ABDULLAH GÜL UNIVERSITY

WASTE MANAGEMENT DIRECTIVE AND IMPLEMENTATION PRINCIPLES

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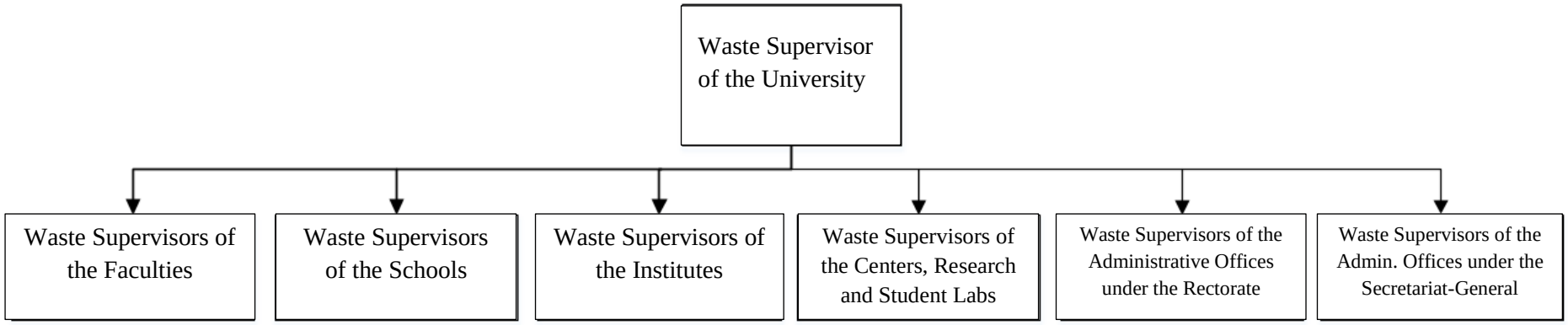

2. WASTE MANAGEMENT DIRECTIVE

SECTION ONE

Purpose, Scope, Basis, and Definitions

Purpose

Waste is defined as any substances or materials that are thrown, left or discarded in the environment. Waste is divided into two basic groups, hazardous and non-hazardous waste, according to their effects on the environment and human health. At this point, waste management planning is important in terms of determining what kind of a removal process should be applied for each waste group. The purpose of this Directive is to regulate the principles regarding the sorting within the university, safe temporary storage, transportation and final disposal of waste generated as a result of education, research and service activities which fall within the responsibility and jurisdiction of Abdullah Gül University.

Scope

Waste management is a collection of activities including waste prevention, reduction at its source, reuse, segregation based on features and types, accumulation, collection, temporary storage, transportation, intermediate storage of waste, recycling waste, energy recovery from waste, waste disposal, maintenance of disposal areas, and monitoring, control, and supervision of these processes. Waste is basically divided into two groups as hazardous and non-hazardous waste. Generally, waste that causes injuries, sickness, death in people or damage to the environment is considered hazardous. Reactive chemicals that are flammable, caustic, explosive, poisonous, carcinogenic, irritating, destructive, easily reacting with other substances or self-reacting; hazardous chemicals (acid, mercury, lead, arsenic compounds, cadmium compounds); radioactive waste; and some medical waste are considered dangerous. Another type of waste considered hazardous is oil that has expired or been reused in the same procedure until it is no longer usable. Oils are examined in two groups as vegetable and mineral. Non-hazardous waste is grouped as organic and non-organic. Cardboard, paper, kitchen waste, glass, ash, plastic, metal, construction and excavation waste are in the non-hazardous type.

This directive concerns the below-mentioned at all steps of the process from the production of primarily chemicals, medical, biological and radioactive waste, then waste in education and service units and research laboratories, office waste, electrical and electronic waste to the disposal of them:

a) Fulfillment of responsibilities by the units operating in the university in terms of determining waste producers, identifying waste types correctly, appropriate disposal methods, appropriate storage methods, and minimizing generation of waste;

b) Preventing direct or indirect generation of waste at the receiving environment, collecting them separately at the source without harming human health and environment, safe storage within the university and ensuring its disposal after transporting away from the university.

The directive covers the legal, administrative and technical bases, principles and regulations for policy and program development in line with these bases, and provisions on the latter's implementation concerning the above-mentioned.

Basis

Article 1- This directive is written based on the Environmental Law No. 2872 and the "Waste Management Regulation" published in the Official Gazette number 29314 on April 2, 2015 based on that law.

