**OBJECTIVE:**

This program could become the most important within the Food Hub due to the multiple Hub Users and the variety of products that can be produced on each piece of equipment. Poorly maintained equipment can lead to food safety issues as well as inconsistent product quality being produced. The biggest issue will be when a piece of equipment is not functioning properly or at all, due to poor or no preventative maintenance.

**SCOPE:**

All equipment, even if a grater with no moving parts may require inspection to confirm efficacy of even particle size and shape. Thus, for equipment that has many moving parts and/or comes into contact with food ingredients, it is critical that a preventative maintenance program be instituted as well as enacted.

**BACKGROUND AND METHODS:**

* Equipment of any shape or size, and level of complexity requires the following activities to ensure consistent and effective operation. These activities are the components of an effective Preventative Maintenance (PM) program.
  + Review of past PM for notes and actions for the equipment
  + Observation – when in operation and when static.
  + Inspection - includes using all senses when conducting the inspection - while running and observing when it stops.
  + Isolation - remove from production during inspection and/or repairs, if the latter is required.
  + Identify frequency of the PM for each equipment
  + Identify if repairs are required and what parts, if any need to be ordered or if a qualified mechanic is required.
  + Remember that not all equipment has a motor or moving parts, thus visual inspection is critical and notes must be made that a visual inspection was conducted.
  + If equipment requires re-calibration such as for scales or specific meters and involves a third-party qualified individual to conduct this activity the appointment for that individual may require a lead-time for booking.
  + Spare parts are generally good to have on hand for equipment that is active and have specified parts that require replacement on a regular basis, i.e. hours of operation or specific times.
  + A contact list of professionals that can repair equipment should be current and reviewed periodically. A list of backup professionals is also advisable to have and maintain current contact information.

**DEFINITIONS:**

**Calibration:** The activity of checking, by comparison with a standard, the accuracy of a measuring instruction of any type. It may also include adjustment of the instrument to bring it into alignment with the standard.

**Quality assurance:** All the planned and systematic activities applied within the quality system to provide adequate confidence that the predetermined standards for quality and safety will be met.

**DOCUMENTATION REQUIRED:**

Specific Equipment SOP

Cleaning SOP

Sanitizing SOP and records

Maintenance SOPs and records

**INSTRUCTIONS:**

1. The instructions for the preventative maintenance for each piece of equipment should be in the operational manual. If no specific manual was provided by the manufacturer, it is prudent to start a binder for each piece of equipment or to contain a common grouping of equipment using dividers to separate the individual pieces of equipment. This is the best method to maintain the records of the PM program. All records require the person submitting the record to initial and print their name and date.
2. The PM binder will include the following information for each piece of equipment.
   * name of equipment
   * the manufacturer and contact information
   * model number
   * serial number
   * distinctive markings if there is no model or serial number
   * list of PM tasks associated with equipment. These tasks are segregated based on frequency of inspection, i.e. weekly, monthly, annually.
   * Outside contractor service report HUB.E.REC.33
   * Ensure that surfaces of equipment coming in contact with product is constructed of smooth, durable, non-reactive and non-toxic materials, and is impervious to moisture.
3. Only use food grade lubricant on equipment used in food processing and preparation.
4. Cover or enclose areas of equipment which may contaminate products with lubricant. (Ex. chains, tanks, pumps, gears)
5. Control and monitor temperature-sensitive compartments. Record such procedures in respective maintenance and monitoring records.
6. Adhere to Preventive Maintenance Program SOP and respective equipment maintenance SOP. Record actions and comments in Maintenance Logs.
7. Ensure that equipment is calibrated and periodically tested for accuracy. Record actions and comments in Maintenance Logs.
8. Maintain equipment usage logs.

**RESPONSIBILITIES AND PROCEDURES:**

1. Quality Assurance and Production Manager are responsible to compose SOPs regarding Maintenance, Sanitation, and Calibration, and to approve amendments or alterations to such SOPs.

**RELATED AND REFERENCE DOCUMENTS:**

HUB.E.SOP.30 Preventative Maintenance Program SOP

HUB.E.SOP.28 New Equipment SOP

HUB.E.REC.36 List of Equipment and Machines (Facility and Users)

HUB.E. WI.37 Maintenance Procedure

HUB.E.REF.38 Equipment Manuals

**REVIEW AND RECORDS:**

1. Maintenance and Sanitation Records shall be completed as per respective schedules and filed in a specified, easy to access binder in the Hub office for a period of 2 years.