Green Envionment & Energy Audit Report 2018-2019

For

Educational Institution

At

S.F. No. 235/1, 235/2, 235/3, 235/4, etc.of Nemili (B) Village and 94/1A, 94/1B, 94/2, etc, of Pennalur Village, Sriperambudur Taluk, Kancheepuram District.

Submitted to

M/S. Sri Venkateswara Educational & Health Trust

Post Bag #1, Chennai - Bangalore High Road, Pennalur, Sriperumbudur Taluk, Kancheepuram District, Tamil Nadu 602 117

Prepared by

Eco Services India Pvt. Ltd.
No. 1/134, Dhanakotiraja Street, Sundar Nagar
Ekkaduthangal, Guindy, Chennai – 600032
Tel: +91-44-30683067/43102232 Fax: +91-44-30680006

ECO SERVICES

31st August 2019

Certificate

This is to certify that we have conducted a Green Environment & Energy Audit for the Academic Year 2018-2019 at the **Sri Venkateswara College of Engineering (SVCE)** located in Pennalur Village, Sriperumbudur Taluk, Kancheepuram District, Tamil Nadu

The audit broadly covered the following components in the campus,

- Biodiversity Aspects of Campus
- Solid Waste, Hazardous Waste and Bio-Medical Waste Management
- Water and Waste Water Management
- Operations of Sewage Treatment Plant Facilities (STPs)
- Rain Water Harvesting Facilities
- Renewable Energy/Energy Conservation Aspects
- Transportation Facilities and Carbon Footprint Reduction
- Green Campus/Environmental Promotional Initiatives

The activities and management of various components mentioned above have been verified and found satisfactory. The efforts taken by the management, faculty and students towards Environmental Protection and Sustainability are highly appreciated and commendable.

For **Eco Services India Pvt. Ltd.**,

Dr. P. Kalaiselvan
Accredited EIA Coordinator (NABET)

Eco Services India Private Limited
No.1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600 032, Tamil Nadu, India
Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in

Declaration

I hereby declare and certify that this audit report is prepared by a team of our in-house accredited experts based on their visits to the campus and physical verification of records. I hereby confirm that I have applied complete due diligence on my part in ascertaining the appropriateness of the information furnished in this audit report.

For **Eco Services India Pvt. Ltd.,**

Dr. P. Kalaiselvan

Accredited EIA Coordinator (NABET)

Contents

1.0 Introduction

1.1. About the Campus

SVCE College of Engineering (SVCE) a leading Educational institution pledges to achieve academic excellence along with the harmonious development of personality of students for the nearly 4 decades.

SVCE campus developed in 95 acres vast lush green campus located at the Pennalur Village i.e at the western outskirts of Chennai. The institution has Academic Blocks, Open Air Auditorium, Boys & Girls Hostel, Library, Canteen, Hostels, Swimming Pool, RO Plant, Gymnasium, Indoor Sports Facility and Play Grounds.

1.2. Environmental & Sustainable Responsibility

The institution is keen in adopting Environmental & Sustainable duties in their management responsibility. To abide the statement, following instruments are in practice.

- Green Policy/Statement
- Environmental Committee

2.0 Audit Planning

2.1 Purpose of Green, Environment & Energy Audit

In accordance with their policy, the Green, Environment & Energy Audit was conducted in the campus once in a year.
The audit measures the extent to which the campus activities are in compliance with the applicable regulations, policies and standards pertaining to the environmental Campus.
Audit Team verifies the all environmental components installed in the campus and summarizes the observations recommendations at the site.

Audit Methods	• Campus Inspection • Interaction with students & employees • Review of Registers, Records & SOPs

Audited	• Maintenance & Utility In-charges • Environmental Committee • Staff & Students
Auditor	Eco Services Team
Academic Year	2018 - 2019
Audit Month	August 2021

3. Audit Findings

The following components/practices were selected and audited with various departments & Staffs and the observation on their implementation is enlisted below.

Table 3.1 Detailed Audit Findings:

Area	Scope/Criteria	Observations
Environmental Policy	• To inculcate a strong sense of commitment and responsibility among students and members of faculty to follow an eco-friendly lifestyle and habits.	• Interaction with students shows there are aware about the environmental initiatives in the campus. • Staffs coming up with Eco friendly ideas shows that their mindful about their responsibilities
	• To make students aware of the sustainability goals at the micro and macro level and to strength their participation and involvement to promote and implement sustainability goals.	• It was observed that institution is making efforts to create knowledge about various aspects of sustainability practices. • It was noted that webinars, and events were conducted for the students to promote sustainability goals.
	• To advance governance regarding environmental compliance and employ methods to reduce the waste and conserve energy and water conservation.	• Institution is encouraging the students and faculties regarding the conservation various resources such as water, food, energy, etc. • To overview the governance regarding environmental compliance environmental committee is in Place
	• To improve the biodiversity of the campus.	• There are around 1300 Trees & 600 shrubs planted in the campus, as reported. • 2 Microhabitat to house butterflies, Insects is inspected and is lively. • Regular maintenance of gardening can be seen

Area	Scope/Criteria	Observations
	• To be recognized as Eco friendly and green campus.	• Solar Pans are installed in the academic Blocks • Bio Gas Plant is effectively operated to reduce the Waste Carbon Footprint • Reuse of treated sewage can be seen for gardening & flushing • Campus is a Plastic Free Zone.
Statutory Compliance	Complaince with the Statutory Requirements.	• Environmental Clearance from State Environment Impact Assessment Authority dated 29.04.14 is available and reviewed. • Consent To Operate under Air & Water Acts is obtained from Tamil Nadu Pollution Control Board on 07.08.2017 valid till 31.03.2022. • Hazardous Waste Authorization obtained under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 from Tamil Nadu Pollution Control Board on 16.08.2017 and valid till 15.08.2022.
Energy Conservation	• Utilization of Solar Energy	• Photovoltaic Panels of 35 KW was installed over the Terrace in one of Academic blocks.
	• Use of LED Bulbs/ energy saving Fixtures	• New Library Block houses sensor based lights, LED Lights etc.
	• Transportation & Carbon Footprint Reduction	• Students & staffs were encouraged to opt of common/ college bus services To minimize the travel carbon foot print.

