Managing the Silent Killer

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Did you know?

In the 1939 classic movie the “Wizard of Oz”, Dorothy, Scarecrow and Lion were sprayed with raw Chrysotile asbestos in the “Poppy Field” scene, exposing cast and crew alike.
How Small is Asbestos?

2-3 rice grains

5-6 human hairs

How Many Asbestos Fibres?

www.AsbestosDiseaseAwarenessOrganization.org
How Small is Asbestos?

2-3 rice grains
20,000 Asbestos Fibers
5-6 human hairs

www.AsbestosDiseaseAwarenessOrganization.org
Types of Asbestos

Crocidolite (Blue)
The Asbestos Building

Key to Figure 4.1

1 Roof/external construction
1-1 Roof sheets/tiles
1-2 Wall cladding/coating
1-3 Guttering/drain pipes
1-4 Soffit panels
1-5 Chimney cowls
1-6 Roofing felt
1-7 Under window panels

2 Internal construction
Walls/ceilings
2-1 Partitions
2-2 Panels to electrical equipment, heater units, cookers, baths, cupboards
2-3 Lining panels to lift shaft
2-4 Riser access panels, riser boxing
2-5 Textured coatings
2-6 Sprayed coating to structural elements, suspended ceiling tiles, firebreaks, loft/ceiling insulation

Door
2-7 Panels, cores, beading to vision panels

Floor
2-8 Tiles, linoleum, lining to raised floors
The Asbestos Building

- **3 Heating, ventilation & electrical equipment**
  - 3-1 Boiler/calorifiers: External & internal insulation, gaskets
  - 3-2 Pipework: Insulation, gaskets, paper lining
  - 3-3 Flues & gaskets
  - 3-4 Ductwork: Insulation, gaskets, internal lining, anti-vibration gaiters
  - 3-5 Electrical switch gear: Internal elements, surround panels
  - 3-6 Heater unit: Gaskets, surround panels

- **4 Other items**
  - 4-1 Bitumen sink pads
  - 4-2 Water tanks
  - 4-3 Toilet cisterns & seats
  - 4-4 Stair nosing
  - 4-5 Fire blankets
  - 4-6 Brake/clutch lining (car in the garage and the lift motor)
Asbestos Management

What shall I do with it now I’ve found it?
Managing Asbestos

- Asbestos Management Plan
- Responsibilities
- Decisions - Remove, Repair, Seal, Label, Signs, Enclose etc
- Register management
- Procedures for accidents etc
- Contractor management
- Monitoring & reviewing
The Asbestos Management Process

1. Identification of ACMs (asbestos register)
2. Assessment of Risk from any ACMs (asbestos register)
3. Arrangements for dealing with any accidents, incidents and emergencies
4. Identification of measures to ensure any risk from exposure to ACMs are controlled
5. Monitoring and reviewing the effectiveness of the asbestos management plan

The process is cyclical, allowing for continuous improvement and management of asbestos risks.
Risk Assessment

- Assess the risk
- Introduce appropriate controls
- Manage the risk
Factors Affecting Risk

- Product
- Asbestos type and content
- Friability
- Condition and extent
- Persons exposed
- Accessibility
- Environment
- Likelihood of damage
Available Options

• Leave in-situ and manage
• Encapsulate and manage
• Remove
Encapsulation Options

- **Paint**
  - Elastomeric paints

- **Flexible covering**
  - Metal wrap

- **Rigid covering**
  - Cage or box-work

- **Labelling**
  - Asbestos warning signs
Asbestos Register

- List all known asbestos installations
- Highlight any no access areas
- Location referenced for ease of use
- Contain all relevant information
- Be easy to read and update
The Good, the Bad & the Ugly

Good Practice
- Small number of limitations & caveats in contract
- Provision for working at heights (if necessary)
- Pre-survey meeting
- Access all areas
- Suitable lighting (contractor checks before survey)
- Representative number of samples
- Clear & concise report with Executive summary & clear drawings

