

From: [Alan Ehrlich](#)
To: [Shannon Hayden \(shayden@reviewboard.ca\)](mailto:shayden@reviewboard.ca)
Subject: FW: Giant Mine Public Registry Filing--Local Media Coverage of Giant Mine
Date: August-29-12 8:42:53 AM
Attachments: [Giant Mine Media Coverage.pdf](#)
Importance: High

From: kevin o'reilly [mailto:kor@theedge.ca]
Sent: August-28-12 11:34 PM
To: Alan Ehrlich
Subject: re: Giant Mine Public Registry Filing--Local Media Coverage of Giant Mine
Importance: High

Alan

Please file the attached document which is a compilation of some of the local media coverage on the Giant Mine from 2008 to present. This is a further indication of the public interest and significant public concern with the site and Remediation Plan developed by AANDC and GNWT. Thank you.

Kevin O'Reilly
Alternatives North

Media Coverage of Giant Mine 2008-2012

http://www.nnsi.com/frames/newspapers/2012-08/aug24_12tb.html

'It's a sitting time bomb'

Former Ndilo chief concerned about plans for Giant Mine

Miranda Scotland

Northern News Services

Published Friday, Aug 24, 2012

SOMBA K'E/YELLOWKNIFE

September's public hearings regarding Giant Mine, one of the most contaminated sites in Canada, are the last chance for Yellowknifers to make their voices heard on the issue before it's too late, said former Ndilo chief Fred Sangris.

"They need to be engaged, they need to express their concern because we are at the final stages here. Once the final stages are completed, there's no coming back to complain," said Sangris, who is also the chair of the Giant Mine Remediation Committee. "We've got one chance to do this right."

The environmental assessment hearings are set to run Sept. 10 to 14 at the Tree of Peace. Once the hearings are complete, the Mackenzie Valley Environmental Impact Review Board will look at the evidence and decide if the final remediation plan should be approved.

"The decision that's being made today, the future generation will have to live by," said Sangris.

The former gold mine has been a source of concern for the public almost since its inception because of the arsenic trioxide dust it produced during gold processing. Over the years, this toxic substance has affected the surrounding wildlife and environment as well as people living in the area. In the 1960s a public health study found a link between arsenic exposure and elevated cancer rates in Yellowknife, with the Yellowknives Dene being most affected because of their close proximity to the mine.

"That mine to most Northerners, it's a legacy, but to the First Nations here, the Yellowknives Dene, it's a heartache and painful memory," Sangris said. "Nothing good came out of that mine for us, no opportunities, no jobs, no benefits."

For more than 10 years the government has been looking at options on how to permanently close Giant Mine and store the 237,000 tonnes of arsenic trioxide dust sitting underground. The current plan includes freezing the dust underground and storing it there indefinitely. The buildings and facilities at the abandoned mine will be demolished and tailings ponds covered.

Alternatives North member Kevin O'Reilly said he doesn't think the government's plan is well thought out and misses some important concerns.

There is no commitment to a perpetual care plan, there is no commitment to conduct further research to find a solution more permanent than freezing the arsenic underground and there is no talk of an apology or compensation to those negatively affected by the mine, he said.

"There is a whole bunch of work and arrangements that need to be reached in some way," said O'Reilly.

"I just don't think we're anywhere near where we should be."

But, Adrian Paradis, acting manager of the Giant Mine Remediation Project, said the plans weren't made lightly.



Fred Sangris: "Nothing good came out of that mine for us, no opportunities, no jobs, no benefits."

"The Giant Mine Remediation Plan, which has undergone extensive expert and public review, is a robust and diligent plan," Paradis stated in an e-mail.

Sangris disagreed, saying that the current remediation plan is just a Band-Aid solution that will cause problems in the future.

"It's unbelievable that Canada is supporting this kind of process and these kind of ideas that are generated by consultants," Sangris said. "(The mine) is a sitting time bomb."

Also, Aboriginal Affairs and Northern Development Canada (AANDC) should have consulted more with the First Nations, Sangris continued. There should have been a partnership like the one seen between the Tlicho and the federal government during the remediation of Colomac Mine, which is located 220 km north of Yellowknife.

"At this time there is no partnership. (AANDC) took the lead on their own, with their agency and consultants, and they said these are our plans, this is what we are willing to do, you respond to us what you think," Sangris said. "They just want the First Nations to tag along and say yes."

Last year a joint venture between Det'on Cho Corporation and Nuna Logistics Ltd. - Det'on Cho Nuna - was awarded a 21-month, \$14.9-million contract to care and maintain the Giant Mine remediation site. Det'on Cho Corp. is the economic development organization owned by the Yellowknives Dene.

http://www.nnsi.com/frames/newspapers/2012-08/aug10_12fsh.html

Fish bigger in Baker Creek

Researchers stumped as to why some species grow larger in contaminated stream

Miranda Scotland

Northern News Services

Published Thursday, Aug. 9, 2012

SOMBA K'E/YELLOWKNIFE

Something in Baker Creek is making certain diminutive species of fish inhabiting Baker Creek a little less diminutive.

After three rounds of testing researchers are still unsure as to what is causing the increase in size, according to reports from the Giant Mine Remediation Project Team.

"There are some effects that we noted but we cannot attribute them to the mine effluent ... At this time we still can't tell," said Adrian Paradis, acting manager of the Giant Mine remediation project.

Tests conducted to determine any effects related to Giant Mine, one of the most contaminated sites in Canada, show that female and juvenile slimy sculpin and young ninespine stickleback found in Baker Creek, are slightly larger than those found in the Yellowknife River. Both species average less than seven centimeters in length as adults.

The fish were collected from a widening of stream called Baker Pond, near the junction between the Ingraham Trail and Vee Lake Road.

"Preliminary data suggests this could be due to various factors such as the treated mine effluent, contamination in the sediment, or the shallowness of Baker Creek," Paradis later wrote in an e-mail, adding more tests still need to be done.



Female and juvenile slimy sculpin grow larger in contaminated Baker Creek and researchers don't know why. - photo courtesy of Wikimedia

The team began testing in the area in 2004 as part of the government's Environmental Effects Monitoring Program as required by the Metal Mining Effluent Regulations. Other rounds of research were conducted in 2006, 2010 and most recently in July. The results of the latest test are expected to be released next year while another phase of testing will be conducted in 2015.

Researchers have been looking at the fishes' gonads, liver and flesh as well as measuring their length and weight. Tests have also been done on other aquatic life and water from the creek. All results were compared with a reference area upstream from the mine.

Research on the water in the Baker Creek exposure area revealed high concentrations of arsenic, copper, selenium and nitrate when compared with the Canadian Water Quality Guidelines. Depending on the year, concentrations of arsenic were between 35 and 23 times what is set out by the guidelines.

High arsenic levels in Baker Creek have been a concern over the years. Last year during the spring melt, the creek broke its banks and flowed into a tailings pond, before flowing back into the creek and into Back Bay. As a result, tests showed arsenic levels 700 times higher than the acceptable levels for drinking water. Risk of other incidents like this continue to be a concern.

Meanwhile, tests showed effects on water fleas, algae and fathead minnows – another small fish of around five centimeters in length -- exposed to undiluted concentrations of mine effluent for seven days. Water fleas displayed decreased survival and reproduction during the test while the growth rate of algae was inhibited, as were the survival of the fathead minnows.

Still, Paradis said the toxic responses found in the aquatic life are nothing to panic about.

"The results are not overly concerning as additional toxicity results on other test species show no effect related to treated mine effluent," he wrote. "The toxicity effects related to mine effluent have been classified as mild."

http://www.nnsi.com/frames/newspapers/2012-08/aug8_12gia.html

Vying for Giant contracts

Giant Mine clean-up opportunities fill room at remediation project Industry Day

Thandiwe Vela

Northern News Services

Published Wednesday, Aug 8, 2012

SOMBA K'E/YELLOWKNIFE

About 100 bureaucrats and industry participants crowded into a Giant Mine Remediation Project information session last week to learn more about roughly half-a-billion dollars in contracts to be tendered over the 10-year clean-up.



The Giant Mine Remediation Project Industry Day information session last week included a tour of the contaminated site.

It was the first Industry Day held by the Giant Mine project team since 2010. A number of major contracts are slated to be tendered in the coming weeks. [About 100 people attended. - NNSL file photo](#)

"There are a lot of contracts coming out between now and Christmas," Giant Mine Project director Henry Westermann told industry representatives, including consultants and representatives from small and large businesses from across the country, the environmental sector, engineering, mining, construction and aboriginal organizations.

"We want you to be aware."

Heather Stewart, president of BBE Ltd., represented one of a few Northern companies present at Giant Mine Industry Day - drawn by the logistics opportunities, including materials management and on-site storage and inventory programs.

"I think there's a lot of opportunity," Stewart said.

"Positive opportunities for local businesses to get involved and I think people should be aware of what's coming out and what's being tendered. I think it's a matter of participating and actively looking for the opportunities."

Due to the scope, scale and complexity of the project, organizers encouraged businesses present to think not only in terms of just their own company, but in terms of partnerships.

"I think that's what the big driver will be, is partnerships for something like this," Stewart said, noting Industry Day was a good networking opportunity.

"We're looking at who's here and just interested in general to see what the activity is going to be."

The clean-up of more than 50 years of gold mining and ore processing at Giant Mine, which is host to approximately 237,000 tonnes of underground arsenic trioxide, also has some personal importance for Stewart, who was born and raised in Yellowknife.

"I think it matters to the city," she said. "Everybody who lives here should make sure it gets cleaned up properly. There's just a lot of nasty stuff spilled over there."

As the second largest federally-administered contaminated site in Canada, the Canadian government has allotted upwards of \$500 million for the cleanup of Giant Mine alone, although the final value of the contracts will not be known until the tenders have been returned.

"It is a huge project the Government of Canada is undertaking here in Yellowknife to remediate the former Giant Mine gold mine," said Adrian Paradis, acting project manager for the Aboriginal Affairs and Northern Development Canada contaminated sites program. "It's very large, it's very contaminated, and it's in very poor repair."

As the remediation project makes its way through the environmental assessment process, Public Works and Government Services Canada - the department in charge of the procurement strategy - is hoping to have the work contracts in place in 2013, in anticipation of licensing approvals to start the 10-year cleanup in 2014.

"Once we get the green light, we want to have the contracts in place and be ready to work," Westermann said on behalf of Public Works.

The main projects contractors will have a chance to bid on in the coming months include the demolition of the roaster complex - a series of buildings where the ore was originally milled; underground stabilization; mining engineering design; mining engineering support services; operation of hazardous materials storage areas; waste and arsenic disposal; investigative drilling; and long-term water treatment and water management, which will continue for many years, possibly forever.

The tender for demolition of the roaster complex is slated to go out later this month, and a construction management tender is to be released in September.

The multi-million dollar, multi-year care and maintenance contract, which has been awarded three times to a Det'on Cho-NUNA joint venture, will go to tender again in September.

Contractors who include aboriginal participation in bids gain extra points in the process.

Financial security may be asked for in contracts on a case-by-case basis.

The remediation team is also seeking company profiles to gauge industry interest and capacity in terms of local contractor and aboriginal capabilities, resources, skills, and training programs.

http://www.nnsi.com/frames/newspapers/2012-07/jul25_12st.html

People warned to stay out of Baker Creek

Miranda Scotland

Northern News Services

Published Wednesday, July 25, 2012

SOMBA K'E/YELLOWKNIFE

Yellowknifers are being asked to stay out of the water at the mouth of Baker Creek and the area north of the public boat launch until Saturday because of testing being done at the site.

The Giant Mine Remediation Project Team will be using low-voltage electricity to catch fish in those areas during 6 a.m. and 8 a.m. Anyone in the water and not wearing protective gear is at risk. The work, which is required by the government, is being done to determine any potential effects on the fish related to Giant Mine. Testing was also done in 2004, 2006 and 2010 but the team still doesn't have a clear answer as to the effects, said Adrian Paradis, acting manager of the Giant Mine remediation project.

"At this time we still can't tell. There are some effects that we noted but we cannot attribute them to the mine effluent."

http://www.nnsi.com/frames/newspapers/2012-07/jul6_12gm.html

Freezer plant shut after leak at Giant

Mine coolant system shuts down after refrigerant escapes

Danielle Sachs

Northern News Services

Published Friday, July 6, 2012

SOMBA K'E/YELLOWKNIFE

A coolant leak at the Giant Mine site has forced the shutdown of the Arctic Foundations Freeze Plant, the structure that freezes deadly arsenic trioxide in blocks kept deep underground.

On June 28, inspectors at Giant Mine noticed low pressure in the condenser. The system was shut down and locked until a refrigeration specialist could inspect the surrounding area.

Adrian Paradis, acting manager of the Giant Mine Remediation Project, confirmed there had been a leak but as of Wednesday the exact source and reason for the leak could not be determined. He couldn't say when the refrigeration system will be turned back on.

It was the hybrid system that leaked, which is the system that triggers the operation of the thermosyphons to cool the underground chambers.

In total, 385 kilograms of R-507 halocarbon refrigerant leaked, but there is no ground contamination because as soon as it's exposed to air it turns into gas.

The immediate effects of contact with the chemical include frostbite and dizziness, or unconsciousness when inhaled.

Paradis said there is no risk to the environment or public.

He said the arsenic blocks are so frozen a brief shutdown won't cause any melting.

"Even if the system was entirely shut down, after 50 years you would only get a thin layer starting to thaw," he said.

Giant Mine has 237,000 tons of arsenic trioxide buried underground. A by-product created by roasting gold ore, the site of the federal government's freezing test is an 11-storey chamber underground which holds the arsenic. It's one of 15 arsenic trioxide-filled chambers and stopes at the mine. The freezing test began in March, 2011 with the ultimate goal of freezing all the arsenic - quite likely in perpetuity.

It's considered one of the most contaminated sites in Canada, and once remediation starts it will take 10 years to clean up the site, said Paradis.

Kevin O'Reilly, a mining watchdog and executive director of Alternatives North, said overall he was pleased with the communication about the spill.

He was notified Friday and later given a copy of the spill report.

"I got a call from Adrian Paradis with the Giant Mine team. It was quick and appreciated," O'Reilly said.

"It's an improvement over the Baker Creek notification. I think that's a good step."

While O'Reilly said he doesn't foresee any environmental or human health hazards from the leaked gas, he said it speaks to the larger issues of long-term care and planning.

"Here we are, less than two years into this test freeze, and we've already had a major incident that caused a shutdown," he said, adding he understands accidents and malfunctions in this type of system are inevitable.

Another issue O'Reilly highlighted was the lack of commitment from the federal government.

"How do we make sure there's always money for the site?" O'Reilly asked.

"This question has been asked three or four times and there's never an answer. If the federal government wants to freeze this forever, they need to come up with a solution for long-term funding."



Adrian Paradis stands near the thermosyphons at the Giant Mine site. - Danielle Sachs/NNSL photo

It doesn't help that the 24-hour emergency number for Environment Canada was out of service when the spill happened.

"Spills have to be reported both to the GNWT and Environment Canada," said O'Reilly.

"The 24-hour emergency spill line wasn't in service, I called it myself."

The GNWT's emergency report line was working fine.

The total cost of the Giant Mine remediation project is an estimated \$479 million. Once the site is completely cleaned up, save for the stored arsenic, it will cost around \$1.9 million per year in upkeep and maintenance.

http://www.nnsi.com/frames/newspapers/2012-07/jul4_12awa.html

Diamond Jubilee medals awarded

Miranda Scotland

Northern News Services

Published Wednesday, July 4, 2012

SOMBA K'E/YELLOWKNIFE

Ten Yellowknifers were presented with Diamond Jubilee Medals on Sunday during the Canada Day celebrations at Somba K'e Park.

The medals were handed out in celebration of the 60th anniversary of Queen Elizabeth II's reign. Sixty-thousand Canadians who have made outstanding contributions in their community, area, or the country at large, are set to receive jubilee medals this year.

"I feel very excited," said medal recipient Pooja Chugh. "I've played a lot of sports and because of that I've kind of expected medals and different kinds of recognition because I competed for it. But something like this I really never expected, I never imagined that would happen."

The 18-year-old was nominated for her work in the community. Chugh volunteers with the NWT Disability Council, the Multiple Sclerosis Student Group and Stanton Territorial Hospital.

"I love (volunteering), it's very nice to meet all kinds of different people and I find it's a lot of fun," she said.

This summer Chugh is working with doctors at the University of Alberta looking for a cure for multiple sclerosis. Chugh said the endeavor is very close to her heart.

"My mother passed away a few years ago from multiple sclerosis," Chugh said, adding she was just 15 years old at the time.

Chugh received the jubilee medal alongside NWT Pipe Band member Floyd Adlem; Helen Balanoff, executive director of the NWT literacy council; former city councilor Kevin O'Reilly; Stephen Clark, co-ordinator of the NWT Mining Heritage Society; Donald Finnermore, president of the Yellowknife Lions Club; 14-year-old philanthropist Cole Philipp; journalist Lee Selleck, Trans-Canada Trail supporter Julian Tomlinson and community volunteer Joy Watt.

The medals were presented by Premier Bob McLeod, commissioner George Tuccaro and a number of city councillors.

Philipp was the youngest of the award recipients honoured at the ceremony. Two years ago, Philipp created a website to raise money for orphanages in Mazatlan, Mexico. He has collected \$33,285 and plans to continue raising funds.

"(This award) means a lot. It's kind of hard to put into words because it's a very big honour to be here. I'm very grateful," he said.

"I will be continuing the work. School is now a very big thing because I'm getting into high school and it's just getting a lot harder but I will definitely continue to do the work."

O'Reilly said he was also very honoured to be presented with the award.

O'Reilly was nominated for his commitment to the environment. The former city councillor has worked to protect the health and safety of Northerners through his role as lead intervenor in the Giant Mine Remediation Plan.

He was also recognized for his work as a board member of Mining Watch Canada and a member of the social justice coalition Alternatives North.

"It's nice to get recognition for the work that you've done and humbling that people in the community recognize the work that I've been doing," O'Reilly said. "I'm very, very pleased and happy."

Eighty-one-year-old Watt received her award for her volunteer work with Stanton Territorial Hospital, the NWT SPCA, Yellowknife 75th anniversary celebrations and the Heart and Stroke foundation.

"I'm quite pleased about it," Watt said, about receiving the award.

"But there are a lot of other people out there that do a lot of volunteering so you know I'd like to see people coming up and coming forward and nominating them. There is still time to nominate good volunteers and I'm very grateful to who did nominate me."

Other Yellowknife medal recipients this year include Gail Cyr, the late Bishop John Sperry, Esther Braden and Tony Whitford.

http://www.nnsi.com/frames/newspapers/2012-05/may25_12tr.html

'Reverse' Ramsay on the defensive

Yellowknife area MLAs charge 'cannibalization' and 'sleight of hand' over Ingraham Trail Realignment project

Danielle Sachs

Northern News Services

Published Friday, May 25, 2012

SOMBA K'E/YELLOWKNIFE

Robert Hawkins, MLA for Yellowknife Centre, said his constituents have coined a new nickname for Transportation Minister David Ramsay.

The convening of the third session of the 17th legislative assembly got off to a quick start Wednesday as Hawkins traded barbs with Ramsay from across the room.

Hawkins said his constituents have taken to calling the minister "Reverse Ramsay," after seeing his dealings with the Negotiated Contracts Policy, specifically regarding the Ingraham Trail Realignment project.

"As we all know, Minister Ramsay has been consistently critical of sole-sourced contracts as a member in this assembly," said Hawkins on the first day of the third session. "But now that he's in cabinet, he's reversed his position."

Hawkins alleged the Negotiated Contracts Policy is just "sleight-of-hand" for sole-sourced contracts.

The \$16-million contract for the Ingraham Trail project was awarded to the Det'on Cho Corporation and, while the details have not been finalized, Ramsay expects the contract to be signed by the end of the month.

Ramsay challenged Hawkins to find one example where he had stood up and criticized the Negotiated Contracts Policy, chiding Hawkins for confusing a sole-sourced contract with a negotiated contract.

"I challenge (Hawkins) to go in Hansard and find one example where I stood up as a member of this house and said one thing negative about a negotiated contract with an aboriginal company in the territory," said Ramsay.

Hawkins said his major concern was with the negotiated contract process and not specifically who was awarded the contract, and continued to press Ramsay on the matter.

"Clearly we can see how thin-skinned the minister is," said Hawkins.

Speaker Jackie Jacobson admonished the MLAs, demanding they remain civil during question period.

Ramsay said he found it difficult to maintain order while fielding questions with phrases such as "sleight of hand, little respect for taxpayers, embarrassment, insult, shameful, back door, dismal and cannibal."

"I take very seriously the allegations that we're insulting the public's intelligence and that we're doing things nefariously," said Ramsay.

Hawkins responded by calling a point of order prompted by Ramsay's use of the word "nefariously."

Earlier in the session, Range Lake MLA Darryl Dolynny questioned Ramsay about the perception that negotiated contracts will create overcapacity in the Northern construction industry.

"How (is the government) going to deal with the cannibalization of businesses competing desperately to stay alive and what is this government going to do when businesses start to close down when there's a lack of work," he asked.

Ramsay replied that future highway construction projects in the Yellowknife area will be tendered, but defended the present contract being negotiated with Det'on Cho Corp. as justified.

"This money is coming from the Giant Mine Remediation Fund," Ramsay said. "This is at the very doorstep of Chief Drygeese territory and nobody asked the Yellowknives Dene for 237,000 tonnes of arsenic trioxide to be stored at the very foot of the Chief Drygeese territory."

Bob Bromley, Weledeh MLA, said if MLAs disagree with the Negotiated Contract Policy, they should have a discussion about it before it's applied to a project in their riding.

"This policy has regularly been applied appropriately across the territory with major benefits.

"A couple of my colleagues have questioned the application of this policy to the realignment of the road through Chief Drygeese territory. Rather than attacking the policy they have attacked the application," said Bromley.

He called the realignment project long overdue.

"With Giant Mine being on the doorstep of Chief Drygeese territory, having the Giant Mine liability fund the work for the realignment of Highway 4, it's the very least this government can do to help the Yellowknives Dene," said Bromley.

http://www.nnsi.com/frames/newspapers/2012-05/may11_12gm.html

Giant Mine top federal priority

Recent report lists mine as an 'extremely expensive cautionary tale'

Danielle Sachs

Northern News Services

Published Friday, May 11, 2012

SOMBA K'E/YELLOWKNIFE

Giant Mine will eventually cost \$1.9 million a year, forever.

The site is also one of the most contaminated in Canada, according to a report presented May 8 by Scott Vaughan, Canadian commissioner of the Environment and Sustainable Development.

While there are thousands of identified contaminated sites across Canada, most of the funding is applied towards the four top priority sites: Giant Mine, Faro Mine in the Yukon and two radioactive sites in Port Hope, Ont.

For now, the annual budget for Giant Mine varies based on what projects and initiatives are being undertaken.

