (Part 27) APHA 4500E	0.02 mg/l to 50mg/l
		Molybdenum as Mo	IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100mg/l
		Total Arsenic as As	IS 3025 (Part 02) APHA 3120 B	0.01 mg/l to 100mg/l
		Sodium	IS 3025 (Part 45) APHA 3500Na	2 mg/l to 1000mg/l
		Potassium	IS 3025 (Part 45) APHA 3500K	2 mg/l to 1000mg/l
		Biochemical Oxygen Demand (B.O.D.)	IS 3025 (Part 44) APHA 5210B	2 mg/l to 5000mg/l
		Total Kjeldahl Nitrogen (TKN)	IS 3025 (Part 34) APHA 4500-N _{org} B	0.2 mg/l to 500mg/l
		Chemical Oxygen Demand (C.O.D.)	IS 3025 (Part 58) APHA 5220C:2012	1 mg/l to 5000mg/l
		Oil and Grease	IS 3025 (Part 39)	2 mg/l to 500mg/l
		Chromium ⁺⁶	IS 3025 (Part 52) IS 3025 (Part 02)	0.03 mg/l to 50mg/L
		Total Solid	IS 3025 (Part 15)	1 mg/L to 10000mg/l

Vinay Kumar Tyagi
Convenor

N. Venkateswaran
Program Director

Laboratory **Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh**
 Accreditation Standard **ISO/IEC 17025: 2005**
 Certificate Number **TC-6518 (in lieu of T-3600)** Page 4 of 16
 Validity **24.09.2017 to 23.09.2019** Last Amended on **15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Irrigation Water	Total Dissolved Solid	IS 3025 (Part 16)	1 mg/L to 10000 mg/l
		Specific Conductance	IS 3025 (Part 14)	(1 µmhos to 5000 µmhos)/cm
		Sodium	IS 3025 (Part 45) /APHA 3500Na	2 mg/l to 1000 mg/l
		Calcium as Ca & CaCO ₃	IS 3025 (Part 40)	1 mg/l to 10000 mg/l
		Magnesium as Mg & CaCO ₃	IS 3025 (Part 46)/ APHA 3500 mg: B	1 mg/l to 10000 mg/l
		Boron as B	IS 3025 (Part 02) IS 3025 (Part 57) APHA 3120 B	0.2 mg/l to 100 mg/l
		Total Alkalinity	IS 3025 (Part 23)	5 mg/l to 10000 mg/l
		P. Alkalinity	IS 3025 (Part 23)	5 mg/l to 10000 mg/l
		Carbonates	IS 3025 (Part 51)	1 mg/l to 10000 mg/l
		Bicarbonates	IS 3025 (Part 51)	1 mg/l to 10000 mg/l
2.	De-mineralized (DM) Water	Specific Conductance	IS 3025 (Part 14)	1 µmhos to 5000 µmhos/cm
		pH	IS 3025 (Part 11)	4 to 10
		Total Solids	IS 3025 (Part 15)	1 mg/l to 10000 mg/l
		Silica as SiO ₂	IS 3025 (Part 35) APHA 4500 SiO ₂ C	0.1 mg/l to 1000 mg/l
3.	Industrial Water	pH	IS 3025 (Part 11)	4 to 10
		Total Dissolved Solid	IS 3025 (Part 16)	1 mg/l to 10000 mg/l
		Iron as Fe	IS 3025 (Part 53)	0.1 mg/l to 500 mg/l
		Chloride as Cl	IS 3025 (Part 32)	5 mg/l to 10000 mg/l
		Fluoride as F	IS 3025 (Part 60) APHA 4500 F	0.01 mg/l to 30 mg/l
		Calcium as Ca & CaCO ₃	IS 3025 (Part 40)	1 mg/l to 10000 mg/l
		Magnesium as Mg & CaCO ₃	IS 3025 (Part 46) /APHA 3500 mg:B	1 mg/L to 10000 mg/L
		Sulphates as SO ₄ /SO ₃	IS 3025 (Part 24)	5 mg/l to 5000 mg/l
		Nitrate as NO ₃ /N	IS 3025 (Part 34)	1 mg/l to 500 mg/l
		Copper as Cu	IS 3025 (Part 42) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100 mg/l

