

Future Perspective of Fumigant Detection

**WCO Technology and Innovation Forum
November 2009**



NEW ZEALAND
CUSTOMS SERVICE
TE MANA ĀRAI O AOTEAROA

PROTECTING NEW ZEALAND'S BORDER

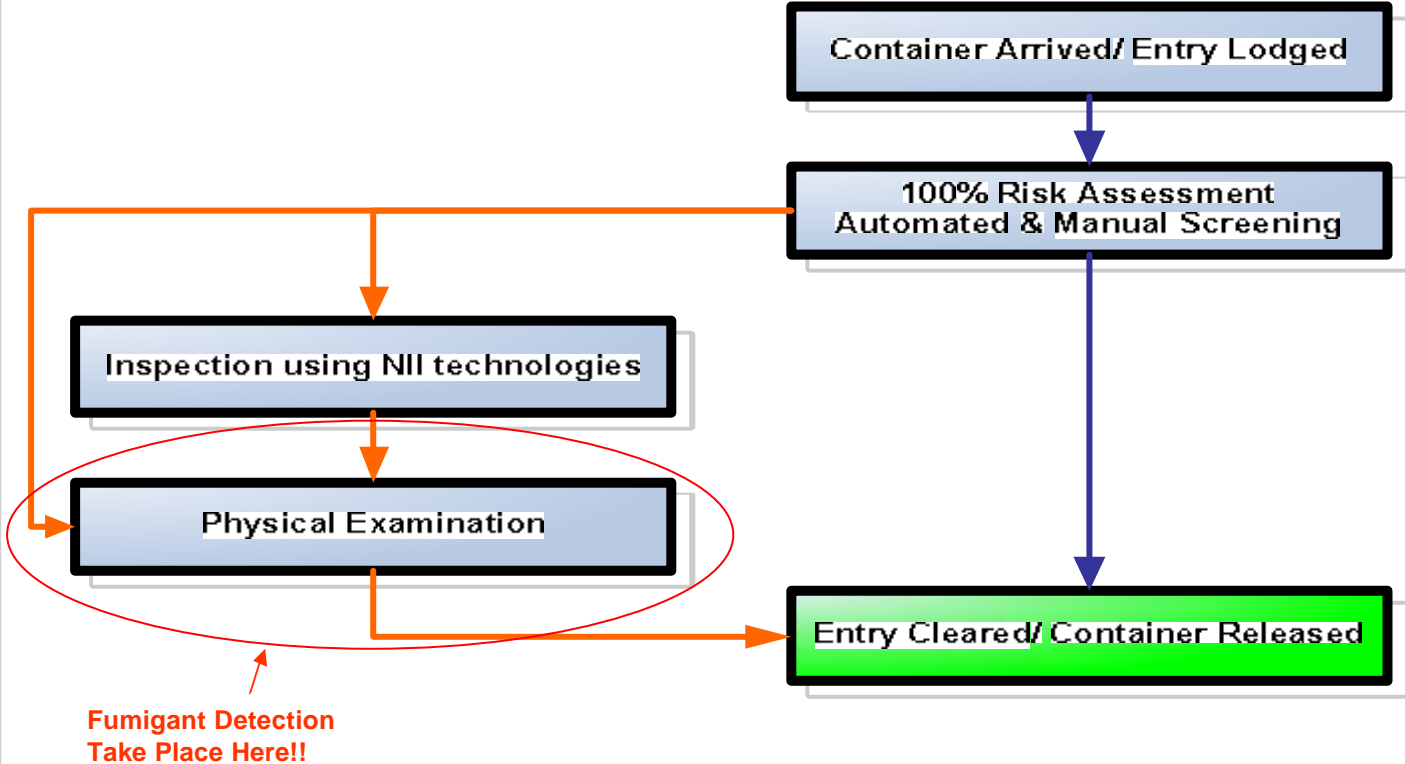
[New Zealand Government](#)

