



Air Quality & Dust

1. Does arsenic in dust affect the air quality in the Yellowknife region?

Elevated dust concentrations can affect the air quality in Yellowknife, regardless of arsenic concentrations. Exposure to dust can cause health problems or make existing health conditions worse, such as asthma or other chronic respiratory problems.

A human health and ecological risk assessment¹ did not report any significant health risks from inhalation exposure to ambient arsenic concentrations in air for residents of Yellowknife, Ndilq̄ and Dettah. Concentrations of arsenic in the air are very low.

2. How is the air quality monitored in the Yellowknife region?

The GNWT operates four state-of-the-art continuous ambient air quality monitoring stations across the Northwest Territories. Stations are located in Fort Smith, Inuvik, Norman Wells and Yellowknife. Each of these stations sample and analyze air quality on a continuous basis for a variety of parameters including dust and chemicals. The network is part of the National Air Pollution Surveillance Network (NAPS), a federal program operated across the country

The Air Quality Monitoring Program, which is part of the Giant Mine Remediation Project, is set up to monitor local air quality prior to and during the remediation activities at Giant Mine. The air monitoring program will help ensure that the Project does not cause adverse effects to people or the environment. A three-tier approach to monitoring includes site-specific activity monitoring, site perimeter (Project boundary) and community stations at three locations (Ndilq̄, Niven area, and the Marina). These monitoring stations measure concentrations of arsenic and other trace metals, PM 2.5, PM 10, NO₂ (Niven Station only) and TSP, depending on the tier of monitoring. When monitors detect elevated levels based on action levels dependent on the tier of monitoring, site personnel take action by informing team members, watering to suppress dust, modifying or stopping work, and investigating to look for the cause (which may be off-site from the Giant Mine, such as local road dust). Giant Mine Remediation Project also administers regular preventative dust suppression activities on-site. Weekly and annual reports, as well as data, are uploaded to the NWT Air Quality Monitoring Network website at <http://aqm.enr.gov.nt.ca>.

KEY MESSAGES

- Air quality is monitored in the Yellowknife area by the Giant Mine Remediation Project and by the GNWT.
- Arsenic in the air is very low and the risks from inhalation exposure to ambient arsenic in the air for residents of Yellowknife, Ndilq̄ and Dettah are negligible.

1 – Canada North Environmental Services. (2018). Giant Mine Human Health and Ecological Risk Assessment, Final Report. Prepared for: Public Services and Procurement Canada – Western Region, Project No. 2385.