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh
Accreditation Standard ISO/IEC 17025: 2005
Certificate Number TC-6518 (in lieu of T-3600) **Page 5 of 16**
Validity 24.09.2017 to 23.09.2019 **Last Amended on 15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		T. Chromium as Cr	IS 3025 (Part 52) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100 mg/l
		Zinc as Zn	IS 3025 (Part 49) IS 3025 (Part 02) APHA 3120 B	0.1 mg/l to 100 mg/l
		Lead as Pb	IS 3025 (Part 47) /3025 (Part 02) APHA 3120 B	0.01 mg/l to 100 mg/l
		Cadmium as Cd	IS 3025 (Part 41) IS 3025 (Part 02) APHA 3120 B	0.003 mg/l to 100 mg/l
		Silica as SiO ₂	IS 3025 (Part 35) APHA 4500 SiO ₂ C	0.1 mg/l to 1000 mg/l
		Phosphorous as P/PO ₄	IS 3025 (Part 31)	0.01 mg/L to 100 mg/L
		T. Alkalinity / P. Alkalinity	IS 3025 (Part 23)	5 mg/l to 10000 mg/l
4.	Swimming Pool Water	pH	IS 3025 (Part 11) APHA 4500H ⁺ B	4 to 10
		Color/Appearance	IS 3025 (Part 04) APHA 2120B, 2110	5 Hazen to 1000 Hazen
		Odor	IS 3025 (Part 05) APHA 2150B	Qualitative
		Taste	IS 3025 (Part 07 & Part 08) APHA 2160B	Qualitative
		Turbidity	IS 3025 (Part 10) /APHA 2130B	1 NTU to 1000 NTU
		T. Alkalinity	IS 3025 (Part 23) APHA 2320B	1 mg/l to 10000 mg/l
		Residual Chlorine	IS 3025 (Part 26) APHA 4500 Cl G	0.05 mg/l to 2 mg/l
		Aluminum as Al	IS 3025 (Part 55) IS 3025 (Part 02) APHA 3120 B	0.01 mg/l to 100 mg/l
		Iron	IS 3025 (Part 53) IS 3025 (Part 02)	0.05 mg/l to 500 g/l

Laboratory **Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh**
 Accreditation Standard **ISO/IEC 17025: 2005**
 Certificate Number **TC-6518 (in lieu of T-3600)** Page 6 of 16
 Validity **24.09.2017 to 23.09.2019** Last Amended on **15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Lead	APHA 3120 B IS 3025 (Part 47) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100 mg/l
		Chloride	IS 3025 (Part 32) APHA 4500Cl-B	1 mg/l to 10000 mg/l
		Total Dissolved Solids	IS 3025 (Part 16) APHA 2540 C	1 mg/l to 10000 mg/l
		Oxygen Absorbed in 4 hrs.	IS 3025 (Part 63)	0.01 mg/l to 10 mg/l
5.	Construction Water	Total Suspended Solids	IS 3025 (Part 17) APHA 2540 D	1 mg/l to 1000 mg/l
		pH	IS 3025 (Part 11) APHA 4500H ⁺ B	2 to 12
		Chloride	IS 3025 (Part 32) APHA 4500Cl-B	1 mg/l to 10000 mg/l
		Sulphate as SO ₄ /SO ₃	IS 3025 (Part 24) APHA 4500 SO ₄ ⁻² E	1 mg/l to 5000 mg/l
		Neutralization Value H ₂ SO ₄ in 100 ml/ T. Alkalinity	IS 3025 (Part 23) APHA 2320B	1 ml to 10000 ml
		Neutralization Value NaOH in 100 ml/ T. Acidity	IS 3025 (Part 22) APHA 2310B	1 ml to 10000 ml
		Organic Solids	IS 3025 (Part 18) APHA 2540 G	1 mg/l to 10000 mg/l
		Inorganic Solids	IS 3025 (Part 18) APHA 2540 G	1 mg/l to 10000 mg/l
II.	POLLUTION AND ENVIRONMENT			
1.	Liquid Effluent/ Waste Water	Total Suspended Solid	IS 3025 (Part 17)	1 mg/L to 5000 mg/L
		Biochemical Oxygen Demand (B.O.D)	IS 3025 (Part 44) APHA 5210B	1 mg/l to 50000 mg/l
		Total Kjeldahl Nitrogen (TKN)	IS 3025 (Part 34) APHA 4500- N _{org} B	1 mg/l to 500 mg/l
		Chemical Oxygen Demand (C.O.D)	IS 3025 (Part 58) APHA 5220C	1 mg/l to 50000 mg/l

