

# Weekly NEWS



An Information Service for Alberta's Environment Industry

The Week Ending November 1st, 2019



## Inside this Issue:

- *RemTech 2019 Wrap-up*
- *2019 ESAA Industry Award Winners Announced*
- *Village of Cereal Faces Environmental Charges*
- *Nova Scotia's Auditor General Warns of Unknown Costs of Remediating Abandoned Mines*
- *How Do You Clean Up a Contaminated 150 Year-Old Gold Mine*
- *New ESAA Member*
- *Upcoming Events*

**The ESAA Weekly News is published weekly by:**

**Environmental Services Association of Alberta**  
102, 2528 Ellwood Drive SW  
Edmonton, AB T6X 0A9  
(P) 780.429.6363  
(F) 780.429.4249  
[info@esaa.org](mailto:info@esaa.org)  
[www.esaa.org](http://www.esaa.org)

**Comments & submissions are welcome!**

Please submit your announcement via e-mail to:  
[weeklynews@esaa.org](mailto:weeklynews@esaa.org)

## REMTECH 2019 WRAP-UP

On behalf of ESAA, thank-you for your continued support of *RemTech*. *RemTech* has grown into an event that is recognized across North America as one of the best remediation conferences. This would not be possible without the great support from all of our sponsors, exhibitors, speakers and delegates.



### Charity Fundraising

Once again, *RemTech* shines and gives back. \$25,000 was raised for The Environmental Artworks Foundation of Alberta and the Ilsa Mae Research Fund. In the past 14 years *RemTech* has raised \$723,000 for charity. Thank you to all of the delegates who made a donation during the casino or purchased a silent auction item. Thank you to everyone who donated an item to the silent auction.

### Presentations Now Available

PDF copies of all the technical presentations are now available via the *RemTech* website. The proceedings archive now includes 1,162 presentations. Presentations can be found at: <http://www.esaa.org/remtech/about-remtech/proceedings/>

### RemTech Photos

Photos from *RemTech 2019* are now available at: <http://www.esaa.org/remtech/about-remtech/photo-gallery/> Take a look back and enjoy!

### EnviroTech 2020

*EnviroTech 2020* will take place April 27-29<sup>th</sup> at the Hyatt Regency in Calgary. Call for Abstracts and registration information is now online at: <https://www.esaa.org/envirotech/>

### RemTech 2020

*RemTech 2020* will take place October 14-16<sup>th</sup> at the Fairmont Banff Springs in Banff. Call for Abstracts and registration information to be released by mid-December, Watch your email for details.

## 2019 ESAA INDUSTRY AWARD WINNERS ANNOUNCED

ESAA is pleased to announce the winners of the 2019 Industry Awards. The ESAA Industry Awards is an annual awards program that recognizes member excellence in areas of environmental innovation and community service.



### Community Service Award

The Community Service Award is presented to an ESAA member organization that has shown an outstanding commitment to bettering their community through active fundraising and community involvement.

The winner of this year's Community Service Award is..... **Waterline Resources!**

To learn more about why Waterline Resources is the 2019 award winner, visit:  
[www.esaa.org/industryawards/](http://www.esaa.org/industryawards/)

## **Environmental Industry Award**

The Environmental Industry Award is presented to a member of Alberta's Environmental Industry that has shown leadership in the area of environmental innovation.

The winner of this year's Environmental Industry Award is..... **Husky Energy!**

To learn more about why they are the 2019 award winners, visit: [www.esaa.org/industryawards/](http://www.esaa.org/industryawards/)

Congratulations to the winners and thank you to everyone that applied. Details about the 2020 awards will be released in early 2020.

## **PROFESSIONAL DRAFTING, BOREHOLE LOG ENTRY AND DATA TABULATION FOR ENVIRONMENTAL CONSULTANTS OF ALL SIZES**

Local company with 25 years experience in Alberta's oil and gas industry.

We are environmental experts who will present your drawings and data professionally and cost-effectively. No job is too big or too small.

We have completed thousands of environmental projects for many happy clients.

