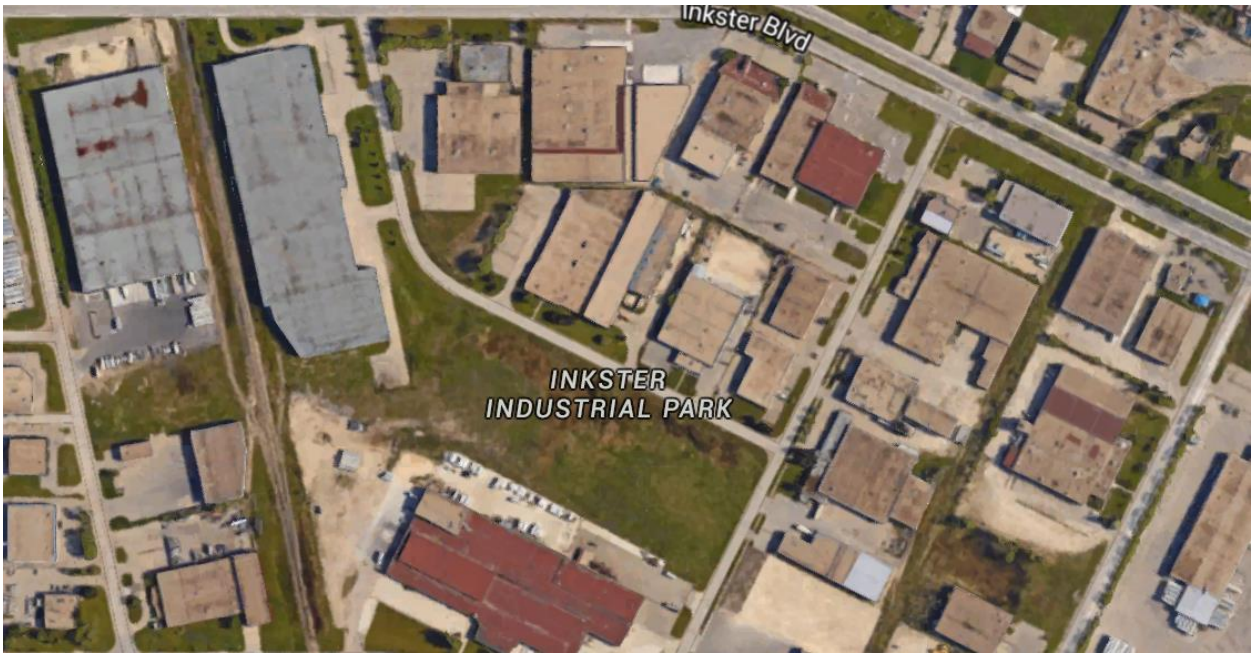
Ambient Air Sample

In some cases, contaminants from other nearby sources can be drawn into the compressed breathing air system at the fresh air intake. This may result in the unit failing when really it is caused by outdoor contaminants. An outdoor or ambient sample can also be collected when testing the air quality of a compressed air system to rule out contamination from outside sources. An ambient sample can measure for the gasses and vapours in the normal system test (but does not measure particulates).

One simple example is a neighbouring company has a paint booth and they vent or exhaust air with solvents out of a stack on their roof. That plume of solvents is carried by the wind towards its adjoining business and the fresh air intake of this second business draws in some of that solvent-laden air. This occurs more commonly in areas where multiply companies are in close proximity to each other.

Example of an Industrial Area where Emissions from one Plant may be Captured by the Fresh Intake in an adjacent facility



An ambient sample is collected by capturing a sample of the outside air near to the fresh air intake for the compressed breathing unit. The sample is tested for the all of the gas and vapour criteria of the CSA standard. Many labs have the capability to identify organics found in a high ambient sample. For example, if the ambient sample finds elevated levels of styrene and your company does not use styrene, it would be clear that the issue is the result of ambient conditions and nearby industrial sources.

During the winter, during a thermal inversion, the outside levels of carbon dioxide and/or carbon monoxide may be near to even exceed their CSA criteria. The collection of an ambient sample at these times identifies that the high results are due to outside ambient conditions and not with a malfunction or other issue with your compressed breathing air unit.

The collection of an ambient sample is a good tool in heavily industrial areas where nearby sources of contaminants is likely. The taking of an ambient sample also identifies that the issue is outside and not with the compressor or lines for the compressed air unit.

In some cases, an ambient sample is collected and sent to the laboratory with the instructions that the sample be analyzed only if the airline fails. That way, the sample results can be corrected for outdoor background levels and there is no delay to arrange a retest nor are there any extra charges for testing an ambient sample unless it is needed.