



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

WASTE MANAGEMENT POLICY

Institute of Aeronautical Engineering has been making very distinctive contributions in the field of environment and sustainability, it shall pay considerable attention to minimize the production of waste in the campus. This policy envisages to guarantying the moral, social and legal responsibilities of the institute in creating an environment friendly and sustainable world devoid of waste and exploitation of nature. This policy is a guidance document to the faculty, staff and students to behave responsibly in the production of waste, waste segregation, storage, handling, transport and disposal.

Institute realizes sustainable and holistic waste management essential in reducing its environmental footprint and providing a safe and healthy work environment for teaching and non-teaching employees, students, and visitors.

Institute has a duty to ensure that all the campus wastes are disposed of responsibly by using proper waste segregation mechanism at the source and if possible, converting it into value added environment friendly product.

POLICY STATEMENT

The institute will adopt the principles of the ‘best practicable environmental option’ in the delivery of its waste management services.

The institute requires all the teaching and non-teaching staff, students, guests and anyone else making use of the premises to comply with this policy and associated “Institute Environmental Guidance” to ensure compliance with all waste legislations. Any solid waste generated in the campus shall be managed and handled in accordance with the compliance criteria and the procedure laid down in Municipal Solid Wastes (Management and Handling) Rules, 1999, published under the notification of the Government of India in the Ministry of Environment.

The policy envisions a community which is acutely conscious of the anthropogenic condition of the world and therefore strives to create an ecologically healthy, prospering and resource efficient community, where waste is considerably reduced, recycled, reused and disposed of using environment friendly safe method.

POLICY OBJECTIVES

The objectives of this policy are:

1. The Institute follows the principle of 3R (Reduce, Reuse and Recycle) to meet its objective of sustainable development by bringing ecological balance.
2. To ensure that waste management is performed in accordance with all waste legislative requirements, including the duty of care, and to plan for future legislative changes and to mitigate their effects.
3. To minimize waste generation at source and facilitate repair, reuse and recycling over the disposal of wastes in a cost effective manner.
4. To provide clearly defined roles and responsibilities to identify and co-ordinate each activity of the waste management.

5. To promote environmental awareness in order to increase and encourage waste minimization, reuse and recycling.
6. To invest into the expansion of recycling opportunities on the institute campus and transform waste into value added products.
7. To ensure the safe handling and storage of wastes in institute campus.
8. Create consciousness among faculty and students about the waste in which waste is generated and the means by which they can reduce waste generation and manage the waste they produce.
9. Maintain the campus plastic free.

ORGANIZATION AND MANAGEMENT

The responsibilities and organizational arrangements for this waste management policy lie with a variety of personnel with in the Institute.

| S. No | Name of the Representative | Department |
|-------|----------------------------|------------|
| 1 | Dr. M Purushotham Reddy | IT |
| 2 | Dr. P Ashok Babu | ECE |
| 3 | Mr. N Rajashekhar | CSIT |
| 4 | Mr. P Rajesh | AO |

Function of Advisory Committee:

1. Reporting annually to the institute on progress against the environmental performance indicators.
2. Monitoring and auditing the management systems for all waste, to ensure safety and legal compliance.
3. Provision of appropriate training for all personnel who have responsibilities for waste management.
4. Ensuring that all contractors are advised that they must comply with the duty of care, that they must comply with the institute waste management policy.
5. Ensuring that all contractors appointed to carry out works are from the government “approved list”.

Support Staff are responsible for:

1. Overseeing the day to day delivery of general waste and their recycling services.
2. Monitoring the performance of the institute contractor against the contact agreements.
3. Operational monitoring of waste management systems across the campus.

Heads of Departments responsible for:

1. Ensuring that non-hazardous waste is disposed of through the general or waste recycling streams.
2. Nominating a ‘responsible person’ within their department to coordinate waste disposal for any hazardous or laboratory wastes.

Staff will be responsible for:

Disposing of waste responsibly through the appropriate waste disposal system (segregation of waste), in accordance with institute policy and procedures.

Students will be responsible for:

Disposing of waste responsibly, through the appropriate waste disposal system, in accordance with institute policy and procedures.

