Dear [Redacted]:

Re: Your request for access to information under Part II of the Access to Information and Protection of Privacy Act, 2015 [Our File #: MAE/021/2019]

On January 30, 2019, the Department of Municipal Affairs and Environment received your request for access to the following records/information:

“All communication from or to Haseen Khan, Ervin McCurdy, Ian Bell, Community Health, Town of Deer Lake council or staff regarding Deer Lakes water supply coming from a wooden creosote treated penstock.”

I am pleased to inform you that a decision has been made by the Deputy Minister for the Department of Municipal Affairs and Environment to provide access to some of the requested information.

However, certain text contained within the records has been refused in accordance with the following exceptions to disclosure, as specified in the Access to Information and Protection of Privacy Act, 2015 (the Act):

Section 34(1)(a)(ii): “The head of a public body may refuse to disclose information to an applicant if the disclosure could reasonably be expected to harm the conduct by the government of the province of relations between that government and the council of a local government body.”

Section 40(1): “The head of a public body shall refuse to disclose personal information to an applicant where the disclosure would be an unreasonable invasion of a third party’s personal privacy.”

As required by 8(2) of the Act, we have severed information that is unable to be disclosed and have provided you with as much information as possible. Please be advised that page 43 of the responsive document has been removed under Section 34(1)(a)(ii). In accordance with your request for a copy of the records, the appropriate copies have been enclosed.

Please be advised that you may appeal this decision and ask the Information and Privacy Commissioner to review the decision to provide partial access to the requested information, as set out in section 42 of the Act (a copy of this section of the Act has been enclosed for your reference). A request to the Commissioner must be made in writing within 15 business days.
days of the date of this letter or within a longer period that may be allowed by the Commissioner. Your appeal should identify your concerns with the request and why you are submitting the appeal.

The appeal may be addressed to the Information and Privacy Commissioner is as follows:

Office of the Information and Privacy Commissioner
2 Canada Drive
P. O. Box 13004, Stn. A
St. John’s, NL A1B 3V8
Telephone: (709) 729-6309
Toll-Free: 1-877-729-6309
Facsimile: (709) 729-6500

You may also appeal directly to the Supreme Court Trial Division within 15 business days after you receive the decision of the public body, pursuant to section 52 of the Act (a copy of this section of the Act has been enclosed for your reference).

Please be advised that responsive records will be published following a 72 hour period after the response is sent electronically to you or five business days in the case where records are mailed to you. It is the goal to have the responsive records posted to the Completed Access to Information Requests website within one business day following the applicable period of time. Please note that requests for personal information will not be posted online.

If you have any further questions, please feel free to contact me by telephone at 709-729-7183 or by e-mail at ryancollins@gov.nl.ca.

Sincerely,

Ryan Collins
ATIPP Coordinator
Municipal Affairs and Environment

Enclosures
Access or correction complaint

42. (1) A person who makes a request under this Act for access to a record or for correction of personal information may file a complaint with the commissioner respecting a decision, act or failure to act of the head of the public body that relates to the request.

(2) A complaint under subsection (1) shall be filed in writing not later than 15 business days

   (a) after the applicant is notified of the decision of the head of the public body, or the date of the act or failure to act; or

   (b) after the date the head of the public body is considered to have refused the request under subsection 16(2).

(3) A third party informed under section 19 of a decision of the head of a public body to grant access to a record or part of a record in response to a request may file a complaint with the commissioner respecting that decision.

(4) A complaint under subsection (3) shall be filed in writing not later than 15 business days after the third party is informed of the decision of the head of the public body.

(5) The commissioner may allow a longer time period for the filing of a complaint under this section.

(6) A person or third party who has appealed directly to the Trial Division under subsection 52(1) or 53(1) shall not file a complaint with the commissioner.

(7) The commissioner shall refuse to investigate a complaint where an appeal has been commenced in the Trial Division.

(8) A complaint shall not be filed under this section with respect to

   (a) a request that is disregarded under section 21;

   (b) a decision respecting an extension of time under section 23;

   (c) a variation of a procedure under section 24; or

   (d) an estimate of costs or a decision not to waive a cost under section 26.