Environmental work is ALL we do and we know exactly what regulators want to see.

All work is hourly - only use us when you need us. Accuracy guaranteed.

Try us on a project and see what you THINK!



**THINK**  
ENVIROTECHNICAL SERVICES  
**587-747-5567**  
[www.thinkenv.ca](http://www.thinkenv.ca)

## ***VILLAGE OF CEREAL FACES ENVIRONMENTAL CHARGES***

The Alberta government has laid 6 charges against the Village of Cereal related to the improper use of pesticides that occurred on or about June 6, 2017.

The Village of Cereal and Kenneth William Rude, the village foreman, face four charges under the Environmental Protection and Enhancement Act and two charges under the Pesticide Sales, Handling, Use and Application Regulation. Darcy Gene Olds, caretaker of the village campground, faces the same charges for a similar offence.

### **Incident overview**

The Environmental Protection and Enhancement Act offences relate to:

- Releasing of substances (Strychnine and Ramex) that may cause a significant adverse effect.
- Application of pesticides contrary to regulations and manufacturer's label directions.

- Applying a Schedule 1 or Schedule 2 pesticide without proper approval or registration.
- Applying pesticides without holding appropriate certificate of qualification.

The charges under the Pesticide Handling, Use and Application Regulation relate to:

- Applying pesticides in a manner likely to cause an adverse effect.
- Applying pesticides without conformity to the requirements of the Pest Controls Products Act (Canada).

---

### ***COMPANIES, DIRECTORS FACE ENVIRONMENTAL CHARGES***

Government has laid a total of 12 environmental charges against three companies and one director from each company related to offences in Calgary.

#### **Incident overview**

The charges, laid under the Environmental Protection and Enhancement Act, relate to excavated fill contaminated with a hazardous substance, hexavalent chromium, deposited on City of Calgary property on or about April 13, 2017.

Loutfi Aboumrad and Superior Concrete Systems Ltd. are charged with five counts under the Environmental Protection and Enhancement Act.

Ziad El-Bittar and Alberta Chrome & Grinding (2001) Ltd. are charged with three counts under the act.

Hussein Amery and Amara Investments Corp. face four charges under the act.

The next court appearance is scheduled for March 2, 2020 at the Calgary Courts Centre.

---

### ***AER: IL 83-02 AND ID 96-03 RESCINDED***

As a result of our continual review of requirements and processes, we determined that the following regulatory documents are no longer necessary, and they are now rescinded:

- *Informational Letter 83-02: Annual Reservoir Review for Gas Pools*
- *Interim Directive 96-03: Oilfield Waste Management Requirements for the Upstream Petroleum Industry*

#### **IL 83-02**

*Informational Letter 83-02: Annual Reservoir Review for Gas Pools* was released on March 28, 1983, to outline the procedures for industry submission of gas reservoir studies. It has now been rescinded for the following reasons:

- We no longer release general bulletins to request the submission of gas pool information.
- Requirements related to gas pool production submissions are found in *Directive 017: Measurement Requirements for Oil and Gas Operations*, and information regarding the conservation of gas pools in Alberta is submitted in accordance with unit 2 of *Directive 065: Resources Applications for Oil and Gas Reservoirs*.

#### **ID 96-03**

*Interim Directive 96-03: Oilfield Waste Management Requirements for the Upstream Petroleum Industry* was released on November 22, 1996, to introduce and briefly describe the forthcoming sections of *Guide 058* (now *Directive 058*). It has now been rescinded for the following reason:

- These requirements are found in [\*Directive 058: Oilfield Waste Requirements for the Upstream Petroleum Industry\*](#).

## ***BC: NATURAL RESOURCE COMPLIANCE AND ENFORCEMENT SUMMARY RELEASED***

The Province of BC has released its quarterly natural resource compliance and enforcement summary for the first quarter of 2019.

The summary outlines various compliance and enforcement actions taken by the provincial government, along with associated penalties and fines. In total, the Province issued 16 orders, 30 administrative sanctions, three administrative penalties, 419 violation tickets and 12 court convictions. These enforcement actions resulted in \$177,207 in penalties.