Background

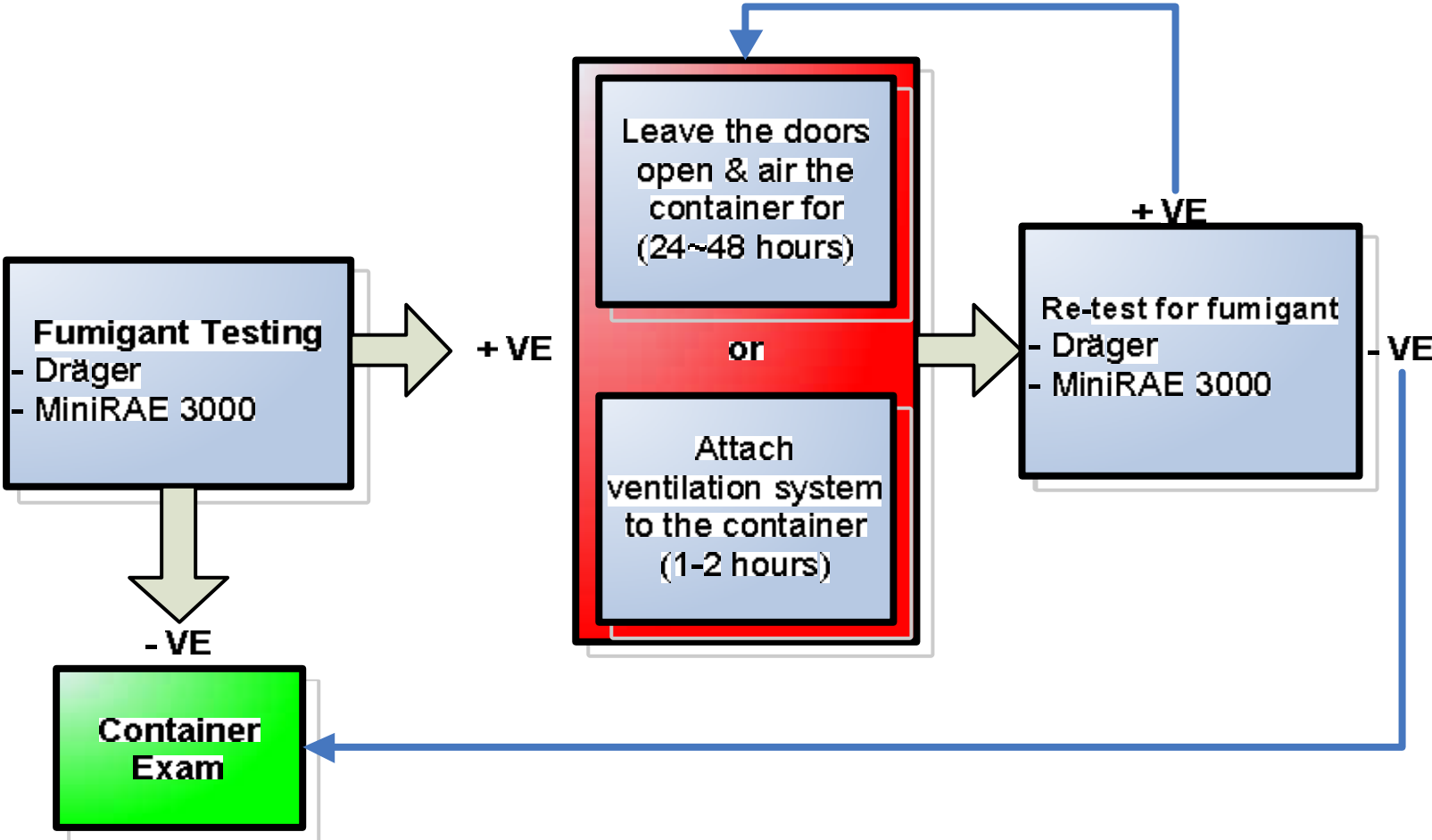
The Canada Border Service Agency (CBSA) have already distributed a comprehensive discussion/issues paper on their fumigant program and the issues and challenges they have identified, that was presented at the WCO SSC meeting on November 24 2008.

Rather than reiterate points already covered within this paper, this presentation will provide a high level overview on the current fumigant program the New Zealand Customs Service operates and then identify for discussion some possible future solutions to some of the problems faced by Customs organisations internationally

Container Flow in New Zealand



Current Process



Fumigant Detection Equipment Utilised in NZ

Dräger Quantimeter 1000



MiniRAE 3000 Volatile Organic Compound Monitor + Nordiko Ventilation Console



miniRAE 3000



Nordiko Ventilation Console

New Zealand Context

The most common fumigant encountered at the New Zealand border is Methyl Bromide – WES* < 5ppm, however we also test for:

- Formaldehyde – WES < 1ppm
- Phosphine – WES < 0.3ppm
- Hydrocyanic Acid – WES < 10ppm
- Ethylene Oxide – WES < 1ppm

*WES – Workplace Exposure Standards, set by the Department of Labour of New Zealand and are intended to be used as guidelines for those involved in occupational health practice

Issues

- » **Health & Safety concerns for Inspection Officers who come into contact with fumigants**
- » **Dräger testing is only able to screen for those fumigants based on specific tubes selected at the time of testing**
- » **Difficulty accessing & sampling air from inside the container, opening the door to complete sampling may be inevitable thus increasing the risk of officers coming into contact with toxic chemicals**
- » **Unnecessary delay to the flow of cargo**