(9) The commissioner shall provide a copy of the complaint to the head of the public body concerned.
Direct appeal to Trial Division by an applicant

52. (1) Where an applicant has made a request to a public body for access to a record or correction of personal information and has not filed a complaint with the commissioner under section 42, the applicant may appeal the decision, act or failure to act of the head of the public body that relates to the request directly to the Trial Division.

(2) An appeal shall be commenced under subsection (1) not later than 15 business days

(a) after the applicant is notified of the decision of the head of the public body, or the date of the act or failure to act; or

(b) after the date the head of the public body is considered to have refused the request under subsection 16(2).

(3) Where an applicant has filed a complaint with the commissioner under section 42 and the commissioner has refused to investigate the complaint, the applicant may commence an appeal in the Trial Division of the decision, act or failure to act of the head of the public body that relates to the request for access to a record or for correction of personal information.

(4) An appeal shall be commenced under subsection (3) not later than 15 business days after the applicant is notified of the commissioner’s refusal under subsection 45(2).
Collins, Ryan

From: Khan, Haseen  
Sent: Thursday, June 8, 2017 9:41 AM  
To: Johnson, Darryl  
Subject: FW: Deer Lake Power Canal

Darryl;

FYI. [s.40(1)] I am not responding. Thanks.

From: [mailto]  
Sent: Thursday, June 8, 2017 9:20 AM  
To: Khan, Haseen  
Cc: Dawe, Paula V; Minister, HCS  
Subject: Re: Deer Lake Power Canal

Good Day

Please see news article regarding creosote penstock concerns of being placed at the Deer Lake dump. I ask does it concern our Govt that this poisonous penstock was used as the supply source for the Deer Lake drinking water supply for decades. Could this attribute for Deer Lakes seemingly high rate of kidney cancer and other illnesses? Will our Govt step up and look that this possible health disaster inflicted on the residents of Deer Lake? Will our Govt investigate the high numbers of illness in our town?


Regards

[Redacted]

Sent from my iPhone

On Apr 11, 2017, at 4:33 PM, Khan, Haseen <hkhan@gov.nl.ca> wrote:

Dear [Redacted]

This is in response to your email of April 6, 2017. Please be advised that there was no interruption in regular seasonal chemical and physical water quality testing for the Town of Deer Lake. Water quality data for the Town can be found online at the Newfoundland and Labrador Water Resources Portal: http://maps.gov.nl.ca/water/. Special sampling of the Town of Deer Lake’s water supply for possible organic contaminants will occur in spring 2017.

Staff of the Department of Municipal Affairs and Environment will be in touch this month concerning the investigation of the Humber Canal for old equipment and other materials possibly left in the canal. Such an investigation cannot occur until the snow melts and the canal is accessible. A possible cleanup plan will be dependent on the results of the investigation.

I trust this addresses your inquiry. Kind regards.
Good Day All

Looking for an update on the dumped equipment/materials that's in the Deer Lake drinking water supply. Is there a plan in place to use the underwater video equipment to check the canal for additional materials? Is there a clean up plan in place? Also as per yesterday's news reports regarding the failure to conduct some testing in the Provinces water supplies, can you confirm if Deer Lake water supply was one of the communities where the error had occurred? Can you confirm in light of this equipment/materials being found in the Deer Lake water supply that added testing precautions and measures has been added to the Deer Lake Water Supply test, such as test that look for contaminates that would go along with a discovery of equipment containing oils and other possibly toxic fluids and etc. In a location?

Regards

Sent from my iPhone

On Mar 17, 2017, at 3:43 PM, Goebel, Martin <mgoebel@gov.nl.ca> wrote:

Dear Ms. Hayden:

I spoke with Mayor Ball a short while ago. I am attaching the videos that show old pieces of equipment in the Deer Lake canal. In one of the videos at the end there is a shot of the GPS co-ordinates. Subsequent to when this video was made, the equipment could no longer be located due to higher water levels. We agreed to continue to investigate this with Deer Lake Power company officials later in the spring and to have [redacted] accompany the officials to the approximate location. Now according to Mr. Ball, there is another option, namely to use an underwater remote device that the town owns in order to find this equipment. We can certainly take Mayor Ball up on this offer and arrange to do another site inspection sooner.
By copy of this email, I am asking my staff to make the arrangements for a date and time to carry out a site inspection.

