Food Processing Sanitation:

Small Mistakes Can Lead to Big Problems

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Empowering. Performance.

How vital is effective sanitation in food processing?

What risks arise when a facility fails to address shortcomings in its sanitation program?

These are critical questions every company considers when faced with reports of product contamination.

Alternatively, one might ask: What advantages can a company achieve by implementing a well-structured sanitation program? Could overhauling such a program genuinely result in benefits like shorter sanitation times, reduced overtime labor, longer production runs, and safer products?

In this eBook, we will explore sanitation in food manufacturing, looking at challenges, issues, and benefits through the lens of a recent project USC Consulting Group completed.

Food Process Sanitation 101

The first step in a company's microbial defense program is to determine the specific countermeasures required to protect their product.

Protein, dairy, and beverage processing facilities are classified as high-risk environments for contamination due to the nature of the products they handle, and the risks associated with their consumption. To minimize risks and maintain safety standards, sanitation procedures are carried out daily, with thorough cleaning performed every night.

In contrast, manufacturers of dry goods, such as facilities producing items like pasta, operate in lower-risk environments. As a result, their sanitation schedules are less frequent, typically occurring every other day.

Efficiency and throughput

When shifts change, ensuring proper sanitation is essential for a smooth transition. If sanitation procedures are not completed as required, the incoming shift is left with the task of, quite literally, cleaning up the mess. This additional responsibility disrupts their workflow, causing late starts and operational delays. The resulting loss of productivity creates a ripple effect, reducing output and putting unnecessary strain on both the workforce and the company's bottom line.

Increased USDA/FDA oversight

The U.S. Department of Agriculture (USDA) & the Food and Drug Administration (FDA) place a strong emphasis on sanitation practices in food processing facilities. When you consistently maintain robust processes and pass inspections repeatedly, it demonstrates to them that your practices are reliable and effective. Conversely, if your facilities fail to meet inspection standards, that will also be evident to them and usually result in fines and Non-Compliance Reports.

CASE STUDY:

How A Consulting Company Cleaned Up Sanitation

At USC Consulting Group (USCCG), we partner with food processing companies to enhance operational efficiency, minimize waste, and boost throughput across a wide range of processes.

Among these critical areas, sanitation holds a particularly vital role in maintaining product quality and safety. To illustrate this, we'd like to share the story of a recent project. Pun fully intended: **It was a mess!**

Background

A large food processing facility located in the Midwest was facing several challenges in their existing sanitation management system. Despite having a significant sanitation window, this company was consistently facing delayed on-time startups, line rejections due to quality inspection failures and morning production teams faced many instances of still soiled machines and tooling.

Gap Analysis

The site team initiated the project by conducting an in-depth, two-week feasibility study (with USCCG support) to evaluate the effectiveness of the existing sanitation process. This comprehensive assessment involved performing time studies and detail analyses for each step in the company's seven-step sanitation process. While the company already had a sanitation system in place, it became clear that their sanitation management operating system (SMOS) had become outdated over time, leading to diminished effectiveness and efficiency. This initial study set the stage for identifying key areas in need of improvement to restore and enhance the system's overall performance.

Observations & Challenges

High turnover: The absence of experienced sanitation management and a certified training program contributed to a turnover rate exceeding industry standard. Frequent high callout rates caused significant delays in the sanitation process, leading to prolonged sanitation windows and missed production deadlines.

Low water pressure: The facility's boiler was unable to supply enough hot water for the initial rinse and chemical washdown steps of the sanitation process. As a result, the sanitation crew often had to clean with water temperatures below 100°F and pressure levels under 130 PSI.

Inexperienced/overloaded management: The sanitation shift operated without formal management, resulting in employees being unclear about their responsibilities and lacking accountability for tasks that were left unfinished.

Training Program issues: There were minimal to no formally documented cleaning procedures in place. New employees were trained by uncertified trainers with limited oversight from management, resulting in frequent cases of improper machine cleaning and skipped microbial defense steps.