So far, the Canadian government has budgeted \$640 million for Giant Mine alone.

The commissioner pointed out that the chances of a disaster like Giant Mine happening again are slim.

"A lot of the operations on these four sites were happening before environmental assessments."

Vaughan had the opportunity to visit Giant Mine, heading deep underground into the tunnels.

Although he wasn't there to audit the specific happenings at the mine, he said it helped give an idea of the scope and magnitude of the Giant Mine site.

"It's an extremely expensive cautionary tale," said Vaughan. "No one wants to return to the past."

During his visit to Giant Mine, Vaughan says he was struck by a few things.

"The first was the amount of consultation and communication with members of the community and the public," he said.

"They take this consultation process very seriously."

He pointed to the collaboration between the Giant Mine Remediation Project and various independent groups and interested residents.

The commissioner's report detailing the funding and treatment of contaminated sites across Canada was released during a time that Adrian Paradis, project manager for the clean-up project, calls "the most challenging season on the site."

With the temperature warming and ice melting, Baker Creek that flows through the mine site is constantly monitored ensuring that there's no contamination.

Tailings dust control is also about to start. The program is typically initiated in June and uses soil cement to cover tailings ponds and roads.

"It's a big task each year," said Rob Girvin, who monitors Baker Creek and aspects of the care and maintenance program.

"When they dry in the warmer weather, dust can pick up. Soil cement is a dust suppressant that makes an impermeable layer, it only lasts one season though."

Fred Sangris, a former chief of Ndilo, said there are still a lot of issues that he feels haven't been properly addressed.

"We're in the earthquake zone," he said. "What happens if there's an earthquake with all the arsenic underground?"

Sangris feels the Yellowknives Dene haven't been included in the process to the extent they should be.

"We've seen so much illness and death," said Sangris. "Ottawa has to be accountable."

In an upcoming report, Vaughan will be examining the responsibilities and requirements of the federal government, specifically with guaranteeing bonds related to the forever nature of the Giant Mine site.

http://www.nnsi.com/frames/newspapers/2012-05/may9_12bk.html

Spring melt flows into Baker Creek

Giant Mine clean-up crews quick to divert melt water path

Danielle Sachs

Northern News Services

Published Wednesday, May 9, 2012

SOMBA K'E/YELLOWKNIFE

While some wait for the ice to melt with growing anticipation, along Baker Creek the melt is met with trepidation and 24-hour monitoring.

On May 3, an area of spring run-off deposited silt into Baker Creek raising concerns about possible arsenic-contaminated sediments entering the creek.

Adrian Paradis, acting manager of the Giant Mine Remediation Project, said the area was no bigger than a ditch and was caught quickly.

"It was only running into the creek for a few hours," he said. "There was nothing there during morning inspections and it was caught early in the afternoon."

Paradis said the ditch was small enough that someone could easily just step right over it. But precautions were still immediately taken and the stream was diverted around the area where it was picking up sediment.

The area is regularly inspected during the approximately six-week thaw period, with inspections continuing throughout the night.

The situation is much different than last May, when Baker Creek broke its banks and flowed into a tailings pond, before flowing back into the creek and into Back Bay. Tests afterwards showed arsenic levels 700 times higher than the acceptable levels for drinking water.

"This is a very different thing," said Paradis. "Last year it was a historic tailings pond. This is related to overland flow, think of water flowing down a road," he said. "It went through some piles of dirt."

Water samples were taken at three different locations for testing. They were taken from the ditch, from the intersection of the ditch and Baker Creek and 50 metres downstream.

While preliminary results are in, the official results aren't expected for a few days. But according to the preliminary results, arsenic levels were well below acceptable levels for the area.

Randy Freeman, director of lands and environment for the Yellowknives Dene First Nation, said he's extremely pleased with the response.

"This is the same time of year where all that trouble happened last year," he said. "I think they've done a wonderful job because of lessons learned last year."

Freeman was kept informed of the situation with regular updates, including the preliminary numbers from the samples.

"The TSS (total suspended solids) number was visibly high, but even just 50 metres downstream it was below what was deemed acceptable," said Freeman. "They're very free with sharing that information with the Yellowknives Dene," he said of the Giant Mine Remediation Project.

"There's no concern for human or environmental health," said Paradis. "There's no risk for the fish that will soon be living in the creek either."

http://www.nnsi.com/frames/newspapers/2012-05/may11_12ad.html

Access denied at Giant pond

Clean-up team fences off popular multi-use area until underground stability ensured

Danielle Sachs

Northern News Services

Published Friday, May 11, 2012

SOMBA K'E/YELLOWKNIFE

The fenced off area around a small pond at the entrance to the Giant Mine town site is just a precautionary measure, according to the Giant Mine remediation team.

Precautionary, but semi-permanent.

During this past winter, the area was evaluated as part of ongoing safety checks and inspections. The inspections deemed there to be a potential risk, and in March 2012, orange snow fencing and danger signs were installed near the boat launch. Access to many of the open air mining displays and equipment by the NWT Mining Heritage Society surrounding the pool have been blocked.

There are no risks of contamination, according to the remediation team. Reports show there is absolutely no arsenic trioxide below the fenced-off area.

"We have a very good idea of how much arsenic trioxide is there because it was due to the production process," said Adrian Paradis, project manager for the remediation project. But the area has been closed to the public and will remain closed until the underground has been evaluated and stabilized.

"We need to limit access until stabilization is complete," said David Colbourne, consultant from DXB Projects.

Colbourne has been working with the conveyor gallery and underground stabilization.

Stephen Clark, co-ordinator of the NWT Mining Heritage Society, is not too concerned about the stability.

"Common sense says those spokes have been underground for 30, 40 years and nothing has fallen yet," he said. "But I understand why the government has to be careful and not take any chances. They'll measure to see how deep the rock is and depending on that, they may have to do some fill," Clark said.

But according to the most recent tentative site stabilization schedule, the engineering review for the underground stabilization will only be completed near the end of 2013, indicating that the site will remain restricted for more than one summer season.

http://www.nnsi.com/frames/newspapers/2012-05/may4_12gnt.html



Demolition of the 300-foot northernmost section of the Giant Mine mill conveyor began Wednesday, with a team of reclamation experts from Tervita Corporation disposing of the conveyor's 8,000 square feet of asbestos cladding. - Kevin Allerston/NNSL photo

Removal of mill conveyor begins

Alberta team brought in to deal with Giant Mine asbestos

Kevin Allerston

Northern News Services

Published Friday, May 4, 2012

SOMBA K'E/YELLOWKNIFE

Dismantling of the northernmost section of the Giant Mine conveyor began Wednesday, with three crew members from Tervita Corporation brought on site from Calgary starting to remove the conveyor's asbestos.

The removal of approximately 8,000 square feet of asbestos exterior cladding is the first step in deconstructing the 300-foot conveyor section connecting the mine's screen house and mill, and is expected to be completed by next week.

Adrian Paradis, acting project manager of the Giant Mine remediation project, said the conveyor must be dismantled because it is a safety hazard to the more than 30 workers on the project.

"Well, that's one of the main pathways for the workers on site. One of the struts and one of the fore beams have been beginning to twist and it's become a safety fall hazard, and it needs to come down," said Paradis. "In a high wind situation the conveyor could start to shift and start to fall."

Dismantling of the rest of the conveyor, built in 1948, is expected to take two to three weeks, according to Paradis, though contractors for the rest of the work have not yet been signed.

Paradis said the total cost of bringing down the section of mill conveyor is expected to be about \$300,000.

Although the permit to demolish the section of conveyor was issued March 20, Paradis said the process was delayed until this week because they were missing a piece of equipment.

"It's a long-arm boom and it has to be able to reach 100 feet ... it's just a very specialized piece because it has to reach so far," said Paradis. He said it was being used for construction of the Deh Cho Bridge, which is why the deconstruction was delayed for nearly a month and a half.

The asbestos in the conveyor will be double bagged and disposed of in the mine's northwest tailings pond. Exposure to asbestos can lead to lung ailments.

While the contract for the rest of the deconstruction has not been issued, Paradis said he expects it to be complete within a month.

http://www.nnsi.com/frames/newspapers/2012-05/may2_12dsg.html

Designations explored for Giant Mine

Lyndsay Herman

Northern News Services

Published Wednesday, May 2, 2012

SOMBA K'E/YELLOWKNIFE

It may not be likely that Giant Mine will be declared a UNESCO heritage site, but a local group is exploring designation options for the contaminated landmark.

Alternatives North, a Yellowknife-based social justice coalition, commissioned a discussion paper on municipal, territorial, federal and international site designations in order to determine if any would be a viable option for Giant Mine. The paper is included as part of the coalition's submission to Giant Mine's environmental review public hearing, to be held this September through the Mackenzie Valley Environmental Review Board.

Their goal is to help future generations remember the history of Giant Mine and what is involved in the "forever-nature" of its care.

"How do we try to make sure future generations don't forget what happened and what needs to be done to take care of the frozen arsenic underground?" said Kevin O'Reilly, a spokesperson and volunteer for Alternatives North. "A designation might help people remember."

The idea of a designation was first brought forward at the Perpetual Care Workshop in September of last year. The workshop, organized by Alternatives North and the Yellowknives Dene First Nation, was held after both groups felt the developer's assessment report did not adequately cover all implications of the mine's perpetual care.

The paper found that, while there may be options available for Giant Mine, there are no site designations developed specifically for sites that are contaminated and all the designation options would require the involvement of other stakeholders to make it a reality.

"What we've found out is that there is not a clear site designation for contaminated sites," said O'Reilly. "We looked at regional, territorial, national, or even international levels and there was nothing specifically for contaminated sites."

O'Reilly said the designation study has given the group more to think about and, while they didn't find exactly what they were looking for, it has given them some options.

"The designation may not be an end in itself," he said. "It may be more of a tool for the overall perpetual care plan."



Signs at the entrance of Giant Mine may include a territorial, federal or international designation if interest groups decide it is the best option for communicating with future generations. - NNSI file photo

"The reports on perpetual care, long-term care, designation, are all building blocks and will inform what we say at the end when we prepare our submission."

O'Reilly said the focus of the Alternative's North submission to the Mackenzie Valley Environmental Review Board will be on minimizing the care required of the site for future generations and planning periodical reviews of current research that may provide better options for care of the site.

http://www.nnsi.com/frames/newspapers/2012-03/mar16_12briefs.html

News Briefs: Friday, March 16, 2012

Giant Mine conveyor coming down

The Northern-most section of the mill conveyor at the Giant Mine site will be dismantled soon.

The Giant Mine Remediation Project is waiting on a demolition permit, said Adrian Paradis, acting manager for the project. Paradis is hopeful the permit will come through today, in which case work will begin as early as tomorrow.

- Laura Busch

http://www.nnsi.com/frames/newspapers/2012-03/mar9_12g.html

Public discusses Giant Mine cleanup

Meeting attendees call for independent oversight committee

Kevin Allerston

Northern News Services

Published Friday, March 9, 2012

SOMBA K'E/YELLOWKNIFE

The Northern Frontier Visitors Centre was packed Tuesday night for a public meeting about oversight for the Giant Mine reclamation project.

Approximately 35 people were at the event, which was organized by Alternatives North to share what was being discussed during workshops on the issue held Tuesday, which continued Wednesday, at the Champagne Room on Franklin Avenue.

"I was very pleased with the turnout," said Kevin O'Reilly, a spokesperson with Alternatives North. "I think it's a good indication of the interest in the issue."

The cleanup efforts are being overseen by Aboriginal Affairs and Northern Development Canada, the same department that manages the remediation project.

During the meeting, two case studies for what oversight might look like were presented.

Laura Johnston, director of the Independent Environmental Monitoring Agency (IEMA) that monitors the Ekati Diamond Mine gave a presentation on what they do with Ekati and how something similar could work with Giant Mine. In their case, the agency receives funding from BHP Billiton, but Johnston said that doesn't stop them from being able to independently make recommendations for the best ways to protect the environment around the mine.

Representatives with the Montana-based Stillwater Good Neighbor Agreement Oversight Committee also gave presentations. In their case, they can set legally binding, measurable goals for the Stillwater Mining Company.

"I'm hoping that they will set up an environmental board that will keep the public informed and that can make recommendations saying 'this has to be done at this time, and this stuff requires immediate action,'" said lifelong Yellowknifer Fred Lemouel.



A public meeting about oversight for the remediation of Giant Mine was held Tuesday night at the Northern Frontier Visitors Centre. - Kevin Allerston/NNSL photo

"I think what we really need here is an agreement that lays out clearly what the roles and responsibilities are and who's watching over who, and I think we heard the public say that they would like that kind of agreement for Giant Mine," said O'Reilly.

The meeting also included a question and answer session, which many used as an opportunity to vent their frustration over the current status of the remediation efforts.

"There's a lot of wasted money out there and nothing's getting done," said Steve Christenson. "There's a lot of wasted money with the freezing. That's something they're going to be spending money on for years."

Frame Lake MLA Wendy Bisaro, who attended the meeting, said she agreed with sentiments raised by many in the audience that a better job has to be done of communicating what is happening with the mine.

"I've felt for quite a long time now that they haven't done a decent job of reaching out to the community," said Bisaro referring to Aboriginal Affairs "I really feel if we can get more information about what's happening, people will feel more comfortable."

The clean-up plan for Giant Mine is undergoing an environmental assessment by the Mackenzie Valley Environmental Impact Review Board. A technical report is expected March 16.

http://www.nnsi.com/frames/newspapers/2012-03/mar2_12city.html

City denied pipeline help

Review board refuses to include \$10 million upgrade in Giant Mine environmental assessment

Simon Whitehouse

Northern News Services

Published Friday, March 2, 2012

SOMBA K'E/YELLOWKNIFE

The Mackenzie Valley Environmental Impact Review Board rejected the city's request to replace a \$10-million potable water pipeline last week.

Director of public works and engineering Dennis Kefalas had written a letter in January requesting the feds pay for the underwater pipeline as part of an environmental assessment (EA) of the Giant Mine Remediation Plan.

The line runs between Pumphouse No. 1 on 48 Street and Pumphouse No. 2 at the Yellowknife River and is a major piece of ongoing efforts to upgrade the city's water treatment plant.

The city plans to start construction on the main structure of the plant this summer, with commissioning to begin in 2013, according to Kefalas.

On Feb. 20 the city received the review board's response from executive director Vern Christensen saying that because the water line was not part of the planned assessment, the review board would not fund it.

"The replacement of the water line is not part of the proposed project," Christensen stated in the letter.

"Accordingly, it is the opinion of the review board that the replacement of the water line should not be included in the EA of the Giant Mine Remediation project."

Christensen draws his reasoning in the letter from review board guidelines which state that the clean-up project does not depend on a new pipeline, that the two projects are not linked, and that the two projects are not in a close proximity.

The letter also notes that the board is aware that replacing the pipe would help alleviate fears from the public of risks to the water supply, but that the city's choice in previous years to draw water from the Yellowknife River took place long before the Giant Mine Remediation Project began.

However the city continues to make the case that because the eight-kilometre pipeline was installed by the federal government in 1969 as a safety concern out of a public fear of arsenic contamination, the line is therefore a federal asset and should be paid for by that government.

The city contends that the pipeline has about eight years left in its useful lifespan and will have to be replaced.

Mayor Gord Van Tighem said the city will continue to look for ways of appealing the decision or finding other avenues to cover the expenses, because it is simply too much for the community to pay for. He said the next step will probably be to go to the remediation project team for assistance.

"We will probably appeal (this decision) because the pipe was put into the ground by the federal government in 1969 at the request of the national Department of Health. So it is a federal asset and was put in by the federal government for a specific purpose."

Kefalas echoed the same position to councillors during Monday's meeting.

"It wasn't our choice, it was the federal government's choice to address the issue of arsenic in the water," he said.

http://www.nnsi.com/frames/newspapers/2012-02/feb1_12wl.html

City wants feds to pay for water line

Simon Whitehouse

Northern News Services

Published Wednesday, February 1, 2012

SOMBA K'E/YELLOWKNIFE

The city has put the federal government on notice that it wants money to replace a key piece of drinking water infrastructure.

On Jan. 17, Public Works director Dennis Kefalas sent a letter to Vern Christensen, executive director of the Mackenzie Valley Environmental Impact Review Board, requesting that the federal government cover the \$10 million needed to replace an underwater pipeline as part of the Giant Mine clean-up plan.

The current line, which runs about eight km between Pumphouse No. 1 on 48 Street and Pumphouse No. 2 at the Yellowknife River, is expected to reach its expiry date by 2020. The city has an eight-year window in which to find funding before a replacement is needed.

Kefalas argues that because contaminated water from Giant Mine was discharged into Yellowknife Bay, it should also be included in the clean-up plan, which is being carried out by the Department of Aboriginal Affairs and Northern Development.

The city had originally planned to discontinue collecting water upstream from Giant Mine at the Yellowknife River, and draw water from Yellowknife Bay.

Doing so would have been \$7 million cheaper but concerns from residents over arsenic contamination scuttled that plan, particular after Baker Creek overflowed its banks last spring and into a arsenic-contaminated tailings pond and back into the creek and out into Yellowknife Bay.

"Regardless of what the science says the majority of Yellowknife residents believe Yellowknife Bay will continue to be contaminated with arsenic due to historical operations and any proposed remediation processes," wrote Kefalas. "This is the reality of the situation."

In the letter, Kefalas argues part of the Giant Mine Remediation Project should include the costs of the line replacement.

The federal government had funded the original line in 1969 due to public concerns about arsenic contamination in the water source.

"Without financial assistance from other orders of government, these replacement costs will be solely on the city to absorb," Kefalas adds. "The city feels that these costs are undeserved and will place excessive financial burden on the tax base of Yellowknife."

Mayor Gord Van Tighem said the federal government should be providing more money to ensure the health and safety of the drinking water source, given this is the mandate of the Giant Mine cleanup.

"Since there is a large remediation project going on reflecting the impact of the mine, we thought it was a good idea to put a hand up and say, 'hey, part of what you should be doing is replacing this pipe because everything that we are doing is about public safety,'" Van Tighem said this week.

Van Tighem admits there is still a "level of uncertainty among residents about what could happen" with a potential contamination of arsenic in the drinking water source and this was affirmed in the Kefalas letter.

The city is currently in the design phase of building a new water treatment plant and new pumphouse.

Christensen told Yellowknifer he could not comment in detail about the letter until the review board reads it.

A decision is to be made next week when the six-member board will be meeting in Yellowknife from Feb. 7 to 9.

"We need to look at the letter to see what the implications would be to the overall process and we haven't completed that yet," said Christensen. "We would be briefing the board on that at the meeting next week and they would have to give some direction on how to manage it."

While Christensen could not comment on the implications of the request, he admitted it "would change the scope of the project, which will take some consideration."

Van Tighem was cautious about whether or not he was optimistic about a funding approval.

"It has been in discussion with the people involved in the mine remediation and the discussion has not been negative," he said.

An Aboriginal Affairs spokesperson told Yellowknifer the department wasn't prepared to comment at press time.

http://www.nnsi.com/frames/newspapers/2012-02/feb1_12giaT.html

Company exploring near Giant Mine

Manson Creek Resources Ltd., acquiring gold project near historic gold mine

Thandiwe Vela

Northern News Services

Published Wednesday, February 1, 2012

SOMBA K'E/YELLOWKNIFE

Former Yellowknife geologist Regan Chernish is returning to the city to hunt for gold.

Last month, Chernish, the president and director of Calgary-based mineral exploration company Manson Creek Resources Ltd., collected samples by snowmobile across Panarc Resources' 3,388 hectare Up Town Gold property, adjacent to the historic Giant Mine. Last week, Manson Creek announced it is acquiring a 100 per cent interest in the project.

"My samples ranged well within what we hoped, so that gives you kind of that base level yes, you know there's mineralization present," Chernish said. "The challenge is to find, essentially, a plumbing system that would distribute this gold over a large area. You need big targets for people these days."

The fact that the property is adjacent to the Yellowknife greenstone belt that produced 12 million ounces of gold from Giant and Con mines, helps, said Tom Hoefer, executive director of the NWT and Nunavut Chamber of Mines, citing an old expression in the mining industry:

"If you're going to go hunting elephants, go to elephant country. Which means, if you're going to explore for gold, go where gold has been found before."

Led by a technical team of four professional geologists, the company's focus is the acquisition and exploration of early stage gold projects across Canada, but Manson Creek's directors have had reservations regarding the permitting situation in the territory.

"I think it's encouraging that Regan and Manson Creek have decided to come back," Hoefer said, noting it's been "sadly quiet" in the territory considering the geological potential of the Yellowknife gold belt, which has seen 60 years of gold production. "Which is pretty phenomenal in Canada or anywhere else in the world to have gold production for that long. It says it was a very rich gold belt that can support mining for that length of time."



Regan Chernish, president of Manson Creek Resources Ltd. The Calgary-based exploration company is hunting for gold at the Up Town Gold property, adjacent to the historic Giant Mine site. - photo courtesy of Manson Creek Resources Ltd.

The drop in activity in the region has allowed Manson Creek to seize on the opportunity presented by the Up Town Gold property, Chernish said.

Previous exploration on the property, done primarily in the 1960s, largely ignored altered granite as a host for mineralization, he said. While the grade of gold from the Archean granite might be a fraction of the grade of Giant Mine, potential value has been demonstrated in this type of geological model as a bulk mine-able target in other parts of the country, he added.

"It's an extremely conceptual idea at this point, so the first round of work will consist of geology, and mapping," Chernish said. "Just to ensure that what we can map on surface lines up with what we hope is there."

The company has not yet firmed up its 2012 budget, but expects to spend no more than \$100,000 on the property this year, with work targeted to begin by late spring.

Manson Creek is publicly traded on the TSX Venture Exchange.

http://www.nnsi.com/frames/newspapers/2012-01/jan27_12ec.html

Ecology North celebrates 40 years

Kevin Allerston

Northern News Services

Published Friday, January 27, 2012

SOMBA K'E/YELLOWKNIFE

Ecology North celebrated its 40th anniversary this week. Members of the environmental organization scheduled a special event to honour the milestone last night at Northern United Place.

Shannon Ripley, an environmental scientist with Ecology North, has been with the group since 2007.

"In terms of the anniversary, it's pretty amazing to me to think that Ecology North began 40 years ago and it's equally amazing to me the number of different people who have been really active in the organization over that time."

The environmental group has grown a lot since it was started in 1971, when it was based out of co-founder Bob Bromley's family home.

Bromley said he got the idea for Ecology North after working with a PhD student from Iowa State College who was studying wildlife in the late 1960s.

"We were noticing that a lot of trees were dying around the mines and the lichen was disappearing from the rocks," he said.

Bromley learned a lot from the experience and at the same time saw a growing interest in environmentalism in Yellowknife, which spurred the idea to form an organization dedicated to ecology.

"We actually had it in my parent's house in the old rumpus room down in the basement and I think it was there for about the first decade," said Bromley.

