

7.0 Air Management

Air quality is a valued ecosystem component because of its importance for visibility and its effects on worker health and safety, as well as for wildlife, vegetation, and water quality. Air quality management focuses on prevention.

7.1 Sensitivities and Concerns

Exploration activities interact with air mainly through road access, camp facilities, excavating, and drilling. Air quality is lowered by the presence of:

- Dust
- Smoke
- Exhaust from internal combustion motors
- Chemical fumes

7.2 Planning

Before field work commences:

- Ensure the exploration program is designed and budgeted to take into account all potential sensitivities associated with air quality
- Ensure that emergency plans and procedures are in place
- Restrict field practices that affect air quality

7.3 Work Practices

To reduce and control dust:

- Wherever practical, but especially in areas of human work activity and habitation, keep roads, helicopter pads and landing strips sprayed with water or a dust suppressant (e.g. calcium chloride)
- Reduce vehicle speed on dusty roads and trails
- Use damp feed when crushing rock for aggregate
- Employ engineered blasting practices to minimize flyrock and fugitive dust
- Install filters, centrifuges or other devices on percussion and rotary drills
- Install temporary windbreaks to control dust dispersion by using polyethylene netting, burlap or lath fencing

To maintain ambient air quality:

- Ensure that heating and cooking appliances are properly maintained and ventilated
- Use low sulphur fuels
- Ensure optimum operation of all combustion and fugitive emission sources through preventative maintenance programs
- Reduce engine exhaust emissions by eliminating unnecessary travel and engine use

- Incinerate solid waste and waste petroleum products only where permitted by regulatory agencies
- Never release hazardous or toxic gases
- Ensure that fuel tanks, gas cylinders and chemicals are properly stored and transported, and that caps/valves are secured in the off or closed position when not in use

When drilling where gases such as methane and hydrogen sulphide could be encountered:

- Install gas detectors at the drill site
- Control gas emissions through the use of blow-out preventers, or other devices
- Advise workers of the health and explosive dangers of such gases

For worker health and safety:

- Ensure that everyone wears appropriate dust/gas masks when in a dusty or gaseous environment
- Keep enclosed work areas well-ventilated to prevent the buildup of carbon monoxide
- Install fume hoods and dust exhaust fans in laboratories and sample preparation facilities
- Ensure that the air quality of a cave or underground working area is tested before entering
- Ensure that workers know the risks and necessary preventative measures when working at high altitudes
- Prohibit smoking in confined spaces