



**Engineering,  
Scientific,  
Planning and  
Management  
Consultants**

2781 Lancaster Road  
Suite 200  
Ottawa ON  
Canada K1B 1A7

Bus 613 738 0708  
Fax 613 738 0721

[www.jacqueswhitford.com](http://www.jacqueswhitford.com)



**Jacques  
Whitford**

**An Environment  
of Exceptional  
Solutions**

Registered to  
ISO 9001:2000 &  
ISO 14001:1996

# DRAFT REPORT

Analysis of Indoor Dust  
Composition

Flin Flon Manitoba and Creighton  
Saskatchewan

PROJECT NO. 1032002.02

---

**PROJECT NO. 1032002.02**

DRAFT REPORT TO

**Ian Cooper  
Hudson Bay Mining and Smelting Company Ltd.**

**Elliot Sigal  
INTRINSIK Environmental Sciences Inc.**

FOR

**Analysis of Indoor Dust Composition  
Flin Flon Manitoba**

---

**February 20, 2008**

Jacques Whitford Limited  
2781 Lancaster Road, Suite 200  
Ottawa, Ontario  
K1B 1A7

Telephone: 613-738-0708  
Facsimile: 613-738-0721



---

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Scope of Work .....	1
<b>2.0</b>	<b>METHODOLOGY .....</b>	<b>1</b>
2.1	indoor surface dust sampling .....	1
2.1.1	<i>Fabric Surfaces</i> .....	2
2.1.2	<i>Hard Surfaces</i> .....	2
2.1.3	<i>Lead-in-paint</i> .....	3
2.2	Sampling considerations and limitations .....	3
2.3	Tenant Questionnaire .....	3
2.4	Sampling Locations.....	4
2.4.1	<i>Fabric Surfaces</i> .....	4
2.4.2	<i>Hard Surfaces</i> .....	5
2.4.3	<i>Lead-in-paint</i> .....	5
2.5	Laboratory Analysis .....	5
2.5.1	<i>Metals</i> .....	5
2.5.2	<i>Particulate</i> .....	6
<b>3.0</b>	<b>RESULTS AND DISCUSSION .....</b>	<b>6</b>
3.1	fabric samples.....	7
3.2	HARD SURFACE SAMPLES.....	7
3.3	Paint chip samples.....	8
<b>4.0</b>	<b>CONCLUSIONS .....</b>	<b>8</b>
<b>5.0</b>	<b>CLOSURE .....</b>	<b>9</b>

---

## List of Figures

Figure 1 – Summary of Indoor Dust Samples..... 4

---

## List of Appendices

### Appendix A

Table 1 Composition of Indoor Dust from Fabric Surfaces within Creighton Locations

Table 2 Composition of Indoor Dust from Fabric Surfaces within Flin Flon East Locations

Table 3 Composition of Indoor Dust from Fabric Surfaces within Flin Flon West Locations

Table 4 Composition of Indoor Dust from Fabric Surfaces within Channing Locations

Table 5 Composition of Indoor Dust from Hard Surfaces within Creighton Locations

Table 6 Composition of Indoor Dust from Hard Surfaces within Flin Flon East Locations

Table 7 Composition of Indoor Dust from Hard Surfaces within Flin Flon West Locations

Table 8 Composition of Indoor Dust from Hard Surfaces within Channing Locations

### Appendix B

Sample Photographs of Indoor Dust Collection Locations

# ANALYSIS OF INDOOR DUST COMPOSITION

---

## 1.0 INTRODUCTION

Airborne particulates inside homes tend to settle out and become part of the dust that is found on furniture and floors/carpets leading to potential exposure pathways via dermal contact and ingestion. A protocol was developed for the sampling and analysis for contaminants of concern (COCs) of settled dust in residential homes, schools and daycare facilities within the Flin Flon Manitoba and Creighton Saskatchewan area, which will be considered during the human health risk assessment (HHRA) currently being considered for the community.

Fifty four (54) locations were sampled that included primarily houses but also apartments, daycare and educational facilities. Forty (40) of the locations had soil samples analyzed for the COCs in addition to indoor dust.

This report is presented in five sections. **Section 1** presents an introduction and outlines the scope of the current study. **Section 2** details the sampling methodologies employed. **Section 3** details the results of the assessment along with a discussion of their significance. **Section 4** provides conclusions and **Section 5** discusses limitations regarding the report and its findings.

---

### 1.1 SCOPE OF WORK

The agreed upon scope of work was set forth in the Jacques Whitford Proposal dated July 17, 2007.

---

## 2.0 METHODOLOGY

---

### 2.1 INDOOR SURFACE DUST SAMPLING

Interior sampling involved the recovery of surface dust. Surface dust sampling was carried out to determine the concentration of COCs in the dust that has accumulated on interior surfaces within the indoor environment. The sampling protocol was designed to assess the quantity of COCs that are available for exposure via ingestion by the most sensitive receptors likely to access the property on a regular basis. The locations where samples were taken have been identified, photographed, and recorded for subsequent rounds of sampling in the event that repeat or follow-up testing is required. The COCs considered in this project include: arsenic, barium, cadmium, chromium, copper, nickel, selenium, thallium, vanadium and zinc.

Samples were recovered using appropriate field protocols including the use of disposable sterile gloves, sterile sample containers with sealing lids and strict decontamination procedures for templates and handling tools to avoid cross-contamination between samples.

---

### 2.1.1 FABRIC SURFACES

Carpet and upholstery testing was carried out to identify the concentration of metals in dust that is captured within the pile or fabric and that can become readily mobilized and made available for ingestion and inhalation. The Department of Environmental Health, University of Cincinnati Medical Centre Tygon Tube Sampling technique procedures, which have been standardized by the US EPA Office of Pollution Prevention & Toxics (US EPA 2000a; 2000b) and the American Society for Testing of Materials (ASTM, D7144) were used for the current project.

The procedure involves the use of a personal air sampling pump, drawing air through a standard size nozzle at a rate of 2.5 litres/min through pre-weighed 0.8 µm pore sized mixed cellulose ester (MCE) filters. The inlet nozzle of the sampler, held at a 45° angle, was drawn across a known template area (e.g., 0.01 m<sup>2</sup> for mercury and 0.09 m<sup>2</sup> for all other metals) of the fabric surface at a rate of 5.0 to 10.0 mm/sec in overlapping swipes for a total of three full passes on a side-to-side, top-to-bottom and, lastly, side-to-side basis. In between each sample, the template was cleaned using a clean “ghost wipe” and a new pair of disposable gloves was donned to prevent cross contamination of samples.

Following recovery, the sample cassette was removed, labeled and forwarded to Maxxam for ICP analysis of the dust. Control samples (unused MCE filters -- approximately 1 blank per 20 field samples) were also forwarded to the Maxxam for metal analysis to determine the background metal content of the sample medium.

The results of the testing include the concentrations of COCs that can be readily taken up by the receptor and are presented on a total weight (metal) per weight (total particulate) and a weight (metal) per unit area basis.

---

### 2.1.2 HARD SURFACES

Hard surface testing was carried out to identify the concentration of metals in dust that settles on floors and other hard surfaces. The US Department of Housing & Urban Development procedures for wipe sampling for lead in house dust (US-HUD, 1990; 1995) were adopted for the collection of hard surface samples in the study locations along with supporting protocols (ASTM 2002a; 2002b; NIOSH 1996). An adaptation of this method for all metals was applied in this study. The procedure involved the use of moistened commercial wipes (ghost wipes) to recover surface dust from hard

surfaces. Each sample was recovered using a single wipe, one clean side of which was drawn gently in an overlapping side-to-side motion across the surface of a known template-defined area (i.e. 0.01 m<sup>2</sup> for mercury and 0.09 m<sup>2</sup> for all other metals). The wiping was carried out three times over each sample area, with the wipe being folded in half with the clean side showing, following each pass. After the third pass, the wipe was placed into a sample jar for shipment to the Maxxam for ICP analysis of the collected dust. Control samples (unused wipes -- approximately 1 blank per 20 field samples) were also forwarded to the Maxxam for metal analysis to determine the background metal content of the sample medium.

