

## Holy Cross College (Autonomous)

Nagercoil-629004

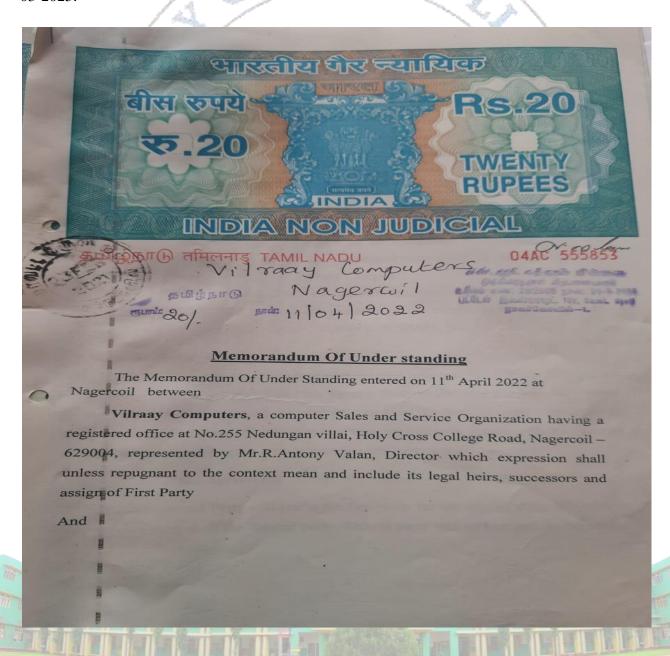
Affiliated to Manonmaniam Sundaranar University, Tirunelveli
Nationally Accredited with A+ Grade (CGPA 3.35) by NAAC IV Cycle
An ISO 9001: 2015 Certified Institution

SSR 2019-2020 to 2023-2024

# 7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste

#### MoU:

The Memorandum of Understanding is signed between Vilraay Computers, Nagercoil and Holy Cross College (Autonomous), Nagercoil on 11<sup>th</sup> April 2022. The sole purpose of this MOU is to dispose the non-degradable e-waste of Holy Cross College Campus as the scrap and the payment will be settled before handing over. The period of agreement is from 11-04-2022 to 31-03-2025.



Holy Cross College (Autonomous), Nagercoil is an academic higher Educational Institution, having its registered office and College located at Roch Nagar, Kurusady, Nagercoil – 629004, Represented by Rev.Dr.Sr.Anne Perpet Sophy, Principal, Which Expression shall unless repugnant to the context mean and include, its legal heirs, Successors and assign of Second Party

### 1. Objectives

The Parties have agreed to Cooperate promote sustainable development for ewaste management system.

- For the Holy Cross College termed as second Party an objective of creating sustainable ewaste management in its campuses by disposing the non degradable waste as the Scrap. The second party enters in this agreement for the college at Holy Cross College Campus.
- For Vilraay Computers to associate with in areas of e waste management of the second party through the purchase of the ewaste in the form of scrap computer parts like Monitor, Mother hard, SMPS, Batteries etc.

### II. Scope of Agreement

1

This Memorandum of Agreement entered between the Vilraay Computers (referred as the First Party) and the Second Party is for Sole Purpose of e waste management with the purchase of the Scrap from the Second party's premises at Roch Nager Campuses. The Parties here to agree to jointly play an effective role as partners for promoting the ewaste management system for the campus

### III. Terms of the Agreement

 The Second Party will prefer the first party for the sale of scrap available in the campus of the Second party. Second party will collect and do the ewaste

/ Scrap. It will be stored in the campus storage systems convenient for the first party to transport to their processing centres.

- 2. The first party will collect the ewaste in the specific storage centre in the campus of the Second party and will be responsible fully for the processing of it as per the norms of the government / authorities.
- 3. The first party is entitled with the ownership of the scrap, after it is sold to the first party and have the authority to sell it or its parts to anyone concerned with or use it for further recycling process.
- 4. The first party will collect the scrap/ ewaste in regular intervals or as informed by the Second party.
- 5. The authorized persons/ employees of the first party will be permitted to enter in campus for sorting the scrap under the supervision of the staff of the Second party or request.
- 6. This agreement can be renewed as per the request from any of the parties in written format
- 7. The updated price details of the scrap items will be update/ fixed at the time of actual transaction as per the market standards
- 8. The payment will be settled before handling over the Gate permission.