As part of the Province's commitment to better protect environmentally sensitive habitats and wildlife from the effects of backcountry winter activities, conservation officers issued 171 tickets to those using off-road vehicles and snowmobiles unlawfully, totalling \$32,286 in fines.

Since 2006, over \$16 million in penalties have been levied against companies and individuals for non-compliance

To date, close to 34,000 enforcement actions have been published in the summaries and entered into the Province's natural resource violations database.

Examples of environmental non-compliance described in the quarterly summaries include:

- hunting and fishing without a licence;
- open burning out of season;
- non-compliance with environmental legislation;
- introducing waste into the environment; and
- unlawful operation of off-road vehicles and snowmobiles.

To view the full natural resource compliance and enforcement summary, visit:

<https://www2.gov.bc.ca/gov/content?id=5286CBBC06654041B5114EAB9BA9085A>

---

### ***TERREBONNE COMPANY FINED A TOTAL OF \$564,000 FOR VIOLATIONS AGAINST THE CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999***

Canadians value a safe and clean environment. Environment and Climate Change Canada's enforcement officers work hard every day to make sure individuals and companies are observing Canadian environmental laws.

Les Entrepreneurs A.B. inc., a Terrebonne-based company, was fined a total of \$564,000 after pleading guilty, on October 4, to three counts of contravening the *Canadian Environmental Protection Act, 1999* and the *Volatile Organic Compound (VOC) Concentration Limits for Automotive Refinishing Products Regulations*, which are part of the Act.

An investigation by Environment and Climate Change Canada enforcement officers revealed that the company had imported, offered for sale, and sold automotive refinishing products that contained volatile organic compounds in excess of the allowable limit. The company also failed to comply with an environmental protection compliance order issued by an enforcement officer, under the Canadian Environmental Protection Act, 1999.

The company received two fines of \$125,000 for importing and selling the products, respectively, totalling \$250,000, and a fine of \$150,000 for failing to comply with an environmental protection compliance order. In addition to the fines on the three counts, the company received an additional \$164,000 fine for financial gains. This amount represents the profits generated by the sale of non-compliant automotive refinishing products. The total fines will be directed to the Environmental Damages Fund.

In addition, the judge ordered the confiscation and destruction of the automotive refinishing products seized at the company's expense, as well as the publication of an article in *Le Carrossier* magazine (Autosphere.ca) within six months. The article must contain the facts of the offence and the details of the sentence.

As a result of this conviction, the company's name will be added to the Environmental Offenders Registry.

## ***NOVA SCOTIA'S AUDITOR GENERAL WARNS OF UNKNOWN COSTS OF REMEDIATING N.S.'S ABANDONED MINES***

(Source: CBC News) Nova Scotia has an unknown financial liability on its hands as it begins to remediate abandoned mine sites, the province's auditor general said Tuesday.

Michael Pickup's [newest financial audit](#) found the Department of Lands and Forestry hasn't sufficiently investigated potential contamination at many of the province's old mines.

Without that analysis, the department can't assess the province's financial risk relating to remediating and monitoring the sites.

"I think, you know, the danger is that there could be significant changes as this work gets done on these sites," Pickup said of potential cleanup costs.

Earlier this year, the province announced it would [spend \\$48 million to remediate two historical gold mines](#). Montague Gold Mines in Dartmouth and Goldenville near Sherbrooke have been contaminated with arsenic and mercury since a gold rush first hit the province in the 1860s.

But those are just two of 69 abandoned gold and coal mine sites on Crown land that the province may be responsible for cleaning up.

"We've been pushing the government to say, 'You need to do that work,'" Pickup said. "And that's why we gave them a significant deficiency this year to say, 'OK, time is up. You need to do this work and you need to figure out, you know, whether you have contamination, what the extent of that might be, what you have to do and if you have to record it [in the accounting].'"

Due to what the report calls a significant weakness in the department's financial reporting of abandoned mine sites, the auditor general's office is now conducting a performance audit, with a report expected next spring.

