VESDA® VLI

SUCCESS STORY

INDUSTRIAL VESDA VLI PROTECTING WASTE TRANSFER STATIONS

THE CHALLENGE

Solid waste management is a crucial sector in our consumer society. It is a multi-billion-dollar industry and growing as more regions experience economic growth and produce more household waste. At the same time, environmental concerns push for an increasingly streamlined waste disposal, treatment, neutralization and recycling process. The waste has to be gathered, stored and processed. As landfills are increasingly becoming filled and no longer a legitimate option for disposal, alternatives involving recycling/reuse are taking affect.

In densely populated countries, solid household waste is collected and carried to a waste incineration plant, rather than dumped directly in landfill sites. The waste is therefore stored in so-called waste bunkers or transfer stations, which contain thousands of metric tons of solid waste. This waste is potentially flammable when stored: self-combustion, heat development due to pressure, spontaneous chemical reactions between the disposals, methane gas-building, are potential fire creators. Waste station fires can be hazardous for both operator and environment: the heavily contaminated firefighting water, which hampers the further processing of the waste, has to be disposed as well. And firefighting does not always reach potential fire spots still dangerously smoldering somewhere in the large and deep station. This is why the stored waste has to be permanently moved, mixed and turned by crane operators.

THE SOLUTION

Under the Waste and Emissions Trading Act 2003, UK councils who are responsible for the disposal and collection of waste were tasked with the duty to develop a strategy which outlines how they will manage municipal waste. The aim of the strategy is to change the way waste is managed, minimize landfill and drive new initiatives with the goal of encouraging waste prevention and greater levels of recycling. The Joint Municipal Waste Management Strategy was executed to include plans for opening waste transfer stations throughout the county.

THE OUTCOME

As part of their waste strategy, Essex County Council opted to develop five new waste transfer stations to support the delivery of new waste treatment facilities. Waste collected from curbside collections are taken to the transfer stations for bulking. No processing of the waste takes place at the transfer station; but rather it's a facility for the temporary storage of waste before it is loaded on to larger vehicles and transported for treatment. The first of these stations includes the Harlow transfer station. The transfer station handles 55,000 tons of waste each year collected from the Harlow and Epping Forest District areas.

A number of organizations in the waste management industry are working to produce new guidance for fire safety. The UK's Wood Recyclers' Association (WRA) and the European Tyre Recovery Association are working alongside health and safety bodies to create new guidelines for the safe storage of combustible materials, as noted by Materials Recycling World. These bodies include the United Kingdom's Environment Agency, the Health and Safety Executive and the Chief Fire Officers Association (CFOA). The industry already operates within an existing set of safety regulations, which includes guidelines for handling flammable and combustible materials, but there is a growing feeling that more specific direction is required.

DPL Electrical Services Ltd proposed a solution to Essex County Council using VESDA VLI to provide very early warning smoke detection to protect the new facility. They selected VLI for this project because of the very high dust levels that will exist in the facility and VLI's ability to provide very early warning detection without nuisance false alarms.

VESDA® VLI

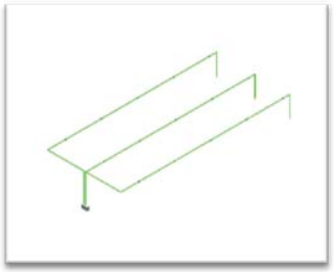
Despite strong competition from point-type smoke detector providers, who were offering their product at a very low cost, Xtralis was able to demonstrate the superiority of the VLI solution. Industrial VESDA VLI was the only technology that could provide very early warning detection and survive the challenging environmental conditions that include:

- Extreme temperatures from incinerators
- High machinery voltages
- High frictional heat sources from large collection and sorting equipment
- Corrosive environments (water and chemical treatments)
- Potentially hazardous atmospheres due to material decomposition
- Dirty processes and dusty environments when processing and storing material

The key features that convinced the customer to choose Industrial VESDA VLI were:

- Actively monitored sampling system
- Fully monitored HEPA filter
- Detection performance and reliability
- Sensitivity consistency over the time
- Efficient response to ineffective detection solutions
- Easy to maintain

The main building, which looks similar to a warehouse, is 11 meters (36 ft) high, 50 meters (153 ft) long and 32 meters (104 ft) wide. It will be protected by a single VLI-880 with a three pipe runs.



Remote test points were installed in each pipe run by extending the pipe down the far wall to an easy to access location, eliminating the need for expensive lifts during routine testing and maintenance.

Project:

Waste Transfer Station

End User/Location:

United Kingdom

Industry:

Waste Recycling

Partner:

DPL Electrical Services Ltd

Solutions:

Industrial VESDA VLI

Benefits:

- Actively monitored sampling system
- Fully monitored HEPA filter
- Detection performance and reliability
- Sensitivity consistency over the time
- Efficient response to ineffective detection solutions
- Easy to maintain

ABOUT THE INSTALLER

DPL electrical & mechanical

DPL Fire & Security offers a solution to fire safety for companies of all sizes. Specializing in prevention, detection, containment and escape from fire situations. Services offered include:

- Design, Installation & commission
- Fire Alarms
- Emergency Lighting
- Alarm Monitoring
- Fire training
- CCTV
- Service & maintenance
- Fire Extinguishers
- Fixed Fire extinguishing systems
- Risk assessments
- Nurse call

www.dplelectrical.co.uk

www.xtralis.com

UK and Europe +44 1442 242 330 **D-A-CH** +49 431 23284 1 **The Americas** +1 781 740 2223
Middle East +962 6 588 5622 **Asia** +86 21 5240 0077 **Australia and New Zealand** +61 3 9936 7000

Doc. 27505_02