Regards,
**Martin G. Goebel, P.Eng**
ADM, Environment Branch

Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
4th Floor, West Block, Confederation Bldg
100 Prince Philip Dr
PO Box 8700
St. John’s NL A1B 4J6

e: MGoebel@gov.nl.ca
t: (709) 729-2559
c: (709) 687-0818
f: (709) 729-0112

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**From:** Hoddinott, Fanny  
**Sent:** Friday, March 17, 2017 1:04 PM  
**To:** 'Maxine Hayden'  
**Cc:** Goebel, Martin  
**Subject:** RE: CANal

Thanks for your e-mail, Maxine. I will follow-up and get back to you soon as I can. I have copied Martin Goebel on this, as well. (Pls note Martin’s correct e-mail address). Thanks.

Fanny

---

**From:** Maxine Hayden [mailto:deerlaketownmanager@nf.aibn.com]  
**Sent:** Friday, March 17, 2017 12:52 PM  
**To:** Hoddinott, Fanny  
**Cc:** mgoebel@gov.nl.ca  
**Subject:** CANal

March 17, 2017  
Hi Fanny  
As per our conversation Mayor Ball would like a copy of correspondence from your department that you would have had with [redacted] regarding the Canal, any pictures of equipment in the canal which is owned by Kruger in Deer Lake. Any correspondence regarding that [redacted] that may have been sent to the media regarding equipment in the canal or any correspondence with the Media regarding [redacted] request about equipment in the canal.? Thank you in advance for whoever information you can provide.

Maxine Hayden  
Town Manager  
Town of Deer Lake  
6 Crescent St.  
Deer Lake, NL A8A 1E9
Can we discuss this on Monday?

Good morning,

On July 28th, the following request was received:

“Confirm Deer Lake water supply was distributed to the towns lines via a creosote treated wooden penstock? How many years this was operated through the treated penstock? Has any chemicals shown up in water test that could be attributed from the treatment product used on this penstock? Were there ever concerns about health risk to residents drinking water from a treated wooden penstock? If yes? When and from whom? Has any Health Dept looked into if Deer Lake has a higher than NL average health issues.”

Please provide me with the appropriate responsive documents or information within 3 days so that the legislative timelines may be met. Should the number of records or the time to extract the information be excessive or if a third party is involved, please notify me as soon as possible so that I may take appropriate action. If any records relate to legal advice or may contain cabinet confidences, please identify them, as additional consultations may be required.

Advisory Date: August 11, 2017
Due Date: Aug 25, 2017

If you have any questions or concerns please let me know.

Thanks for your attention,

Debi Keith | ATIPP Coordinator
Policy and Planning Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John’s, NL A1B 4J6
Ph: 729-3631
E: debikeith@gov.nl.ca
Potential copyright material

If you wish to obtain a copy please contact the ATIPP Office at (709) 729-7072 or atippoffice@gov.nl.ca.
From: Johnson, Darryl
Sent: Thursday, August 31, 2017 11:55 AM
To: Dawe, Paula V; Khan, Haseen
Subject: RE: Deer Lake Water Supply

I have a question about the old penstocks at Deer Lake Power.

Would you know if the old penstocks at Deer Lake Power in fact creosote treated wood penstocks?

Thanks,

DJ

From: Dawe, Paula V
Sent: Thursday, August 10, 2017 11:47 AM
To: Khan, Haseen <hkhan@gov.nl.ca>; Johnson, Darryl <DJohnson@gov.nl.ca>
Subject: RE: Deer Lake Water Supply

Darryl,

Attached are BTEX results for a site in the Humber Canal (not at the intake). All LTD.

From: Khan, Haseen
Sent: Thursday, August 10, 2017 11:32 AM
To: Johnson, Darryl; Dawe, Paula V
Subject: RE: Deer Lake Water Supply

Darryl;

I suspect the information is being collected in support of class action law suit.

We did collect a set of samples around May. I am asking Paula to share results with you.

If you need any other information please let us know. Thanks.

Haseen.

From: Johnson, Darryl
Sent: Thursday, August 10, 2017 10:58 AM
To: Khan, Haseen
Subject: Deer Lake Water Supply

Hi Haseen:

We have a request from a resident of Deer Lake to review cancer data in relation to concerns about exposure to carcinogens in the Town’s water supply.

