

**SANITATION PROCESSES**

**TABLE OF CONTENTS**

Introduction………………………………………………………………………… 3

Objectives………………………………………………………………………….. 4

Overview: Systems Thinking and Sanitation Guidelines ……………….……….. 5

Sanitation Guidelines –Three Top Priorities…………………………………… 9

Systems Structure Perspective 13

Proper Rack Cleaning Procedures……………………………………………… 14

Good Manufacturing Practices (GMP)…………………………………………... 16

Sample Flow Chart ……………………………………………………………….. 17

Sample Job Breakdown………………………………………………………….. 18

Safety Standards………………………………………………………………….. 19

Case Study 21

Green Solutions for Sanitation…………………………………………………… 23

Summary…………………………………………………………………………… 25

Supplemental Material……………………………………………………………. 26

**INTRODUCTION**

Sanitation is one of the most important processes performed by every type of business. Regulated by the U.S. Food and Drug Administration, manufacturers, processors, and packagers of drugs, medical devices, food and blood are required to take proactive steps to ensure that their products are safe, pure, and effective. This in turn, protects the consumer from purchasing a product which is not effective or which may be dangerous.

Everyone is responsible for the cleanliness and contamination-free environment in the work center. Sanitation is as important to the supply chain environment as water is to the desert, as air is to breathing, as stars are to the sky….you get the point!

Some companies may hire one or more employees to perform just sanitation duties. But remember, sanitation remains everyone’s responsibility!



**OBJECTIVES**

The information, activities, and practices provided you in this unit will enable you to:

1. Identify importance of sanitation as part of supply chain system

2. Understand sanitation guidelines and standards.

3. Explain the top three priorities for a Sanitation Technician.

4. Explain proper rack cleaning processes.

5. State Good Manufacturing Practices (GMP).

6. List safety standards.

7. Understand equipment usage and the role of certification.

8. Recommend ‘green’ or energy-saving solutions for your company.

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**SYSTEMS THINKING**

Systems thinking is a way of seeing and talking about reality. Systems thinking helps us better understand and work with systems. A key to understanding any system is to know its purpose, either as a separate entity or in relation to a larger system of which it is a part.

By understanding how a supply chain system works, you will be able to (1) identify the role(s) you fill within the system for meeting sanitation requirements, (2) learn how to function more effectively and proactively within the system, (3) anticipate behavior of the system that effects sanitation practices, and (4) work with systems (rather than being controlled by them) to shape quality.

Key Characteristics of Systems Thinking:

* Interrelatedness
* Interdependence
  + No interdependence = just a collection
* Specific purpose
* All parts are required to carry out purpose
* Order of parts affects performance
* Maintain stability through feedback

