

Human Health Risk Assessment Technical Advisory Committee

2007-10-01, Flin Flon General Hospital Boardroom

Attendees:

MB Conservation: Dave Bezak, Mike Gilbertson, Geoff Jones, Audrey Romanchuk, Dean Kasur (by teleconference – am only)

MB Health: Marcia Anderson, Dr. Susan Roberecki (by teleconference – pm only)

MB STEM: Doina Priscu

SERM: George Bihun, Les Oystryk

SK Health: James Irvine, David Sampson, Shala Ricklefs, Karen Hill (by teleconference – am only)

Health Canada: Lindsay Smith

NORMAN RHA: Beverley Hill

HBMS: Alan Hair, Ian Cooper, Steph West, Shirley Neault

Intrinsik: Elliot Sigal

Observer: Sheldon McLeod

1. Review & Approval of Previous Minutes

The notes of the previous teleconference of August 30, 2007, were not reviewed. The meeting opened with introductions and a review of the draft agenda distributed by D. Bezak, which was then modified.

2. Review of Intrinsik Data

Approximately two months ago, a tour of the sites used in the Metals in Soil report was conducted. The following gaps were identified by the project consultant and reviewed at this meeting. The ensuing discussions are also noted. Intrinsik is continuing to add related data as information becomes available.

2.1 SOIL

Gap #1 – Sampling of the yards of residences, which is where people spend the bulk of their time.

- Approximately 10% (or 200) of homes in the Flin Flon and Creighton area will have samples collected from both the front and back yards. These samples will be collected before the snow sets in.
- If individuals want data on their own homes, it will be made available to them. The public report will not reference specific homes.
- The methodology for sampling has not yet been determined. Sites could be volunteer-based, although it is assumed that 200 volunteers would not come forward. If the assumption is incorrect, it is also assumed that extra requests could be accommodated. In any event, the sampling will be done by experienced professionals (see action #01).

#	Action	Responsibility	Target Date	Status
01	Determine sampling methodology and approach	Intrinsik/CAC	2007-10-15	2007-10-01, new
02	Send indoor dust data that was collected from Creighton homes following the tailings dust event to Intrinsik	S. West or G. Bihun	2007-10-31	2007-10-01, new

Human Health Risk Assessment Technical Advisory Committee

2007-10-01, Flin Flon General Hospital Boardroom

Gap #2 – Sampling of indoor dust in area residences, where people spend the bulk of their time (see action #02).

- The indoor samples are planned to be collected at or near the same time as the yard samples are collected. Approximately 40 homes are targeted for this sample collection.
- Factors being considered for this portion of the project include the age of the home, the presence of pets, where the home-owners work, the presence of wood-burning heating systems, etc.

2.2 AIR

Gap #3 – The current HBMS air sampling program did not analyze for six of the eleven metals reported to be elevated in the area soils. HBMS has already adjusted their sampling program to include analyses of these metals.

- MB Conservation has a TSP sampler in Flin Flon, but data from it will not likely be used as PM10 particle sizes are more relevant to this study. Although exposures for TSP size particles do not enter the lungs, particle may still enter the body through the mouth and swallowed. Therefore, discounting this data needs to be based on sound science (see action #03).

#	Action	Responsibility	Target Date	Status
03	Review related literature regarding particle size to ensure that discounting TSP data assumptions are correct. Proximity to the plant is also a factor to be considered in this review	Intrinsik	2007-11-30	2007-10-01, new

2.3 GARDEN SOIL

Gap #4 – The data from the garden soils collected in Creighton has not been provided (see action #04).

#	Action	Responsibility	Target Date	Status
04	Provide data from 6-7 Creighton gardens to Intrinsik	George Bihun	2007-10-31	2007-10-01, new

2.4 DRINKING WATER

Gap #5 – Current drinking water samples are collected from water sources as opposed to normal exposure areas (i.e. residences). HBMS has already made arrangements to collect drinking water samples from residential locations with analyses for all 11 metals.

2.5 FISH AND SEDIMENT

Gap #6 – The current available fish data is not sufficient for inclusion. The CAC will be asked where and to what extent fishing is done and the extent that fish is consumed in

**Human Health Risk Assessment
Technical Advisory Committee**
2007-10-01, Flin Flon General Hospital Boardroom

the community. This will help to determine if more data is relevant and therefore required (see action #05).

- No gaps were identified in the sediment data, as the soil survey should mirror sediment exposures.