Eventually, Ecology North struck a deal with the Northern Frontier Visitors Centre to use its space for a reduced rent, which lasted another decade, before moving to the Roman Empire Building.

"Our focus initially was on particularly arsenic and mercury and contamination with the mines, and at the same time there was a lot of concern being expressed by the communities across the NWT, along the Arctic Coast, which then included Nunavut, and about the garbage," Bromley said.



Dawn Tremblay, program co-ordinator with Ecology North, and the organization's co-founder, Bob Bromley, stand in front of Ecology North headquarters on Wednesday. Ecology North celebrated its 40th anniversary yesterday. - Kevin Allerston/NNSL photo

At the time, coastal communities would send garbage out into the ocean on sea ice.

Bromley said the issues facing the environment, and by extension Ecology North, haven't really changed, but have simply gotten bigger, which he said reflects on the record of Ecology North "not having achieved very much."

But there are a few notable achievements members of the organization are proud of. In 1973 Ecology North was successful in compelling the territorial government to draft its first piece of environmental legislation, which was called An Ordinance to Provide for the Conservation of the Natural and Human Environment of the Northwest Territories. Ecology North was focused on the need to clean up the Giant Mine area back in the 1970s. Then there is Yellowknife's blue bin recycling program, another Ecology North initiative.

As for the new generation of environmentalists, Bromley said he is happy with how young people have embraced environmentalism.

"Oh, it's really fantastic and they bring much more expertise to the table than I think we did in the past and instill lots of enthusiasm," he said.

One of those young people is 27-year-old Dawn Tremblay, who has served as a program co-ordinator with the group for about a year.

"It's great to be part of an organization that is long-standing and has a very good reputation in the community and an organization that has clear values," said Tremblay. "I started to become involved with Ecology North because I thought it would be a great opportunity to learn a lot and explore some issues that I'm interested in and was becoming more passionate about."

http://www.nnsi.com/frames/newspapers/2011-12/dec30_11bus.html

Lures, mines and airlines

Yellowknife businesses endure change through innovation and determination

Compiled by Sara Wilson

Northern News Services

Published Friday, December 30, 2011

SOMBA K'E/YELLOWKNIFE

Amid a bleak global economy this past year, some Yellowknife businesses pushed past the odds and recorded gains, while others succumbed to tough times.

Some city businesses were rewarded for their commitments to community and others broke the past stereotypes to define themselves in a changing market.

Music and movie lovers said farewell to CD Plus, as its Yellowknife store closed its doors last February due to poor sales. The store had to let go three full-time staff.

CD Plus opened its doors in Yellowknife seven-and-a-half years ago after purchasing Top Forty Music in the Centre Square Mall.

When the franchise opened, the store didn't have a problem moving merchandise – selling 200 or more copies in their first month of release.

"Now you're lucky to get 50 down in a month," manager Aaron Hernandez said at the time.

Four Yellowknife businesses were recognized for providing services in French in a ceremony held in the Great Hall of the legislative assembly in February.

Arctic Farmer Landscaping, Sam's Monkey Tree and Diamante's Restaurant, Francois Thibault and Diane Fortin were honoured by the Conseil de développement économique des Territoires du Nord-Ouest.



CD Plus employees Noel Hernandez, left, and Jordan Bowden lament the closing of the music and video rental franchise last February. - NNSI file photo

"I would like to congratulate the businesses and entrepreneurs being recognized here this evening," said Bob McLeod then minister of Industry, Tourism and Investment. "You represent entrepreneurial excellence among francophones in the Northwest Territories."

Blaine Nickel was announced as Det'on Cho RTL Construction's new general manager. The joint-venture company – between the Det'on Cho Corporation and RTL Robinson Enterprises – is the largest transportation, construction, aggregate crushing and logistics company in the Northwest Territories. Nickel said he was excited to help lead the company, and looks forward to helping it grow.

"It's a great opportunity and I am excited for the chance to help build a completely, truly Northern construction company," said Nickel. "This is a great chance for me to expand my experience."

Ten Diavik employees-working underground were the first Canadian mining workers to receive national certification through the Canadian Mining Credentials Program in March.

The first-of-its-kind pilot program was developed by the Mining Industry Human Council as well as industry members.

The participants from Yellowknife, Fort Simpson, Fort Resolution and Inuvik received their Level 2 underground miner certification during a ceremony at the Prince of Wales Northern Heritage Centre in Yellowknife.

Representatives from aboriginal-owned businesses gathered for a luncheon at First Air's Yellowknife headquarters in April to see the unveiling of the Northern Aboriginal Business Association's (NABA) first aboriginal business directory.

The 232-page directory is a comprehensive list of all aboriginal-owned businesses throughout the NWT.

The association was created in 2010 to promote, create and develop NWT aboriginal business opportunities.

"We've been planning this for nine months. It's been a long time coming and we are really excited. It's a great accomplishment," said Jeanne Morrison, executive director of NABA.

This past year proved to be a record-breaking one for the Yellowknife Chamber of Commerce's Spring Trade Show.

Tim Doyle, executive director of the Yellowknife Chamber of Commerce, worked the admissions desk and said more than 9,000 people attended the event held May 7 and 8. In addition to record pedestrian traffic, 174 businesses took part in 'Yellowknife's greatest indoor show.'

The Canadian Northern Economic Development Agency (CanNor) pledged almost \$900,000 to strengthen and expand the tourism sector in the Northwest Territories.

The funding will go toward six initiatives valued at \$1,104,300.

"These strategic investments will directly support the success of tourism-related businesses in the NWT by developing operator business skills, building the statistical knowledge-base and attracting new visitor dollars to the territory," said CanNor Minister Leona Aglukkaq.

CanNor is also teaming up with the GNWT to deliver an arts and crafts marketing strategy, which is to include an artists' database, retail venues and trade shows. The arts and crafts project is valued at \$28,800 over five years.

Yellowknifers John Bray and Chris Kondracki joined forces to create the 'top-selling lure' in the biggest bait and tackle shop in the city. In the first seven weeks since the original product hit Canadian Tire stores nationwide, 5,000 T-Spoon lures were sold, Kondracki told Yellowknifer in June. Kondracki is also the general manager of the department store's Yellowknife location, where the T-Spoons are outselling the hundreds of other makes it carries.

"We had no idea if we were going to sell two or 10,000," Kondracki said. "They're selling better than we thought." The popularity of the T-Spoon lies in its simplicity and novelty, because this spoon lure is actually a teaspoon.

The Det'on Cho nuna joint venture secured its contract to oversee the care and maintenance of the Giant Mine remediation site. The federal government announced July 6 the joint venture, between Det'on Cho Corp. and Nuna Logistics Ltd., would be awarded the 21-month, \$14.9-million contract.

"We are committed to supporting the local residents and their community by ensuring the integrity of the care and maintenance of the Giant Mine," Rona Ambrose, minister of the federal Department of Public Works and Government Services, stated in a written statement.

Weaver and Devore hosted a barbecue July 23, to celebrate the family-run business's 75th anniversary. Ken Weaver, 58, said he and his seven siblings have already poured a lifetime into the general store.

"Honestly, I think it's great we made it this long but I'm not so sure that we have another 75 years left in us," the eldest Weaver said.

Weaver said the siblings have been working in the store – started by his grandfather, Harry Weaver, and Bud Devore in 1936 – since as young as eight and nine years old. About 200 Yellowknifers came out to help the family celebrate their milestone.

BHP Billiton announced in November that the mining giant is considering the sale of its Ekati Diamond Mine. The company shocked the city's mining industry with the announcement and stated it is reviewing its participation in the diamond business.

The potential decision to sell affects Canada's first diamond mine, Ekati as well as Chidliak, Nunavut's diamond exploration project.

"We are doing a strategic review of whether a continued presence in the diamond industry is consistent with our overall group strategy," BHP Billiton spokesman Bronwyn Wilkinson said, declining to disclose details of the review or whether any requests for proposals have been made. "One of the possible outcomes that we would evaluate is a potential sale of all or part of our business, but it is early in the process and we can't speculate about what the outcome of that process will be at this stage."

- With files from Thandiwe Vela, Daron Letts and Guy Quenneville.

http://www.nnsi.com/frames/newspapers/2011-12/dec16_11briefs.html

Giant Mine losing signature yellow siding

Workers with the Giant Mine Remediation Team are in the process of removing the yellow metal siding at the top of the Giant Mine headframe over the next two weeks to ensure the health and safety of workers on site and the general public.

The work is expected to be finished by Dec. 23.

- Kevin Allerston

http://www.nnsi.com/frames/newspapers/2011-10/oct26_11gm.html



There are 237,000 tonnes of arsenic trioxide dust underground at Giant Mine. The federal government, through the Aboriginal Affairs and Northern Development Canada, has undertaken a clean-up of the site and is planning to freeze the toxic dust underground forever. The Giant Mine Remediation Project is currently undergoing an environmental assessment by the Mackenzie Valley Review Board. - Galit Rodan/NNSL photo

Giant mine forever

Galit Rodan

Northern News Services

Published Wednesday, October 26, 2011

SOMBA K'E/YELLOWKNIFE

Lengthy technical sessions held last week as part of the environmental assessment of the Giant Mine cleanup have helped boost community confidence in the project, but far more needs to be addressed, said Kevin O'Reilly of social justice coalition Alternatives North.

The technical sessions were attended by various stakeholders, including representatives from federal, territorial and municipal governments as well as non-governmental organizations. They were held in between two rounds of information requests and, though they were quite thorough, O'Reilly said that many important issues still remain unaddressed. There is the question of perpetual funding, a matter which resides with decision-makers in Ottawa.

As it now stands, 237,000 tonnes of toxic arsenic trioxide dust at the mine will remain underground. In the short term, the 'frozen block' method entails freezing the surrounding ground to make a frozen shell and adding water to the arsenic dust to create a frozen block. The government plans to use thermosyphons and employ a team of eight people to maintain and monitor the frozen arsenic indefinitely - a logistically demanding proposition that worries community members.

"Will there always be the funding available to monitor and replace the thermosyphons?" wondered O'Reilly. "Will there always be money to make sure that fences and berms are in place around the pit? Will there always be money to make sure the tailings are covered properly? I'm not convinced that having people in Ottawa decide on an annual basis is the best way to fund this work."

There is also the issue of what O'Reilly calls "information management" - the communication of information about the site and its maintenance requirements through future generations.

"CDs wear out," said O'Reilly. "The assumption is people have electricity, access to computers. We have to look at some other way of communicating to future generations ... How do you mark these sites in ways that people will understand what's there? Even if they don't have electricity, even if they don't speak our language."

However, Daryl Hockley, principal engineer with SRK Consulting and senior technical adviser to the project, said in an absolute worst case scenario - if all thermosyphons become ineffective - it would take another 20 years before the dust would begin to thaw.

Even then, said Hockley, any arsenic that was released from the system would still end up in the mine water treatment system and would be collected and treated. He said there will not be an environmental impact unless that system completely fails.

At the sessions, Hockley said he expects new information and research to be presented within 10 years, but a "markedly superior" option for handling the arsenic is unlikely to arise in the future.

http://www.nnsi.com/frames/newspapers/2011-10/oct21_11fsh.html

Bringing Baker Creek back

Living classroom celebrates improvement in unique watercourse

Daron Letts

Northern News Services

Published Friday, October 21, 2011

SOMBA K'E/YELLOWKNIFE

Baker Creek, like all things rare and delicate, is special.

A new Living Classroom project at the Giant Mine site teaches young fishing enthusiasts about the creek and its surrounding ecosystem.

A team of community volunteers, non-profit organizations, corporations, and government researchers joined together to celebrate the narrow, fast-flowing watercourse this fall to design and install 17 interpretive signs describing the natural systems affecting the stream.

Baker Creek originates northeast of Yellowknife and flows south through the Giant Mine site into Yellowknife Bay on Great Slave Lake. It is the only stream of its kind around Yellowknife Bay.

Video Link:

[Underwater World of Baker Creek](#)

Beginning in 2006, the creek underwent rehabilitation to alter its flow and enhance the fish habitat after years of mining destroyed the creek's ability to support aquatic life.

Today, a wide variety of fish species, as well as the invertebrates they feed on, have returned to the creek at various stages of their life cycles.

"I think it's a very productive system now," said Bruce Hanna, senior habitat biologist with Fisheries and Oceans Canada (DFO).

Hanna helped pull the Baker Creek sign project together under the umbrella of the Fly Kid Foundation.

Established in 2006, the Fly Kid Foundation is an educational non-profit organization that promotes environmental conservation and awareness by developing fly fishing opportunities for Northern youth.

The signs posted along the creek bank describe the fish that rely on the stream, such as white suckers.

"Baker Creek is possibly the only small stream where suckers from Yellowknife Bay spawn," reads one of the panels.

Other signs describe how Northern pike feed on sticklebacks near the culvert that runs beneath the Ingraham Trail, and how emerald and spot tail shiners enter the creek when water temperature rises above 15 C in summer.

Arctic grayling also migrate to upper Baker Creek to spawn in spring and early summer. The chunky gravel that lines the creek bed is well-suited for concealing eggs until they hatch. Grayling larvae hide between the rocks until they mature into tiny grayling. After three or four weeks, the young fish make their way into Yellowknife Bay. They return to their birthplace to spawn four to six years later.

"From my understanding this little creek is going to become a nursery for Yellowknife Bay," said Brian Heppelle, executive director of the Fly Kid Foundation and an environmental engineer with Environment Canada. "In the long run that is going to support angling and fishing opportunities for that bay if we do our job and conserve it properly."

Historical information relating to the natural pristine condition of Baker Creek is virtually nonexistent, said Paul Vecsei, a consultant with Golder Associates who has worked closely with DFO to survey fish diversity and population in the creek since 2007.

"There has been a dramatic improvement in fish diversity and overall numbers since the 1970s when mining was going on and Baker Creek appeared to be biologically dead," Vecsei said.

Fishing is allowable in Baker Creek but is catch and release only for Arctic grayling. Eating fish or drinking water from the creek though is discouraged and will not be possible even after the restoration process is complete, according to recommendations from the Giant Mine Remediation Project.

While most of the fish activity in the creek occurs in spring and summer when the creek level is high, there are still opportunities to see ducks and other fauna in and around the stream before the snow falls.



Mark Leonard, 5, examines a photograph of a grayling at one of 17 interpretive stations recently installed along lower Baker Creek at the Giant Mine site. - Daron Letts/NNSL photo

The Fly Kid Foundation collaborated on the Baker Creek Living Classroom project with the NWT Mining Heritage Society, the City of Yellowknife, Fisheries and Oceans Canada, Environment Canada, Aboriginal Affairs and Northern Development - Giant Mine Remediation Project, Deton'cho/ Nuna Joint Venture, Matrix Helicopters, and Diavik Diamond Mines Inc.

http://www.nnsi.com/frames/newspapers/2011-08/aug29_11edit.html

Giant Mine cleanup needs watchdog

Weekend Yellowknifer - Friday, August 26, 2011

Environment Minister Michael Miltenberger says his government will consider an independent watchdog to oversee the cleanup of Giant Mine.

His pronouncement comes a couple months after Dene National Chief Bill Erasmus called for the creation of an independent body to monitor the cleanup of the mine site, which is stuffed full of deadly arsenic trioxide. The cleanup is under the complete care and control of the federal government, save the GNWT's token \$27 million investment toward that goal, which is estimated to require up to \$300 million to complete.

Weledeh MLA Bob Bromley, who, like many in this city, questions the federal government's will to lay down the law should it be negligent in its clean-up of Giant Mine.

The Giant Mine cleanup and the monitoring of that cleanup are both being handled by the same department: Aboriginal Affairs and Northern Development (AAND).

The absurdity of this situation came to a head in May after Baker Creek, which flows through the mine site, overflowed into a tailings pond.

A cross-looking water resource officer with AAND insisted he'd press charges if it were to happen again. But does anyone really expect a bureaucrat to throw other bureaucrats in jail?

The only people who get punished in these situations are taxpayers after the department hands itself a six-figure fine.

Miltenberger told the legislative assembly that, as minor as its role in the cleanup may be, the GNWT may also be in a conflict of interest. All the more reason why the federal and territorial government departments involved should leave monitoring to someone else - a body that will be less concerned about making a show of affixing blame after something bad happens, and more worried about preventing it before it does.

We previously suggested revamping the somewhat defunct Giant Mine Community Alliance, and having the water resource officer work for it.

An election is coming up so it's doubtful much will come before then. But Yellowknife MLA candidates should be front and centre with this issue so they can hit the ground running once the campaigning is over and the governing begins.

http://www.nnsi.com/frames/newspapers/2011-08/aug19_11wad.html

A new watchdog proposed for Giant Mine

Environment minister says he will consider it

Jack Danylchuk

Northern News Services

Published Friday, August 19, 2011

SOMBA K'E/YELLOWKNIFE

Environment Minister Michael Miltenberger says he will consider an independent, arms-length watchdog for the Giant Mine clean-up project.

"I will discuss the issue of independent oversight," Miltenberger said Wednesday in response to questions from Weledeh MLA Bob Bromley.

Alarms were sounded this spring when an ice dam on Baker Creek caused it to flood into a tailings pond, and then a sinkhole threatened to flood the mine and underground chambers where more than 200,000 tonnes of arsenic trioxide are stored.

Aboriginal Affairs and Northern Development Canada manages the remediation project and monitors the effort, which Bromley said is a clear conflict of interest that led to delays in releasing information.

"The federal government needs to be put on notice that it needs to make more information available," said Bromley, who questioned whether the territorial government might also be in conflict.

The territorial government is spending \$27 million on the clean-up project, and Miltenberger said he "would be happy to look at alternative structures."

http://www.nnsi.com/frames/newspapers/2011-08/aug5_11ca.html

Report supports capping tailings pond

Decision on next step should be settled by mid-August

Daniel MacIsaac

Northern News Services

Published Friday, August 5, 2011

SOMBA K'E/YELLOWKNIFE

A new report by the Giant Mine clean-up team recommends capping an historic tailings pond on the property with layers of gravel, coarse rock and sand, so that the toxic tailings it contains never again mix with the water in nearby Baker Creek.

Aboriginal Affairs and Northern Development Canada had given the Giant Mine team until Tuesday to submit a plan outlining measures to contain or eliminate the tailings pond - also referred to as Baker Pond, Jo-Jo Lake and Jo Lake - which holds toxic by-products from gold refining, including arsenic.

The issue arose after the creek, which drains into Yellowknife Bay, flowed into and out of the tailings pond during spring breakup.

"Basically, we just don't want the creek overflowing in the spring - we want to prevent it, prevent the mobilization of tailings into Baker Creek," said Scott Stewart, an inspector with AANDC's enforcement directorate. "The plan is to take mitigative measures in Lake Jo-Jo to prevent the migration of tailings."

The recommendation to cap the tailings pond does not mean that is what will happen, however. The other option presented in the new, 160-page Giant Mine report is to dredge the pond and remove the tailings altogether.

"They've proposed both those options, and we have to make a decision," Stewart said.

The inspector said that is what he expected from the report. He said his team will now review it, as will officials from Environment Canada and the Department of Fisheries and Oceans. Stewart said they'll get together to make a decision by the middle of August, and get to work on either capping or dredging the tailings pond soon after.

"According to the plan, and if everything is approved, work should be started by September," Stewart said. "Everything I've seen points to this being resolved by the deadline of April 30 (2012)."

The Giant Mine report goes into far more detail on the two options available. Capping the tailings pond would involve placing about a half-metre of gravel and coarse rock across the tailings.

The gravel would then be covered with up to a half-metre thick layer of fine sand including organic material to allow development of a vegetative cover next year. The cap would be underlain by a high-strength geotextile, or permeable fabric, to minimize disturbance of the tailings.

http://www.nnsi.com/frames/newspapers/2011-08/aug3_11ld.html

Lake data monitored

Spindle-legged lakeside sampling station gathers information for tailings pond construction

Jack Danylchuk

Northern News Services

Published Wednesday, August 3, 2011

SOMBA K'E/YELLOWKNIFE

As lakes go, it's more puddle than body of water, covering just 4.5 hectares with an average depth of 1.5 meters. Its catchment area gathers just enough rain and snow to keep it from drying up.

The water teems with bugs and thin red worms that don't seem to mind its high arsenic load: 1.62 parts per million, or approximately three times the metal mining effluent regulations limit of 0.5.

But those unremarkable features make the lake - tucked away in the granite folds above Giant Mine - perfect for Bob Reid's purpose: designing and building better mine tailings ponds.

Before 1993, mining companies used data gathered from an evaporation pan - used to hold water and determine the quantity of evaporation at a given location - at Yellowknife Airport to gather the information they needed to design tailings ponds, said Reid, a hydrologist with the water resources division at Aboriginal Affairs and Northern Development Canada.

"Everyone knew it was wrong," said Reid, but there was no other data until he installed a lakeside monitoring station in 1993.

Bristling with sensors, the spindle-legged station samples air and water temperatures, relative humidity, wind speed and direction, rainfall, water levels and net solar radiation.

Analysis revealed that the lake loses between 400 and 427 millimetres of water a year, compared to the 470 mm that disappears from the airport evaporation pan.

"The difference is not that critical in Yellowknife," said Reid, but at more distant mine sites like Tundra, Ekati or Nanisivik, where the variance from the airport is more than 200 mm, the difference could cause problems after a mine closes and there is no one on site to manage the situation.

"We've demonstrated that just \$10,000 worth of equipment can eliminate guesswork."

Reid has battled "tooth and nail" through budget cuts to keep the station near Giant Mine running. Monitoring costs about \$500 a year and will continue, at least until Reid retires in five years - and beyond, he hopes.

http://www.nnsi.com/frames/newspapers/2011-08/aug3_11briefs.html

News Briefs: Wednesday, August 3, 2011

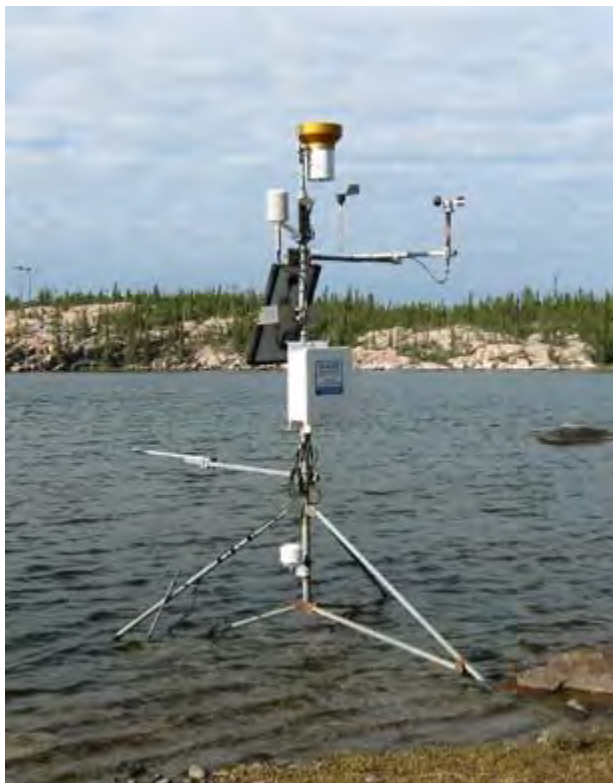
Tailings pond plan due

A plan outlining measures to make sure toxic tailings at Giant Mine never mix with the water in Baker Creek again is supposed to be made public today.