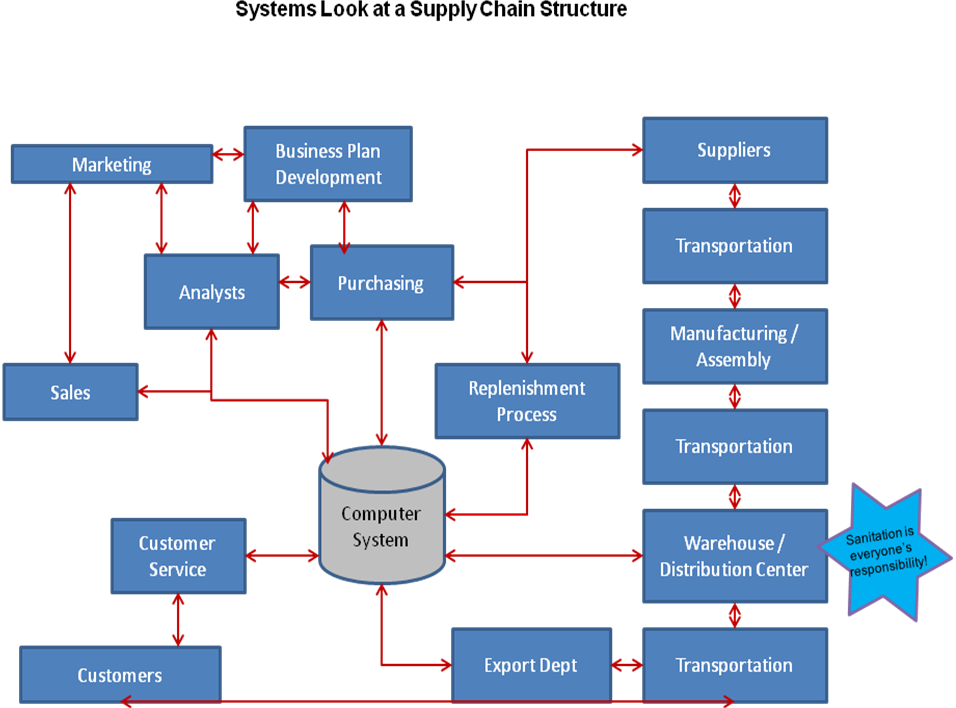
Examples of Systems and Collections

Systems Collections

Each has specific purpose Not interrelated

Specific organization of parts Not interdependent

Example of Supply Chain System



All of these operations are interrelated and interdependent on the other to get the product to the customer. They cannot function independently. If the supplier does not receive orders from purchasing, the transportation department will not have products to deliver to either the stores or to the distribution centers. The products would stop moving. The one constant in all of these departments is sanitation. The facilities must meet government and company standards for cleanliness or face the repercussions.

**SANITATION GUIDELINES**

The purpose of sanitation guidelines is to promote receiving, handling, storage, and shipping of food and other related product items will assure the continued delivery of safe, sanitary, and wholesome foods and products to the consumer.

The department(s) responsible for implementing the sanitation program establish written procedures and maintain outlines showing responsibilities of each department member. Training for new employees and current employees is conducted periodically.

Each facility shall establish an effective written sanitation program utilizing Master Cleaning Schedules (also known as the Master Sanitation Schedule) that identifies periodic cleaning tasks. Examples of tasks could include cleaning of floors, walls, light fixtures, storage slots, lower racks, dock areas, dock leveling plates, exterior grounds, etc. This written plan shall specify cleaning frequency and cleaning assignments.

Each facility shall establish an appropriate budget and support to maintain the proper and timely acquisition of appropriate tools, materials, equipment, monitoring devices, chemicals, and pest control materials.

Typically, weekly and monthly inspections of the facility shall be completed. These inspections monitor the level of compliance with the sanitation and food safety programs in place at the facility. In addition, supervisors shall conduct weekly inspections that focus on safety and general housekeeping practices in their respective areas of responsibility. All findings from these inspections shall be documented and kept on file.