Descriptions

Article 2- In this regulation, the following expressions refer to the ensuing description:

a) Ministry: Ministry of Environment and Urbanization,

b) University: Abdullah Gül University,

c) Waste Management Committee: Academic and administrative staff appointed by the Rector,

d) Units: Faculties, Institutes, Research and Application Centers and other administrative offices of the University,

e) Waste Supervisor: Waste supervisors appointed by the units specified in clause "d",

f) Wastes: Primarily chemicals, biological waste, hazardous and radioactive wastes as well as waste, office waste and electronic waste generated in the education and service units and research laboratories,

g) Waste Producers: Students and staff engaged in education, training, research, production and service activities in the units,

Article 3-Within the scope of this directive, descriptions of waste types to be handled at the institution and management measures to be taken are as follows.

Waste Prevention

As in the rest of the world, in our country, zero waste approach has become an unavoidable target in the implementation of the circular economy model that has emerged with the orientation towards sustainable urban waste management and sustainable development. Therefore, resources that turn into waste as a result of our consumption-oriented activities should be directed to a production process through holistic zero waste management systems. In order to address the waste problem effectively and move towards a circular economy, it is necessary to attach importance to the upper part of the waste management hierarchy given in Figure 1, meaning reuse, reduction and prevention efforts instead of disposal at sanitary landfills.

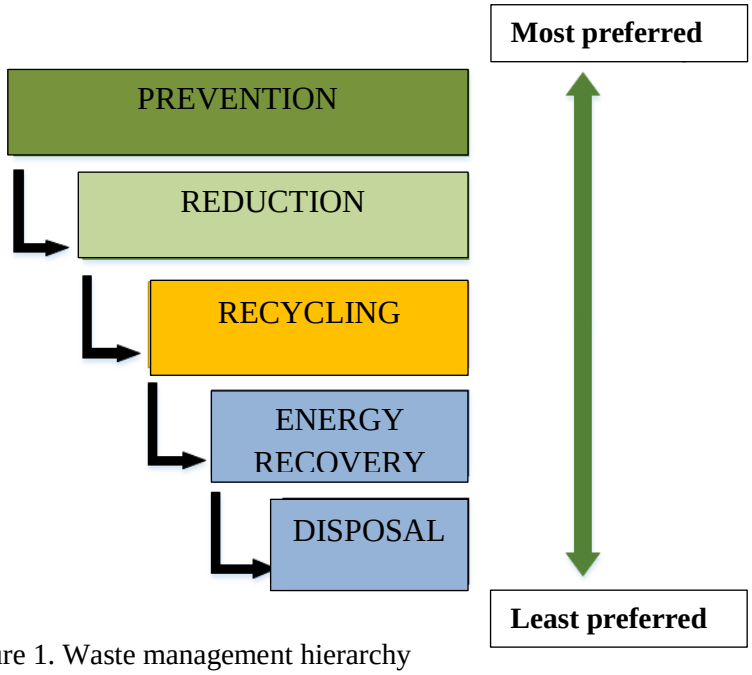

Figure 1. Waste management hierarchy

Waste Reduction

Preferring less waste generating technologies in production systems, using materials less which generate hazardous waste / using their alternatives, re-planning all processes to create less waste will be important in reducing the amount of waste and the level of hazard.

Reuse of Waste

The approach of quickly re-including waste into appropriate usage processes without any treatment is effective in conserving resources and reducing the amount of waste.

Recycling of Waste

Including waste as a raw material into a new production process to obtain a new product that can be used for the same or different purposes is an effective method of waste reduction and protection of nature.

Energy Recovery from Waste

Breaking down waste into components by various methods and generating energy during this process is considered as a positive waste management approach in terms of reducing both the amount of waste and the need for energy resources. An example is biogas, which is produced as a result of the decomposition of biodegradable and organic wastes, and its conversion to energy.

Waste Disposal

Neutralization and removal of waste is considered the last step in the waste management. For this purpose, options such as intermediate storage, sanitary landfills (accumulating or burying), incineration with special systems, exporting are available. The most common disposal methods in our country are sanitary landfills and incineration.