Last month, Aboriginal Affairs and Northern Development Canada gave the Giant Mine clean-up team until Aug. 1 to submit a plan - which is expected to recommend either capping or dredging an historic tailings pond at the site.

Baker Creek became a concern May 14 when it overflowed into the tailings pond and then back into the creek which flows into Back Bay.

- Daniel MacIsaac



It may look like the lunar module that Neil Armstrong and Buzz Aldrin landed on the moon, but this automatic weather station is strictly earthbound. - Jack Danylichuk/NNSL photo

http://www.nnsi.com/frames/newspapers/2011-07/jul22_11edit.html

Clean-up contract is good business for Dene

Yellowknifer - Wednesday, July 20, 2011

Close to 7.6 million ounces of gold were carted away from Giant Mine and millions of dollars in profits flowed to various corporations from 1948 until 2004.

While providing sustained growth of the City of Yellowknife, very little of the riches benefited the Yellowknives Dene, the original owners of the land.

That began to change in 2005 when Det'on Cho NUNA, a joint-venture between the Yellowknives and the Inuit, was formed.

As of July 6, that company was the winning bidder for the care and maintenance contract for the third straight time - the terms: \$14.9 million over 21 months. That follows a three-year, \$40-million contract. The Yellowknives and Inuit workers are responsible for security, water sampling and sewage treatment, public safety and monitoring buildings on the site.

The past two contracts that Det'on Cho NUNA held for the site over six years ended with not a single safety incident, Det'on Cho president and CEO Roy Erasmus Jr. said. Its a sterling record.

As Erasmus suggested, the mine, with its 237,000 tonnes of arsenic trioxide being frozen underground, is one of the worst environmental liabilities in Canadian history.

Yet now the Yellowknives are helping to oversee the cleanup of the site and building wealth at the same time.

Their initiative is to be commended as is the direction provided by the federal government, which has been supportive of Det'on Cho NUNA efforts.

So long as the mine is cleaned up, the benefits extend to us all.

http://www.nnsi.com/frames/newspapers/2011-07/jul13_11cm.html

Mine maintenance contract awarded

Det'on Cho NUNA joint venture secures latest multi-million dollar maintenance contract at Giant Mine

Thandiwe Vela

Northern News Services

Published Tuesday, July 11, 2011

SOMBA K'E/YELLOWKNIFE - First, second, and third time is the charm for the Det'on Cho NUNA joint venture, which has secured its latest contract over care and maintenance of the Giant Mine remediation site.

The federal government announced July 6 the joint venture, between Det'on Cho Corp. and Nuna Logistics Ltd., would be awarded the 21-month, \$14.9-million contract.

"We are committed to supporting the local residents and their community by ensuring the integrity of the care and maintenance of the Giant Mine," Rona Ambrose, minister of the federal Department of Public Works and Government Services said in a written statement.

Det'on Cho NUNA was first contracted for care and maintenance over the site in 2005, after the mine's owner, Royal Oak Mines Inc., went into receivership, leaving the federal government to oversee and manage the site.

An estimated 237,000 tonnes of arsenic trioxide is said to have been left at the site after more than 50 years of gold processing between 1948 and 2004. About 7.6 million ounces of gold was produced and the arsenic was left stored in rock and concrete vaults, also contaminating the surface of the Giant Mine site.

"The Yellowknives Dene did not benefit a whole lot from the mining and now we are left with one of the largest environmental disasters in Canada," Det'on Cho Corp. president and CEO Roy Erasmus Jr. said. "Our communities and our people have been significantly affected and impacted from this so seeing and realizing not only some benefit from the cleanup, but ensuring that the cleanup happens in a responsible way and is done in a way that brings back the land to as close a natural state as possible, is important to the community."

Det'on Cho is owned by the Yellowknives Dene First Nation, and NUNA is 51 per cent Inuit-owned.

Det'on Cho NUNA has a staff of about 25 to 30 people at the Giant Mine site. The contract makes the joint venture responsible for security with 24-hour surveillance, protecting the public from accidental harm, ensuring the mine remains in compliance with environmental regulations, including water sampling and sewage treatment as well as monitoring the condition of structures and facilities on the site.

The last contract, valued at \$40 million over three years, expired in March and followed a public competitive tendering process similar to the awarding of the most recent contract. Just one other application was received from another joint venture between Tlicho Engineering and Environmental Services Ltd., and Aboriginal Engineering Ltd.

Erasmus said Det'on Cho NUNA has provided site care and maintenance over the past six years with no safety incidents.

The official Giant Mine Remediation Project is awaiting review of the cleanup plan's environmental assessment by the Mackenzie Valley Environmental Impact Review Board.

Giant Mine is located 12 km from the city centre.

Mine maintenance contract awarded

Det'on Cho NUNA joint venture secures latest multi-million dollar maintenance contract at Giant Mine

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Det'on Cho Corporation president and CEO Roy Erasmus Jr. stand in front of a Giant Mine painting from artist Christopher Hunt on July 8. The painting was received as a gift after the Det'on Cho NUNA Joint Venture was awarded the most recent care and maintenance contract for the infamous mine site. - Thandiwe Vela/NNSL photo

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Giant Mine is located 12 km from the city centre.

http://www.nnsi.com/frames/newspapers/2011-07/jul27_11sh.html

Sinkhole complicates Giant cleanup

Remediation team monitoring expanding sinkhole discovered after spring thaw

Tim Edwards

Northern News Services

Published Wednesday, July 27, 2011

SOMBA K'E/YELLOWKNIFE

A sinkhole the size of a small bus in a gravel roadway at Giant Mine is being monitored by the mine's remediation team to make sure that the nearby Baker Creek doesn't flow through it.



Det'on Cho Corporation president and CEO Roy Erasmus Jr. stand in front of a Giant Mine painting from artist Christopher Hunt on July 8. The painting was received as a gift after the Det'on Cho NUNA Joint Venture was awarded the most recent care and maintenance contract for the infamous mine site. - Thandiwe Vela/NNSL photo

The worst-case scenario, according to acting project manager Adrian Paradis, would be that the creek might overflow, and flow into the sinkhole for three to four days - by which time the remediation team, comprised of staff from Aboriginal Affairs and Northern Development Canada, might not have the capacity to pump the water back out.

The water would then overflow into pit B1 - a large open pit and one of eight at the mine - and through it into the underground arsenic chambers, which the team is currently working to freeze.

In such a scenario, groundwater would be contaminated -- though Paradis also described that situation as very unlikely.

"It is a concern, but we've got it under control," he said, pointing out there is a fair amount of flat land and a large slope the creek would have to flow over before it would reach the sinkhole. The distance between the hole and the creek is currently about 17.5 metres.

Paradis said the hole was first noticed on May 2, after spring freshet - where water levels rise from heavy rain or spring thaw - at which point it was just about one-square-metre in size.

He said the team has been monitoring the sinkhole daily since then and is still looking into the cause. But the general conclusion is that the hole appeared during the melt when water sucked away some of the gravel and dirt from the road.

"Every time it rains, the process repeats itself," Paradis said.

The sinkhole is now six-square-metres in size.

In the short term, he said the team's engineers are working on a plan to make sure there isn't a chance the sinkhole could open a route between Baker Creek and the mine's underground.

And in the long term Paradis said the team plans on stabilizing the underground mining tunnels in the area and filling in pit B1 and other pits while continuing the process of freezing the arsenic chambers and cleaning up the mine site.

Yellowknives Dene Dettah Chief Ed Sangris has previously expressed concern about arsenic contamination of the area, especially after a tailings pond overflowed into Baker Creek earlier this year.

http://www.nnsi.com/frames/newspapers/2011-07/jul15_11bc.html

Tailings pond could be capped

Feds consider options to ensure Baker Creek never comes in contact with toxic by-products again

Nicole Veerman
Northern News Services
Published Friday, July 15, 2011

SOMBA K'E/YELLOWKNIFE - The Giant Mine clean-up team has come up with two possible ways to ensure toxic tailings never mix with the water in Baker Creek again.



Adrian Paradis, acting project manager of the Giant Mine remediation project, stands in front of the sinkhole on July 25, 2011. A large sinkhole has developed since May 2 between pit B1 and Baker Creek, near Giant Mine along the Ingraham trail. - Tim Edwards/NNSL photo

The options - capping or dredging a historical tailings pond near Vee Lake Road - come in response to orders given last month by a water resource officer from Aboriginal Affairs and Northern Development, formally Indian and Northern Affairs Canada.

Capping the tailings pond would involve placing about 60 centimetres of granular material on top of the historical tailings pond, then another 30 cm of finer material, mixed with organics that would allow vegetation to grow, said Robert Girvan, Giant Mine project manager for Public Works Canada.

"The benefit of this particular option is it's the gentlest way to deal with the tailings," he said at a public forum Tuesday night.

The second option is to remove the tailings by dredging. Girvan said the drawback to dredging is it will introduce more sediment into Baker Creek.

Baker Creek became a concern May 14 when a naturally forming ice dam caused the creek to overflow into the tailings pond, which holds toxic by-products from decades of gold mining. The water then drained back into the creek, which flows into Back Bay.

The diversion of water - which was redirected with the use of a dam on May 18 - caused high levels of sediment, including arsenic and other metals, to enter the creek.

Hilary Machtans of Golder Associates conducted sampling of the water following the incident.

She said it took about two weeks for the sediment levels to reach background levels - which, because Giant Mine is a contaminated site, are already above Health Canada's Canadian Drinking Water Guidelines and the Canadian Water Quality Guidelines for the Protection of Aquatic Life.

"The drinking water guidelines were designed for water that's been treated, so it doesn't exactly compare to Baker Creek," explained Machtans, noting that people should never drink water off a contaminated site. As a result, human health wasn't as great a concern as aquatic life when Golder was sampling the water, she said.

On May 16, arsenic levels in Baker Creek were 700 times higher than the acceptable levels for drinking water and 1,500 times higher than the acceptable level for the protection of aquatic life.

Levels remained high for a few days, but were back to the creek's usual levels within a couple weeks - about five to 11 times over the acceptable level for drinking water and 12 to 24 times the acceptable level for the protection of aquatic life.

Although there was a large spike, results from a fish monitoring program show that the water was not toxic to aquatic life and that fish did use the creek to spawn and lay eggs. Machtans said the eggs hatched and the young fish survived.

Aboriginal Affairs and Northern Development has given the Giant Mine team until Aug. 1 to submit a plan outlining the measures it will take to ensure toxic tailings never come in contact with Baker Creek again. All subsequent work must be finished by April 30, 2012. The team must also submit monthly progress reports from September 2011 until April 2012.

http://www.nnsi.com/frames/newspapers/2011-06/jun10_11edit.html

Feds police themselves but fine us

Weekend Yellowknifer - Friday, June 10, 2011



Baker Creek, near Vee Lake Road, as seen in mid-May 2011 after a naturally forming ice dam caused water to overflow into a historic Giant Mine tailings pond. The water subsequently drained back into the creek, along with toxic tailings. - photo courtesy of Aboriginal Affairs and Northern Development

Dene National Chief Bill Erasmus surely knows a hollow commitment when he hears one. So it's not surprising he scoffs at the federal government's pledge to prosecute itself if any more Baker Creek water flows into a toxic tailings pond.

Erasmus's scepticism was aroused by an order issued by Michael Martin, a water resource officer with the Department of Indian and Northern Affairs Canada after an ice dam caused Baker Creek to breach its banks and flow into an old tailings pond at Giant Mine last month.

The contaminated water then re-entered the creek channel and flowed into Great Slave Lake. Water samples taken afterwards showed arsenic levels at 10 times the acceptable level for drinking water and 20 times the acceptable level for the protection of aquatic life.

The intent of the water resource officer - whose criticism of the breach was unusually harsh to the ears of reporters unaccustomed to such forceful statements coming from a federal bureaucrat - is undoubtedly sincere.

But it's hard to ignore that he works for the federal department managing the cleanup of Giant Mine, the same department facing fines of up to \$100,000 and a one-year jail sentence per each day of non-compliance should his orders not be followed. Indeed, department communication staff set up Martin's interviews so he could lambaste the department's poor response to the overflowing creek.

Martin says it's up to a different department, the Department of Justice, to actually prosecute non-compliance of his orders, but if former owners of the abandoned Giant mine, who left taxpayers on the hook for around \$300 million in cleanup costs, can escape prosecution, people should be forgiven for doubting any order from one bureaucrat to another has any real teeth.

And what if fines were handed out? Does anybody believe bureaucrats involved in the Giant Mine cleanup will be hauled to jail and forced to pay \$100,000 fines?

The reality is, much like the \$450,000 fine handed to the NWT Power Corporation earlier this year for allowing a dike to breach and destroy fish habitat, it's the public paying the fines when governments get in trouble with the law.

Fines aside, Erasmus says a more independent body is needed to monitor the cleanup of Giant Mine. This is a reasonable demand considering the long-lasting impacts this mine site will have on the Yellowknives Dene and residents of this city, even after the cleanup is complete.

In 2003, a committee called the Giant Mine Community Alliance was formed to act as a liaison between the cleanup project team and the public. The group has been fairly silent lately and there are three vacancies on it according to the department's website, including two positions set aside for the public-at-large.

It seems an opportune time to revive the committee and have the water resource officer working directly for them with all the same powers and authority he has now.

That way Yellowknifers can be assured local people are involved in monitoring the Giant Mine cleanup, the federal department can be relieved of the responsibility of policing itself, and the decision to levy fines and penalties will be in the hands of people more mindful of the taxpayers who pay the penalties at the end of the day.

http://www.nnsi.com/frames/newspapers/2011-06/jun1_11bc.html

High arsenic levels in Baker Creek

Public Works insists public health and safety not at risk; grayling might not be so lucky

Nathalie Heiberg-Harrison

Northern News Services

Published Wednesday, June 1, 2011

SOMBA K'E/YELLOWKNIFE - Arsenic levels in Baker Creek are 10 times the acceptable level for drinking water and 20 times the acceptable level for protection of aquatic life, according to samples collected at the Giant Mine site just over two weeks ago.

That, combined with low water temperatures and water cloudiness, could hinder or delay Arctic grayling spawning in the creek, according to Public Works and Government Service Canada.

"It is a contaminated site," said Randal Cripps, regional director general for Public Works, although communications officials with the department insist levels aren't "acutely toxic" to fish or plankton.

Hilary Machtans of Golder Associates conducted the sampling, which showed arsenic levels were highest upstream, just off of

Vee Lake Road.

Levels were lower where the creek feeds into Yellowknife Bay, but still seven times higher than acceptable levels for drinking water and 14 times higher than acceptable levels for protection of aquatic life.

"The creek is continuing to improve in its quality," she said, "but it has not yet returned to (past levels.)"

The city of Yellowknife is currently toying with the idea of changing the city's drinking water source to Yellowknife Bay, although its water treatment plant would be outfitted with an arsenic treatment system.

"We're not expecting that people would try and drink the water from the stream, because it would never be safe for that," Henry Westermann, director of the Giant Mine project for Public Works Canada, said in response to concerns that the public could be put at risk.

"If there was a need to put a sign up for any safety reasons we would certainly do that. At this point I don't think we're seeing a safety risk that we would need to inform the public about."

Machtans echoed Westermann's statement and added, "It's my general understanding that the general public in Yellowknife do not drink this water regardless."

She said there was no reason the public should stop fishing in that portion of Yellowknife Bay, but that it might be a good idea to post a sign saying snorkeling is unsafe.

Officials made the decision to test the creek's water after an ice dam caused it to overflow over an old mine road and into a tailings pond May 14.

The creek was redirected back into its channel May 17 after crews excavated the ice that was causing the blockage.

Cripps said that Public Works will continue to monitor the situation, and will release up-to-date lab findings when they receive the newest results back.

In the meantime, they have created a fish monitoring program to watch for when and if fish return, and whether their activities are normal

http://www.nnsi.com/frames/newspapers/2011-06/jun3_11bc.html



Water samples taken from Baker Creek two weeks ago show arsenic levels 10 times the acceptable level for drinking water after the stream overflowed into a tailings pond earlier this month. - Ian Vaydik/ NNSL photo

Inspector gives Baker Creek deadline

Feds must come up with a plan to prevent spills by August, or face a fine

Nathalie Heiberg-Harrison

Northern News Services

Published Friday, June 3, 2011

SOMBA K'E/YELLOWKNIFE - A water resource officer with Aboriginal Affairs and Northern Development, formerly called Indian and Northern Affairs, has given some strict orders to his federal counterparts at Giant Mine: come up with a plan to ensure toxic tailings never mix with Baker Creek again, or face a \$100,000 fine.

The directorate has until Aug. 1 to submit their plan, and all subsequent work must be done by April 30, 2012.

Michael Martin, the water resource officer who issued the directive, said he had no other choice.

"I had reasonable ground to believe that there was potential for an adverse environmental impact. As an inspector, it's my job to enforce the Waters Act and to lay out penalties that are drawn out in the act."

He said for the protection and safety of Northerners and the environment, it was crucial the Giant Mine team find a permanent remedy so the toxic tailings never come in contact with the water again.

The plan has to outline the measures the team will take, and must be reviewed in consultation with Environment Canada and the Department of Fisheries and Oceans.

They must also submit monthly reports from September 2011 until April 2012 on their progress.

The maximum fine for not complying is up to \$100,000 and a one-year jail sentence per day they are in non-compliance.

"It's my understanding that the Giant Mine project director is taking steps to fulfill the request," Martin said.

Responding to concerns that he would have difficulty enforcing these measures when all parties are a part of Aboriginal Affairs and Northern Development, he said he has never faced issues before, and added the actual application of legislation falls with the Department of Justice.

Dene national chief Bill Erasmus is also calling on more measures to be taken at the site.

In a press release sent out yesterday, he said an independent environmental monitoring process must be established at the Giant Mine site.

"Water knows no boundaries," he said.

"Any pollution in Great Slave Lake will make its way downstream throughout Denendeh."



Water samples taken from Baker Creek two weeks ago show arsenic levels 10 times the acceptable level for drinking water after the stream overflowed into a tailings pond earlier this month. - Ian Vaydik/ NNSL photo

Water samples collected more than two weeks ago from Baker Creek, which runs into Yellowknife Bay, showed arsenic levels upstream were 10 times the acceptable level for drinking water and 20 times the acceptable level for protection of aquatic life.

Sediment samples were even higher, at 700 times the acceptable level for drinking water and 1,400 times the acceptable level for protection of aquatic life.

Erasmus said he wants to establish a more direct relationship with Aboriginal Affairs and Northern Development so when spills occur, they're notified right away.

For two weeks after the initial spill, he said the government was quiet on the subject of water testing and potential environmental contamination, and never contacted his offices.

"The government is calling this release of toxic tailings an act of nature, but there's nothing natural about arsenic-contaminated mining waste just sitting around waiting to pollute the water," Erasmus said.

He is also critical of the system put in place right now to oversee clean-up efforts at the mine.

"The way it's designed is the water license is issued by the department, then the department is the one that does the monitoring and the oversight," he said.

"There needs to be more of an independent process where the monitoring and the oversight is done by someone outside of INAC (Aboriginal Affairs and Northern Development)."

http://www.nnsi.com/frames/newspapers/2011-06/jun1_11edit.html

City water goals clear as mud

Weekend Yellowknifer - Friday, May 27, 2011

"The quality of our water source is probably one of the best in the world ... it's perfectly safe, perfectly clean."

That's what a senior official at city hall told Yellowknifer in April of last year about the city's water supply from the Yellowknife River.

The statement was made during a line of questioning about the city's proposal to move its water intake to Yellowknife Bay, and build a water treatment plant, expected to cost up to \$20 million, near Pumphouse No. 1 on 48 Street.

The city currently screens its water for fish and debris at the Yellowknife River intake and chlorinates it at Pumphouse No. 1.

The city official explained that because the federal government will likely begin forcing communities to upgrade water treatment facilities within five years, the city was going ahead with building this extremely expensive water treatment plant so as to be "proactive and have it done on our schedule rather than someone else's schedule."

The city would likely need to borrow \$10 million to finance the project, the official said, which under GNWT rules, should require voter approval much as borrowing for the geothermal project did. As many readers will recall, residents rejected the city's proposal to borrow up to \$49 million toward that project last March.

Leaving aside residents' fears about arsenic trioxide in Yellowknife Bay for a moment, the city hasn't explained what the consequences are should it decide not to build the treatment plant. Yellowknife has been trying to get a straight answer from the city on that issue for more than a year with less than satisfactory results.

Mayor Gord Van Tighem told Yellowknife two weeks ago that the plant was needed because of "regulations" adopted by the Canadian Council of Ministers of the Environment - an inter-governmental group of provincial and territorial ministers of the environment - a few years after the E. coli outbreak in Walkerton, Ont., in 2000.

This group is responsible for Guidelines for Canadian Drinking Water Quality, the standard used by communities nationwide. The key here, of course, is the word "guidelines." According to the dictionary, a guideline is "a principle or instruction set forth as a guide," as in something one SHOULD do.

Not surprisingly, the water guidelines contain words like "should" and "recommend;" they don't appear to state anywhere that these are rules and regulations that MUST be followed. Nor can we find anything in the guidelines stating it's a "requirement" for the water to undergo a filtration process, as the city's water treatment plant fact sheet insists.

Indeed, in 2008, the director of community operations for the Department of Municipal and Community Affairs, while commenting on the construction of five filtration plants in NWT communities that were experiencing issues with water turbidity, had this to say: "These are guidelines, not laws but we encourage (communities) to follow that ... Some of our communities are very lucky because they have a good quality of water."

Yellowknife must be one of the lucky ones considering what our city official had to say about our "perfectly safe, perfectly clean water."

If moving the city's water intake to Yellowknife Bay was about saving money it could very well be a worthy venture. The city says replacing the eight-km long underwater pipeline from the Yellowknife River to Pumphouse No. 1 will cost about \$10 million, while an arsenic treatment system at the water treatment plant would cost \$3 million.

Arsenic from Giant Mine is somewhat of a concern but recent tests have shown levels are below the accepted guidelines and there hasn't been any mining activity at Giant for years.

But what city councillors need to ask is whether the water treatment plant is necessary at all. Does it need to be built, or is it simply an attractive project for city bureaucrats?

If the latter is the case, then common sense would dictate taxpayers would be better served if plans for a \$20 million water treatment plant were scrapped and the line to the Yellowknife River was replaced when it reaches the end of its expected lifespan in 2020.

Council owes residents answers to these questions.

http://www.nnsi.com/frames/newspapers/2011-05/may27_11briefs.html

News Briefs: Friday, May 27, 2011

No word yet on Baker Creek

Lab results have not yet been released from samples of Baker creek water taken to look for arsenic contamination

after the creek overflowed due to an ice dam on May 14.