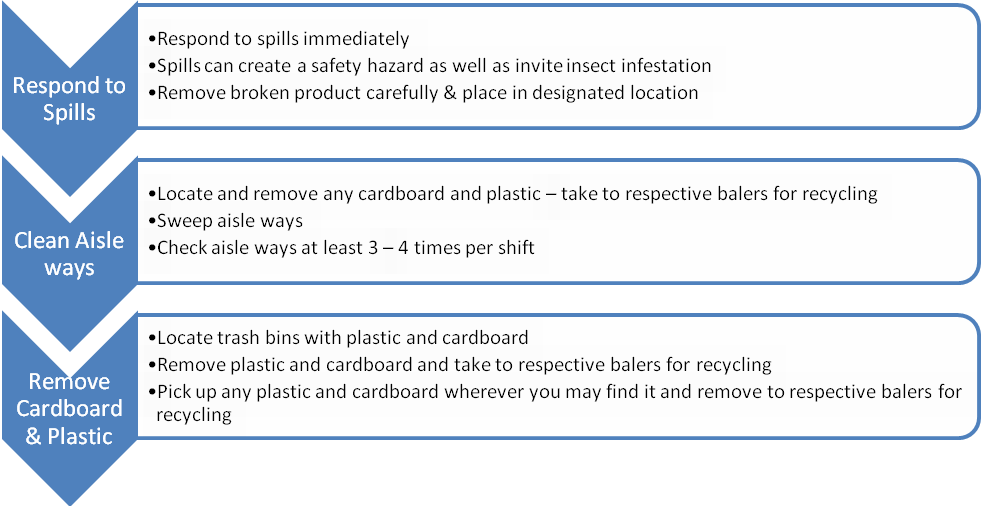
**SANITATION STANDARDS**



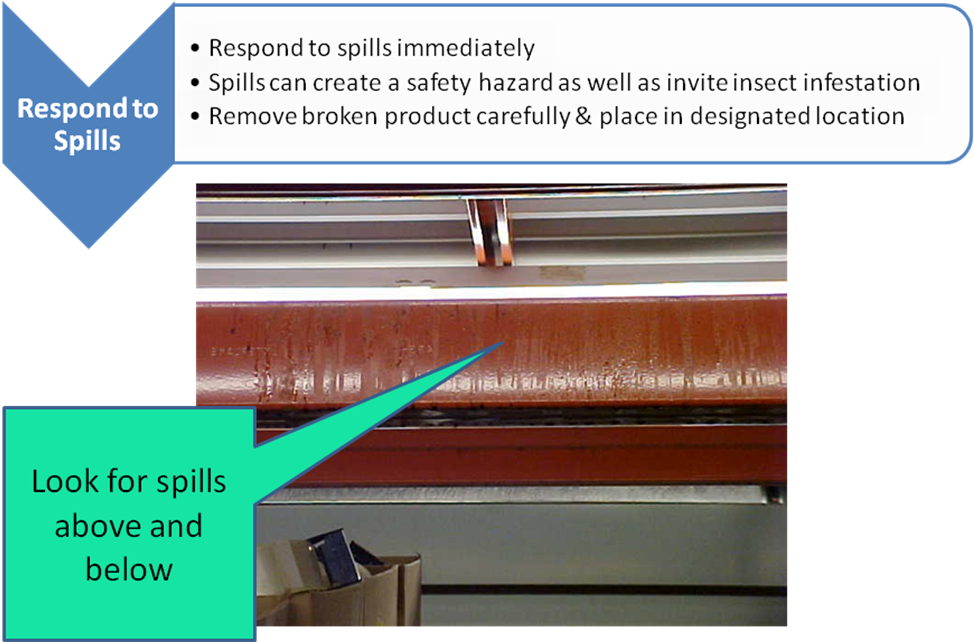
Each business facility will handle different and unique products that require different sanitation standards. It is your responsibility to learn those standards and conduct your work to meet and adhere to those principles. You will learn the basic priorities needed for those products handled by the company where you work; i.e. if you work in a facility with cold storage the priorities will be different than those of a distribution center for pet food.

**SANITATION GUIDELINES –THREE TOP PRIORITIES**

In order to maintain the highest standards and comply with Good Manufacturing Practices, all sanitation tasks are considered to be important and critical. Shown below are the three top priorities in maintaining a safe environment in a distribution center.