## IV. Termination of the Agreement

This Memorandum Of Agreement can be terminated by both or any of the parties or written request to the other Two month in advance. The termination will be applicable only on the settlement of dues if any.

## V. Period of Agreement

The Period of Agreement is for Three consecutive years ( 2022&2023, 2023&2024, 2024&2025) ie, 1/4/2022 to 31/3/2025

In witness whereof the parties have signed the Memorandum Of Understanding on the day, month and year first here in above mentioned

1. For Holy Cross College

Holy Cross College (Autonomous) Nagercoil - 629 004.

Rev. Dr. Sr. Anne Perpet Sophy

Principal

Holy Cross College, Nagercoil.

2. For Department of Computer Science, Holy Cross College

Sr. Jothi

HEAD OF THE DEPARTMENT DEPARTMENT OF COMPUTER SCIENCE HOLY CROSS COLLEGE (AUTONOMOUS) NAGERCOIL

Rev. Sr. Jothi Antony

Head of the Department ,Computer Science

For Vilraay Computers

R. Antony Valah Ph: 04652-261916

Director

# TJ Solutions



Integrator – Solar Power Plant, Solar Street Light, Solar Water Pump, Solar Water Heater, Electrical work -Energy, Green & Environment Audit. STP,ETP,Bio Gas Plant.

#### **Suggested Treatment Technology**

The effluent line will have the following treatment systems:-

Outlet from lab Pumping to →Flocculation tank →Settling tank →Bottom sludge to sludge drying beds→ Over flow to filter feed tank →Treated water over flow to out let

#### **DESIGN BASIS:-**

The proposal is for a wastewater treatment plant for the disposal of wastewater generated in the complex with the inlet characteristics as furnished by the customer

#### **Total Design Capacity of Treatment:**

1000 Litres/day

Expected characteristics of the influent water to the treatment system will be as follows

SI. No.	Parameter	Effluent Inlet	Unit
1.	Flow	900	Litres/day
2.	pH	8.0 to 11.0	
3.	Temperature	< 38	Degree C
4.	Suspended solids	100	mg/l
5.	BOD	300 to 600	mg/l
6	COD	1000 to 1500	mg/l

#### Characteristics of the Treated Effluent with DMF outlet

The treated effluent will meet the following levels

SI. No.	Parameter	Out let characteristics	TNPCB Norms	Unit
1./_	Flow	900		Litres/day
2.	рН	7.0 to 8.0	6 - 9	
3.	Temperature	< 38		Degree C
4.	Suspended solids	20	< 30	mg/l
5.	BOD	< 30	< 30	mg/l
6.	COD	< 250	< 250	mg/l

#### Harvest Solar Energy, , Save mother Earth

4/101, Thomas Road, Raja Sir Muthiah Nagar, Byepass Road, Ellis Nagar, Madurai-625016. Cell : 94431 54641, 99433 54641, Ph : 0452-2606050

Email: <u>tisolutionsmadurai@gmail.com</u> Web: <u>www.tisolutions.in</u> 13/23 Elango St, Ullagaram Nanganallur, Chennai – 600061. 14/41, South Street, Agateeswaram& Post, Kanniyakumari Dist-629 701.

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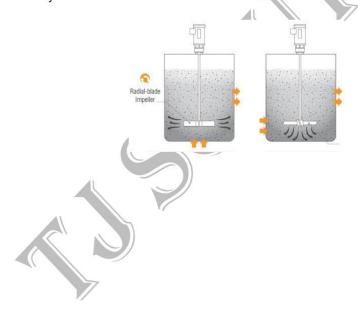
#### PROCESS DESCRIPTION:-

#### Coagulation and Flocculation

The flocculation takes place in tanks equipped with a slow stirrer with blades, or directly in the tubes which feed the successive flotation phase. The object of this phase is to favour the separation of the suspended solids and colloids in the water, by means of neutralization of the electric charges of the suspended solids which, interacting between themselves, prevent separation and slugging. To reach this object nutrient salts are used, successively polyelectrolyte is dosed to improve aggregation in sludge flakes and to favour slugging of suspended solids, grouped in the form of sludge flakes. The separation of sludge flakes and water takes place in decantation-basins or tanks.

