

**Laboratory** Analytical Research Laboratory, BEIL Infrastructure Ltd., Plot No. 9701-9716, GIDC Estate, Ankleshwar, Dist. Bharuch, Gujarat

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

**Certificate Number** TC-8141

**Page 1 of 6**

**Validity** 13.09.2019 to 06.11.2020

**Last Amended on** --

S. No.	Materials or Products tested	Component, parameter or characteristic tested/ Specific Test Performed/ Tests or type of tests performed	Test Method Specification against which tests are performed and/or the techniques/ equipment used
--------	------------------------------	--	---

**CHEMICAL TESTING**

<b>I. POLLUTION &amp; ENVIRONMENT</b>			
1.	<b>Hazardous Liquid Waste</b>	Loss on Drying	SOP no.:2.13 Issue No. 01 -30/06/2016 based on standard chemical analysis book by NH surman
		Ash Content	IS 1448 (Part-4) ;1984
		Water Content by K.F.	USEPA 9000 B (Feb 2007)
		Calorific Value	IS 1448 (Part-6) : 1984
		Carbon	ASTM D5291-10 (2015)
		Hydrogen	ASTM D5291-10 (2015)
		Nitrogen	ASTM D5291-10 (2015)
		Sulphur	ASTM D5291-10 (2015)
2.	<b>Leachate from Hazardous Solid waste in water medium</b>	pH	APHA* 4500H+-B, 4-95 to 4-99, 23 <sup>rd</sup> Ed.2017
		Ammonical Nitrogen	APHA 4500-NH3-C, 4-116, 23 <sup>rd</sup> Ed.2017
		Total Phenols (as C <sub>6</sub> H <sub>5</sub> OH)	APHA, 5530-D, 5-52, 23 <sup>rd</sup> Ed.2017
		Copper (as Cu)	APHA 3111-Cu-B 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Total Chromium (as Cr)	APHA 3111-Cr-B 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Lead (as Pb)	APHA 3111-Pb-B, 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Zinc (as Zn)	APHA 3111-Zn- B, 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Nickel (as Ni)	APHA 3111-Ni- B, 3-20 to 3-21, 23 <sup>rd</sup>

**Laboratory** Analytical Research Laboratory, BEIL Infrastructure Ltd., Plot No. 9701-9716, GIDC Estate, Ankleshwar, Dist. Bharuch, Gujarat

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

**Certificate Number** TC-8141

**Page 2 of 6**

**Validity** 13.09.2019 to 06.11.2020

**Last Amended on** --

S. No.	Materials or Products tested	Component, parameter or characteristic tested/ Specific Test Performed/ Tests or type of tests performed	Test Method Specification against which tests are performed and/or the techniques/ equipment used
		Arsenic (as As)	Ed. 2017 APHA 3114-As- B, 3-36 to 3-40, 23 <sup>rd</sup> Ed.2017
		Mercury (as Hg)	APHA 3112-Hg- B, 3-25 to 3-27, 23 <sup>rd</sup> Ed.2017
		Cadmium (as Cd)	APHA 3111-Cd- B, 3-20 to 3-21, 23 <sup>rd</sup> Ed. 2017
		Fluoride (as F)	APHA 4500-F- C, 4-89 to 4-90, 23 <sup>rd</sup> Ed.2017
		Nitrate (as NO <sub>3</sub> -N)	APHA 4500-NO <sub>3</sub> - D, 4-129 to 4-130, 23 <sup>rd</sup> Ed.2017
3.	Waste Water	pH	APHA* 4500H+-B, 4-95 to 4-99, 23 <sup>rd</sup> Ed.2017
		Color	APHA 2120 C, 2-7 to 2-8, 23 <sup>rd</sup> Ed. 2017
		Total Suspended Solids (TSS)	APHA-2540-D 2-70 to 2-71, 23 <sup>rd</sup> Ed.2017
		Total Dissolved Solid (TDS)	APHA 2540-C, 2-69 to 2-70 23 <sup>rd</sup> Ed. 2017
		Chloride (as Cl)	APHA 4500Cl- B, 4-75 to 4-76 23 <sup>rd</sup> Ed.2017
		Sulphate (as SO <sub>4</sub> )	APHA ,4500-SO <sub>4</sub> -E , 4-199 to 4-200, 23 <sup>rd</sup> Ed.2017
		COD	APHA 5220-B, 5-18 to 5-19, 23 <sup>rd</sup> Ed.2017
		BOD <sub>5</sub> at 27 ° C	BIS:3025 (Part 44)
		Oil & Grease	APHA 5520-B, 5-42 to 5-44, 23 <sup>rd</sup> Ed.2017
		Ammonical Nitrogen	APHA 4500-NH <sub>3</sub> -C, 4-116, 23 <sup>rd</sup>