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh
Accreditation Standard ISO/IEC 17025: 2005
Certificate Number TC-6518 (in lieu of T-3600) **Page 7 of 16**
Validity 24.09.2017 to 23.09.2019 **Last Amended on 15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Oil and Grease	IS 3025 (Part 39)	2 mg/l to 1000 mg/l
		Chromium ⁺⁶	IS 3025 (Part 52) IS 3025 (Part 02)	0.01 mg/l to 50 mg/l
		Total Solid	IS 3025 (Part15)	1 mg/l to 30000 mg/l
		Lead as Pb	IS 3025 (Part 47) IS 3025 (Part 02) APHA 3120	0.01 mg/l to 100 mg/l
		pH	IS 3025 (Part 11)	1 to 14
		Specific Conductance	IS 3025 (Part 14)	(0.5 µmhos to 5000 µmhos)/cm
		Odor	IS 3025 (Part 05) APHA 2150B	Qualitative
		Particle Size of Suspended Solid (>850µ)	ELPL/III/SOP/57 Issue No. & Issue Date: 02 & 01/07/2016	1 mg/l to 500 mg/l
		Temperature	IS 3025 (Part 09) APHA 2550B	10.0 °C to 70.0 °C
		Color	IS 3025 (Part 4)	5 Hazen to 30 Hazen
		Turbidity	IS 3025 (Part 10)	1 NTU to 200 NTU
		Total Dissolved Solid	IS 3025 (Part 16)	1 mg/l to 50000 mg/l
		Total Suspended Solid	IS 3025 (Part 17)	1 mg/l to 50000 mg/l
		Total Hardness	IS 3025 (Part 21)	1 mg/l to 10000 mg/l
		Acidity	IS 3025 (Part 22)	1 mg/l to 10000 mg/l
		T. Alkalinity/ P. Alkalinity	IS 3025 (Part 23)	1 mg/l to 10000 mg/l
		Sulphates as SO ₄ / SO ₃	IS 3025 (Part 24)	1 mg/l to 1000 mg/l
		Chloride as Cl	IS 3025 (Part 32)	1 mg/l to 5000 mg/l
		Nitrate as NO ₃ /N	IS 3025 (Part 34)	1 mg/l to 500 mg/l
		Phosphorus as P/PO ₄	IS 3025 (Part 31)	0. 01 mg/l to 100 mg/l
		Calcium as Ca & CaCO ₃	IS 3025 (Part 40)	1 mg/l to 10000 mg/l
		Magnesium as Mg & CaCO ₃	IS 3025 (Part 46) APHA 3500 mg:B	1 mg/l to 10000 mg/l
		Iron as Fe	IS 3025 (Part 53) IS 3025 (Part 02) APHA 3120B	0.05 mg/l to 200 mg/l
		Fluoride as F	IS 3025 (Part 60)	0.01 mg/l to 30 mg/l

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6518 (in lieu of T-3600)

