

# Assessing Asbestos

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- Asbestos Analyses:
  - Air monitoring
  - Asbestos Identification
- Consultants
- Asbestos Register & Asbestos Management Plan
- ACM Removals
  - Building materials

# Asbestos Analyses: Air Monitoring



- Air monitoring used to determine risk, i.e. respirable fibres present  
*Respirable fibres: >5  $\mu\text{m}$  long & <3  $\mu\text{m}$  wide (>3:1 ratio)*
- Air monitoring types:
  - **Exposure** (personal) – never generally required
  - **Control** (static) - ensure removal process is under control, background & clearance monitoring
- Friable removals – mandatory, licensed asbestos assessor (LAA)
- Non friable removals – based on risk assessment
- Important to use NATA accredited laboratory for airborne asbestos analysis ([www.nata.com.au](http://www.nata.com.au))



# What to Expect: Air Monitoring

- Control air monitoring conducted during the *entire* ACM removal duration, e.g. from 7.30 am – 3.30 pm
- Samplers located about 1.5 m high
- Results should be reported within 24 hours
- NATA endorsed laboratory report (and attached to consultant report)
- Report include reason for air monitoring, sampling locations & sampling data (LAA information for friable removals)
- **All results** should be less than Detection Limit to be satisfactory
  - <10 fibres/100 fields *and* <0.01 f/mL



# Asbestos Analyses: Asbestos Identification

- Any suspicious ACM – Analyse first!
  - building materials, dust, debris, soil etc.
- On-site/site based analysis is never recommended!
- Asbestos ID analysis uses stereo & polarised light microscopy
- Fibres meeting certain criteria can be unequivocally identified as:

Chrysotile Asbestos	Amosite Asbestos	Crocidolite Asbestos
Organic fibres		Synthetic fibres (MMVF)

- Important to use NATA accredited laboratory for asbestos identification analysis ([www.nata.com.au](http://www.nata.com.au))



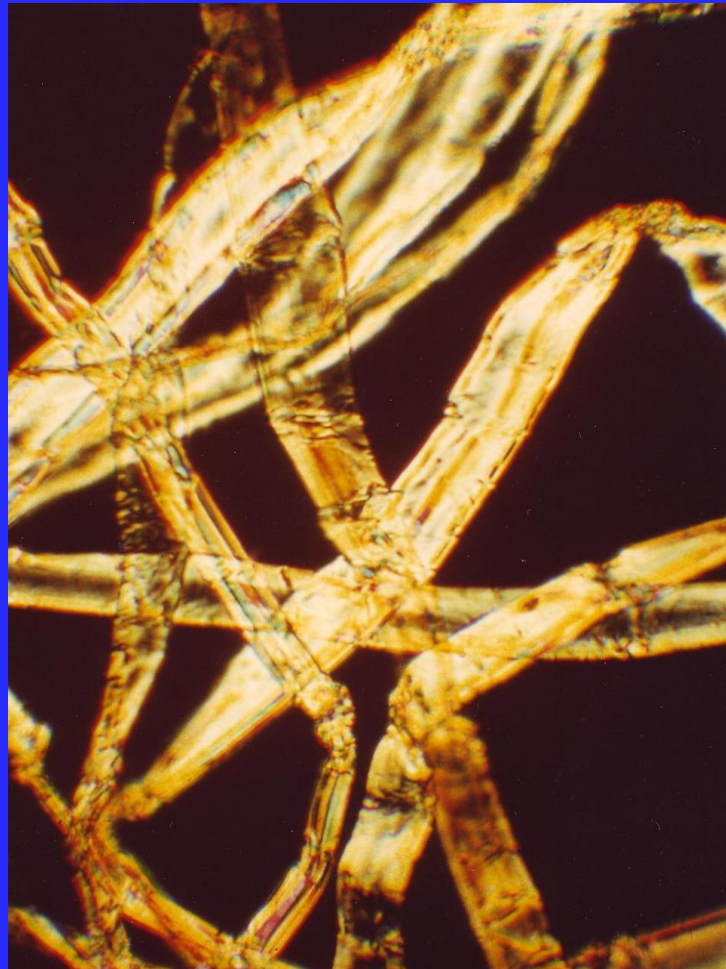
# What to Expect: Asbestos Identification