Did Municipal Affairs and Environment do any recent testing of the Deer Lake water supply for potential contaminants (e.g., aromatic hydrocarbons) in the water supply? If testing was carried out, are you able to share the results.

Thanks for considering this.
Attention: Annette Tobin - Rush/Early
Department of Municipal Affairs and Environment
St. John's - DW Only
PO Box 8700
St. John's, NL
A1B 4J6

Report Date: 2017/05/15
Report #: R4460218
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B789642
Received: 2017/05/04, 10:08
Sample Matrix: Water
# Samples Received: 1

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<th>Quantity</th>
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<th>Date Analyzed</th>
<th>Laboratory Method</th>
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<td>N/A</td>
<td>Atl. RBCA v3 m</td>
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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
(1) This test was performed by Maxxam St. John’s NL

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Michelle Hill, Project Manager
Email: MHill@maxxam.ca
Phone #: 902-420-0203 Ext. 289

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.
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</table>
**GENERAL COMMENTS**

Each temperature is the average of up to three cooler temperatures taken at receipt.

| Package 1 | 3.9°C |

Revised report: Reissued to exclude COC and Cooler Temperature record from the CofA as requested by A. Tobin. 2017/05/15 MHL.

Results relate only to the items tested.
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Paula Chaplin, Project Manager

Phil Deveau, Scientific Specialist (Organics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.
FYI. I have alerted Jessica that this individual is a part of class action law suit against the DLP and GNL. 

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Department of Municipal Affairs and Environment
4th Floor, Confederation Building West Block
PO Box 8700
St. John’s NL  Canada  A1B 4J6
T (709) 729-2563
F (709) 729-0320
E hkhan@gov.nl.ca
www.gov.nl.ca/env

From: Jackman, Jessica (HCS)
Sent: Tuesday, December 05, 2017 10:20 AM
To: Khan, Haseen
Subject: RE: Creosote

So sorry about that – I am still learning the processes and who has access to what. 😊

Please see attached.

Kind regards,
Jessica

From: Khan, Haseen
Sent: Tuesday, December 5, 2017 10:02 AM
To: Jackman, Jessica (HCS) <Jackman@gov.nl.ca>
Subject: RE: Creosote

Jessica;

You can email me the report. I don't have access to HCS TRIM.

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Department of Municipal Affairs and Environment
4th Floor, Confederation Building West Block

1

ATIPP MAE-21-2019 11
Great, thanks so much.

Dr. Allison was wondering if you would like to review the report and provide comments/suggestions? It is in TRIM under record number DOC-34964.

Kind regards,
Jessica

---

From: Khan, Haseen  
Sent: Tuesday, December 5, 2017 9:42 AM  
To: Jackman, Jessica (HCS) <jjackman@gov.nl.ca>  
Subject: RE: Creosote

Yes, we did this through a policy document for public water supply areas only.

Haseen Khan, P.Eng.  
Director  
Water Resources Management Division  
Department of Municipal Affairs and Environment  
4th Floor, Confederation Building West Block  
PO Box 8700  
St. John’s NL Canada A1B 4J6  
T (709) 729-2563  
F (709) 729-0320  
E hkhan@gov.nl.ca  
www.gov.nl.ca/env

---

From: Jackman, Jessica (HCS)  
Sent: Tuesday, December 05, 2017 9:03 AM  
To: Khan, Haseen  
Subject: Creosote

Hi Hasseen,

I’m in the final stages of preparing a report regarding creosote, and our ADM was wondering when creosote was banned. On the following webpage: http://www.mae.gov.nl.ca/waterres/regulations/policies/creosote_wood.html it states that the use of creosote is banned for all purposes anywhere in a protected water supply area and anywhere upstream of any drinking water source or swimming area whether protected or not. Under the Environment Act 1995, it doesn’t state that creosote specifically is banned, but it says that known pollutants are banned. Is it correct for me to say in my report that creosote has been banned since 1995?
Thank you in advance,

Jessica

Jessica Jackman, MD, MPH
Resident, Public Health & Preventive Medicine
Draft Response to

This review was undertaken in response to your concerns that wooden penstocks, which at one time were used in the Town of Deer Lake’s water distribution system, may have exposed residents to creosote, a potential cancer causing agent.

