

TOXIC LEGACIES AT GIANT MINE

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From our ongoing Arctic Interruptions series, John Sandlos and Arn Keeling reflect on the legacy and future of the Giant Mine site in Yellowknife, NWT. Edited by Sara Komarnisky and Lindsay Bell, this series challenges our expectations about the North and opens new windows on its life and history. This series will appear in Volume 4, Issue 1 of Northern Public Affairs.

Research is often conventionally thought of in terms of “progress”—in the advancement of knowledge, in the solution of problems, in the creation of new techniques or technologies. So what might it mean for research to *interrupt*: to “break in” on the action, to “hinder” some course or indeed for force a “stoppage”?

In the context of the research issues and practices considered in this series in *NPA*, such interruptions can provide critical opportunities for scholars and communities to intervene in certain “actions, processes or conditions” that are harmful or negative. In this sense, interruptions may be creative moments that provide spaces for (new) discourses and (redirected) actions, through the critical reflection and dialogue fostered by those pauses in what often seem unstoppable forces or processes.

Working with northern community members, our research into the toxic legacies of mining and the politics of remediation at Yellowknife's Giant Mine aims at just such an interjection. This research has not ceased the controversial clean-up of the massive arsenic waste problem at Giant, nor has that ever been the intention given the pressing need for containment of specific pressing hazards at the site.

Nonetheless, it has contributed in small ways to the collective interruption of what many regarded as a highly centralized, technology-driven remediation exercise. In so doing, the research has also promoted reflection on the complex social and environmental legacies of industrial mining at Yellowknife and their implications for the community's future.

The “Toxic Legacies” project was conceived as a collaborative, community-scholarly response to the history and ongoing conflicts surrounding arguably the North's worst environmental disaster, Yellowknife's Giant Mine. There, nearly a half-century of gold processing between 1951 and 1998 left 237,000 tonnes of highly toxic arsenic trioxide buried underground below the now-abandoned mine.

The presence of this toxic waste, which now threatens to pollute local groundwater and lake systems, has reinforced and perpetuated the historical injustices of dispossession, exclusion and contamination associated with the mine during its operations, particularly for the Yellowknives Dene First Nation (YKDFN). Now under the control of the Aboriginal Affairs and Northern Development Canada (AANDC), the mine presents a complex, critical, yet highly contested remediation problem.

In 2012, our research team worked with YKDFN and a Yellowknife-based environmental and social justice NGO, Alternatives North, to develop a research project highlighting community concerns surrounding the remediation of Giant Mine. This partnership grew out

of previous community-based research under the Abandoned Mines in Northern Canada project, which undertook community oral history and archival research into the historical encounters of indigenous communities with large-scale mining across the Canadian North.

These relationships and discussions led directly to the framing of the Toxic Legacies project around key community concerns with the remediation and regulatory processes at Giant Mine, including: exploring the historical experience of arsenic contamination by YKDFN people; documenting land use change and contamination associated with Giant Mine; understanding community perspectives on arsenic remediation and its regulation; and facilitating community dialogue on the potential perpetual care of the Giant site and the problem of communicating toxic hazards to future generations. We secured funding through SSHRC's Partnership Development Grant program to foster this research as a community-university partnership between YKDFN (through the Goyatiko Language Society), Alternatives North, Lakehead University, and Memorial University.

Interruption: "A breaking in upon some action, process, or condition (esp. speech or discourse), so as to cause it (usually temporarily) to cease; hindrance of the course or continuance of something ... a stoppage." (Oxford English Dictionary)

Since the project is ongoing, it is best to highlight just a couple of these themes: community participation in the regulatory processes surrounding remediation, and the challenge of perpetual care and communicating with future generations. Both of these issues have been topics of wider community concern and action since remediation proposals began to circulate in the early 2000s; however, the Toxic Legacies partnership has also taken them up as part of its research mandate and activities.

In the mid-2000s, the federal government began promoting a remediation solution for the underground arsenic known as the frozen block method, whereby the underground chambers housing the waste would be actively refrigerated to prevent groundwater infiltration. Then, thermosyphons would be installed to keep the rock surrounding the chambers frozen, using a low-energy air-exchange process. Though there was some public consultation on this method, many in Yellowknife questioned both the technology and the process by which it was chosen.

Ultimately, these concerns led the City of Yellowknife, in conjunction with the Yellowknives Dene First Nation, to refer the remediation proposal to territorial environmental assessment by the Mackenzie Valley Environmental Impact Review Board.