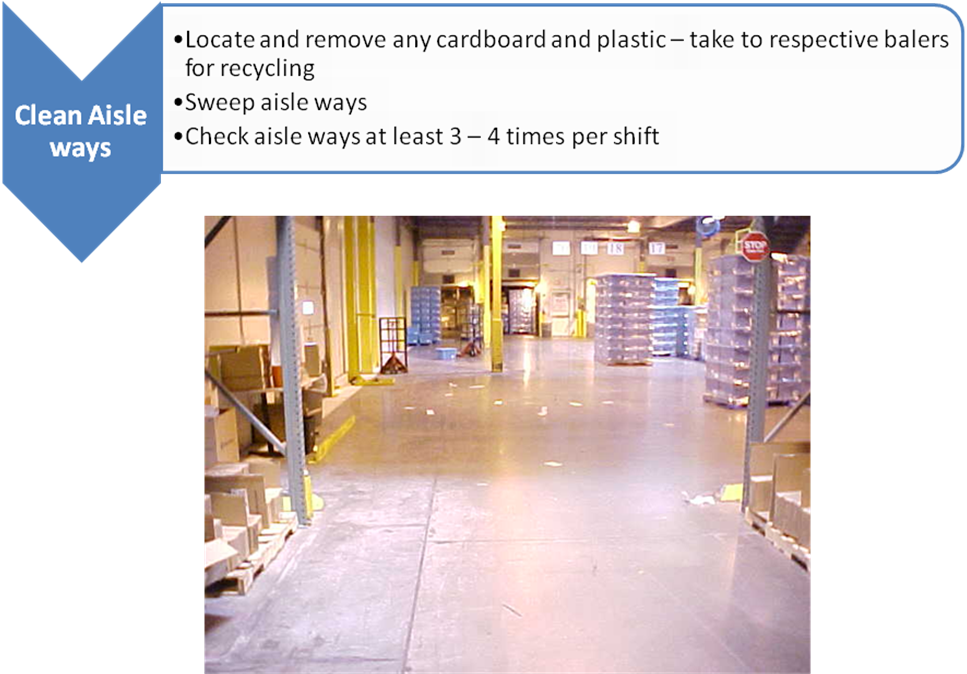
**Priority 1**



Spills can result from many items: liquids, dry goods, grains, nuts, powders, hazardous materials (including blood borne pathogens) and chemicals. Just think of going down the aisle at your local grocery store. Any item on the shelf could end up as a spill. A sanitation worker is responsible for making sure these spills are cleaned immediately. If you are the first to arrive, prevent others from entering the spill area. The entire area needs to be sanitized to prevent infestation and to promote a safe work environment. Once the product and area are cleaned up, transport the damaged product to the proper holding area for disposal.

One of the main challenges in properly cleaning the spill is to confirm the source of the spill. Many storage facilities and retail locations have product stacked up to eight racks high and the spill can be from any one of the racks above. Infestation and damage to other product below the spill is always a possibility.

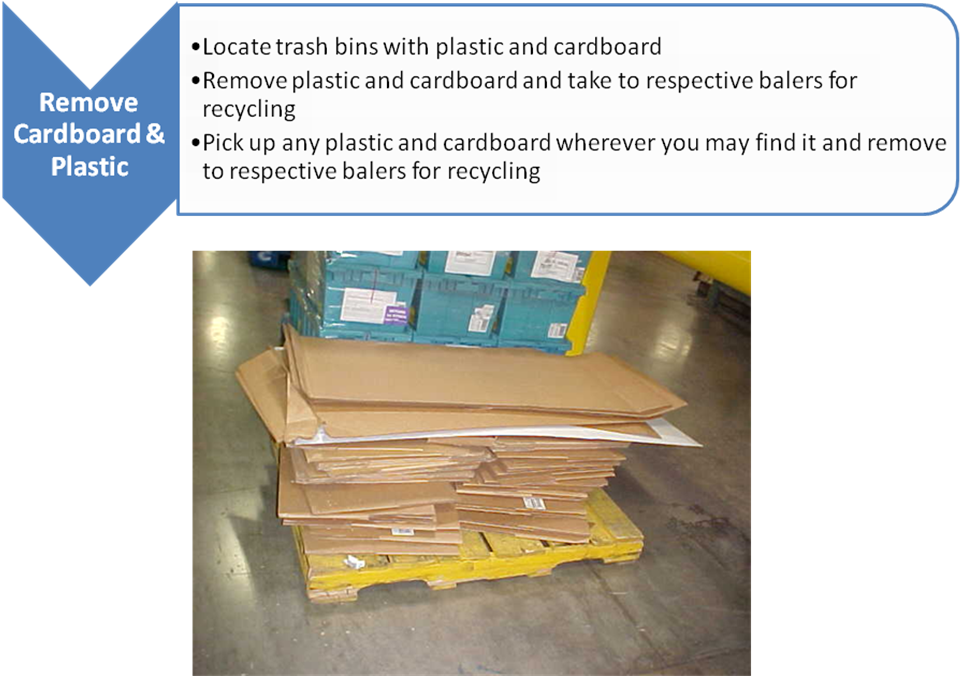
**Priority 2**



Keep storage aisles and walkways clean of debris. Practice good safety techniques when cleaning around other employees.

Cleaning typical warehouse aisles is a time consuming process. All aisles must be cleaned from one end to the other. As you sweep, locate and remove any excess cardboard and plastic. Take this material to the respective balers for recycling. Check for broken pallet pieces and take this material to the trash compactor for disposal. Check your assigned aisle ways at least three to four times daily and clean as needed. Pick up any plastic strapping material and take to trash compactor for disposal as this is not recyclable plastic. Locate and empty trash cans at the end of each aisle and prepare for use by putting in a fresh liner.

**Priority 3**



Locate storage bins for the cardboard and plastic and remove the material. Take all cardboard to the baler for compressing and recycling. Plastic must be a clear, soft material in order for it to be recycled. Remove all recyclable plastic and take to the plastic baler. Take any plastic that cannot be recycled and put it in the trash compactor for disposal. Any size pieces of cardboard and plastic must be picked up and taken to their respective balers for disposal. If you are assigned aisle ways, make sure you check them regularly. Perform sanitation tasks constantly, especially in the receiving and shipping areas, while conducting your daily cleaning duties.

