

White Paper—Improve Your Facilities and Operations – Avoid the Next Crises!

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Each new food contamination crises that hits the front page, each death of an infant or grandparent due to E. Coli, Lysteria or Salmonella, is an avoidable tragedy. Our society and our legislators will not allow a complacent attitude. It's likely that criminal charges and stricter legislation will result from the recent peanut butter disaster: Allegedly eight deaths, all over 59 years old, and over 500 illnesses, half of them kids under 10!

Those of us in management positions can think back to Jack-in-the-Box, twenty four years ago. From there, a series of incidents hit the front page, concerning sliced meats, hot dogs, frozen foods, produce, canned foods, and now peanut butter. Dozens of deaths, hundreds of illnesses, factories shuttered, companies bankrupt.

Regardless of our defenses, the public is aware, concerned and critical. Criminal investigations have been announced in the PCA case. In Canada, 56% now avoid RTE meats at restaurants, up from 9%.¹ Center for Science in the Public Interest was tracking 14 bills introduced in the 110th Congress. Representative Waxman's committee begins food safety hearings in February, spurred by PCA. Congressman Dingell's HR 759 is one of the first bills that will impact the food industry in significant ways. Sen. Durbin, and Representatives Stupak and DeLauro are introducing Food Safety bills. Hang on, 2009 will be a rough ride.

Thirty years ago, our cupboards were stocked with canned food—log 7 kill. Today there are many foods that have significant intervention after the kill step and many longer shelf life, chilled distribution foods without a kill step. Production shifts are expanding, including multiple-day runs between cleanups. And regulations have been relaxed since the 80's. Few of us are left who waited outside a USDA office in Washington to get our construction drawings approved. The number of FSIS inspectors has decreased while the volume of inspected products has greatly increased.² In short, the world has changed, and our food production systems need to change to meet the new challenges.

It can be reasonably claimed that the most sophisticated organizations produce ready-to-eat (RTE) foods. Their focus on safe handling, sanitary design and micro-testing, among other food safety approaches, is exemplary. They spend the most on equipment and facilities. They have the most at stake in meeting stringent requirements such as Directive 10,240.4 and other *L.m.* and *E.coli* regulations. These companies are the ones investing in high-pressure pasteurization or other post-packaging interventions.



1. MeatingPlace Magazine, January 2009 "Not Ready to Eat", page 26
 2. www.ombwatch.org/node/3624

What is significant is that the approaches of these sophisticated companies are converging on a common set of sanitary design concepts for both facilities and equipment. The extent of agreement among task force members of the recent American Meat Institute Facility Sanitary Design Task force was notable. And the implementation of the AMI Equipment Design Guidelines by suppliers has been impressive.

What we are seeing in the broader food industry is a wider adoption of these more stringent approaches. Dairy, Juice, Condiments, Snacks, Confections, Bakery and other sectors are moving quickly towards the higher standards that used to only be found in the meat industry. Some of the common themes are:



Courtesy Facility Group



Courtesy AMI Facility Design Task Force

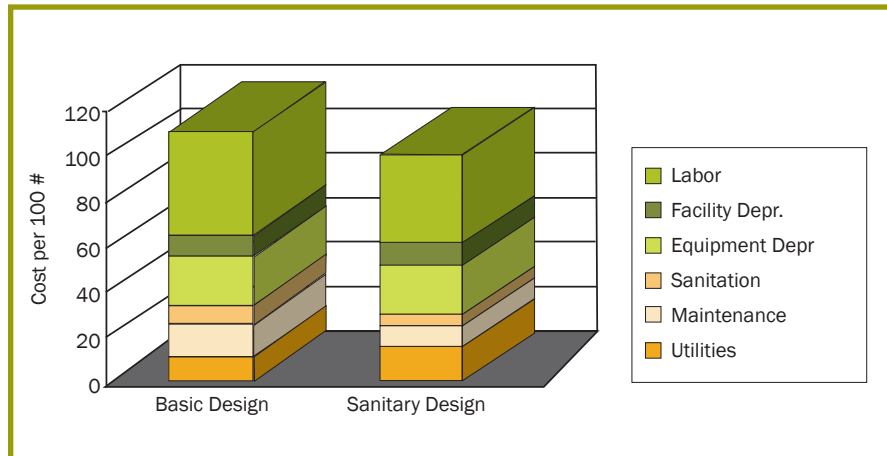


Courtesy AMI Facility Design Task Force

- Separated receiving and storage areas for ingredients, materials and finished products.
- Special processing for any rework and special attention to how and where rework is used in products.
- Attention to how ingredients, materials, rework, trash, products and people move through a facility and avoiding opportunities for contamination.
- Complete production breaks to create discrete lots as an aid to traceability.
- Floors sloped to avoid standing water and floor systems designed and maintained to avoid spaces that could trap water.
- Lower temperatures in production rooms to impede the growth of pathogens, even in rooms traditionally kept ambient such as rooms housing cooking processes.
- More outside air, better filtration, fewer hanging evaps and an emphasis on cleaning the ductwork.
- Care taken at all floor/wall intersections to seal them, cove them and avoid trapping water under the wall.
- Insulated metal panel walls, with vertical joints caulked.
- Drier production environments with a renewed attention to surfaces likely to cause condensation.
- Insulated metal panel ceilings in any rooms that might have exposed food, either raw, in-process or cooked.
- Much more stainless steel and much less painted carbon steel or galvanized.
- Cleaner miscellaneous platforms, utilizing continuous welding, rotated angles, standoffs and other good practices in detailing.
- More complete gowning of employees and elaborate areas for boot washing and hand cleaning.
- More money spent on air systems—piping materials, better filtration, oil-free compressors and a focus on compressed air that might contact product or processing equipment.

These are just a few of the over 200 issues discussed in the AMI Sanitary and Equipment Facility Guidelines.

Supply Chain thinking, with closer integration of functional departments and better analysis of cost-per-case, supports investments in sanitary approaches. Those extra dollars spent on capital, much of it with a 30-year asset life, hit the case cost in pennies. Downtime for cleaning, sanitation labor, chemicals, maintenance costs, and lowered yields due to product loss all hit the case cost in dimes or even dollars.



Spend more on your facilities and your case costs drop

If this financial perspective is new, or if some of those sanitary design and operations concepts highlighted above are not currently integrated into your company's approach, feel free to call on Facility Group. We offer training courses and auditing services to help your company implement those approaches appropriate to your products and circumstances. Our comprehensive approach to process engineering, equipment and facility design and cost analysis will help you improve food safety, justify the necessary capital and drive down delivered costs.

To get an extended version of this document, please contact David Dixon at 770.437.7155 or david.dixon@facilitygroup.com. For more information please visit our website at www.facilitygroup.com.

David Dixon is the Executive Vice-President at Facility Group, a full-service, integrated consulting, design and construction company providing services to all sectors of the Food Industry. Mr. Dixon was the Co-Chair of the American Meat Industry's Facility Design Task Force. Industry leaders from seventeen manufacturing and design firms developed a training program, assessment tools, and guidelines which promoted best practices in the Sanitary Design of Food Facilities. With his more than 20-year career designing and operating food facilities, Mr. Dixon is a strong advocate for improving food production systems worldwide.