



ADITYA COLLEGE OF ENGINEERING

Approved by AICTE, Permanently Affiliated to JNTUK & Accredited by NAAC

Recognized by UGC under Sections 2(f) and 12(B) of UGC Act- 1956

Aditya Nagar, ADB Road, Surampalem - 533 437, E.G.Dist., Ph: 99631 76662.

Management of the various types of Degradable and Non-Degradable waste



ADITYA COLLEGE OF ENGINEERING

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Signed by: Adireddy Ramesh
Reason: Self-Attestation
Location: Kakinada, India
Date: 22-Jun-2023 (02:38 PM)



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

Our institution provides the following facilities to manage various types of degradable and Non-Degradable waste in the college premises.

- College provides separate bins for degradable and Non-Degradable waste
- College provides garbage collection vehicle to college and dispose the wastes in the proper way from bins.
- College installed a biogas plant to generate energy from decomposing waste from the college canteen and the hostel.
- Awareness posters on food waste and water conservation are placed in the college canteen and various blocks of the college
- College provides sewage treatment plant for waste water recycling
- E-Waste are stored for academic demonstration purpose and also sold out to entity with whom MOU was agreed upon for the disposal of obsolete e-materials every year.

The following facilities are available to manage various types of Degradable and non-degradable waste in the college premises.

- Separate waste bins for Degradable and Non-Degradable waste
- Garbage collection vehicle
- Biogas plant
- Awareness poster display on Food wastes and water conservation
- Sewage treatment plant
- E-waste management



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Management of the various types of Degradable and Non-Degradable waste

Solid Waste

Aditya College of Engineering took major steps to manage the waste to protect and create a clean and pleasant environment. Every day they regularly collect an average of 100 kg solid waste from the dust bins placed on the campus include departments, administrative-office, canteens, hostel, and guest houses.

The whole waste is segregated that can be used for composting which is dumped for vermicomposting. The vermicomposting unit requires biodegradable waste to convert as fertilizer that will be used for plants. The Paper waste from departments, libraries, administrative offices, Hostels are disposed of through vendors. Aditya promotes digital platforms to reduce the usage of paper for communication and sharing documents.

Solid waste includes both biodegradable and non-biodegradable components. The non-biodegradable solid waste generated in the campus include, paper, plastics, metal cans etc. Biodegradable waste includes food waste, vegetable peels, leaves etc.

'Use and throw' items like plastic cups, plates etc. used in the college canteen are replaced by reusable items steel glasses and plates. Glass, paper and metal waste is sold for recyclers.

Food waste and non-biodegradable waste are collected in separate bins. Biodegradable waste is disposed off in four dumping yards of size 3m x 3m x 2m, specially earmarked for the purpose.

The following facilities are available to manage various types of Degradable and Non-Degradable waste in the college premises.

- Separate waste bins for degradable and non-degradable waste
- Garbage collection vehicle
- Biogas plant
- Signage boards and pedestrian friendly pathways for all prominent places
- Awareness poster display on food wastes and water conservation
- Sanitary napkin incinerator
- Sewage treatment plant
- E-waste management

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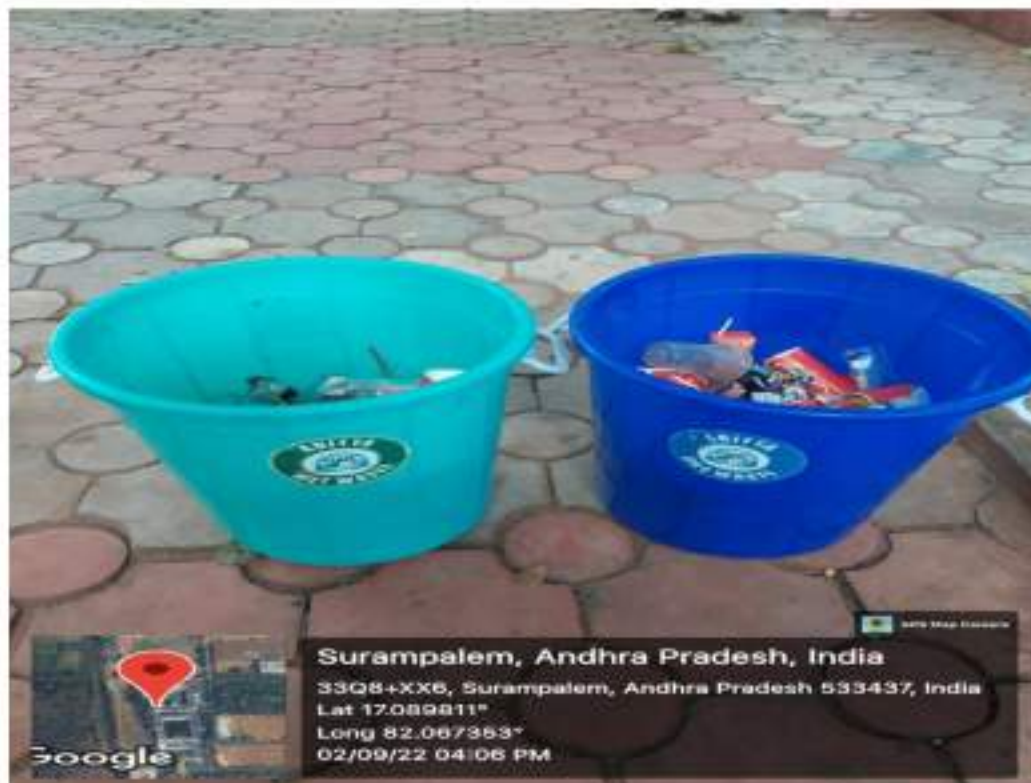
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Solid Waste



