Clyde Terminal community update

February 2016

Conversion Project Fact Sheet - Demolition of Chimney Stacks

Clyde Terminal, January 2014, pre-commencement of the demolition works.

Viva Energy Australia Pty. Ltd. (previously Shell) commenced work on the Clyde Terminal Conversion Project in January 2015. The project works involved the demolition and removal of redundant refining infrastructure from the former Clyde Refinery as well as other capital works to improve the operational and environmental performance of the facility (Clyde Terminal) and to consolidate operations into a smaller land area.

Part of the demolition works involved demolition of five reinforced chimney stacks. The five chimney stacks were prominent on the Camellia Peninsula skyline, with three of the stacks being over 100m high. The stacks were demolished using controlled explosive techniques, where four of the stacks were demolished on February 21 2016 and the remaining (fifth stack) was demolished a day later.

Decommissioning

The stacks were decommissioned in 2012. All waste and hazardous material was removed to satisfy statutory requirements. The chimney stacks were then inspected, including internally, from top to bottom and tested for any residual hazardous materials.

Inside the platformer stack which had a concrete shell.

Hazardous materials were removed in accordance with statutory requirements.

Planning

Extensive planning went into the demolition activity, including extensive consultation with the Department of Planning & Environment (DP&E), Environment Protection Authority (EPA) and Work Cover as well as other agencies including NSW Police and Fire Brigade.

Demolition Techniques

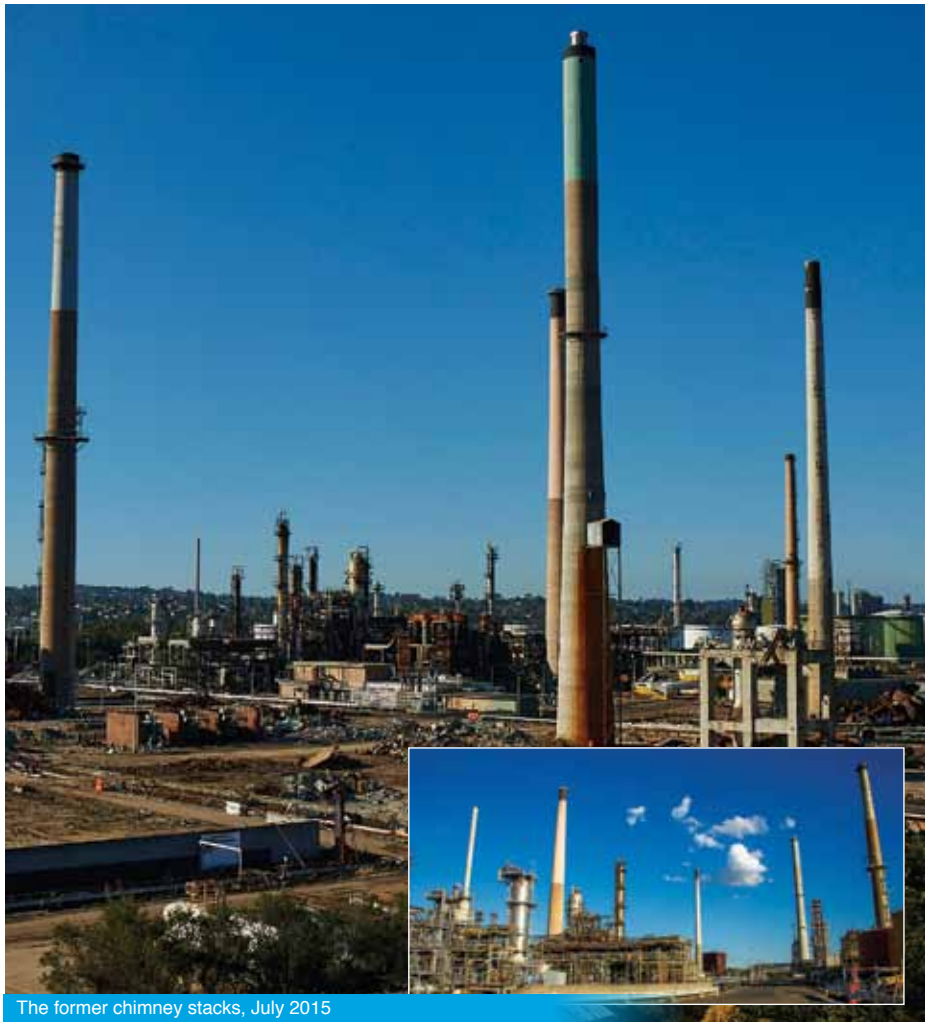
Controlled explosive techniques were used to demolish the chimney stacks as this was identified as the safest method of demolition, for these structures.

- Dust was anticipated and its management was carefully planned. Some of the structures were saturated with water from the top using a soaker system spray for a number of days prior to the planned demolition.

In addition, large fog cannons with the ability to spray water 200m were placed up wind and water spray systems down-wind of the stacks.

- Extensive air and vibration monitoring was undertaken both on and off site with the results supplied to the EPA.

About the Chimney Stacks



The former chimney stacks, July 2015

Each stack was coupled to either boilers or process heaters fired predominately on a mix of refinery fuel gas and natural gas.

- Generally, the stacks were constructed from concrete and lined with either brick or refractory lining. One of the stacks was constructed in 1990 and four of the stacks were built in the 1960s.
- **Crude distillation unit (CDU) stack:** 100m high with an outer diameter of 8m at its base. The CDU was 38.1cm thick (over the length of a standard ruler), the thickest stack of the five.
- **Catalytic cracking unit (CCU) stack:** 82m high with an outer diameter of 5.45m at its base.
- **High vacuum unit (HVU) stack:** 80m high with an outer diameter of 4.5m at its base. The HVU was 20.3cm thick, the thinnest wall of the five stacks.
- **Boiler stack:** Stack 100m high with an outer diameter of 6m at its base.
- **Platformer stack:** Stack 102m high with an outer diameter of 8.2m, the widest of the five stacks.

How To Contact Us

Should you have general enquiries, please feel free to contact us:

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