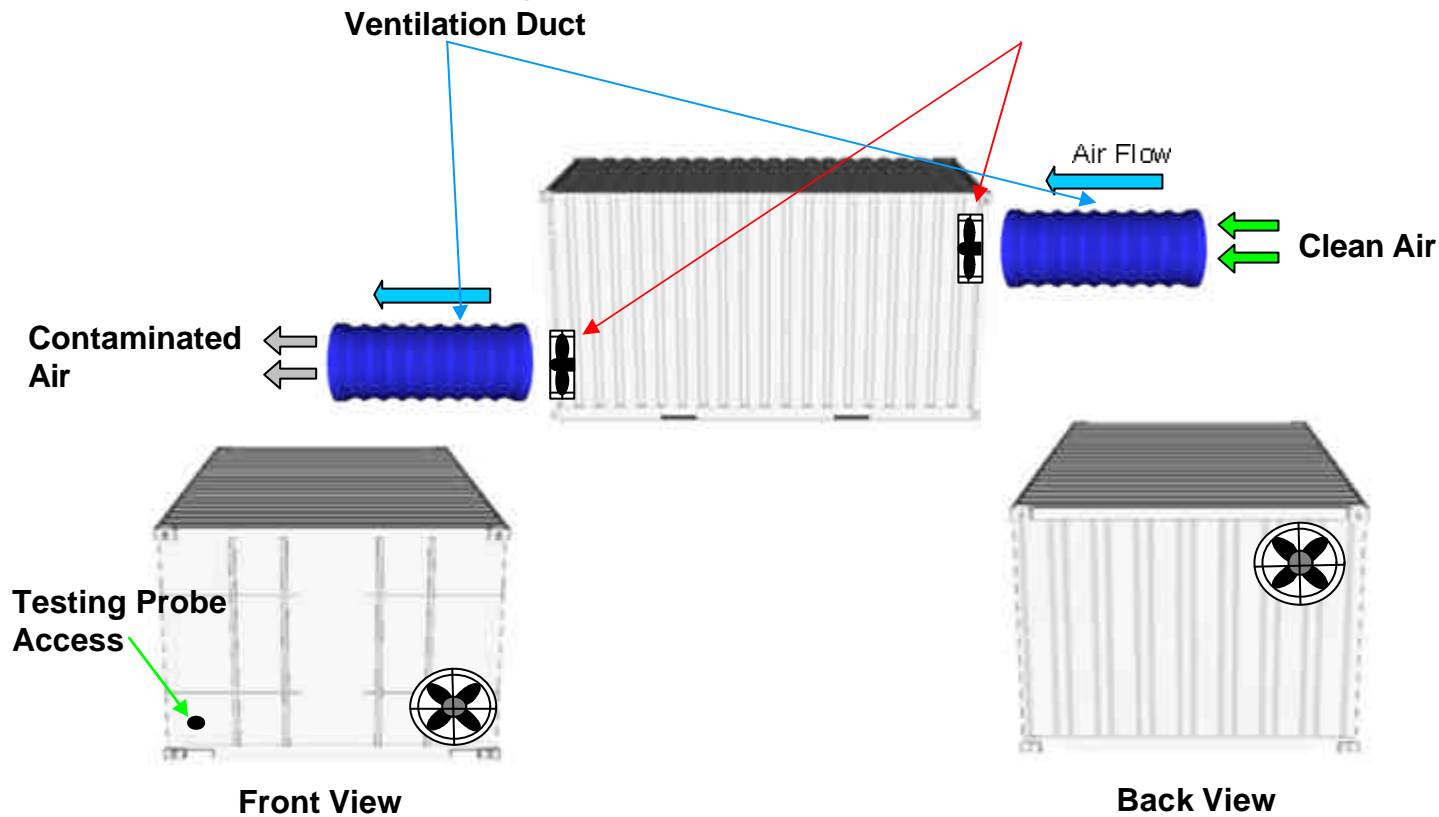
Possible Solutions

- » **Use Human Friendly Fumigants**

- » **Onus on fumigators to ensure containers leave their facility fumigant free**
 - Customs only require detection devices and not ventilation devices

- » **New Container Design**
 - Inspection Friendly Container to speed up the ventilation process (this might include external powered ventilation fans and/or access for testing probes) - see next slide

Inspection Friendly Container (Example)



Enquiries should be directed to the International Container Bureau (the Bureau International des Containers et du Transport Intermodal – B.I.C, who administer standards for shipping containers)

Discussion

Questions to consider:

- » **Does this issue overlap with the SAFE framework?**
- » **Is it only fumigants that are of our concern? E.g. toxic chemicals as cargo**
- » **Is it a Customs problem?**
- » **Is this problem too big?**

- » **Any ideas or work being done around this issue? Any suggestions?**