



7.1.4 Water conservation facilities available in the Institution:

1. Rainwater harvesting
2. Borewell /Open well recharge
3. Construction of tanks and bunds
4. Wastewater recycling
5. Maintenance of water bodies and distribution system in the campus

Response :

A. Any 4 or all of the above

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1. Rainwater Harvesting

At KCT rainwater harvesting structures and recharge wells are commissioned in the campus at different locations. Every building is equipped with rainwater harvesting facilities. Beyond that, with the arrangement of cover slab structure and open structure it is expected to percolate a minimum of 1,05,000 Litres of water in an hour of moderate rain through recharge wells. Also, two percolation ponds of total capacity 83 Lakh Litre are inside the campus area.

S.No	Location	Method of RWH Structure	Size of RWH Structure	Approximate Capacity of RWH (Litres/ Hr)
1	Main Road (Near KRAFT)	Cover Slab Structure - Roadside	6" Diameter drill to the Depth of 230 Ft	20,000
2	MVB Block	Recharge Well with Tube Well	6" Diameter drill to the Depth of 200 Ft	20,000
3	Girls Hostel	Recharge Well with Tube Well	6" Diameter drill to the Depth of 200 Ft	20,000
4	Behind the Jyothi Nilayam	Recharge Well with Tube Well	6" Diameter drill to the Depth of 320 Ft	25,000
5	Near Boys Hostel 2	Recharge Well with Tube Well	6" Diameter drill to the Depth of 200 Ft	20,000



2. Borewell /Open well recharge

Kumaraguru College of Technology contains 7 Borewells and 5 rainwater recharge wells

Recharge Well

- A 6" dia tube well is drilled for a depth of 100m - 125m, with casing pipe (both plain and perforated) erection.
- A filter chamber of size 3.35m x 2m x 2m depth is constructed around the tube well with a brick outer wall. For roadside structures, a cover slab of 200mm thickness is placed with filter media.
- The filter chamber is filled with random rubble soling for 1.25m height and 40mm metal for 0.5m height.

- The perforated pipe is provided with an end cap on top and the filter bed is covered with green net and grill cover for open space structure to avoid the clogging of the filter bed.
- The perimeter of the filter bed is provided with a brick border and the surrounding areas will be channelized for the rainwater to flow into the RWH structure.

Below is the list of independent RWH units that are established in the institution premises as given in the above Lack

S.No	Location	Method of RWH Structure	Size of RWH Structure	Approximate Capacity of RWH(Litres / Hr)
1	MVB Block	Recharge Well with Tube Well	6" Diameter drill to the Depth of 200 Ft	20,000
2	Girls Hostel	Recharge Well with Tube Well	6" Diameter drill to the Depth of 200 Ft	20,000
3	Behind the Jyothi Nilayam	Recharge Well with Tube Well	6" Diameter drill to the Depth of 320 Ft	25,000
4	Near Boys Hostel 2	Recharge Well with Tube Well	6" Diameter drill to the Depth of 200 Ft	20,000

3. Construction of Tanks and Bunds

Percolation Pond Construction: Kumaraguru is set to become a water resilient campus by using various methods to harvest every drop of rainwater and optimize water usage on campus. Two aquifer containment is available in the campus to store rainwater. The details are ,

- (i) Percolation Pond - Behind Boys Hostel is of 55m*40m*15m having a storage capacity of 50 Lakh Litre and
- (ii) A new pond was built on 02 Oct 2019 on the southern side of the institution measuring 13m * 60m * 4.5m which has a storage capacity of approximately 33 Lakh Litre of water at a point of time.