Area	Scope/Criteria	Observations
		• Proposal for Battery Vehicles was reviewed and discussed. • Fuel Free - Material handling carts employed to save fuel The Photographs of transportation services is enclosed herewith as Attached as Annexure - III
	Bio gas & other alternative fuels	• Institution operates a Bio gas Plant (35 Cu.m capacity) to treat the food waste. • Bio gas storage cylinders available for reuse in Kitchens was seen. The Photographs of Bio gas plant components enclosed as Annexure - V
Water Conservation	Rain Water Harvesting	• Storms Drains run off are internally collected aand used theough storage system. • Huge Rain water harvesting pond observed at the site. (4 MLD)
	Recycling of treated sewage/ water	• Excess storm runoff collected was stored, treated and reused for Flushing & gardening purposes. • STP treated water s used for Gardening and flushing purposes

Area	Scope/Criteria	Observations
	Water Quality	• Water Treatment Plant was operated to treat the raw water. The Photographs of WTP enclosed as Annexure IV • Reports from NABL Accredited labs were reviewed and quality of water samples are well within the ISO 10500:2015 standards.
	Water Distribution system	• Drinking Water are bottled in Water Dispenser bottles and dispatched to classrooms and all other amenities.
Waste Management	Municipal Solid Waste Management	• Campus tends to be a Plastic Free Zone • Tri color Bin – Collection System near the entry/exit of can be found near Blocks, Canteens & common areas. • Workers stated that Organic Waste generated is treated in Bio gas plant. • A wing of ITC Limited collects the recyclable waste i.e paper, plastics etc. in the campus. • Bio Gas flow records, Appreciation Letter from ITC Limited was reviewed and found effective. • The Bio gas plant Photographs attached as Annexure – III
	E-waste management	• An agreement with TESSAM recyclers is in place and valid.

Area	Scope/Criteria	Observations
		• Separate Room stacked with E waste components CPU, Monitors etc is inspected. • The MOUs & Photos of E Waste Handling storage room attached in Annexure – VII.
	Hazardous Waste Management	• The Spent lube oil derived from DG sets is stored separately.
Air Emissions & Control	Stack Emissions	• Exhaust Stack connected to for 3 Nos. of Diesel Generator sets. • Stack Height is in line with CPCB Norms and Consent issued.
Waste Water Management	Treatment options available	• Conventional Activated Sludge Process Based STP is seen under operation. • Tertiary Treatment systems Ultra Filtration installed to increase the quality of treated sewage.
	Waste water Quality	• Month wise STP Outlet Sample Test Reports was reviewed. • Reviewed Lab Reports shows that the Treated Sewage meets the TNPCB Norms.
Green Campus & Environment Initiatives	Environmental awareness workshops	• Environmental Committee framed combining faculties of different departments. • Institution is regularly conducting Seminars and awareness programmes to highlight the principle of Sustainability in every seminars & programs

Area	Scope/Criteria	Observations
		• The Photos & list of activities carried out to promote environmental awareness can be seen in Annexure – X.

4.0 Summary of Findings

The overall GEE requirements are under function and following are the observations suggested.

- A separate E Waste room can be maintained for E waste storage till is handed over to recyclers since it is at present in decentralized manner.
- In coming future, LED Lights can only be considered
- Incinerator in the Ladies Washrooms can be considered.

Annexures

Annexure I

Bio Diversity:

From the site inspection, it is evident that the educational Institution Campus has already planted adequate numbers of saplings all along the periphery and inside the campus, roadways and available open spaces. The major aim of greenbelt development plan is to attenuate air pollutants released into the environment but it can also help in overall improvement in the environmental conditions of the campus.

Floral Diversity:

The plan will address the following issues such as attenuation of air pollution, noise reduction, improving the biodiversity of the region, adding aesthetics and combating soil erosion and prevention of land degradation.

A well designed green-belt helps in intercepting particulate matter and gaseous pollutants and helps in purifying the air. Trees acts as effective barrier and absorber of noise. The green belt around the campus acts as an indicator in the event of release of gaseous emission by visible morphological changes in the leaves, stem etc.

To accrue the benefits of greenbelt and to maximize its potential in environmental management around the campus, choice of the green belt tree and shrub species plays a vital role. About 1259 nos. of trees and 370 nos. of Shrubs are planted in 3.5 ha of land and the details of trees and shrubs species are furnished below.

List of Tree/shrubs present at site

S.No.	Common Name	Botanical Name	Tamil Name
1.	Royal poinciana	*Delonix regia*	Sengonrai Maram
2.	Fishing rod tree	*Pterospermum suberifolium*	Taddaemarum
3.	Flame of the forest	Butea monosperma	*Kincukam*
4.	Trumpet Flower/ Yellow Snake tree	Stereospermum colais	Vasantharani Maram
5.	Ceylon ebeny tree, East Indian Ebony	Diospyros ebenum	*Karingali*
6.	Jodpakli	Dimorphocalyx glabellus	Thenthukk
7.	Seashor	Pongamia pinnata	Pongam

	Mempari, Pongam, Indian Beech		
8.	Alexandrian laurel	Calophyllum inophyllum	Punnnai
9.	Indian lilac	Azadirachta indica	Malai vembu
10.	Rain Tree	Samanea saman	Seema vaagai
11.	Banyan	Ficus benghalensis benghalensis	Aalam
12.	Fig tree	Ficus glomerata	Atthi maram
13.	Strangler fig		
14.	Noni	Morinda tinctoria	Nuna maram
15.	Neem	Azadirachta indica	Vembu
16.	Indian bael	Aegle marmelos	Vilva maram
17.	Tamarind tree	Tamarindus Indica	Puliyamaram
18.	Rosy trumpet tree	Tabebuia rosea	Vasantharani Tree
19.	Royal Palm	*Roystonea regia*	Panamaram
20.	Fishtail Palm	*Caryota urens*	Panamaram
21.	Table palm	*Livistona Rotundifolia*	Panamaram
22.	Areca palm	*Dypsis lutescens*	Date Palm
23.	Date palm	*Phoenix dactylifera*	Date tree
24.	Copperpod	*Peltophorum pterocarpum*	Perungondraii maram
25.	Ironwood tree	*Cassia Siamea*	Sinnakennai
26.	Casuarina	*Casuarina junghuhniana*	Savukku maram
27.	Zebra wood	*Guettarda speciosa*	Panneer maram
28.	Devils Tree	*Alstonia scholaris*	Ezilai aalai
29.	Kadam	*Neolamarckia cadamba*	Kadamba maram
30.	Malabar Neem	*Melia dubia*	Malai Vembu
31.	Teak	*Tectona grandis*	Thekku
32.	Beach-almond	*Terminalia bellirica*	Than-dri.
33.	Golden Shower, Indian Laburnum	*Cassia fistula*	Sarakondrai
34.	Indian cork tree	*(Millingtonia hortensis*	Mara malli
35.	Cannon Ball Tree	*Couroupita guianensis*	Nagalinga maram
36.	Indian ash tree	*Lannea coromandelica*	Othiyan maram
37.	Malabar plum	*Syzygium cumini*	Naval maram
38.	Bullet Wood	*Mimusops elengi*	Makila maram
39.	Butter tree	*Madhuca longifolia*	Iluppai maram
40.	Mango tree	*Mangifera indica*	Maa amram
41.	Bastard poon tree	*Sterculia foetida*	Pootha karapaan
42.	Peacock flower fence	*Adenanthera pavonina*	Annai kundrimani
43.	Indian laurel	*Terminalia elliptica*	Neer mathi

