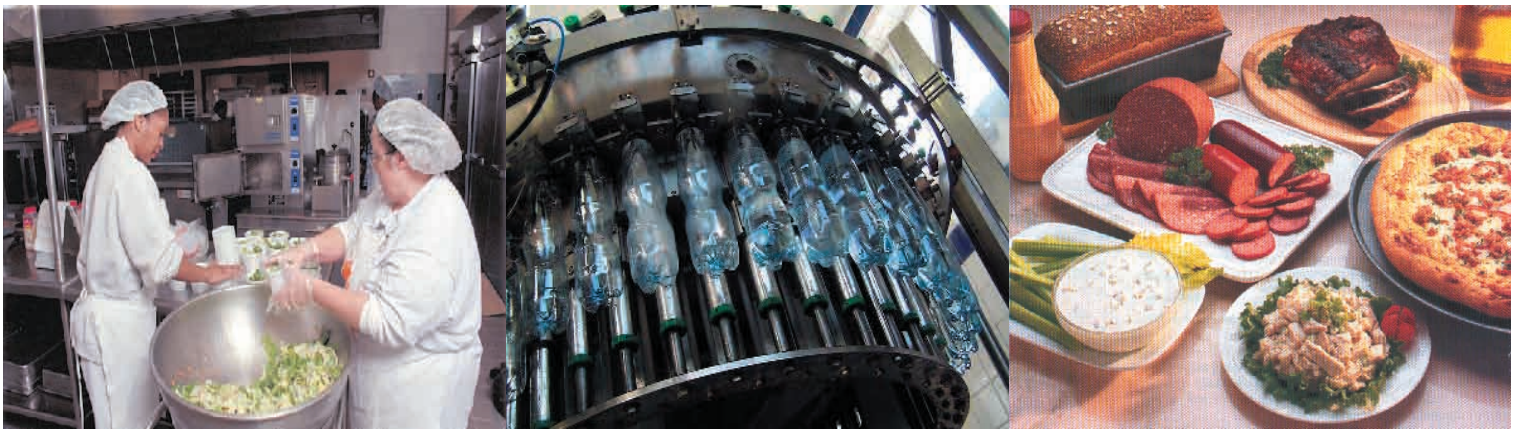

TECH TIPS

Issue #16 May 2007

Security in the Food Manufacturing Environment

What is the purpose of a Food Security Program?

Also called Food Defense, the purpose of an effective Food Security program in a manufacturing facility is to guarantee a safe food supply for the consumer. A successful program will embrace all aspects of the manufacturing process from ingredient receipt to finished product shipping. Program content may be individualized to reflect the specific needs of each manufacturer and types of produced product. However, there are several critical program components which may be deemed essential to food safety. This Tech Tip will describe these specific aspects of Food Security as they are applied in food manufacturing.

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Areas of Focus

1. **Crisis Management Team** - An effective Food Defense program must be monitored for effectiveness. This is the responsibility of the Crisis Management Team. Representation may include both management and labor. Team member contact information should be readily available on a 24/7 basis. The Food Security program components are described specifically in a document which can be called the Organization Risk Management (ORM) or another similar title description.

The ORM contains all Food Security program components and validation procedures. The Crisis Management Team oversees the implementation and validation of the established facility ORM. The Team should meet at established intervals and review all validation documentation. The team may publish a written report detailing compliance success. The team may also receive specific training in various protocol procedures and implementation from a recognized authority.

2. **Facility Security** - Protecting the food manufacturing process begins with a secure facility structure which will include external energy and water supplies. Areas of concern which require monitoring include (but are not limited to) the following examples.

a. Regular water testing for proper pH and chlorination.
b. Water source securely protected with designated access only.
c. External electrical supplies securely housed and protected.
d. All facility entrance doors feature individual authorization devices.
e. Air intakes and distribution systems inspected on a regular basis.
f. Boiler chemicals approved and properly secured.
g. Employee access restricted to assigned facility areas.
h. Exterior facility grounds properly illuminated.
i. TV monitoring of sensitive plant areas.
j. A system in effect to record and track keys assigned to individuals.
k. Plant grounds are fenced and secure with monitored entry and departure routes.
l. Car license plates may be photographed and recorded.

