

CASE STUDY

A-Gas Partners with Peng Chuan Engineering Construction Pte Ltd. to Recover High GWP Refrigerant During a Demolition Project in Singapore

BACKGROUND

About Peng Chuan Engineering Construction Pte Ltd.

Peng Chuan Engineering Construction Pte Ltd. is an engineering design and consulting company based in Singapore. It specialises in earth works, drainage works, road works and building demolition. It prioritises a safe working environment for all of its employees, and has a commitment to Corporate Social Responsibility. Its values include sustainability and the protection of the environment.

About A-Gas

A-Gas is a world leader in the supply and lifecycle management of refrigerants and associated products and services. Through our first-class recovery, reclamation, and repurposing processes, we capture 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 our clients and partners on their environmental journey by supplying lower global warming gases and actively increasing the circularity of the industries we serve, building a sustainable future.

CHALLENGE

A project was organised to demolish the Tampines 11 Concourse building in Tampines, Singapore. Peng Chuan Engineering Construction Pte Ltd. was awarded the position of main-contractor by the Singapore Housing & Development Board (HBD). While surveying the site, 104 air-conditioning units containing almost a ton of R410A were found; a HFC refrigerant which has a high Global Warming Potential if allowed to enter the atmosphere.

AT A GLANCE

Challenges

- Safely and effectively recover R410A (a HFC with a high Global Warming Potential) from 104 air-conditioning units, to prevent its potential release to atmosphere.
- Supporting the customer in achieving their own Corporate Social Responsibility goals.
- Recovering the refrigerant within a short timeframe, due to the building awaiting imminent demolition.

Benefits

- Partnering with Peng Chuan Engineering Construction Pte Ltd. and providing a fast and effective refrigerant management solution as the air-conditioning units have reached the end of their lifecycle.
- Effective recovery of refrigerant to the customer's satisfaction.
- Use of portable and flexible equipment to provide an expert on-site service.

A-Gas contacted Peng Chuan Engineering Construction Pte Ltd. and offered them an efficient and reliable recovery solution that would prevent the refrigerant being released to the atmosphere. A-Gas' ability to carry out the refrigerant recovery quickly meant the demolition of the building could still take place by the required deadline.

Peng Chuan Engineering Construction Pte Ltd. then chose A-Gas as the refrigerant management partner for this project.

SOLUTION

The A-Gas technicians recovered the R410A safely while reducing the risk of leakage to atmosphere. Using a highly-efficient portable recovery unit, our recovery cylinders and a 50-metre hose, the A-Gas team made sure that the project was completed safely and effectively.

RESULTS

Due to successful collaboration between A-Gas and Peng Chuan Engineering Construction Pte Ltd., the refrigerant was safely recovered and made ready for reclamation. In total, the A-Gas team in Singapore recovered 868kg of R410A from the 104 air-conditioning units preventing its potential release to atmosphere.

The customer was satisfied that A-Gas had helped them keep their commitment to Corporate Social Responsibility and carry out a large-scale project to a high standard.

CONCLUSION

This is a great example of A-Gas supporting its partners to provide Lifecycle Refrigerant Management (LRM) solutions. A-Gas proved that it can work with customers across many sectors to support them with their environmental goals, and establish itself as a leading Lifecycle Refrigerant Management company in Southeast Asia.



It was a pleasure to work with A-Gas on the gas removal from 104 air-conditioning Systems for 11 Tampines Concourse. The whole process was carried out in a safe and efficient manner. It was a good opportunity for us to properly handle the greenhouse gas from the unwanted air-conditioning systems, as contributing to environmental sustainability is one of our company visions. As a result from this project, we managed to abate 1,811.95 tons of CO2e through this exercise.

Yap Rue Tong, Project Engineer, Peng Chuan Engineering Construction Pte Ltd.



The team in Singapore recovered almost a ton of R410A from 104 air-conditioning units, preventing emissions of roughly 1,812 tons of CO2e at the same time.