44.	Sea almond	*Terminalia catappa*	Badam tree
45.	Gooseberry tree	*Phyllanthus emblica*	periya nelli maram
46.	Indian rock fig	*Ficus arnottiana*	Kallala maram
47.	Notched Leaf Soapnut	*Sapindus emarginatus*	Poovandikottai Maram
48.	Mahogany	*Swietenia macrophylla*	Mahogany
49.	Orchid tree	*Bauhinia variegata*	Mantharai
50.	Orchid tree	*Bauhinia racemosa*	Mantharai
51.	Singapore Cherry	*Muntingia calabura*	NeiPazha Maram
52.	River tamarind	*Leucaena leucocephala*	Peru-n-takarai
53.	Nipa palm	*Nypa fruticans*	Panamaram
54.	Guava	*Psidium guajava*	Guava
55.	Pala indigo	*Wrightia tinctoria*	Veppalai
56.	Yellow Bells	*Tecoma stans*	Nagasambagam
57.	Earleaf acacia	*acacia auriculiformis*	Kaththik karuvel

Greenbelt Photographs at site

Faunal Diversity:

It was also noted during the audit that a micro habitat was created within the campus with aim of marinating the biodiversity of the campus.

In order to attract butterflies, 20 species of nectar-yielding saplings were planted. As a result of planting a total of nearly 40 species of butterflies have been identified in the Micro Habitat. A well-maintained lawn alone will not attract butterflies, other insects or smaller life forms.

Micro Habitat

Annexure II

Power Requirements & Energy Sources

This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliances, natural gas and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment. However, many may not realize how much influence the higher education sector has in the larger energy market. Energy sources utilized by all the departments and common facility centers include electricity.

Major use of energy is in office, canteen, hostels and laboratories for lighting, and laboratory work. Energy consumption by major energy. The total connected load is 1089 kVA and sanctioned demand from TNEB is 9000 kVA. The campus is achieved utilizing the Solar Energy to generate 35 kwh out of the total consumption. Furthermore the followings are adopted as energy conservation measures in the campus.

Transformer and Diesel Generator Details

S.No.	Power House	Transformer	Qty	Total Capacity
1	Sub Station	500 kVA	3	1500 KVA

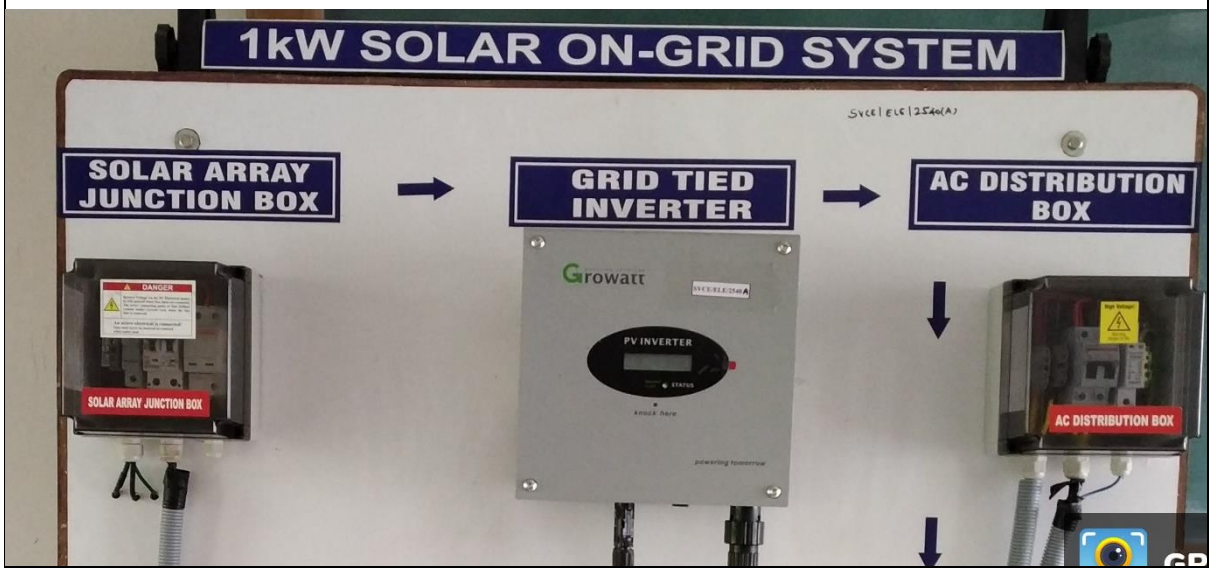
S.No.	Generators	Capacity	Qty	Make	Status
1	DG sets 1	500 kVA	1 Ns	Powerica	Under Operation condition
2	DG sets 2	500 kVA	1 Ns	Powerica	Under Operation condition
3	DG sets 3	500 kVA	1 Ns	Powerica	Under Operation condition

Estimation of Energy Savings:

S. No.	Description	No. of fixtures	Power consumption without Energy saving measures		Power consumption with Energy saving measures	
			Load per Fitting (in watts)	Total load (in watts)	Load per Fitting (in watts)	Total load (in watts)
1. Lighting Fixtures	Lighting Fixtures					
a	New Library Block	430	70	30100	45	19350
b	Canteen & Hostel Blocks	270	75	20250	21	5670
c	Admin Block	62	70	4340	40	2480
d	Common area	135	80	10800	30	4050
2	External Lighting Main Gate, Workshop & Hostel Block Lighting	21	250	5250	72	1512
3	Lifts	2	8,000	16000	5,000	10000
4	Solar Panel					35000
	Total			86,740		78,062
	Total power consumption/year in KW			37,99,21,200		34,19,11,560
	(Assuming 12 Hrs/ day / 365d)					
	Thus, energy saved in %					10.00461148
				11% (say)		

Solar Panels at the campus

Installed capacity –35 kW



Annexure III

Transportation Facilities

- Majority of the students in the campus rely on public transport, and the transport service provided by the educational institution indicating lesser carbon foot print of the student community.
- It is reported that e there are re around 50 nos. of buses commuting the students & staffs from various parts of city/ surrounding area in the daily basis.
- The Campus has yet to introduce the Electric Vehicles.