The results were expected back last week, but officials have yet to make the findings public. At the time they took the samples, Henry Westermann, the director of the Giant Mine project for public works and government services, said the breach wasn't a cause for concern and wouldn't effect public health or safety.

- Nathalie Heiberg-Harrison

http://www.nnsi.com/frames/newspapers/2011-05/may20_11wat.html

Chief worried about changing water source to Yellowknife Bay

Concerns raised about arsenic as Baker Creek overflows into tailings pond

Nicole Veerman

Northern News Services

Published Friday, May 20, 2011

SOMBA K'E/YELLOWKNIFE - A naturally forming ice dam caused water in Baker Creek to overflow into a tailings pond near the Vee Lake turnoff last weekend, and now the water is draining back into the creek, which leads to Back Bay.



Dettah Chief Ed Sangris points toward Baker Creek, past Giant Mine, Wednesday. Water from the creek started overflowing into a tailings pond last weekend, which Sangris worries could be contaminated with deadly arsenic trioxide. That water is now draining back into the creek and into Great Slave Lake. - Ian Vaydik/NNSL photo

Dettah Chief Ed Sangris said a mishap like this is proof the city shouldn't move its water source downstream to Yellowknife Bay from the Yellowknife River, as it is proposing right now.

"You know how the city talk about switching the water intake from the river to the bay, well if the mayor's not careful, he's going to kill everybody in Yellowknife because stuff like this goes on," Sangris said, pointing towards the 237,000 tonnes of deadly arsenic trioxide - a byproduct from decades of roasting gold ore at Giant Mine through which the creek runs - stored underground.

"It's going to affect everybody's life, not only the First Nations."

As of noon Wednesday, the overflowing water had been diverted back into its channel and away from the tailings pond, located at the back of Baker Pond, said Henry Westermann, director of the Giant Mine project for Public Works and Government Services Canada.

Mayor Gord Van Tighem said the overflowing creek is no reason to write off Yellowknife Bay as a drinking water source.

"I think it's more an indication that there are people putting safeguards in place to ensure that doesn't become a problem and they responded immediately and that's why they're there."

Westermann said when the water diverted into the tailings pond, it picked up sediment that then flowed into Back Bay.

Public Works Canada couldn't say what was in the water or the tailings pond because it's currently being tested.

Water samples that were expected back from the lab Thursday afternoon have been taken throughout the creek, said Westermann.

"When we get the results we'll be working again with the regulatory departments to assess what actually entered into the stream and into Back Bay," he said Thursday morning.

Westermann said the breach is a concern, but he doesn't think it's a public health or safety risk.

Changing the city's water source to Yellowknife Bay, which encompasses Back Bay, would require the city to install an arsenic treatment system in the water treatment plant set to be built for about \$18 million next year.

The city wants to change its drinking water source to Yellowknife Bay because the eight-km-long underwater pipeline running from the river to Pumphouse No. 1 on 48 Street near downtown is reaching the end of its life. The pipeline, which has been in place since 1968, needs to be replaced by 2020.

At a public meeting last week, a consultant hired by the city to design the water treatment plant said the cost of replacing the pipeline would be about \$10 million, while installing an arsenic filter and drawing water from the bay would cost \$3 million.

If approved by council, the city's drinking water source will change to Yellowknife Bay around 2020 to coincide with the end of the water pipeline's lifespan.

"The decision as to where the water source will eventually be is something to be looked at over the next eight years, not today or tomorrow. It's a longer-term discussion," said Van Tighem.

http://www.nnsi.com/frames/newspapers/2011-05/may13_11wat.html

Residents' arsenic fears cloud city's water plan

Nicole Veerman

Northern News Services

Published Friday, May 13, 2011

SOMBA K'E/YELLOWKNIFE - The city is considering changing its drinking water source to Yellowknife Bay from the Yellowknife River - a switch that would require an arsenic treatment system.

The recommendation, from Edmonton-based AECOM, the company hired by the city to design the new water treatment plant to be constructed next year, was presented to about 30 Yellowknifers Tuesday night during an information session at the Yellowknife Inn.

Richard Tombs, a process engineer for AECOM, told the crowd that the consensus within his company is the city should move "forward with the design of a water treatment plant that utilizes the bay as the raw water source, that includes an arsenic treatment stage to address the annual variations in arsenic and the presence of Giant Mine."

The recommendation came with resistance from residents.

"I live here and lived here for decades," said Lorraine Hewlett. "It's really, to me, really very upsetting, the idea that our water source would be drawn downstream from a toxic waste site," she said, referring to Giant Mine, where arsenic cleanup is currently underway.

"I really in my heart feel that if you were to ask people in Yellowknife, 'Do you want to draw your water source from upstream of the toxic waste site or from downstream of the toxic waste site?' I'm pretty sure the majority of people would say upstream."

According to the Canadian Drinking Water Quality Guidelines, the maximum arsenic concentration allowed in water is 10 parts per billion. In studies done by the city since 2005, water in Yellowknife Bay has not exceeded that number, and in most cases, it was less than three parts per billion, said Tombs.

"Under the current license for water supply for the city of Yellowknife, Yellowknife Bay can be used for an emergency source of water and it has been used previously when the pipeline has required repairs," said Tombs, noting that both the bay and river are stable, high-quality water sources.

Tombs said the 8-km-long underwater pipeline used to bring water from the river to Pumphouse No. 1 downtown is reaching the end of its lifespan. The pipeline, which has been in place since 1968, needs to be replaced by 2020, he said, adding this was a major consideration in the change of water source.

The replacement would cost the city around \$10 million, while the installation of an arsenic treatment system at the new water treatment plant - if Yellowknife Bay becomes the city's water source - would be about \$3 million, said Tombs.

Long-time Yellowknife resident Eric Henderson, who attended the meeting, questioned the city's desire to change the "perfectly good system upstream."

"I feel taking the lake water isn't the safe way to go," he said.

If approved by council, the city's drinking water source will change to Yellowknife Bay around 2020 to coincide with the end of the water pipeline's lifespan.

The construction of a water treatment plant is a requirement of the federal government and will happen whether the water source is changed or not, said Mayor Gord Van Tighem.

"In the regulations that the Canadian Council for Ministers of the Environment put out about two or three years after Walkerton, it requires that there be filtration and we didn't do filtration before," he said.

Currently, Yellowknife tap water is only screened to keep out debris and fish and then chlorinated at Pumphouse No. 1.

The new plant, scheduled to be built in 2012 for about \$18 million, will use a membrane filtration system that traps small particles in the water, such as silt and sediment.

http://www.nnsi.com/frames/newspapers/2011-04/apr15_11frz.html

The freeze begins at Giant Mine

Katherine Hudson
Northern News Services
Published Friday, April 15, 2011

SOMBA K'E/YELLOWKNIFE - The freeze system is fully operational and freezing has begun on the outside of arsenic trioxide Chamber No. 10 as of the last week of March, according to the Department of Indian and Northern Affairs (INAC).

"It is great news that we are actually seeing the freezing begin. Giant Mine is in our backyard, and we care about implementing a permanent solution," said a spokesperson who asked not to be identified due to constraints from Ottawa put on the department in communicating to the media in the midst of the federal election campaign.



Benny Nordahn, a mine system officer with INAC's Giant Mine Remediation Project, inspects the progress of the frozen shell forming around Chamber No. 10 during the last week of March. - photo courtesy of Indian and Northern Affairs Canada

There are about 237,000 tonnes of arsenic trioxide dust underground at Giant Mine, which is somewhat soluble in water and deadly poisonous if ingested. It's the by-product of more than 50 years of smelting at the mine.

The full frozen shell at Chamber No. 10 is expected to be complete by early 2012. There are 14 underground arsenic trioxide chambers which will be frozen in place pending an environmental assessment, with Chamber No. 10 being part of an optimization study which is gathering information on the project, such as power requirements, rate of freezing and other project management data.

Once the environmental assessment by the Mackenzie Valley Environmental Impact Review Board is complete, which could be as early as next year, INAC will proceed with cleanup of the mine site.

Kevin O'Reilly, of Alternatives North, said the way the government arrived at the freeze optimization study is questionable.

"I think it's probably worthwhile testing it, but the way in which it was hived off really amounts to project-splitting which is not a good idea," he said.

"There's a lot of resources that were invested into doing that study. I'm surprised it took them as long as it did to get it up and going," he said.

The cleanup plan, along with a water licence application, was submitted to the Mackenzie Valley Land and Water Board in 2007, according to the spokesperson. In 2008, the City of Yellowknife submitted the plan for an environmental assessment to the review board. The freeze optimization study was exempt from the assessment in 2008; work on it began in 2009.

The decision to go with the "frozen block method" was made after exploring a total of 56 options, which were first whittled down to 19, then three and finally to the freezing plan.

The spokesperson said the air in the underground tunnel is heated, so the temperature is approximately 5 C.

"In the actual 10-foot wall, the temperature currently varies between -2 C and -5 C. The goal is to reach a minimum temperature of -10 C on the surface of the wall."

According to the spokesperson, biodegradable food-grade glycol coolant is being pumped from the freeze system on the surface, through the pipes.

The end goal of the project is to have all the cleanup finalized in eight to 10 years, including the capping of the tailings ponds, demolishing the buildings, establishing a new water treatment system, freezing all 14 arsenic trioxide chambers and decommissioning the mine.

O'Reilly said he wondered if there are any plans for ongoing research and development into other technologies to deal with the arsenic trioxide dust underground.

The spokesperson said through the environmental assessment process, the question has been asked if freezing the arsenic is reversible. The spokesperson said although it is reversible, the frozen block method is a "permanent solution."

http://www.nnsi.com/frames/newspapers/2011-02/feb9_11c.html

It's getting cold down there

Giant Mine's freeze optimization study underway

Katherine Hudson

Northern News Services

Published Tuesday, February 8, 2011

SOMBA K'E/YELLOWKNIFE - After a dark and bumpy 15-minute drive into the depths of Giant Mine, the manager of the mine's clean up explained the progress of the freeze optimization study Monday, the first step toward the Giant Mine Remediation Project.

All 14 underground arsenic trioxide chambers will be frozen in place pending an environmental assessment, said Martin Gavin, who heads up the remediation project for Indian and Northern Affairs Canada. There are about 237,000 tonnes of arsenic trioxide dust, which can be deadly if ingested when mixed with water, the by-product of more than 50 years of smelting at the mine.

The study is in its conditioning stage, according to Gavin, with the facility pumping a super-cooled liquid through pipes around Chamber 10, one of 14 arsenic trioxide chambers, freezing rock around the area, locking in large storage pockets of arsenic trioxide dust held there.

The actual freezing began in mid-December with the development of one freeze optimization study pipe every four metres extending back in the rock around Chamber 10, creating a frozen shell. The last of the pipes will be operational in the next few days, according to Gavin.

"The coolant comes out of a plant and is sent here and it withdraws the heat from the rock," said Gavin.



Martin Gavin, manager of the Giant Mine Remediation Project for the Department of Indian and Northern Affairs (INAC), stands outside the concrete wall of an arsenic chamber in Giant Mine Monday morning. There are about 237,000 tonnes of arsenic trioxide dust stored underground at the site, which is the by-product of more than 50 years of operation. - Katherine Hudson/NNSL photo

He said the team of workers has been checking the pipes for leaks by pumping air through as well as checking alarms systems, switches and sensors along the 8 kilometres of piping.

The official opening of the study will be some time in March or April.

"It's very exciting. It started with a concept and it's going to be a reality in a very short period of time," said Gavin.

He said the study will go on for years, with the mine continuing to use data from the first chamber that is frozen.

"If we know how long it takes for the freeze wall to expand and become established, then that's our project management data and we know to plan the bigger project," said Gavin.

"So with any project, you realize increased efficiency is approximately 10 per cent after you do it the second time and it diminishes from that point, in this case if we save 10 per cent of what would have been an operational cost, saving somewhere in the vicinity of \$20 million of taxpayers' dollars ... It allows us to use this to learn from – to do things efficiently in the fixture and it supports us through the environmental assessment process."

Once the environmental assessment is concluded in a year or two, Gavin said the designs and implementation strategies will be stable and the project will move forward with the remediation plan led by the Mackenzie Valley Environmental Impact Review Board.

"From the point that the underground piece starts, the surface piece will also be going on. It's essentially two project that's are working together under one big project. The surface and the underground have to work cooperatively," he said.

Gavin said the end goal is to have all the remediation finalized in eight years, including the capping of the tailings ponds, demolishing the buildings, establishing a new water treatment system, freezing the arsenic trioxide chambers and decommissioning the mine.

"The mine will need to operate with ventilation for a number of years after that so we can come down and look at these things and then after that, up to 10 years, there will be a significant period of time where there's actually care and maintenance of the project systems that have just been put in," said Gavin.

http://www.nnsi.com/frames/newspapers/2010-12/dec3_10fa.html

Feds in a hurry to freeze arsenic

Study on freezing not part of overall assessment of Giant Mine clean-up

Terrence McEachern

Northern News Services

Published Friday, December 3, 2010

SOMBA K'E/YELLOWKNIFE - With the freezing of 237,000 tonnes of arsenic trioxide set to begin at Giant Mine in January, a former city councillor is questioning how the project was able to proceed two years ago without undergoing an environmental assessment.

"In my view, it showed the project wasn't ready to move ahead if they didn't really know if the technology would work or not, and that allowing this to go ahead was really what you might call 'project splitting' - where you start to do the project before you have it approved," said Kevin O'Reilly, a former city councillor who has been a regular voice on environmental issues in the North through his work with groups like Alternatives North.

The issue came up during a media briefing last week by the Department of Indian and Northern Affairs (INAC) on the remediation of Giant Mine.

Martin Gavin, the department's manager of the Giant Mine Remediation Project, explained that given the lengthy environmental assessment process, and a goal to complete the clean-up of Giant Mine "as soon as possible following the (environmental assessment) process," the department asked for an exemption on assessing its plan to freeze the arsenic buried under Giant Mine.

"We asked the board to consider allowing INAC to proceed with an optimization study so that we could gather some design that we would need or we would want to utilize in the carrying out of the remediation plan - the idea being if folks had some 'real time, made in Yellowknife' data that we could actually feed them back," said Gavin.

He insisted that even though the freezing study wasn't required to undergo an environmental assessment, the freezing process is "absolutely" safe to both the public and the environment.

In an earlier interview, Gavin explained that even though arsenic trioxide - slightly soluble in water and deadly poisonous if ingested - hasn't been encased behind a frozen wall before, there are several other examples of the freezing technology successfully working in other areas.

Mayor Gord Van Tigham agreed there are successful examples of the freezing technology. He's also confident in the experts, including international experts, who reviewed the government's plans and agreed with the recommendations that the freezing study need not undergo an environmental assessment.

The remediation project - the total clean-up of the mine site, including demolishing surface buildings and cleaning up the tailings ponds - is currently at the environmental assessment review stage. The review will investigate whether the project "is likely to cause significant adverse impacts on the environment or if it is likely to cause significant public concern," according to the Mackenzie Valley Land and Water Board website.

This, however, will not include a closer look at the freezing study, which calls for arsenic to be frozen underground at Giant Mine in perpetuity. The plan is to encase Chamber 10 of the 14 arsenic chambers in a 10-metre wall of ice.

To freeze the chamber, pipes have been inserted ten metres around and beneath the chamber and dynalene a refrigerator coolant, will be pumped into the pipes to freeze the rock between the pipe and the chamber. The arsenic stored underground at the site is a by-product of smelting at the mine.

Originally, the entire remediation project was exempted from the environmental assessment process, said O'Reilly, but after a complaint from the Yellowknives Dene First Nations, city council looked at the matter and triggered a mandatory environmental assessment review after O'Reilly and others made presentations to council. On March 31, 2008, the City of Yellowknife contacted the Mackenzie Valley Land and Water Board and used its authority to trigger a mandatory environmental assessment for the remediation project.

But in a Dec. 17, 2008 written decision, the water board determined the freezing study would be a separate project from the Giant Mine Remediation Project and not "interconnected."

Zabey Nevitt, executive director of the water board, could not be reached for comment by press time.

Giant Mine, located about 5 km from Yellowknife off the Ingraham Trail, first opened in 1948. INAC took over responsibility for the site after Royal Oak went bankrupt in 1999. It is the second largest federal contaminated mine in Canada, next to the Faro Mine in Yukon, said Gavin.

http://www.nnsi.com/frames/newspapers/2008-03/mar21_08giant.html

'Forever is a long time'

Jess McDiarmid

YELLOWKNIFE - The federal government's plan to clean up roughly a quarter of a million tonnes of arsenic stored underground at Giant Mine will go through an environmental assessment before work can begin, following a unanimous vote by city council in favour of ordering the review.

Councillors cited public fear and distrust of the proposal to freeze the 237,000 tonnes of arsenic trioxide dust under the mine as its chief consideration in referring the project to assessment.

"There's no doubt about the high level of public concern, and I'd go so far as to say fear, on the part of the public," said Coun. Lydia Bardak at the special council meeting Tuesday evening.

Coun. David Wind said the project raised obvious concern among the public.

"There's a huge quantity of arsenic next to one of the largest freshwater lakes in the world."

Regulated under the Mackenzie Valley Resource Management Act, environmental assessments are public planning processes called when a project could have adverse environmental impacts or trigger major public concern.

"There's clearly public concern here," said Coun. Paul Falvo, noting the dozens of people who came to the meeting as well as e-mails and phone calls council received from residents.

Former city councillor Kevin O'Reilly, one of a handful of presenters urging the city to order a review of Giant Mine cleanup, said it was up to the city to take leadership and ensure the cleanup is done right. "We helped create this mess, everyone in this room, because we didn't stop it from happening," said O'Reilly. "And we're responsible for cleaning it up." - Jess McDiarmid/NNSL photo

He said council had to consider long-time residents such as the Yellowknives Dene, who wrote requesting an assessment, as well as future generations.

"We also have to think about people who have not been here for very long, like our children and their children. We owe it to them to do this right," said Falvo. "I believe there is clearly potential for adverse environmental impacts here. Forever is a long time."

The Mackenzie Valley Land and Water Board ruled in February that the \$350-million remediation plan did not meet the criteria for an environmental assessment, leaving it up to the city or the Mackenzie Valley Environmental Impact Review Board to trigger the process.

Chair Willard Hagen said last week the board didn't feel existing concern merited an assessment, a view contradicting a previous staff report recommending the board order further scrutiny. That recommendation was largely based on the Yellowknives Dene's request for the assessment.

He said an environmental assessment would take years, delaying cleanup and costing taxpayers millions, and that the proposal had already been "studied to death."

Councillors heard from seven presenters prior to voting on the matter, including Dettah Chief Edward Sangris and representatives from the territorial government and the federal department responsible for the cleanup.

Sangris told council that the mine and emergency measures to contain the arsenic within it have caused hardship for Dene families and they took the decision not to refer the proposal to assessment "real hard."

"That's just like saying, we took your land, we extracted the gold and we give you back the land, damaged land," said Sangris. Billions of dollars worth of gold was extracted from Giant Mine, he said, yet roads in Ndilo aren't paved.

"That's how we're treated," said Sangris. "I'm here to plea with you. It should go to an environmental assessment. That way we secure the land for future generations."

Some councillors said the city had a moral imperative to order the assessment on behalf of the Yellowknives Dene, since legislation doesn't give the First Nation that authority.

"It's important to respect the fact that they can't request this, but we can," said Coun. Kevin Kennedy.

Councillors also said they'd like to see more independent oversight of the project. Indian and Northern Affairs Canada (INAC) developed the proposal and is responsible for cleanup costs, implementation and inspections.

"The footprint you see everywhere you look is INAC," said Wind.

Councillors said, however, that they believed the department was acting "in good faith."

Remediation project manager Bill Mitchell, who addressed council on behalf of INAC, said the department was hopeful the level of review the proposal has already undergone by numerous federal departments and a panel of outside experts would be sufficient to proceed with the cleanup more quickly.

Emergency measures have been required in previous years, said Mitchell, and the bulkheads on some of the 15 vaults containing the arsenic are deteriorating, which could cause leakage into the mine.

"I don't want to be alarmist but we've had issues over the past couple of years potentially where we could have had a flooding situation at the mine," said Mitchell. "We've been able, by quick reaction, to avert that ... but these risks are ever-present."

Emergency work could still be done during an environmental assessment, a process that INAC is not opposed to and is prepared to proceed with, said Mitchell.

Bob Bailey, deputy minister of Environment and Natural Resources with the territorial government, said the GNWT accepted the proposed method of freezing the arsenic as the best available and believed proceeding as quickly as possible to be in everyone's best interest.

But the GNWT was not averse to an environmental assessment, he said.

Giant Mine, five kilometres north of Yellowknife, produced more than seven million ounces of gold during its roughly 50 years in operation.

Coun. Dave McCann wasn't at Tuesday's meeting and Coun. Bob Brooks left prior to the Giant Mine debate, citing a conflict of interest due to his job with the territorial government

Friday, March 14, 2008

The squirrel, the bear and the wolverine

In the animal kingdom, bears do what they want despite the chattering of squirrels.

So does the Department Indian and Northern Affairs. DIAND's regulatory paws reach into every corner of the North. Now that big old bear in bureaucratic clothing is at Yellowknife's borders, poised to sink its teeth into the Giant mine cleanup.

Three years ago, DIAND asked Northerners what they wanted done about Giant's 237,000 tonnes of toxic arsenic trioxide dust. Then, over objections of the territorial government and other Northern environmental voices, an Ottawa committee of senior DIAND bureaucrats decided on a \$300 million plan to freeze the vaults of arsenic forever, or until somebody buys it.

When the arsenic popsicle proposal was put to the Mackenzie Valley Land and Water Board, board staff recommended a full environmental assessment, based upon public concern and the requests of the Yellowknives Dene.

Water Board Chair and DIAND appointee Willard Hagen said no to an assessment. "It's been studied to death," he said. An environmental assessment, as the Chamber of Mines knows, is like a wolverine - unpredictable with very sharp teeth.

But the City of Yellowknife needs an assessment. Like most smart little squirrels, Yellowknifers think about the future and wonder what that big old bear is really going to do. Bears hibernate for long periods of time, can be very messy and never admit mistakes. A wolverine may help keep that old bear awake and moving in the right direction.

City council is asking if Yellowknifers want an environmental assessment at a special meeting Tuesday night in council chambers. Last chance for the squirrels to team up with the wolverine before the bear gets to town.

<http://www.cbc.ca/news/canada/north/story/2008/03/19/giant-vote.html>

Yellowknife council votes to force Giant Mine cleanup review

Last Updated: Wednesday, March 19, 2008 | 9:44 AM CT

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[Yellowknife city council calls for review of Giant Mine cleanup](#)

['Nobody wins' with environmental review of Giant Mine cleanup: board chair](#)

Audio

Joslyn Oosenbrug reports for CBC Radio (Runs: 1:21)

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Cleanup plans for the defunct Giant Mine will undergo an environmental assessment after all, on the orders of Yellowknife city council.

