

**TITLE**

4 X 270 MW BHADRADRI TPS
TECHNICAL SPECIFICATION FOR
CW/RW/PW CHLORINATION PLANT

SPECIFICATION NO.

PE-TS-411-174A-A001

VOLUME: II B

REV 00

SHEET 1 of 2

ANNEXURE III

RAW WATER ANALYSIS AND CLARIFIED WATER ANALYSIS

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RAW WATER ANALYSIS

Sr.No	Parameters	Unit	Results
1.	Physical characteristics		
	Colour	Hazen	8.0
	pH at 25 °C	--	7.79
	Conductivity at 25 °C	µs/cms	400
	Dissolved solids	ppm	282
2.	Cations		
	Calcium Hardness	ppm as CaCO ₃	96
	Magnesium Hardness	ppm as CaCO ₃	52
	Sodium + Potassium	ppm as CaCO ₃	76.6
	Iron	ppm as CaCO ₃	Traces
	Total Cations	ppm as CaCO ₃	224.6
3.	Anions		
	M- Alkalinity	ppm as CaCO ₃	136.0
	Chlorides	ppm as CaCO ₃	72.0
	Sulphate	ppm as CaCO ₃	15.0
	Nitrates	ppm as CaCO ₃	1.6
	Total Anions	ppm as CaCO ₃	224.6
4.	Total Hardness	ppm as CaCO ₃	148
5.	P - Alkalinity	ppm as CaCO ₃	Nil
6.	Dissolved Silica	ppm as SiO ₂	1.1
7.	Colloidal Silica	ppm as SiO ₂	2.0
7.	Turbidity	NTU	10
8.	Total suspended solids	ppm	500

CLARIFIED WATER ANALYSIS

Outlet TSS of PT shall be 10 ppm

Clarified Water Analysis should take care of the following chemical dosage in Pre-Treatment Plant:

- a) Alum Dosing – 70 ppm
- b) Lime Dosing – 30 ppm
- c) PE Dosing – 1 ppm
- d) Chlorine dosing – 3 ppm continuous

Above water analysis shall be modified considering the above chemical dosage rate in PT plant, for consideration of the design clarified water analysis for Chlorination Plant.

COC shall be 5.0.