Sudbury Soils Study
Industry Perspective

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Mining and metals have been part of Sudbury history for over 100 years
Timelines

- Soil Survey conducted in 2001-2003
- Risk assessment began in 2003
- Independent Expert Review Panel in 2006
- HHRA results released 2008
The study was conducted and administered by a multi-stakeholder Technical Committee. The Unions and public had a voice at all Technical Committee meetings. All meetings were attended by a Process Observer who reported to the community on his observations of the process. A Public Advisory Committee met frequently in a public setting and helped with the dissemination of scientific information to the community. The science was reviewed on multiple levels by world-renown experts.
• Franco Mariotti, a well-respected local environmentalist acted as the Process Observer to the Sudbury Soils Study.
• Mr. Mariotti reported to the public on a quarterly basis. His reports were honest and spoke transparently on how decisions were made at the Technical Committee.
• “Perception is important, if the perception by Sudburians says that this study is a white wash, that's an incredible shame... my observation, as my role, and I try to be as independent as possible, has been that this has been a very fair process, and transparent. The public could have had access to it, at any one point. I think it's an extremely legitimate study that Sudburians ought to accept the findings. (Source: CBC Morning North – May 13, 2008)
• Ontario and Federal Government agencies whose mandate is to act in the best interests of the public were on the Technical Committee (OMOE, SDHU and Health Canada First Nations and Inuit Health Branch).

• *Dr. Penny Sutcliffe, Medical Officer of Health for Sudbury:* “There is clearly no dark cloud hanging over Sudbury’s health based on the current level of levels of the six metal contaminants measured in our environment in this Study…when you stop to consider a community that has 125 years of mining history, you might expect to see levels of contaminants that are much higher than those found in this study…Overall this is very good news for the health of our community.” (Source: Sudbury Star – “Soils Study finds no major risk to health” – May 14, 2008)
• **Mayor John Rodriguez, Mayor of Greater Sudbury:** “It (the study) has been very transparent…the community has been present. The unions have been at the table. The citizens had a voice at the table…then it was peer reviewed. It is the most extensive soils study done in North America”. (Source: Northern Life, “Sudbury Soils are Safe Study Says, May 14, 2008)
Rigorous Peer Review

- Results of the HHRA (and ERA) were peer-reviewed by an Independent Expert Review Panel (IERP), which was comprised of six leading North American scientists who are specialists in human health, toxicology, speciation, and risk assessment.
- The panel was formed and administered by a not-for-profit organization called Toxicology Excellence for Risk Assessment (TERA) located in Cincinnati, Ohio.
• The panel found this to be a very comprehensive assessment. They were especially pleased to see the extent of sampling done in the community, for example soil, air, dust, market basket and local foods.
• The assessment appropriately considered all sensitive groups of the population and the possible ways that people in Sudbury might be exposed.
• The panel found the overall approach to be appropriate and provided specific technical recommendations for revisions to improve the scientific soundness of the results. The panel also made suggestions to improve the clarity of the report.
“We have every confidence that the HHRA accurately represents risks in the Greater Sudbury Area. In fact, based on the conservative assumptions used in risk assessment, we can be confident that if anything, the identified risks are over-estimated in the interest of protecting human health” (Ms. Jacqueline Patterson of TERA, September 22nd, 2006).
Vale Inco is committed to sustainable operations and has faith in the results of the risk assessment.

Fred Stanford, President, Vale Inco Ontario Operations: “We think this is very good news for all of us. At the same time, I want to make it very clear that Vale Inco is committed to doing our part to address the risks that were identified in the Human Health Risk Assessment”
Relative levels of effort

- Public Consultation: 25%
- ERA: 20%
- Project Management: 20%
- HHRA: 35%
Why believe this Risk Assessment?

- The Sudbury Soils Study is:
  - Conservative
  - Transparent
  - Extremely well documented
  - Repeatable, can change assumptions
  - Uncertainty is documented
  - Based on multiple lines of evidence
  - Supported by scientific peers
So you want to do a ‘community-based’ risk assessment?

- Understand the challenge and prepare accordingly
  
  - Risk assessment is expensive (total cost of SSS approximately $13 million, 25 significant project changes over time)
  
  - Risk assessment with multi-stakeholder and community involvement takes time (SSS process began in 2001).
  
  - Risk assessment science and results are very difficult to explain to the community.
  
  - Science versus policy issues take time to understand and resolve.
  
  - Risk assessment methods and standard practices are very conservative by nature – proponents need to learn to accept this.
  
  - Be prepared to find risks that aren’t necessarily attributable to the proponent.
Advice for starting out

• Spend considerable time agreeing on what needs to be done, what data need to be collected, what pathways will be investigated, what receptors will considered, etc…(Problem Formulation)
• Agree and sign-off on cost and time once Problem Formulation is complete.
• Listen to the public and consider what is important to the community. Ensure the public has a voice.
• Communicate progress and results often and with clarity.