The results of the testing include the concentrations of COCs that can be readily taken up by the receptor and are presented on a weight (metal) per unit area basis.

---

### 2.1.3 LEAD-IN-PAINT

Samples if paint chips were collected where possible and sent to Paracel labs for lead analysis by atomic absorption.

---

## 2.2 SAMPLING CONSIDERATIONS AND LIMITATIONS

Physical activity in a building can be expected to affect dust loadings in the air and, unless controlled for, could introduce significant bias into the results obtained. It is important to consider that a realistic evaluation of airborne chemical concentrations requires a moderate level of physical activity, representative of typical disturbances associated with the presence of occupants involved in regular day-to-day activities within the building. Attempts were made to ensure this moderate level of activity during the sampling process to ensure that the results of any testing work carried out did not affect the outcome of the dust sampling. Furthermore, residents were asked not to vacuum their houses during sampling or during the 7 days preceding sampling in order to maximize dust accumulation so as to not underestimate dust levels in homes.

The original sampling plan included the collection paint chip samples from each home that was sampled for indoor dust. Sampling of paint chips was not completed unless there was additional consent from the residents /owner during the sampling period. Some residents/owners chose not to have samples taken due to potential and subsequent damage to finished surfaces.

---

### 2.3 TENANT QUESTIONNAIRE

The occupants were asked to keep a diary of time spent and activities undertaken in the house during the sampling period. A questionnaire was administered to the occupants outlining the number of people and their ages in the home; activities/hobbies undertaken in the home etc. All locations that were sampled completed a questionnaire.

## 2.4 SAMPLING LOCATIONS

Figure 1 summarizes the numbers, types and locations of samples taken during the project.

**Figure 1 – Summary of Indoor Dust Samples**

Series	Locations in each area	Address type	Total Fabric Samples	Total Hard Surface Samples	Total Lead in Paint Samples	No corresponding soil samples
100 Creighton	8	Houses	34	18	6	0
200 West Flin Flon	21	1 Apartment 1 School 2 Daycares Houses	74	47	15	5 Houses 1 Apartment
300 East Flin Flon	21	1 Apartment 1 School Houses	81	53	15	6 Houses 1 Apartment
400 Channing	4	Houses	18	9	3	1
<b>Totals</b>	<b>54</b>	<b>2 Apartments 2 Schools 2 Daycares 48 Houses</b>	<b>207</b>	<b>127</b>	<b>39</b>	<b>14</b>

### 2.4.1 FABRIC SURFACES

Dust samples within the locations were collected (depending on presence within the location) from fabric surfaces 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. Every attempt was made to recover the same number of samples from each residence. Where variations exist (i.e. no carpet) additional samples were recovered from other surfaces deemed similar at the time of sampling. If there were no carpets, area rugs were sampled. If there was an insufficient number of surfaces for soft surface samples, additional hard surface samples were collected. Samples were collected where the most sensitive receptor spends the largest portion of their active time.

---

## 2.4.2 HARD SURFACES

Dust samples within the locations 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 (likely to be in the main living area).

A total of 2 samples (one from a window sill and one from a tiled floor) were recovered from hard surfaces in each residence. Every attempt was made to recover the same number of samples from each residence. Samples were collected in the main living area where the most sensitive receptor is likely to spend the largest portion of their active time.

---

## 2.4.3 LEAD-IN-PAINT

Based on the historical use of lead in paints and the age of the community, samples of paint were recovered from the interior of the homes selected for the indoor dust assessment. The data from the lead paint assessment is combined with the indoor dust sampling results and may be used in the community-based risk assessment.

---

## 2.5 LABORATORY ANALYSIS

---

### 2.5.1 METALS

MCE filters (fabric samples) and wipes (hard surface samples) were sent to Maxaam Analytics for metals analysis by ICP. All metals with the exception of mercury could be analyzed on the same medium. A separate sample for each location was required for the analysis of mercury. Results were reported as the micrograms of each metal on filters and wipes. Sample results were corrected for residual metals contained within the blank samples by subtracting the average weight of each

metal contained on the blanks from the metal weights reported for the collected dust samples. Paint chip samples were sent to Paracel labs for lead analysis. Results are expressed in parts per million (ppm.)

---

## 2.5.2 PARTICULATE

Total micrograms of particulate for the fabric (vacuum) samples were determined by collecting samples on either preweighed or matched weight filters. The total weight of dust collected was determined gravimetrically by weighing the filters following sample collection (microvacuuming.)

---

## 3.0 RESULTS AND DISCUSSION

Appendix A contains Tables 1 to 8 that present the results for all fabric and hard surface metal composition. The COCs presented in the tables include: arsenic, barium, cadmium, chromium, copper, nickel, selenium, thallium, vanadium and zinc.

A confidential sample identifier is used to indicate the type and location of each sample. This sample identifier may be traced to actual locations using a cross reference table contained on a CD appended to this report.

The labelling protocol for fabric and hard surface samples is demonstrated with the following example:

**A – HS – 01**

**A** = location Identifier (with distinct street address)

**HS** = hard surface sample (FS = fabric surface sample)

**01** = location of the sample within the building

The tables also include a written description of where the sample was taken within the house or building.

Corresponding sample identifiers for the soil samples are also given in the tables (where data exists for both soil and dust samples.)

Example photographs of sample locations are given in Appendix B. These illustrate the templates used for surface area demarcation as well as the types of samples collected at a typical location. The full list of photographs (identified by location) is contained on a CD appended to this report.

Responses to tenant questionnaires for all locations are on a CD appended to this report.

Floor layout drawings indicating the location of all fabric, hard surface and paint chip samples are on a CD appended to this report.

Original data from laboratory analysis are available on a CD appended to this report.

---

### 3.1 FABRIC SAMPLES

Fabric dust samples collected using the microvacuum method were analyzed for the metal COCs. Results are expressed in micrograms ( $\mu\text{g}$ ) metal per total dust particulate collected for each sample. Tables 1 to 4 contain results for all fabric samples collected at each location. Table 1 includes results for Creighton, Table 2 for Flin Flon West, Table 3 from Flin Flon East and Table 4 from Channing.

For all metals with the exception of Zinc, the vast majority of samples were below detection limits of analytical sensitivity. Using the CCME SQG for human health (or environment when human health criteria are not established) the other samples that exceeded criteria are as follows:

One staircase in Creighton (Chromium)

One staircase corridor in East Flin Flon (Barium)

One main entrance in West Flin Flon (Copper)

An entrance and living room floor in East Flin Flon (Mercury)

One living room floor in West Flin Flon (Mercury)

The Zinc samples exceeding CCME criteria were widespread across all regions and within all areas of the homes.

---

### 3.2 HARD SURFACE SAMPLES

Hard surface dust samples collected using the wipe method were analyzed for the metal COCs. Results are expressed in micrograms ( $\mu\text{g}$ ) metal per surface area wiped in  $\text{cm}^2$ . Tables 5 to 8 contain results for all fabric samples collected at each location. Table 5 has results for Creighton, Table 6 for Flin Flon West, Table 7 for Flin Flon East and Table 8 for Channing.