Mode of Transports at site

Annexure IV

Water & Waste Water Management

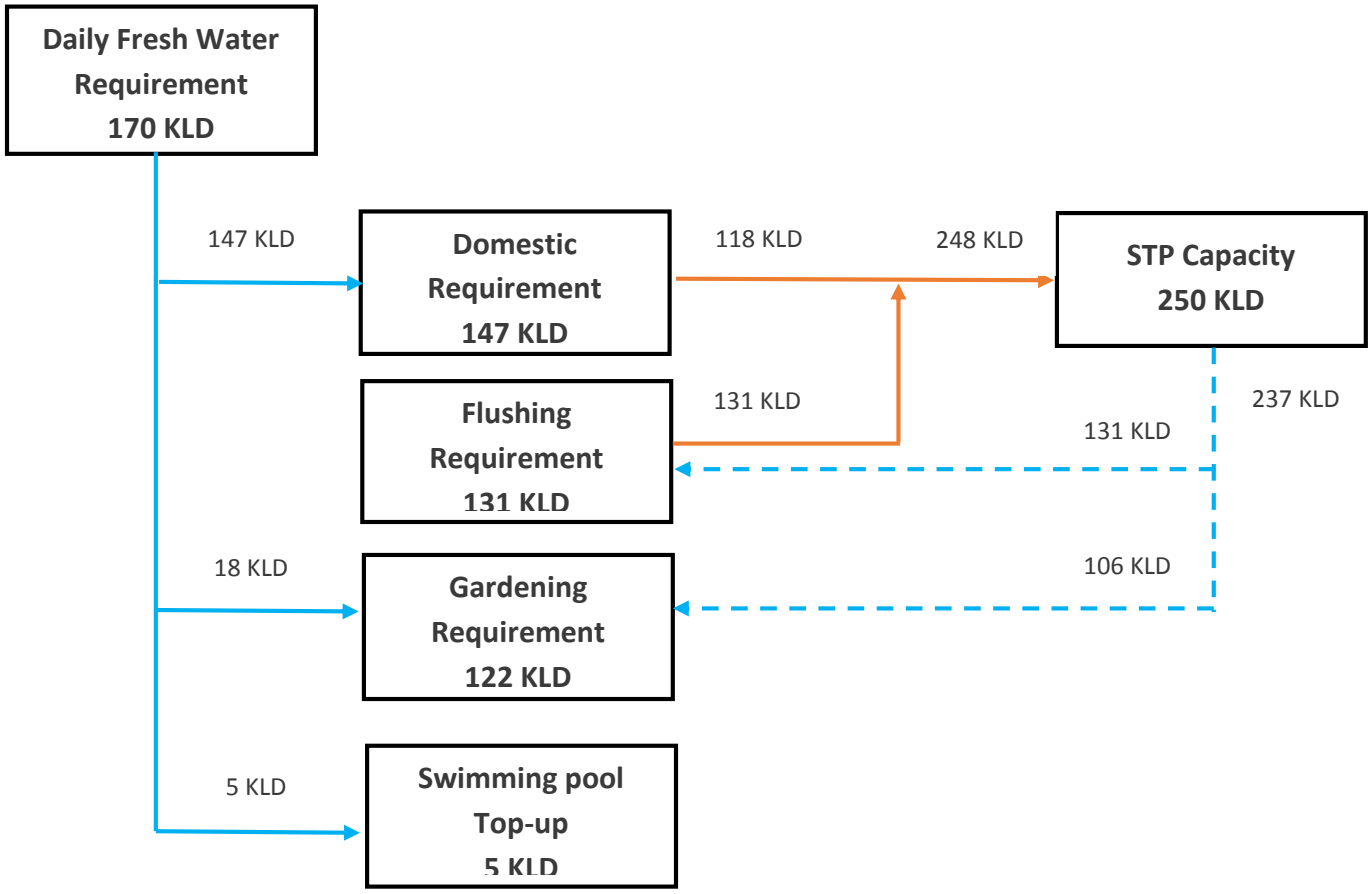
The Campus Water Requirement is reported as 277 KLD and their Fresh Water Requirement is said to be 155 KLD (which is being sourced through the Private Tankers water supply and treated in Water Treatment Plant with a capacity of 200 KLD) and the Flushing water requirement is 122 KLD.

The Sewage generation from the campus is about 245 KLD which is being treated in Sewage Treatment Plant having 250 KLD Capacity. The details of water requirement and the water balance chart is shown in table below:

Project Component	Total Occupancy (Nos.)	Water Requirement (LPCD)			
		Water Requirement rate (LPCD)	Fresh Water for Domestic Requirement	Flushing Requirement	Total Water Requirement (L)
Students	4109	45	20	25	1,84,905
			82,180	1,02,725	
Teaching Staff	450	45	20	25	20,250
			9,000	11,250	
Boys Hostel	601	90	70	20	54,090
			42,070	12,020	
Girls Hostel	153	90	70	20	13,770
			10,710	3,060	
Non-Teaching Staff	22	45	20	25	990
			440	550	
Staff Quarters	26	135	90	45	3,510
			2,340	1,170	
Swimming pool Top-up	-	-	5,000	-	5,000
Sub Total	**5361**	**-**	**1,51,740**	**1,30,775**	**2,82,515**
Green belt Development	35000 @ 3.5 KL per Ha		17,516	1,04,984	1,22,500
Total			**1,69,256**	**2,35,759**	**4,05,015**
			169 KLD	236 KLD	405 KLD

It is clear about 60% of the total water demand is being met through the recycled water which shows the importance to water conservation in the institution.

Water Balance Chart:



STP Components at site

Annexure V

Solid Waste Management

The solid waste generation of the campus comprises of biodegradable waste e.g. domestic waste, food waste, horticultural waste etc. and recyclable waste, like plastics, paper etc., and inert fractions. The current scenario of solid waste is as follows:

S. No	Project Component	Total Occupancy (Nos.)	Per Capita generation (Kg/P/D)	Total Solid Waste Generation (Kg/day)	Bio Degradable Waste (Kg/day)	Non Bio Degradable Waste (Kg/day)
1	Students	4109	0.4	1644	986	657
2	Teaching Staff	450	0.4	180	108	72
3	Boys Hostel	601	1.2	721	433	288
4	Girls Hostel	153	1.2	184	110	73
5	Non Teaching Staff	22	0.4	9	5	4
6	Staff Quarters	26	0.6	16	9	6
Total Solid Waste Generation		**5361**	**-**	**2753**	**1652**	**1101**
Total (Tonnes/day)				**2.8**	**1.7**	**1.1**