#	Action	Responsibility	Target Date	Status
05	Provide fishing data described above	CAC	2007-11-15	2007-10-01, new

2.6 SURFACE WATER

- There is sufficient surface water data, as exposures tend to be a few months out of the year only (e.g. swimming, especially at Phantom and Little Cliff Lakes). The CAC should confirm that additional data is not required (see action #06).

#	Action	Responsibility	Target Date	Status
06	Confirm that the surface water assumptions are correct	CAC	2007-11-15	2007-10-01, new

2.7 BLUEBERRIES

Gap #7 – Current studies did not evaluate for all 11 metals, although elevated levels of the metals assessed were not noted in the samples analyzed. Additional factors to consider include the need to wait another year to collect samples (unless residents are willing to part with samples from their own blueberry storage), a determination of usage volumes, etc. (see action #07)

#	Action	Responsibility	Target Date	Status
07	Assist in determining if more blueberry data is required and how to obtain it	CAC	2007-11-15	2007-10-01, new

2.8 WILD GAME AND WILD RICE

- No gaps were identified for these two potential exposures as it is assumed that rice fields and game are not in the immediate exposure area.

#	Action	Responsibility	Target Date	Status
07	Confirm that the wild game and rice assumptions are correct	CAC	2007-11-15	2007-10-01, new

3. General Discussion Items

- The differences between bioaccessibility and bioavailability were reviewed. Bioaccessibility looks at how soils react in a stimulated stomach environment and is what the CCME guidelines are based on. Bioavailability looks at how available the metals in

**Human Health Risk Assessment
Technical Advisory Committee**
2007-10-01, Flin Flon General Hospital Boardroom

the soils are and what the likelihood that they could be absorbed into the body if soil particles were ingested is and is not the focus of this study at this time.

- Ongoing research programs will guide the process.
- To address validity issues, assumptions will be conservative to err on the “worst-case” side.
- This study may lead to further biomonitoring studies such as urinary arsenic analysis, blood lead analysis, etc. However, considerable work would be required to determine other contributing factors to ensure that these further studies are valid.
- Consideration of improvements in Smelter emissions pre and post 2000 were discussed. The current study is risk management based. A concern about past exposures is a different study and one that is not easy to do due to low population size leading to insufficient data. The communities’ desire regarding this matter will need to be prepared for.
- The differences in the tables in the Intrinsic draft gap document were discussed. Some of the table refers to maximums while others refer to upper-bound averages. As the project is currently at the screening level, it is currently not statistical (see action #09).

#	Action	Responsibility	Target Date	Status
09	Ensure that the methodology determination addresses the maximums vs. upper-bound limits issue	Intrinsic	2007-10-15	2007-10-01, new

The meeting was interrupted at this point for the Health Flin Flon noon-hour meeting.

4. Terms Of Reference Review

A general discussion regarding the two draft terms of reference documents (one for each panel) determined that both need considerable “clean-up”. Some of the items that should be included are:

- keeping in touch with constituents by representatives on the panel is key;
- a responsibilities section;
- establishment of links to the overall project; and
- clearly establishing what, if any, portions of the TAC and/or CAC meetings should be open to the public (see actions #10 & #11).

It was agreed that Sheldon would facilitate both committee meetings.

#	Action	Responsibility	Target Date	Status
10	Revise the draft terms of reference for CAC and circulate prior to the 1 st CAC meeting	S. McLeod	2007-10-12	2007-10-01, new
11	Revise the draft terms of reference for the TAC and circulate for comment.	S. McLeod	2007-10-12	2007-10-01, new

5. Other Business

- The duties of a sub-group of both panels regarding communication were generally discussed.

**Human Health Risk Assessment
 Technical Advisory Committee**
 2007-10-01, Flin Flon General Hospital Boardroom

- Different governance models were discussed and appropriateness in the context of a proponent driven study (see action #12). Duties of such a committee may include “ownership” of the various terms of reference, revision of those terms, panel membership (see action #13) and accountability, etc. Advice from either panel may or may not be accepted by HBMS (the proponent) at their own risk.
- Intrinsic closed the meeting with a brief presentation outlining an overview of HHRA terms of reference including objectives and scope, background, supplementary sampling plan, exposure to mixture of chemicals and acceptable levels of risk (see action #14).
- Next meeting – no date for next meeting was set due to time constraints.

#	Action	Responsibility	Target Date	Status
12	Provide a governance model	Alan Hair	2007-10-31	2007-10-01, new
13	Indicate who will be representing them on the TAC	Governments	2007-10-18	2007-10-01, new
14	Circulate draft HHRA terms of reference document once it is revised	Intrinsic	2007-11-15	2007-10-01, new