



Northwest
Territories Justice and Public Services

cc. K. Blower
G. Amundson OK

K. BLOWER

MAY 11 1982

May 05, 1982

K. BLOWER,
GENERAL MANAGER,
GIANT YELLOWKNIFE MINES LTD.

Dear Sir,

Please find enclosed "Air Sampling Guidelines" in order to help you in planning your Occupational/Environmental Surveys.

We hope that you will find these guidelines useful and stick to them while carrying out a sampling program.

Yours truly,

Subhash Dandekar.

Subhash Dandekar
Environmental Engineer
Mining Inspection Services

SD/ml
Encl.

all mine nitrogen

AIR SAMPLING GUIDELINES

The attached Sampling Guidelines have been prepared in order to provide a quick, easy and handy reference method for obtaining valid Occupational Environmental samples.

Sampling Considerations in the Particulate Sampling

1. All particular sampling shall be done "close face" except for fibrous asbestos containing dust and cotton dust (using the vertical elutriator)
2. To obtain the best estimate of the 8 hour TWA exposure, sampling should be carried out for a minimum of 6 hrs.
3. Since it is possible for the filter to become plugged by heavy particulate loading or by the presence of other aerosols in the air, the pump flow should be checked and readjusted as needed. If unable to readjust, terminate sampling and start taking another sample using fully charged pump.
4. Submit the blank filters for the same batch as that used for sampling.

Contaminant	Collection Device	Pump Flow Rate	Sampling Time	Analytical Method	Remarks
Arsenic & Compounds (Particulate)	Cellulose Ester Filter (37 mm dia. 0.8 um pore size)	2 LPM	6 hrs.	AAS	Submit Blank Filters
Asbestos	Open Face Cellulose Ester Filter 37mm 0.8 um.	2 LPM	15 min. for 10f/cc 60 min. for 2 to 10f/cc 90 min. for 0.2 to 2f/cc	Optical Fiber Counting. Phase Contrast 450-500X Magnification	1) The 15 min sample to be taken during very dusty operations only. 2) Submit blank form. 3) The analysed filter must be stored for 6 mo.
Cadmium and Compounds	Cellulose Ester Filter 37mm 0.8 um.	2 LPM	6 hrs.	AAS	Submit Blank Filters
Carbon Black	Tared PVC Filter 37mm 2.00 um.	2 LPM	6 hrs.	Gravimetric	Non-specific other particulates will cause positive interference.
Chromium and Compounds	Cellulose Ester Filter 37mm 0.8 um.	2 LPM	6 hrs.	AAS	Submit Blank Filters
Copper and Compounds	Cellulose Ester Filter 37mm 0.8 um.	2 LPM	6 hrs.	AAS	Submit Blank Filters
Cyanide (total)	Midget Impinger Containing 10ml. of 0.1 N NaOH	2 LPM	1 hr.	Specific Ion Electrode	Submit Blank Absorbing Solution
Dust (total)	Tared 37mm/2um. PVC Filter	2 LPM	6 hrs.	Gravimetric	
Dust (respirable)	Tared 37mm/2um. PVC Filter 10mm Nylone Cyclone	1.7 LPM	6 hrs	Gravimetric	

Contaminant	Collection Device	Pump Flow Rate	Sampling Time	Analytical Method	Remarks
Lead and Compounds	Cellulose Ester Filter 37mm 0.8 um.	2 LPM	6 hrs.	AAS	Submit Blank Filters
Manganese and Compounds	Cellulose Ester Filter 37 mm 0.8 um.	2 LPM	6 hrs.	AAS	Submit Blank Filters
Nickel and Compounds (particulate)	Cellulose Ester Filter 37mm 0.8 um.	2 LPM	6 hrs.	AAS	Submit Blank Filters
PCB's	Florisil Tube	0.2 LPM	4 hrs.	GC	Submit Bulk Sample. Submit Blank Florisil Tubes.
Silica (respirable)	10mm Nylon Cyclone with 37mm/5 um. Silver Membrane Filter.	1.7 LPM	Full Shift	XRD	Submit Blank Filters
Welding Fumes (NOC)	Tared PVC Filter 37mm/2 um.	1.8 LPM	6 hrs.	Gravimetric	Sample inside the welders helmet.
Welding Fume (NOC & Metals)	Tared or Match weight, Cellulose Ester Filter 37mm/0.8 um.	1.8 LPM	6 hrs.	Gravimetric for NOC & AAS for metals.	Sample inside the welders helmet. Submit Blank Filters.
Wood Dust	Tared PVC filter 37mm/2um.	2 LPM	6 hrs.	Gravimetric	
Zinc and Compounds	Cellulose Ester Filter. 37mm/ 0.8 um.	2 LPM	6 hrs.	AAS	Submit Blank Filters.