



**Sudbury  
Soils  
Study** | **Étude  
des sols  
sudburois**

metals • health • environment  
métaux • santé • environnement

# INDEPENDENT PROCESS OBSERVER'S REPORT No. 3

Winter 2002/2003

*The Process Observer, independent of any organization or group involved in the Sudbury Soils Study, is impartial, and advises on matters related to the Human Health Risk Assessment and the Ecological Risk Assessment, as managed by the Study's Technical Committee with input from the Public Advisory Committee.*

*As this Observer, **Franco Mariotti** is required to report to the public four times a year on the study process. This is his third report. For information about the Sudbury Soils Study, please go to the last page.*

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# **Introduction to the Sudbury Soils Study**

## **Why a Study?**

In recent years, several studies have shown that there are some areas in Sudbury - generally close to the historic smelting sites of Coniston, Falconbridge and Copper Cliff - with elevated metal levels (nickel, copper, cobalt and arsenic and others) in the soil.

Although these elements occur naturally in all soils, it is assumed that the higher amounts which are found in the top 5 cm. of soil (the surface soil) are the result of mining, smelting and refining operations from local mining companies.

Previous studies have not determined the possible health risks to humans and the environment that are associated with elevated metals in Sudbury soils. Therefore, the Ministry of the Environment (MOE) has asked Inco Limited and Falconbridge Limited to undertake the Sudbury Soils Study. It will include the most extensive soil sampling and analysis ever conducted in Ontario and comprehensive human health and ecological risk assessments.

The Sudbury Soils Study is an open, public process that will evaluate the levels of metals and chemicals such as nickel, copper, cobalt and arsenic and others that have been found in the local environment. It will be the most comprehensive assessment of its kind ever conducted in Ontario and will be reviewed by an independent panel of expert scientists.

From the assessment of thousands of soil samples, the community will learn of any possible risks these elements may pose to human health and/or the health of the environment. Both the Ontario Ministry of the Environment and local Medical Officer of Health believe that based on previous studies of a similar nature in other Ontario communities, "there is no expected immediate risk to human health". Today, the partners in the study agree a comprehensive Human Health Risk Assessment is a logical and necessary step to validate those beliefs.

Soil samples have been taken from throughout the region and are being carefully analyzed to assess their contents. A consulting firm will be evaluating the potential for human health and ecological risks due to the metal levels found in these samples. It is expected that final results of the study will be available by 2005.

## **The Study**

More than 10,000 soil samples were collected in the summer and fall of 2001 from various locations randomly selected in the Sudbury area. These sample sites were chosen to scientifically represent the study area. Samples are being analyzed to provide data about the levels of nickel, copper, cobalt, and arsenic in local soils.

A qualified consultant, will be evaluating the sampling information and comparing results with metal levels that would normally occur in soils of this type. Through further analysis and research, the consultant will examine the risks that these contaminants may pose to the health of people or the environment, and then conclusively evaluate the implications of the results in the context of the Ecological and Human Health Risk Assessment.

## Update

Since the release of my second Process Observer's report in January, 2003, a number of events have taken place:

### 1. Reporting Schedule

Due to unforeseen circumstances, my second report was made public about six weeks later than intended, and I apologize for that. You can expect that my quarterly reports for 2003 will appear in February, April, August, and November.

### 2. The Consultant

The consultant chosen to carry out the Sudbury Soils Study is the S.A.R.A. Group, a team of companies that have partnered on this project. The S.A.R.A. Group has shown that it has the best expertise to carry out the HHRA and ERA.

The final selection was made in mid-December and arrived at after lengthy discussions within the Technical Committee. The Committee was thorough in exploring all bidders and options, which extended the process about six months more than expected. However, this delay should not be seen as a shortcoming on the part of the Committee, and I wish to point out that they worked diligently to identify the scope and nature of the work to be done. Equally challenging was the selection of a consultant that would produce the best HHRA and ERA studies and meet the Committee's standards.

Final agreement was reached by consensus after lengthy and sometimes exhaustive discussions. Everyone practiced a "give and take" approach to achieving agreement, and this is a compliment to the members of the Committee who have demonstrated that consensus can be reached on even the toughest of decisions. Congratulations!

### 3. Introducing the S.A.R.A. (Sudbury Area Risk Assessment) Group

The S.A.R.A. Group is a consortium of companies established to provide consulting services in the Sudbury region, and in particular to undertake the Sudbury Area-Wide Human Health Risk Assessment and Ecological Risk Assessment (HHRA/ERA). Each individual and firm in the Group is a recognized leader in their field. The group provides a full range of expertise in HHRA/ERA and related disciplines. Together, we draw upon over 600 qualified professionals and support staff in Ontario alone for in-depth project delivery.

The S.A.R.A. Group can effectively provide solutions at all stages of a complex site assessment from public communications, database management and scientific interpretation of results to recommendations for risk management. Members of the Group have also successfully undertaken site remediation and brownfields development.