**Laboratory** Analytical Research Laboratory, BEIL Infrastructure Ltd., Plot No. 9701-9716, GIDC Estate, Ankleshwar, Dist. Bharuch, Gujarat

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

**Certificate Number** TC-8141

**Page 3 of 6**

**Validity** 13.09.2019 to 06.11.2020

**Last Amended on --**

S. No.	Materials or Products tested	Component, parameter or characteristic tested/ Specific Test Performed/ Tests or type of tests performed	Test Method Specification against which tests are performed and/or the techniques/ equipment used
			Ed.,2017
		Total Phenols (as C <sub>6</sub> H <sub>5</sub> OH)	APHA, 5530-D, 5-52, 23 <sup>rd</sup> Ed.2017
		Sulfide (as S <sup>2-</sup> )	APHA 4500-S <sup>2-</sup> -F 4-187 ,23 <sup>rd</sup> Ed.2017
		Copper (as Cu)	APHA 3111-Cu-B 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Total Chromium (as Cr)	APHA 3111-Cr-B 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Lead (as Pb)	APHA 3111-Pb-B, 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Zinc (as Zn)	APHA 3111-Zn- B, 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Nickel (as Ni)	APHA 3111-Ni- B, 3-20 to 3-21, 23 <sup>rd</sup> Ed. 2017
		Iron (as Fe)	APHA 3111-Fe- B, 3-20 to 3-21, 23 <sup>rd</sup> Ed. 2017
		Total organic Carbon (TOC)	APAH 5310-B, 5-26 to 5-29, 23 <sup>rd</sup> Ed.2017
II.	<b>WATER</b>		
1.	<b>Bore well and Potable water</b>	pH	APHA* 4500H+-B, 4-95 to 4-99, 23 <sup>rd</sup> Ed.2017
		Color	APHA 2120 C, 2-7 to 2-8, 23 <sup>rd</sup> Ed. 2017
		Turbidity	APHA-2130-B, 2-13 to 2-15, 23 <sup>rd</sup> Ed.2017
		Conductivity	APHA-2510-B, 2-58 to 2-59, 23 <sup>rd</sup> Ed.2017
		Total Suspended Solids (TSS)	APHA-2540-D 2-70 to 2-71, 23 <sup>rd</sup> Ed.2017

**Laboratory** Analytical Research Laboratory, BEIL Infrastructure Ltd., Plot No. 9701-9716, GIDC Estate, Ankleshwar, Dist. Bharuch, Gujarat

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

**Certificate Number** TC-8141

Page 4 of 6

**Validity** 13.09.2019 to 06.11.2020

Last Amended on --

S. No.	Materials or Products tested	Component, parameter or characteristic tested/ Specific Test Performed/ Tests or type	Test Method Specification against which tests are performed and/or the techniques/ equipment used
		Total Dissolved Solid (TDS)	APHA 2540-C, 2-69 to 2-70 23 <sup>rd</sup> Ed. 2017
		Chloride (as Cl)	APHA 4500Cl- B, 4-75 to 4-76 23 <sup>rd</sup> Ed.2017
		Sulphate (as SO <sub>4</sub> )	APHA ,4500-SO <sub>4</sub> -E , 4-199 to 4-200, 23 <sup>rd</sup> Ed.2017
		Total Hardness as CaCO <sub>3</sub>	APHA-2340-C , 2-48 to 2-50, 23 <sup>rd</sup> Ed.2017
		COD	APHA 5220-B, 5-18 to 5-19, 23 <sup>rd</sup> Ed.2017
		BOD <sub>5</sub> at 27 ° C	BIS :3025 (part 44)
		Total Organic Carbon (TOC)	APAH 5310-B, 5-26 to 5-29, 23 <sup>rd</sup> Ed.2017
		Oil & Grease	APHA 5520-B, 5-42 to 5-44, 23 <sup>rd</sup> Ed.2017
		Ammonical Nitrogen	APHA 4500-NH <sub>3</sub> -C, 4-116, 23 <sup>rd</sup> Ed.,2017
		Total Phenols	APHA, 5530-D, 5-52, 23 <sup>rd</sup> Ed.2017
		Sulfide (as S <sup>2-</sup> )	APHA 4500-S <sup>2-</sup> -F 4-187 , 23 <sup>rd</sup> Ed.2017
		Copper (as Cu)	APHA 3111-Cu-B 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Total Chromium (as Cr)	APHA 3111-Cr-B 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Lead (as Pb)	APHA 3111-Pb-B, 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Zinc (as Zn)	APHA 3111-Zn- B, 3-20 to 3-21, 23 <sup>rd</sup> Ed.2017
		Nickel (as Ni)	APHA 3111-Ni- B, 3-20 to 3-21, 23 <sup>rd</sup> Ed. 2017
		Iron (as Fe)	APHA 3111-Fe- B, 3-20 to 3-21, 23 <sup>rd</sup>