#### **Settling Phase**

The settling phase is that allows the settlement of sludge flocks with a consequently good separation between clean water and sludge. The sludge flocks settled at the hopper bottom is removed to drying beds, while the supernatant overflows to the treatment holding tank facility or directly drained.



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Size and model may be vary based on quantity and designing

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## Flocculation Tank OUR SCOPE OF WORK & SPECIFICATIONS FORSUPPLYING EQUIPMENTS

1. Raw water feed pump:

Qty - 1 Number

MOC - CI Motor power - 1 HP

Make - Lakshmi/Kirloskar/Equal ant

Supply - Hayman

2. MS Epoxy painted Flocculation Tank - Motorised Stirrer:

 Qty
 1 No.

 Stirrer MOC
 SS 304

 Gear Box MOC
 CI

 Motor Power
 0.5 HP

 Supply
 Hayman

3. MS Epoxy painted Conical settler Tank

Qty - 1 No.
Supply - Hayman

4. Chemical dosing pump

Oty - 1 No.
Model Diaphram
Supply - Hayman

5. MS Epoxy painted Filter feed Tank

Qty - 1 No. Supply - Hayman

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#### 6. Filter feed pump:

Qty - 1 Number

MOC - CI Motor power - 0.5

Make - Lakshmi/Kirloskar/Equalant

Supply - Hayman

#### 7. FRP Multi Grade Filter

Qty - 1 No. Supply - Hayman

#### 8. Inter Connecting Pipe Lines, Fittings & Valves:

Qty - 1 Lot MOC - PVC Make - Supreme Supply - Hayman

#### **COMMERCIAL OFFER**

#### Pricing: -

S.No.	Description	Amount (Rs.)
	The Price for Supply of Prefabricated Effluent Treatment Plant with a Treatment Capacity of 1000 litres/day using Chemical Treatment (Excluding civil and Electrical)	2,57,500.00 +GST

Note-1: Order to be placed as per the description mentioned above.

Note-2: The above design parameters of the plant shall be modified at time

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of Erection/Commissioning without compromising the Performance of the system Note-3: Expenses for Civil, , Transport, Shed and Electrical works.

Waste water Collection Tank, Treated water collection Tank, Plat form for the erection of

(8 Feet x 6 Feet), PVC pipe ,Electrical Items ) Customer scope

#### Terms and Conditions:-

**ETP Pre Fabricated unit** 

Delivery : 2-3 weeks from the date of work order along

With 100% advance

GST : 18% Freight To Pay (Erode to Nager coil)

Erecting & Commissioning : Included Validity : 15 Days.

Warranty:

12months from the date of Erection or 18 months from the date of supply whichever is earlier. This warranty includes only inherent manufacturing defects; it does not cover any replacement for normal wear and tear.

#### SCOPE OF EXCLUSIONS:-

- 1. All civil/electrical works
- 2. Collection or treated water tank if any
- Water, Chemicals and Lubricants required for Erection and Commissioning to be supplied at free of cost.
- 4. Plant Room &Shed.
- 5. Lighting arrangements and generators if required during erection work.
- 6. Materials will be delivered immediately after inspection from our factory.
- 7. For unloading the materials, equipments, tools, except ground floor will be your scope.
- 8. Crane for lifting the materials.
- 9. Separate room to store the materials.
- 10. Security for the storeroom.
- 11. During commissioning we will depute our engineer for the same and we require an Operator to operate the plant.
- 12. Decent boarding and lodging during erecting and commissioning for our engineers
- 13. Treated Water Pump & Pipe Line from out Final Treated Water Tank.
- 14. Any other things which is not mentioned apart from our proposal.