**SYSTEMS STRUCTURE PERSPECTIVE**

Sanitation can look different from day to day. One day you might deal with a liquid spill, the next a dry spill, and the next a chemical spill. Or each day you might have to clean them all. In systems thinking, all of these spills represent events.

When you look at your work from a systems perspective, events are simply the occurrences we encounter on a day-to-day basis. From these events, patterns can form.

Patterns are the accumulated "memories" of events. When strung together they can reveal a trend.

What are some trends that might happen in a warehouse environment?

Damaged items Injuries

Outdated products Infestation

Late shipments Odors

On time deliveries

Others?

When you consider how to resolve or reward these trends, remember to first consider the system structure then the people who work in the system.

**PROPER RACK CLEANING PROCEDURES**

All racking must be dusted and cleaned and free of any spills on any part of the racking and supports. There should be no mop strings, cobwebs, dirt, or grease in or around the feet of the racks, or on any surface of the rack railing.



The arrows indicate all the directions that are to be completely cleaned.

**Side View**

Check all rack spaces and remove product that has fallen in between shelves. Place product in proper slot or if not known, place in holding area for further disposal.

A good warehousing practice is to mark all pallets with the slot location before pulling the product from the slot. Then, mark all empty slots with a sticker or marker that designates the product has been removed. This sticker or marker is removed upon replacement of each pallet to its original location.

AC422

AC412

AC442

AC402

**MT**

**Front View**

Workers should become familiar with normal product labels and tags. For instance this sign should not be removed. This sign indicates that the product for this slot is currently out of stock.

**GOOD MANUFACTURING PRACTICES (GMP)**

GMP refers to Good Manufacturing Practice Regulations decreed by the U.S. Food and Drug Administration under the authority of the Federal Food, Drug and Cosmetic Act. These regulations, which have the force of law, require that manufacturers, processors, and packagers of drugs, medical devices, some food, and blood take proactive steps to ensure that their products are safe, pure and effective. GMP regulations require a quality approach to manufacturing, enabling companies to minimize or eliminate instances of contamination, mix-ups, and errors. This protects the consumer from purchasing a product which is not effective or could be dangerous. Failure of firms to comply with GMP regulations can result in very serious consequences including recall, seizure, fines and jail time.

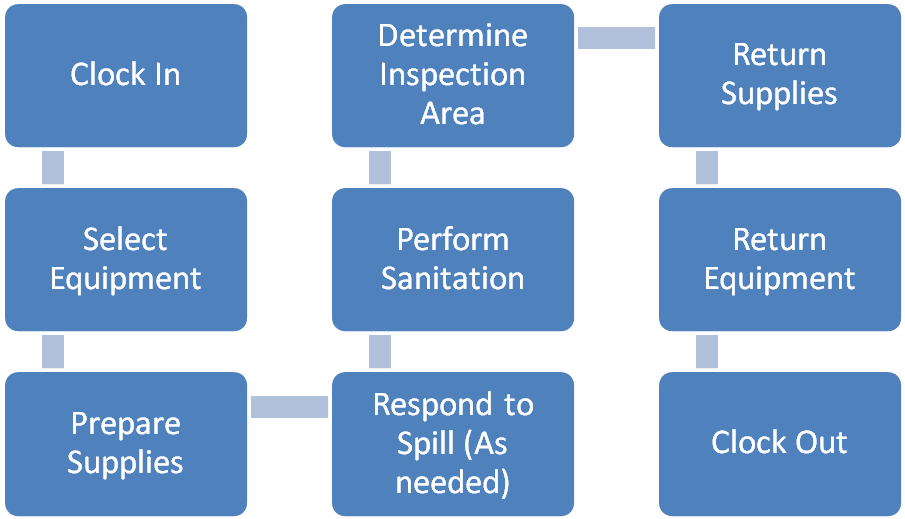
GMP regulations address issues including recordkeeping, personnel qualifications, sanitation, cleanliness, equipment verification, process validation, and complaint handling. Most GMP requirements are very general and open-ended, allowing each manufacturer to decide individually how to best implement the necessary controls. This provides much flexibility, but also requires that the manufacturer interpret the requirements in a manner which makes sense for each individual business.

Use the following website to obtain further information about GMP.