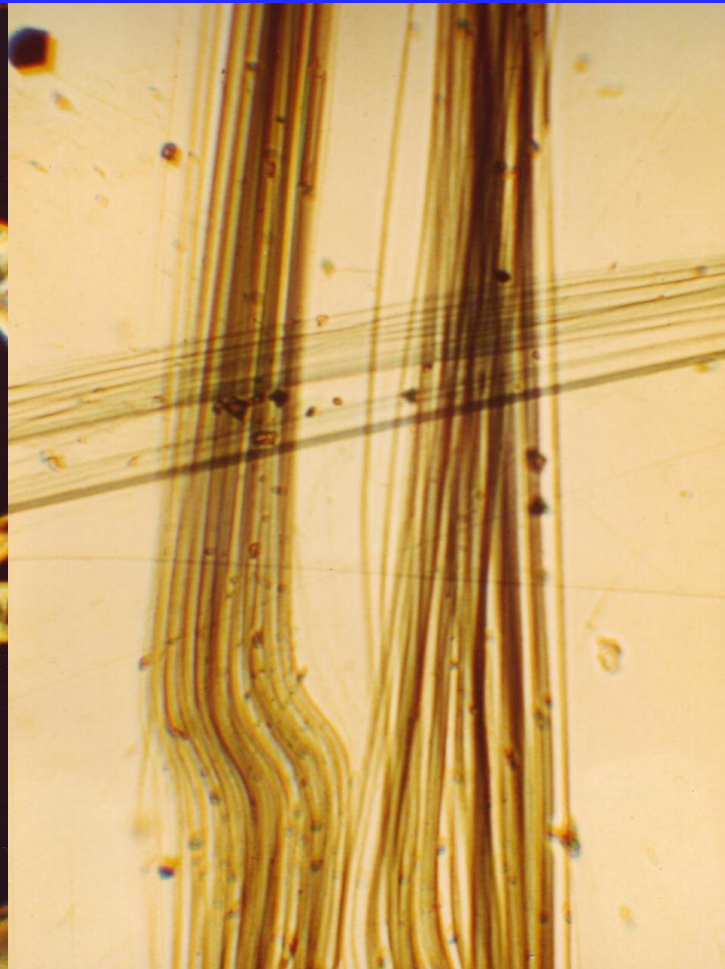
- NATA endorsed laboratory report
  - Includes sampling information and location
  - Contains no opinions or interpretations!
  - Ensure it is attached to any subsequent reports issued
- Results -> presence of *chrysotile*, *amosite*, *crocidolite*, organic fibres, synthetic mineral fibres
- Note:
  - Wipes/swabs – no validated method
  - quantity/concentration of asbestos is **not allowed**
  - 'friability' is subjective and **never allowed** on NATA reports



Organic fibres



Asbestos fibres



# Consultants...

- Carry out airborne fibre sampling/monitoring
- Collect samples for asbestos identification
- Conduct risk assessments for asbestos & ACM
- Provide advice re ACM at sites, including removals
- Review ARCP/SWMS for ACM removals
- Assist development/write Asbestos Management Plan
- Asbestos inspection surveys & prepare Asbestos Register
  
- Select the right one for the job!





# Consultant Competency

- Person who has acquired, through training, qualification or experience, the **knowledge** and **skills** to carry out the task (Code of Practice: Control)
- AIOH recommends:
  - Are those with the **relevant asbestos experience** and **proven competence** in the required specific areas of investigation, analysis and/or interpretation of the findings are used for asbestos related enquiries; and
  - This includes health effects of asbestos, asbestos inspection surveys, risk assessments, preparation of Asbestos Registers, sampling (i.e. airborne analysis and asbestos identification analysis), removal methodologies, disposal requirements, clearances and project management of asbestos removal work; and
  - Are **licensed asbestos assessors** (e.g. where friable asbestos is present); and
  - Is (at least) **Full member** of the AIOH; and
  - Has current **professional indemnity** insurance for asbestos