TYPES OF WASTE MANAGEMENT

1. Solid Waste Management
2. Liquid Waste Management
3. E-Waste Management
4. Bio-medical Waste Management
5. Hazardous Waste Management

Solid Waste Management

The institution is highly concerned about the solid waste generated in day to day activities both degradable and non-degradable. They have separate bins for degradable and non-degradable items in each class rooms. Wastes from various rooms shall be collected in the waste segregation centre. The segregated waste can be sold the MOU signed agency for recycling. The institute has a dedicated collection system for segregation of wet and dry waste which is collected using coloured bins Blue (Dry waste), Green (Wet waste).

In addition, dry waste includes dry leaves, paper, plastic, cardboard glass, tin cans etc and the wet waste refers mainly food waste generated in canteen and various food vendors inside the campus. A biogas plant is installed to manage food waste from the canteen and the generated gas is used in the canteen.

Furthermore, the non-biodegradable solid waste, mainly plastic which generates in the campus is segregated and made in to fine plastic pieces by using plastic shredder available in the campus.

Liquid Waste Management

Liquid wastage generated from canteen and toilets is segregated and letting out to sewage treatment plant (STP), where the treated water is reused for flushing and gardening purpose in **the campus. Sewage treatment plant capacity considered as 30 KLD.**

E-Waste Management

Electronic waste also known as E-Waste or WEEE (Waste electrical and electronic equipment) comprises of a broad and growing range of electronic devices, ranging from large household devices such as refrigerators, electric motors, voltage stabilizers, air conditioners, cell phones, television, LED's, Computer systems and other consumer electronics which have outlived their lives and have been discarded by the users.

Robinson 2009 defines E-Waste as “any device connected to a power source that no longer satisfies the current owner to the purpose for which it was created”, such as computer, television, cell phones, refrigerator and ovens. With the presence of deadly chemicals and toxic substances in the electronic gadgets, disposal of E-Waste is becoming an environmental and health nightmare. Globally only 15 – 20 percent of E-Waste is recycled while the rest is dumped into developing countries such as India, China and Nigeria.

Electronic waste generated from computer laboratories, electronic labs, physics labs, academic and administrative offices are separated as E-waste that includes outdated equipment of obsolete items like lab instruments, circuits, desktops, laptops, printers, charging and net work cables, Wi-Fi devices,

cartridges, sound systems, UPS, biometric machine, scientific instruments etc. The same is dispatched through authorized vendors M/s Ramky Environ Engineers Ltd on a monthly basis.

Bio-medical Waste Management

Bio-medical waste means “any solid and/or liquid waste including its container and any intermediate product, which is generated during the diagnosis, treatment or immunization of human beings or research activities pertaining thereto or in the production or testing of biological or in health camps.

Biomedical waste poses hazard due to two principal reasons – the first is infectivity and other toxicity.

Bio Medical waste consists of:

1. Waste sharps like hypodermic needles, syringes, scalpels and broken glass
2. Discarded medicines and cytotoxic drugs
3. Soiled waste such as dressing, bandages, plaster casts, material contaminated with blood, tubes and catheters.

Bio-medical waste generated from clinic room available in the institute campus are syringes, discarded medicines, drugs, bandages, plaster casts, material contaminated with blood, COVID-19 masks, sanitizer bottles are disposed to the MOU signed agency.

Hazardous Waste Management

Hazardous chemicals are not used in the laboratories. Acids in diluted form are used in environment engineering laboratory, which are discharged directly. When necessity arises to utilize a strong acid or base, they are neutralized before discharging. No radioactive elements of any form are used in the campus and thus its waste is not generated in the campus.

WASTE MANAGEMENT PRACTICES

The Bio Waste – Food Waste which generates in the canteen is used as feed stock for Bio Gas plant. The total installed capacity of the plant 2 cubic meter of biogas production per day which is equivalent 0.8 to 1 kilogram Equivalent of LPG.20 Kg Kitchen waste produces 1 m³

Sewage Treatment Plant (STP) is in use in the institution campus. The treated water is used for flushing and gardening purpose.

The institute has a dedicated collection system where segregation for wet and dry waste basis which is collected using coloured bins Blue (Dry waste), Green (Wet waste).

Adequate number of trash cans and dust bins are placed all over the campus. The collected waste is disposed with the help of Greater Hyderabad Municipal Corporation (GHMC) on a daily basis.

Institute has committed with M/s Ramky Environ Engineers Ltd, Hyderabad to pick up the E wastage on every month.