

## **Case Study #6**

### **Small Cabbage Processor**

This small business case study prepares, ferments, and packages sauerkraut. Their busiest time is August-November, when they employ seasonal workers (many who do not speak English). The process starts with the cleaning, coring, and shredding of raw cabbage. The outer leaves are peeled off by hand as the cabbage passes on a conveyor. The equipment in this room is noisy when running; employees wear ear plugs and gloves. The fermentation processes occurs in large, two-story tanks. Workers enter the tanks to load the sauerkraut into a vacuum hose, which carries it to the packaging lines. They wear harnesses hooked to overhead safety lines while performing this work. A confined-space entry permit program is followed. All employees are required to wear safety glasses, earplugs, bump caps, and hairnets. On the packaging floor, there lines that run metal and glass containers. They are rinsed, filled, pasteurized, packed into boxes, palletted, and shrink-wrapped for shipment. In another room, employees pack bagged sauerkraut into boxes and lift them onto a conveyor line.

#### **Grant Work:**

After an initial gap analysis and interview several issues arose, the business had recently broke away from being part of a major corporation, leaving the business with limited staffing resources, causing some problems with keeping paperwork and procedures up to date. Aside from that problem the business had a decent health and safety program left over from the parent company, the person left in charge of the safety and health program was also the director of human resources, they were beginning to bring in other people to help with running the safety and health programs. The business conducts scheduled safety meetings and has a good system for addressing and investigating any accidents. There appears to be good communication of safety issues to employees.

The business had recently received an OSHA inspection, which cited several guarding issues around the facility, by the time the RIT assistants scheduled a visit majority of the cited issues were corrected. This showed that the business was interested in improving upon its safety and health. OSHA did not cite several other issues that the RIT assistant felt needed addressing.

The first of the issues involved injuries, the most common injuries are lifting and ergonomic related. The worst of the ergonomic issues was in the palleting area, the employees had to lift cases of jars from the conveyer line and in most cases had to spin 180 degrees and lower the cases to a pallet that is located on the floor. The cases weighed between 15 to 50 lbs. The RIT assistants ran the NIOSH lifting equation on a worst and best case scenario to help determine and design the best lift system possible for their operation. For the worst case scenario, which was present in the facility, the recommended weight limit (RWL) was only 2.68 pounds, for the best case which was not found the RWL to e 113.06 pounds. From an attempt to design for best case was begun, the RIT assistant with the HR director and Operations supervisor, the owners of the facility would only accept a very low cost solution which prevented the purchases of lift

tables, this case was later referred to the RIT Center for Integrated Manufacturing studies which provides ergonomic services under a NYS Hazard Abatement grant for more expertise. The business has realized this to be a problem before participating in the Harwood grant and has sent employees to undergo ergonomic training by an outside consultant.

Much of the facility had a noise level that was over 85dBa. The cutting and coring room which was not operating at the times of visits was described to be of deafening sound levels, in this room there is much mechanical motor noise and noise from metal cutting blades hitting metal tables during the coring process. Discussion about sound dampening and guarding techniques was discussed. Hearing protection is required around much of the facility but there was no formal audiometric testing at the time. The facility has contracted with an outside consultant to conduct baseline hearing assessment and annual test. Since half of their staff is seasonal that will provide some problems.

**Follow up:**

This company was moving forward with their safety efforts, though most of it was being shouldered by one person. When that champion was laid off, much focus was lost. Now that the work is distributed among many others, it has been difficult to maintain the effort. Due to all this reorganization of that person's position, all records and knowledge of the training was lost. The new contact had no knowledge of any of the training or any of the assistance that was given, after hearing this news it was decided to go ahead with the follow up gap, to see what progress has been made in the facility on their own.

After an interview and review of the follow up gap analysis, it was discovered that the company has indeed made some strides forward in safety and health. The most notable related to the ergonomics problem on the product palleting lines, as they were a severe risk of injury. The company is now in the process of fully automating that portion of the operation, thereby eliminating the hazard. This seem to be part of a renewed interest in safety, the people interviewed were very interested in moving forward.

The company has been consulting with their insurance company, which has been helping them with safety inspections, and advising on employee training. Therefore, there have been some gains, even with the reorganization, and further support of safety and health is available to the company.