RELIABILITY, MAINTENANCE, AND FOOD SAFETY

HACCP in the food industry stands for Hazard Analysis and Critical Control Points. It is the foundation to which companies are building a safe food supply. Let's explore how a reliability professional can use this information to improve the Asset Management program.

What is HACCP?

Hazard Analysis Critical Control Points (HACCP) is a systematic approach to food safety. First, identifying the food safety hazards and second implementing controls to eliminate or minimize the risk. It is based on the assumption that the foundational elements of Prerequisite programs exist.

- Good Manufacturing Practices

- Standard Operating Procedures

- Preventive Maintenance

- Pest Control

- Sanitation Procedures

- Effective and Documented Personnel Training

- Personnel Hygiene (hand washing)

    Active Management Control

HACCP is built from these foundational programs such as Preventative Maintenance. This means that to deliver a safe food supply a well implemented preventive and predictive program must exist. Other foundational programs like Good Manufacturing Practice (GMP), Sanitation, Training, Standard Operating Procedures require maintenance supervisors and mechanics to manage while performing their work.

Document control is another requirement for equipment identified as critical control points (CCP). This equipment will be listed as critical or high priority in the CMMS. Equipment history for this critical equipment will need to be accurate, reported and stored in the CMMS.

Like many continuous improvement processes, HACCP has twelve steps including five preliminary steps, which are:

1. Assemble the HACCP Team
2. Describe the Product or Process
3. Identify the intended use
4. Construct a Flow Diagram
5. Confirm Flow Diagram by walking system

Construction of the Flow Diagram should include every process step including optional steps like routine maintenance, PM's, cleaning and sanitation. This is a great opportunity to review the maintenance plans for the assets involved in each process step outside of the HACCP team.

Once the process flow has been completed and field verified, the seven principles of HACCP can be applied.

- Conduct a Hazard Analysis
- Determine the Critical Control Points (CCP)
- Establish Critical limits
- Monitor Control of CCP's
- Establish pre-planned corrective actions
- Establish procedures for verification
- Documentation and records for all procedures

The HACCP process is only concerned with finding the CCPs. When they are identified the assets involved need to be put on the critical asset list. During the hazard analysis process there will be many hazards identified but most will be managed by a prerequisite program like preventive maintenance, standard operating procedures, and GMP's. This information from the hazard analysis can be extremely useful in prioritizing other assets and reviewing the existing Preventive Maintenance practices.

Maintenance Plans for CCP are essential and must be well documented along with maintaining a complete equipment history.

Your role as a maintenance and reliability manager is directly involved in providing a safe and reliable food supply.