To address these concerns, the information you supplied was examined. In addition, data from the Newfoundland and Labrador Centre for Health Information (NLCHI) and information from the International Agency for Research on Cancer (IARC), the United States Environmental Protection Agency (EPA), Health Canada and the Agency for Toxic Substances and Disease Registry (ATSDR) were reviewed.

IARC and the United States EPA state that creosote is probably carcinogenic. This is based on limited evidence from human studies and sufficient evidence from animal studies. Health Canada describes chronic, repeated exposures to creosote as carcinogenic to humans.

Most human studies examining the association between creosote and cancer have been in occupational settings and do not involve drinking water as a route of exposure. The ATSDR’s review of creosote indicates an increased risk of cancer among animals and individuals exposed to creosote in occupational settings. One study reviewed by the ATSDR attributed excess cases of breast cancer in a town to contamination of the town’s water supply with coal tar creosote. However, re-analysis of the study found that it did not provide sufficient evidence of an association between creosote and breast cancer.

Although there may be an understanding among residents in Deer Lake that the penstocks used by the Town of Deer Lake up to 2001 were treated with creosote, government records do not confirm whether this is true. Creosote is also not normally analyzed in drinking water sources. As a result, the presence of creosote or any of its components in the Town of Deer Lake’s drinking water supply cannot be confirmed.

You provided data from Newfoundland and Labrador’s Medical Care Plan (MCP) to us. Specifically, the annual number of claims by fee-for-service general practitioners by town/area were provided. However, this data cannot be used to determine new or pre-existing cases of cancer. Rather, it is more appropriate to examine data provided by NLCHI. Overall, data obtained from NLCHI indicate that there is no increased risk of cancer in Deer Lake compared to the rest of the Western Health region of the province and the rest of NL.

In small communities, particularly those with older populations, such as Deer Lake, cancer can be common. As a result, individuals may feel that there is an increased risk of cancer in their community. However, cancer is a multi-factorial disease; a person’s genetics, environment, and personal practices and behaviours all contribute to a person’s risk of developing cancer. Cancer as a disease is very common, and the risk of cancer increases with age. Increases in the number of cancer cases observed within a population in a particular area is often related to a growing number of older persons in that population.

We will be sharing this report with Western Health and the Medical Officer of Health responsible for the area and I hope that this will provide a solid foundation for discussion with the medical community about cancer risks. In addition, I would be pleased to arrange a discussion of these findings with you at your convenience.
Full Report

Issue:
Concern that wooden penstocks, which at one time fed the water supply of the Town of Deer Lake, may have exposed residents to creosote, a potential cancer causing agent.

Purpose of Review
This review was undertaken to address concerns brought to the attention of the Premier and the Minister of Health by the Department of Health and Community Services, the Newfoundland Centre for Health Information (NLCHI) and the Department of Municipal Affairs and Environment through the Access to Information and Protection of Privacy (ATIPP) process.

Introduction
Creosote is the name commonly used to refer to wood creosotes and coal tar creosotes. Wood creosotes are derived from the creosote bush and beechwood, and coal tar creosotes are produced during the distillation of coal tar. (1) Creosote is a mixture of many different compounds, including polynuclear hydrocarbons (PAHs), phenolics, nitrogen-containing heterocycles, sulphur-containing heterocycles and oxygen-containing heterocycles. (2) Creosote treated wood was used for many years in situations where materials needed to be protected against decay. Newer products have replaced the need for creosote treated wood in many situations where durability of materials is required. (2) Since 1995, and as per Newfoundland and Labrador’s (NL) Environment Act, the use of creosote has been banned for any purpose in a protected water supply area, and anywhere upstream of a drinking water source. (3)

The International Agency for Research on Cancer (IARC) has classified creosotes, as a group, as a Group 2A carcinogen (i.e. probably carcinogenic to humans). This is based on limited evidence from studies involving humans and sufficient evidence from studies involving animals. The United States Environmental Protection Agency (EPA) has classified creosote as a Group B1 carcinogen (i.e. probably carcinogenic to humans). This is based on limited evidence from studies involving humans and sufficient evidence from studies involving animals. (1) Health Canada describes chronic, repeated exposures to creosote as carcinogenic to humans. (4)

Methods
The Office of the Premier and Minister of Health with the following:
1. Information obtained from the Department of Municipal Affairs and Environment:
• Information pertaining to the infrastructure used to deliver water from the Town of Deer Lake’s water supply between 1970 – 2001
• Information pertaining to drinking water quality testing performed during 1970 – 2001

2. Information obtained from the Department of Health and Community Services:
   • Annual number of claims by fee-for-service general practitioners for each town/area in NL during the 2016 – 2017 fiscal year

3. Information obtained from NLCHI:
   • Number of hospitalizations and hospitalization rate per 100,000 population for all types of cancers and for kidney and stomach cancer by fiscal year in Deer Lake compared to the rest of NL.