<http://www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/CurrentGoodManufacturingPracticesCGMPS/default.htm>

Training is a necessary approach to sustain a quality sanitation program. A company must first set the standards, and then train the employees to meet those standards of cleanliness and sanitation. Many companies utilize various methods such as Six Sigma, Total Quality Management, and PDCA (Plan, Do, Check, Act) to continuously improve their standards while maintaining adherence to GMP regulations.

**SAMPLE FLOW CHART**



The example above shows the multiple steps a worker can go through in the course of their daily activities. Remember, a flow chart only shows “what” is to be completed. It does not set the standards nor give the “how” of how to complete tasks.

**SAMPLE JOB BREAKDOWN**

|  |  |  |  |
| --- | --- | --- | --- |
| **IMPORTANT STEPS** | | **KEY POINTS** | **REASONS** |
| 7 | Drive safely to areas as needed | Adhere to all Stop signs | There is constant movement of equipment, people, and product in the warehouse-use caution at all times when driving |
|  |  | Use horn to signal/alert other drivers to your presence |  |
| 8 | Respond to spills immediately | Receive calls for spills either over radio or over loudspeaker | This is your number one priority! Every sanitation worker assigned to the floor will assist in cleaning spills in the warehouse - NO Exceptions! |
|  |  | Respond immediately | The spill can create a safety hazard and your immediate attention to detail will prevent further accidents |
|  |  | Fill in time, product, slot and quantity on Daily Spill Sheet | Use safety equipment if needed to protect yourself and others from further injury due to the spill |
|  |  | Take damaged product to holding area for further disposal | Remove broken product carefully so that you do not get cut or hurt. Be sure not to spread the damage by containing the broken product either in trash bag or tote. |

The sample job breakdown above gives the “how” of completing the tasks assigned to the employee. The first column relates to the steps listed on the flow chart. The second column relates key points the employee must complete to successfully accomplish the task. The third column sets the standards and explains the “why” for the employee.

**SAFETY STANDARDS**

No matter where you work you must maintain a safe environment. There are certainly a few more challenges performing sanitation on a distribution center with over two million square feet versus a 120 square foot office. However, safety standards are very much the same no matter the size of the facility. With the movement of product, comes the busy and congested work of the employees. OSHA (Occupational Safety and Health Administration) Standards (OSHA § 1910.178) dictate that only trained and authorized operators shall be permitted to operate a powered industrial truck. Research the website below for additional information.

<http://www.osha.gov/>

OSHA standards state that each facility must train and certify their own employees. Basically, if you worked at another distribution center driving powered equipment, you still need to attend training at the current facility.

The most common piece of equipment used in sanitation work is the pallet jack. The operator will load all of their cleaning supplies and equipment and travel to their designated section of the warehouse.



**SAFETY FIRST!**

Before loading your equipment on the pallet jack, you must first conduct an inspection of the equipment. You should use the Equipment Inspection Form provided by the facility and complete all of the necessary inspection steps. Many facilities require the operators to carry this inspection form with them for the entire duration of their shift.

Employees of a distribution center are expected to support the following safety guidelines:

1. Adhere to plant safety rules and practices.

2. Take responsibility for workstation by:

* Wearing required personal protective equipment
* Performing work assignments in a safe manner
* Correcting unsafe conditions and practices over which they have control
* Maintaining cleanliness and good housekeeping

3. Immediately report all accidents, injuries and symptom of chemical exposure to supervisor.

4. Immediately report unsafe conditions or practices to supervisor.

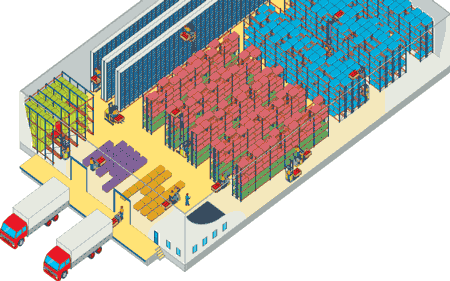
5. Know emergency procedures and the role they hold in an emergency.