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Thanking You

For TJ Solutions

N. Tamil Selvan

94431 54641

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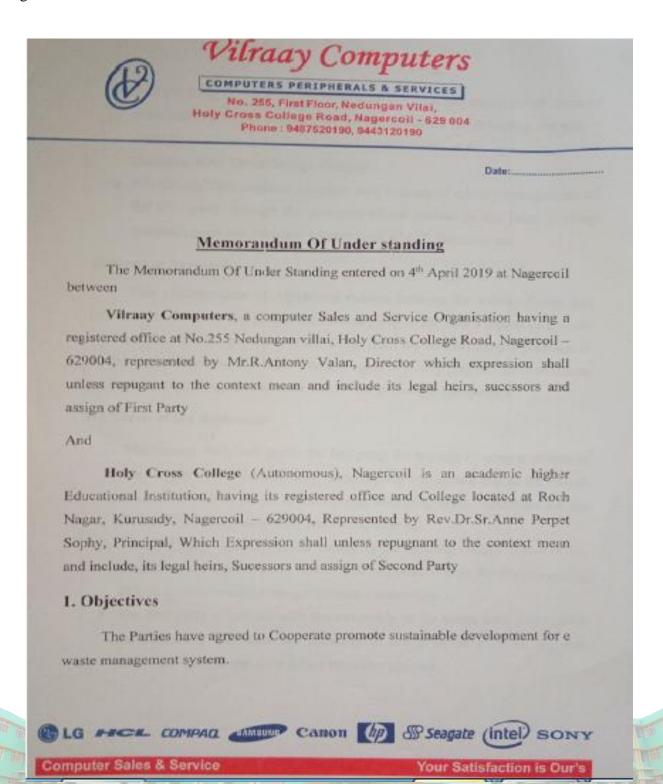
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#### E-waste MOU

The memorandum of understanding is signed on 4<sup>th</sup> April 2019 between Vilraay Computers and Holy Cross College (Autonomous), Nagercoil. The sole purpose of this MOU is to dispose the non-degradable E- waste of Holy cross college with bye back policy. The period of agreement is from 2019 to 2022.



- For the Holy Cross College termed as 2<sup>nd</sup> Party an objective of creating sustainable e waste management in its campuses by disposing the nondegradable waste as the Scrap. The 2<sup>nd</sup> party enters in this agreement for the college at Holy Cross College Campus.
- For Vilraay Computers to associate with in areas of e waste management of the 2<sup>nd</sup> party through the purchase of the ewaste in the form of scrap computer parts like Monitor, Mother hard, SMPS, Batteries etc.

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In witness Whereof the parties have signed the Memorandum Of Under standing on the day, month and year first here in above mentioned

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Rev. Dr. Sr. Ar	ne Perpet Sophy		
p. Fidnes	Holy Cross		
rtincipal	PRINC	IPAL	
Holy Cross Co	llege, Nagercoli	College	
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2. For Departs	ment of Compute	r Science, Holy Cros	s College
1000			
Sr Jothi			
Rev. Sr. Jothi	Antony		
Head of the De	partment ,Comput	er Science	
HEAD OF THE	GIRRITHENE		
MOLY CROSS CO.	CONTURBING STATE		
For Vilraay Co	omputers		
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Director	Ph: 04652	-0.28 No.4	



### WASTE MANAGEMENT SERVICE AGREEMENT

This waste management service agreement is made and executed on this date 14.02.2023 between

#### CLIENT

HOLY CROSS COLLEGE (Autonomous) Affiliated to M.S. University, Tirunelveli Nagercoil - 629 004, Tamil Nadu, India

#### SERVICE PROVIDER

Mr. P.T. RAMESH P.T.R. Shop, Kurusady, Nagercoil - 629 004, Tamil Nadu, India

As per this waste management service agreement,

The Service provider agrees to collect and dispose of waste products such as papers, cardboards, bottles, plastics, e-wastes and confirms that he will be responsible for tools, equipments, labor and manpower to achieve this.

Also confirm that he will not dispose the collected wastes in sewer, rivers, swamps and locations that are nuisance to the public.

The client needs to make sure that all the disposable waste are kept in an assigned area/ room and will bring to the on-time notice of the Service provider for safe disposal.

This agreement may be amended in writing by mutual consent of both the parties IN WITNESS whereof, the undersigned parties have agreed and executed this document.

For Client

Principal, Holy Cross College, Nagercoil PRINCIPAL

Holy Cross College (Autonomous) Nagercoil - 629 004.

Witnessed by

Sr. Asha

Office Superintendent

Holy Cross College, Nagercoil

Dr. A. Punitha

**Eco-club Nodal Officer** 

Holy Cross College, Nagercoil

For Service provider

78629 Mr. P.T. RAMESH

Witnessed by

JANUA .

Mr. E. Kalliyam Pillai Sweeper'

Holy Cross College, Nagercoil

65-1449P91 Mr. G. Iyyappan

Scavenger

Holy Cross College, Nagercoil