Students Volunteering on 2nd October 2019 to build the new Percolation Pond



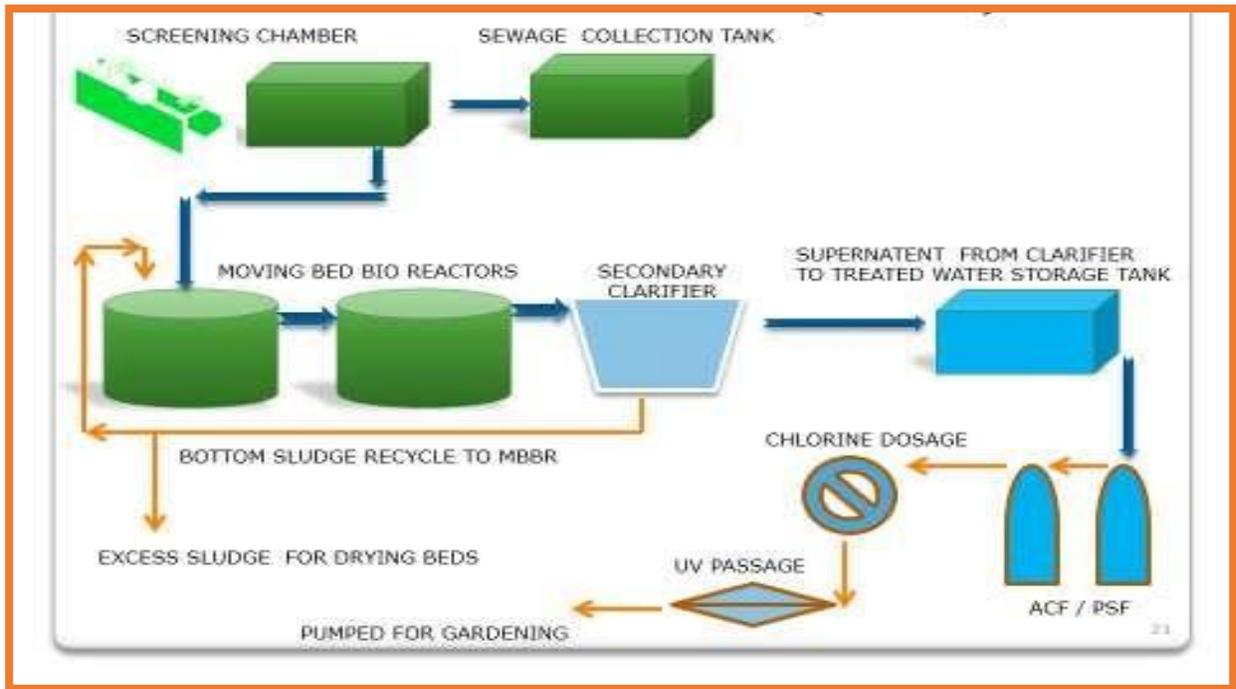
Percolation Pond filled up after a heavy rain

4. Wastewater recycling

Waste water collected in the campus are treated in the Sewage Treatment Plant, using a Moving Bed Bio Reactor (MBBR) Technology Sewage Treatment Plant in KCT Campus with an installed capacity of 10 Lakh LPD, with a storage capacity of 2 Lakh Litres. The recycled water is used for gardening and irrigating the landscapes.



PROCESS DESCRIPTION



OPERATIONAL DESIGN

Running Hours -24 hours / day

Flow Rate / Day -1000 Cu.M/ Day

Parameters	Unit	Untreated Water	TNPCB Norms
Flow	m ³ /Day	9.0	NA
pH		4.5 - 7.5	7.5 - 9.0
Temperature	°C	30	NA
TSS	mg/L	200 - 300	100
COD	mg/L	200 - 300	250
BOD (5Days)	mg/L	100 - 150	30
Oil & Grease	mg/L	80	1

RAW WATER FEATURES

TREATED WATER CHARACTERISTICS

Parameters	Unit	DC Mill
pH		6.5 - 8.0
TSS	mg/L	<20
COD	mg/L	<250
BOD (5Days)	mg/L	<30
Oil & Grease	mg/L	<1

Bill for installation of Sewage treatment plant



HAYMAN

ENVIROMENTAL ENGINEERING PRIVATE LIMITED
Excellence we repeat – which is not an act but habit

First Floor A, Sree Kaman Silver Park, Perundurai main road, Opp AET school, Valipurothangalayan Post, Erode - 638 112, Tamilnadu
 Mobile: +91 94435-10794
 Email: haymanenvironmental@gmail.com, www.haymanenv.com
 GST No. : 33AAACH9320C1Z2

Registered Office:

INVOICE Date : 21.11.2018

INV NO: 128/ 2018 - 2019

Kumaraguru college of technology
 Unit of Ramanandha Adigalar Foundation
 Chinavedampetti, Saravanampetty,
 Coimbatore - 641049
 GST No. : 33AAATR3648M1ZG

Delivery at:
 Kumaraguru college of technology
 Coimbatore - 641049

Contact Person : Jayakumar S, JCT - Purchase

PAYMENT SCHEDULE:
 40% advance, 40% after delivery materials,
 20% after commissioning