There are very few health related guidelines for dust on indoor surfaces containing the COCs within the scope of this project. For lead, the US EPA suggests 0.05 micrograms/square centimetre for

uncarpeted floors and 0.27 micrograms/square centimetre ( $\mu\text{g}/\text{cm}^2$ ) for window sills. For mercury, a previous Jacques Whitford project suggested a guideline of 0.055  $\mu\text{g}/\text{cm}^2$  on surfaces.

Only two samples exceeded the lead guidelines (one window sill and one school gymnasium floor in Flin Flon West).

None of the mercury samples exceeded the guideline proposed by Jacques Whitford in a previous project.

Most of the other samples had varying amounts of the other 10 COCs, but criteria will have to be established to determine what the acceptable surface concentrations are.

---

### 3.3 PAINT CHIP SAMPLES

Table 9 contains analytical results of the paint chip samples for lead. Corresponding dust sample location identifiers and soil sample identifiers are referenced in the table. The floor layouts in the accompanying CD also show the location of the samples.

Two criteria are presented for lead content in paint samples.

According to the proposed Surface Coating Materials Regulations, April 2005, by Health Canada's Occupational Health and Safety Agency, a paint is considered to be a lead-based paint if the concentration of lead in the paint is equal to or greater than 0.06 percent by weight (weight of lead to weight of paint), which is equivalent to 600 parts per million (ppm.)

The Hazardous Products Act in Canada and the United States Department of Housing and Urban Development (HUD) have set a criteria of 0.5 % lead (by weight) or 5,000 ppm for determining if a paint application should be considered lead-based. The US Centre for Disease Control (CDC) notes that the 0.5 % level is based on practical, not health concerns, so care must be taken when this criteria is applied.

Elevated lead content (above the stated criteria) in paint was noted at a number of locations in walls, ceilings and window sills.

---

## 4.0 CONCLUSIONS

With the exception of Zinc, very few indoor dust fabric samples contained COCs above analytical detection limits. Zinc samples exceeding CCME criteria were widespread across all regions and within all areas of the homes.

Only two hard surface samples had lead concentrations that exceeded the EPA guidelines (one window sill and one school gymnasium floor in Flin Flon West. Mercury levels were within guidelines suggested by Jacques Whitford in a previous project. Most of the other samples had varying amounts of the other 10 COCs, but criteria will have to be established to determine what the acceptable surface concentrations are.

Elevated lead content (above Health Canada and HUD criteria) in paint was noted at a number of locations in walls, floors, ceilings and window sills.

---

## 5.0 CLOSURE

This report has been prepared by Jacques Whitford Limited on behalf of, and for the exclusive use of Intrinsic. The report may not be relied upon by any other person or entity without the express written consent of Jacques Whitford and Intrinsic.

Should additional information become available, Jacques Whitford requests that this information be brought to our attention so that we may re-assess the conclusions presented herein. This report was prepared by Zack Kranjec, with the senior technical review provided by Todd Irick, M.Sc, CRSP, CIH.

We trust that this information is sufficient for your requirements at the present time. Should you or your colleagues have any questions or require any additional information, please do not hesitate to contact the undersigned at your convenience.

Yours truly,

JACQUES WHITFORD LIMITED

**DRAFT**

Zack Kranjec  
Report Author

**DRAFT**

Todd Irick, M.Sc, CRSP, CIH  
Senior Technical Review

Distribution: (1) Addressee

ZK/TJI/jg

P:\2007\1032002.02 - Flin Flon Dust\report\Flin Flon Indoor Dust Report Draft\_2008-02-20.doc



# APPENDIX A

Tables 1-9

### Table 1-Creighton Fabric Sample Dust

Soil Sample ID	Dust Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Selenium (Se)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
CS106	AL-FS-01	Lower level living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	533
CS106	AL-FS-02	Lower level corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	102
CS106	AL-FS-03	Main level armchair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	787
CS106	AL-FS-04	Main level sofa	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	824
CS106	AL-FS-05	Staircase	µg/g	bdl	307	bdl	812	366	bdl	bdl	bdl	bdl	bdl	bdl	404
CS109	AW-FS-01	Basement rug 1	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1094
CS109	AW-FS-02	Basement rug 2	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3333
CS109	AW-FS-03	Infant room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3333
CS111	AB-FS-01	West entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1304
CS111	AB-FS-02	Room 114 kindergarden rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	6105
CS111	AB-FS-03	Room 208 rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3415
CS111	AB-FS-04	Resource center couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	746
CS111	AB-FS-05	Main office floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5397
CS114	T-FS-01	Main level living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
CS114	T-FS-02	Lower level family room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	16000
CS114	T-FS-03	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	7391
CS114	T-FS-04	Computer room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	623
CS114	T-FS-05	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3871
CS119	S-FS-01	Main level living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1892
CS119	S-FS-02	Main entrance way	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1525
CS119	S-FS-03	Computer / play room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	13529
CS121	BD-FS-01	Entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3214
CS121	BD-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	402
CS121	BD-FS-03	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3333
CS127	AD-FS-01	Living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
CS127	AD-FS-02	Staircase corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
CS127	AD-FS-03	Play room basement	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
CS127	AD-FS-04	Play room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
CS127	AD-FS-05	Child's bedroom	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
CS130	AK-FS-01	Living room main floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1912
CS130	AK-FS-02	Hallway main floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
CS130	AK-FS-03	Living room sectional couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	9048
CS130	AK-FS-04	Lower level living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	318
CS130	AK-FS-05	Lower level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	U-FS-01	Main level living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	U-FS-02	Main level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	U-FS-03	Main level corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	U-FS-04	Main level play room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	4407
none	U-FS-05	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1667

CCME Criterion (\* is environmental; others are human health)

Analytical Detection Limit

bdl = below detection limit

µg/g	12	500*	14	220	1100	140	6.6	50*	28	1	130*	200*
µg	<10	<1.0	<0.3	<0.5	<1.0	<3.0	<0.003	<1.0	<10	<3.0	<0.5	<0.5



