

PROPOSED SYSTEMS IN THE EVENT OF UNINTENTIONAL RELEASES

Westerleigh Group operate 34 crematoria all of which have cremation plant installed and maintained by Facultatieve Technologies Ltd.

Across all of our sites there have been no unintentional releases of emissions that have been likely to have an effect on the local community during normal operating conditions, there is no history of complaints, nor has any enforcement action been taken by any Regulator.

Therefore, no formal risk based assessment has been carried out, as it is assessed that the environmental risks and hazards are minimal, however:

In the event of a malfunction or breakdown leading to abnormal emissions, all operating staff are fully trained to:

- Investigate and undertake remedial action immediately;
- Adjust the process or activity to minimise those emissions.

With a Facultatieve Cremator and abatement plant, the operating system continuously monitors emissions and other cremation parameters, and early warning audible and visual alarms will activate for the attention of the technician when any operating parameters or continuously monitored emissions deviate from the normal operating range.

In most cases the operating system will automatically adjust the cremation parameters of temperature, oxygen and suction by modulating primary & secondary burners, combustion & secondary air, and induced draught fan speed to ensure that emissions do not exceed the emission limits prescribed in PG5/2 (12).

For example:

High Carbon Monoxide or Low Oxygen would be automatically controlled and corrected by the system automatically turning the primary burner and combustion air off, and increasing the secondary air, until the condition is resolved.

If a condition exists that is not automatically resolved by the operating system, the audible and visual alarms will have alerted the cremator technician to take remedial action.

This may require the technician to take manual control of the cremation by adjusting Burners or Combustion Air, or reset a burner failure for example.

The technician may also be required to replace a faulty component such as a thermocouple, spark electrode or ionisation probe.

If any malfunction or potential exceedance cannot be resolved immediately by the operating system or the technician, a broadband link enables Facultatieve Technologies take remote manual control of the cremation, identify a fault, and have an engineer on site within 24 hours with any necessary parts.

If any malfunction exists which is likely to cause emissions to exceed the permitted limits, then cremations would be ceased until the malfunction had been resolved.

EMERGENCY OPERATING CONDITIONS – Abatement Bypass

In the event of a malfunction or failure of the abatement equipment, the unabated gases will bypass the abatement plant, and will be released to atmosphere unabated.

In most cases, the current cremation would be completed, and then the abatement bypass would be reset so that cremations could continue abated.

When operating in emergency conditions without abatement, the secondary chamber exit temperature will automatically increase to a minimum of 1123K (850⁰) to ensure that continuously monitored emissions do not exceed the prescribed limits.

Cremations may continue for up to 48 hours whilst the necessary repairs are completed.

The chimney discharge height has been calculated for the release of abated gases during normal operation using HMIP Technical Guidance Note (Dispersion) D1.

In addition to the chimney flue for abated gases, an operational bypass flue is also installed at the same height, and whilst this may be shorter than the optimum height for unabated gases, it is not considered **BAT** to require the additional flue to be built at a height calculated to be sufficient for the release of unabated gases.

LOSS OF ELECTRICITY

In the event of a total power cut / loss of electricity, the cremation plant will fail-safe.

The abatement plant would automatically be bypassed to protect the filter.

Burners and combustion air would be off, effectively putting the current cremation into halt mode, thus minimising any potential emissions.