The documents and data provided to the Office of the Premier and Minister of Health by [redacted] were reviewed.

Information from IARC, Health Canada, the United States EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) were reviewed to determine whether exposure to the agent of concern, creosote, represents a public health risk.

Data obtained from NLCHI were also reviewed. Data obtained and reviewed include:

• Age-standardized hospitalization rates for all cancers from 2001/2002 to 2016/2017
  o Deer Lake compared to Western Health (excluding Deer Lake)
  o Western Health compared to NL (excluding Western Health)

• Number of hospitalizations due to and crude hospitalization rate of all selected cancers and specific cancers for Deer Lake, Western Health (excluding Deer Lake), and NL (excluding Western Health) between 2001/2002 – 2016/2017
  o Cancers included: lung cancer, breast cancer, leukemia, Hodgkin’s disease, ovarian cancer, colorectal cancer, uterine cancer, multiple myeloma, soft tissue sarcoma, and bladder cancer

• Crude mortality rate due to selected cancers, residents of Deer Lake, Western Health (excluding Deer Lake), and NL (excluding Western Health) 2001 – 2012
  o Cancers included: colorectal cancer, lung cancer, bladder cancer, breast cancer, leukemia, Hodgkin’s disease, ovarian cancer, uterine cancer, multiple myeloma, and soft tissue sarcoma

• Relative risk for all cancer mortality (data from 2001 – 2012)
  o Deer Lake compared to Western Health
  o Deer Lake compared to NL
  o Western Health compared to NL

  o Deer Lake compared to Western Health
Results & Analysis

Environmental Data from Deer Lake

The ATSDR states that drinking water contaminated by a hazardous waste site is a route of exposure to creosote. (1) Therefore, it is plausible that ingestion of water from a water supply that has been contaminated by creosote is a route of exposure to creosote.

With respect to the situation in Deer Lake, Deer Lake’s water supply was distributed using wooden penstocks. Data regarding the duration of use of the wooden penstocks are not available, but they were in use as of August 1970, with the intake relocated as of April 2001. This represents a potential period of exposure of 30 years and a 16 year period since the potential exposure ceased. However, there are no records that the penstocks were treated with creosote. In addition to this, because creosote is an organic parameter that is not normally analyzed in drinking water sources, there are no records of the Town of Deer Lake’s drinking water supply being tested for the presence of creosote. Therefore, the presence or absence of creosote or any of its components in the Town of Deer Lake’s drinking water supply between 1970 - 2001 cannot be confirmed.

The Atlantic Region Federal – Provincial Toxic Chemical Survey of Municipal Drinking Water Sources 1985 – 1988 interpretive report describes water quality data associated with water supply sources in Newfoundland and Labrador between 1985 - 1988. Deer Lake (Humber Canal) was included in the survey. The presence of polycyclic aromatic hydrocarbons (PAHs), a major component of creosote, was included as a parameter of interest in the study. Almost every site reported a level of fluoranthene, a low molecular weight PAH, near the detection limit of 0.001 µg/L. (5) We do not have data regarding the level of this parameter in Deer Lake, but this data suggests that fluoranthene, and possibly other PAHs, is widespread at a low level in most communities. This is because fluoranthene occurs as a result of human activities, is transported in the atmosphere, and is deposited in precipitation. As a result, it is ubiquitous in the environment, (5) and its presence cannot be attributed to any one source.

Review of Creosote’s Health Effects

There is relatively little information regarding the systemic effects of ingested wood creosote, coal tar creosote, coal tar, or coal tar pitch. Most of the information presently available pertains to old anecdotal reports or animal studies that have been judged by the Agency for Toxic Substances and Disease Registry (ATSDR) to be inadequate by current standards. (1) Research from animal studies, occupational settings, and other settings expected to expose the public to creosote have been reviewed by the ATSDR. In the sections that follow, their findings will be reviewed.