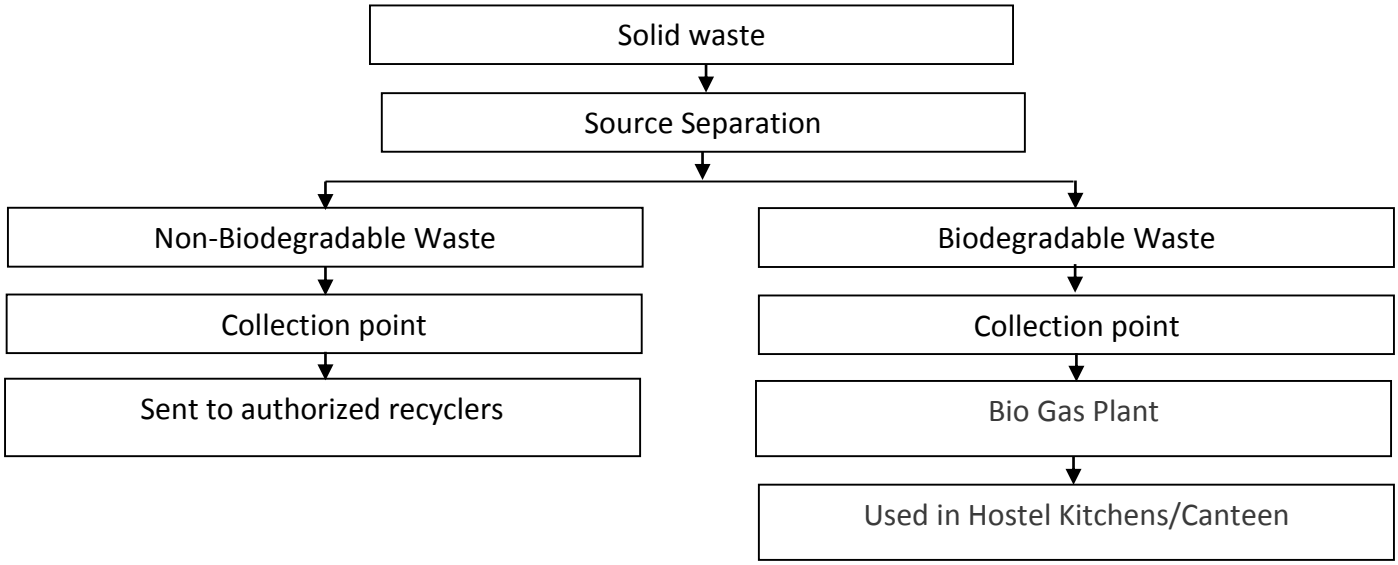
S. No.	Name of Solid Waste	Quantity T/day	Mode of Disposal
1	Bio Degradable Waste (Food, vegetables, paper wastes etc.)	1.7	Treated in Bio Gas plant and Used in Hostel Kitchens/Canteen
2	Non Bio Degradable Waste Plastics, Carton boxes, scraps etc.)	1.1	Handed over to Authorized Recyclers
3	STP Sludge	0.03	Used as manure for greenbelt Development

In the campus, sweepers are seen while handling domestic waste. Adequate number of collection bins separately for biodegradable and non-biodegradable waste has been provided as per the Municipal Solid Waste (Management and Handling) Rule, 2016. Waste from such

bins are collected separately on daily basis and taken to a separate centralized collection facility. Final segregation of solid waste into biodegradable, non-biodegradable, and inert fraction are done in the centralized collection facility. The biodegradable wastes are collected and feed into the Bio Gas Plant for Bio Gas Production. The non-biodegradable wastes are given to the ITC Limited for recycling Project called WOW (Well Being Out of Waste – A National Recycling Initiative)

Horticulture wastes leaves, grass and vegetative residues are being collected at the secured location such that it will not hinder daily activity schedule or washed away by the surface run-off causing choking of drains, etc. and being separately treated and disposed off along with biodegradable waste in the Bio Gas unit in the campus and the Bio gas is used in hostel kitchen.

The solidified sludge from the STP is being dewatered, and used as manure for the green belt.



Bio Gas Plant

ITC Limited

WOW
WELL BEING OUT OF WASTE

NET

To,

The Principal,
Sri Venkateshwara College of Engineering
Pennalur,
Sriperambudur
Chennai 602 117

Sub: WOW Proposal for Disposal of Waste Material,

Dear Sir,

Greetings from Nish Elgha Technologies Pvt Ltd, Associated for ITC LTD, PSPD, WOW (Well Being Out of waste) initiative for clean and Green environment initiative.

Thanks for your great support as we have signed agreement for collecting waste papers from your college campus since we are collecting waste papers only from Hostel premises

Hence we have to extent our service to your entire campus.

So we need your great support on the same to collect all kinds of waste papers from your entire college campus with same price which already mentioned in the agreement

We value your support

Thanking You,

For – WOW (Well Being out of waste)
99440 15467/9791373242

NISH ELGHA TECHNOLOGIES PVT LTD. Chennai 600 073

WOW (Well Being out of waste)

14, ANJANEYAR KOVIL STREET, VENGAIVASAL, MADAMPAKKAM, CHENNAI-600 073

Mobile: - 9677100845, 9840922432 LL: 044-6521 3366 E Mail: - jeyaminathan.jamky@gmail.com

