

Lesson Title: Hazardous Substances - Asbestos
Learning Outcome: An introduction to asbestos, covering of the risks posed to Defence personnel, likely locations of asbestos, and current defence policy on the actions to be taken on finding asbestos in the workplace.
Duration: 20 Minutes
Method: Theory Lesson / Lecture
References: <ul style="list-style-type: none"> • SAFETYMAN Vol 1 Pt 5 Chap 2 (Asbestos management) • SAFETYMAN Vol 2 Pt 3 Chap 22 Annex D (Asbestos) • EMEI Workshop E 410 (Safe work practices for working with asbestos) • ArmySAFE website (various guidance and links) • OHSB website (various guidance and links) • CA Directive 24/2008, Management of Asbestos within The Australian Army, dated 05 Dec 08 • CA Directive 24/11 Asbestos Management Plan for Land Materiel • National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC: 1005 (1994)], dated Jan 94 • National Code of Practice for the Control of Workplace Hazardous Substances [NOHSC: 2007 (1994)], dated Jan 94 • Health Directive 296 - Health aspects to managing Asbestos containing material in the Australian Defence Force
Revision: Nil
Teaching Points: <ul style="list-style-type: none"> • What is Asbestos • What are the health affects from asbestos exposure • Where is asbestos found • What actions should be taken on finding asbestos in the workplace • Incident reporting • Managing asbestos in an Army unit
Speaker information: This presentation is a module of the Force Preservation Awareness (FPA) training package. It is aimed at all ranks to ensure all Army members (both military and civilian) are aware of the risks posed by asbestos in the workplace.. Unit specific details are to be entered into the slide templates prior to delivery.

PPT 1:

Speaker notes:

Army 'cover' slide for display prior to commencement.

[NEXT SLIDE]

PPT 2:

Speaker notes:

This presentation will cover the general level of asbestos awareness required by all Army personnel each year as detailed in CA Directive 24/11 **ASBESTOS MANAGEMENT PLAN FOR LAND MATERIEL.**

[NEXT SLIDE]

PPT 3:

Speaker notes:

Persons who are at risk of inhaling airborne asbestos fibres within Army usually belong to two main employment groups:

1. Technicians and trades personnel, and
2. Supply personnel.

However anyone in Army may encounter asbestos at some time in their career – so this training is for **everyone**.

[NEXT SLIDE]

PPT 4:

Speaker notes:

This session will cover the points listed on the slide.

[NEXT SLIDE]

PPT 5:

Speaker notes:

- Asbestos is a mineral that was in reasonably wide use within Australia prior to being banned in Jan 2004 as a result of the potential health threats posed by microscopic airborne asbestos particles.
- Defence began phasing out asbestos parts, apart from a limited number deemed 'mission critical', for which formal exemptions were granted. Army has **no** exempt parts, and there will be no more Defence exemptions after 2010. Asbestos free alternative parts are being identified by the Defence Material Organisation and all known asbestos items are being removed from the

logistics system.

- In-situ asbestos is still permitted within facilities and equipment. Asbestos containing materials that have been fixed or installed (eg a gasket in an engine or cement sheeting in a roof) and have not been moved/disturbed (eg through maintenance activity) are defined as in-situ. In-situ asbestos must be checked at least annually to ensure that it poses no threat of releasing fibres. In-situ asbestos poses a very low risk so long as it is not damaged or disturbed, and it's condition is regularly inspected. It is important to note that Defence still has a number of facilities and equipment that contain 'in-situ' asbestos. All in-situ asbestos within the unit is logged in the unit asbestos register. Although no new asbestos parts will be introduced into the logistics system, Army will have to manage 'in-situ' asbestos well into the future. Remember: If the asbestos containing material is moved or disturbed then it ceases to be classified as in-situ asbestos and must be replaced with a non-asbestos material.
- The greatest threat to units in the future will be through direct unit purchasing. We need to ensure that all items purchased in this manner are free of asbestos; especially things like training aids which may be purchased second-hand.

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PPT 6:

Speaker notes:

Asbestos can be very dangerous if you do not adhere to the appropriate controls. Asbestos is a hazardous substance that can cause serious disease and illness when microscopic fibres are released into the air – ie you may not be able to see the fibres.

Specific health threats from inhaled asbestos fibres include:

- **Asbestosis:**

This scarring impairs the elasticity of the lung and hampers its ability to exchange gases leading to inadequate oxygen uptake into the blood. Asbestosis restricts breathing leading to decreased lung volume and increased resistance in the airways. It is a slowly progressive disease that may take 15 to 30 years to Develop.

- It occurs with very high asbestos fibre exposures (typically in the old asbestos mining and milling industries)
- It is highly unlikely to occur in Army members, given how asbestos is managed today.

- **Mesothelioma:**

Refers to cancer of the outer covering of the lungs (pleural lining). It is considered to be exclusively related to asbestos exposure. By the time it is diagnosed, it is almost always fatal. Similar to other asbestos-related diseases, Mesothelioma has a long latency period, usually in excess of 20 years.

