



## Marine Notice 15/2011

### Possible Explosion Hazard with Refrigerated Shipping Containers

AMSA has become aware that there is the possibility that refrigeration units fitted to shipping containers re-gassed in Vietnam between March 2011 and June 2011 may have been filled with contaminated refrigerant gas.

The risk of explosion has also been identified by Lloyds Register in their safety alert 31/2011, where it has been suggested that the contamination may have arisen due to topping up of systems with different types of gas. In normal operation this situation should not create a hazardous situation while the refrigerant gas remains sealed within the pipe work and compressor system of the refrigeration unit of the container.

The possible risk associated with this contamination is being investigated by the owners and providers of refrigerated containers, who have advised that the contaminant appears to have the potential to ignite, on coming in contact with the oxygen in the atmosphere, causing an explosion. It is noted that incidents attributed to this situation have only occurred when the compressor unit has been running.

Investigations are ongoing by shipping lines and in Vietnam, however the scope of this issue has not finally been determined and a hazardous situation may arise where service or maintenance on a refrigeration unit is undertaken. Such work should only be undertaken by qualified refrigeration technicians using appropriate precautions. Given the current understanding of the nature of the hazard it is essential that procedures to capture refrigerant gas are complied with and that none of the gas is vented to the atmosphere.

While this issue is not solely related to the maritime industry, AMSA is continuing to seek further information on this situation and will endeavour to continue to provide advice to its stakeholders as further information comes to hand.

AMSA has been advised that owners have records that are being used to identify containers that may have been affected and recommend that where a refrigerated container is identified as potentially being affected it should not be plugged in and should be isolated from other containers. The container owner/operator and shipper or consignee (as appropriate) should be notified immediately. Reporting of incidents/accidents in accordance with all other legislative obligations is also required.

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