Page 8 of 16

Validity 24.09.2017 to 23.09.2019

Last Amended on 15.11.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chromium as Cr	APHA 4500 F IS 3025 (Part 52) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100 mg/l
		Zinc as Zn	IS 3025 (Part 49) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100 mg/l
		Copper as Cu	IS 3025 (Part 42) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100 mg/l
		Cadmium as Cd	IS 3025 (Part 41) IS 3025 (Part 02) APHA 3120 B	0.003 mg/l to 100 mg/l
		Lead as Pb	IS 3025 (Part 47) IS 3025 (Part 02) APHA 3120 B	0.01 mg/l to 100 mg/l
		Residual Chlorine	IS 3025 (Part 26)	0.05 mg/l to 2.0 mg/l
		Mercury as Hg	IS 3025 (Part 48) IS 3025 (Part 02) APHA 3120 B	0.001 mg/l to 100 mg/l
		Nickel as Ni	IS 3025 (Part 54) IS 3025 (Part 02) APHA 3120 B	0.02 mg/l to 100 mg/l
		Aluminum as Al	IS 3025 (Part 55) IS 3025 (Part 02) APHA 3120 B	0.01 mg/l to 100 mg/l
		Selenium as Se	IS 3025 (Part 56) IS 3025 (Part 02) APHA 3120 B	0.01 mg/l to 100 mg/l
		Manganese as Mn	IS 3025 (Part 59) IS 3025 (Part 02) APHA 3120 B	0.05 mg/l to 100 mg/l
		Ammonical Nitrogen	IS 3025 (Part 34) APHA 4500B,C	1 mg/l to 1000 mg/l
		Free Ammonia	ELPL/III/SOP/54	0.1 mg/l to 50 mg/l

Vinay Kumar Tyagi
Convenor

N. Venkateswaran
Program Director

Laboratory **Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6518 (in lieu of T-3600)**

Page 9 of 16

Validity **24.09.2017 to 23.09.2019**

Last Amended on **15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Issue No. & Issue Date: 02 & 1/07/2016 IS 3025 (Part 34)	
		Arsenic	IS 3025 (Part 02) APHA 3120B	0.01 mg/l to 100 mg/l
		Cyanide	IS 3025 (Part 27) APHA 4500E	0.02 mg/l to 50 mg/l
		Sulphide as H ₂ S	IS 3025 (Part 29)	0.02 mg/l to 100 mg/l
		Phenolic Compound	IS 3025 (Part 43) APHA 5530 C	0.01 mg/l to 100 mg/l
		Vanadium	IS 3025 (Part 02) APHA 3120B	0.1 mg/l to 100 mg/l
		Sodium	IS 3025 (Part 45) APHA 3500 Na	1 mg/l to 1000 mg/l
		Potassium	IS 3025 (Part 45) APHA 3500 K	1 mg/l to 1000 mg/l
		Anionic Detergents	Annexure K of IS 13428 APHA 5540 C	0.1 mg/l to 100 mg/l
		Sodium Absorbance Ratio	ELPL/III/SOP/52 Issue No. & Issue Date: 02 & 01/07/2016 USDA method	1 to 1000
		Dissolved Oxygen as DO	APHA 4500-O C IS 3025 (Part 38)	1 mg/l to 12 mg/l
		Boron as B	IS 3025 (Part 57) IS 3025 (Part 02) APHA 3120B	0.1 mg/l to 100 mg/l
2.	Soil/ Solid Waste/ Sludge And Sediment	pH	IS 2720 (Part 26) USDA	2 to 12
		Conductivity	IS 14767 USDA	0.5 µmhos/cm to 5000 µmhos/cm
		Moisture/ Water Content	IS 2720 (Part 02) USDA	0.5 % to 100 %
		Color	ELPL/III/SOP/54	Qualitative

Vinay Kumar Tyagi
Convenor

N. Venkateswaran
Program Director

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6518 (in lieu of T-3600)