Table 2-East Flin Flon Fabric Sample Dust

Soil Sample ID	Dust Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Selenium (Se)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
FF207	B-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3636
FF207	B-FS-02	Living room sofa	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2336
FF207	B-FS-03	Main entrance carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	7000
FF207	B-FS-04	Piano room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2315
FF211	AX-FS-01	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5333
FF211	AX-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1667
FF211	AX-FS-03	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2333
FF211	AX-FS-04	Landing of stairs	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	4000
FF214	K-FS-01	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2000
FF214	K-FS-02	Bedroom floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	534
FF214	K-FS-03	Near entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	19333	bdl	bdl
FF214	K-FS-04	Living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF220	H-FS-01	Entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	143	bdl	bdl	bdl	bdl	10891
FF220	H-FS-02	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	200	bdl	bdl	bdl	bdl	3141
FF220	H-FS-03	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF223	AY-FS-01	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1224
FF223	AY-FS-02	Entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	11429
FF223	AY-FS-03	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	235
(FF240)	AI-FS-01	Play area carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
(FF240)	AI-FS-02	Play area carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
(FF240)	AI-FS-03	Entrance area carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
(FF240)	AH-FS-01	Pre-kindergarden rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
(FF240)	AH-FS-02	Large muscle room rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
(FF240)	AH-FS-03	Entrance of locker room rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF240	AJ-FS-01	Hallway carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3018
FF240	AJ-FS-02	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF240	AJ-FS-03	Administration area floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF240	AJ-FS-04	Kindergarden main carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1000
FF240	AJ-FS-05	Library first riser	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF242	AC-FS-01	Downstairs couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF242	AC-FS-02	Downstairs living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF242	AC-FS-03	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF242	AC-FS-04	Stairs/corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	156
FF242	AC-FS-05	Main level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF248	AQ-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF248	AQ-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2333
FF248	AQ-FS-03	Living room chesterfield	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF248	AQ-FS-04	Corridor to basement staircase	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	409
FF249	Q-FS-01	Main living room exit	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3095
FF249	Q-FS-02	Main level bedroom 1	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1878
FF249	Q-FS-03	Main level bedroom 2	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1317
FF253	Y-FS-01	Main level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF253	Y-FS-02	Rear entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1127
FF253	Y-FS-03	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1286
FF253	Y-FS-04	Basement chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1201
FF256	A-FS-01	Living room sub-floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF256	A-FS-02	Family room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF256	A-FS-03	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF259	BC-FS-01	Entrance corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2412
FF259	BC-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	755
FF259	BC-FS-03	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1667
FF261	L-FS-01	Living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1265
FF261	L-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2667
FF261	L-FS-03	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5271
FF266	I-FS-01	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	481
FF266	I-FS-02	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF266	I-FS-03	Living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2667
FF270	X-FS-01	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF270	X-FS-02	Main level futon	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF270	X-FS-03	Lower level chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	4667
none	D-FS-01	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	8333
none	D-FS-02	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5493
none	D-FS-03	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	D-FS-04	Play room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	32667
none	D-FS-05	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5667
none	AS-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5000
none	AS-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1667
none	AS-FS-03	Basement staircase	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	AS-FS-04	Basement laundry room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5000
none	BB-FS-01	Library floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1720
none	BB-FS-02	Main entrance corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1380
none	BB-FS-03	Lower level entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1585
none	BB-FS-04	Upper level benches	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1263
none	BB-FS-05	Main level benches	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1250
none	AT-FS-01	Computer room riser	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1167
none	AU-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1000
none	AU-FS-02	Living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	6000
none	AU-FS-03	Corridor floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	319
none	AF-FS-01	Main level living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	AF-FS-02	Basement couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	AF-FS-03	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	AF-FS-04	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1552
none	AF-FS-05	Basement carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	W-FS-01	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	7204
none	W-FS-02	Family room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2115
none	W-FS-03	Second entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	5000
none	W-FS-04	Family room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	W-FS-05	Main level corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	N-FS-01	Library floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1846
none	N-FS-02	Music room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	16905
none	N-FS-03	Kindergarden rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2857
none	C-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	C-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	C-FS-03	Entrance corridor floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	C-FS-04	Den / lounge couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	16000
none	E-FS-01	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	38667
none	E-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	E-FS-03	Main entrance	µg/g	bdl											



Table 3-West Flin Flon Fabric Sample Dust

Soil Sample ID	Dust Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Selenium (Se)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
FF302	AV-FS-01	Main level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3667
FF302	AV-FS-02	Corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	7333
FF302	AV-FS-03	Main level living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF306	R-FS-01	Main level living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF306	R-FS-02	Main level play room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3750
FF306	R-FS-03	Main level living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	943
FF306	R-FS-04	Basement play area floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	596
FF309	AR-FS-01	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF309	AR-FS-02	Office floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	8333
FF309	AR-FS-03	Living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2333
FF309	AR-FS-04	Corridor in main level at entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF315	AG-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF315	AG-FS-02	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF315	AG-FS-03	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF315	AG-FS-04	Downstairs living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF315	AG-FS-05	Downstairs couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF321	O-FS-01	Lower level floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF321	O-FS-02	Lower level armchair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3333
FF321	O-FS-03	Lower level staircase corridor	µg/g	bdl	8088	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	12353
FF336	BA-FS-01	Main level living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	614
FF336	BA-FS-02	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1740
FF336	BA-FS-03	Main level couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	685
FF336	BA-FS-04	Sitting room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2333
FF339	AN-FS-01	Living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF339	AN-FS-02	Lower level living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF339	AN-FS-03	Lower level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF339	AN-FS-04	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF345	AA-FS-01	Basement floor corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	18485
FF345	AA-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	24333
FF345	AA-FS-03	Living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	13269
FF345	AA-FS-04	Main level nursery	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	9683
FF353	M-FS-01	Living room armchair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3871
FF353	M-FS-02	Corridor floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF353	M-FS-03	Family room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF353	M-FS-04	Family room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF353	M-FS-05	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	19333
FF357	P-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	7333
FF357	P-FS-02	Corridor floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1852
FF357	P-FS-03	Lower level computer room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	6154
FF357	P-FS-04	Lower level class/teaching area	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3333
FF360	J-FS-01	Main floor living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	3367	bdl	bdl	bdl	bdl	bdl
FF360	J-FS-02	Lower level family room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF360	J-FS-03	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	6000
FF360	J-FS-04	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF360	J-FS-05	Lower level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF363	Z-FS-01	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	103333
FF363	Z-FS-02	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	20333
FF363	Z-FS-03	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	18333
FF363	Z-FS-04	Main entrance vestibule	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	6106
FF365	G-FS-01	Entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	22667
FF365	G-FS-02	Living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF366	F-FS-01	Living room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF366	F-FS-02	Main entrance	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	3667
FF366	F-FS-03	Corridor floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	538
none	AO-FS-01	Living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
none	AO-FS-02	Main entrance rug	µg/g	bdl	bdl	413	bdl	3645	bdl	bdl	bdl	bdl	bdl	bdl	2041

CCME Criterion (\* is environmental; others are human health)  
 Analytical Detection Limit  
 bdl = below detection limit

µg/g	12	500*	14	220	1100	140	6.6	50*	28	1	130*	200*
µg	<10	<1.0	<0.3	<0.5	<1.0	<3.0	<0.003	<1.0	<10	<3.0	<0.5	<0.5



### Table 4-Channing Fabric Sample Dust

Soil Sample ID	Dust Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Selenium (Se)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
FF401	V-FS-01	Main level living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF401	V-FS-02	Computer room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF401	V-FS-03	Main level living room chair	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF401	V-FS-04	Entrance rug	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	930
FF401	V-FS-05	Play room floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	602
FF402	BE-FS-01	Living room carpet	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF402	BE-FS-02	Main entrance vestibule	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF402	BE-FS-03	Main corridor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	648
FF402	BE-FS-04	Kitchen	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF404	AP-FS-01	Lower level living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF404	AP-FS-02	Main level play room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF404	AP-FS-03	Main level living room	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF404	AP-FS-04	Main level living room couch	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
FF404	AP-FS-05	Main level bedroom floor	µg/g	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl

CCME Criterion (\* is environmental)

Analytical Detection Limit  
bdl = below detection limit

µg/g	12	500*	14	220	1100	140	6.6	50*	28	1	130*	200*
µg	<10	<1.0	<0.3	<0.5	<1.0	<3.0	<0.003	<1.0	<10	<3.0	<0.5	<0.5