In addition to the financial risk, Pickup's report notes that the lack of studies at old mine sites also means there are potential human health or ecological risks.

### ***Department responds***

Lands and Forestry Minister Iain Rankin said he agrees "we can always move faster" to address contamination concerns, but he couldn't give a timeline on when the sites will be remediated.

"It'll be a number of years to address these sites. There's a lot of analysis and work that has to go into it and then looking at what the priority is and how we find the money to make sure that we're addressing them."

Rankin said staff plan to meet with other relevant departments, including Energy and Mines and Nova Scotia Lands, and then present a plan to the Treasury Board.

The next sites on the province's list to study are the former gold mines of Caribou Mines, near Upper Musquodoboit, and Oldham, near the Halifax Stanfield International Airport, and two former coal mines in Sydney Mines on Halfway Road and Ocean Street.

Rankin said he welcomes the auditor general's report and the department plans to comply with his recommendations.

### ***Financial liability for contaminated sites \$372 million***

Nova Scotia's financial liability for contaminated sites this year sits at \$372 million, up from \$285 million last year, and up from \$107 million five years ago. This year's figures include \$230 million for [the cleanup of Boat Harbour](#), \$48 million for abandoned mine sites and \$94 million for other projects, including [the cleanup of the Harrietsfield salvage site](#).

Despite Pickup's concerns about the lack of studies on abandoned mines — and the financial implications of that — he said the province has followed proper accounting procedures for the sites it has studied.

In 2010, the auditor general's office audited the management of contaminated sites and made 17 recommendations. When the office last followed up, in 2014, 10 of the 17 recommendations had not been implemented, Pickup said.

## HOW DO YOU CLEAN UP A CONTAMINATED 150-YEAR-OLD GOLD MINE?

(Source: CBC News) For 150 years, dozens of abandoned former gold mines have littered Nova Scotia, some harbouring residue with sky-high arsenic levels.

Earlier this year, [the province announced it will spend \\$48 million](#) to clean up two of the worst offenders — Goldenville, near Sherbrooke on the Eastern Shore, and Montague Gold Mines, in Dartmouth.

But that task is daunting.

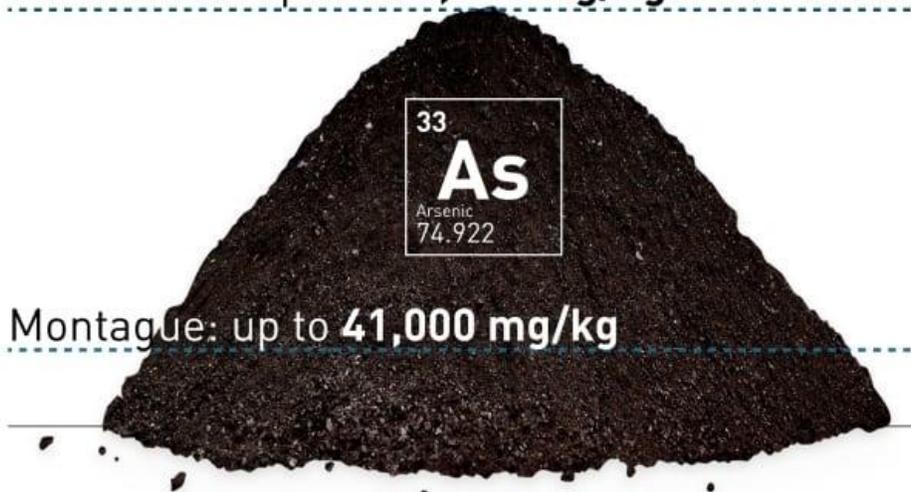
[The two sites were mined extensively](#) from the 1860s to the early 1940s. Back then, environmental regulations were non-existent, or, at best, inadequate.

Miners used liquid mercury to extract gold from crushed rock, and the leftover material, called tailings, was simply dumped in the closest body of water.

Arsenic, which occurs naturally in rock, was released as part of the mining process.