Councillors voted Tuesday to force an assessment, even though the Mackenzie Land and Water Board decided last month to approve the federal government's \$300-million mine remediation plan without the need for one.

In making its decision, the board had said holding an environmental assessment would further delay cleanup work that must be done now on the toxic mine site.

Councillors agreed there is enough public concern to warrant further scrutiny of the plan, which involves filling in waste tailings ponds, removing decrepit buildings and freezing 273,000 tonnes of poisonous arsenic trioxide dust currently stored underground.

"I don't think that in a thousand or even a hundred years, it's going to matter whether we start this a year or two later," Coun. Paul Falvo said at Tuesday night's council meeting.

"We owe it to our citizens to take the time to do this right."

The environmental assessment is expected to take up to three years.

The Giant Mine produced more than seven million ounces of gold from 1948 until 1999. The federal Indian and Northern Affairs Department is now responsible for cleaning up the leftover contamination and monitoring the site.

The city's request for an assessment would normally trigger one automatically, had it asked for one when the land and water board was deciding whether to do so.

But the city had thought other agencies with the authority to trigger a review would do so, reacting with shock when no one came forward.

Dozens of people packed council chambers, many of whom called for the city to order the assessment.

"They're trying to force us to say, 'Hurry up and clean it up,'" Chief Edward Sangris of the Yellowknives Dene said.

"But it took them 71 years to contaminate it. Did we say, 'Hurry up, we're worried about contamination?'"

Councillors said they are concerned with the lack of an independent agency to monitor the federal department's cleanup work. They also said the remediation plan must take into account the city's plans to build on the site eventually.

Kevin O'Reilly, an environmental activist and former city councillor, said the city has to be prepared if anything goes wrong and the city is left on the hook financially.

"The city needs to start to stand up for itself as a corporation and the residents of this community," O'Reilly told councillors.

"You need to get some professional and technical legal assistance when it comes to mine closure," he added. "You do this whenever there's a rate application for the Public Utilities Board, and you should be doing this to protect your rights and interests when it comes to mine reclamation."

<http://www.cbc.ca/news/canada/new-brunswick/story/2012/05/07/pol-mckie-contaminated-sites-treasury-board-environment.html>

Contaminated sites across Canada require clean up

By David McKie, [CBC News](#)

Posted: May 7, 2012 1:24 PM AT

Last Updated: May 8, 2012 11:09 AM AT



Thousands of containers of contaminated soil and other waste sit at an old Distant Early Warning System site at Cape Dyer, Nunavut, awaiting transport south in July, 2011. DEW line sites are some of the 142 contaminated sites that required clean up across Canada according to the most recent data. (Dave Eagles/DND/Canadian Press)

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[A Federal Approach to Contaminated Sites \(pdf\)](#)

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The federal government identified 142 contaminated sites as of last September where pollutants need to be contained or eliminated because of a long-term or immediate threat to human health or the environment.

That's according to a CBC News analysis of the most recently available data compiled by the Treasury Board, one of the departments responsible for maintaining an inventory of sites. Much of the data is [available online](#), but CBC News obtained more complete data under an access-to-information request.

(Source: Treasury Board, Analysis: David McKie, CBC News)

The 142 sites, included in the map above, are only those that have reached step eight in a long process that federal departments and agencies must follow to assess and develop plans to clean up or contain damage posed by contaminants.

Step eight is what's called "remediation/risk management strategy," which includes identifying the contaminants and whether they are present in soil or groundwater, and developing a plan to remove or treat the contaminants, as well as a detailed contingency plan in case the contaminants are released into the environment.

(For an explanation of how these steps work, see pages 14 to 36 of Contaminated Sites Management Working Group's report, [A Federal Approach to Contaminated Sites](#).)

Contaminated sites that fall into this category dot the Canadian landscape, ranging from decommissioned Distant Early Warning sites that form the so-called DEW line in Canada's far north, to native reserves, to sites closer to major cities, such as Montreal's Lachine Canal and Ottawa's Macdonald-Cartier Airport.

Some work at the 142 sites is underway. The government [announced more than \\$14 million last month](#) to clean up 21 DEW line sites that were last used in 1993, with the final two scheduled to be done next year.

The 142 sites are but a handful of the thousands of potential sites requiring clean up that have been identified since the department began tracking them in the 1990s. In the 2004 budget, the government set aside \$3.5 billion for the task of assessing and developing plans to ensure these sites cease to pose a risk to human health and the environment. So far, the government has spent just over \$1 billion, and that doesn't include additional money still needed to identify new sites.

In 2005, the government developed what it called the Federal Contaminated Action Plan under the joint direction of the Treasury Board and Environment Canada, which included the commitment to ensure that departments such as National Defence, Aboriginal Affairs and Northern Development, Transport Canada and Fisheries and Oceans Canada, the four departments that are responsible for most of the contaminated sites, develop regular plans and report on their progress.

Some of the largest problems have been abandoned mines in the North such as the Giant Mine just outside Yellowknife in the Northwest Territories. According to the most recent data analyzed by CBC News, the mine is at step seven.

The Commissioner of the Environment and Sustainable Development is set to deliver an update on Tuesday on how the contaminated action plan is working. In [his 2008 assessment](#), the commissioner noted that while the four departments had made progress, there was still a lot more work to be done. The commissioner also recommended ways that Treasury Board and Environment Canada could improve oversight of the program.

For instance, many of the contaminants come from petroleum stored in underground storage tanks. In the 2008 report, the commissioner gave Environment Canada an "unsatisfactory" mark for failing to force the four departments to deal with petroleum storage tanks considered to be "high-risk."

Environment Canada, the audit concluded, "has done limited inspections of petroleum storage tanks on federal facilities to ensure that departments were registering them, as required under the 1997 regulations." The report also noted the risk posed by these storage tanks is serious.

"Depending on the surrounding environment and the amount and type of petroleum products that have spilled or leaked, the impact could be very significant. For example, one litre of gasoline can render one million litres of water unfit for human consumption."

The environment commissioner will also report Tuesday on the government's progress in meeting its 2020 emissions-reduction targets, and will make his third and final report on Canada's Kyoto Protocol. The Conservatives withdrew from the Kyoto agreement in late 2011.

<http://www.cbc.ca/news/canada/north/story/2008/07/23/yknife-giant.html>

Yellowknife seeks compensation in Giant Mine cleanup

Last Updated: Wednesday, July 23, 2008 | 6:25 PM CT

Internal Links

[Yellowknife council votes to force Giant Mine cleanup review](#)

The City of Yellowknife wants to be compensated for land at the Giant Mine site that will not or cannot be cleaned up, Mayor Gordon Van Tighem said Wednesday.

The defunct gold mine, which produced more than seven million ounces of gold from 1948 to 1999, sits within the N.W.T. capital's boundaries.

The federal Indian and Northern Affairs Department is responsible for cleaning up the remaining contamination on the property.

It has a \$300-million remediation plan that would involve bringing the site up to industrially acceptable standards.

But that isn't enough for the city, which wants the land to be clean enough for homes to be built on it some day.

Otherwise, the city would lose money, Van Tighem said Wednesday at hearings being held on the Giant Mine cleanup plan.

"As you will be aware, at the municipal level of government, our main revenue source is property taxes, which means the property has to be developable," Van Tighem said at the hearing.

"Removal of that land quantum would indicate a significant reduction of our available future income."

Van Tighem said that if the government won't do a more thorough cleanup, the city will need money to do its own work to bring the land up to residential standards.

The other option, he said, would be to change Yellowknife city boundaries to exclude the Giant Mine site.

The Yellowknives Dene say they also want compensation for any hunting and berry-picking grounds it would not have access to if the Giant Mine site cannot be fully restored.

No 'magic bullet' for toxic arsenic dust: engineer

The Mackenzie Valley Environmental Impact Review Board has been holding hearings into the federal government's remediation plan in order to give residents a chance to voice their concerns.

One of the biggest issues that has surfaced is how best to handle 237,000 tonnes of poisonous arsenic trioxide dust left over from 50 years of gold production.

The arsenic trioxide dust is currently stored in chambers underground, and the federal plan is to keep the dust frozen and sealed underground.

But some questioned that plan at the hearings Tuesday, despite nearly a decade of work by experts to come up with a solution that works for everyone.

"We looked long and hard for a magic bullet that would make the problem go away, because we knew that would be very attractive to all the stakeholders," said engineer Daryl Hockley, who is a senior technical advisor on the arsenic cleanup portion of the Giant Mine remediation plan.

"There wasn't any eight years ago, there wasn't any five years ago, and there aren't any now."

The Mackenzie Valley Impact Review Board must decide how much of Ottawa's plan requires a more comprehensive assessment. Its hearings end Thursday.

<http://www.cbc.ca/news/canada/north/story/2008/03/06/giant-mine.html>

'Nobody wins' with environmental review of Giant Mine cleanup: board chair

Last Updated: Thursday, March 6, 2008 | 4:32 PM CT

[CBC News](#)

Internal Links

[Giant Mine cleanup needs no environmental assessment: regulator](#)

An environmental assessment of Ottawa's \$300-million plan to clean up the defunct Giant Mine near Yellowknife would further delay work that needs to be done now, said the head of the Mackenzie Valley Land and Water Board.

The land and water board has released its reasons behind its decision to skip an environmental review for the federal Indian and Northern Affairs Department's remediation plan, which partly involves freezing 273,000 tonnes of poisonous arsenic trioxide now stored underground.



'It's time to get the work done now,' Willard Hagen of the Mackenzie Land and Water Board said of cleanup efforts for the Giant Mine.
(CBC)

Board chair Willard Hagen told CBC News that most of the world's arsenic experts have already been consulted on how to clean up the mine site, which is considered to be the North's most toxic site.

As well, he added, the board had not received any detailed arguments in favour of conducting a full environmental review.

"The process has been going on and on — I mean, it's time to get the work done now," Hagen said Wednesday.

"You want to clean up a dangerous polluted site. Well, it goes to an [environmental assessment], that's another 2½ years. So I mean, who wins? Really, nobody wins."

Hagen said some parties, including the City of Yellowknife, want remediation officials to "get to work and start cleaning up this mess, not talking about it again."

The board's decision not to order an environmental review came despite concerns from the Yellowknives Dene and environmental activists, who argued that the plan did not receive enough scrutiny.

But remediation project manager Bill Mitchell said the plan has already been thoroughly reviewed and supported by a panel of nine experts.

"Certainly we've had a very thorough review, a lot of that review [was] by independent experts," Mitchell said. "So it's difficult to see what the environmental assessment would add to the project."

Mitchell said he's confident that freezing the vaults of arsenic trioxide — enough to fill a tall Yellowknife office tower 7½ times — will work. The toxic dust is a byproduct of the gold production process.

The Giant Mine produced more than seven million ounces of gold from 1948 until it closed in 1999. The Indian and Northern Affairs Department is now responsible for cleaning up the remaining contamination.

The remediation plan is subject to regulatory approval and funding by the federal government.

<http://www.cbc.ca/news/canada/story/2012/05/08/canadas-most-expensive-contaminated-sites.html>

Canada's four most expensive contaminated sites

Contaminated soil, radioactive waste puts groundwater in jeopardy

[CBC News](#)

Posted: May 8, 2012 4:41 PM ET

Last Updated: May 8, 2012 5:24 PM ET



An aerial view of the Grum pit at the mine complex in Faro, Yukon. (2006 file photo)

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Canada's Environmental commissioner's 2012 report identifies four sites as having the highest reported financial liabilities - although the report does not disclose the financial details, which are "protected information."

1. Port Hope Area Contaminated Sites, Ont.

Natural Resources Canada responsible for remediation of about 1,380,000 cubic metres of low-level radioactive waste, including radium 226, uranium and arsenic. The project is funded through the Port Hope Area Initiative.

2. Welcome Waste Management Facility, Port Hope, Ont.

Natural Resources also responsible for an estimated 620,000 cubic metres of low-level radioactive waste at this above-ground facility and operation of treatment ponds and effluent discharge. Funded through the Port Hope Area Initiative.

3. Faro Mine, Yukon

Aboriginal Affairs and Northern Development Canada is responsible for this former mine, whose owner went bankrupt. Estimated 64,000 hectares of contaminated soil and groundwater, leaching of acids and metals into groundwater and surface water. Requires at least 100 years of treatment of contaminated water and potential physical instability of tailings dams and waste rock dumps. Contaminants include petroleum hydrocarbons, metal, metalloid and organometallics.



The federal government is trying to figure out how to keep thousands of tonnes of arsenic trioxide frozen forever underground at the Giant Mine site in Yellowknife, N.W.T.

4. Giant Mine, Yellowknife, NWT

Another bankrupt mine site managed by AANDC, with 237,000 tonnes of arsenic trioxide dust stored in 15 underground chambers; 16,000,000 tonnes of tailings, which is also arsenic rich; three large tailings ponds that require water treatment and discharge; and eight open pits, with 35 mine openings. Requires more than 100 years freezing of arsenic trioxide and contaminated soil to prevent release; treating and discharging water from tailings ponds; and covering tailings and open pits.

Other high-priority contaminated sites:

The Commissioner's report offers two examples of sites categorized as Class 1 (high priority for action). Both have completed step 7 (remediation strategy) of a 10-step process.

Attawapiskat Soil Remediation Project, Ont. (Aboriginal Affairs and Northern Development Canada)

Includes the J.R. Nakogee Elementary School, a former water treatment plant and underground fuel supply lines. Site was contaminated in 1979 when 24,450 litres of diesel fuel seeped into the soil and groundwater. In 2000, the school was closed due to health concerns. Students were relocated to portables. The school was demolished in 2009.

Contaminants: Diesel fuel contains toxins such as benzene, toluene, xylene and other chemicals. Health and safety concerns are immediate and long term, including headaches, nausea and possibly cancer.

Closure objectives: Since 1997, \$3.6 million has been spent on the school site. \$10.1 million more has been approved under AANDC's Federal Contaminated Sites Action Plan budget by 2014–15. In 2011, AANDC announced a new school was to be built on a new site by 2014.

Victoria Coast Guard Base, Victoria, B.C. (Fisheries and Oceans Canada)

Base covers a 7.26-hectares on Shoal Point in Victoria, B.C. There are nine buildings, some dating to the 1970s. Site assessments identified contamination of about 91,000 cubic metres in soil, sediment, groundwater and surface water in four areas. The contamination is being addressed by a combination of remediation and risk management measures.

Contaminants: Petroleum hydrocarbons, polycyclic aromatic hydrocarbons and metals.

Closure objectives: About \$360,000 has been spent since 2005–06. There will be ongoing risk management, assuming no change in operations.

Source: 2012 Spring Report of the Commissioner of the Environment and Sustainable Development

Giant Mine Remediation

CBC Northbeat, Wednesday, August 1, 2012, 5:30 p.m.

ANGELA STERRITT, CBC: Seventy business people hoping to get a piece of the lucrative Giant Mine clean-up pie were in Yellowknife today. Many came from across the country, but federal officials say they prefer to do business with local companies when they can. They do that using a scoring system that gives extra points for bids that include First Nations.

WESTERMAN: That's one tool they have. The other approach we take is to just provide them multiple opportunities. So rather than one large contract, we offer several smaller contracts that may match their size and capacity better.

CBC: The main attraction for businesses interested in work at Giant is the amount of money the federal government plans to spend there. Though officials couldn't say what this year's budget is, the government estimates the entire job will cost about \$500 million. Based on that contracts will be issued for the demolition of the gold roaster, one of the most toxic buildings on the site.

CJCD Radio, Thursday, August 2, 2012, 6:00/8:00 a.m.

JAMES MCCARTHY, CJCD: Remediation of the Giant Mine was the centre of industry day yesterday here in town as the team held a conference to gain both local and contracting opportunities. The future of the site was discussed in detail with regards to some of the projects that these contractors will have a chance to be part of, including the demolition of the roaster. The mine's acting remediation project manager, Adrian Paradis, explains one of the two parts of the project that the team will be dealing with moving ahead.

PARADIS: We have what is becoming urgent works at the site stabilization plan, specifically with the roaster and underground. I believe this part of the industry session was to talk about what those works were.

CJCD: The second part is hiring contractors on an interim basis and Paradis goes on to say what exactly the timeline for the project is.

PARADIS: Approximately it's about 10 years from the active implementation. It's somewhat based on foreclose and project scheduling, some work may extend a little bit beyond, but right now we're looking at a 10-year horizon.

CJCD: In regard to hiring contractors to work on the site, Paradis says it's their intent to try and bring on as many local people as possible.

CBC Radio, Thursday, August 2, 2012, 7:30 a.m.

KATHERINE BARTON, CBC: Businesses from the north and south are eyeing the silver lining of an environmental cloud hanging over Yellowknife. They were in the city yesterday to hear about an opportunity to make money by cleaning up one of the worst environmental messes in the country; Giant Mine. Richard Gleeson reports.

GLEESON: About 70 business people from as far away as Maine made their way to Yellowknife to hear about the business opportunities at Giant. Adrian Paradis is with Aboriginal Affairs and Northern Development Canada.

PARADIS: Part of the reason why we ask for local businesses to attend is to get an understanding of what their capacities and their interests are.

GLEESON: Contracting at Giant is handled by Public Works and Government Services Canada in Edmonton. Henry Westerman is acting regional director. He says companies bidding on contracts are given extra points for including Aboriginal firms and workers.

WESTERMAN: The other approach we take is to just provide them multiple opportunities. So rather than one large contract, we offer several smaller contracts that may match their size and capacity better.

GLEESON: There's plenty of money to go around at Giant. The total cost of the clean-up is an estimated \$500 million. Richard Gleeson, CBC News, Yellowknife.

Halocarbon Spill at Giant Mine

CJCD Radio, Friday, July 6, 2012, 6:00/8:00 a.m.

JAMES MCCARTHY, CJCD: There was a release of 385 kilograms of halocarbon on June 28th from the hybrid freeze plant at the Giant Mine site. An alarm alerted the staff on site then the system was shut down immediately with nobody being affected. A specialist is now investigating the cause of the release and the mine remediation project team is currently assessing the impact, if any, on the environment. The acting project manager of the remediation project, Adrian Paradis, describes what the halocarbons are.

PARADIS: Halocarbon is used as a refrigerant, the active component of the hybrid freeze system site. The alarm going off, the system was shut down immediately. The release was reported to the spill line, as well as Environment Canada.

CJCD: Paradis says they have called in some plumbing and mechanical experts and they will begin working on the site.

Gas Leak at Giant Mine Arsenic Storage Site

CBC Radio, Wednesday, July 4, 2012, 4:30/5:30 p.m.

ANGEL DUBOIS, CBC: Nearly 400 kilograms of a gas used to freeze arsenic at Giant Mine leaked into the air Thursday afternoon in Yellowknife. Staff at the mine stopped the leak moments after it started. Adrian Paradis is managing the former mine for the federal government. He says the arsenic is secure even though the refrigeration system has been turned off.

PARADIS: The freeze system as a whole has been designed so that hiccups like this do not impact the actual frozen shell, the rock. The rock itself is frozen and it takes, well, in our modeling it takes years to actually eventually unthaw.

CBC: The gas came from equipment that keeps an underground chamber of arsenic frozen. Paradis says that they aren't sure what caused the leak or how long it will take to repair. A mechanical engineer is travelling to Yellowknife to investigate.

CBC Northbeat Feature Interview, Wednesday, July 4, 2012, 5:30 p.m.

ANGELA STERRITT, CBC: A recent halocarbon spill at the Giant Mine site in Yellowknife has sparked local concerns. Halocarbon is also known as refrigerant. It's being used at the mine to freeze underground arsenic, keeping it from seeping into the environment. Kevin O'Reilly is with Alternatives North. He's worried about the spill and what it all means as the Giant Mine remediation project moves forward. Kevin joins me in the studio now. Kevin, can you tell me how did the spill happen?

O'REILLY: Well as I understand it there is a test freeze going on in the arsenic chambers underground. They have an active freezing system that's partly above ground, partly below ground and a gas, much like you have a gas in the refrigerator, some of that leaked out into the environment.

CBC: And we rarely hear of refrigeration spills. What exactly does this mean?

O'REILLY: Well I don't think this material is particularly toxic to the environment or humans, but what it does tell us is that these sort of accidents and malfunctions are really inevitable when it comes to freezing the arsenic underground. So we have to properly plan for that, not just for now, but well into the future because this is a forever project.

CBC: And how concerned are you about this in the area?

O'REILLY: Well I think, as I said, the immediate effects of this spill are probably not significant or should be of public concern, but what it does say is that we have to properly plan for accidents, malfunctions, making sure we have the resources and funding in place to properly manage this material once its frozen underground, not just now, but forever and that kind of planning has yet to start for this project.

CBC: Do you think it's a bad sign the chemical, refrigerant is designed to keep arsenic contained and now it's potentially leaking itself, do you think this is an issue?

O'REILLY: Well I don't think that the leak of the refrigerant itself is a big issue of concern. It was a relatively small quantity, but what it tells us is that we have to properly plan for and manage the arsenic once its frozen underground, forever, and we have to do a lot of careful thinking about how we're going to do that, how we're going to communicate with future generations, how we're going to preserve records, how we're going to make sure that there's always money in place to do this, not just from people in Ottawa voting once a year. So that's the kind of thinking and management that has to take place and it is really to start with this project and that's what we're really concerned about.

CBC: So where do we move forward from here?

O'REILLY: Well a couple of things. I think we want to make sure that there's a proper spill contingency and plan in place. We noted that the Environment Canada spill line is no longer in operation. It's probably as a result of some cuts that the Harper government has made to Environment Canada. We need to understand what that means in terms of spill contingency, but we also have to make sure that what will happen with accidents and malfunctions and properly plan for those, make sure we have the resources in place to deal with them and we understand what the trigger points are, what specific actions are going to be done if something goes off the rails with the frozen arsenic once it's underground and frozen. So we need to properly plan and manage this, not just now, but for the long-term and that kind of thinking has yet to really start with this project.

CBC: Thank you for talking to us today.

O'REILLY: Thank you.

CBC Radio, Thursday, July 5, 2012, 6:30/7:30 a.m.

SONYA KOENIG, CBC: A recent spill at the giant mine site in Yellowknife is sparking local concerns. Halocarbon is also known as refrigerant. It's being used at the mine to freeze underground arsenic to help keep it from seeping into the environment. The small leak happened during a test freeze of one of the arsenic chambers. Kevin O'Reilly is with Alternatives North.

O'REILLY: I don't think this material is particularly toxic to the environment or humans, but what it does tell us is that these sort of accidents and malfunctions are really inevitable when it comes to freezing the arsenic underground. So we have to properly plan for that, not just for now, but well into the future because this is a forever project.

CBC: Hundreds of thousands of tonnes of arsenic trioxide is being stored underground. O'Reilly says at this point there isn't a perpetual care plan in place for the underground chambers. He'd also like to see a spill contingency plan created. Giant Mine is considered the largest federal remediation project in the country.

