

SUMMARY

Laboratory evaluations were conducted for twenty-three portable gas monitors used in British Columbia pulp and paper mills to detect and measure hydrogen sulphide, combustible gases, and oxygen concentrations in the atmosphere. The monitors tested were manufactured by GasTech, Scott Aviation (Scott-Alert), Bacharach (formerly J-W), Industrial Scientific (formerly National Mine Service), MSA, National Draeger (Ecolyzer), and MDA Scientific (Monitox).

The performance characteristics studied were linearity of response, effect of humidity, calibration stability and effect of interferent gases. Most of the monitors provide dependable and reliable readings if their limitations are understood, and if maintained and calibrated regularly. Portable monitors are capable of fairly accurate measurements, but do not give the same degree of precision as fixed-location gas monitors.

Linearity of response and calibration stability were usually maintained within 20% error when tested at concentrations likely to be found in the work environment. The response rates were fast enough to give adequate warning of hazardous concentrations of gases, and clearing rates ensured a rapid return to zero if further measurements were required.