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İşin Adı The Name of the Job	:	Mersin-Adana-Osmaniye-Gaziantep Yüksek Standartlı Demiryolu Hattı İnşaatı ile Elektromekanik Sistemlerinin Temini Construction of Mersin-Adana-Osmaniye-Gaziantep High Standard Railway Line With Supply Of Electromechanical Systems
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İŞ SAĞLIĞI GÜVENLİĞİ & ÇEVRE

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1. PURPOSE

Determination of the methods applicable for collection and disposal of all medical wastes to be generated during the medical interventions to be performed in the construction site infirmary/ambulance and in the project area for the Project for Construction of Mersin-Adana-Osmaniye-Gaziantep High Standard Railway Line with Supply of Electromechanical Systems.

2. SCOPE

Covers all medical wastes generated from all medical interventions performed at the infirmary, ambulance and in the project area.

3. REFERENCES

Medical Wastes Control Regulation

4. DEFINITIONS AND ABBREVIATIONS

Medical Waste: Infectious wastes, pathological wastes and incisive-piercing wastes**.**

Mobile Hazardous Waste Transport (MHWT): The system where the request is made to collect the waste from its location and includes the records and declarations regarding the discharge and quantities of the waste, wherein the transportation processes are monitored up to the waste processing facility.

Infectious Waste: All kinds of body fluids, in particular the blood and blood products, human tissues, organs, anatomical parts, autopsy material, placenta, fetus and other pathological material which are known or likely to carry infectious agents and the gloves, covers, sheets, bandages, plasters, tampons, swab and similar wastes contaminated with such material, body excretions of quarantined patients, bacteria and virus-retaining air filters, laboratory cultures and culture stocks of infectious agents, all kinds of materials that have come into contact with infected animals and excretions thereof, and the wastes from veterinary services.

Temporary Storage: Safe storage of the medical wastes within the health institution before being delivered to the medical waste processing facility and at the medical waste processing facility before being processed.

Incisive-Piercing Waste: The wastes that can lead to stinging, piercing, scratches and injuries such as the injector and all other medical intervention needles, lancet, capillary tube, scalpel, knife, serum set needle, surgical suture needles, biopsy needles, branule, broken glass, ampoule, lam-lamella, broken glass tube and petri dishes, etc.

Incisive-Piercing Waste Receptacles: The collection container used for collecting and storing the incisive and piercing wastes, the technical features of which are specified in the medical waste regulation.

International Biohazard Symbol: The symbol that must be present on the medical waste bags, receptacle, buckets or containers and incisive-piercing waste receptacles, the vehicles used in transportation thereof and the temporary storage units, an example of which is provided in Annex-2,

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5. ROLES AND RESPONSIBILITIES

5.1. Project Management

Is responsible for securing implementation of this plan at the project site and allocating the resources necessary.

5.2. HSE Supervisor

The HSE Supervisor is responsible for:

- Control and supervision of the correct sorting of the medical waste at the source.
- Control and supervision of the contract with the medical waste delivery and disposal company and delivery of the wastes using the MHWT system.
- Control of recording and archiving of waste quantities.

5.3. Infirmary-Ambulance Physician and Healthcare Personnel

Are responsible for disposal of the wastes generated after the medical interventions to the relevant waste bin in the infirmary/ambulance, for ensuring that the wastes are not mixed with the domestic wastes under any circumstance, and that filled waste bins are reported to the REC HSE Department for delivery to the waste disposal facility.

5.4. Environmental Engineer

Is responsible for notifying the waste disposal company and keeping track of the wastes through the MHWT system, delivering training on correct sorting of wastes, and for archiving waste delivery records.

5.5. Headquarter E&S Manager

Responsible for managing infrastructure and superstructure projects regarding environmental and social governance issues and member of the Executive E&S Committee on behalf of the REC.

5.6. Subcontractor and Laborers

Complying with the waste management plan and waste collection rules communicated by REC during the training sessions. Disposal of waste at source and in appropriate waste bins.

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5.7. PIU (Project Implementation Unit)

- **PIU Department Manager (Environmental and Feasibility / Environmental Engineer)** will be responsible for supervising the implementation of all environmental and biodiversity measures, as specified within the disclosure package of the Project, and regular reporting to AYGM PIU.
- **PIU Department Manager (Superstructure / Civil Engineer)** will be responsible for overseeing the implementation of all health, safety and social measures, as specified within the disclosure package of the Project, and regular reporting to AYGM PIU.
- **PIU Physics Engineer** who is responsible for supervising health and safety for the Project.

5.8. Executive Environmental and Social Management Committee

- **Executive E&S Committee Project Manager (Department Head / Branch Manager /Head of Department)** will be ultimately responsible for overseeing the activities undertaken by the AYGM/TCDD specialists (listed below), overseeing the implementation of mitigation measures and management procedures specified within the disclosure package of the Project, and overseeing the preparation and implementation of a CESMP, which will be based on this ESMP.

