

Building an Effective Food & Beverage Safety Program

Safety Note

Food and beverage manufacturers have a lot on their plate. Not only must they monitor the day to day tasks of running a business and satisfy their employees, but they also face regulations with which they must comply. How can they remain competitive and compliant in this ever-changing world of compliance and regulations?

The tips below will help get you on the right path for developing and/or enhancing your Food & Beverage Safety Program to maintain compliance and possibly reduce costs and advance production.

1. Regularly conduct maintenance inspections

Equipment testing and inspections are required by NFPA 86 (Standard for Ovens and Furnaces), as well as ANSI Z50.1 for bakeries and OSHA 1910.263 for bakeries. Daily routine walk-around inspections just as important. Unless equipment is maintained, it will wear out. If there is a leak, the burners do not know there is a change, so the output remains the same. Diminished process operation could be caused by a number of reasons, so a daily equipment walk-around is essential to identifying the cause of such fluctuations. Consider the following:

Does it feel warmer next to the oven than normal?

It is not an accident; the oven is losing heat to the room. You could be losing heat through the gradual breakdown of insulation or door seals.

Are you noticing a fluctuation in flame color?

Something has changed, and not for the better. Bright, luminescent flames generally indicate a gas-rich condition while a bright white or wispy blue flame often indicates lean combustion or excess air. Soot or carbon on the floor indicates problems with the combustion process.

Are your filters clean?

Any filter blockage will result in serious problems. As the system bogs down under a clogged filter, the process may not receive the required input. This puts undue strain on the combustion air blowers over time, which can cause electrical and motor maintenance costs to escalate.



Problems can arise from blocked air filters if the burners go fuel rich; wasting fuel, dollars, creating carbon, and the potential for a fire hazard.

2. Effectively manage your equipment

Just as you must manage goods within the production process, managing the process in which they're being produced is just as important. Keeping equipment running as the manufacturers intended is key to reducing nuisance shut downs or production delays. When a burner is properly tuned and running as designed, there is a distinct noise associated with it, so what does a change in that pitch indicate? What does a low drone or high pitched roar indicate? Anytime a burner changes sounds or a valve creaks, it's never a positive change. Look after your combustion equipment to keep it running smoothly.

3. Understand your energy consumption

Are you seeing a spike in fuel consumption within the plant? A best-in-class combustion safety program will positively impact energy consumption. Successful organizations pay attention to these details to better address both identified problems and potential. After all, without data you're just another person with an opinion. In the age of being preventive vs. reactive, a manufacturer's best tool for managing energy costs is burner tuning.



Eliminating unwarranted excess air can save a fortune. If you're heating air you don't need to properly cook your food, you are wasting energy. Typical systems can see up to 7% improvement from proper tuning, equating to thousands of dollars a year.

4. Check your pressure

Combustion experts speak in terms of pressures, velocities and flows because these are critical to burner operation. By understanding and knowing burner pressures and flows, changes in performance can be detected early to help troubleshoot any problems. A manometer is an inexpensive device for measuring air pressure. If you do not have one, get one. Have your burner technician show you where to check the pressure inputs on your burner, then check them monthly. If a pressure change is noticed, alert the technician to get the burner back in tune.

5. Manage control of safety inventory/stock

What are the components on your equipment, burners and gas trains that will shut down production if they were to fail? Paying attention to critical spares part numbers, switch orientation (normally open vs. normally closed), valve types, etc. is crucial to prevention. And with technology available today, documenting via photographs from a phone or digital camera is one of the best ways to ensure your database is accurate so spares are ordered correctly every time.



Maintaining this information and ordering spares in advance to sustain an on-site inventory can mean the difference between multiple days of downtime or just a mere hour, especially for older equipment where the lead time on parts can turn into weeks. If an emergency situation were to arise, could you afford to be down for an extended period of time?

ABOUT US

Honeywell Combustion Safety is a part of Honeywell Thermal Solutions, an industry leader in commercial and industrial combustion solutions. Honeywell Combustion Safety, formerly known as CEC Combustion Safety, has been in business since 1984. With engineers and staff members that sit on Code committees such as NFPA 56, NFPA 85, NFPA 86, and NFPA 87, our inside expertise is integrated within all of our practices, and our global reach ensures that customers around the world are kept safe. Honeywell offers testing and inspections, engineering & upgrades/retrofits, gas hazards management, training, and field services for all industrial facilities and different types of fuel fired equipment. By assisting organizations and their personnel with the safe maintenance and operation of their combustion equipment, Honeywell aims to save lives and prevent explosions while increasing efficiency and reliability of combustion equipment.

6. Commit to educating yourself and staff

The future of the Safe Quality Food Program will be focusing on additional areas to include subject matter training. Additionally, NFPA 86 requires training and/or refresher training for those that operate, maintain or supervise combustion equipment on an annual basis. A number of reputable combustion schools are offered by burner equipment manufacturers and trade organizations to help educate you and your staff on proper burner operation. Most are one to three days in duration and cover the principles of combustion and application issues. They are worth the time investment.

7. Maintain documentation and recordkeeping

The Global Food Safety Initiative (GFSI) focuses on documentation. Be prepared for unannounced audits by documenting all maintenance checks, tests, repairs, etc. The overarching mantra is "if it isn't documented, you didn't do it," so don't be caught without the correspondence to prove your work. Standard operating procedures should include logs documenting tests, service and equipment adjustments. These should contain dates, times and sign-off. Training programs must also be documented to include course curriculum, instructors, dates and times and attendees. If there isn't paperwork to prove it occurred, it didn't happen. Don't let a good program go to waste because the documentation isn't present to support it.

8. Maintain corporate standards globally

For organizations with multiple sites worldwide, a corporate-wide compliance program is imperative for success. Developing countries do not have the same strict regulations as the United States, but GFSI is looking to take a global approach to companies' food safety programs. This will include the above mentioned tactics from routine maintenance, to critical spares programs (especially overseas when the lead time can increase dramatically), personnel training programs and documentation. A web-based corporate database would be ideal to prove domestic and foreign compliance in one records archive.

In an era of rising commodity and energy costs, and stricter regulations, it is essential to optimize internal processes. Best-in-class organizations have realized the benefits of a strategy that enables them to see where inefficient processes exist. By implementing safety programs to address these issues, effective, accurate, and actionable insights are gained into production processes to allow for maximized margins, increased competitive advantage, and most importantly, improved safety.

For more information

Learn more about Honeywell Combustion Safety, contact info@combustionsafety.com, visit www.combustionsafety.com or contact your Honeywell Sales Engineer.

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