6. Actively participate in the facility safety program as it relates to local, state, and federal safety standards.



**CASE STUDY**

Today's Foods distributes food products to multiple convenience store chains in the metropolitan area. Today's Foods has 45,000 square feet of storage space and employs 125 employees: 60% work from 6:00 a.m. to 2:30 p.m. and the rest work from 2:30 p.m. to 11:00 p.m.. They currently employ one sanitation worker who shares responsibility with all employees for keeping the facilities and outside grounds in compliance with Good Manufacturing Practice standards. Today's Foods has set expectations for how long the sanitation processes should take an average worker to accomplish. A schedule is established for each month and cascades down to daily tasks. Despite constant emphasis on safety and good manufacturing practices, personnel mishaps and product damage still occur.



As workload increases and the pressure to perform rises, some workers will deem housekeeping expendable. What those workers don't realize is that the greater the pressure to perform, the more important housekeeping functions become. You have noticed that some of your coworkers have started to lean empty pallets against bin rows and push empty boxes and used plastic wrap under conveyors. This normally happens when they fall behind their productivity quotas. Also, a few employees put up signs indicating a spill but never return to clean it up.

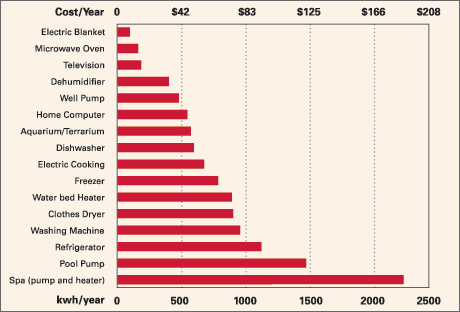
**Case Study Questions**:

1. What housekeeping standards must a warehouse maintain? List at least three Good Manufacturing Practices requirements that apply to warehouses. Who establishes these rules?

1. What impact does poor housekeeping have on work flow? Productivity? Sanitation?
2. What can a warehouse manager do to make it convenient for people to do what is expected? (For example, if garbage is the problem, what can be done?)

**GREEN SOLUTIONS FOR SANITATION**

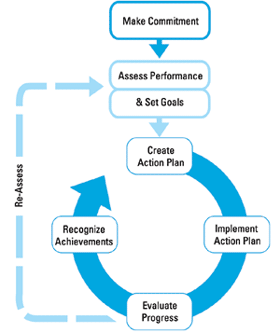
Going green not only in our business lives but in our personal lives is becoming an extremely important decision for each and every one of us. Improving the energy efficiency of the places where we work, play and learn helps us save energy, save money, and fight global warming. The graph below shows the average dollar and kilowatt usage for most home appliances per year.



When an individual or organization makes even small changes by going green, it will add up to big benefits for their wallets, for their health, and, of course, for the health of our planet. As energy, water, and other resources become less abundant and more costly, going green at a personal or business level becomes more practical. Fortunately, there are more new technologies and products coming to market than ever before that can help you achieve significant savings of both energy and money.

**Lab 1: Apply Energy Audit Checklist provided by instructor to conduct an audit of designated building.**

The steps shown below are guidelines suggested by Energy Star ([www.energystar.gov](http://www.energystar.gov)) as a way to help your organization become greener.



The list of potential green solutions is just a beginning. As you work in and around your environment, new ideas will form about how you can improve your green world. Search the additional websites listed below or others you know of for more ideas that you can implement.

<http://www.greenseal.org/>

<http://dsireusa.org/>

<http://greenandsave.com>

<http://www.irecusa.org/>

<http://www.epa.gov/epp/>

<http://www.bpiworld.org/>

<http://www.cleanairmakemore.com/>

**Lab 2: Student performs research to identify three actions a company can take to help protect the environment.**



**SUMMARY**

Today we have discussed the world of sanitation in a distribution center and how important cleanliness standards and guidelines are to that environment. You should know the characteristics of a system as well as understand three top sanitation priorities:

* Respond to Spills
* Clean Aisle Ways
* Remove Cardboard and Plastic

Rack cleaning and deep cleaning are two more important steps in keeping the work environment free of infestation. GMP (Good Manufacturing Practices) provides the regulations decreed by the U.S. Food & Drug Administration that ensure product handling is safe, pure, and effective for the consumer.

A safe environment is promoted and practiced on a daily basis, especially by someone assigned to be a sanitation technician. But remember, sanitation is everyone's responsibility. Before taking on sanitation duties, ensure you receive the proper training and certification.

One person can enact changes in their world – even small changes – that will help protect and preserve our earth’s natural resources for future generations. Going green is the responsibility of each individual and each company. There are many websites and organizations available to help you decide which green changes you will help implement.