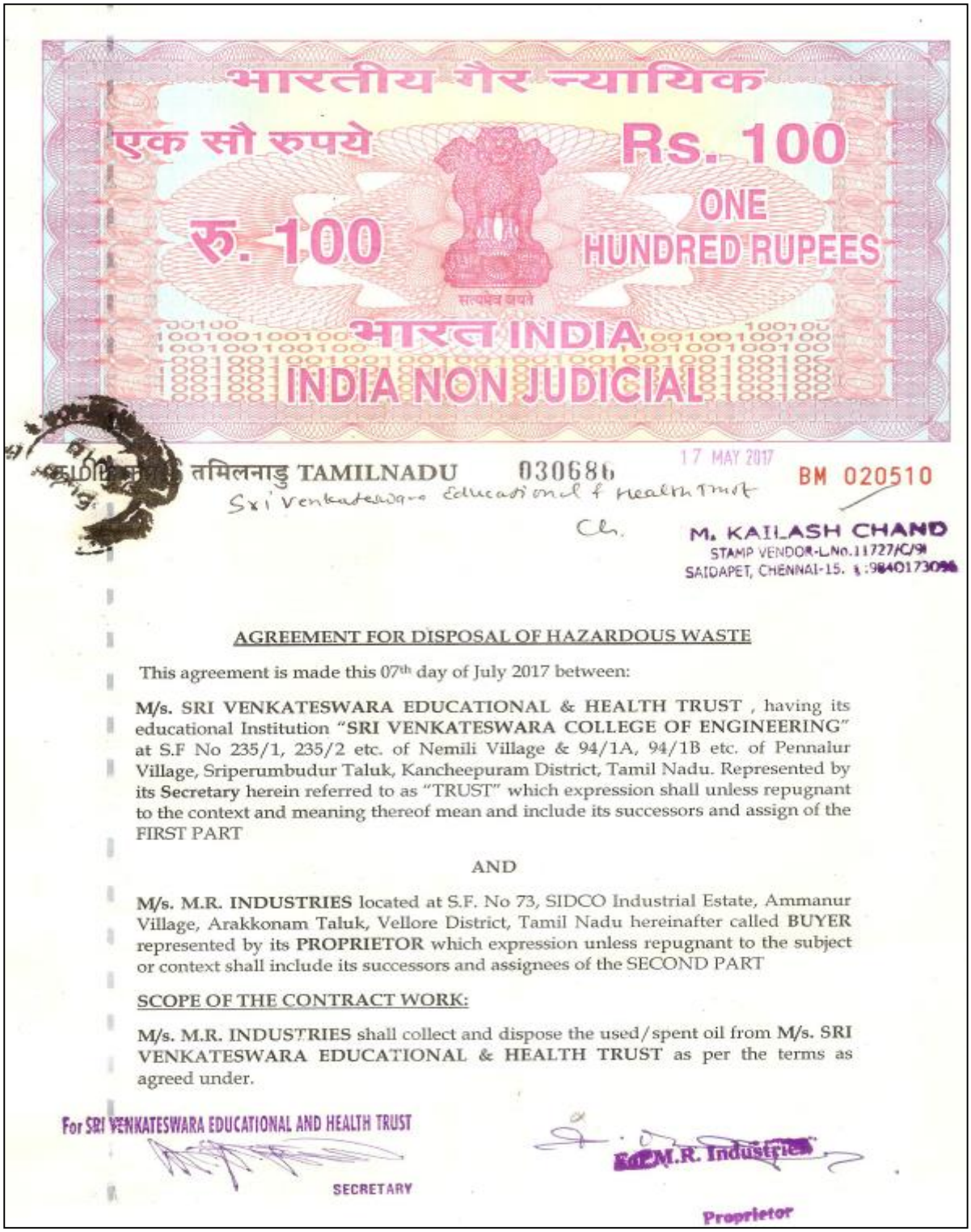
A MOU with ITC part of recyclable waste handed over initiative.

The other non-biodegradable waste are being handed over to the recyclers on a regular basis.

Annexure VI
Hazardous Waste Management

In an educational institution, the source for generation of Hazardous waste is mainly from Diesel Generators (DG) sets from which spent/used oil and filters will in hazardous in nature. These wastes are collected and segregated and disposed through the authorized vendor as per the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016.

The minimization, safe handling, and ultimate elimination of these materials are essential to the long-term health of the planet. For environmental sustainability the drainage of chemical laboratory collected in air tight cement chamber and frequently the chemical waste from chamber is sent for recycle or for scientifically destroy process.



भारतीय गैर न्यायिक

एक सौ रुपये Rs. 100

रु. 100 ONE HUNDRED RUPEES

भारत INDIA

INDIA NON JUDICIAL

तमिलनाडु TAMILNADU 030686 17 MAY 2017 BM 020510

Sri Venkateswara Educational & Health Trust

Ch.

M. KAILASH CHAND
STAMP VENDOR-Lic.No.11727/C/91
SAIDAPET, CHENNAI-15. ☎:9840173096

AGREEMENT FOR DISPOSAL OF HAZARDOUS WASTE

This agreement is made this 07th day of July 2017 between:

M/s. SRI VENKATESWARA EDUCATIONAL & HEALTH TRUST , having its educational Institution **"SRI VENKATESWARA COLLEGE OF ENGINEERING"** at S.F No 235/1, 235/2 etc. of Nemili Village & 94/1A, 94/1B etc. of Pennalur Village, Sriperumbudur Taluk, Kancheepuram District, Tamil Nadu. Represented by its **Secretary** herein referred to as "TRUST" which expression shall unless repugnant to the context and meaning thereof mean and include its successors and assign of the FIRST PART

AND

M/s. M.R. INDUSTRIES located at S.F. No 73, SIDCO Industrial Estate, Ammanur Village, Arakkonam Taluk, Vellore District, Tamil Nadu hereinafter called **BUYER** represented by its **PROPRIETOR** which expression unless repugnant to the subject or context shall include its successors and assignees of the SECOND PART

SCOPE OF THE CONTRACT WORK:

M/s. M.R. INDUSTRIES shall collect and dispose the used/spent oil from **M/s. SRI VENKATESWARA EDUCATIONAL & HEALTH TRUST** as per the terms as agreed under.

For SRI VENKATESWARA EDUCATIONAL AND HEALTH TRUST

SECRETARY

For M.R. Industries

Proprietor

Hazardous Waste Disposal agreement with M/s. M. R. Industries for disposal of Spent Oil from DG Sets

Annexure VII

E – Waste Management

E - Waste Management

The E –Waste generated like, obsoleted Computers from laboratories, Administration Buildings, Electrical and Electronic Equipment from the Laboratories is being collected and stored in a centralized earmarked area which will be handed over to the authorized recyclers for Recycling and Disposal.

The Purchasing Department will be responsible for the disposal of defective equipment's and E Scrap by the method which obtains Best Value for money. Intimation to the authorized recyclers through mail/ telephone for collection will be given on a periodic basis.

TES-AMM INDIA

TES-AMM (INDIA) PRIVATE LIMITED

Certificate of Recycling

To: Sri Venkateswara College of Engineering
Post bag No 3, Pennalur,
Sriperumbudur - 602 105

Date : 6-Sep-18
Load No : 194118
Ref No : 5856

Dear Sir / Madam,

This is to certify that TES-AMM (India) Pvt. Ltd., has recycled the materials stated below :

Sl. No	Description	Quantity (in Kgs)
1	Electronic Waste	3900.00
	Total :	3900.00

Received Date: 18-Aug-18

Recycling Date : 6-Sep-18

Approved By
Name : KARTHIKEYAN .M
Designation : Manager- Operation


Dec 27, 2021, 3:03 PM

Annexure VIII

Rain Water Harvesting

Rainfall

It is reported that Kancheepuram district receives rainfall during North-East Monsoon (Oct - Dec) and South-West Monsoon (June - September). A major portion of the rainfall is during North-East Monsoon. Sometimes the city also receives rainfall during January and February, but that is quite rare.