Dry waste and wet waste bins in the campus



Vermicompost Management Using Solid Waste

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Vermicompost Pit near Ramanujan Bhavan



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E-Waste Management

Aditya College of Engineering took major steps to manage the waste to protect and create a clean and pleasant environment. E-waste or electronic waste is created when an electronic product is discarded after the end of its useful life. E-waste mainly includes obsolete electronic devices, such as computer systems, servers, monitors, compact discs (CDs), printers, scanners, copiers, calculators, fax machines, battery cells etc.

E- waste was handled by the server room management. Components and other small devices/parts of non-repairable equipment's are used to fabricate new experimental kits /power supplies. This is one of the best practices of the management. The department has started reusing the electronic components from the discarded instruments, PCs, UPS, etc. such as transformers, transistors, ICs, Capacitors, Inductors, Resistors, Connectors, Sockets, Switches, Wires, LEDs and other electronic or electrical devices to fabricate the instruments and experimental kits.

The students and faculty have also involved in the maintenance and repairs of the instruments and experimental kits, which led to increase their life and the optimum uses. This have not only become a step towards the E-waste management but also cultivated innovative ideas among the students and the faculty. The students have also gained many skills through these activities



E-Waste storeroom in ramanujan Bhavan

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E-Waste from campus stored in Ramanujan Bhavan

Liquid Waste Management

Liquid waste that is generated in the institute falls into three following categories.

- i. Septic tank effluents from various sanitary blocks, water used for washing and cleaning of utensils etc. from canteen
- ii. Wastewater from laboratories using chemicals
- iii. Wastewater from RO plant

As the college is located in rural un-sewered area, waste water generated from the sanitary facilities is disposed off into septic tanks located at different places in the campus and their effluents combined with canteen waste water is used for gardening, watering trees etc. The excess wastewater will be directed into natural drain passing near by the college campus.

Waste water generated from the laboratories is very small in quantity; hence they are handled along with septic sewage.

RO plant wastewater is diluted with canteen wastewater and used for gardening, watering trees etc.

The future vision of the college is to establish full-fledged sewage treatment plant for sewage treatment and recycling the same only within the campus, thus achieving the goal of zero discharge campus.

Signed by: Aditya Kumar
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Waste water collecting pond



Liquid waste pipe line system form Ramanujan Bhavan




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Waste Recycling System

Aditya College of Engineering took major steps to manage the waste to protect and create a clean and pleasant environment. The college has 15 members team for housekeeping. Every day they regularly collect an average of 100 kg solid waste from the dust bins placed on the campus include departments, administrative-office, canteens, hostel, and guest houses.

The institute maintains two STPs with the capacity of 20000 liters water recycling and usage by the students in the hostel. Other water redirected to fields and ponds.

The whole waste is segregated that can be used for composting which is dumped for vermicomposting. The vermicomposting unit requires biodegradable waste to convert as fertilizer that will be used for plants. The Paper waste from departments, libraries, administrative offices, Hostels are disposed of through vendors. Aditya promotes digital platforms to reduce the usage of paper for communication and sharing documents.

Solid waste includes both biodegradable and non-biodegradable components. The non-biodegradable solid waste generated in the campus include, paper, plastics, metal cans etc. Biodegradable waste includes food waste, vegetable peels, leaves etc.

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Food waste and non-biodegradable waste are collected in separate bins. Biodegradable waste is disposed off in four dumping yards of size 3m x 3m x 2m, specially earmarked for the purpose.



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STPs with the capacity of 20000 liters



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MOU



Plot.No.42,

Block-D Extension, Auto Nagar,

Visakhapatnam - 530012, IDA.

8912755528, +91 9246762326

MEMORANDUM OF UNDERSTANDING

Between
Veera Waste Management Systems
And
Aditya College of Engineering

I. Purpose

The purpose of this Memorandum of Understanding (MOU) is to formally create an agreement between Veera waste management systems and Aditya College of Engineering to collect the E waste and solid waste from the campus in regular manner.

II. Background

The VWMS works to address emerging environmental issues and solve current and future environmental Problems. The agency works through partnering with non profit organisations, state and local governments to organise some pollution prevention programs and energy conservation efforts. VWMS advances educational efforts to develop an environmentally conscious and responsible public and to inspire personal responsibility in caring for the environment.