CBC Special Report, Thursday, July 5, 2012, 7:15 a.m.

ALISON DEVEREAUX, CBC: Well last Thursday at 7:04 p.m., an alarm went off at Yellowknife's Giant Mine. Gas was leaking into the atmosphere. Within a few moments the staff at the mine had stopped the leak. The gas comes from a refrigeration system that is currently freezing underground chambers of arsenic. To stop the gas leak it meant shutting down one of these refrigerators. There's no danger of the arsenic chamber thawing anytime soon, but this leak has some critics worried. The concern is whether the system is robust enough to keep the arsenic frozen forever. Kevin O'Reilly is with Alternatives North. It's a non-governmental organization and its registered as an intervener in the environmental assessment of the Giant Mine clean-up. Good morning, Kevin, thanks for coming in.

O'REILLY: Hi.

CBC: So how did you find out about the leak?

O'REILLY: Well I got a call on Friday, late in the afternoon, from Adrian Paradis with the Giant team and I do want to commend them for actually notifying, it wasn't just me that I guess got these calls, a number of the other parties. So I think that's an improvement over some of the other incidents that we've seen happen at the mine site. That's a good thing.

CBC: So how serious do you think it is?

O'REILLY: Well, you know, they did send us, I think it was on Tuesday or Wednesday, it's called a material safety datasheet. It's basically some of the background information about the potential health and environmental effects of the refrigerant and when you look at it I don't think it's a particularly toxic substance. One of the bigger issues is if you are right next to it and you inhale it and if it's still compressed it's still cold and that tends to cause more damage perhaps than the actual toxicity of the substance. So I don't think the material itself should be a big public concern.

CBC: Well what does this say to you about the government's ability to secure the arsenic chambers?

O'REILLY: Well that's a different issue. Here we are I think less than two years into the test freeze of one of the chambers out there and there's been a major malfunction that resulted in it being shut down. You know, accidents and malfunctions are inevitable, particularly when you're looking at a perpetual care situation like this and we need to have proper plans in place to look after these sort of systems forever. It's not just five, 10 years from now, 5,000, 50,000 years from now and I just don't think we have those sort of plans in place to look at where is the money going to come from, what resources are required, how many people, what skillsets, what kind of tools do they have, how do we preserve the records that relate to the site, how do we communicate to future generations what we've done to the site and how they need to take care of it. Those things we really haven't even started to scratch the surface on in terms of the Giant Mine.

CBC: How concerned are you about the fact that the emergency phone number for Environment Canada wasn't working at the time?

O'REILLY: Well that was interesting. On the fax sheet that contractors that manage the site, they're required to report a spill to the spill line here in the Northwest Territories, but because it was a halocarbon, or refrigerant, they're also required to report it to Environment Canada and the expectation is that they can get some technical information. So if you look at the fax coversheet the guy's got written on here "attempted to report to Environment Canada emergency number, but this number is out of service." What's going on here? I think this is a result of the Harper government cuts to spill prevention, management within Environment Canada. So there's a lot of spill contingency plans out there for various projects in the Northwest Territories and across Canada. This phone number or the phone numbers that are likely to be listed in there where people want or expect to get technical information, they're no longer in service apparently and all of those plans need to be changed and where is the federal government in terms of providing technical advice and assistance on spills that are regulated at the federal level?

CBC: So to be fair, this freezing system is an experiment and its purpose is to iron out some kinks. Isn't that what happened here?

O'REILLY: Yes, absolutely. That is true. It's a test freeze. They're using this to better design a system and I think some of the early indications are that they may not even need an active freeze system, which would be great because we should be looking for low energy, low technology, low maintenance, low perpetual care systems wherever we can, but we haven't done a long-term planning for these sorts of systems and because this is a perpetual care system that work needs to be done in concert with the planning and design work that's on the table. I think, you know, Yellowknifers want to have some assurance that this system is going to work for the long-term, not just for the next five or 10 years.

CBC: What kind of system would you prefer?

O'REILLY: Boy, well if we had to go back to the very beginning I think we needed a much more robust and participatory, collaborative approach on looking at the alternatives in the first place. I don't know whether we can go back there, but if the frozen block method, as it's called, is to move forward we need to have the perpetual care planning knowing at the same time, and that's just not happened so far, that's to give a measure of public confidence in the long-term for our kids, our grandkids and those that come after us.

CBC: Alright, well thank you very much for coming in today, Kevin.

O'REILLY: Great, thank you.

CBC: And that was Kevin O'Reilly. He's with Alternatives North, which is a registered intervener in the environmental assessment in the Giant Mine clean-up, a responsibility of the federal government.

PARADIS: I think they're are starting to pull through the system. The system is broken up into two halves, which is subsequently broken up into a third for each site. They're going to pressurize up each component with nitrogen and work through, much like you would on a flat tire.

CJCD: Paradis says a report to Environment Canada is required within 14 days of the incident.

Calls for Independent Committee to Oversee Giant Mine Cleanup

CBC Radio, Thursday, June 14, 2012, 7:30 a.m.

SONYA KOENIG, CBC: There are calls for an independent committee to oversee the Giant Mine cleanup. Alternatives North, the Yellowknives Dene and the City of Yellowknife say an environmental monitoring group needs to be in place before the federal government's plan for the site begins. Weledah MLA Bob Bromley says the committee would help build public trust.

BROMLEY: It would monitor compliance and encourage research into alternative technologies and finally eliminate the arsenic. Perhaps above all it would create the transparency, public involvement and unbiased reporting essential to public trust.

CBC: The Aboriginal Affairs cleanup team says the independent committee wouldn't be able to make decisions about how to run the project, but they've agreed the committee could help ensure that proper environmental monitoring is taking place. A working group plans to meet to discuss who would sit on the committee and what type of funding it would need.

Cleanup at Giant Mine

CBC Northbeat, Friday, May 11, 2012, 5:30 p.m.

RANDY HENDERSON, CBC: More than a decade after the federal government assumed responsibility for it, some big questions remain about the cleanup of Giant Mine near Yellowknife. They were asked at public meetings this week. Meetings about emergency work that officials say cannot wait for regulatory approvals. At the meeting last night in N'dilo, elders spoke of how they feel the mine has changed their traditional way of life.

MURIEL BETSINA: I would like to see the land pure where the berries can grow and be picked up and eaten right from the Mother Earth to my mouth. I still pick a lot of berries but I have to go very, very very far, or go on a boat on an island in the fall. It's not fair.

CBC: The people of N'dilo believe the mine has been responsible for the poisoning of their land and water and children for years, and while these meetings were about the work being done to demolish the aging buildings on the site, concerns were raised about contamination, what plans are in place to deal with emergencies and how the Yellowknives Dene could benefit economically from the remediation work being done on their land.

CBC Northbeat, Friday, May 11, 2012, 5:30 p.m.

RANDY HENDERSON, CBC: Public information sessions on the cleanup of Giant Mine wrapped up in Yellowknife this week. It was a chance for people who live closest to the mine to ask questions about the remediation plan. Two hundred and thirty seven tonnes of arsenic trioxide make this mine the most toxic site in Canada. Adrian Paradis is the federal official overseeing the cleanup of the mine and he joins me in the studio. Welcome to the program.

PARADIS: Hello, Randy.

CBC: People had a range of concerns, as you know, including what happens if there's a natural disaster like an earthquake, something that you haven't factored in. How can people have confidence in the plan going forward?

PARADIS: Actually, I think that was more of a mistake on our behalf. It was actually Wednesday night when that question was asked. We do actually have a range of catastrophes accounted for. We do take them into account on a year-to-year basis as part of our risk registry and our risk assessments.

CBC: It's all about safety, and the federal environment commissioner even this week has indicated that you cannot guarantee safety at this mine site in perpetuity. Given that, I mean, why are we going ahead with this plan?

PARADIS: At this point it is the best available knowledge of what we have. We have some of the world's experts on the project. The site is falling down. As part of what we talked about this week, even just the roaster and the underground. The more we learn, the more problems that we're uncovering. We discussed this week with the public roughly what we call the three buckets. There are known risks, or unknown and where we have a little bit of information and where we don't have an understanding, and just simply the unknowns. And this was in reference to the underground stability.

CBC: So you're dealing with a bunch of unknowns so are you sort of making it up as you go along then?

PARADIS: No. We've been at this for almost 10 years. It is, as you started out, it's one of the most contaminated sites in Canada. It's got an historical legacy of 60 plus years of mining. We know a lot about the site. It's just the more you learn and the more you plan for actually implementing the remediation the more you realize how much more you have to learn.

CBC: Do you envision a future government changing their mind and getting rid of the trioxide when it is safe to do so?

PARADIS: Best case, yes, if that's possible. Sure. But that's a decision for a future government. At this point what we need to do is stabilize the site.

CBC: We also heard about communications. You say that there's a lot of information online yet many are not internet savvy or don't have the wherewithal or the technical language to digest what you have. Are you planning to change that?

PARADIS: Yes and no. We have multitudes of people that we have to speak to. Those who are incredibly internet savvy and have a great deal of technical expertise. We also have the folks who have limited technology and limited technical understanding. The challenge is to actually speak to both levels and speak to them at the level that they want.

CBC: What's next in the cleanup of Giant Mine?

PARADIS: Well, what's next right now is care and maintenance through the summer. We're getting ready to do water treatment probably sometime in early June or late June. The next big step that we're going to be out in the community talking about is the roaster demolition. We've been advised by our engineers that it can't wait. It is actually getting to the point where we have to do something now to protect human health and the environment, and that's first and foremost why we're on site.

CBC: Do you have a target date for completion of this cleanup plan?

PARADIS: Somewhat. We do have it. We talked to the review board and the (inaudible) to the environmental assessment approximately 10 years. That's subject to some contracting and just simply project management. So it might be starting from 2013, let's say, to 2023, and approximately 10 years of construction.

CBC: So it's a moving target?

PARADIS: It's a moving target but right now we're approximately in about 10 years of active work.

CBC: Alright. Thanks for coming in today.

PARADIS: Thank you, Randy. Appreciate it.

Meeting Held on Cleanup of Giant Mine

CBC Radio, Thursday, May 10, 2012, 6:30/7:30/8:30 a.m.

JUANITA TAYLOR, CBC: Members of the public were invited to a meeting in Yellowknife last night to discuss the cleanup of Giant Mine. Specifically, the site stabilization plan. It's a plan to deal with parts of the remediation which require immediate attention like the demolition of the conveyor and roaster.

UNIDENTIFIED SPEAKER: This is arguably one of the most contaminated buildings in Canada. It takes a level of effort and it takes a level of engineering and understanding to actually do this safely. So these are long processes. They're just being compared against the long process

of environmental assessment and normal water licensing. So we're trying to marry those two to actually get some work done before these become emergencies.

CBC: Other issues discussed at the meeting included the recent spring runoff that made its way into Baker Creek, what provisions have been taken to ensure the safety of the site in an emergency and who is ensuring the work is being done safely. There will be another chance for the public to have their say tonight in N'dilo.

Giant Mine Sediment Runoff in Baker Creek

CJCD Radio, Thursday, May 10, 2012, 6:00/8:00 a.m.

MEGAN TURCADO, CJCD: The spring melt in the Yellowknife area caused a small problem out in Baker Creek late last week. Inspectors from the Giant Mine remediation project team found a small runoff of sediment into the creek on May 3rd. The acting manager of the remediation project, Adrian Paradis, says water went over the land, picked up some dirt and went into one of the ditches. Paradis says work on cleaning things up began as soon as it was detected.

PARADIS: We had people out on site by two, three o'clock, starting to divert and pump and try and get the water to make sure it was clean.

CJCD: By 10:00 p.m. the water began to look clearer than it did earlier on and by Sunday Paadis said the testing done on the water showed what's known as a non-detect.

PARADIS: That means from a laboratory standpoint our samples were going in and they were below 3 mg/L and they could not detect total suspended solids in the samples.

CJCD: Paradis says several groups were contacted about the situation including the YK Dene First National Department of Fisheries and Oceans and the city.

Plans Proceed to Tear Down Giant Mine

CBC Radio, Wednesday, April 4, 2012, 4:30/5:30 p.m.

Thursday, April 5, 2012, 6:30 a.m.

ANGEL DUBOIS, CBC: Aboriginal Affairs is moving ahead with plans to tear down a piece of the former Giant Mine. Crews will start removing the 120 metre long mill conveyer this week. But some groups following the mine's cleanup say they're worried the federal government wants to dodge the environmental assessment by fast tracking some of the work. Elizabeth MacMillan has more.

PARITY: The site's just deteriorating. The site is 60-plus years old and as it continues to age it degrades.

MACMILLAN: Adrian Parodie is with Aboriginal Affairs. He says the long rectangular box is sagging and crews no longer drive under it. It has asbestos shingles but doesn't contain toxic material.

PARODIE: This is an old building that needs to come down. It's not a risk to the people of the community. It's a risk to the workers on site as a fall hazard.

MACMILLAN: Taking the conveyor down now means it won't be factored into the environmental assessment. Kevin O'Reilly says it's not the first time that's happened during a cleanup of Giant. He's with Alternatives North.

O'REILLY: You know, you rush things. You try to avoid carrying out things properly. You don't get the permits that are necessary. You try to get out from your own laws. Problems are going to happen.

MACMILLAN: Parodie says the highly toxic gold roaster is also in bad shape. The Giant team is now deciding if it needs to be torn down before the cleanup plan is approved. Elizabeth MacMillan, CBC New, Yellowknife.

CBC Northbeat, Wednesday, April 4, 2012, 5:30 p.m.

RANDY HENDERSON, CBC: Crews will be starting to dismantle part of the Giant Mine horizon this week in Yellowknife. Aboriginal Affairs is moving ahead with plans to tear down the mill conveyor, but some groups say the federal government is dodging environmental rules by fast tracking clean-up work at the mine. Elizabeth McMillan has more.

PARODIE: What you're seeing here from the...(inaudible)...to the top of the mill, that section will be gone.

MCMILLAN: The 120-metre long conveyor was used to transport crushed rock. There was never any arsenic inside of it, but the white shingles do contain asbestos. Adrian Parodie says it's a risk to workers on site, not the general public.

PARODIE: The site is just deteriorating. This site is 60 plus years old and as it continues to age it degrades.

MCMILLAN: Federal engineers say the structure is sagging. Workers no longer drive under it.

PARODIE: Worst case scenario is that if high winds come up, and it's not like the entire structure is going to topple and come crashing down, but sections of it could start to actually twist and sort of fall.

MCMILLAN: Taking the conveyor down now means it won't be factored into the environmental assessment of the clean-up plan. Kevin O'Reilly says this isn't the first time it's happened since the federal government took over the mine.

O'REILLY: This was all within the scope of the project and that's part of the reason why it's in the environmental assessment. It's to make sure that those things are done properly. There's inspections, oversight, permits are issued with the right kinds of terms and conditions that reflect people's issues and concerns.

MCMILLAN: Aboriginal Affairs has been in charge of the mine site since 1999. Its clean-up plan is still being reviewed.

O'REILLY: They're the ones that are dragging their feet here and they're partly using that now as an excuse to say well if they're going to get on with various parts of the project. Well, c'mon guys, stop trying to avoid the laws and just get on and do the work that's necessary.

MCMILLAN: The mill conveyor may not be the only structure to come down early. Parodie says the highly toxic roaster is also in bad shape. That's the building where the ore was roasted into gold, the process that produces deadly arsenic trioxide. The clean-up team is now deciding how urgent it is to take that building down. Elizabeth McMillan, CBC News, Yellowknife.

CBC Radio, Thursday, April 5, 2012, 7:30 a.m.

KATHERINE BARTON, CBC: Crews at Giant Mine will begin taking down the mill conveyor this week. The structure was used to transport crushed rock between buildings. Project Manager Adrian Parodie says it's now sagging and could collapse.

PARODIE: The roaster I believe is one of the highest...(inaudible)...in the current plans. It was one of the first structures that we were looking at taking down. We do have recommendations from our engineers that it does need to be mitigated soon and it is posing an undue risk to human health and environment.

CBC: The highly toxic arsenic trioxide was produced when the ore was roasted to create gold. The building still contains toxic material. Alternatives North say they're concerned there will be less oversight if the roaster is taken down before a final clean-up plan is approved.

Giant Mine Remediation

CJCD Radio, Thursday, March 15, 2012, 6:00/8:00 a.m.

MEGAN DRECADA, CJCD: The Giant Mine remediation project is getting set to take down what could be a potential hazard. Work was scheduled to begin this week on dismantling the mine's mill conveyor, which has been deemed unsafe to remain standing. The legs which hold up the conveyor are beginning to move and could collapse, causing a health and safety risk to workers at the site if it came down without

warning. The project's acting manager, Adrian Parodie, says they've done what they can to try and keep people out of the area.

PARODIE: Right now we've got a bypass road built around it, a temporary measure. Effectively we've kind of blocked off and put up some berms and barriers just around that area for the interim.

CJCD: Parodie says the conveyors materials will be stored away from the site once it's taken down.

PARODIE: We've got a hazardous waste area already set aside on the mine out at the northwest tailings pond and the steel, the rubber, the wood from the structure I believe we're going to set that off on the northwest pond too, back up and away from the public in a controlled area.

CJCD: Parodie adds they're just waiting for the city to approve a permit for the job.

Public Meeting on Giant Mine Remediation
CBC Radio, Tuesday, March 6, 2012, 12:30/4:30 p.m.

ANGEL DUBOIS, CBC: The federal government is wearing two hats when it comes to Giant Mine. Its responsible for cleaning up the abandoned mine and it's also responsible for making sure the clean-up is done well. Some Yellowknifers say an independent body should monitor the project. Alternatives North will hold an information session tonight to look at how that's been done for a mine in the United States. Charles Sangmiester (?) sits on the Sill Water Good Neighbour Agreement Oversight Committee in Montana. Sangmiester says a similar citizens committee could benefit Yellowknife and save money too.

SANGMIESTER: In our good neighbour agreement we have mandatory arbitration where we say we don't go on out and spend all the money on judges and it's a very affordable affair. So we're able to do that and here it could be more difficult, but I think it would be a challenge. I'd like to see it proceed.

CBC: Sangmiester says the situation is a little bit different because in Montana they're dealing with a mining company and not the federal government. Tonight's meeting begins at seven o'clock at the Northern Frontier Visitors' Centre.

CBC Radio, Wednesday, March 7, 2012, 6:30/8:30 a.m.

ANGEL DUBOIS, CBC: Just who should oversee the Giant Mine remediation project? That was the topic of discussion at a meeting in Yellowknife last night. The federal government is responsible for cleaning up the site, but it's also responsible for making sure the clean-up is done properly, but many people at the meeting, such as Yellowknifer Suzette Montrieux (?), say that's just not right.

MONTRIEUX: It's not an aggressive thing to say that there should be an overseer. To me it seems normal if you, you know, if one group is doing some really serious work and we hear tons of comments about how serious the work is to do, then it only makes sense that you have something independent, some independent valid structure that reviews the work that they do.

CBC: The remediation plan includes freezing 237,000 tonnes of arsenic trioxide and storing it below ground. The plan is currently in environmental assessment. The public will have more chances to share their thoughts on the remediation process once the public hearings begin this spring.

CBC Special Report, Wednesday, March 7, 2012, 6:50 a.m.

PHIL MORK, CBC: Who should oversee the Giant Mine remediation project? That was the topic of discussion at a meeting in Yellowknife last night. Right now the federal government is in charge of the clean-up of the site and monitoring that process. Alternatives North brought in some guest speakers to talk about the independent oversight, including two members of the Good Neighbour Agreement Oversight Committee in Montana and we spoke with Charles Sangmiester yesterday of that committee. The CBC's Kate Kyle was at the meeting and spoke to people who attended.

HEWLETT: Sure, Lorraine Hewlett. We live right next to a toxic waste site and for me the quality of the water and the environment is of utmost importance. When you have a department that's actually doing the clean-up work, but they're also the same department that has to implement fines when there's been a breach of the legislation it's a conflict of interest. That's the problem. You can't have a department doing both functions and that's why you need an independent oversight.

KYLE: Now we had some presenters this evening, what did you think about what you saw?

HEWLETT: I think it was fantastic that Alternatives North was able to bring people from another area in the world where they have managed to create independent oversight and really involve the community that is next to the mining activity. It was fantastic. What a great opportunity to hear about what they're doing and how they're making it happen in their area of the world. Well my concern is the toxic material that exists here, arsenic trioxide, it's very lethal. It takes a very small amount to kill somebody. So I can't exactly imagine volunteers going with hip waders or chest waders into Baker Creek. We'd probably need someone who is trained in taking water samples in a dangerous area, but there's other aspects of their presentation where we could do those things.

MONTRIEUX: It's Suzette Montrieux. I think the particular theme for tonight was the idea of oversight of the whole project and they presented us with a couple of options that exist and I think it's not an aggressive thing to say that there should be an independent oversight. To me it seems normal if you, you know, if one group is doing some really serious work and we heard tons of comments about how serious the work is to do, then it only makes sense that you have something independent, some independent valid structure that reviews the work that they do and I mean the two models that they presented, it's not a simple every time you blow your nose it's double-checked. You look at the plans, you look at the results, you make comments that way. It's a means to check, it's a check and balance, it's a means to validate and give ideas for improving the method. But the other thing is when, you know, we

were talking tonight about models where it's the community's involvement and we heard so many comments from people saying that they still feel uninformed and uninvolved.

KYLE: So what would you see working here if we had an independent group of people monitoring this remediation project?

MONTRIEUX: Well this type of thing, I don't have a specific it should have seven people, it should be like that. I think it has to have some independent experts, it has to have some community involvement, it has to have a good communication plan. I think the thing that's unique about Giant that is different from the other projects that we were presented is the other ones they had the company, they did have government and they had the community and we're in a situation where it's really government that's doing the work and checking on it. So that's not to say everything is going to be wrong, it's just that it only makes sense that you have an official counter balance and that's what an independent oversight committee does. You know, like the way the two presentations talked about how they structure theirs, I mean government is involved, it's not that you're pushing government aside, there's more and more in this project by Ottawa for them to in fact decrease the amount of local control and I don't blame the workers here, it's not their fault, the decisions are made at a much higher level, but we want to say that that's not enough. We want whoever is doing the setting for the plan should be comfortable to have those plans looked at by an independent body whose mandate is to look out for the needs of the community. That's a normal thing, that's not an aggressive action.

LEMOUEL: Fred Lemouel. You know, having all the federal government people kind of monitoring it is like watching a fox watching the chickens, you know. If you have an equal board, an environmental board that could consist of maybe a member from Ndilo, a member from Dettah and for sure a member from the NWT government, members from the federal government and maybe a member from Dehcho, then you'd have maybe an environmental representation on there and a scientist or whatever that are experts on that kind of stuff and they sit down and meet maybe every month or every two or three months, a big thing in both newspapers, not just one, News of the North and the Yellowknifer because it is closest to Yellowknife saying this is what the goals are, this is how much we've done. That I think will keep people happy and not so scared and let people get involved that way.