- **Lung cancers:**

Lung cancer is common in smokers who do not work with asbestos but it is even more common in asbestos workers who smoke. The tumor grows through surrounding tissue, invading and often obstructing air passages within the lung. The time between

exposure to asbestos and the occurrence of lung cancer is usually in excess of 10 years.

- **Other cancers:**

There are also potential concerns with cancers of the stomach and oesophagus from ingested fibres but the evidence is currently unclear.

It is important to note however, that given the controls that operate in Army, your actual risk of suffering medical complications arising from asbestos is very low. The risk increases as the number of asbestos fibres in the air increases and the number of times you are exposed increases. Remember – if no fibres are released then asbestos does not pose a threat; hence you can safely work in a building and/or use equipment that contains ‘in-situ’ asbestos so long as it is not damaged or worn down.

[NEXT SLIDE]

PPT 7:

Speaker notes:

In the past, asbestos was used widely in Australian Defence Force platforms, equipment, and facilities. Because of its inherent properties, asbestos was used in:

- brake pads and clutches
- thermal and acoustic insulation
- high temperature gaskets for engines, exhausts and valves, bulk gasket materials and seals
- building materials such as asbestos cement sheets
- aircraft panels and as a filler in adhesives

When asbestos was used for most of these applications it was often mixed with cement or woven into fabric or mats. This process produces asbestos that is often referred to as ‘non-friable’ or ‘bonded’. As a result, the risk of exposure to asbestos fibres is usually very low because the fibres are contained.

It is important to note that these items are not a threat in themselves – they pose a threat when they are damaged or worn down and fibres are released to the air.

[NEXT SLIDE]

PPT 8:

Speaker notes:

By referring to our unit’s asbestos register and Defence Support Group’s Defence Estate Management System we have compiled the following locations of known and suspected asbestos within the unit:

NOTE FOR PRESENTER: *You will have to obtain this information from DEMS and the unit Asbestos Register. You should also mention any specific controls/restrictions in place in your unit for these items.*

[NEXT SLIDE]

PPT 9:

Speaker notes:

- If you suspect **previously unidentified** asbestos, quarantine the area and report to your supervisor. Quarantining the area can be as simple as closing the door and not letting anyone enter the room.
- The relevant Systems Program Office within the Defence Material Organisation will provide technical advice on any in-Service equipment and Defence Support Group will provide technical advice on asbestos within facilities.
- Only licensed contractors or appropriately trained personnel can remove asbestos. Remember, that if it is in-situ and doesn't pose a threat it, removal may not be required.
- You should not assist in the removal process unless you have completed asbestos removal training – this is only awareness training.
- Asbestos should never be disposed of as general waste – there are specialist disposal requirements and it can only be disposed of by qualified contractors.
- **A reality check:** Remember that some asbestos containing materials are in-situ and the equipment and/or facilities in which they are found can be used so long as:
 - the asbestos components are not disturbed, and
 - regular monitoring confirms that the ACM continues to pose no threat.

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PPT 10:

Speaker notes:

- Personnel who may have inhaled airborne asbestos fibres – or even think they may have done so – must raise an AC563. Uniformed personnel should contact their local medical centre if they require advice on health concerns. The Defence Asbestos Exposure Evaluation Service can be used by non-uniformed personnel and is also available to serving members. Serving members are however encouraged to use their medical centre in the first instance.

[NEXT SLIDE]

PPT 11:

Speaker notes:

- Personnel who may have inhaled airborne asbestos fibres – or even think they may have done so – must raise an AC563. Uniformed personnel should contact their local medical centre if they require advice on health concerns. The Defence Asbestos Exposure Evaluation Service can be used by non-uniformed personnel and is also available to serving members. Serving members are however encouraged to use their medical centre in the first instance.

[NEXT SLIDE]

PPT 12:

Speaker notes:

Units maintain an asbestos register that records the location of all known and suspected asbestos within the unit – we treat suspected asbestos as asbestos. Before you undertake any work that may disturb asbestos ensure that you check the register – remember that the register can change over time. The register will also note how often checks of the asbestos containing materials must be conducted so as to ensure there is no threat of airborne fibres.

Only qualified personnel can prepare asbestos materials for disposal and /or remove components from equipment. Those personnel must be trained IAW SAFETYMAN Vol 2 Pt 3 Chap 22. EMEI Workshop E 410 details the safety precautions to be taken by trained personnel involved with working with asbestos containing materials, such as techniques, PPE, etc. Do not participate or assist in the process unless you are trained.

Ensure that unit briefs for visitors and contractors mention any relevant asbestos hazards.

Finally, look after your mates. Asbestos is a hazard – comply with the controls and keep yourself and your mates safe – and, if confused ask for help.

[NEXT SLIDE]

PPT 13:

Speaker notes:

The slide displays a number of useful references for asbestos.

[NEXT SLIDE]

PPT 14:

Speaker notes:

- Remember this was only general awareness training and does not qualify you to remove or assist in the removal of asbestos. IF you have any doubts at any time notify your supervisor.
- Are there any questions?

[NEXT SLIDE]

PPT 25:

Speaker notes:

Army 'cover' slide for display on completion, and whilst next presentation is arranged.