

CASE STUDY

Safe and Efficient Recovery of Waste Refrigerant from Decommissioned Gas Cylinders



BACKGROUND

About the Customer

The customer is one of Australia's leading waste management providers with extensive operations throughout Australia. Committed to a more sustainable future, they collect, treat, recycle or safely dispose of all types of waste.

About A-Gas

A-Gas is a world leader in the supply and lifecycle management of refrigerants and associated products and services. Through its first-class recovery, reclamation, and repurposing processes, A-Gas captures refrigerants and fire protection gases for future re-use or safe destruction, preventing harmful release into the atmosphere.

For over 30 years, A-Gas has supported its clients and partners on their environmental journey by supplying lower global warming gases and actively increasing the circularity of the industries it serves, building a more sustainable future.

CHALLENGE

One of the customer's waste management facilities located in New South Wales accepts and processes hazardous goods, including end-of-life gas cylinders.

However, when cylinders received are not completely empty and contain residual gas, they can't be processed for metal recycling.

Over the years, the facility received hundreds of used cylinders containing a mix of ozone depleting and high global warming potential substances, but didn't have the appropriate equipment and training to safely recover these waste substances.

AT A GLANCE

Challenges

- Customer unable to recycle metal from used cylinders due to ozone depleting substances content
- Mitigate environmental impact by preventing potential gas leaks from decommissioned cylinders

Benefits

- Best practice refrigerant recovery enabling safe and efficient recovery of harmful ozone depleting and high global warming potential refrigerants prevented potential leaks into atmosphere
- Recycling of decommissioned gas cylinders



"It's so important that any refrigerant residue from decommissioned systems including cylinders are safely recovered and responsibly disposed of, to ensure there's no potential for it to be leaked to the atmosphere."

Daniel Tanaskovic

Sales and Operations Manager,
A-Gas Rapid Recovery, Australia

SOLUTION

A-Gas Rapid Recovery®, a mobile high-speed refrigerant recovery service, was commissioned by the recycling facility to recover waste gas from the end-of-life cylinders.

Rapid Recovery® trucks are equipped with Neutronics Refrigerant Analysis technology to identify refrigerant gases.

All local compliance documentation is provided including a detailed certificate of recovery showing the quantity of refrigerant recovered and the equivalent CO_{2e} emissions avoided.

As part of the complete recovery process offered by A-Gas Rapid Recovery®, recovered refrigerant is returned to A-Gas' dedicated facility for processing.



RESULTS

Over 800kgs of ozone depleting and high global warming substances were identified, and safely and efficiently recovered from hundreds of various sized and aged decommissioned gas cylinders, preventing potential leaks into atmosphere.

Once empty, the cylinders were clearly labelled, enabling the facility to send empty cylinders to be processed for metal recycling. The recovered refrigerant was sent back to the A-Gas Laverton site for processing.

CONCLUSION

The recovery of waste refrigerant from decommissioned equipment and systems that is no longer fit for purpose, reduces the risk of potential leaks into the atmosphere.

Fully equipped A-Gas Rapid Recovery® trucks, utilising high-speed recovery technology enables safe and efficient refrigerant recovery on-site.

Over 800kg of used refrigerant was safely and efficiently recovered from decommissioned cylinders preventing potential leaks into atmosphere