The annual rainfall in Kancheepuram is in the range of 800- 1000 mm. The characteristics of our rainfall demands not only to conserve large quantity of rainwater during these few days but also to store wherever it rains in preferably for direct use and alternatively as ground water.

Rain harvesting system

Rain Water Harvesting Pond:

Keeping in mind the importance of water and it scarcity it is implemented to conserve water by rainwater harvesting by which the subsoil water condition / moisture content is maintained / improved to a great extent. Also to harvest rainwater from the terrace area by collecting the same in a rainwater collection trench of suitable capacity and stored in a Rain water harvesting Pond.

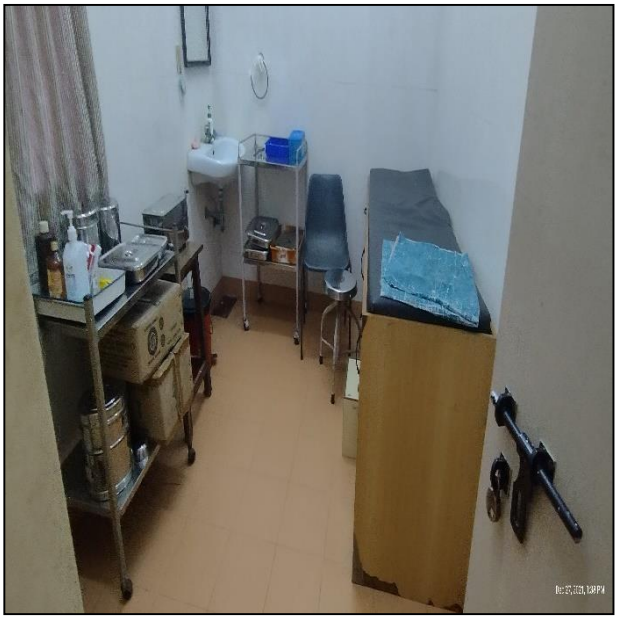
Rainwater from the roof-top of the institution buildings which is about 2,400 Sq.m is being collected in the pond with a capacity of 40 lakh liters. The collected water is reused for the domestic purpose within the campus with the provision of a filtration unit.

Rain Water harvesting pond

Annexure IX

Medical/Clinical Facilities

The Medical centre of SVCE was instituted in the year 2008 with 6 beds, a resident Medical Officer, a trained residential nurse and a qualified lab technician. Besides that, the college has first aid kits made available in almost all blocks. A 24-hour ambulance facility, adequate pharmaceutical support, medical lab services are a few of the mentionable services offered.



Annexure X

Green Campus & Environmental Initiatives

Environmental Activities:

The main objective of conducting the Environmental activates within the campus for the students, teachers and stakeholders to acquire knowledge of the environment beyond the immediate environment including distant environment. It helps the students understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future.

CARE - Concern, Awareness, and Responsibility for Environment is a student-run organization that works with peers, faculty, and community to create environmental consciousness among public, in general, and students, in particular. It motivates students to have an eco-friendly life style and attempts make the campus a more sustainable campus by converting green ideas into reality.

The activities carried out in the academic year related to Environmental is as follows:

- Mr Jaswanth K, pre final year student of Department of Information Technology, eco club - one of the developers of "House Sparrows" a mobile application to map Sparrows under the mentorship of Dr.T.Murugavel, HoD/HSS. A newspaper article of the same has been published in The Times of India on March 20th 2019

Students develop app to map house sparrows

Chennai: To map the dwindling sparrow population, students of the eco club at Sri Venkateswara College of Engineering have developed a mobile application for public use to crowdsource information about the bird.

To mark International Sparrow Day on March 20, the app, 'Go5—Save Sparrow', allows users to pin the location where a house sparrow is sighted. "Users can take a photograph of the bird or its nest and the data can be uploaded. Using this app a spar-

INT'L SPARROW DAY

row map in the city can be created that shows the distribution of the bird in various parts of Chennai. After recording sizable sightings, this data will be transferred to the e-bird portal," said K Jaswanth, one of the student who developed the app.

The eco club along with Environmental Monitoring and Action Initiating (EMAI) is part of the team that developed the app. Vishnu Kumar of EMAI said, the organization is also distributing sparrow nests that can be kept in residential areas.

"Before taking the nests, residents have to confirm that sparrows have been spotted in their neighbourhood," said Sanjay, another EMAI volunteer.

Principal of the college Ganesh Vaidyanathan said, "The project sparrow was initiated by the eco club five years ago. Now, the students have used technology to make a difference in nature conservation."

Nests have been distributed in some of the residential areas in north Chennai such as Royapuram, New Washermanpet, Thiruvotriyur, Manali, Perrys Corner and Chintadripet as these areas have existing trees, which attract sparrows.

Those wish to take a nest can contact Students Against Apathy or download the app from PlayStore.

- Mr. C. Muthuraj Assistant Engineer, Perundurai SIPCOT, Tamil Nadu Pollution Control Board delivered a Guest Lecture on “A strategic Problem Solver for Environmental Challenges” on 19th March 2019.
- CARE SVCE arranged a junk art showcase on 19th of August during Calibrations 2019

Annexure XI

Environmental Monitoring Programme

The environmental monitoring programs helps to continuously monitor the incremental increase in various pollutant concentration in the respective environment. It outlines the frequency of the pollutant concentration being measured in each environment and the parameters being monitored in respective environment.

S. No.	Description	Monitoring parameters	Frequency of Sampling and Analysis
Operation Phase			
1.	Ambient Air Quality	PM_{10}, $PM_{2.5}$, SOx, NOx and CO	Once in a month
2.	Stack Emissions from DG Set	PM, SOx, NOx, HC and CO	Once in a month
3.	Ambient Noise Level	Noise level in dB (A)	Once in a month
4.	Treated Sewage (STP)	pH, TSS, BOD and Fecal Coliform	Once in a month

All parameters shall be monitored; compilation and reporting is done by NABL Accredited Laboratory.

Annexure XII

Environmental Policy & Environmental Committee

Environmental Policy:

During the Audit, the educational institution's Environment Policy were reviewed and the policy is as follows:

Objectives

- To inculcate a strong sense of commitment and responsibility among students and members of faculty to follow an eco-friendly lifestyle and habits.
- To make students aware of the sustainability goals at the micro and macro level and to strength their participation and involvement to promote and implement sustainability goals.
- To advance governance regarding environmental compliance and employ methods to reduce the waste and conserve energy and water conservation.
- To improve the biodiversity of the campus.
- To be recognized as Eco friendly and green campus.

SVCE | Sri Venkateswara College of Engineering
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Email : acm@svce.ac.in URL : https://www.svce.ac.in

Green and Environment Policy

Statement

Sri Venkateswara College of Engineering (SVCE) is committed to making the Institution one of the most environmentally conscious and sustainable institutions in of the Country.

