RISK BULLETIN

Waste Management Guidelines For Healthcare Facilities

Healthcare facilities can generate numerous waste streams including solid, radioactive, hazardous, infectious and chemo-therapeutic wastes. Larger healthcare facilities may generate several different wastes in each waste category.

The identification, collection, storage and disposal of numerous waste streams can be a daunting task for any facility. Improper waste handling, storage and disposal can result in regulatory fines, negative publicity, on-site environmental contamination, increased possibilities for theft or terrorism and Superfund liability, all of which can result in net income losses to the healthcare facility.

The development and implementation of guidelines or best management practices can assist healthcare facilities in effectively managing their wastes and minimizing their potential for liabilities. Written procedures allow for comprehensive waste identification, consistent handling and storage, and proper disposal. The following guidance can be used in developing a waste management plan. In addition, the Joint Commission on the Accreditation of Healthcare Organization's (JCAHO) Environment of Care Manual includes standards for managing hazardous materials and waste.

WASTE IDENTIFICATION AND TRACKING

The first step in healthcare facility waste management is to identify the various waste streams that are generated at a facility. Coordination among all departments in an organization is critical in developing a comprehensive waste identification and management plan. The primary waste stream generated is medical waste, including sharps, blood and blood products, human tissue wastes, pathological wastes and cultures. Other wastes generated may include radioactive, hazardous and chemotherapeutic materials. Wastes are also generated from ancillary activities such as laboratory analysis (solvents) and equipment decommissioning (mercury). Building maintenance activities can result in the generation of waste solvent, used oil, asbestos-containing materials and PCBs. Property features such as aboveground or underground storage tanks and transformers can also generate wastes from normal operations, maintenance activities, and spills.

After the waste streams have been classified, each area of generation should be identified. The identification of each waste generation point permits scrutiny of waste-generating activities. The waste-generating activity can be evaluated for

waste minimization purposes by determining, for example, if another material could be substituted so a nonhazardous waste or a less hazardous waste is generated. In addition, operational changes may be possible so the hazardous waste is not generated, or the quantity of waste generated is reduced.

WASTE COLLECTION

Wastes should be collected in proper storage containers that maintain their integrity throughout the storage process. For all types of waste, selecting a proper container is important to minimizing the risk of exposure. Containers also must meet the applicable waste disposal regulations and should be properly labeled. Wastes should be collected from each generation point on a regular basis. Regulations for hazardous waste require satellite hazardous waste collection containers to be moved to the hazardous waste storage area within three days of becoming full. Care should be taken in moving wastes to the storage area as leaking bags or punctured containers can contaminate hallways and expose patients and employees.

Employees whose responsibilities include collection, packaging, storage and disposal of hazardous waste are required to receive training on proper waste handling and emergency procedures in accordance with 40 CFR Part 262.34(d)(5)(iii).

WASTE STORAGE

Wastes should be stored in a designated area. The waste storage area should be labeled and access restricted. Wastes should be segregated according to type and compatibility, and placed into USDOT-approved containers. Waste containers should also be provided with secondary containment where applicable. Waste storage areas should be inspected on a regular basis to ensure that containers are not leaking. Storage areas for small and large quantity hazardous waste generators are required to be inspected with records being maintained on a weekly basis. Regulations also specify the maximum amount of time a waste may be stored on site.

WASTE DISPOSAL

Waste disposal options should be determined for each waste stream. Infectious wastes can be treated on-site or off-site through incineration, sterilization, chemical disinfection, and irradiation. The advantages and disadvantages of each disposal method should be considered. Disposal options also need to be considered for hazardous, radioactive and chemotherapeutic wastes.

On-site treatment requires additional controls for the healthcare facility. Standard operating procedures need to be developed for the waste disposal process and operators need to be trained. For incineration, emissions monitoring and air pollution control devices are also required. For wastes discharged to the municipal sewer system, local discharge guidelines must be met. Local sewer facilities may restrict the release of radionuclides. Inadequate on-site treatment can result in a pollution event from off-site disposal of still-infectious or radioactive wastes.

Off-site disposal requires careful selection of the disposal facility and the transportation company. Audits should be performed for each transporter and disposal facility under consideration. Regulatory agencies should also be contacted to verify the compliance history of the firm. Contracts should be executed for the companies

chosen. Personnel who sign waste manifests should be designated and trained. Copies of waste disposal records should be kept in a designated area for the life of the facility.

Healthcare organizations should develop a waste management plan outlining their facility's waste identification, collection, storage and disposal procedures. The plan should also include:

- an outline of the training that must be provided to personnel handling wastes;
- emergency procedures to be followed in the event of a waste spill; and
- procedures for reducing the possibilities of terrorism or other theft of waste materials.

A comprehensive waste management plan enables a healthcare organization to effectively control wastes as well as the associated environmental liabilities.

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