Collection, transportation, temporary storage and disposal of hazardous wastes must be carried out by companies and individuals holding a certificate approved by the Ministry and with certified vehicles. Companies that will provide consultancy on hazardous waste management should also be certified. Otherwise, administrative fines are imposed. Wastes are separated according to their types and characteristics at their current location. The separation is generally made by taking into account the

process / environment (source) generating waste, whether waste can be recycled, its structural features (technical, physical, chemical), and possibilities of hazard.

According to Annex-4 of the Waste Management Regulation, wastes are divided into 20 waste groups with a total of 839 waste codes. Wastes must be packed and stored separately according to these codes so as not to prevent them reacting with each other. Hazardous / non-hazardous waste signs, waste codes, amount and storage dates are indicated on the packages where waste is collected.

SECTION TWO

General Principles, Management Units, Duties and Obligations

General Principles

Article 4 Waste generated at areas within responsibility and jurisdiction of Abdullah Gul University is managed in accordance with the following principles:

a) It is essential to comply with the provisions of the Environmental Law No. 2872 and related Regulations in the collection and disposal of waste;
b) It is essential to prevent waste generation from occurring unless it is mandatory;
c) It is essential to implement waste management in a way that minimizes the harmful effects of waste on human health and the environment.

Principles of Execution

Article 5-Waste Management is carried out under the supervision of the Abdullah Gül University Waste Management Committee. Relevant work is executed by the personnel to be assigned by the Rector's Office/Deans' Offices/Directorates.

Management Units

Article 6
a) Waste Management Committee: It consists of four faculty members, one academic, and one substitute academic appointed by the Rector;
b) President of the Waste Management Committee: The committee president is a faculty member elected by the Rector from the members of the Waste Management Committee.
c) Waste Supervisors of the Units: They are the people determined by the directors of the units specified in Article 2 (d).

Responsibilities, Duties and Obligations

Waste Management Committee

Article 7- The Waste Management Committee is responsible for coordinating the activities of the units in all the processes related to separate collection within the university, safe temporary storage, transportation and final disposal of waste generated due to the education, research and service activities which fall within responsibility and jurisdiction of the AGU Rectorate,

organizing training sessions and information meetings, and following up on the correct and effective implementation of the Regulation and Directive.

President of the Waste Management Committee

Article 8-The President of the Waste Management Committee is responsible for

a) Representation of the Waste Committee,

b) Organizing the work of the Waste Committee,

c) Inviting the Waste Supervisors of each unit to meetings,

d) Ensuring coordination for the regular and effective operation of all units, committees, and administrative staff involved in the Waste Management process.

Waste Supervisors of the Units

Article 9- Waste Supervisors at each Unit are responsible for

a) Ensuring that the principles in the "Waste Management Directive" are followed,

b) Taking measures to minimize waste production,

c) Supervision of waste collection at units in accordance with the Directive;

d) Ensuring that wastes are properly packaged and labeled in a way that eliminates or minimizes their harmful effects on human health and the environment;

e) Ensuring that wastes are stored safely at the location where they are produced and transported to the temporary collection area on the date announced by the committee;

f) When wastes are temporarily stored in research and production units/facilities in accordance with the provisions of this Directive, ensuring their safe storage and informing the Waste Management Committee;

g) Collecting records and declaration forms on wastes from the units, keeping track of, following up on and submitting them regularly to the Waste Management Committee.

Waste Producers

Article 10- Waste producers are responsible for;

a) Complying with the directive and implementation principles;

b) Prevention of waste generation and when this is not possible, minimizing waste generation;

c) Recovery of resources from waste materials, if applicable, and proper storage of wastes after the reduction/elimination of hazardous contents;

d) Keeping records of wastes generated, packaging and labeling them in accordance with internationally accepted standards;

e) Ensuring occupational and environmental safety for the storage of waste at its source;

f) Filling the Waste Declaration Forms in accordance with the relevant regulations and the Implementation Principles of this Directive and delivering them to the unit waste supervisors.

Decision Making Process of the Waste Management Committee

Article 11- The committee holds its ordinary meetings at the beginning of each academic year and convenes upon the call of the president if deemed necessary. It also organizes extended meetings with representatives from the Units.

SECTION THREE

2.1 IMPLEMENTATION PRINCIPLES FOR THE WASTE MANAGEMENT DIRECTIVE

2.1.1 Classification and Definitions of Waste

Domestic/General Waste:

According to the "Waste Management Regulation" which went into effect with publication in the Official Gazette number 29314 on April 2, 2015, municipal waste (domestic or similarly commercial, industrial and institutional) including the separately collected waste listed in its Annex-4 and institutional waste excluding dangerous and hazardous materials are in this category.

