



# Manufacturing

## **Food and Beverage**

### **Fire Recovery Project**

Mildura Fruit Juices Australia

**Client** Mildura Fruit Juices Australia

**Location** Mildura, Victoria, Australia

**Value** \$2.7 Million

**Duration** Mar – May 2009 (10 weeks)

### **Project Overview**

Mildura Fruit Juices Australia (MFJA) is one of Australia's largest processors of fresh citrus juice and processes approximately 500 tonnes of citrus fruit a day to create final product of fresh orange juice, concentrates, citrus oil and pulp.

In January 2009 the facility was damaged by fire, destroying multiple areas and severely damaging the main crushing and processing plant.

SAGE was asked to assess the damage and advise on the best possible course of action to allow production to commence in time for the new season's fruit, due on the 1st of May. This deadline was achieved.

### **Capabilities Demonstrated**

- Project management, reporting, estimating, procurement, cost planning, scheduling, risk management and mitigation.
- Safety risk assessments (TUV Certified)
- Design, construct & test electrical control cabinets
- Low voltage electrical design and installation
- PLC/HMI programming and commissioning



**Capabilities cont.**

- Multiple network protocols; Devicenet, Ethernet
- SAGE Service; instrument testing and NADA certification.
- Final as built documentation; electrical schematic CAD drawings, lighting and power test sheets, motor test sheets and user manuals.

**Project Challenges**

SAGE was awarded the contract in early March 2009 to electrically refurbish the main crushing and process area. The process area consists of a fruit receivable area, wash down area, grading area, juice extraction machines, storage and transfer tanks, three pasteurisers, two evaporator systems, ion exchange system, refrigeration system and cleaning system.

The existing factory required the damaged electrical systems to be removed and new infrastructure installed to allow new cabling for machines, lighting and power.

At one point, SAGE had more than 50 personnel on site to ensure timely completion of the project.

SAGE, with the factory operators, created new functional descriptions of the operational requirements. The software for all systems was developed and a VPN connection was also set up to allow future remote support and modification of software when required after final commissioning.

A safety risk assessment was carried out by SAGE's TUV certified safety engineers to implement design to meet current safety standards.

***“We called SAGE as we were looking for a company with a history of delivering”***

***Michael Rolfe, General Manager MFJA***

A total of 13 panels were constructed and tested within four weeks of design to allow site installation by the required deadlines.

Following this success, SAGE began stage 2 of the project involving the design, construction and commissioning of an automation control system for new plants and a plant relocated following the fire, including a peel plant, juice plant, blending room and new machinery. The stage 2 project was delivered in September 2009.

**Project Time line**

- 25 Jan - Major fire damage to the factory
- 1 March - SAGE on site start, no documentation
- 1 May - Practical completion
- Project completed in 10 weeks, fully documented

Winner 2010 Process and Control Engineering (PACE) Zenith Awards – Food & Beverage Category