CBC: Just some of the people who attended an information session about who should monitor and oversee remediation of the Giant Mine clean-up. It was hosted by Alternatives North.

CBC Radio, Wednesday, March 7, 2012, 7:30 a.m.

ANGEL DUBOIS, CBC: The MLA for Frame Lake would like to see an independent group oversee the clean-up of Giant Mine. The federal government is in charge of the remediation work, as well as making sure it's done properly. Wendy Bisaro attended a meeting last night in Yellowknife about the clean-up efforts. She says the public needs more reassurance it's being done right.

BISARO: The benefit of the independent monitoring agencies for the diamond mines has been shown and I think, you know, with Giant, it's so close to town, it's so close to many people's hearts and it's such a huge liability that we need to have the community involved in overseeing what's going on, we need to have all orders of government involved in what's going on and that's not happening right now. You know, as I mentioned in there, there's a huge amount of mistrust.

CBC: The remediation plans include freezing 237,000 tonnes of arsenic trioxide and storing it below ground. The plan is currently in environmental assessment. The Giant Mine remediation project is considered one of the largest clean-up projects in the country.

Public Meetings on Giant Mine Remediation Project
CJCD Radio, Monday, March 5, 2012, 12:00/3:00/5:00 p.m.

JAMES MCCARTHY, CJCD: Alternatives North is sponsoring a public meeting tomorrow to discuss what independent oversight of the Giant Mine remediation project could look like. Its spokesperson Kevin O'Reilly says it's the group's position that more public oversight of the project is needed.

O'REILLY: The design of the remediation plan, its implementation, reporting of the results, access to information, those are all key items that we think that there's certainly a lot of room to improve on.

CJCD: At the meetings speakers will highlight several case studies of how independent reviews have taken place on other projects. O'Reilly says one example is the Ekati Diamond Mine.

O'REILLY: It's set up as a registered non-profit society, they review the design and results of the monitoring programs, environmental management plans and give feedback to the company and the regulators.

CJCD: The meeting will take place tomorrow evening at seven p.m. over at the Northern Frontier Visitors Centre.

CJCD Radio, Monday, March 5, 2012, 6:00 p.m.

JAMES MCCARTHY: Who should oversee remediation at the Giant Mine? That is one of the questions that will be up for discussion Tuesday night at a public meeting sponsored by Alternatives North. Speakers will be highlighting case studies of oversight of similar projects in the US and Canada. Alternatives North spokesperson Kevin O'Reilly explained the long term goal of the meeting.

O'REILLY: Ultimately, we hope that all of the parties can get together and negotiate an agreement to set up appropriate oversight at the Giant Mine so the community can have greater confidence in what's going on.

CJCD: The remediation plan is currently undergoing an environmental assessment through the Mackenzie Valley Review Board. The plan calls for the long term storage and maintenance of over 200,000 tonnes of arsenic trioxide dust as well as discusses plans to demolish the buildings and facilities on the surface from the site.

Managing the Giant Mine Site Forever

CBC Special Report, Wednesday, October 26, 2011, 7:40 a.m.

JOSLYN OOSENBURG, CBC: Well some of us have difficulty planning a year in advance. Imagine having to make a plan for forever, or at least the conceivable future. That's the timeframe we're grappling with when it comes to the arsenic stored underground at Giant Mine. The experts call it perpetual care and it's about making sure that the toxins buried underground don't come back to haunt future generations. You heard a little bit about it on the show yesterday from CBC Reporter Elizabeth McMillan, but it's also something that Joan Kuyak (?) has been trying to wrap her head around. The former national coordinator for Mining Watch Canada has been looking into how contaminants have been managed in other parts of the world. She pulled it all together in a report for Alternatives North, that's part of the Mackenzie Valley Environmental Impact Review Board's review of the Giant Mine project. Joan Kuyak joins me on the line now from Ottawa. Good morning.

KUYAK: Good morning, Joslyn.

CBC: So there are contaminated sites and then there are contaminated sites right? How would you describe the Giant Mine site in terms of the seriousness of the contamination there?

KUYAK: I think it's one of the worst in the world. It's certainly one of the worst in North America. Probably in a category along with nuclear waste and spent fuel sites.

CBC: So when we talk about perpetual care, can we really monitor a site forever?

KUYAK: Well, no we can't. We can try and we have to try, we don't have any choice in doing that, but if you look at the lessons of history as I did with one of the case studies I did, which was about a UNESCO heritage site, even something like the pyramids that we'd want to keep because of their beauty and extraordinary grace, it's less than 5,000 years old and, you know, crumbling, people forget what they were for, they've pillaged it and robbed it. So, no, we can't monitor things forever, but we most certainly have to try and while we're trying we have to try and find alternatives.

CBC: What have we learned from other efforts about perpetual care?

KUYAK: Well I think it needs to be understood that in fact perpetual care of contaminated and nuclear sites is a fairly recent phenomenon. So there isn't actually a history of this. The oldest example I had from North America in an attempt to provide perpetual care was the Love Canal and it had been built, the Love Canal had been used as a toxic waste dump for only since the 40s and it was only used for a few years, they covered it over and thought that it would be fine for a long time. Then people build a school on it and 20 years later it was oozing yellow gunk and poisoning people and kids were getting sick. Love Canal in the United States lead to the founding of Super Fund, which is a major, probably the best plan for

cleaning up toxic sites in the world, but even Super Fund can only contain the problem, it cleans it up, but then there are always contaminants that are going to be there and have to be monitored forever.

CBC: So in your view then what needs to be in place to deal with a site like Giant when the length of time that it would need to be monitored is on such a mind boggling kind of timeframe?

KUYAK: Well we need to, I think the first thing is we have to really think about what creates good intergenerational guardianship. What is it that means that our grandchildren and our great grandchildren will be careful out it, will watch it, will remember it, will watch with small signs of neglect that could lead to a disaster. We also have to be ready to put the resources into researching ways to actually dispose of that arsenic over time. We don't have the technology now, but we might develop it if it becomes a priority and it's something that we're going to put lots and lots of energy and time into.

CBC: So how do we do that, how do we make the site one that people are going to remember and talk about for generations to come, it won't get forgotten?

KUYAK: Well actually the first thing is to acknowledge how it happened and to take responsibility for it and of all the case studies, I looked at I wrote up nine of them, but in fact I looked at probably 40, absolutely to it was an acknowledgement of the damage that had been done and who it had been done and its interests. So in the case of the Giant Mine, an apology and a real understanding, not of blame, but of responsibility, an apology to the Yellowknives Dene and to the people of Yellowknife and the workers there for what has happened. Yellowknife and the Giant Mine, Colomac, Con, like all these other sites are places where people struggled, first usually subjected to the contaminants happening in the first place and years trying to call it to the attention of the authorities. Now that the industry is closed or, you know, folded up for one reason or another, they're left with the mess and I think that an apology and an acknowledgement of responsibility for the problem is absolutely crucial to anything going forward. When people are angry and they don't trust those in power they're going to reject taking responsibility and you can't avoid it if you're going to live there. You have to be able to take it and I think some kind of compensation as part of that apology is crucial too.

CBC: And what about for monitoring and financial – I mean you mention compensation, but also a financial investment in the site?

KUYAK: Well there's a number of things. First off, money has to definitely be set aside for the long-term monitoring and it should be independent monitoring of the site and the money has to be stored or kept in a way that will last for a long, long, long time. It won't be used for other purposes or taken into government's general revenues or stolen, which is of course something that can happen over time too. It's got to be available and there's got to be enough to react if monitoring shows something is going wrong. There's a number of analysis around that. There needs to be independent monitoring where the community is represented, where they're part of it, but aren't responsible for the costs. There needs to be a way to keep records about everything so that even if there's earthquakes, fire and floods and new computer systems you can still access the information. There needs to be a clear emergency response plan for all sorts of things, knowing exactly who is responsible. It's like being in a fire department. Most of the time nothing is going wrong, but when something goes wrong you've got to be able to react efficiently and fast and you've got to be able to throw the money at it that's needed. We've got to look at memory, we've got to look at how we remember what's happened. We have to be careful not to do it again. We

have to take care of markers and keeping people away from the site and we have to find ways to make sure that future generations are willing and this generation is willing to put resources into trying to figure out how to deal with it in a more effective way.

CBC: Alright, we're going to have to leave things there for now for time purposes, but, Joan, I really appreciate you joining us this morning sharing some of your work with us.

KUYAK: Thanks, Joslyn.

CBC: And that's Joan Kuyak. She recently completed a report about the perpetual care of contaminated sites around the world. We reached her in Ottawa.

Public Hearings on Giant Mine Cleanup Wrap Up

CBC Northbeat, Friday, October 21, 2011, 5:30 p.m.

RANDY HENDERSON, CBC: In Yellowknife environmental and engineering experts wrapped up their weeklong talks on the cleanup of Giant Mine. The focus today was monitoring the site after underground arsenic chambers are frozen. Groups are worried, especially as climate change spells uncertainty in the centuries ahead. Elizabeth McMillan has the story.

MCMILLAN: Decades of gold mining produced enough toxic tailings to last for millennia, including 237,000 tonnes of arsenic trioxide. The federal government wants to freeze the deadly dust and leave it underground, pumping coolant deep into the mine in a process similar to keeping an ice rink frozen.

UNIDENTIFIED: This is the solution. There is no other solution right now.

MCMILLAN: The Giant Mine cleanup team admits planning for the future won't be easy. The site will require constant maintenance, about eight people to monitor the arsenic and treat the water, year round, forever. It will be up to future governments to consider new technology and cope with climate change.

UNIDENTIFIED: We no longer get the hard frosts that we got in October; we get the rain, as you see today, in mid to late October. It is a dynamic system.

MCMILLAN: But Kevin O'Reilly says planning for forever means coming up with worst case scenarios and ways to deal with them, from earthquakes to flooding to melting permafrost.

O'REILLY: Is the precipitation going to change, or the timing of it, the duration of it? All of those things, and it's really difficult for us to peer into the future, but we should be designing things with whatever understanding we have now.

MCMILLAN: The same federal department that is in charge of the cleanup is also in charge of monitoring the project. O'Reilly, as well as the Yellowknives Dene, want more independent

oversight. Todd Slack says if something goes wrong there's potential for damage throughout the Mackenzie Valley.

SLACK: I don't think anyone in Yellowknife wants to allow Ottawa to be making all the decisions for our health and our environmental management. So that kind of oversight has to be maintained here in the Territory.

MCMILLAN: There will be more public hearings this winter. All the parties hope people living here in Yellowknife can contribute ideas to help guard for the future, long after the mine's buildings and the departments running the project are gone. Elizabeth McMillan, CBC News, Yellowknife.

Giant Mine Remediation

CBC Special Report, Tuesday, October 25, 2011, 7:20 a.m.

JOSLYN OOSENBURG, CBC: Well cast your mind forward 10, 20 or 50 years into the future. Chances are Yellowknife will look very different from the city that we know today. How about hundreds or thousands of years down the road. A bit hard to imagine? Wondering if the city will even be here that far from now? Well one part of the city that's expected to endure the test of time isn't so pretty, even once the roaster and the head frames at Giant Mine have been torn down, pits have been filled in and the trees and the bushes that once covered the land have been restored, the hundreds of thousands of tonnes of toxic arsenic sealed in the bedrock under the mine will remain. Last week environmental and engineering experts met to talk about the federal government's plan for cleaning up the mine site. It involves freezing all that arsenic into giant blocks underground. They got into the nitty gritty details with the groups that are paying close attention to the project; the Yellowknives Dene, Alternatives North and of course the City of Yellowknife. The CBC's Elizabeth McMillan sat in on some of the sessions and she spoke with the people there and she joins me in the studio now. Good morning.

MCMILLAN: Hi, Joslyn.

CBC: So you were there and you've been reviewing all of the documents that have come out of this. What were the discussions like about this?

MCMILLAN: Well they were very technical and there was a lot of specialized experts talking about risk matrixes and arsenic concentrations. More than a dozen people represented Aboriginal Affairs, but it was the Giant team that's focused on the cleanup that was in the spotlight and that team includes people from Public Works, the groups you just mentioned, Alternatives North, the city and the Yellowknives Dene. They had a chance to question the government's experts. The review board had their own experts and Environment Canada and the Department of Fisheries and Oceans were there too also questioning Aboriginal Affairs.

CBC: So I mean I'm curious because most of these kinds of environmental reviews focus on a development project, right, a company that's looking to start up a mine, for example. Now in this case the proponent is a government department, Aboriginal Affairs and Northern Development

as you mentioned, which is usually involved in reviewing the projects. So this time they're actually on the other side of the table and we've heard before that there are people out there who are concerned about this process and whether it's independent enough. What did you hear from people at the meetings about that particular issue?

MCMILLAN: Well, you know, it is unusual. Even the review board acknowledged that it's usually a company in the hot seat. I spoke with Todd Slack who works for the Lands and Environment office of the Yellowknives Dene and he does want independent oversight. He says the issue isn't that he doesn't trust the people working on the project now, but that the same Minister responsible for cleaning up the mess at Giant Mine gets to decide if the cleanup plan is good enough. We saw that when Baker Creek overflowed this spring. Slack also pointed out that it's the same Minister, right now it's John Duncan with Aboriginal Affairs, who appoints people to the Mackenzie Valley Environmental Impact Review Board and they'll make a recommendation to the Minister about whether to approve the cleanup plan his own department has put forward. So that's a lot of decision making power to put in one spot. Here's what Todd had to say.

SLACK: Okay well if the fox is guarding the hen house, you better keep a close eye on the fox, and I find that very appropriate in this case because it is the fox who is deciding whether this is being done right or not.

CBC: Now that's one concern we've heard quite a bit about. The other concern is about the seemingly endless lifespan of this project. I reference that in the introduction before I started asking you questions - the fact that this arsenic at this point is expected to be there until the end of time as far as we know. So what have you learned about what the experts are calling perpetual care?

MCMILLAN: Well it's a daunting task. It means forever. The ongoing maintenance is going to cost about \$2 million a year long after the arsenic is frozen. So that's a huge commitment. The current project manager, Adrian Parody, says centuries from now, you know, after that arsenic underground is frozen, there will be about eight employees who will be onsite monitoring that things are still going to plan. The Giant team says the site will need ongoing water treatment and that means a new water treatment plant to treat the water that's underground and even though the arsenic trioxide will be contained, enough tailings were blasted across the site when the mine was operational that it will never be back to normal.

CBC: So what are the concerns that you're hearing about the government's plan for dealing with the arsenic?

MCMILLAN: You know, well the parties asked a lot of questions about what happens if things go wrong. You know, for instance, if no one maintained the frozen blocks and the arsenic started to melt. Kevin O'Reilly of Alternatives North, he says the government needs to plan to look at worst case scenarios and then plan for how to deal with them, and here's what he had to say.

O'REILLY: If there was some catastrophic failure and parts of the arsenic chambers were exposed to a lot of water, an earthquake or some other catastrophe there would be big releases of

this stuff into the environment and it's very soluble in water and it would go into the Yellowknife Bay and flow down throughout Great Slave Lake perhaps.

CBC: You know, it's interesting because you've referenced this spring we saw Baker Creek overflow over top of the tailings and then of course there's that depression near one of the large pits that appears to be a sinkhole that's forming on the site. What Kevin is talking about there, how farfetched is this idea of a worst case scenario that we would actually reach a worst case scenario?

MCMILLAN: Well, you know, there was discussion about what would happen if water levels went up, say there was increased rain and Baker Creek flooded the mine before the arsenic chambers were frozen. So say this happened next year, they don't think it's likely, but what they do know is if the creek floods badly enough and gets into the mine it would fill the underground part in three to five days and if that happens they don't have the capacity to treat that water and that flooding would destabilize that mine underground. So it's up to Aboriginal Affairs to weigh the risks of these scenarios and the risk of them happening and try to prevent them from happening.

CBC: Now the Yellowknives Dene have always said that they want the stuff out of their backyard. Is that still a possibility that the removing the arsenic or treating it could make it less harmful?

MCMILLAN: Well at this point Aboriginal Affairs has decided the safest most cost effective way to deal with the arsenic is to freeze it and leave it underground, but even if it is frozen they say it's reversible. So if better technology comes up they can melt the arsenic blocks and try something else. So it will be up to future governments to look at new ways of dealing with the site and they'll only do that every 10 years. Right now they don't expect new technology to update anytime soon. Here's what the project manager Adrian Parody had to say about that technology.

PARODY: It's not like a computer, not like technology that changes rapidly in a lot of areas. This is a very complex, very interim linked series of technologies. So one jump in one piece of technology does not fit everywhere else.

MCMILLAN: So in other words you may need to update your cell phone every three years because there's a new version coming out every month, but this field isn't evolving as quickly.

CBC: Okay. So, Elizabeth, where does that put us, where do things go from here?

MCMILLAN: Well it will move forward with the environmental assessment. The parties will have a chance to ask even more detailed questions and then there will be public hearings, probably next winter, then it will be up to the board when it's all finished to make the recommendation. Todd Slack of the Yellowknives Dene hope people living here will continue to have a say and role in long-term maintenance.

SLACK: No one wants Ottawa to be making the health and environmental decisions for our communities, especially the Yellowknives Dene. We've seen the Drybones Bay and we've seen numerous other times with legislation including caribou, Ottawa is not the best decision maker for the people of this community.

MCMILLAN: And one thing is sure, it's going to be very expensive. This is hundreds of millions for the remediation proposal and it's something Canadian taxpayers will have to pay for forever because, as I said, it will cost about \$2 million a year to maintain.

CBC: Elizabeth, thank you for that overview on this.

MCMILLAN: You're welcome.

CBC: That's Reporter Elizabeth McMillan. She's been following the Giant Mine remediation project for the CBC.

CKLB Radio, Tuesday, October 25, 2011, 8:30 a.m.

JOSH LONG, CKLB: Thousands of tonnes of arsenic sits at the bottom of the Giant Mine site in Yellowknife. Although the toxic dust is currently frozen underground, concerns have risen over the stability of the arsenic and the long-term plan to ensure none of this poison seeps into Yellowknife's water. Eman Casam has more.

CASAM: The City of Yellowknife, Dene First Nations, Environment Canada and Alternatives North met last week to discuss methods of treating, assessing and dealing with the highly toxic arsenic leftover in the Giant Mine site. There's well over 200,000 tonnes of arsenic dust frozen underground on site by pumping coolant deep into the mine, but climate change is unpredictable and a growing fear is that this method isn't sustainable. Kevin O'Reilly from Alternatives North says although some of the arsenic is leaking into the water that's moving through the mine, people are not at immediate risk of contamination.

O'REILLY: The water is collected at the bottom of the mine, it's pumped, it's treated. If for some reason all of those systems failed then the arsenic contaminated water would get into Baker Creek, into Yellowknife Bay and pollute parts of the Bay. I'm not sure that a lot of work has been done to look at all of the affects of that, but it certainly wouldn't be a good thing.

CASAM: Future governments will have to consider new technology to properly care for mining sites well in advance. The Giant Mine site will require constant maintenance to monitor the arsenic and treat the water all year round, forever. Eman Casam, CKLB News, Yellowknife.

Giant Mine Remediation

CBC Radio, Friday, October 21, 2011, 7:30 a.m.

RANDY HENDERSON, CBC: Today in Yellowknife engineering and environmental experts are talking about how they'll manage the Giant Mine cleanup and what happens after underground arsenic trioxide is frozen. Kevin O'Reilly of Alternatives North says one of the challenges facing the federal government is planning for long-term monitoring and ensuring future generations understand the risks the mine site poses.

O'REILLY: Information that is how do we preserve and protect the documents about what's happened at the site over the years while it was an active mine, while it's being remediated. How do we have access to those documents, not just now, but forever. Paper degrades, it disappears, if you put stuff on CDs the assumption is that people are going to have computers.

CBC: O'Reilly hopes people living in Yellowknife, Ndilo and Dettah will have input into the long-term management plan. Aboriginal Affairs plans to host most public information sessions next winter.

CBC Radio, Friday, October 21, 2011, 8:30 a.m.

TONY BUGGINS, CBC: Today is the final day of a week of technical hearings on the plan for Giant Mine. Experts are debating the best way to monitor the massive cleanup. Kevin O'Reilly of Alternatives North says the federal government needs to make contingency plans in case the environment changes radically. He says there should be plans in place to deal with natural disasters such as earthquakes or floods, as well as climate change.

O'REILLY: Is the precipitation going to change, or the timing of it, the duration of it? All of those things and it's really good for us to peer into the future, but we should be designing things with whatever understanding we have now and making sure we have a proper system in place that if there are changes we know how to handle those into the future.

CBC: Federal officials overseeing the project say they've planned for the risks that could happen in a 100-year period, but they acknowledge monitoring forever will be a challenge.

Giant Mine Remediation

CBC Northbeat, Wednesday, October 19, 2011, 5:30 p.m.

RANDY HENDERSON, CBC: Parties following the Giant Mine cleanup are meeting in Yellowknife this week. They're talking about plans to remediate the contaminated site. Today, experts answered questions about the water and surface area, spring flooding and a sinkhole is putting pressure on the cleanup team to re-evaluate their plans for Baker Creek. The plan was to keep Baker Creek flowing through the mine site on its way to Great Slave Lake, but after the creek overflowed on top of contaminated tailings area this spring, federal officials are now looking into how to divert the creek north of the mine site. It would be a contingency plan if rainfall increased or flooding remained a problem. The cleanup team says water on the site will always have to be treated, even after underground chambers containing arsenic trioxide are frozen. (Full Story)

CBC Radio, Thursday, October 20, 2011, 6:30/8:30 a.m.

SONYA KENEG, CBC: Experts are painting a clearer picture of what it will mean to stabilize the underground arsenic at Giant Mine forever. At meetings in Yellowknife federal officials are answering questions about the huge clean up. As Elizabeth McMillan reports, questions remain about long-term maintenance and how a government department can plan for infinity.

MCMILLAN: Beneath Giant Mine there's enough arsenic trioxide to poison everyone in the world and it's not going away. The federal cleanup team wants to freeze the underground chambers that contain the toxic dust. Adrian Parody is the project manager.

PARODY: This is the solution. There is no other solution right now.

MCMILLAN: But even after the arsenic is frozen, Parody says at least eight people will need to monitor the site and treat the water, year-round, forever. A better solution may come along some day.

PARODY: In the long term 100 years from now, 200 years that's something for our great, great grandkids to look at.

MCMILLAN: Todd Slask (?) represents the Yellowknives Dene's concerns. He says the federal government needs to consider the affects of climate change, flooding or melting permafrost. He's pushing for independent oversight.

SLASK: And not just that the federal government is the only decision maker. There has to be direct, local community involvement such that folks in Ottawa are not looking out for the folks up here in Yellowknife.

MCMILLAN: Today the group will talk about the long-term risks associated with the project. Elizabeth McMillan, CBC News, Yellowknife.