Laboratory Analytical Research Laboratory, BEIL Infrastructure Ltd., Plot No. 9701-9716, GIDC Estate, Ankleshwar, Dist. Bharuch, Gujarat

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-8141

Page 5 of 6

Validity 13.09.2019 to 06.11.2020

Last Amended on --

S. No.	Materials or Products tested	Component, parameter or characteristic tested/ Specific Test Performed/ Tests or type of test performed	Test Method Specification against which tests are performed and/or the techniques/ equipment used
			Ed. 2017
III.	<b>ATMOSPHERIC POLLUTION</b>		
1.	<b>Ambient Air Quality</b>	RSPM (PM10)	SOP/AIR/001 Issue No. 01-25/01/2018)
		PM-2.5	SOP/AIR/001 (Issue No. 01- Date 25/01/2018 (Gravimetric Method)
		Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (Part- 2)-2001
		Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (Part- 6)- 2006
		Ammonia (NH <sub>3</sub> )	SOP/AIR/006 (Issue No. 01- Issue Date 25/01/2018)
		Lead as (Pb)	IS 5182 (Part 22) :2004 Issue No.(01-25/01/2018)
		Nickel as (Ni)	IS 5182 (Part 22) :2004 Issue No.(01-25/01/2018)
		Arsenic as (As)	IS 5182 (Part 22) :2004 Issue No. (01-25/01/2018)
2.	<b>Stack Monitoring</b>	Particulate Matter (PM)	IS 11255 (Part 1): 1985 (RA 1999)
		Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part 2): 1985 (RA 2003)
		Nitrogen Dioxide (NO <sub>2</sub> )	IS 11255 (Part 7): 2005
		Hydrogen Sulfide (H <sub>2</sub> S)	IS 11255 (Part 4): 1985
		Flue gas Velocity	IS 11255 (Part 3): 2008
		Flow rate	IS 11255 (Part 3): 2008
		Temperature	IS 11255 (Part 3): 2008
IV.	<b>FERTILIZER</b>		
1.	<b>Fertilizer (Compost)</b>	Color	Visually/Qualitative

Laboratory Analytical Research Laboratory, BEIL Infrastructure Ltd., Plot No. 9701-9716, GIDC Estate, Ankleshwar, Dist. Bharuch, Gujarat

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-8141

Page 6 of 6

Validity 13.09.2019 to 06.11.2020

Last Amended on --

S. No.	Materials or Products tested	Component, parameter or characteristic tested/ Specific Test Performed/ Tests or type	Test Method Specification against which tests are performed and/or the techniques/ equipment used
		Odor	Physically/Qualitative
		Particle Size	FCO 1985 Schedule-IV Part A 1 (iv)
		Moisture	FCO 1985 Schedule-IV Part D (2)
		pH	FCO 1985 Schedule-IV Part D (1)
		Conductivity	FCO 1985 Schedule-IV Part D (4)
		Total Organic Carbon	FCO 1985 Schedule-IV Part D (5)
		Nitrogen	FCO-1985- Schedule -II Part-B 3(v)
		Total Phosphate (P <sub>2</sub> O <sub>5</sub> )	FCO-1985 Schedule-II Part-B 4(ii)
		Potash as K <sub>2</sub> O	FCO 1985 Schedule-IV Part D (9)
		Copper as Cu	FCO-1985 Schedule-II Part-B 8 (iv)
		Lead as Pb	FCO-1985 Schedule-II Part-B 8 (v)
		Zinc as Zn	FCO-1985 Schedule-II Part-B 8 (ii)
		Cadmium as Cd	FCO-1985 Schedule-II Part-B 8 (x)
		Chromium as Cr	FCO 1985 Part D
		Nickel as Ni	FCO 1985 Part D
		Arsenic as As <sub>2</sub> O <sub>3</sub>	FCO 1985 Part D
		Mercury as Hg	FCO 1985 Part D
<b>V.</b>	<b>PESTICIDES AND FORMULATION</b>		
1.	Propanil Technical	% Propanil Assay	SOP/P/001 (01-08-2018) In-house Developed Method
2.	Impurity -I	3,3',4,4'-tetrachloroazobenzene (TCAB) Impurity	SOP/P/002 (01-08-2018) Inhouse Developed Method
3.	Impurity- II	3,3',4,4'-tetrachloroazoxybenzene (TCAOB) Impurity	SOP/P/002 (01-08-2018) Inhouse Developed Method