**Table 5-Creighton Hard Surface Dust**

Soil Sample IDs	Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
CS106	AL-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.3	0.001	bdl	bdl	0.004	bdl	0.00007	bdl	bdl	bdl	0.01
CS106	AL-HS-02	Main level living room window	µg/cm <sup>2</sup>	bdl	3.7	0.004	bdl	0.0021	bdl	bdl	0.00012	bdl	bdl	bdl	0.04
CS109	AW-HS-01	Kitchen	µg/cm <sup>2</sup>	0.02	4	0.004	0.0006	0.0013	bdl	bdl	bdl	bdl	bdl	bdl	0.04
CS109	AW-HS-02	Preschool room window	µg/cm <sup>2</sup>	0.02	6.5	0.007	bdl	0.0027	bdl	bdl	0.00024	bdl	bdl	bdl	0.06
CS109	AW-HS-03	Preschool room window	µg/cm <sup>2</sup>	bdl	2.4	0.003	0.0005	0.0008	bdl	bdl	0.00105	bdl	bdl	bdl	0.02
CS109	AW-HS-04	Infant feeding play room	µg/cm <sup>2</sup>	0.01	46	0.051	0.001	0.0036	bdl	0.010	0.00058	bdl	bdl	0.0018	0.13
CS111	AB-HS-01	Resource room window	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00004	bdl	bdl	bdl	0.01
CS111	AB-HS-02	Gym floor	µg/cm <sup>2</sup>	0.02	7.4	0.008	0.002	0.0019	bdl	0.018	0.00012	bdl	bdl	0.0012	0.31
CS114	T-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00020	bdl	bdl	bdl	0.00
CS114	T-HS-02	Bedroom 1 window sill	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.005	0.005	0.00372	bdl	bdl	bdl	0.01
CS119	S-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.1	0.001	bdl	bdl	0.003	bdl	bdl	bdl	bdl	bdl	0.01
CS119	S-HS-02	Living room window sill	µg/cm <sup>2</sup>	bdl	6.8	0.008	0.0007	0.0030	0.043	0.059	0.00025	bdl	bdl	0.0009	0.08
CS121	BD-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.01
CS121	BD-HS-02	Entrance floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00
CS127	AD-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	5.8	0.006	0.0004	0.0092	0.040	0.049	0.00008	bdl	bdl	bdl	0.07
CS127	AD-HS-02	Living room window sill	µg/cm <sup>2</sup>	bdl	3.7	0.004	bdl	0.0021	0.013	bdl	0.00023	bdl	bdl	bdl	0.04
CS130	AK-HS-01	Kitchen floor	µg/cm <sup>2</sup>	0.01	4.4	0.005	bdl	0.0013	0.010	bdl	0.00018	bdl	bdl	bdl	0.02
CS130	AK-HS-02	Main floor living room window sill	µg/cm <sup>2</sup>	bdl	2.3	0.003	bdl	0.0010	0.014	0.007	0.00039	bdl	bdl	bdl	0.02
none	U-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.1	0.001	bdl	0.0022	0.006	bdl	bdl	bdl	bdl	bdl	0.01
none	U-HS-02	Living room window sill	µg/cm <sup>2</sup>	bdl	3.7	0.004	0.0005	0.0021	0.032	0.004	0.00007	bdl	bdl	bdl	0.05

(A) US EPA floor guideline

(B) US EPA windowsill guideline

(C) Jacques Whitford surface guideline

0.05 (A)	0.055 (C)
0.27 (B)	

analytical detection limit

bdl = below detection limit

µg/cm <sup>2</sup>	<0.01	<1.0	<0.001	<0.0003	<0.0006	<0.001	<0.003	<0.00003	<0.001	<0.001	<0.0006	<0.01
--------------------	-------	------	--------	---------	---------	--------	--------	----------	--------	--------	---------	-------



