

TRUenergy Gas Assets

Iona Gas Plant Safety Case

TRUenergy Gas Storage Pty Ltd (TRUenergy Gas Assets) owns and operates the Iona Gas Plant (Iona). Iona and the associated facilities are located at 285 Waarre Road, 4km northeast of Port Campbell, Victoria.

The Iona facilities consist of 5 production/withdrawal wells, a gas processing plant that includes compression equipment and facilities for the separation of hydrocarbon liquids and water. The plant is connected to the Victorian gas transmission system via the SouthWest Pipeline (SWP) and the Seagas Pipeline into South Australia.

The TRUenergy Gas Assets Integrated Management System (IMS) controls the activities associated with operation of the facilities as noted in Section 1 of the Facility Description. The operational performance requirements set out in the Management System Standards (MSS) apply to all the facilities identified in the Facility Description including the North Paaratte and Wallaby Creek wells and gathering system.

The satellite fields include interconnection with Casino offshore wells through the Santos MLV, North Paaratte fields including North Paaratte wellheads and flowlines and Wallaby Creek wellheads, and MEG injection facilities, flowlines and evaporation pond.

The Iona facilities were registered as a Major Hazard Facility on 10 August 2007 and in accordance with Regulation 6.2.25 have until 10 August 2009 to apply for a licence to operate a Major Hazardous Facility and submit a compliant Safety Case. The Safety Case was submitted to WorkSafe in April 2009 and a 5 year Licence was approved on 24 September 2009. The Iona facility has a compliant Operations Plan in place which has been approved by the Department of Primary Industries. This document has been updated to meet both regulations.

The Safety Case outlines all the possible Major Hazard Events and the controls in place to reduce the risk of the events from occurring to as low as reasonably practicable.

Safety Case Summary

Part 1 Facility Description

A description of the facility and how it operates as well as the infrastructure and materials present on the site.

Part 2 Safety Management System

A set of formalised procedures developed over time to cover all aspects of the facility operation with special attention given to safety procedures deemed critical to reduce the likelihood of Major Hazard Events.

Part 3 Formal Safety Assessment

A number of hazard identification studies and hazardous operations studies have been undertaken over time to assess and manage the safety of the plant. These studies cover the current plant upgrade project (LOPS) and includes reviews of the current operations. Various operations personnel have participated in these workshops over the past year to make sure that operations are involved in all the changes and safety risks associated with the plant.

Other safety assessment documents such as the Fire Safety Study, Vent Study, Vapour Cloud Analysis, have been also been updated. A summary of the Formal Safety Assessment findings is outlined further below.

Major Incidents Events

The Iona site has been deemed a 'Major Hazard Facility' under the OH&S Regulations. These regulations require the identification, assessment and control of 'Major Incidents'.

TRUenergy has defined a 'Major Incident' as an incident which has a consequence of 4 or greater on the TRUenergy Risk Matrix. This is equivalent to a Major Injury to more than one person.

Nb: the regulations are only concerned with 'acute' (immediate) effects, not 'chronic' (long term) effects.

The safety studies helped to identify which Incidents were 'Major' and which were not.

Fires can be pool fires from liquid inventories, or flash and jet fires from gas inventories.

Studies have shown that fires will not compromise safety critical systems.

Safety Bulletin

Equipment spacing, and the distance of the site from its boundary, is such that escalation of a fire from one vessel to another is not considered likely. This was an important factor in the location of the LOPS equipment with respect to the condensate storage tank.

Explosions can occur when there is a large enough release of gas, and the gas is able to be confined and ignited.

Explosion scenarios were considered in the design of the original plant, particularly in the design of the control room, and the compressor house.

The new LOPS equipment has been designed such that large areas of confinement within the plant have been removed. The new compressor house has been designed to be consistent with the existing one.

Dispersion covers dispersion of flammable gases, in the cases where flaring systems flameout.

Studies have found that flammable dispersion will not reach flammable levels at areas where personnel are present. Flammable concentrations do not go off site.

Also covers toxic dispersion from the ammonia refrigeration system. Modelling of a release of ammonia has shown that, theoretically, toxic levels can reach 20m from the source. However the modelling assumes the release is 'steady state' (i.e. constantly fed), does not decrease over time, and is all liquid.

Controls in place include: Operation, Maintenance and PTW Procedures; Alarms and Trips; PSV; and the fact that the ammonia system is 'closed'.

Most of the possible major incident events involve a loss of containment of gas or condensate. Other possible causes of a major incident event are a fire or explosion in the compressor shed or well head, or ignition of the cold vent.

For more information regarding the Safety Case or its content you can contact Rod Harris, Asset Manager, TRUenergy Gas Assets (ph 03 8628 1561).

What should you do in the event of an incident?

In the event that you hear, see or smell something strange, a loud bang, smoke coming from the site etc. you can contact the site for further information on:

Ph 03 5598 6579

This number is always manned and the on shift operator will be able to assist with an enquiry and advise of further action if required. None of the major incident events identified have any off site impact so it is unlikely that you will need to take any action.

In the event that a Major Incident event occurs a member of the TRUenergy Gas Assets personnel will make notifications as necessary.