

Summary of Methods for Residential Dust Sampling Program

**To support the Community Based Risk
Assessment**

Community Advisory Committee

December 5, 2007

Objective

The dust sampling program is meant to provide an assessment of metals in households, daycare facilities and schools for residential areas in Flin Flon, Channing and Creighton, SK.

Aluminum (Al)
Arsenic (As)
Antimony (Sb)
Barium (Ba)
Beryllium (Be)
Bismuth (Bi)
Cadmium (Cd)
Calcium (Ca)
Chromium (Cr)
Cobalt (Co)
Copper (Cu)
Iron (Fe)
Lead (Pb)
Lithium (Li)
Magnesium (Mg)
Manganese (Mn)
Mercury (Hg)

Molybdenum (Mo)
Nickel (Ni)
Phosphorus (P)
Potassium (K)
Selenium (Se)
Silicon (Si)
Silver (Ag)
Sodium (Na)
Strontium (Sr)
Sulphur (S)
Thallium (Tl)
Tin (Sn)
Titanium (Ti)
Tungsten (W)
Vanadium (V)
Zinc (Zn)

Summary of Residential Dust Sampling November 12 to 26, 2007

18 homes West of Ross Lake

18 homes East of Ross Lake

6 homes in Creighton

3 homes in Channing

5 schools (4 Flin Flon, 1 Creighton)

4 day care (3 Flin Flon, 1 Creighton)

54 total locations (44 had soil sampled)

Dust Sample Locations

Fabric Surfaces

Samples were collected (depending on presence in house) from carpeted floor areas at::

- the centre of the most frequently used play area for children under the age of six
- the main entrance used for access and egress from the house;
- the secondary, less heavily used entrance to the house;
- the main hallway of the house and evident route of high traffic flow;
- and from two items of upholstered furniture such as:
 - a regularly used chesterfield; and
 - an easy chair.

Up to 5 samples were recovered from fabric surfaces in each residence.

Hard Surfaces

Samples were collected from hard surfaced areas including a commonly contacted portion of:

- the kitchen tiled floor;
 - the sill of a window commonly accessed and most likely to be contacted by a child
- 2 samples (or more depending on the number of fabric samples) were recovered from hard surfaces in each residence

Lead-in-paint Sampling

Samples of paint from the interior of selected homes were collected for analysis.

Dust Sampling Methods

Fabric Samples (carpets, rugs, furniture):

ASTM D7144 Standard Practice for Collection of Surface Dust by Micro-vacuum Sampling for Subsequent Metals Determination

All vacuumed dust samples were collected on pre-weighed filters

Hard Surface Samples (floors, window sills):

ASTM D6966 Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Determination of Metals

Floor plan sketches showing sample locations and photographs were taken for all samples.

Occupant Questionnaire

A questionnaire was administered to occupants to determine number of people and their ages in the home, activities/hobbies undertaken in the home etc.

Completed questionnaires from all 54 locations were obtained during the survey.

Information will be used to help with the interpretation of laboratory analysis of dust samples.

All information obtained (questionnaire and analytical results) will be treated as confidential