PO: 1819/NA0155 Dated 26-06-2018

S.No	Item Description	HSN code	Qty	Unit	Unit Price	Total
					Rs. P	Rs. P
	Sewage Treatment plant with sand/carbon filter and accessories	84212190	1	lot	30,23,496.00	30,23,496.00
Total Purchase order value		44,59,657.00			Total Taxable Value	7,55,874.00
Raising invoice value		8,91,931.00	✓		CGST @9%	68,028.66
Less 40% paid as advance		17,83,863.00	✓		SGST @9%	68,028.66
40% value against Delivery - INV:67/18-19		17,83,863.00	✓		Round off	(0.32)
					GST Total	8,91,931.00

E.R.O.E

(Rupees eight lakhs ninety one thousands nine hundred and thirty one only)

Payment by demand draft at Erode/At par cheque payable at all branches/RTGS

For HAYMAN ENVIRONMENTAL ENGINEERING PRIVATE LIMITED

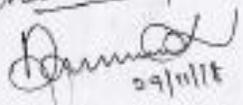
ERODE



DIRECTOR

Subject to Erode Jurisdiction

Work completed and checked by


 29/11/18
 (P. Ramakrishnan)

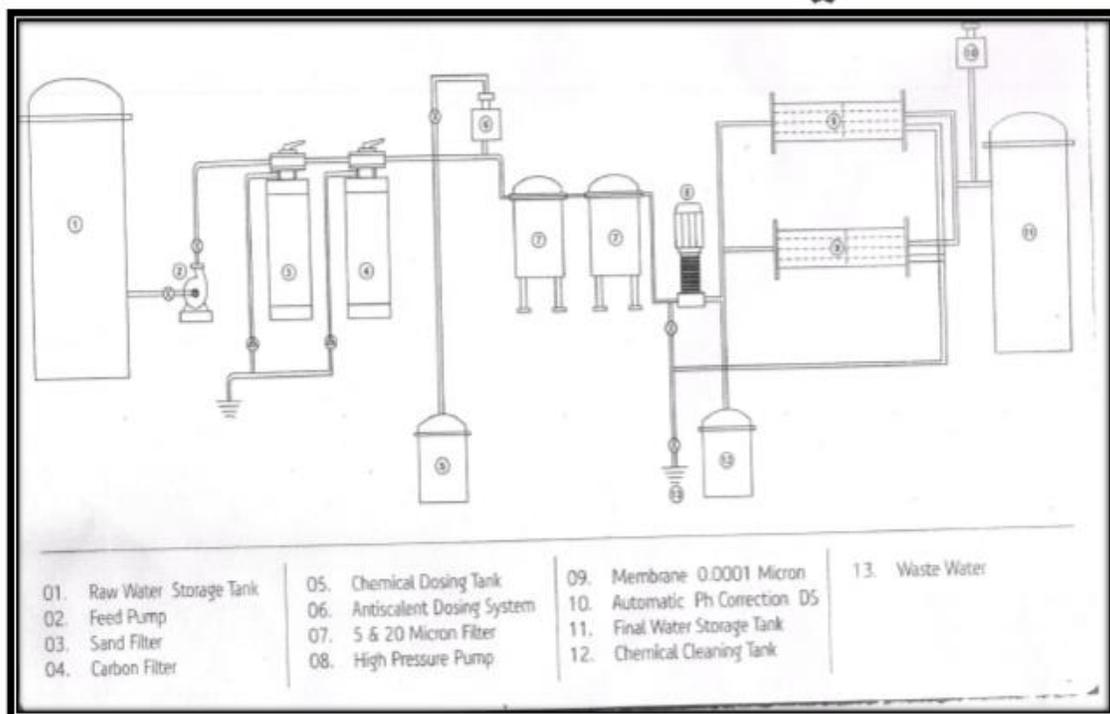

 29.11.18

Accountant for payment of Rs 8,91,931/-
 (Eight lakhs ninety one thousand and
 and Nine hundred thirty one only)
 ✓
 1-12-18
 Jy. No: 125/
 dt
 29.6.18.

Measures to conserve water has been effectively implemented widely across various facilities including hostels, mess, canteen, and restrooms. Spring type/self-closing taps are fitted into the new facilities and replaced with the older ones as and when the need arises. Distributed storage systems setups are provided to individual blocks as per the requirements. The water is distributed through a well laid and reliable pipe network. Besides, sprinklers, drip irrigation systems are installed in the gardens, lawns to conserve water usage in the campus. The water distribution system is well manoeuvred by our civil and infrastructure team to ensure against leakages and wastages from these facilities.

RO Treated Water Source and Utilization

The institution is provisioned with 2 lakh litre per day, water supply from the municipal corporation. Reverse Osmosis Units are operational with a processing capacity of each 1000 Liters per Hour (LPH).