# Arsenic content discovered at two former mines

Goldenville: up to **200,000 mg/kg**



Montague: up to **41,000 mg/kg**

NSED Soil Quality Guideline: **31 mg/kg**

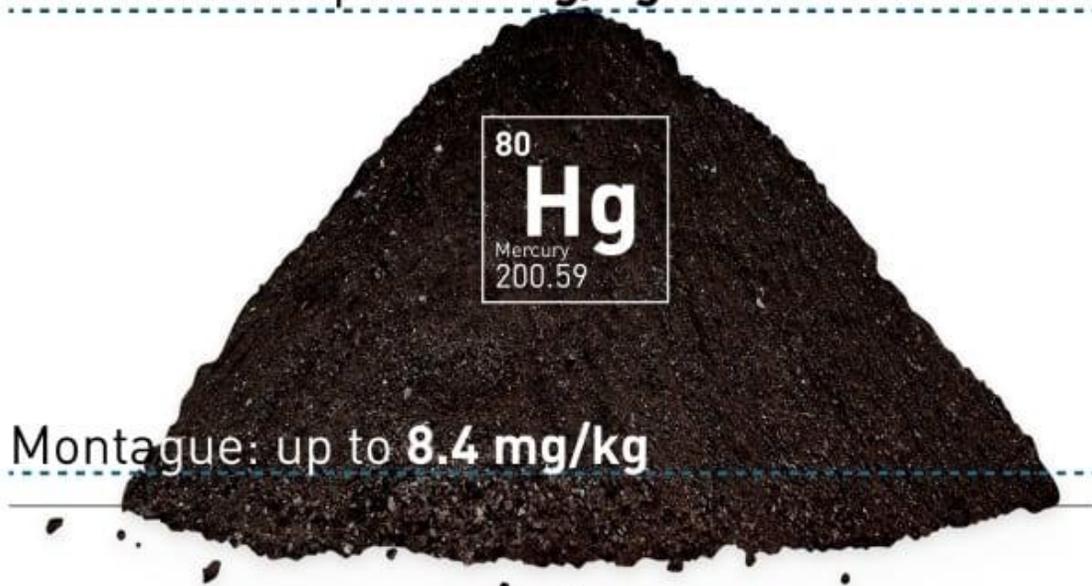


Arsenic levels at the two sites are astonishing. The Nova Scotia Environment Department's human health soil quality guideline is 31 mg/kg, but at Goldenville, levels of up to 200,000 mg/kg were found, and at Montague Gold Mines, the tailings had arsenic levels of up to 41,000 mg/kg.

The Canadian Council of Ministers of the Environment's human health and ecological soil quality guidelines for inorganic mercury is 6.6mg/kg. At Goldenville, mercury levels of up to 48 mg/kg were found, and at Montague Gold Mines, they were up to 8.4 mg/kg.

