

Position paper:

# Air Pollution Control Residues



October 2013



## At a **Glance.**

Underground storage and Physico-Chemical Treatment (PCT) as the most secure management options for Air Pollution Control Residues (APCr).

APCr are hazardous regardless of composition and have a high pH, heavy metal content and persistent organic pollutants (POPs) such as dioxins. They must be managed in a controlled way to ensure the protection of the environment and those handling them.

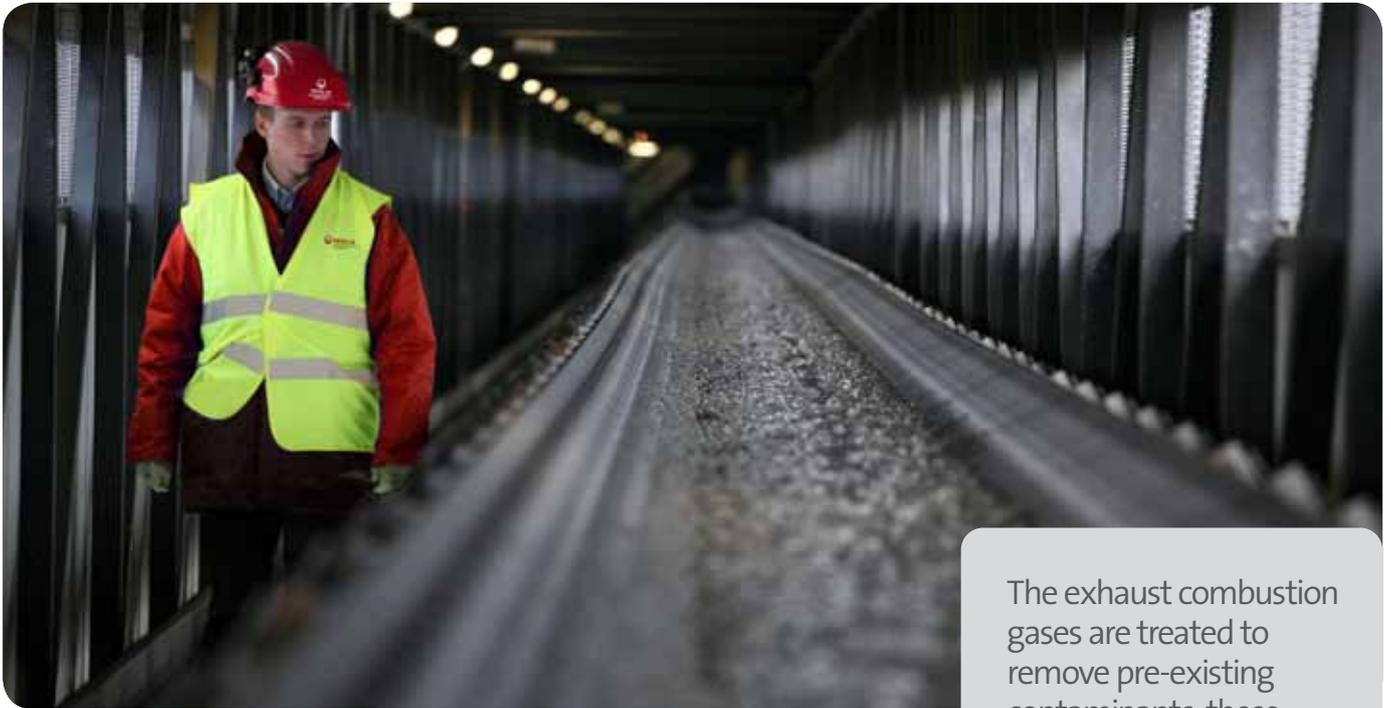
## Where we **Stand.**

Health & Safety and environmental protection are key considerations when selecting the best management options for waste streams.

Therefore, understanding and tracking the potential release of contaminants is essential.