Packaging Waste:

According to the Regulation on Controlling Packaging Waste which went into effect with publication in the Official Gazette number 30283 on April 24, 2017, all products, raw or processed, which are made from any materials including non-refundable ones and used for transportation, protection, storage and sale of a product for its delivery to a user or consumer by the manufacturer are considered in this category as per the criteria of its Annex-1.
It is recyclable waste such as paper, cardboard, and metal generated in the offices, classrooms and laboratories of the university.

Hazardous Waste:

According to the Annex-4 of the "Waste Management Regulation" which went into effect with publication in the Official Gazette number 29314 on April 2, 2015, wastes marked with (A) are considered hazardous regardless of any hazardous concentrations, while wastes marked with (M) in the same list are considered hazardous if they have a value above the hazardous concentration threshold given in its Annex-3 B. Due to the fact that the characteristics of this type of wastes are irritation, corrosion, carcinogenicity, toxicity, etc., they may pose a risk to human health and the environment.

Medical Waste

According to the "Regulation on Controlling Medical Waste" which went into effect with publication in the Official Gazette number 29959 on January 25, 2017, infectious, pathological, and sharp-penetrating wastes produced at laboratories are considered in this category.

Electronic Waste:

According to the "Regulation on Controlling Waste Electrical or Electronic Equipment" which went into effect with publication in the Official Gazette number 28300 on May 22, 2012, electronic wastes are devices which are covered by the categories specified in its Annex-1/A and have been designed

for use with a voltage rating not exceeding 1000 Volts for alternating current and 1500 Volts for direct current, devices which are dependent on electric current or an electromagnetic field in order to work properly, and devices which are used for the generation, transfer and measurement of such current and fields.

Waste Batteries and Accumulators

According to the “Regulation on Controlling Waste Batteries and Accumulators” which went into effect with publication in the Official Gazette number 25569 on August 31,2014, waste batteries and accumulators are used batteries and accumulators that are not reusable and that must be collected, transported, and disposed separately from household waste.

Biodegradable Waste:

According to the "Waste Management Regulation" which went into effect with publication in the Official Gazette number 29314 on April 2, 2015, this type of waste originates from parks, gardens, houses, restaurants, commercial outlets, facilities for food production and similar activities and may be degraded in oxygenated or oxygen-free environments.

Construction Waste

According to the "Regulation on Controlling Excavation, Construction, and Demolition Waste" which went into effect with publication in the Official Gazette number 25406 on March 18, 2004, this type of waste originates during the construction of residences, buildings, bridges, roads, and similar infrastructures and superstructures.

Waste Oil:

According to the "Regulation on Controlling Waste Oil" which went into effect with publication in the Official Gazette number 26952 on July 30, 2008, the waste oil category includes grease or special vehicle oils for gasoline or diesel engines, gearboxes and differentials, transmissions; industrial oils or grease for turbines and compressors, slides, open-enclosed gears, circulation, metal cutting and processing, metal extrusion, textile, heat treatment, heat transfer, insulation and protection, transformers, molds, steam cylinders, protection of pneumatic systems, food and pharmaceutical industries, paper machines, bearings; used thickeners, preservatives, cleaning agents; and similar proprietary oil products which become unfit for use.

2.1.2 Waste Prevention and Minimization

According to the relevant provision of the Environmental Law No. 2872 — “It is forbidden to directly or indirectly dump, store, transfer, or remove all types of waste or residue to a receiving environment or engage in similar actions in a manner harmful to the environment and contradicting the standards and methods set out in the relevant regulations. In case that there is a possibility of contamination, concerned people are obliged to prevent the contamination; when contamination occurs, polluters are obliged to take necessary measures to stop the contamination and remove or reduce its effects.” — the main purpose of the waste management practices is to reduce wastes within the institution at their source and to dispose of them without harming the environment. Reusing products within the university or prolonging their lifetime forms the basis of waste prevention.

2.1.3 Making use of waste collected on the campus

It is essential to employ methods and procedures which do not create a risk for water, air, soil, plants, animals, and people, cause discomfort through noise, vibration, or odor, and negatively affect the environment and human health during the collection at the source, temporary storage, transportation and processing of waste.