Bad Practice
- Many limitations and caveats in agreement
- Ground level surveys
- No pre-access meeting
- Excessive sampling
- Inadequate sampling
- Page per sample report
- Poor drawings – not linked with report
Asbestos Reports and Registers

- Interpreting asbestos surveys and registers is critical in planning works.
- ‘Survey reports’ are likely to be out-of-date.
- ‘Asbestos registers’ should be the most up to date information.
- Read all the asbestos information – it is often spread through the entire documents.
- Don’t rely on just one part of a report to give you the full story.
4 Stage Air Clearance process

**Stage 1:** Preliminary check of site condition and job completeness
It should be clear from the plan of work:
- Where the asbestos to be removed was;
- If any asbestos materials were to remain in situ; and
- What the asbestos materials removed were.

**Stage 2:** Thorough visual inspection
This thorough visual inspection of the enclosure or work area is the most significant part of the clearance procedure.
The analyst must check:
- The completeness of the removal of the ACMs from the underlying surfaces;
- For the presence of any visible asbestos debris left inside the enclosure and airlocks or work area; and
- For the presence of fine settled dust.
4 Stage Air Clearance process

Stage 3: Clearance indicator air sampling for the certificate of reoccupation

Stage 4: Final assessment post-enclosure/work area dismantling
  - The enclosure can be dismantled.
  - Usually the analyst would remain on site during the dismantling (unless the deconstruction is delayed).
  - Reassurance sampling carried out during the dismantling procedure to check for airborne asbestos.
  - Visual inspection of the area is made to ensure that it is clean of debris.
  - Re-inspect the waste route and transit route for asbestos debris.

NOTE: If a stage is failed, remedial works must be undertaken to rectify the issues before the test can be repeated.
  - Once all stages are passed, the analyst issues a certificate of re-occupation detailing any remedial actions carried out.
  - A copy of this Certificate must be kept for a minimum of 40 years.
The challenges of Asbestos removal project management

- Complete a desktop survey
- Consider all the risks
- Expect the unexpected!
- Make provision for the unexpected and consider:
  - People working in the immediate area
  - Any risks created from other people not conforming – eg smoking in enclosure
  - The location / weather / accessibility of the work area
  - Working with client specified restrictions eg term time
Issues to consider

- Other people / wildlife

Meet Azzy!
Asbestos is a hidden killer. So now’s the time to get clued up on the facts, so that you, your workmates, your friends and family are protected.
Did you spot the following?

1) He did not receive a copy of the Asbestos Survey or Asbestos register.
2) The Dutyholder (Building Owner) has not complied with the HSE guidelines.
3) The asbestos dust cloud he is creating.
4) His age – There are now plenty of claims of workers now suing their former employers regarding exposure.
What if the worst should happen?
Emergency Procedures

- Stop all work in the area.
- Remove and keep all persons out of the area.
- Close/seal or lock off the area where practicable.
- Do not remove any equipment or materials.
- Report the problem to manager/supervisor.
- Is the disturbed material asbestos?
- Does a sample need taking?
- If asbestos, is removal required?
- Return area to normal.
- Update register.
- Investigate the emergency.
- Review management plan.
Personal contamination – Emergency actions

A little contamination eg. Dust on shoes or a sleeve

- Get help and put on RPE
- Remove dust with damp rags
- Dispose of rags as hazardous waste
- Keep a record of the incident

Lots of contamination eg. Over clothes, or in hair

- Stay put, call for help and put on RPE
- Helper to wear full PPE/RPE
- Remove dust with damp rags
- Undress, shower and wash hair
- Dispose of rags and clothes as hazardous waste
- Keep record of incident
Case Study

International companies still get it wrong!

- Not understanding the different Survey types
- Not knowing when to undertake the surveys
- Not planning refurbishment/demolition works
- Expecting their contractors to know about asbestos
- Failing to understand their responsibilities to contractors & workers
- Failing to notify the authorities
Any questions?

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