Both the Abandoned Mines and Toxic Legacies projects contributed to the environmental assessment process, by contributing research and information to the review board. For instance, the authors provided a historical summary of arsenic contamination issues during the operational period of Giant Mine, documenting for the record the tragic death of a Yellowknives Dene child in 1951 that led to the installation of pollution control equipment and the collection of arsenic trioxide dust.

At the environmental assessment hearings, YKDFN and Alternatives North members themselves were active participants with formal intervenor status in the environmental assessment process, a status they used to press regulators and the project proponent, AANDC, both on the effectiveness of the frozen block method and the process by which remediation decisions had been made.

The assessment process was unusual in that it employed a format designed for major project proposals (such as new mines, dams, etc.) to evaluate a project nominally aimed to improve, not impact the local environment. Part of the scholarly role of the Toxic Legacies project has been to consider how community perceptions and issues were addressed (or not) in the environmental assessment documents and subsequent public hearings, held in Yellowknife in 2012.

Our review of the process suggests that community concerns were inadequately addressed in what was often a highly technical and formal review process. In particular, despite the mandate of the MVEIRB to consider traditional knowledge in decision-making, the process largely failed to incorporate indigenous knowledge and experiences of arsenic contamination and, through its resolutely technical focus on remediation techniques, actively excluded historical pollution and resulting injustices from consideration.



A second key issue highlighted by critics of the frozen block remediation proposal was the question of the perpetual care of the site. In its original formulation, the remediation plan was intended to keep arsenic stored underground in perpetuity. As Alternatives North and other critics pointed out, this proposal raised profound questions of the management of these toxic wastes over the very long term and the challenge of communicating these hazards to future generations, issues inadequately addressed during the environmental assessment.

The Toxic Legacies project responded to these concerns by undertaking **background research on communicating with future generations**, mostly in relation to the storage of high-level nuclear waste. Notwithstanding the regulator's decision to limit the nominal timeline of the Giant Mine project to 100 years, important questions remain about how to ensure governments and communities in the future retain critical knowledge of the toxic waste at the site.

The next phase of this research, being undertaken in 2015, is to generate indigenous and community perspectives on communicating hazards to future generations. Much of the literature on communicating with future generations focused on expert knowledge and discounted oral history as an effective means of preserving knowledge for the future. Working with local communities, the Toxic Legacies project seeks to challenge these assumptions and to help generate locally relevant and robust systems of communication, to ensure the knowledge of arsenic hazards at Giant is not lost.

We have created a local committee on communicating with future generations, including membership from the Memorial University researchers, First Nations, Métis, government (federal, territorial, and municipal), NGOs, the NWT Mining Heritage Society, and other interested citizens. While not a decision-making body, the committee is working to develop ideas and approaches to commemorating toxic hazards that are specific to Giant Mine. These may include monuments, text, signs, symbols, and archival repositories.

Drawing on the knowledge of Yellowknives elders, we are also considering the possibility of using and/or developing stories that warn of the arsenic dangers at Giant Mine (a story describing a monster underground is one idea that has come up). We have also discussed the possibility that regular events, possibly even rituals, at the Giant Mine site may be one way to ensure that the need to maintain the site is not forgotten. To raise awareness of the issue, we are also working with local filmmaker France Benoit, along with Ontario-based filmmakers Kelly Saxberg and Ron Harpelle, to make a documentary (titled *Guardians of Eternity*) that examines the issue of communicating hazard to future generations at Giant Mine. We also held workshops in the spring of 2015 to gather ideas about communicating with the future from the Yellowknives Dene and the general population of Yellowknife. The results, we think, will be a unique example of community-generated perspectives on this problem.

In August 2014, the Giant Mine Remediation Project received approval from the federal Minister of Aboriginal Affairs and Northern Development. In doing so, however, the minister also mandated the imposition of 26 measures and commitments to address areas of public concern, including the creation of an independent oversight body and the creation of an environmental agreement to govern the project.

The “interruption” of the remediation project by the efforts of local leaders and community groups clearly influenced these outcomes, and has provided openings for ongoing

community involvement and direction in the future of Giant Mine. As one small part of these efforts, community-engaged scholarship is helping support community goals around generating and sharing knowledge about Giant Mine's troubling past, controversial present, and uncertain future. ●

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Photo credits

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