Page 10 of 16

Validity 24.09.2017 to 23.09.2019

Last Amended on 15.11.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Issue No. & Issue Date: 02 & 01/07/2016 USDA	
		Texture	ELPL/III/SOP/51 Issue No. & Issue Date: 02 & 1/07/2016 USDA	Qualitative
		Sodium Absorbance Ratio	ELPL/III/SOP/52 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 to 1000
		Cation Exchange Capacity	IS 2720 (Part 24) ELPL/III/SOP/50 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 meq / 100g m to 50 meq / 100 gm
		Porosity	ELPL/III/SOP/63 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 % to 50 %
		Water Holding Capacity	ELPL/III/SOP/41 Issue No. & Issue Date: 02 & 01/07/2016 USDA	0.1 % to 90 %
		Bulk Density	ELPL/III/SOP/40 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 gm/cc to 5 gm/cc
		Chloride as Cl	ELPL/III/SOP/46 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 mg/kg to 50000 mg/kg
		Calcium as Ca	ELPL/III/SOP/42 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 mg/kg to 50000 mg/kg

Vinay Kumar Tyagi
Convenor

N. Venkateswaran
Program Director

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6518 (in lieu of T-3600)

Page 11 of 16

Validity 24.09.2017 to 23.09.2019

Last Amended on 15.11.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Magnesium as Mg	ELPL/III/SOP/43 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 mg/kg to 50000 mg/kg
		Sodium as Na	ELPL/III/SOP/44 Issue No. & Issue Date: 02 & 01/07/2016 USDA	5 mg/kg to 50000 mg/kg
		Potassium as K	ELPL/III/SOP/45 Issue No. & Issue Date: 02 & 01/07/2016 USDA	5 mg/kg to 50000 mg/kg
		Organic Matter	IS 2720 (Part 22):1972 USDA	0.017 % to 100 %
		Organic Carbon	IS 2720 (Part 22):1972 USDA	0.01 % to 58 %
		Available Nitrogen	ELPL/III/SOP/49 Issue No. & Issue Date: 02 & 01/07/2016 USDA	2 mg/kg to 100000 mg/kg
		Total Nitrogen	ELPL/III/SOP/49 Issue No. & Issue Date: 02 & 01/07/2016 USDA	2 mg/kg to 100000 mg/kg
		Available Phosphorous	ELPL/III/SOP/47 Issue No. & Issue Date: 02 & 01/07/2016 USDA	1 mg/kg to 100000 mg/kg
		Sulphate	EPA SW 846 Method 9038:1986	10 mg/kg to 10000 mg/kg
		Ignitability	EPA SW 846 Method 1010:1986	40 °C to 350 °C
		Loss on Ignition	ELPL/III/SOP/55 Issue No. & Issue Date: 02 & 01/07/2016	1 % to 100 %

Vinay Kumar Tyagi
Convenor

N. Venkateswaran
Program Director

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh
Accreditation Standard ISO/IEC 17025: 2005
Certificate Number TC-6518 (in lieu of T-3600) **Page 12 of 16**
Validity 24.09.2017 to 23.09.2019 **Last Amended on 15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Gross Calorific Value/ Net Calorific Value	IS 1350 (Part 02): 1970 ELPL/III/SOP/58 Issue No. & Issue Date: 02 & 01/07/2016	100 cal/gm to 13000 cal/gm
		Oil & Grease	EPA SW 846 Method 3540C	10 mg/kg to 120000 mg/kg
		Silica as SiO ₂	IS 3025 (Part 35)	5 mg/kg to 100,000 mg/kg
		Zinc as Zn	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Manganese as Mn	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Copper as Cu	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Iron as Fe	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Aluminum as Al	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Arsenic as As	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Barium as Ba	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Boron as B	USEPA 6010C, USDA	2 mg/kg to 50,000mg/kg
		Cadmium as Cd	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Chromium as Cr	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Lead as Pb	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Mercury as Hg	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Molybdenum as Mo	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Nickel as Ni	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Selenium as Se	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Silver as Ag	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		Vanadium as V	USEPA 6010C, USDA	2 mg/kg to 50,000 mg/kg
		pH(10% solution)	SW-846 -9045C	1 to 14
		Chloride	SW-846	10 mg/kg to 10000 mg/kg
		Sulphate	SW-846	10 mg/kg to 5000 mg/kg
		Moisture Content	USDA method	1 % to 50 %
		Lead as Pb (TCLP Extract) (1:20)	USEPA 1311 APHA 3120 B	0.01 mg/l to 100 mg/l
		Zinc as Zn (TCLP Extract) (1:20)	USEPA 1311 APHA 3120 B	0.05 mg/l to 100 mg/l