3. **Human Variable** - Ensuring only authorized personnel are present in external and internal facility areas is crucial to effective food security. Some ORM program components which serve to address this issue may include the following guidelines.

a. Contractors and visitors should be signed in/out with a daily log and carry prominently displayed ID badges. These personnel may require a company escort where warranted.
b. All employees should possess and prominently display a company issued photo ID while on the facility grounds.
c. There is an effective employee termination process which includes retrieval of all access keys and immediate escort from facility grounds.
d. All employees – both permanent and temporary - undergo a complete background check before entry permission is allowed.
e. Employee training is conducted with emphasis on effective reaction to suspicious events or observance of unauthorized personnel on company property.
f. Personal items (lunch boxes, etc) are allowed only in designated areas such as break rooms.

4. **Ingredient Safety** - Proper receiving and subsequent handling of product ingredients used in finished product formulation is critical to food safety. Finished product packaging materials also should be properly in spected and handled beginning at the point of delivery. Safeguarding protocols may include the following guidelines.

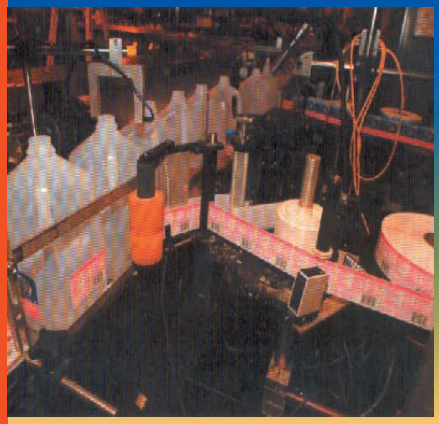
a. All received shipments feature sealed trailers and proper documentation from an approved supplier.
b. Inspection of all received materials is performed and documented before unloading is permitted.
c. Procedures are in place to handle such ingredients or packaging materials at the point of receipt which appear to be damaged or possess a suspicious appearance.
d. No opened ingredient packages are permitted in storage areas.
e. All product labels are stored in a designated and secure area with access only to designated individuals – inventories are monitored.
f. There is a procedure in place to describe proper handling and use of imported materials.
g. Ingredient lot numbers are traced through the entire manufacturing process from receipt to finished product.

5. **Storage and Transportation Safety** - The safe transportation and subsequent secure storage of ingredients, finished products, and chemicals requires a system of protocols which should be in effect throughout the manufacturing and logistic chain.

a. Food ingredients and allergen containing additions are stored in designated and separate areas.
b. Chemicals are stored in secure designated areas separate from food ingredients and finished products. Regular inventories are performed.
c. Product returns, rework, etc are held in clearly defined and designated areas – regular inventory accounting is performed.
d. Transport trailers are evaluated for proper integrity and cleanliness before loading is permitted.
e. Transport drivers are assigned to a designated driver reception area with denied access to other facility areas.
f. 3rd party storage facilities are regularly inspected and maintained in accordance with company guidelines.

6. **Food Process Security** - There are many critical points in the actual food manufacturing process which must be controlled and validated to ensure finished product safety. Some of these points are described below.

a. Unusual events during production shifts are recorded and investigated.
b. Critical Controls Points (CCPs) are monitored by electronic recording devices with deviations handled according to established procedures.
c. Process controllers and critical instruments should be pass code protected with designated access only.
d. Small tools are inventoried at the beginning and end of each production shift with established procedures to deal with unaccounted for items.
e. Computer formulation and addition programs are secure and access granted only to designated individuals with pass code authorization.
f. Storage vessels in remote facility areas should be secure and alarmed to alert for attempted tampering.
g. All Operators are identified by official license documents.
h. Mock recalls through the distribution system should be performed at regular intervals to ensure complete product traceability.
i. Tamper evident packaging should be used were appropriate.



C. **The Final Result: Consumer Food Safety.**

There are many resources available today to establish and maintain an effective Food Defense system in our food manufacturing environments. The above discussion should serve as a starting point for further action. Development and implementation of such systems of vigilance and effective corrective action are central to ensuring a safe food supply for our consuming public.

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