



Shannon Airport Fuel Terminal Safety Review and Consequence Assessment of Major Accident Hazards

Clare Fire Brigade is the authority responsible for enforcing health and safety legislation at Shannon Airport Fuel Terminal which is classified as an upper tier Seveso site under the Control of Major Accident Hazard Regulations (S.I. 74 of 2006). AWN reviewed health and safety practices at the fuel terminal site including consequence assessment of accident scenarios, on behalf of Clare Fire Brigade.

Fire fighting capability at the fuel terminal site was reviewed including water supply, location of the fire control point, quantity of foam stored on site, fire detection and storage provision for contaminated fire water. Fire fighting options for Clare Fire Brigade were presented including details of required fire fighting equipment, water quantities and foam quantities.

Existing spill containment at the terminal site was reviewed and recommended that spill containment and the tank level monitoring system be upgraded. The absence of firewater retention was noted and the volume of storage required was specified.

Consequence modelling of several accident scenarios was completed to assess impacts on the fire control point and adjacent tanks as follows:

- Thermal radiation impacts from a full surface tank fire and calculation of the quantity of cooling water required;
- Thermal radiation impacts from a catastrophic tank rupture, subsequent pool fire and vapour cloud explosion;
- Impacts of a tank leak, subsequent jet fire and pool fire.

A review of existing response strategies was completed and it was recommended that an automatic flammable gas detection and fire detection system be installed.

The potential environmental impacts of an accident scenario on the adjacent Lower Shannon Estuary, an ecologically protected site, were assessed.