Laboratory **Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh**
Accreditation Standard **ISO/IEC 17025: 2005**
Certificate Number **TC-6518 (in lieu of T-3600)** **Page 13 of 16**
Validity **24.09.2017 to 23.09.2019** **Last Amended on 15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chromium as Cr (TCLP Extract) (1:20)	USEPA 1311 APHA 3120 B	0.05 mg/l to 100 mg/l
		Cadmium as Cd (TCLP Extract) (1:20)	USEPA 1311 APHA 3120 B	0.01 mg/l to 100 mg/l
		Selenium as Se (TCLP Extract) (1:20)	USEPA 1311 APHA 3120 B	0.01 mg/l to 100 mg/l
		Nickel as Ni (TCLP Extract) (1:20)	USEPA 1311 APHA 3120 B	0.05 mg/l to 100 mg/l
III.	ATMOSPHERE POLLUTION			
1.	Ambient Air	Particulate Matter as PM _{2.5}	ELPL/III/SOP/23 Issue No. & Issue Date: 02 & 01/07/2016 CPCB Guideline for Measurement of Ambient Air Pollutant, Vol. I, 201213 (Issue No.2, Amend. No.0)	5 µg/m ³ to 500 µg/m ³
		Particulate Matter as PM ₁₀	IS 5182 (Part 23)	5 µg/m ³ to 1000 µg/m ³
		Sulphur Dioxide as SO ₂	IS 5182 (Part 2)	5 µg/m ³ to 100 µg/m ³
		Oxides of Nitrogen as NO ₂	IS 5182 (Part 6)	5 µg/m ³ to 750 µg/m ³
		Ammonia	ELPL/III/SOP/27 Issue No. & Issue Date: 02 & 01/07/2016 CPCB Guideline-for Measurement of Ambient Air Pollutant-2012-201313 (Issue No.2, Amend. No.0)	10 µg/m ³ to 2000 µg/m ³
		Nickel as Ni	ELPL/III/SOP/28 Issue No. & Issue Date: 02 & 01/07/2016 CPCB Guideline-for	1.1 ng/m ³ to 1000 ng/m ³

Laboratory **Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh**
Accreditation Standard **ISO/IEC 17025: 2005**
Certificate Number **TC-6518 (in lieu of T-3600)** **Page 14 of 16**
Validity **24.09.2017 to 23.09.2019** **Last Amended on 15.11.2017**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Measurement of Ambient Air Pollutant-2012-1313 (Issue No.2, Amend. No.0)	
		Ozone as O ₃	IS 5182 (Part 9)	10 µg/m ³ to 1000 µg/m ³
		Arsenic as As	ELPL/III/SOP/28 Issue No. & Issue Date: 02 & 01/07/2016 CPCB Guideline-for Measurement of Ambient Air Pollutant-2012-13 (Issue No.2, Amend. No.0)	0.01 ng/m ³ to 50000 ng/m ³
		Carbon Monoxide as CO	IS 5182 (Part 10)	2 µg/m ³ to 500 µg/m ³
		Lead as Pb	IS 5182 (Part 22) ELPL/III/SOP/28 Issue No. & Issue Date: 02 & 01/07/2016	2.2 ng/m ³ to 20000 ng/m ³
		Benzene	ELPL/III/SOP/30 Issue No. & Issue Date: 02 & 01/07/2016	1.0 µg/m ³ to 500 µg/m ³
		Benzo (a) Pyrine	ELPL/III/SOP/29 Issue No. & Issue Date: 02 & 01/07/2016	0.1 µg/m ³ to 100 µg/m ³
		Hydrogen Sulphide (as H ₂ S)	IS 5182 (Part 07)	6.0 µg/m ³ to 100 µg/m ³
		Chloride as Cl	ELPL/III/SOP/81 Issue No. & Issue Date: 02 & 01/07/2016	0.05 µg/m ³ to 500 µg/m ³
		Mercury as Hg	ELPL/III/SOP/68 Issue No. & Issue Date: 02 & 01/07/2016	0.01 ng/m ³ to 0.02 50000 ng/m ³
2.	Stack Emission Monitoring	Particulate Matter	IS 11255 (Part 1)	10 mg/Nm ³ to 5000 mg/Nm ³
		SO ₂	IS 11255 (Part 2)	5 mg/Nm ³ to 250 mg/Nm ³
		NO _x	IS 11255 (Part 6)	5 mg/Nm ³ to 400 mg/Nm ³
		CO ₂	IS 13270	0.2 % to 20 %
		CO	IS 13270	0.2 % to 20 %