# Mercury content discovered at two former mines

Goldenville: up to **48 mg/kg**

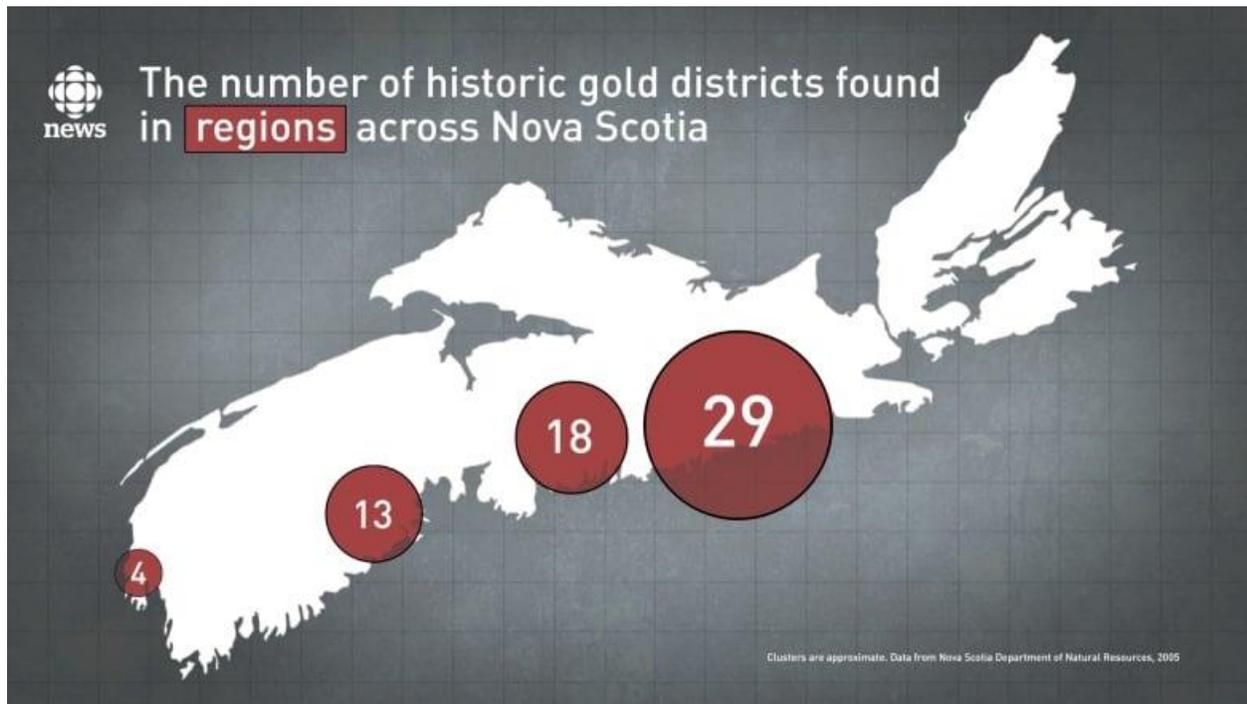


Last month, the province revealed plans to remediate [Montague](#) and [Goldenville](#) — plans that could serve as a template for future cleanups of other former gold mines.

The plans, pitched by a consortium of companies selected by the province through a tendering process, involve excavating the tailings with the greatest contamination to a depth of two metres and placing them in a lined containment cell.

"You're controlling what water can get at them and more or less entombing them so that they don't have a negative effect on the environment any longer," said Donnie Burke, the executive director of environmental analysis and remediation for Nova Scotia Lands, a provincial Crown corporation responsible for environmental cleanups.

Those areas will then be covered with clean backfill.



At Montague, two containment cells will each be 95 metres by 95 metres and five metres high, made with a berm, an impermeable liner, a leachate collection system and an impermeable cover system. At Goldenville, the same structures will be built, but one will be 180 metres by 180 metres and the other will be 135 metres by 135 metres.

The two sites will also require a water treatment system as well as a wall to prevent contaminated water from leaving the excavation zone.

In other areas with lower levels of contamination, a protective, low-permeability cover will be placed on top of the tailings to prevent precipitation from getting into the contaminated soils. That barrier will then be covered with soil and vegetation.

The sites are challenging to clean up, the reports note, because of the sheer size of the tailings areas and the fact that some areas flood seasonally.

Burke said the plans are still subject to approval. Cleanup will likely take place over about five years, he said.

A Saint Mary's University scientist who studies gold mine contamination and remediation said she is impressed with the reports.

"It is good gathering of information and identifying the gaps that are required before you're even able to start thinking about remediating the area," said Linda Campbell, the director of the school of environment at the university. "I really applaud the people who are involved in this report."

Campbell said one detail she'd like to see in future plans for the sites is a good monitoring strategy to catch any leaks in the liners.

"The challenge with geotextile clay liners, that kind of thing, they will fail at some point. They will," Campbell said, noting that failure would happen in a matter of decades. "Nothing lasts forever and that's just one of them."

Over time, the tailings have been transported downstream from the initial mine sites. At Montague, the contaminated material has been found in nearby Barry's Run. At Goldenville, tailings have been found six kilometres away, but the report notes they "have likely been deposited further downstream, including in the marine environment."

In August, [the Halifax Regional Municipality warned residents](#) not to enter the water or eat fish from Barry's Run due to arsenic contamination from the mine site.

