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**Drainage Management**

**1. Introduction:**

Effective drainage management is critical for maintaining hygiene, preventing flooding, and minimizing environmental impact within a food manufacturing facility (NIC Code 10101). This document outlines the key elements of a comprehensive drainage management plan.

**2. Drainage System Design:**

* Separate Systems: Implementing separate systems for sanitary wastewater (from toilets and sinks) and process wastewater (from production areas). This prevents cross-contamination.
* Slope and Gradient: Ensuring adequate slope in drainage lines to facilitate efficient flow and prevent blockages.
* Materials: Using appropriate materials for drainage pipes and fittings, such as corrosion-resistant materials for wastewater lines.
* Cleanouts and Access Points: Including cleanouts and access points at regular intervals for easy cleaning and maintenance.
* Grease Traps: Installing grease traps in areas where significant grease or oil is generated to prevent blockages in the drainage system.

**3. Maintenance and Cleaning:**

* Regular Inspection: Regular visual inspection of drainage lines for blockages, leaks, and damage.
* Cleaning Schedule: Developing a schedule for cleaning drainage lines using appropriate methods, including high-pressure water jetting or chemical cleaning.
* Grease Trap Maintenance: Regular cleaning and emptying of grease traps to prevent build-up.
* Debris Removal: Regular removal of debris from drainage grates and catch basins.

**4. Stormwater Management:**

* Collection and Conveyance: Effective collection and conveyance of stormwater runoff to prevent flooding and erosion.
* Oil and Grease Separation: Implementing measures to separate oil and grease from stormwater runoff before it enters the drainage system.
* Sediment Control: Using sediment basins or other measures to control sediment runoff.
* Water Quality Monitoring: Monitoring the water quality of stormwater runoff to ensure compliance with environmental regulations.

**5. Compliance Notes:**

Adherence to local building codes and environmental regulations is essential for the design and operation of drainage systems. Proper drainage management helps prevent contamination of groundwater and surface water.

**6. Practical Guidelines:**

* Develop a comprehensive drainage management plan.
* Provide training to employees on proper drainage system usage and maintenance.
* Establish a system for reporting and addressing drainage problems.
* Regularly review and update the drainage management plan.
* Use appropriate signage to direct the flow of wastewater and stormwater.

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