

# Case Study

smiths detection  
bringing technology to life

## Eagle FA

### LONE STAR BEEF PROCESSORS

#### Introduction

Lone Star Beef Processors L.P., based in San Angelo Texas, is a full-service slaughter house processing between 920 and 930 head of cattle per day during peak season, typically late spring through mid December.

Lone Star Beef sells 250,000lbs to 350,000lbs of meat per day to grinders and processors that in turn sell to more than 40 of the industry's top restaurant and grocery chains. In 2007, one of those processors recommended Smiths Detection X-ray technology for increased contaminant detection to ensure a higher quality product.

#### Challenge

Lone Star Beef relied on metal detectors and manual inspection for contaminant detection before installing the Eagle FA. Due to the density of the muscle tissue of the meat, the metal detectors could only detect the small metal contaminants near the surface of the meat. Metal contaminants embedded deep inside would have to be extremely large to be detected. Lone Star determined that it needed better contaminant detection performance as well as accurate Chemical Lean (CL) value for its meat, as the selling price of the meat is based on the amount of lean meat per batch. CL determination is typically done by removing a core sample of meat from each container and performing a lab analysis. Not only is this process time and labor intensive, but also inherently inaccurate due to the fact that not every piece of bulk meat would be evaluated, leading to a high sampling error.

#### Identification and Selection

In October 2007, Lone Star Beef attended the WWFE AMI show to evaluate X-ray vendors. After comparing two, Lone Star Beef selected Smiths Detection based on the following criteria: throughput speed, AMI sanitary design and overall smaller machine footprint. The Eagle FA is able to process up to 160 US Tons of bulk meat per hour for both CL value, weight analysis and contaminant evaluation. In addition to the processing speed, the AMI sanitary standards make the Eagle FA an easy choice for the sanitary standards required by the USDA. The FA also offers the smallest machine footprint for AMI sanitary X-ray in the industry.

#### System Evaluation

In March 2008, Lone Star Beef had an Eagle FA system installed for an in-plant trial, on a conditional purchase agreement, pending achievement of the required specifications. The system was installed off-line in an area designated for combo evaluation. Filled with 2150 lbs of boneless bulk beef, Lone Star inspects upwards of 160 combos per day. After inspection with the Eagle FA, the meat is then combined into 2000 lb combos which are marked with a specific CL value and readied for shipment.

Lone Star's management was sold on the Eagle FA system's value within the first 24 hours. For the first time, number 8 buckshot was being rejected multiple times from very dense pieces of meat.

#### Results

All boneless bulk beef sold from the Lone Star Beef plant is now inspected by Smiths Detection X-ray. Prior to the installation of the Eagle FA, detection of buck shot rarely happened and now it's a daily occurrence. Chad Collier, Quality Control Manager for Lone Star Beef estimates a more than 90% increase in contaminant detection. This allows Lone Star to identify and remove contaminants from the product prior to shipment, saving their customers time and money.



# Case Study Lone Star Beef

The original goal in purchasing an X-ray inspection system was for contaminant detection, but as an added value, the Eagle FA offers accurate CL measurement, **“we’re no longer testing**

**“In this business, your money comes from volume and if you aren’t pushing product out the door then you aren’t running a profitable business. With the FA we’re able to supply a premium product to our grinders at the pace required to stay ahead of the game”**

**- Brent Smith, Vice President of Sales, Lone Star Beef**

**customers—it’s a trickle-down effect.”** Brent Smith, Vice President of Sales, Lone Star Beef.

Quote from Chad Collier, Quality Control Manager on his experience with Smiths – **“The Smiths Technicians who’ve installed and serviced our FA system have not only addressed the issue at hand, but have taken the time to educate our people to allow us to take more ownership of the system.”**

**only a small portion of the product; with the Eagle FA every piece of meat gets a true evaluation”** Brent Smith, Vice President of Sales, Lone Star Beef.

In addition to satisfying the request of one of Lone Star Beef’s top processors, they are experiencing an unexpected additional benefit - **“We now receive order preference from suppliers, both existing and new grinders and processors, because we are able to say that we offer a product that is contaminant free thus protecting the machines in their facilities from damage. The benefits of this system are not just experienced within Lone Star Beef but also by their customers and their**

## USA - Headquarters

3202 Regal Drive  
Alcoa, TN 37701  
T: +1 877 379 1670  
F: +1 865 379 1677  
E: [PIDsales@smithsdetection.com](mailto:PIDsales@smithsdetection.com)

## United Kingdom

Pegasus Square  
Pegasus Way  
Europarc, Grimsby DN37 9TJ, UK  
T: +44 (0) 1472 349204  
F: +44 (0) 1472 349206

## Singapore

100 Beach Road  
#20-06 Shaw Towers  
Singapore 189702  
T: +(65) 64 661700  
F: +(65) 64 692506

## Mexico

Blvd. Luis Donaldo Colosio Km. 4.5  
Las Palomas; Mineral de La Reforma,  
Hidalgo, Mexico, 42186  
T: +52 771 1532929  
F: +52 771 1532928