Objectives

- To inculcate a strong sense of commitment and responsibility among students and members of faculty to follow an eco-friendly lifestyle and habits.
- To make students aware of the sustainability goals at the micro and macro level and to strengthen their participation and involvement to promote and implement sustainability goals.
- To advance governance regarding environmental compliance and employ methods to reduce the waste, and conserve energy, and water consumption.
- To improve the biodiversity of the Campus.
- To be recognized as Eco friendly and Green Campus.

Process

- By introducing environmental sustainability concepts in the curriculum and research.
- By improving governance regarding environmental compliance; reduce its waste, energy, and water consumption proportionally against its growth in staff and student numbers.
- By enhancing, monitoring, and developing the biodiversity of the Campus by creating microhabitats, planting indigenous plant species.
- By promoting and creating smart, sustainable approach to the Institution's plans and projects.

Provisions

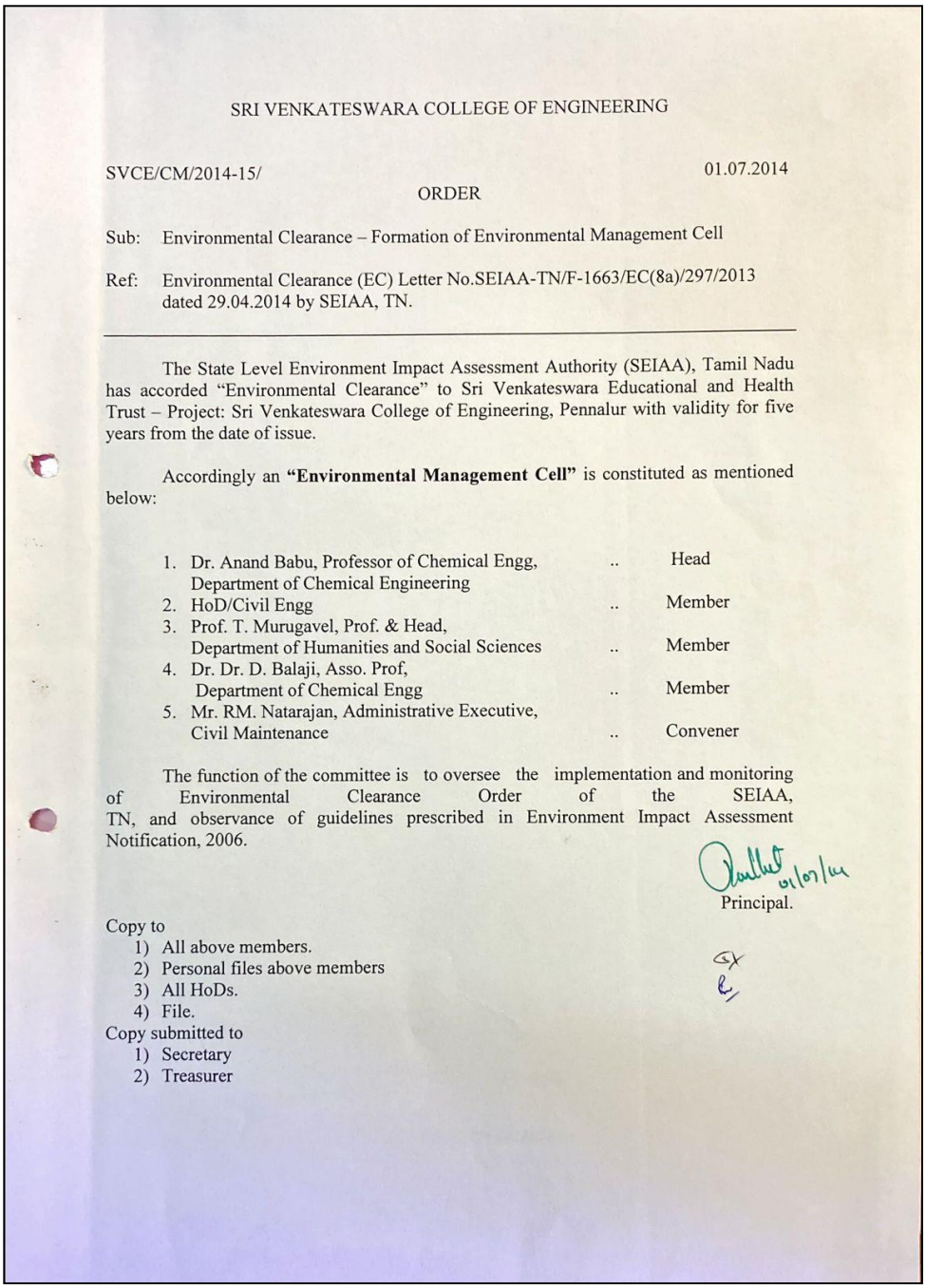
The College will provide adequate funding, infrastructure and staff for implementing the Green and Environment policy.

PRINCIPAL

Environmental Committee:

During the audit, details of the Environmental committee were reviewed which mainly consist of faculties from various departments in order to review the educational policy and to check the status of the targets made based on the Environmental policy.

The details of the Environmental committee is as follows:



SRI VENKATESWARA COLLEGE OF ENGINEERING

SVCE/CM/2014-15/ 01.07.2014

ORDER

Sub: Environmental Clearance – Formation of Environmental Management Cell

Ref: Environmental Clearance (EC) Letter No.SEIAA-TN/F-1663/EC(8a)/297/2013 dated 29.04.2014 by SEIAA, TN.

The State Level Environment Impact Assessment Authority (SEIAA), Tamil Nadu has accorded "Environmental Clearance" to Sri Venkateswara Educational and Health Trust – Project: Sri Venkateswara College of Engineering, Pennalur with validity for five years from the date of issue.

Accordingly an **"Environmental Management Cell"** is constituted as mentioned below:

1. Dr. Anand Babu, Professor of Chemical Engg, Department of Chemical Engineering .. Head
2. HoD/Civil Engg .. Member
3. Prof. T. Murugavel, Prof. & Head, Department of Humanities and Social Sciences .. Member
4. Dr. Dr. D. Balaji, Asso. Prof, Department of Chemical Engg .. Member
5. Mr. RM. Natarajan, Administrative Executive, Civil Maintenance .. Convener

The function of the committee is to oversee the implementation and monitoring of Environmental Clearance Order of the SEIAA, TN, and observance of guidelines prescribed in Environment Impact Assessment Notification, 2006.

01/07/14

Principal.

Copy to
1) All above members.
2) Personal files above members
3) All HoDs.
4) File.

Copy submitted to
1) Secretary
2) Treasurer