Table 6-East Flin Flon Hard Surface Dust

Soil Sample IDs	Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
FF207	B-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	3.4	0.004	0.0007	0.0018	0.063	0.008	0.00203	bdl	bdl	0.0010	0.08
FF207	B-HS-02	Dining room window sill	µg/cm <sup>2</sup>	0.03	29	0.032	0.006	0.0356	0.978	0.222	0.00267	0.009	bdl	0.0073	1.01
FF211	AX-ME-HS-01	Living room window sill	µg/cm <sup>2</sup>	bdl	100	0.111	0.0005	0.0006	0.029	bdl	0.00031	bdl	bdl	bdl	0.11
FF211	AX-ME-HS-02	Kitchen floor	µg/cm <sup>2</sup>	bdl	13	0.014	bdl	0.0011	0.020	0.006	0.00056	bdl	bdl	bdl	0.05
FF214	K-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	0.0011	0.004	bdl	0.00004	bdl	bdl	bdl	0.01
FF214	K-HS-02	Kitchen window sill	µg/cm <sup>2</sup>	0.01	5.3	0.006	0.001	0.0011	0.200	0.009	0.00082	bdl	bdl	bdl	0.22
FF220	H-HS-01	Corridor floor	µg/cm <sup>2</sup>	bdl	3	0.003	0.0006	0.0020	0.099	0.012	0.01170	bdl	bdl	bdl	0.18
FF220	H-HS-02	Rec room window sill	µg/cm <sup>2</sup>	0.02	11	0.012	0.004	0.0051	0.633	0.049	0.00071	0.006	bdl	0.0019	0.64
FF223	AY-ME-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	3.2	0.004	bdl	0.0009	0.026	0.005	0.00015	bdl	bdl	0.0006	0.06
FF223	AY-ME-HS-02	Living room window sill	µg/cm <sup>2</sup>	0.01	22	0.024	0.001	0.0023	0.222	0.133	0.00058	bdl	bdl	0.0008	0.22
FF240	AH-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	2.3	0.003	bdl	0.0006	0.013	bdl	0.00006	bdl	bdl	bdl	0.11
FF240	AH-HS-02	Circle room window sill	µg/cm <sup>2</sup>	0.01	5.9	0.007	0.002	0.0033	0.156	0.024	0.00032	bdl	bdl	0.0008	0.16
(FF240)	AI-HS-01	Play area north at fridge	µg/cm <sup>2</sup>	bdl	2.1	0.002	bdl	0.0008	0.011	bdl	0.00004	bdl	bdl	bdl	0.23
(FF240)	AJ-HS-01	Lunch room 2nd floor	µg/cm <sup>2</sup>	bdl	2.5	0.003	bdl	<0.0006	0.008	bdl	bdl	bdl	bdl	bdl	0.09
(FF240)	AJ-HS-02	Kindergarden window	µg/cm <sup>2</sup>	bdl	4.7	0.005	bdl	0.0008	0.018	bdl	0.00005	bdl	bdl	bdl	0.05
FF240	AJ-HS-03	Gym floor	µg/cm <sup>2</sup>	bdl	7	0.008	bdl	0.0008	0.041	0.011	0.00023	bdl	bdl	bdl	0.06
FF242	AC-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	<1.0	bdl	bdl	0.0006	0.004	bdl	0.00004	bdl	bdl	bdl	0.01
FF242	AC-HS-02	Living room window sill	µg/cm <sup>2</sup>	0.01	1.6	0.002	bdl	0.0031	0.022	bdl	0.00009	bdl	bdl	bdl	0.07
FF248	AQ-HS-01	Main level floor at kitchen sink	µg/cm <sup>2</sup>	bdl	2	0.002	bdl	0.0013	0.006	bdl	bdl	bdl	bdl	bdl	0.02
FF248	AQ-HS-02	Main level living room window sill	µg/cm <sup>2</sup>	bdl	4.3	0.005	bdl	0.0021	0.027	bdl	0.00007	bdl	bdl	bdl	0.05
FF248	AQ-HS-03	Main level corridor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.002	bdl	bdl	bdl	bdl	bdl	0.01
FF249	Q-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	6.5	0.007	0.0007	0.0038	0.026	0.010	0.00038	0.004	bdl	bdl	0.22
FF249	Q-HS-02	Living room window sill	µg/cm <sup>2</sup>	0.02	31	0.034	0.01	0.0144	0.300	0.059	0.00051	0.01	bdl	0.0029	0.82
FF253	Y-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	8.2	0.009	bdl	0.0010	0.026	bdl	0.00020	bdl	bdl	bdl	0.04
FF253	Y-HS-02	Corridor floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.002	bdl	0.00004	bdl	bdl	bdl	0.01
FF256	A-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.2	0.001	bdl	0.0016	0.011	bdl	0.00005	bdl	bdl	bdl	0.02
FF256	A-HS-02	Bathroom window sill	µg/cm <sup>2</sup>	0.04	22	0.02	0.013	0.0056	1.100	0.074	0.00038	0.0	bdl	0.0029	0.83
FF259	BC-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.006	bdl	0.00004	bdl	bdl	bdl	0.01
FF259	BC-HS-02	Kitchen window sill	µg/cm <sup>2</sup>	bdl	1.5	0.002	0.0006	bdl	0.048	0.005	0.00030	bdl	bdl	bdl	0.07
FF259	BC-HS-03	Bathroom window sill	µg/cm <sup>2</sup>	0.01	4.1	0.005	0.001	0.0012	0.122	0.007	0.00088	bdl	bdl	bdl	0.15
FF261	L-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	5.7	0.006	0.0005	0.0014	0.017	0.006	0.00008	bdl	bdl	bdl	0.03
FF261	L-HS-02	Bedroom floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.002	bdl	0.00066	bdl	bdl	bdl	0.00
FF261	L-HS-03	Living room window sill	µg/cm <sup>2</sup>	0.03	30	0.033	0.007	0.0091	0.733	0.054	bdl	0.006	bdl	bdl	0.64
FF266	I-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.004	bdl	bdl	bdl	bdl	bdl	0.01
FF266	I-HS-02	Rear entrance window sill	µg/cm <sup>2</sup>	bdl	4.7	0.005	0.0004	0.0009	0.030	bdl	0.00248	bdl	bdl	bdl	0.03
FF270	X-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	2.2	0.002	0.0003	bdl	0.026	bdl	0.00014	bdl	bdl	bdl	0.02
FF270	X-HS-02	Living room window sill	µg/cm <sup>2</sup>	bdl	4.7	0.005	0.0007	0.0010	0.054	0.003	0.00019	bdl	bdl	bdl	0.04
FF270	X-HS-03	Corridor	µg/cm <sup>2</sup>	0.03	3.9	0.004	0.0010	0.0013	0.051	0.006	0.00021	bdl	bdl	bdl	0.05
none	C-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	0.0006	0.005	bdl	bdl	bdl	bdl	bdl	0.01
none	C-HS-02	Main corridor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.003	bdl	bdl	bdl	bdl	bdl	0.00
none	C-HS-03	Kitchen window sill	µg/cm <sup>2</sup>	bdl	1.8	0.002	0.0011	0.0006	0.101	0.007	bdl	bdl	bdl	bdl	0.18
none	D-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1	0.001	0.0006	0.0016	0.006	bdl	0.00009	bdl	bdl	bdl	0.02
none	D-HS-02	Dining room window sill	µg/cm <sup>2</sup>	0.09	47	0.052	0.01	0.0156	1.556	0.256	0.01360	0.008	bdl	0.0110	2.33
none	E-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	6.1	0.007	bdl	0.0014	0.017	0.004	0.00017	bdl	bdl	bdl	0.03
none	E-HS-02	Kitchen window sill	µg/cm <sup>2</sup>	0.02	14	0.016	0.009	0.0041	0.889	0.046	0.00471	bdl	bdl	0.0029	0.69
none	N-HS-01	Room 118 window sill	µg/cm <sup>2</sup>	bdl	5.3	0.006	0.0007	0.0032	0.027	0.007	0.00017	0.008	bdl	bdl	0.12
none	N-HS-02	Room 118 top shelf	µg/cm <sup>2</sup>	bdl	15	0.017	0.001	0.0089	0.076	0.021	0.00087	0.006	bdl	0.0020	0.36
none	N-HS-03	Music room floor	µg/cm <sup>2</sup>	bdl	4.6	0.005	bdl	0.0018	0.009	bdl	0.00013	bdl	bdl	bdl	0.13
none	N-HS-04	Gym mezzanine	µg/cm <sup>2</sup>	0.02	170	0.189	0.006	0.0322	0.278	0.081	0.01620	bdl	0.004	bdl	0.95
none	N-HS-05	Rom 201 window sill	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.003	bdl	0.00166	bdl	bdl	bdl	0.02
none	N-HS-06	Room 201 top of fridge	µg/cm <sup>2</sup>	bdl	2.8	0.003	bdl	0.0012	0.017	bdl	0.00021	bdl	bdl	bdl	0.07
none	W-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	3.5	0.004	0.0004	0.0006	0.021	bdl	bdl	bdl	bdl	bdl	0.02
none	W-HS-02	Family room window sill	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.003	bdl	0.00857	bdl	bdl	bdl	0.00
none	AF-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.3	0.001	0.0004	0.0006	0.012	bdl	0.00007	bdl	bdl	bdl	0.03
none	AF-HS-02	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.5	0.002	0.0005	0.0009	0.024	bdl	0.00008	bdl	bdl	bdl	0.06
none	AS-HS-01	Living room window sill	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.003	bdl	0.00053	bdl	bdl	bdl	0.01
none	AS-HS-02	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00
none	AT-HS-01	Science classroom	µg/cm <sup>2</sup>	bdl	8.6	0.010	0.007	0.0017	0.107	0.006	0.00073	0.004	bdl	bdl	0.10
none	AT-HS-02	Staircase	µg/cm <sup>2</sup>	bdl	3.6	0.004	bdl	0.0016	0.020	bdl	0.00028	bdl	bdl	bdl	0.06
none	AT-HS-03	Kitchen floor	µg/cm <sup>2</sup>	bdl	5.3	0.006	0.0005	0.0022	0.019	bdl	0.00006	bdl	bdl	0.0016	0.12
none	AT-HS-04	Ground level entrance	µg/cm <sup>2</sup>	bdl	6.8	0.008	bdl	0.0019	0.017	bdl	0.00011	bdl	bdl	bdl	0.09
none	AT-HS-05	Classroom	µg/cm <sup>2</sup>	bdl	7.4	0.008	0.001	0.0011	0.083	0.006	0.00042	bdl	bdl	bdl	0.10
none	AU-HS-01	Living room window sill	µg/cm <sup>2</sup>	bdl	4.7	0.005	0.003	0.0016	0.060	0.006	0.00009	0.01	bdl	bdl	0.15
none	AU-HS-02	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.9	0.002	<0.0003	bdl	0.005	bdl	<0.00003	bdl	bdl	bdl	0.01
none	BB-HS-01	Gym entrance floor	µg/cm <sup>2</sup>	bdl	5.7	0.006	bdl	0.0019	0.021	0.006	0.00018	bdl	bdl	0.0008	0.08
none	BB-HS-02	Cafeteria kitchen floor	µg/cm <sup>2</sup>	bdl	2.1	0.002	0.0006	0.0010	0.012	bdl	0.00017	bdl	bdl	bdl	0.09

(A) US EPA floor guideline  
 (B) US EPA windowsill guideline  
 (C) Jacques Whitford surface guideline

0.05 (A)	0.055 (C)
0.27 (B)	

analytical detection limit  
 bdl = below detection limit

µg/cm <sup>2</sup>	<0.01	<1.0	<0.001	<0.0003	<0.0006	<0.001	<0.003	<0.00003	<0.001	<0.001	<0.0006	<0.01
--------------------	-------	------	--------	---------	---------	--------	--------	----------	--------	--------	---------	-------