Ingesting arsenic in moderate levels over a lifetime can cause cancer, [according to the provincial government](#), while ingesting high concentrations over a short period of time can cause sickness. Daily exposure to dust from tailings can also cause health effects.

Today, Nova Scotians are unlikely to be affected by mercury from gold mine tailings because their exposure is low, [the province says](#), but long-term exposure at low levels can cause some minor health effects, and people are advised to avoid tailings.

---

### ***LABRADOR MILITARY SITE CLEANUP TALKS DRAG ON BETWEEN FEDS AND N.L. GOVERNMENT***

(Source: CBC News) Ottawa is moving the goalposts downfield on a potential deal to remediate contaminated former U.S. military sites in Labrador, with Department of National Defence officials requiring more information and narrowing the definition of what work may be eligible for funding.

That's according to provincial government briefing notes obtained by CBC News through access to information.

"The scope of work that may be eligible for cost sharing under the agreement has changed substantially over time," a July 24 Department of Municipal Affairs and Environment (MAE) information note advises.

"Initially, it was understood through discussions with DND that any work related to the abatement, removal and remediation of environmental contaminants or hazardous materials that were attributable to former military operations at eligible sites may be considered for 50-50 cost sharing."

But that position has shifted, according to the provincial briefing materials.

"DND advised that their current position is that only specific eligible costs would be considered and that those could be limited to impacted media (soil, air, or water). There are components of clean-up work at eligible sites that may not be eligible for cost sharing, including the removal of infrastructure and debris, even if they contain hazardous materials."

Provincial officials wrote that both the level of information requested by DND to secure a cost-shared agreement and the timelines have increased or changed "significantly over time."

The Department of National Defence did not directly address those concerns in an emailed statement to CBC News.

But DND stressed it is "committed to environmental stewardship and sustainable development and we will continue taking concrete and significant steps to address risks posed by historically contaminated areas," spokesperson Daniel Le Bouthillier wrote.

The Mid-Canada Line sites were transferred from the Department of National Defence to their respective provinces by 1970, after technology rendered them obsolete.

Le Bouthillier noted that past environmental practices, while considered acceptable at the time, have left "considerable contamination" at the sites.

"We are currently conducting site assessments to determine which sites are eligible for remediation. Local Innu and Inuit groups have been engaged in the design of assessment projects completed to date."

Le Bouthillier added, "As discussions with the province continue, we don't have further detail to provide at this time."

In 1986, the province got \$5.5 million from Ottawa to remediate 13 former U.S. radar, communications or supply sites in Labrador, plus one in St. Anthony, near the tip of Newfoundland's Northern Peninsula.

That cash was spent mostly on "building and equipment removal and disposal" — work that was completed at 11 sites.

In addition to the initial \$5.5 million dating back to the 1980s, more money has been spent by the province at some of the affected sites.

That includes \$13 million in Hopedale, \$3 million to "fully remediate" the site in St. Anthony, and \$500,000 to start work at North West Point.

In total, \$22 million has been spent on cleanup work over the years.

According to the province, the sites covered by the 1986 agreement where efforts are continuing to ensure they "meet current acceptable environmental standards" are:

- Hopedale.
- North West Point.
- Cartwright.
- Border Beacon.
- Cape Harrison.
- Cut Throat Island.
- Spotted Island.
- Cape Makkovik.
- Wild Boar.
- BOA Hunt Lake.
- Harbour Lake.
- St. Anthony.

According to the provincial briefing notes, talks began in 2016 on a potential 50-50 cost-shared agreement, similar to a deal the feds signed with the Ontario government.

The province delayed further work in Hopedale until federal funding became available.

But the two sides have yet to reach a deal. Provincial and DND officials held a conference call in early July to discuss "the current status and next steps." An earlier provincial briefing note — from June 2019 — outlined environmental liabilities, totalling more than \$16 million at seven of those sites in Labrador.