In determining the most sustainable treatment Veolia Environmental Services does not support the use of the waste hierarchy in isolation. We believe that the fate of contaminants and their impact on health and the environment must take priority, together with the use of raw materials and energy consumption.

# The Situation.



## Underground storage and PCT as the most secure management options for APCr.

The exhaust combustion gases are treated to remove pre-existing contaminants, these contaminants are then removed as a solid ash known as APCr.

Energy recovery incineration recovers the energy that is embedded in residual, non-recyclable wastes. Similar to when coal is burned to produce heat and power, waste is combusted into hot gas to recover energy. The exhaust combustion gases are then treated to remove pre-existing contaminants or those that are generated during the process. These contaminants are then removed as a solid ash known as APCr which is an Absolute Entry hazardous waste.

Whilst APCr makes up only 2 - 3% of the mass balance, it is important to treat and dispose of it correctly. In the UK, the most common way to treat APC residues is by PCT. PCT changes the chemical and physical nature of APCr. The residues from the process are then sent for safe disposal in landfill.

# The Issues.

To ensure the Best Overall Environmental Option (BOEO) is secured for hazardous waste, each and every waste stream must be assessed individually.



Contaminants are present in APCr because they have been removed from municipal waste (following combustion) to prevent release into the environment.

APCr are hazardous regardless of composition and have a high pH, heavy metal content and POPs such as dioxins. They must be managed in a controlled way to ensure the protection of the environment and those handling them.

Defra's strategy for the management of hazardous waste promotes a move up the waste hierarchy. But to ensure the Best Overall Environmental Option (BOEO) is secured for hazardous waste, each and every waste stream must be assessed individually.

In the 'race to recovery and recycling', some companies are offering recycling options

for APCr. Most rely on the encapsulation of the contaminants. This means that they are still present in the recycled material and will remain there while the physical structure of the material remains intact. It is proposed to use these recycled materials in the construction industry. However, once waste streams become an aggregate or building material, there is no way to trace their ultimate fate - or the fate of contaminants over the life of the product.

When considering the BOEO for a waste stream it is essential that the entire life cycle of the stream is considered. For example, what will happen once a recycled material becomes a waste once more through demolition or maintenance works?

# Where we Stand.



We generate over 46,000 tonnes of APCRs per annum, treating and storing them at our network of facilities.

## Health & Safety and environmental protection are key considerations when selecting the **best management options** for waste streams.

Therefore, understanding and tracking the potential release of contaminants is essential.

In determining the most sustainable treatment Veolia Environmental Services does not support the use of the waste hierarchy in isolation. We believe that the fate of contaminants and their impact on health and the environment must take priority, together with the use of raw materials and energy consumption.

More importantly, we do not support recycling where contaminants are simply encapsulated prior to use in every day products with the risk that they could be released into the environment in the future.

Veolia has seven Energy Recovery Facilities (ERFs) accepting over 1.6 million tonnes of

residual waste. We generate over 46,000 tonnes of APCRs per annum, treating and storing them at our network of facilities. We also accept APCRs from external ERFs and operate six APCr treatment plants in Europe.

In addition to PCT we also offer an alternative solution at Minosus - our underground storage facility at a salt mine in Cheshire. Minosus is authorised to accept raw APCRs that have been containerised in bespoke bags. The mine offers complete containment of waste and the dry environment means there is no risk of contaminant emission through leaching. In fact a 50,000 year risk assessment of the facility concluded that there is no path to the biosphere, meaning secure containment and traceability of the waste stream.

Minosus is not only the most sustainable APCr route in the UK; since it does not require derogations for acceptance of waste, it will remain so regardless of future changes in regulations that are set to have an impact on disposal above ground.

Until a recycling option is developed that removes the contaminants completely, Veolia will continue to support underground storage and PCT as the most secure management options for APCr.



Where do you stand?

Join the debate at: [www.veolia.co.uk](http://www.veolia.co.uk)