**Table 7-West Flin Flon Hard Surface Dust**

Soil Sample IDs	Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
FF302	AV-HS-01	Corridor	µg/cm <sup>2</sup>	0.01	5.8	0.006	0.0010	0.0028	0.122	0.006	0.00012	0.01	bdl	0.0008	0.14
FF302	AV-HS-02	Kitchen	µg/cm <sup>2</sup>	bdl	2.4	0.003	0.0005	0.0010	0.008	bdl	0.00004	bdl	bdl	bdl	0.02
FF306	R-HS-01	Play room window sill	µg/cm <sup>2</sup>	bdl	5.8	0.006	0.001	0.0007	0.076	0.008	0.00011	bdl	bdl	0.0006	0.10
FF306	R-HS-02	Main level living room window	µg/cm <sup>2</sup>	0.01	5.8	0.006	0.002	0.0017	0.167	0.013	0.00009	bdl	bdl	0.0009	0.25
FF306	R-HS-03	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00005	bdl	bdl	bdl	0.01
FF309	AR-HS-01	Office window sill	µg/cm <sup>2</sup>	bdl	1.3	0.001	bdl	bdl	0.003	bdl	bdl	bdl	bdl	bdl	0.01
FF309	AR-HS-02	Living room window sill	µg/cm <sup>2</sup>	0.02	6.1	0.007	bdl	0.0020	0.020	0.005	0.00011	bdl	bdl	bdl	0.03
FF309	AR-HS-03	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	0.0010	0.005	bdl	bdl	bdl	bdl	bdl	0.01
FF315	AG-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.001	bdl	bdl	bdl	bdl	bdl	0.00
FF315	AG-HS-02	Kitchen window sill	µg/cm <sup>2</sup>	bdl	2	0.002	bdl	0.0007	0.010	bdl	0.00009	bdl	bdl	bdl	0.09
FF321	O-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.005	bdl	0.00005	bdl	bdl	bdl	0.01
FF321	O-HS-02	Kitchen window sill	µg/cm <sup>2</sup>	0.012	1.9	0.002	bdl	0.0009	0.029	bdl	0.00031	bdl	bdl	bdl	0.04
FF336	BA-HS-02	Kitchen window sill	µg/cm <sup>2</sup>	bdl	11	0.012	bdl	0.0010	0.016	0.014	0.00011	bdl	bdl	bdl	0.04
FF339	AN-HS-01	Lower level living room window sill	µg/cm <sup>2</sup>	bdl	4.9	0.005	0.001	0.0009	0.043	0.005	0.00004	bdl	bdl	bdl	0.04
FF339	AN-HS-02	Main level kitchen floor	µg/cm <sup>2</sup>	0.04	3.8	0.004	0.001	bdl	0.006	bdl	bdl	bdl	bdl	bdl	0.01
FF339	AN-HS-04	Main level living room window sill	µg/cm <sup>2</sup>	0.02	11	0.012	0.001	0.0043	0.178	0.010	0.00045	bdl	bdl	0.0016	0.23
FF345	AA-HS-01	Kitchen floor	µg/cm <sup>2</sup>	0.09	5.6	0.006	0.002	0.0020	0.019	0.004	0.00009	bdl	bdl	0.0008	0.05
FF345	AA-HS-02	Living room window sill	µg/cm <sup>2</sup>	bdl	1.6	0.002	0.001	0.0007	0.008	bdl	0.00005	bdl	bdl	bdl	0.02
FF353	M-HS-01	Master bedroom window sill	µg/cm <sup>2</sup>	0.02	9	0.010	0.004	0.0027	0.389	0.028	0.00050	0.004	bdl	0.0018	0.33
FF353	M-HS-02	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.003	bdl	bdl	bdl	bdl	bdl	0.01
FF357	P-HS-01	Main level living room window	µg/cm <sup>2</sup>	0.01	67	0.074	0.002	0.0052	0.189	0.026	0.00087	bdl	bdl	0.0008	0.19
FF357	P-HS-02	Kitchen floor	µg/cm <sup>2</sup>	bdl	1	0.001	bdl	0.0014	0.006	bdl	bdl	bdl	bdl	bdl	0.01
FF360	J-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	<0.001	bdl	0.00004	bdl	bdl	bdl	0.00
FF360	J-HS-02	Living room window sill	µg/cm <sup>2</sup>	bdl	2.5	0.003	bdl	0.0021	0.033	bdl	0.01190	bdl	bdl	bdl	0.12
FF363	Z-HS-01	Kitchen floor	µg/cm <sup>2</sup>	0.01	3.7	0.004	bdl	0.0013	0.034	0.004	0.00021	bdl	bdl	bdl	0.09
FF363	Z-HS-02	Bedroom window	µg/cm <sup>2</sup>	bdl	13	0.014	bdl	0.0028	0.023	bdl	0.00011	bdl	bdl	0.0008	0.43
FF365	G-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.1	0.001	bdl	bdl	0.008	bdl	0.00006	bdl	bdl	bdl	0.01
FF365	G-HS-02	Corridor floor	µg/cm <sup>2</sup>	bdl	4.1	0.005	0.0004	0.0016	0.028	0.006	0.00008	bdl	bdl	bdl	0.04
FF365	G-HS-03	Living room window sill	µg/cm <sup>2</sup>	0.01	8.1	0.009	0.002	0.0041	0.233	0.021	0.00729	bdl	bdl	bdl	0.29
FF366	F-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.1	0.001	0.0004	0.0009	0.009	bdl	0.00007	bdl	bdl	bdl	0.02
FF366	F-HS-02	Corridor baseboard heater	µg/cm <sup>2</sup>	bdl	2.2	0.002	0.0007	0.0020	0.024	0.009	0.00011	bdl	0.004	bdl	0.04
FF366	F-HS-03	Sitting room window sill	µg/cm <sup>2</sup>	0.02	18	0.020	0.006	0.0072	0.833	0.064	0.00534	bdl	0.004	0.0058	0.61
none	AO-HS-01	Kitchen window sill	µg/cm <sup>2</sup>	0.02	12	0.013	0.004	0.0032	0.933	0.036	0.00192	bdl	bdl	0.0012	0.56
none	AO-HS-02	Main living area	µg/cm <sup>2</sup>	bdl	bdl	bdl	0.0004	0.0011	0.012	bdl	0.00037	bdl	bdl	bdl	0.01

(A) US EPA floor guideline

(B) US EPA windowsill guideline

(C) Jacques Whitford surface guideline

analytical detection limit

bdl = below detection limit

0.05 (A) 0.055 (C)

0.27 (B)

µg/cm <sup>2</sup>	<0.01	<1.0	<0.001	<0.0003	<0.0006	<0.001	<0.003	<0.00003	<0.001	<0.001	<0.0006	<0.01
--------------------	-------	------	--------	---------	---------	--------	--------	----------	--------	--------	---------	-------