Animal studies

In animal studies, the ingestion of large amounts of wood creosote caused seizures and was fatal. Animals fed lower levels developed hepatic and renal toxicity. (1) Animal studies also suggest that dermal exposure to coal tar products may be carcinogenic. Increases in mortality due to lung tumors among animals exposed to coal tar pitch aerosols have also been observed. (1)
**Occupational Settings**

Studies of workers exposed to coal tar creosote, coal tar, coal tar pitch, and coal tar pitch volatiles in various occupational settings have found an increased risk of cancers involving the respiratory tract, skin, lung, pancreas, kidney, scrotum, prostate, rectum, bladder, and central nervous and hematological systems. There have also been reports of men developing cancer of the lip following dermatological exposure to wood products treated with creosote. However, tobacco use is a potential confounder of the relationship between creosote exposure and the development of cancer, and data regarding smoking status was not considered in some of the studies reviewed. (1) There were no studies in occupational settings which included ingestion as a route of exposure, which is the exposure of interest with regards to the situation in Deer Lake.

**Other Settings Involving Creosote Exposure**

Excess cases of breast cancer were observed in St. Louis Park, Minnesota and were initially attributed to contamination of the town’s water supply with coal tar creosote. The concentration of coal tar creosote, or any of its components, in the drinking water of St. Louis Park was not specified. This data was later reviewed by the Minnesota Department of Health and was found to not provide sufficient evidence of an association between breast cancer and the contaminated water. This was largely due to the inability to determine: the pattern and history of water contamination; the extent of water contamination throughout the distribution system; and, the effect of water treatment and the distribution system on contaminant concentration. (1)

**Data Obtained from the Newfoundland and Labrador Centre for Health Information (NLCHI)**

Please see Appendix A for data obtained from NLCHI.

Data from 2001/2002 – 2016/2017 were selected for review. This time period was selected to allow for an appropriate length of time between the time of potential exposure and development of cancer and analysis of longer-term trends.

Age-standardized hospitalization rates for all cancers between 2001/2002 – 2016/2017 for Deer Lake and Western Health (excluding Deer Lake) were compared. In 2015/2016, a statistically significant difference in the age-standardized hospitalization rates for Deer Lake and Western Health was observed. However, Western Health’s rate was higher than Deer Lake’s: 245.7 (95% CI: 214.9 – 276.6) compared to 121.8 (95% CI: 46.8 – 196.7), respectively. (Figure 1) No statistically significant differences were observed in any of the other years analyzed.

The number of hospitalizations due to all selected cancers in Deer Lake, Western Health (excluding Deer Lake), and NL (excluding Western Health) were analyzed. Crude hospitalization rates for all selected cancers for these areas were also analyzed. As seen in Figure 2, the crude hospitalization rate in Deer Lake for all selected cancers is lower than the rest of Western Health and the rest of NL. Figure 2 also shows that the crude hospitalization rate in Deer Lake for all selected cancers has been decreasing between 2001/2002 – 2016/2017. However, although
Figure 1: Age-Standardized Hospitalization Rates for all Cancers, Residents of Western Health and Deer Lake, 2001/2002 – 2016/2017

Figure 2: Crude Inpatient Hospitalization Rate for all Selected Cancers, Residents of Western Health, Deer Lake and NL, 2001/2002 - 2016/2017
encouraging, these data were not accompanied by confidence intervals and we cannot determine the statistical significance of these results.

The number of hospitalizations due to and crude hospitalization rates of lung cancer, breast cancer, leukemia, Hodgkin’s disease, ovarian cancer, uterine cancer, colorectal cancer, multiple myeloma, soft tissue sarcoma, and bladder cancer in Deer Lake, Western Health (excluding Deer Lake), and NL (excluding Western Health) were also reviewed. We cannot comment on the statistical significance of these data, as confidence intervals were not provided. This data can be found in appendix A.

The crude mortality rate associated with bladder cancer, breast cancer, colorectal cancer, Hodgkin’s disease, leukemia, lung cancer, multiple myeloma, ovarian cancer, soft tissue sarcoma and uterine cancer in Deer Lake, Western Health (excluding Deer Lake), and NL (excluding Western Health) were reviewed. We cannot comment on the statistical significance of these data, as confidence intervals were not provided. This data can be found in appendix A.