- **Executive E&S Committee Environmental, Health and Safety, and Social (EHSS) Manager (Specialist / Engineer)** will be responsible for overseeing all matters that relate to environment, health, safety and social aspects of the Project. Also, s/he will be appointed to be responsible for supporting the implementation of the SEP, by conducting regular consultation with affected communities on any concern regarding the Project. CLOs will also have responsibility for disseminating the Project disclosure package as described in the SEP. They will also conduct regular inspections of records relating to grievances received and their resolution. S/He will report regularly to AYGM PIU.

Further technical staff may be required during the course of the Project, who will be assigned internally by the AYGM, either by means of permanent or temporary basis until the completion of relevant tasks under the Project whilst they undertake their current responsibilities

6. GENERAL RULES AND PRACTICES

6.1. Waste Minimization

Waste minimization shall be achieved through implementation of the following policies.

- Reduction at the Source:

Generation of wastes is minimized by avoiding unnecessary interventions. Where possible, the materials used shall be sorted without being contaminated with the medical waste. For example: using the materials in sufficient quantities during the intervention; avoiding any unnecessary interventions, (for example, if no extra medication is injected to the serum bottle, and is not contaminated with medical waste, such bottle can be sent for recycling)

- Implementing adequate management and supervision:

Ensuring that procurement and use of drugs and chemicals is duly controlled.

- Sorting of the Wastes:

Proper containers have been installed in the infirmary to ensure the collection of the Medical, Hazardous, Domestic and Packaging wastes separately.

The personnel are subjected to training periodically on waste management and the records of such trainings are maintained. The personnel are further trained on means for minimizing generation and amount of domestic wastes.

6.2. Waste Management

6.2.1. Types of Waste

The wastes to be generated in the infirmary are categorized under 4 main groups:

1. Domestic Wastes (organic food wastes)
2. Packaging Wastes (Carton, metal, plastic, glass, uncontaminated serum bottles)
3. Hazardous wastes (Contaminated wastes, medicines with expired shelf life, etc.)
4. Medical wastes (all wastes such as all materials contaminated with all kinds of fluids coming out of the human body such as saliva, blood, etc. after the intervention, the blood bags and contaminated materials, gloves, bandages, cotton, needles, fistulas, etc. used during the examination, etc.)
5. Battery Wastes (Mercury-free alkaline batteries extracted from medical devices, blood pressure monitor, fever measuring device, etc.)

6.2.2. Waste Sorting Receptacles

6.2.2.1. Domestic Waste Container with Black Bag

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The domestic wastes, other than packaging wastes, are collected separately from medical, hazardous and packaging wastes in bins labeled "**Domestic Waste**" in which **black** colored bags are placed. The food scraps can be disposed into these containers.

6.2.2.2. Packaging Waste Container with Blue Bag

The packaging wastes are collected separately from other wastes, in **blue** colored bags, and in bins labeled "**Mixed Packaging Waste**" according to the type of waste, provided that such wastes are not contaminated.

6.2.2.3. Medical Waste Container with Red Bag

Disposable incisive-piercing medical waste container

Waste container that should be available in the infirmary (the lid should be lockable)

Bag for non-incisive/piercing medical waste

Apart from other wastes, the medical wastes are collected in leak-proof, double-bottomed, seamed and non-gusseted, double-layered red colored bags with 100-micron thickness resistant to tearing, puncture, burst and transportation with load bearing capacity of 10 kg at minimum made of original medium-density polyethylene raw material bearing the "International Biohazard" symbol and the inscription "**CAUTION MEDICAL WASTE**" on both sides at readily visible size.

When collecting the medical wastes, leak-proof, double-bottomed, seamed and non-gusseted, double-layered red colored bags with 100-micron thickness resistant to tearing, puncture, burst and transportation with load bearing capacity of 10 kg at minimum made of original medium-density polyethylene raw material bearing the "International Biohazard" symbol and the inscription "**CAUTION! MEDICAL WASTE**" on both sides at readily visible size are used. The bags are filled up to maximum ¾ of their capacity, are tightly sealed, and if and when considered necessary, each bag is placed in another bag with identical characteristics in order to ensure that the bag is absolutely leak-proof. These bags are not recoverable or reusable under any circumstance. The contents of the medical waste bags cannot be compressed, removed from the medical waste bags, emptied and transferred to another container under any circumstance.

The liquid medical wastes are also condensed using suitable absorbent materials and placed in medical waste bags.

6.2.2.4. Incisive-Piercing Medical Waste Bin;

The incisive and piercing wastes are collected separately from the other medical wastes and are placed in watertight and leak-proof receptacles or containers made of plastic or laminated cardboard with identical characteristics resistant to tearing, puncture, burst and breaking, resistant to tampering, and bearing black-colored “International Biohazard" symbol and the inscription "CAUTION! INCISIVE and PIERCING MEDICAL WASTE".