Laboratory Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6518 (in lieu of T-3600)

Page 15 of 16

Validity 24.09.2017 to 23.09.2019

Last Amended on 15.11.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Hydrocarbons as CH ₄	IS 5182 (Part 17)	1 mg/Nm ³ to 8000 mg/Nm ³
		Total Fluoride (as F)	IS 11255 (Part 5): 1990 ELPL/III/SOP/80 Issue No. & Issue Date: 02 & 01/07/2016	1 mg/Nm ³ to 5000 mg/Nm ³
		Ammonia	IS 11255 (Part 6)	1 mg/Nm ³ to 1000 mg/Nm ³
		Carbon Di Sulphide	IS 11255 (Part 4)	1 mg/Nm ³ to 1000 mg/Nm ³
IV.	RESIDUES IN WATER			
1.	Residues in Water	Alachor	USEPA Method 507	7 µg/l to 1000 µg/l
		Atrazine	USEPA Method 8141 B	1 µg/l to 1000 µg/l
		Aldrin/Dieldrin	USEPA Method 508.1	0.02 µg/l to 1000 µg/l
		Alpha HCH	USEPA Method 508.1	0.01µg/l to 500 µg/l
		Beta HCH	USEPA Method 508.1	0.02µg/l to 500 µg/l
		Delta HCH	USEPA Method 508.1	0.02µg/l to 500 µg/l
		Butachlor	USEPA Method 8141 B	10 µg/l to 500 µg/l
		Chlorpyrifos	USEPA Method 8141 B	10 µg/l to 500 µg/l
		2,4-Dichlorophenoxyacetic Acid	USEPA Method 515.3	5 µg/l to 500 µg/l
		DDT	USEPA Method 508.1	0.5 µg/l to 500 µg/l
		Endosulfan	USEPA Method 508.1	0.2 µg/l to 500 µg/l
		Ethion	USEPA Method 608	1.0 µg/l to 1000 µg/l
		Gamma HCH	USEPA Method 508.1	1.0 µg/l to 500 µg/l
		Isoproturon	USEPA Method 608	3.0 µg/l to 500 µg/l
		Malathion	USEPA Method 8141 B	10 µg/l to 200 µg/l
		Methyl Parathion	USEPA Method 8141 B	0.2 µg/l to 200 µg/l
		Monocrotophos	USEPA Method 8141 B	0.5 µg/l to 200 µg/l
		Phorate	USEPA Method 8141 B	0.6 µg/l to 200 µg/l

Laboratory **Ecosteps Laboratory Pvt. Ltd., D-79, Sector-6, Noida, Uttar Pradesh**
Accreditation Standard **ISO/IEC 17025: 2005**
Certificate Number **TC-6518 (in lieu of T-3600)** **Page 16 of 16**
Validity **24.09.2017 to 23.09.2019** **Last Amended on 15.11.2017**

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

CHEMICAL TESTING

<u>At Site</u>				
1.	NOISE	Ambient Noise DG Set Noise	ELPL/III/SOP/37 Issue No. & Issue Date: 02 & 01/07/2016 CPCB guideline (Issue No.2, Amend. No.0)	34 dB (A) to 130 dB (A)