---

## ***New ESAA Member***

---

ESAA's Board of Directors and staff would like to welcome the following new member:

**Full Member:**



**Competition Environmental Consulting Ltd**

101, 7902 - 110 Street  
Grande Prairie, AB T8W 1M3  
Phone: (780) 518-9416

**Web:** <https://www.ceclimited.ca/>

Rhonda Greenwood, Director  
**e-mail:** [rhonda@ceclimited.ca](mailto:rhonda@ceclimited.ca)

Locally owned and operated with Environmental Specialists skilled in Waste Management, Environmental monitoring, Water Management and Emergency Spill Response.

---

## Upcoming Events

---



*CLRA Alberta Chapter presents*

### **2020 AGM & CONFERENCE**

**February 26 - 28, 2020**

**Registration Opens November 18, 2019**

*(Early-Bird until December 31, 2019)*

### **Call for Abstracts**

**Open:** October 29, 2019

**Deadline:** November 29, 2019 at 11:59 pm

[Call for Abstract Details](#)



### **2020 Science and Technology Seminars Call for Abstracts**

AGAT Laboratories is inviting you to present at our 2020 annual Tech Talks. These one-day seminars are held across Canada and bring together individuals from various disciplines and sectors, to discuss relevant industry matters and share the latest scientific and technological advances within the environmental and engineering fields.

The presentations are 25-minute long, followed by a 5-minute Q&A session, and will be held on:

Please submit your abstract (500 words maximum) in MS Word format, no later than **November 15, 2019**, accompanied by a 150-word bio and your:

- Full name, designations and credentials
- Company name
- Position
- Presentation title
- AGAT Tech Talk location of interest (Calgary, Edmonton, Toronto and/or Montreal)

Suggested topics for this year's talks are:

- Government and regulatory updates
- New and emerging technologies
- Emerging contaminants
- Site assessment and remediation
- Air testing
- Spill response and management

Please send your submission and questions to [techtalk@agatlabs.com](mailto:techtalk@agatlabs.com).



### ***2020 Call for Abstracts is Now Available!***

The 2020 RPIC Federal Contaminated Sites National Workshop will provide a forum for the contaminated sites community to learn about technical, scientific and organizational innovations, and best practices for the management of contaminated sites. The Workshop will offer a unique opportunity for the public, private, and academic sectors to meet and exchange new ideas and information with colleagues and industry representatives from across the country and abroad.

#### **GUIDELINES FOR SUBMITTING ABSTRACTS**

The Real Property Institute of Canada (RPIC) and the Contaminated Sites Management Working Group invite you to submit presentations related to the assessment, risk management, remediation and management of federal contaminated sites. **As the Workshop is being held in Quebec City, presentations proposed to be delivered in French will be given special consideration.**

All abstract submissions will be done through our online submission system at <https://2020rpicfcsnw.exordo.com/> by **November 15, 2019**. **Please note that submissions sent via email will not be considered. All presenters are required to register for the Workshop.**

Presentations will be selected for inclusion in the preliminary program on the basis of a peer review by the Technical Committee. Abstracts with a commercial or marketing tone (promoting services not the science) will not be accepted. Authors will be notified of acceptance by **December 13, 2019**.

#### **ABSTRACTS ARE ENCOURAGED IN, BUT NOT LIMITED TO, THE FOLLOWING TOPICS**

- Climate Change Adaptation
- Per and Polyfluoroalkylated Substances and other Persistent and Recalcitrant Compounds

- Brownfields
- Socio-economic and Indigenous Engagement
- Intergovernmental Collaboration
- Legal Considerations and Requirements
- Management
- Project Management and Challenges Specific to Emerging Contaminants
- Northern Site Challenges
- Long Term Monitoring, Site Closure and Diversiture
- Innovative Approaches for Contamination in Aquatic Environments
- Information and Technology Management
- Zero Waste and Sustainability
- Air Quality
- Research and Development, New Technologies and Innovation
- Human Health and Ecological Risk Assessment

[Download Call for Abstracts](#)



join

ENVIRONMENTAL SERVICES ASSOCIATION OF ALBERTA

**ESAA**

now!

visit [www.esaa.org](http://www.esaa.org)  
for more information