Pain points: Numerous machines with complex cleaning requirements were identified, often requiring extensive disassembly and relying on undocumented cleaning procedures. These challenges either delayed the sanitation process or led to additional cleaning, resulting in multiple quality interventions.

The Proposed Strategy

To tackle the challenges and inefficiencies that were identified, we collaboratively developed a detailed plan of tools and processes. The total duration of the project spanned five months, strategically divided into four distinct sprints. Each sprint was organized according to the production zones, with a clear distinction made between raw areas and ready-to-eat (RTE) areas.

This structure was implemented to guarantee that the necessary processes, methodologies, and disciplines were consistently maintained and effectively integrated throughout all aspects of their operations.

Formalized processes: The site team developed a set of formalized tools and resources for each shift to ensure clarity and consistency in daily operations. These tools were designed to provide team members with a clear understanding of exactly what tasks needed to be completed, when to perform them, how to execute them properly, and why they were essential to the overall sanitation process. To further enhance this system, laminated instructional guides were created featuring detailed, step-by-step, visuals for each machine and work area. These illustrated guides provided precise directions on how to thoroughly clean and sanitize equipment, empowering the team to maintain high standards of hygiene and safety across the facility.

Tackling turnover and training: High turnover is an inherent challenge in the sanitation field, but companies can take steps to reduce it by formalizing their processes. When teams operate with the precision and efficiency of a pit crew, job satisfaction naturally increases, creating a more motivated and engaged workforce. Another critical component is comprehensive training. As turnover inevitably occurs and new employees join the team, having a robust training program in place ensures that new hires can quickly acclimate and perform from day one. Together, streamlined processes and excellent training form the foundation for long-term success in sanitation.

Collapse of the sanitation cycle: By implementing the Single Minute Exchange of Die (SMED) process, the team successfully reduced the overall sanitation window by 50%. This approach was applied to each production line, enabling the identification of rework areas and out-of-sequence steps within the sanitation process.

Solidify the shift start times: The planned start times were initially set but were seldom met in practice. This was largely due to little consideration for setup times and inspection periods, which often left machines unavailable and caused delays in starting on time. However, by introducing a rigorous operational startup procedure and an area readiness program, the site team successfully enforced strict startup schedules and achieved consistent first good part times.

Schedule Controls: This tool is designed to assist management in efficiently overseeing and coordinating activities throughout each shift, ensuring seamless operations while upholding safety protocols and maintaining quality standards.

Master Sanitation Schedule Meeting: Most of the facility's infrastructure is not included in daily sanitation procedures, often leading to overlooked areas that become breeding grounds for pests and bacteria. USCCG assisted in revising the Master Sanitation Schedule and implemented follow-up meetings to identify issues and address the sanitation team's needs.

Standard Operating Procedures: Every tool, procedure, and process developed or refined by the site team is accompanied by a Standard Operating Procedure (SOP). These SOPs serve as foundational building blocks for ongoing sustainability, providing newly hired or promoted managers with a clear resource to understand the established standards and how to implement them effectively.

Results & Outcomes

• Reduction of sanitation process time by **50%** by use of SMED (Single Minute Exchange of Die) Process.

• Lowered labor costs due to fewer missed sanitation windows and reduced overtime hours caused by rework. Master sanitation tasks scheduled to maximize coverage during normal work hours. **Reduction of ~$400,000 in overtime hours annually.**

• Reduction in failed ATP swabs using pre-inspection checks done by sanitation leadership and sanitation specialists. Ultimately led to a decrease in reoccurring line rejections/rework during pre-operation inspections.

• Increased productivity windows due to reliable scheduled start times. An additional two hours per day of added production time. **~520 hours gained annually.**

• Increase throughput by decreasing sanitation windows and streamlining quality pre-inspections. Reduction of findings during quality inspections.

These improvements showcased the effectiveness of the enhanced sanitation management system in boosting performance and promoting continuous improvement throughout the organization.

How much would an additional 520 hours of production time impact your business?

Need help optimizing your sanitation?

Contact USC Consulting Group today.