The following provides a very brief synopsis and introduction to the core S.A.R.A. Group. For further information and more detailed qualifications, please contact either Dr. Christopher Wren, ESG International Inc., or Dr. Glenn Ferguson, Cantox Environmental Inc.

### The S.A.R.A. Group

Group Member	Number of Ontario Staff	Relevant Areas of Expertise
<b>ESG International</b> 160 Research Lane, Suite 206 University of Guelph Research and Business Park Guelph, ON N1G 5B2 Tel: (519) 829-2518 Fax: (519) 829-2352	95	<ul style="list-style-type: none"> <li>▶ Project Management</li> <li>▶ GIS/database management</li> <li>▶ Ecological Risk Assessment</li> <li>▶ Soil and Phyto Toxicity Testing</li> <li>▶ Public Communication</li> </ul>
<b>Cantox Environmental Inc.</b> 1900 Minnesota Court, Suite 130 Mississauga, ON L5N 3C9 Tel: (905) 814-7800 Fax: (905) 814-4954	15	<ul style="list-style-type: none"> <li>▶ Human Health Risk Assessment</li> <li>▶ Ecological Risk Assessment</li> <li>▶ Risk Communication</li> </ul>
<b>Lakefield Research</b> P.O. Box 4300 185 Concession St. Lakefield, ON K0L 2H0 Tel: (705) 652-2009 Fax: (705) 652-7702	260	<ul style="list-style-type: none"> <li>▶ Soil and Water Analysis</li> <li>▶ Trace Metal Speciation</li> <li>▶ Mineralogy</li> <li>▶ Physical and Chemical Material Characteristics</li> </ul>
<b>Goss Gilroy Inc.</b> 900-150 Metcalfe Ottawa, ON K2P 1P1 Tel: (613) 230-5577 Fax: (613) 235-9592	25	<ul style="list-style-type: none"> <li>▶ Community Health Survey</li> <li>▶ Human Health Assessment</li> <li>▶ Epidemiology</li> </ul>
<b>RWDI</b> 650 Woodlawn Road West Guelph, ON N1K 1B8 Tel: (519) 823-1311 Fax: (519) 823-1316	220	<ul style="list-style-type: none"> <li>▶ Atmospheric and Air Dispersion Modeling</li> <li>▶ Stack Testing</li> <li>▶ Ambient and workplace air monitoring</li> <li>▶ Air quality decision support systems</li> </ul>
<b>Dr. Lesbia Smith</b> Tel/Fax: (416) 968-3841	1+	<ul style="list-style-type: none"> <li>▶ Human Health Assessment</li> <li>▶ Medical Health Testing</li> </ul>

#### **4. Sudbury Soils Study Begins!**

With the selection of the S.A.R.A. Group, the research into the HHRA and the ERA has begun. Attached is a tentative calendar of events that outlines major deliverables for the project over the next two years.

#### **5. Launch of the Sudbury Soils Study Website**

The public can now access information about the Sudbury Soils Study (SSS) and request information through the website at [www.sudburysoilsstudy.com](http://www.sudburysoilsstudy.com)

#### **6. Attendance at Public Advisory Committee Meetings**

In my last report, I noted that Public Advisory Committee (PAC) meetings were poorly attended by members. I am happy to report that six attended the last meeting on November 19<sup>th</sup>, and membership has increased to 12 from 10. I believe a minimum of seven members per meeting (out of a possible 12) would be ideal as it would at least achieve quorum.

The Committee reflects a cross-section of viewpoints in the community and is not intended to represent the public-at-large. The PAC has several roles, one of which is to advise the Technical Committee and another is to act as a sounding board regarding TC decisions. Furthermore, the PAC along with myself as the Process Observer, ensure an open and transparent process. Please visit the website to see the PAC's Terms of Reference.

#### **7. Public Attendance at PAC Meetings**

For the first time (November 19th) six citizens attended a PAC meeting. The public can attend, but they do so strictly as observers; that is, they are not permitted to interfere with the progress of the meeting. My compliments to Chair Ivan Filion for diplomatically handling curious members of the public and for allowing a question and answer session after the official meeting.

PAC meetings for 2003 are all scheduled for 6:30 pm at Cambrian College, on February 18, May 20, and September 16.

#### **8. Peer Review Group**

The creation of a scientific review Committee (Peer Review Group) was identified as a necessity at the beginning of the Sudbury Soils Study. This group would provide independent professional opinions on all scientific aspects of the HHRA and ERA studies.

This group is not yet in place; however, members of the TC are working on its Terms of Reference. For example, they are considering the criteria for the existence of a review group, the composition of such a group, and issues about which it will comment. Membership will be international in scope, and I expect that it will be established shortly (between March and May, 2003).

