HAZMAT OPERATIONAL

O.2.2 HAZMAT - Asbestos

1. PURPOSE
To provide information and guidance for when asbestos and/or other fibres are suspected or confirmed at an incident.

2. APPLICATION
This guideline applies to all TFS operational personnel. TFS is the lead combat authority for HAZMAT incidents.

Note: this publication should be read in conjunction with specific incident guidelines contained within the O.2.0 HAZMAT series.

3. GENERAL SAFETY CONSIDERATIONS
Asbestos is a natural rock fibre; specifically a form of mineral silicate. The name itself applies to a group of six different fibrous materials (amosite, chrysotile, crocidolite, tremolite, actinolite and anthophyllite). Asbestos was widely used in most industrial, domestic and commercial applications until 1992. As a result, Asbestos containing materials (ACM) still exist in many areas including roofing material, thermal or acoustic insulation, wall panelling in wet areas, vinyl sheeting and floor tiles, under eaves, in heater flues and even in textured paints.

ACM in bonded form poses a very low health risk as the asbestos fibres are contained. However, when the ACM bonding is disturbed asbestos fibres can become airborne and present significant health risks if inhaled.

Some industrial/commercial premises have ‘Asbestos – Danger’ signs to indicate presence; however many others do not. Domestic buildings do not require signs at all. Therefore, during firefighting or other emergency operations involving structures, it is foreseeable that ACM may be present and actions at the incident scene may disturb ACM thereby creating airborne fibres.

Contamination by asbestos can only be confirmed through laboratory testing, but it is impossible to remove once within the respiratory system. It is usually only diagnosed once symptoms begin to develop 10 to 15 years after exposure. Prevention of exposure and decontamination is therefore a priority.

Responding crew entering areas identified as, or suspected to contain ACM, must wear full PPE and respiratory protection (see relevant PPE and BA doctrine titles). Additionally, the Incident Controller (IC) should ensure:

- Respiratory protection is to be maintained until members are clear of potential ACM contamination
- The general area of contamination is identified and the numbers of personnel exposed is limited to only those necessary to undertake the task
- A WordBack is provided to FireComm and the responsible DO is notified of ACM presence where there is a possibility of contamination (WST and local council are also to be notified)
• All PPE and respiratory equipment must be decontaminated on-site. If this cannot occur, the equipment is to be bagged and tagged for later cleaning.

• Where ACM is identified within a Pre-Incident Plan, or sighted by personnel on the fireground, and the ACM is remote from fire and/or otherwise undisturbed, the risk of contamination is significantly reduced.

All pre-1980 buildings should be treated as suspected to contain ACM.

4. TACTICAL CONSIDERATIONS

The Incident Controller (IC) (and/or crew leader) must adapt prior knowledge and experience to the specific incident, as each situation may present unique and, at times, conflicting challenges. The IC must undertake a size-up of the onsite conditions to identify all of the hazards and to assess the risks involved in each. The IC must then develop and prioritise the incident objectives and apply tactical strategies to control and manage the incident based on the principles of RECEO. An Incident Action Plan (course of action) should be established, implemented and communicated in accordance with TFS briefing formats.

The IC must continuously review and re-assess the strategies as the incident progresses and/or as new hazards develop. This could include reviewing the incident objectives. The IC is to seek as much information as possible regarding the incident location to assist in the pre-identification and presence of ACM. This may include reference to Local Action Plans (LAP) and/or local knowledge.

4.1 Arrival and Size-up

The incident size-up and ongoing Dynamic Risk Assessment must consider some reasonable indicators of the presence of asbestos and/or other fibres on-site. Sources may include:

• Local knowledge: Confirm knowledge/details with an owner/occupier of a commercial or industrial property, e.g. the presence of an Asbestos Register

• Age and type of building construction: ACM were used extensively before the mid-1980s and up to buildings constructed prior to 1990, although its commercial use continued until 2003 in specialist applications such as plant rooms

• Nature of incident: identify if the nature of the incident could disturb/generate fibres, e.g. well involved in fire, crash, or other impact.

4.2 Incident Action

If it is suspected or confirmed that ACM are present at any incident then precautionary actions must be implemented to prevent exposure to, or contamination of personnel, clothing, equipment (including appliances) and clean work areas. These should include:

• Implementing an AIIMS/ICS structure and communications plan, as necessary

• Providing immediate wordback to FireComm requesting additional resources necessary for decontamination, and initiate District Officer notification

• Positioning of resources and personnel upwind and uphill of the hazardous area

• Establishing incident control zones/sectoring and clearly identify the zones/sectors with barrier tape (or other visual marker)

• Evacuating all non-essential personnel (including TFS personnel not wearing appropriate PPE and respiratory protection) to the cool zone and immediately initiating wet decontamination for all evacuees suspected to have been exposed.

• Selecting appropriate operational firefighting tactics to minimise ACM disturbance

• Avoiding cutting or drilling unless the work is absolutely necessary. Hand tools are to be used in preference to power tools
- Ensuring that fire appliances and other emergency response vehicle doors and windows remain closed
- Introducing fine fog spray periodically over the contaminated area to suppress airborne fibres and limit the spread of any contamination
- Avoiding, reducing and/or containing water run-off from any ACM area, where practical
- Continuing to extinguish/contain the original incident from the warm zone
- Restricting overhaul actions in asbestos areas and the areas of contamination to limit further spread of any contamination
- Limiting access to contaminated areas
- Constantly review objectives and strategies as the incident develops or the situation changes.

4.3 Decontamination

PPE, firefighting equipment and personnel must be decontaminated on site to ensure ACM are not transferred to appliances or back to brigades (see Decontamination Titles in Chief Officer’s Operating Instructions).

5. POST INCIDENT CONSIDERATIONS

The respiration hazard will continue through overhaul and clean-up operations (including fire investigation activities). Wet decontamination must be continued until the hazard is contained or the control of any removal operations is handed over to the site owner/responsible party and/or a licensed asbestos removal agent. Fire investigators must adopt respiratory protection and follow decontamination procedures as outlined in the relevant publication.

Additionally, the IC should:
- Ensure that overhaul is conducted and de-mobilisation of resources and de-escalation of the Incident Management System occurs
- Ensure on site decontamination occurs
- Ensure personal hygiene standards are enforced. Hands should be thoroughly washed after handling any exposed item, and prior to smoking/consuming anything by mouth
- Ensure that the integrity of evidence at the scene is preserved, notify the Fire Investigation Officer as required and record all relevant information and observations
- Ensure a Fire Incident Report is completed
- Identify and liaise with the responsible party for site handover considerations. Ensure that the owner/occupier is informed of the potential contamination and specific safety precautions needed before handing over control of any incident involving ACM (and the responsibility for any residual hazard)
- Conduct an incident debrief and then a post-incident analysis, to identify improvements to procedures, training and equipment
- Ensure crew welfare, including monitoring of hydration and health
- Initiate the Critical Incident Stress Management (CISM) de-briefing process, as necessary.

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