

Plant Sanitation - Plant Perspective

- ▶ Perspective on the Daily “Plant Clean-Up”

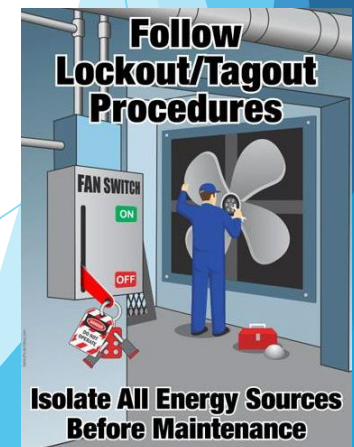
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What is the Plant Clean-Up?

- ▶ Important
 - ▶ Meet your sanitation requirements
 - ▶ Control Microbiological profiles for shelf life
- ▶ Process to remove all soils and residues from the prior days operations.
- ▶ It is the time period to perform critical equipment maintenance/repairs.
- ▶ It is the opportunity to clean those auxiliary areas. (Master Sanitation Schedule)
- ▶ A time where unique **SAFETY HAZARDS** can occur.
- ▶ We try to put a lot of activities into this unique time where operations has minimal activity.



Hindrances to Proper Clean-Up

▶ Common Issues:

- ▶ Time to clean
- ▶ Proper water temperature and pressure, heating and cooling cycles, air pressure, etc.



- ▶ Improper equipment design.
- ▶ Improper maintenance of equipment
- ▶ Training of employees on safety, chemical usages, applications.
- ▶ Inefficient access to chemical cages and equipment storage.
- ▶ Lack of communication between Operations, Maintenance, Sanitation Crew and/or Q.A.



Good Practices to Achieve a Proper Clean-Up

- ▶ Staffing
- ▶ Chemical Storage/Usage/Application
- ▶ Monitoring
- ▶ Verification

Staffing

- ▶ A proper number of people need to be at the plant every day to achieve cleaning.
 - ▶ Variabilities in the number of people create inconsistent results.
- ▶ Training
 - ▶ Cleaning employees have to be properly trained.
 - ▶ Safety Training.
- ▶ Supervisory/Management Staffing
 - ▶ The Supervisor/Management staff has to do their job. It is problematic when the supervisors are running a hose!
 - ▶ These people need to supervise.

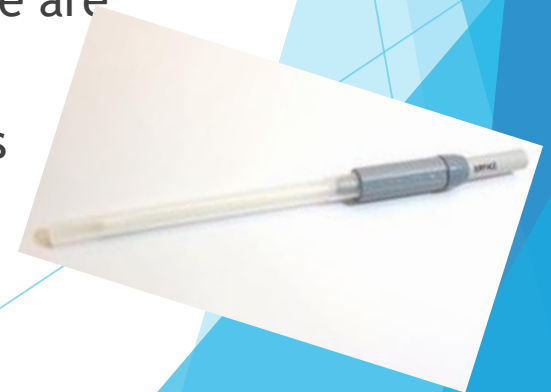
Chemical Usages

- ▶ Access to SDS, Labels, Procedures on using chemicals.
- ▶ Rotation of Chemicals nightly, throughout the week.
- ▶ Follow the label.
- ▶ Follow the cleaning instructions for the equipment.
- ▶ The way a chemical is applied matters.
- ▶ Chemical Storage - temperature, sunlight, proper rotation.



Monitoring

- ▶ Be consistent!
- ▶ Routine monitoring of what goes on during the clean-up shift.
 - ▶ Important to routinely verify how the plant is being cleaned by trained personnel while the plant is being cleaned.
- ▶ **Micro Evaluation/Lightning Swabs**
 - ▶ Consistent program with random and targeted samples sites.
 - ▶ Corrective actions for sites that had a failed score are required.
 - ▶ Lightning swabs - Be careful of how the sample is obtained and reader calibration.
 - ▶ Storage of swabs/sponges.



Verification

▶ Pre-Op Inspection - Organoleptic (Visual Inspection) of the finished product.

- ▶ Limitation - don't rely solely on visual.
- ▶ If a plant has had an issue, may need a more robust inspection.
- ▶ More than visual, feel, smell, etc.
- ▶ Consistent from day to day.

▶ Tracking and Trending

- ▶ It is important to track and trend the information (micros, lightning results and visual observations) to assure that good feedback is given to the clean up people but also targeted follow up is given to those sites that have issues.



Special Cleaning Provisions

▶ CIP systems

- ▶ Exact Multi-Step procedure
- ▶ Monitoring/Verifying



▶ Hard to reach areas

- ▶ Due to design or reformatting of the production areas, these areas are common in plants.

▶ Complex equipment

- ▶ Evaluate Manufacturer's Recommendation for tear down - and assure that those recommendations create an acceptable cleaning level.

▶ Ceilings, Walls, Floors and Drains

- ▶ Those need cleaned daily with special chemical treatments.



Extraordinary Cleaning

- ▶ A plant should schedule regular “deep cleaning” activities that give access to the sanitation group for 24-72 hours depending on the complexity of the plant.
- ▶ Deep tear down of equipment.
- ▶ Allows for:
 - ▶ Deep cleaning
 - ▶ Inspection of equipment for hollow framework integrity, etc.



Common Pitfalls

- ▶ Becoming complacent in the safety monitoring during the cleaning shift.
- ▶ Relying on Pre-Op Inspection to determine efficacy of cleaning.
- ▶ Not tracking and trending results.
- ▶ Not communicating with Maintenance, Operations, and other departments in the plant with the opportunities that may be occurring with the clean-up process.



Any Questions?

