

<b>Laboratory</b>	<b>Ircon Infrastructure &amp; Services Limited, Environment Management Planning Laboratory, Subordinate Complex, Northern Railway, Jammu, Jammu &amp; Kashmir</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Chemical Testing</b>	<b>Issue Date</b>	<b>11.09.2015</b>
<b>Certificate Number</b>	<b>T-3587</b>	<b>Valid Until</b>	<b>10.09.2017</b>
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<b>S. No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
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**AT LABORATORY**

**I. WATER**

<b>1.</b>	<b>Drinking Water Surface Water/ Ground Water</b>	Color	IS 3025 (Part 4): 1983 (RA 1996) Visual Comparison	1 to 100
		Odour	IS 3025 (Part 6): 1983 (RA 2002) Threshold Water Test	Qualitative
		Temperature	IS 3025 (Part 9): 1984 (RA 2002) Threshold Water Test	10 °C to 110 °C
		pH	IS 3025 (Part 11): 1983 (RA 2002) Electrometric Method	1 to 14
		Electrical Conductivity	IS 3025 (Part 14): 1985 (RA 1996) Electrometric Method	2 µS/cm to 1999 µS/cm
		Total Suspended Solid	IS 3025 (Part 15): 1984 (RA 2003) Filterable Residue Method	10 mg/L to 10000 mg/L
		Total Hardness	IS 3025 (Part 21): 2009 (RA 1996) EDTA Titrimetric Method	10 mg/L to 1000 mg/L
		Chloride	IS 3025 (Part 32): 1988 (RA 2007) Argentometric Method	5 mg/L to 500 mg/L
		Residual Free Chlorine	IS 3025 (Part 26): 1986 (RA 2003) Idometric Method	0.1 mg/L to 100 mg/L
	Total Dissolved Solid	IS 3025 (Part 16): 1984 (RA 2003) Filterable Residue Method	10 mg/L to 5000 mg/L	

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**N. Venkateswaran**  
Program Manager

<b>Laboratory</b>	<b>Iron Infrastructure &amp; Services Limited, Environment Management Planning Laboratory, Subordinate Complex, Northern Railway, Jammu, Jammu &amp; Kashmir</b>		
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	<b>Drinking Water Surface Water/ Ground Water</b>	Calcium	IS 3025 (Part 40): 1991 (RA 2003) EDTA Titrimetric Method	5 mg/L to 10000 mg/L
		Sulphate	IS 3025 (Part 24): 1986 (RA 2003) Titrimetric Method	10 mg/L to 5000 mg/L
		Nitrate	IS 3025 (Part 34): 1988 (RA 2003) Devarda's alloy reduction method	2 mg/L to 1000 mg/L
		Magnesium	IS 3025 (Part 46): 1994 (RA 2003) EDTA Titrimetric Method	5 mg/L to 500 mg/L
		Alkalinity	IS 3025 (Part 23): 1986 (RA 2003) Titrimetric Method	10 mg/L to 1000 mg/L
<b>2.</b>	<b>Waste Water</b>	Odour	IS 3025 (Part 6): 1983 (RA 2002) Threshold Water Test	Qualitative
		pH	IS 3025 (Part 11): 1983 (RA 2002) Electrometric Method	1 to 14
		Temperature	IS 3025 (Part 9): 1984 (RA 2002) Threshold Water Test	10 °C to 110 °C
		Total Suspended Solid	IS 3025 (Part 15): 1984 (RA 2009) Filterable Residue Method	10 mg/L to 10000 mg/L
		Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993 (RA 2009) Bio Assay Method	5 mg/L to 10000 mg/L
	Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2006 Open Reflux Method	8 mg/L to 10000 mg/L	

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	<b>Waste Water</b>	Dissolve Oxygen	IS 3025 (Part 38): 1989 (RA 2003) Azide Modification Method	1 mg/L to 10 mg/L
		Oil & Grease	IS 3025 (Part 39): 1991 (RA 2003) Partition – gravimetric Method	1.0 mg/L to 250 mg/L
<b>II. AIR, GASES AND ATMOSPHERE</b>				
<b>1.</b>	<b>Ambient Air Monitoring</b>	Fine Particulate Matter (FPM) PM <sub>2.5</sub>	Lab SOP No. SP-03 Based on CPCB Guidelines 2011 Issue No.: 1 Issue Date: 12/05/2014	10 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Respirable Particulate Matter (RPM) PM <sub>10</sub>	IS 5182 (Part 23): 2006	10 µg/m <sup>3</sup> to 2000 µg/m <sup>3</sup>
		Sulphur Dioxide as (SO <sub>x</sub> )	IS 5182 (Part 2): 2001	6.5 µg/m <sup>3</sup> to 150 µg/m <sup>3</sup>
		Nitrogen Dioxide as (SO <sub>x</sub> )	IS 5182 (Part 6): 2006	5 µg/m <sup>3</sup> to 150 µg/m <sup>3</sup>
<b>2.</b>	<b>Stack Emission</b>	Particulate Matter as (PM)	IS 11255 (Part 1): 1985 (RA 2003)	5 mg/Nm <sup>3</sup> to 400 mg/Nm <sup>3</sup>
		Sulphur Dioxide as (SO <sub>x</sub> )	IS 11255 (Part 2): 1985 (RA 2003)	5 µg/Nm <sup>3</sup> to 400 mg/Nm <sup>3</sup>
		Nitrogen Dioxide as (NO <sub>x</sub> )	IS 11255 (Part 7): 2005	5 µg/m <sup>3</sup> to 400 µg/Nm <sup>3</sup>
		Carbon Dioxide as (CO <sub>2</sub> )	IS 13270: 1992 (RA 2003)	1 % to 20 %
		Oxygen as (O <sub>2</sub> )	IS 13270: 1992 (RA 2003)	1 % to 15 %

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**AT SITE**

**I. NOISE**

1.	Ambient Noise	Noise Level Leq	IS 9989: 1981	30 dB (A) to 130 dB (A)
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