CUSTOMER SUCCESS STORY

AUSTRALIAN EQUINE AND LIVESTOCK EVENTS CENTER

About End User

The Australian Equine and Livestock Events Center (AELEC) is owned by the Tamworth Regional Council and was opened in 2008 as a state of the art facility located in the major regional hub of Tamworth, NSW Australia.

The development was designed to provide facilities for the promotion of Australia's equine industry and world-class live stock events including:

- Showjumping
- Hacking
- Dressage
- Rodeo
- Campdrafting
- Team Penning
- Cutting
- Ponies
- Harness
- Miniatures
- Alpacas
- Dogs

In 2010, more than 200 event use days were catered for including 12,230 head of cattle, 5,321 horses and 4,651 individual competitors.

The Challenge

The AELEC facility was originally required to have a sprinkler system installed to meet the 'deemed to satisfy' building regulatory requirements for the Class and size of construction. In view of the type of construction and operation it was recommended that an 'Alternate Engineered Solution' be installed to meet the regulatory performance requirements of the Building Code of Australia (BCA) that would remove the need for the sprinkler system.

PROJECT:

Australian Equine and Livestock Events Center

END USER/LOCATION:

Tamworth, New South Wales, Australia

INDUSTRY:

Cultural/Heritage

PARTNERS:

Fire and Safety Technologies Design And Management Pty. Ltd.

Dynamic Fire Pty. Ltd. - Tamworth

SOLUTION:

Industrial VESDA VLI

"We were impressed by the VESDA VLI's detection effectiveness. The VESDA system has now been installed and operational since mid March 2011 and is meeting our regulatory requirements whilst providing effective detection despite the challenging conditions of our venue."

Mike Rowland
Acting Venue Manager
Australian Equine and Livestock Events Center

A suitably qualified fire consultant was engaged to design an alternate solution to meet the 'Performance' requirements of the BCA.

The system would need to adequately perform in various environmental conditions, including high levels of dust from active events and varying airflow patterns resulting from the self ventilated building design as well as facilitating evacuation requirements. An analogue addressable point detection system with a combination of Heat and Ionisation point detectors was ultimately installed supported by extinguishers and hydrants.

The original system as designed and installed became problematic with constant nuisance alarms and maintenance faults leading to unnecessary costs to the client and the eventual unworkability and disablement of the system. The unsuitability of ionisation point detectors mounted at heights above the occupied areas of up to 18 meters (60 ft.) virtually guaranteed the system would not meet the 'Performance' requirements of the BCA. The problematic performance of the installed detection system lead to enquiries to investigate and design a more suitable fire detection system for the facility.

The Solution

Fire and Safety Technologies Pty. Ltd. were engaged as independent consultants to carry out this investigation. The conclusion of the investigation was that the existing smoke detection system was inappropriate for this application. Recommendations for an appropriately installed aspirating smoke detection (ASD) system were presented and accepted.

Fire and Safety Technologies Pty. Ltd's design proposal coincided with a new ASD product being developed by Xtralis which is particularly suited to this type of environment. A suggestion was made that this would be an ideal opportunity for a field trial. Discussions were held with Xtralis and AELEC operators where a design was prepared by Xtralis for the new ASD system using the VESDA VLI (Industrial detector).

The facility's high ceiling areas were adequately addressed by VESDA VLI since the detectors were located at ground level whilst the extended pipe capability provided a concentrated level of detection coverage. VLI's Intelligent Filter, Inertial Separator, Secondary Filter and Clean Air Zero all combined to make VLI a perfectly suited solution to address the environmental challenges of this facility. Remote monitoring requirements were also addressed thanks to VLI's BACnet over Ethernet connectivity.

The Outcome

Seven VESDA VLI detectors in total were installed by Dynamic Fire; a local fire company based in Tamworth, and tested using a variety of real test fires. The VESDA VLI detection was very effective, but more importantly the original problematic system issues experienced with dust had been eliminated. The VESDA VLI system has now been installed and operational since March 2011.

The installed VESDA VLI system now not only meets the regulatory 'Performance' requirements but will also continue to provide effective smoke detection in this difficult environment as well as providing for ease of maintenance and reduced total cost of ownership for its service life.

ABOUT VESDA VLI

The VESDA VLI is the first very early warning aspirating smoke detector built specifically for the protection of harsh industrial applications based on experience gained over 25 years protecting a diverse range of applications. Key features include: coverage of up to 2,000 m^2 (21,520 sq. ft.), 360 meters (1,181 ft.) aggregate pipe length, IP 54 ruggedized industrial enclosure and incorporating an industry first patented long-life, fail-safe filter technology. VLI sets a new benchmark for the protection of industrial applications.