ACE is to maintain eco friendly and pollution free campus by providing high quality measures that the needs of the stake holders and surrounding area. As part of this vision, ACE will increasingly be recognised as an environmentally conscious institution that uses resources wisely, reduces solid, e waste and hazardous waste and increases recycling and re-use of materials.

We commit to protecting of our students, staff and the community where we live and work by continuously improving our programs to reduce waste, minimize the use of hazardous materials, prevent pollution and improve efficient use of our valuable natural resources, develop renewable energy sources, increase recycling, comply with all environmental regulations, and work toward sustainability.

The VWMS and ACE will, through this MOU, work together to further progress in sustainable operations.

III. Memorandum of Understanding (MOU) Commitments

Electronics Waste (E-Waste).

Computer components/CRTs contain hazardous substances, which can harm the environment if they are simply put out with the trash. These items and similar ones contain both lead and mercury, which make their way into landfills or incinerators. Substantial cost and effort are required to assure that these hazardous substances are not released into the air or water. The Institute has contracted with an agency to collect of all E-Waste that is not leased or returned to the supplier.

B. Status Reporting

ACE will submit a status report to VWMS annually beginning one year after the official signing of the MOU. The report will include an update on the various activities identified in the agreement. VWMS will use this data to determine the environmental benefits associated with ACE's "green" activities.

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IV. Terms and Conditions

This MOU is not a contractual or a financial obligation instrument. Nothing in this MOU shall obligate VWMS or ACE to expend appropriations or to enter into any contract or other obligation or be cited as the basis for the promise or transfer of funds. Collaboration under this MOU shall be in accordance with applicable statutes and regulations. Either Party may unilaterally withdraw at any time from this MOU by transmitting a signed written notice to that effect to the other Party. By mutual agreement, which may be either formal or informal, each party may modify the list of intended activities set forth above, and/or determine the practical manner by which the goals, purposes and activities set forth in this MOU will be accomplished. Modification to other written parts of this MOU must be made in writing and signed by either the Parties or their designees.

Nothing in this MOU shall be construed to authorize or permit any violation of any, State or local law, including, but not limited to, any environmental law administered and/or enforced by VWMS. Access to all documents generated pursuant to the activities set forth in this MOU that constitute agency records for purposes of the Act.

ACE agrees that it does not expect, nor will it ever seek to compel from VWMS in any judicial forum, the payment of money, services or other thing of value from VWMS based upon the terms of this MOU.


V. Effective Date and Administration

This MOU will become effective upon signature by the Regional Administrator of VWMS and Principal of Aditya College of Engineering or their designees. It may be modified or amended by written agreement between the parties. This MOU will terminate at the end of five (5) years from the date of signature unless revised or extended at that time by written agreement of the parties. This MOU may be terminated at any time by either party upon the issuance of a written notice to the other party. The Parties will review annually the provisions of this MOU and its implementation.

Signed:

M/s Veera Waste Management Systems
Plot No. 42, Block-D Extension
IDA, Autonagar - 530012,
Visakhapatnam.




Principal
Aditya College of Engineering
ADB road, Aditya Nagar
Surampalem - 533 467
Aditya College of Engineering
SURAMPALAM-533 437

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ANDHRA PRADESH POLLUTION CONTROL BOARD

D.No. 33-26-14D/2, Chalamatswari Street, Kasturibalpet,

Vijayawada - 520 010.

Phone No. 0866 - 2436217

Authorization for dismantling of E-Waste
(Under rule 13(3) (VI) of e-Waste (Management) Rules, 2016)

Authorisation No. 03/APP/PCB/VSP/e-Waste/HO/ 2017 -131

Date: 03.05.2019

1. M/s Veera Waste Management Systems is hereby granted e-Waste Authorization only for dismantling of e-waste at the premises situated at Plot No. 42, Block-D Extension, IDA, Autonagar, Visakhapatnam District.
2. The Authorization is granted for collection, storage and dismantling of e-waste - 19.4 TPD.
3. The Authorization shall be valid for a period up to 30.04.2020.
4. The Authorization is granted for dismantling of e-Waste as prescribed under schedule-I of e-Waste Rules 2016.
5. The Authorization is subject to the conditions stipulated at Annexure-A and such conditions as may be specified in the rules for the time being in force under the Environment (Protection) Act, 1986.

Sd/-
CHAIRMAN

03-05-2019
DESPATCHED

To

M/s Veera Waste Management Systems,
Plot No. 42, Block-D Extension,
IDA, Autonagar - 530 012,
Visakhapatnam District.

Copy to:

1. The JCEE, ZO, Visakhapatnam for information and necessary action.
2. The EE, RO, Visakhapatnam for information and necessary action.

// T.C.F.B.O //

JOINT CHIEF ENVIRONMENTAL ENGINEER
UH-II

07/5/19

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