These receptacles/containers are filled up to maximum ¾ of their capacity, are tightly sealed and placed in medical waste bags. Incisive-piercing waste receptacles/containers cannot be compressed, re-opened, contents removed or recovered once they are filled.

6.2.2.5. Hazardous Waste Containers

Containers with red bags are used for non-medical waste contaminated materials and medicines with expired shelf life. The container is labeled with the expression “HAZARDOUS WASTE”.

6.2.3. Storage of the Wastes

6.2.3.1. Domestic and Packaging Wastes

The domestic wastes and the packaging wastes are transferred to the temporary waste yards in the construction site and stored in respective areas. From this waste yard, the wastes are then delivered to the concerned Municipality and the Licensed companies contracted by the municipality. The shipment records are maintained for the domestic and packaging wastes.

6.2.3.2. Medical Wastes

The medical waste bags are stored in medical waste container or bin during collection. The medical waste container or bin must be made of orange colored plastic material resistant to tearing, puncture, burst and breaking, must be watertight and leak-proof and must bear black-colored “International Biohazard" symbol and the inscription "CAUTION! MEDICAL WASTE".

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The features of the Medical Waste Container are as follows;

- The volume should be 0.8 m3 at minimum and should be made of stainless metal, plastic or similar material, should feature wheels and lids and the lids should be lockable.
- The lids are manufactured to be resistant against ingress of animals.
- The inner surfaces of the containers do not contain sharp edges and jagged corners that may cause damage or perforation of the bags during loading and unloading operations. Intersecting surfaces join together with smooth turns
- The external surfaces of the containers are orange in color and bear readily visible black colored "International Biohazard" symbol and black colored expression "ATTENTION! MEDICAL WASTE" of appropriate size.

- The number of containers should be capable of storing at least two days' quantity of the medical wastes generated at the healthcare institution.
- The containers are placed at certain distance from the locations with heavy human and patient traffic, such as entrance-exit gate of the healthcare institution and pavement, etc., and from the sites used for storage, preparation and sales of foodstuff and away from direct sunlight within the boundaries of the plot where the healthcare institution is constructed.
- The lids of the containers are kept closed and locked at all times and unauthorized persons are not allowed to open the containers.
- The containers are cleaned and disinfected after removal of the waste or immediately after any accident. Cleaning and disinfection operations are performed using appropriate disinfectants.
- The containers are not used for any purpose other than temporary storage of medical wastes.

6.2.3.3. Hazardous Wastes

The hazardous wastes generated at the departments are collected in sealed containers labeled "Hazardous Waste". The containers must be sealed and leak-proof. Hazardous wastes are transported to the temporary hazardous waste storage yard designated in the construction site and forwarded to the licensed institutions within 6 months at maximum.

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6.2.5. Record Keeping and Reporting

Licensed vehicles are requested for the medical and hazardous wastes using the MHWT system, and the wastes are shipped to the Licensed disposal facility. The process and the quantities of the wastes so shipped are monitored using this system, and the process is finalized after receiving the approval from the licensed disposal facility, again through the MHWT system.

The hazardous waste records of the previous year are entered to the hazardous waste declaration system (TABS) each year. After logging in the system and getting approval, the system form is printed out, stamped and signed, and archived in the site environment file for 5 years.

6.2.6. Measures to be Adopted and Actions to be Taken in the Event of any Accident

Any injuries that may occur during handling and temporary storage of the medical wastes within the unit are referred to the Occupational Physician.

If the contents of any bag containing medical waste becomes exposed due to tearing of the bag, the spilled wastes are collected using appropriate equipment after taking necessary universal measures, and the liquid wastes are placed into the red colored medical waste bag after condensing with suitable absorbent material (such as sawdust), and the compartment as well as the material used are disinfected promptly.

In the event of any injury due to incisive or piercing tool during collection, handling and temporary storage of the medical wastes, the Occupational Physician / ATT specialist is notified.

7. MONITORING, ASSURANCE AND VERIFICATION

Key success indicators (KPIs) of this procedure will be monitored, verified and evaluated by the relevant parties in accordance with their responsibilities set forth in the E&S Governance document, within the scope of the MAOG-RECU-GB-GNL-IS-PRG-0007-0 HSE Monitoring, Assurance and Verification Procedure.

8. ADDITIONAL INFORMATION

NAME OF THE UNIT: Yenice Camp
ADDRESS: Yenice Mh. Atatürk Cd. No:17 Tarsus/Mersin
TELEPHONE NO.: 0312

II-ADMINISTRATIVE INFORMATION

AGENCY THAT THE UNIT IS AFFILIATED: Shall be revised after completion of the works.
TYPE OF UNIT: Shall be revised after completion of the works.
NUMBER OF BEDS: Shall be revised after completion of the works.
MEDICAL WASTES OFFICER: Shall be revised after completion of the works.
CONTACT TELEPHONE OF THE MEDICAL WASTES OFFICER: Shall be revised after completion of the works.

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