Department of **Local Government, Industry Regulation and Safety**

GOVERNMENT OF WESTERN AUSTRALIA

WorkSafe Western Australia

How to identify airborne contaminant hazards in construction

As a person conducting a business or undertaking (PCBU) in the construction industry, you must protect your workers from breathing in hazardous contaminants in the air. Workers on a construction site can be exposed to many hazards found in common construction materials, including:

- dusts from cutting, crushing and grinding concrete and tiles
- dusts from asbestos-containing materials
- dusts from working with stone benchtops
- fumes and vapours from working with some paints, glues and varnishes
- exhaust fumes from power equipment such as petrol powered quick-cut saws, chain saws, or working near plant/vehicle exhausts
- fumes from welding.

The first step to protect workers is to identify where these hazards are in your workplace. This is part of your duty of care to minimise health and safety risks at your workplace as much as you reasonably can.

Breathing in airborne contaminants such as dusts, gases, fumes, mists and vapours at work can cause harm. Being exposed to theses hazards can lead to conditions like asthma, or diseases like lung cancer, asbestosis, mesothelioma and chronic obstructive pulmonary disease.

How to identify hazards

Project planning

Prior to your project commencing, it's important to undertake scoping and planning to identify any hazards. This could include a project work health and safety (WHS) risk assessment and/or looking at the scope of works and intended work methods to identify any WHS hazards.

Look at your workplace

Observe your workplace and how your workers conduct their work to help identify the presence of dusts, gases, fumes and vapours. You should look at what types of machinery and equipment are used, and how they are used, what hazardous chemicals are around, and the general state of tidiness/maintenance.

How to identify hazards (continued)

For example, look to see if:

- residues from dusts, vapours, mists or fumes are on machinery, benchtops, on the walls or the ground
- workers are using control measures appropriately, such as on-tool dust extraction and respiratory protection equipment
- equipment warning lights that indicate filters are not working as intended.

Also, make sure you check the asbestos register.

If you can see or smell something in the air, your workers may also be breathing it in. However, some hazards are invisible and odourless.

It is important to consider other people around the workplace who may be impacted by hazards. This could include contractors and sub-contractors from trades, suppliers, engineers and architects and on-site office staff.



Talk and consult with your workers

Your workers or your health and safety representatives (HSRs) may know what work processes create dusts, gases, fumes, mists and vapours, how much is produced and how often it happens. They may also be able to tell you how work practices could be changed to manage the risk of breathing it in. Your workers can also tell you and the HSRs if certain tasks make them cough, itch or feel unwell.



Read labels and safety data sheets

Some materials used in your workplace may contain or generate a hazardous chemical. Hazardous chemicals are required to have a safety data sheet containing health and physical hazards information. Look for labels on other materials too, as these may also contain health information.

For more information, see Safety data sheets.



Engage a professional

An occupational hygienist can help identify hazards in your workplace. You can search for occupational hygienists near you on the Australian Institute of Occupational Hygienists' website.

Your industry association may be able to help you identify the hazards at your workplace or suggest who can assist you.

How to identify hazards (continued)

Reassess

Managing WHS risks is an ongoing process. When you introduce new materials or processes into the workplace, you must reassess for any new or changed airborne contaminants. Changes in seasonal practices and weather mean that you must regularly inspect your workplace to identify if these changes present a new or changed hazard that may affect the health and safety of your workers.

If a hazard is identified, you should conduct a risk assessment for airborne contaminants. For more information, read our checklist *How to identify airborne contaminant risk in construction*.