

## Chapter 7

# Auditing and reporting

All asbestos-related reports should be presented primarily as outlined in the Contaminated Sites Guidelines. The reports should also reflect the additional guidance provided in these Guidelines. Any Mandatory or Voluntary Auditors Report should comment on the compliance with these Guidelines of the relevant site investigation and management activities

The following items must be included in reports. Note that this is not a comprehensive auditing checklist but rather an outline of the information often omitted from reports.

### 7.1 General requirements

- Each report should outline the asbestos specific training, work history and experience of at least the person supervising the investigation (not a full CV). Field personnel need to demonstrate that they have been adequately trained to identify the range of asbestos-containing materials present in soils and how to assess their condition. Field analytical methods should be performed by appropriately skilled personnel (ASC NEPM, 1999).
- All reports should be as comprehensive as possible regarding information, process, and decisions to avoid misinterpretation.
- Each report must include a conceptual site model. The sampling and validation methodology must be detailed and justified, including providing information on precedents of any validation of methods used.
- Each report should normally be “stand-alone” and should not rely on other documents for contextual information or interpretation.
- Each report should outline any changes to site-associated conditions that might affect site management.
- Where asbestos is not the only contaminant, any reporting relating to it should be clearly identified. A specific plan and/or site-specific procedure for managing asbestos contamination (separate to other contaminants) may be required that incorporates control of all sources of asbestos at a location and complies with WHS legislation
- The report should include photographs of field investigation, remediation and validation inspections
- Derivation and justification for any site-specific clean up goals must be included.

### 7.2 Soil investigations

The details of the process and rationale associated with site investigations, walkover inspections, site sampling, analysis and validation, and how the results are interpreted must be reported.

The investigation methodology needs to be clear and comprehensive, especially for sites that are complicated or lack good historical information.

All samples taken are to be representative of the asbestos contamination to the extent practical. Soil samples for AF analysis are collected from undisturbed, representative soils (i.e. collected separately from field samples).

The report should:

- include the full raw data, including soil logs, sample volumes and weights and laboratory results (may be provided in appendices)
- incorporate tables and diagrams to help summarise and interpret the data
- include sampling methodology
- show asbestos concentration calculations or provide an example of how calculations against criteria have been made.

### 7.2.1 Reporting of site inspection findings

For the initial inspection/walkover, it is critical to comment specifically **on the presence or absence of asbestos material and the inspection method**, such as:

- the depth to which site-specific surface impacts were investigated/remediated
- the methodology used (e.g. raking, trenching or test pits) to confirm the depth of surface impacts
- inclusion of analytical reporting of suspect materials, including materials tested and found not to be asbestos-containing.

Reports will benefit from the annotation of summary information on suitable site inspection figures.

Useful information may include:

- the various types and forms of asbestos contamination encountered
- average and range of sizes observed
- locations where samples of suspect material were taken for either identification or soil (AF) analysis, including on a plan or aerial photograph
- locations where photographs were taken, including the direction of the shot.

The site inspection/walkover should include a description of:

- any remaining asbestos-containing structures, especially if in poor repair
- footprints of demolished structures (including fences, drains and soakwells)
- waste and debris on the surface of the site
- any uncontrolled fill (particularly if it contains building or industrial waste).

### 7.2.2 Reporting of tilling/raking or screening sampling

For these types of sampling, a site figure or diagram should be provided denoting on a grid basis the investigation area(s), the direction of each pass, the description, number of fragments and collected weight of asbestos for each grid, and calculated soil asbestos concentrations, all on a per pass basis.

In the case of screening, the effective screen mesh size should be stated, and the results for the different strata should be differentiated.

The discussion of results should include trends observed across the sequence of investigation passes, including variability and change in asbestos concentrations and delineation of areas where asbestos contamination is more pronounced.

### 7.2.3 Reporting of soil bores, test pits and trenches

The following components should be considered for inclusion in the site investigation diagram:

- depth of strata sampled for asbestos
- soil asbestos concentrations at each position for each stratum sampled
- sampling screening size.

### 7.3 Site characterisation

Comment is provided regarding the asbestos contamination at the site and the confirmation or applicability of assumptions such as:

- asbestos content of asbestos-containing materials found to be present
- soil density used when converting the volume of samples to weight
- sample results are representative of soil impacts to a referenced area or soil stratum.

Limitations and uncertainties have been acknowledged and discussed.

Site investigation reports should explicitly state whether asbestos contamination is evident at a site (for each location it is found) above or below the screening criteria with a description of:

- the location, nature, condition and origin of asbestos contamination
- the lateral and vertical extent of contamination
- a quantitative estimate of the contamination and its distribution in soil
- the consideration of any uncertainties, assumptions or limitations
- the conceptual site model.

### 7.4 Air quality monitoring

Reporting elements for air quality monitoring, in all instances, should include:

- the rationale for air quality monitoring conducted and site-specific action levels
- reference methods
- the date and time of the sampling
- the names of the people conducting the sampling and analysis
- sampling instrument used and accessories
- flow rates, pre and post flow checks
- any deviations from standard protocols/reference method
- static sampling locations
- the activities and location of any person wearing a sampling device
- relevant information on engineering controls, weather conditions and protective clothing and equipment.
- any exceedances of action levels;

The following information must be included:

- calibration certificates for sampling equipment used (e.g. air sampling pumps, field calibrator)
- flow rates and sampling times for air samples

- analytical reports – both NATA accredited reports, and relevant additional/supplementary laboratory reported data

The information may be provided within the main report or in appendices (such as laboratory reports and field records). However, a summary cross-referencing the relevant information would be of benefit.

The discussion on air quality monitoring should evaluate potential causes of exceedances, the prevailing meteorological conditions and the effectiveness of corrective actions implemented and include a statement of the potential exposure of on-site and off-site human receptors to asbestos fibres and the adequacy of site management measures implemented.

## 7.5 Material tracking and disposal

The validation reporting should include documentation arising from the disposal of removed asbestos or asbestos-containing material at a suitable landfill (e.g. material tracking and disposal receipts).

Compliance with the Environmental (Controlled Waste) Regulation 2004 must also be confirmed. Complete documentation of the remediation works needs to be available in the final report, including:

- description of all field operations or daily logs
- containment areas
- maps showing excavation profiles
- maps showing the location of asbestos contamination left in situ
- on-site and off-site vehicle/load tracking information that includes information on the load and its destination (source location, volume, description of contents and contaminants, specific destination location)
- disposal weights and receipts.

## 7.6 Site management plan

In the case of an SMP, evidence (e.g. signed acceptance by persons holding current positions of the assigned roles and responsibilities within the SMP) will need to be included that the responsible party (and any nominated responsible persons) will manage the site into perpetuity.

For contamination contained on-site, the restrictions on use will include the requirement for procedures to be in place for any excavation work beyond the clean surface layer. A site management plan must also be implemented for the following circumstances:

- containment in public open spaces (parks, ovals and playgrounds) at less than 1 m depth
- containment for all other uses, including residential, commercial, natural bushland/reserve, at less than 0.5 m depth

## 7.7 Auditor final inspection

The Auditor may use their discretion as to whether the presence of incidental and infrequent occurrence of fragments that may have resurfaced after remedial works are complete, i.e. when the surface soils are disturbed or following heavy rains, complies with the intent to have the surficial surface free from visible asbestos. A more stringent criterion of asbestos-free surfaces should be applied to sensitive site uses.