# Asbestos Management Plan

- Legislative requirement, i.e. mandatory where ACM is present
- Policy & procedures document for managing asbestos
- Used for ACM in buildings and for soils (e.g. remediation works)
  
- AMP overall purpose ->

*to ensure no person is exposed to airborne asbestos fibres*

- More details: Code of Practice: how to manage and control asbestos

# Asbestos Register

- Legislative requirement, mandatory
- Register required for buildings pre 12/2003

## *Two Parts:*

- A: **List** of all ACM at site, includes:-
  - ACM location and condition (F & NF)
  - ID analysis information
  - Labelling information
- B: **Retention** of all asbestos related info at sites, including:-
  - Removal information, analysis reports, tip dockets, clearance reports etc.



# Asbestos Register (cont.)

- Always check Register/Haz-Mat survey before maintenance, demolition or refurbishment work commences
  - Register update interval is at least once per 5 years
  - Register available/accessible for anyone!
  - Management vs Demolition inspection
  - Inspection survey by competent & experienced person
- 
- More details: Code of Practice: how to manage and control asbestos
    - Incl. register contents, template layout, labelling etc.



# ACM Removals – Building Materials

- Ideally, planned – part of demolition or renovation work
- Domestic:
  - Issues with ignorance of ACM in dwellings
  - Inadvertent disturbance of ACM
- Commercial:
  - Ignorance of ACM
  - Asbestos register issues (non existent, incorrect, out of date etc.)
- Common issues:
  - Costs of asbestos contractors & proper disposal
  - Removal work not in compliance with SafeWork NSW requirements
    - Friable, non friable, greater/less than 10 sqm NF



# ACM Removals – Building Materials

- ACM removal:
  - Regulated by SafeWork NSW, notification/permit
- **Friable:**
  - Class A licensed asbestos removalist
  - Air monitoring - mandatory
  - Licensed Asbestos Assessor: ARCP/SWMS review, enclosure check, air monitoring, clearance work (visual & air monitoring), clearance certificate
- **Non Friable:**
  - Class A or B licensed asbestos removalist
  - Air monitoring -> result of risk assessment
  - Clearance certificate (visual inspection)
  - <10 sqm NF – no licence required



# What to Expect: Clearance Reports



- Friable & Non Friable ACM removal:
  - Name of person who carried out visual clearance inspection
  - Removal details (contractor, dates, ACM, specific locations etc.)
  - Clearance inspection details (date, time etc.)
  - Results of visual inspection
  - Air monitoring information (if required) (details, results etc.), and results attached to clearance certificate (incl. NATA report)
  - Conclusion regarding if the area is safe for re-occupation
- Friable (in addition to above):
  - Licensed asbestos assessor information
  - Removal enclosure information (e.g. inspections)
  - Clearance air monitoring results

# ACM Removals - Soils

- Next Session!





# Remember!

- Ensure any consultant report which refers to analysis results (air sampling and/or ID) of samples taken ***includes*** the NATA endorsed results certificate with the report, if not -> ask!
- Select competent consultants with **demonstrated experience** and **integrity** (refer AIOH recommendations)
- ACM removals require notification to SafeWork NSW prior to commencement
  - Allows for proper planning
  - Impact for urgent jobs



# Remember...

- Ensure appropriate due diligence is given to each specific situation
- A common mistake is to over-compensate based on perception of risk
  - Impact -> heightens issue, increases costs & duration to resolve/remediate
- **Consider risk profile of ACM:**
  - Friable vs non friable
  - Damaged vs stable/undamaged
- Careful management of risk perception is required which includes effective risk communication and involvement with all stakeholders
- Provision of suitable education and asbestos awareness, resources (e.g. *appropriate* web pages, info-fact sheets, SafeWork NSW information, AIOH)

# Resources

- Membrane filter method: SafeWork Australia (NOHSC, 2<sup>nd</sup> Edition, 3003 (2005))
- Australian Standard 4964 (2004) – qualitative identification of asbestos in bulk samples
- SafeWork NSW
  - ACM removal information, licensing etc.
  - Code of Practice for **management/control**
  - Code of Practice for **removal** of asbestos