## 9. Date for the Next Open House

A date for the next Open House has not been set because the S.A.R.A. Group (who will plan the Study's public information program) is working on a new plan. My next report will have further information.

## 10. Environmental Data Bank

In my last report it was mentioned that the Centre for Environmental Monitoring at Laurentian University would eventually house all data resulting from the Sudbury Soils Study. To date, no new information has been released as to how this data will be stored or made accessible to the public.

## 11. Change of a Member's Status on the Technical Committee

At the start, Health Canada's First Nations & Inuit Health Branch was invited to be a sitting and voting member of the TC. Ray Alatalo, an Environmental Health Officer with Health Canada, attends and represents the First Nation communities of Whitefish Lake and Wahnapiatae, which are encompassed by the Sudbury Soils Study.

According to Mr. Alatalo, his role is similar to that of the Process Observer which is non-voting in nature. Therefore, it is my understanding that Mr. Alatalo will continue to sit on the TC, but as a non-voting member. He will continue to liaise with and inform the band councils, and ensure that reports from the study are reviewed by Health Canada.

It should be noted that Whitefish Lake and Wahnapiatae First Nations do have representatives on the Public Advisory Committee.

## 12. Communication Between the S.A.R.A. Group and the TC

In order to facilitate communication between the S.A.R.A. Group and the TC, a representative from the S.A.R.A. Group will attend monthly TC meetings. In addition, the S.A.R.A. group will produce monthly progress reports for the TC.

## 13. Proposed Project Timetable

### January to March, 2003

Project Initiation	January
Monthly Technical Committee Meetings	January, February, March
Meetings with Communications Sub-Committee	January, February
Meeting with Public Advisory Committee	February
Meetings to discuss soils data	January, February
Monthly Progress Reports	January, February, March



	March
Website Launch and Press Release	February
Engaging Faculty at Laurentian University	February
Assembly of Soils Database	February, March
Workshop on Risk Communication	March
Newsletter Introducing Study and Process	March
Fish Creel Survey on Ramsay Lake	March 1 to ice out

### **April to June, 2003**

Monthly Technical Committee Meetings	April, May, June
Monthly Progress Reports	April, May, June
Planning for Vegetable Garden Survey	April
Meetings with Communications Sub-committee	as required
Meetings with Public Advisory Committee	May
Workshops for VEC (Valued Ecosystem Components) Selection	May
Planning for Market Basket Survey	May
Proposed Ministry of Environment Release of Urban Soils Data	June
Public Open House	June

# **Members of the Sudbury Soils Study Technical Committee**

## **City of Greater Sudbury**

Bill Lautenbach, Director, Planning Services  
Dr. Stephen Monet, Coordinator of Environmental Initiatives

## **Falconbridge Limited.**

Marc Butler, Environmental Coordinator  
Dr. Gord Hall, Director of Occupational Health and Hygiene  
Denis Kemp, Director, Environmental Development

## **Health Canada First Nations & Inuit Health Branch**

Ray Alatalo, Environmental Health Officer

## **INCO Ltd.**

Glen Watson, Environmental Biologist  
Dr. Bruce Conard, Vice President, Environmental & Health Sciences  
Dr. R.W. (Bob) Francis, Medical Director

## **Ministry of the Environment**

Brian McMahon, Sudbury Soils and SO<sub>2</sub> Assessment Program  
Dale Henry, Manager, Human Toxicology and Air Standards  
Mary Ellen Starodub, Senior Advisor, Risk Management

## **Sudbury & District Health Unit**

Dr. Penny Sutcliffe, Medical Officer of Health  
Ido Vettoretti, Community Environmental Health Specialist  
Ed Wierzbicki, Environmental Support Officer

## **Chair, PAC**

Ivan Fillion, (non-voting), Academic Vice-president, Cambrian College

## **Communications Sub-Committee Chair**

Cory McPhee, (non-voting), Manager, Communications, INCO Ltd.

## **Process Observer**

Franco Mariotti (non-voting)

## **TC Facilitator**

Dick DeStefano (non-voting)

## **Administrative Support**

Julie Sabourin (non-voting)

## **Members of the Sudbury Soils Study Public Advisory Committee:**

Norris Artuso	Joe Cimino
Ronda Gougeon	John Hogenbirk (Vice Chair)
Gary Hrytsak	Aino Laamanen
Rubina Nebenionquit	Paul St. Jean
Ivan Fillion (Chair)	Vacant Position
Vacant Position	Vacant Position
Franco Mariotti (Process Observer)	Julie Sabourin (Recorder)

## **Contact Information**

For any comments or questions regarding this report, the Sudbury Soils Study, the Technical Committee or Public Advisory Committee, please contact us at the following:

**Telephone: 1 800 315-0228**  
**through our web site**  
**at: [www.sudburysoilsstudy.com](http://www.sudburysoilsstudy.com)**