### Table 8-Channing Hard Surface Dust

Soil Sample IDs	Sample ID	Sample Location	Units	Arsenic (As)	Barium (Ba)	Barium (Ba)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
FF401	V-HS-01	Kitchen floor	µg/cm <sup>2</sup>	bdl	1.1	0.001	bdl	bdl	0.004	bdl	bdl	bdl	bdl	bdl	0.01
FF401	V-HS-02	Computer room window sill	µg/cm <sup>2</sup>	bdl	5	0.006	0.0007	0.0029	0.043	0.005	0.00014	0.004	bdl	0.0008	0.04
FF402	BE-HS-01	Front entrance vestibule floor	µg/cm <sup>2</sup>	bdl	1.9	0.002	0.0007	bdl	0.009	bdl	bdl	bdl	bdl	bdl	0.02
FF402	BE-HS-02	Kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.003	bdl	0.00005	bdl	bdl	bdl	0.01
FF402	BE-HS-03	Living room window sill	µg/cm <sup>2</sup>	0.01	13	0.014	0.003	0.0050	0.156	0.060	0.01780	bdl	bdl	0.0022	0.71
FF404	AP-HS-01	Main level living room window sill	µg/cm <sup>2</sup>	bdl	4.4	0.005	bdl	0.0014	0.029	bdl	0.00021	bdl	bdl	bdl	0.09
FF404	AP-HS-02	Main level kitchen floor	µg/cm <sup>2</sup>	bdl	bdl	bdl	bdl	bdl	0.002	bdl	bdl	bdl	bdl	bdl	0.01

(A) US EPA floor guideline

(B) US EPA windowsill guideline

(C) Jacques Whitford surface guideline

analytical detection limit

bdl = below detection limit

0.05 (A)	0.055 (C)
----------	-----------

0.27 (B)
----------

µg/cm <sup>2</sup>	<0.01	<1.0	<0.001	<0.0003	<0.0006	<0.001	<0.003	<0.00003	<0.001	<0.001	<0.0006	<0.01
--------------------	-------	------	--------	---------	---------	--------	--------	----------	--------	--------	---------	-------



**Table 9. Lead Content of Paint Samples**

Exceeds 600 ppm\*

Exceeds 5,000 ppm\*\*

Dust Sample ID	Lead Concentration in Paint Sample	Sample Location
AL	1000 ppm	Main level wood
AW	1800 ppm	Lower level wall
AB	NLS	NLS
T	NLS	NLS
S	1200 ppm	Basement floor / wall
BD	25000 ppm	Basement on wood
AD	<100 ppm	Basement wall
AK	150 ppm	Main level wood
U	500 ppm	Main level ceiling
B	<100 ppm	Main level wall
AX	1200 ppm	Basement floor
K	1800 ppm	Basement wall
H	NLS	NLS
AY	NLS	NLS
AJ	460 ppm	Boardroom wall
AC	<100 ppm	Basement wall
AQ	1100 ppm	Lower level
Q	130 ppm	Main level on wood
Y	<100 ppm	Family room
A	<100 ppm	Main level wall
BC	360 ppm	Main level wall
L	NLS	NLS
I	NLS	NLS
X	3200 ppm	Basement floor
AF	<2000 ppm	Main level on wood
AH	750 ppm	Circle room window sill
AI	<100 ppm	Ceiling
AS	NLS	NLS
AT	<100 ppm	Classroom 2 wall
AU	NLS	NLS
BB	NLS	NLS
C	NLS	NLS
D	<100 ppm	Basement on wood
E	NLS	NLS
N	<100 ppm	NS
W	NLS	NLS
AV	1600 ppm	Basement wall
R	<100 ppm	Main level on wall

<b>Table 9. Lead Content of Paint Samples</b>		
Exceeds 600 ppm*		
Exceeds 5,000 ppm**		
<b>Dust Sample ID</b>	<b>Lead Concentration in Paint Sample</b>	<b>Sample Location</b>
AR	6000 ppm	Wood staircase
AG	NLS	NLS
O	<400 ppm	Main level on wood
BA	3700 ppm	Main level on wood
AN	<100 ppm	Lower level wall
AA	1700 ppm	Downstairs wall
M	<100 ppm	Main level wood
P	NLS	NLS
J	<300 ppm	Main level wall
Z	<600 ppm	NS
G	<200 ppm	Main level wall
F	NLS	NLS
AO	<100 ppm	Main level wall
V	<200 ppm	NS
BE	<100 ppm	Basement floor
AP	<100 ppm	Living room window sill

Notes:

NLS = No lead sample taken

NS = location not specified

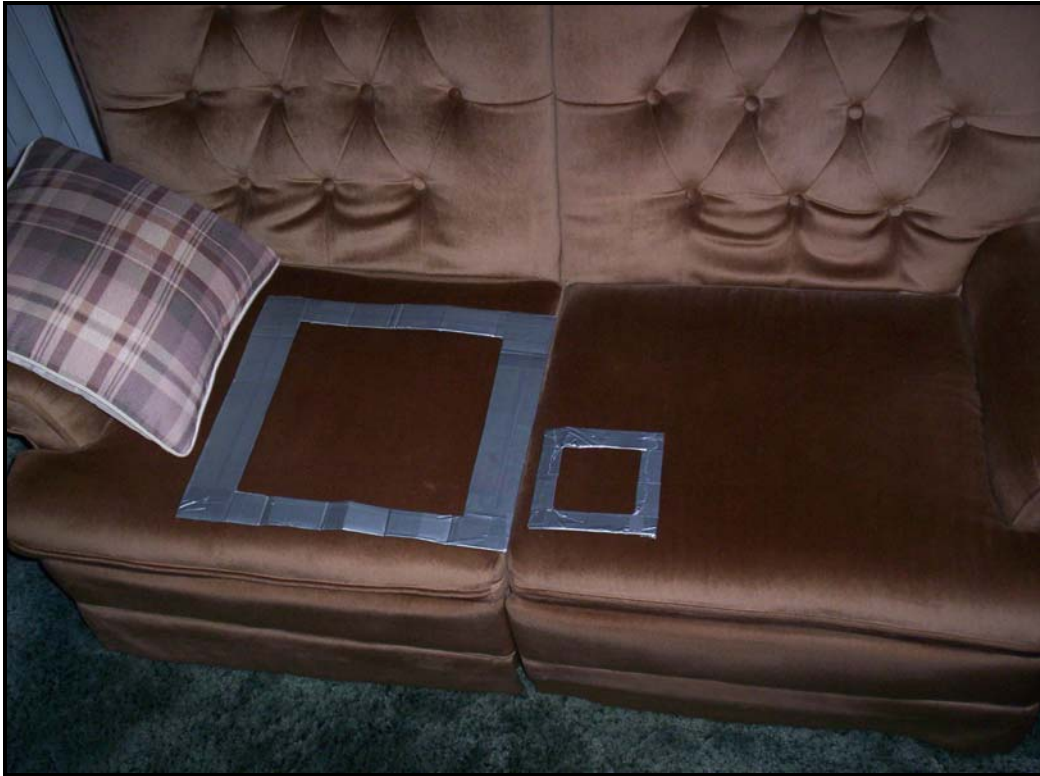
\*According to the proposed Surface Coating Materials Regulations, April 2005, by Health Canada's Occupational Health and Safety Agency, a paint is considered to be a lead-based paint if the concentration of lead in the paint is equal to or greater than 0.06 percent by weight (weight of lead to weight of paint), which is equivalent to 600 ppm.

\*\*The Hazardous Products Act in Canada and the United States Department of Housing and Urban Development (HUD) have set a criteria of 0.5 % lead (by weight) or 5,000 parts per million (ppm) for determining if a paint application should be considered lead-based. The US Centre for Disease Control (CDC) notes that the 0.5 % level is based on practical, not health concerns, so care must be taken when this criteria is applied.



## APPENDIX B

Sample Photographs of Indoor Dust Collection Locations



Fabric surface samples from sofa



Fabric surface samples from carpet



Hard surface samples from floor



Hard surface samples from window sill



Lead in paint chip sample