In order to collect waste at the source and in accordance with the standards, containers segregated into household, paper, metal, plastic, glass and battery are stationed at locations determined based on the number people using those location within the university. Bag colors in the containers differ according to the types of waste. Cleaning staff working in the related areas ensure that wastes are delivered to the temporary storage area paying attention to the colors of the bags.

Chemical wastes originating from the laboratories and fitting the category of hazardous waste are collected in separate bins at their locations based on waste codes. During this procedure, waste accumulation is kept as low as possible. Additionally, medical wastes originating from the laboratories are collected in yellow bins with the tag and sign stating "WARNING MEDICAL WASTE" on them.

Sharp, penetrating materials (needles, shards, etc.) originating from the laboratories are collected into separate hard plastic containers at the source.

2.1.4 Waste Labeling

Hazardous chemical containers are labeled with the relevant waste code, accumulation start date and general info on the chemical as well as the tag and sign stating "Warning Hazardous Waste"; biological waste also carry "Warning Biological Waste" tag and sign.

2.1.5 Moving Waste from Buildings to the Temporary Storage

Chemical wastes originating from the university laboratories are handed over to the waste supervisor inside a secondary container for the prevention of any leakage that might occur from the labeled chemical containers. These wastes are moved to the temporary storage one day before they are handed over to the certified company.

Medical wastes originating from the laboratories are temporarily stored at the university in containers labeled with the medical waste tag.

Wastes separated at their source are stored in containers specifically segregated for this purpose at the temporary storage area.

Organic and recyclable wastes originating from the dining service are collected separately and moved to the temporary storage.

2.1.6 Location, Features of the Temporary Waste Storage and Waste Codes for Storage

All the waste originating from our university is stored at the temporary storage according to the criteria in the Waste Management Directive determined based on their types so that reactions between them do not occur. Except for medical wastes, hazardous wastes are stored in the

temporary storage for a maximum of 6 months, and non-hazardous wastes for a maximum of 1 year.

2.1.7 Precautions and Actions to Be Taken at the Event of an Accident

A person who gets injured during the collection and transfer of wastes consults the physician at the university medical center. The physician and nurse at the medical center check and follow up on the injured person.
In case of an occupational accident during the collection, transfer, and storage of medical and chemical wastes, necessary procedures are followed based on the AGU Occupational Health and Safety Directive.

2.1.8 Making Use of Waste Generated on the Campus

Domestic waste originating from our university is collected regularly by the concerned municipality.
Chemical wastes originating from the laboratories and waste oils from the maintenance of machines/devices are collected by a certified company which has a contract with the university and disposed by this company in an appropriate way.
Wood, metal and electronic waste separated for scrap by the Office of Administration and Finance is sold to Hurdasan, the Mechanical and Chemical Industry Corporation once the Waste Committee is informed.
For the proper disposal of waste toner originating from the university, the Office of Administration and Finance contracts a certified company or the municipality after informing the Waste Committee.
Medical waste originating from the laboratories is stored in containers labeled as medical waste and located in the concerned laboratories and collected by a certified company once a week.
Biodegradable waste originating from garden maintenance on the campus is transferred to the composting facility of the concerned municipality.
Debris waste originating from construction sites and civil engineering laboratories is transferred by the university to the waste storage facility determined by the relevant municipality.
Recyclable waste of the university collected separately at the source is removed from the temporary storage by the concerned municipality and transferred to the municipal recycling facility.

2.1.9 Selection of Waste Supervisors

Waste supervisors for administrative offices, faculties and departments are selected by each unit and the Waste Management Committee is informed accordingly. Waste supervisors are appointed for a period of 2 years.

2.1.10 Training and Information

Laboratory safety training is administered to students who work in the research laboratories of the university, and during the training, they are informed about how chemical waste originating from the laboratory will be handled.

Training sessions are organized for internal and external stakeholders in order to implement waste management effectively and widely.

2.1.11 Recording and Reporting

Records of medical and chemical waste for the previous year are entered by the Faculties of Engineering and Life and Natural Sciences every year between January and March into the waste declaration system on the website of the Provincial Directorate of Environment and Urbanization. Waste amounts are reported to the Waste Management Committee every 6 months. Information on wastes from all units (quantity, disposal method, etc.) is reported to the Waste Management Committee by unit supervisors.

2.2 Enforcement

Article 12- This directive takes effect on the date it is approved by the University Senate.

2.3 Enforcement

Article 13-The Rector enforces the provisions of this directive.