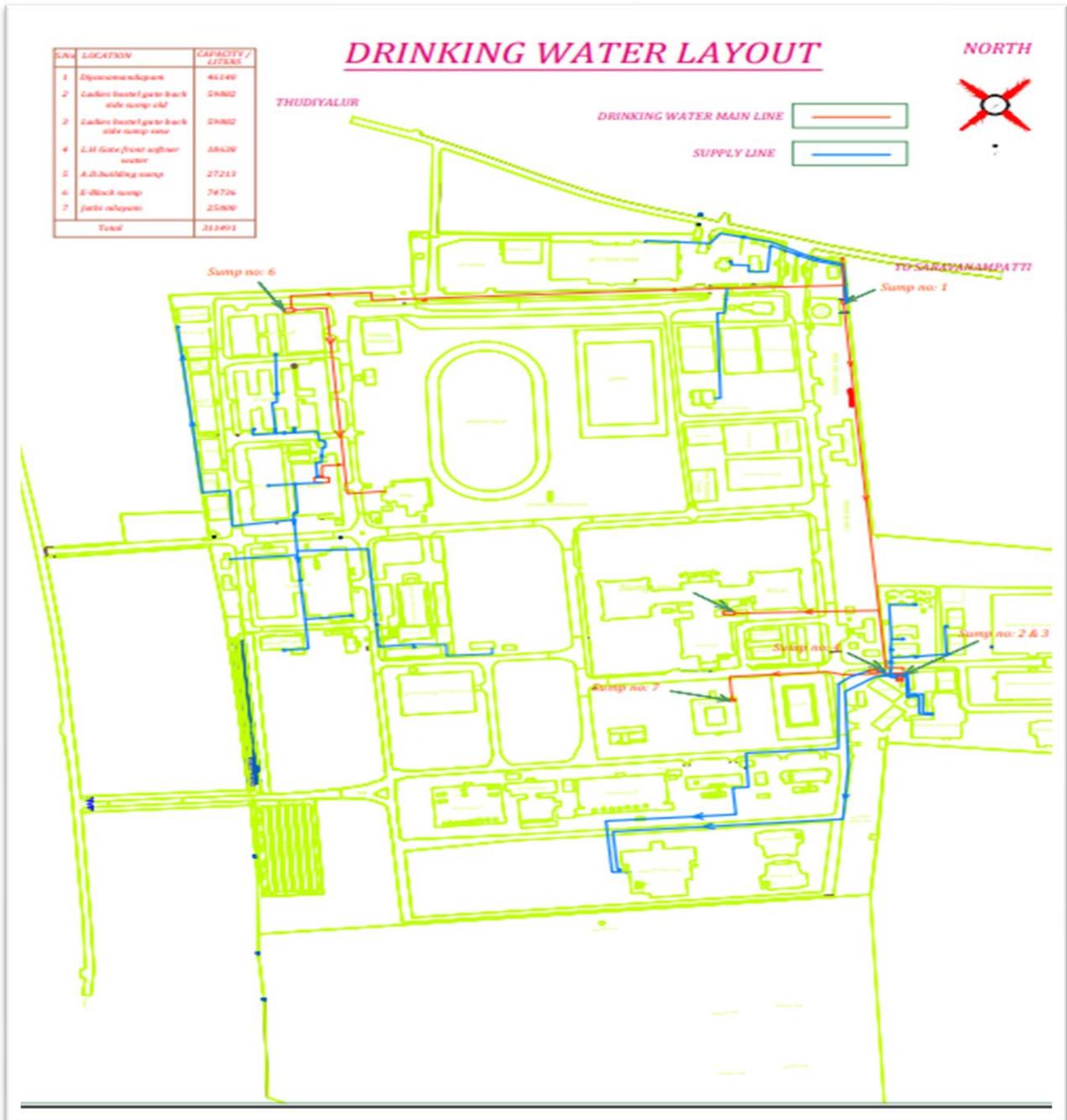
FLOW CHART SHOWING REVERSE OSMOSIS (RO) PLANT IN KCT CAMPUS



RO Plant



The RO treated water quality analysis done periodically by an external vendor M/s Seeds Enviro Labs (an ISO 9001:2008 Certified state-of-the-art Laboratory for carrying out various tests in food, water, hygiene, air & environment. In addition, the regular yearly maintenance is also carried out by the agency for the RO units mentioned above.





Reuse of treated water for lawn sprinkling