Relative risks for all cancer mortality between 2001 – 2012 were calculated for Deer Lake versus Western Health, and Deer Lake versus NL. The relative risk for all cancer mortality between 2001 – 2012 for Deer Lake versus Western Health reveals a decreased risk for residents of Deer Lake, which is not statistically significant (RR: 0.98, 95% CI: 0.78 – 1.21). The relative risk for all cancer mortality between 2001 – 2012 for Deer Lake versus NL reveals an increased risk for residents of Deer Lake, but this is also not statistically significant (RR: 1.14, 95% CI: 0.93 – 1.42).

The relative risk for cancer between Deer Lake and Western Health were calculated for two time periods: 2006-2010 and 2011-2015. The relative risk for cancer in 2006-2010 for Deer Lake compared to Western Health was 0.89 (95% CI: 0.75 – 1.05). The relative risk for cancer in 2011-2015 for Deer Lake compared to Western Health was 0.92 (95% CI: 0.79 – 1.08). These results indicate that there is a decreased risk of cancer in Deer Lake compared to Western Health, but the risk is not statistically significant.

In summary, the data reviewed suggest that residents of Deer Lake do not experience rates of cancer hospitalization or mortality that is increased relative to the rest of Western Health or the rest of NL. The data reviewed also suggest that residents of Deer Lake do not experience an increased risk of cancer compared to the rest of Western Health.

Discussion

Limitations of Data

Most of the information reviewed as part of the literature review comes from research in occupational and/or animal settings. There are many challenges with using research obtained in these settings. Occupational exposures are not similar to those experienced by the general public; exposures in occupational settings often involve multiple exposure routes, higher doses, and/or more frequent exposures over a longer period of time. It is also difficult in occupational studies to determine the extent to which an individual is exposed, as measuring exposure, particularly retrospectively, is challenging. Inaccurately measuring or detecting exposures among study participants may bias a study’s results. In
addition, the composition of a creosote product varies depending on its preparation and source. As a result, creosote components of wood and coal tar creosote products are rarely consistent. Therefore, a study that examines one particular creosote sample is likely inadequate to make inferences about another creosote sample.

With regards to animal studies, it is difficult to determine whether health effects experienced by animals can be expected to occur among humans.

Data from Newfoundland and Labrador’s Medical Care Plan (MCP) was provided to the Department of Health and Community Services. This administrative database is for the purposes of physician billing and reimbursement only. This data is not intended to be used for the purposes of calculating the incidence or prevalence of disease, such as cancer, as billing codes only capture the reason for a physician visit, not the number of new or pre-existing cases of disease. In addition, all reasons for a visit are often not captured by fee codes, which affects the completeness of data. With regards to the data provided to the Department of Health and Community Services specifically, the annual number of claims by fee-for-service general practitioners by town/area were provided. This is for all visits, including conditions such as high blood pressure and the common cold. For these reasons, this set of data cannot be used to make any conclusions regarding the rates of cancer in Deer Lake compared to other areas.

There are also limitations with the data obtained from NLCHI. With regards to hospitalization rates, hospitalizations occurring outside of the province were not included. In addition, hospitalizations were identified using the most responsible diagnosis codes only. As a result, the rates provided may underestimate the true hospitalization rates for all regions. In addition, rates of hospitalization reflect health service utilization in an inpatient setting, and do not represent prevalence of disease. Mortality rates associated with particular cancers are influenced by many factors and do not reflect the incidence or risk of cancer in Deer Lake, Western Health and Newfoundland and Labrador; this information should not be used to make inferences regarding the risk of cancer. In addition to these limitations, data used to calculate cancer incidence do not include cases diagnosed outside of Newfoundland and Labrador. Moreover, the information presented for Deer Lake is based on a small population, which may arbitrarily lead to a large difference in rates.

Other Studies

A similar investigation occurred in the Argentia region of Newfoundland and Labrador. Due to the operation of a US naval base between the 1940s and 1990s, soil and ground water in the region were contaminated with chemicals. As a result, residents expressed concerns regarding the higher rates of cancer in the Argentia region. Researchers compared the crude and age-standardized incidence rates of cancer diagnosis in the Argentia region, two comparison communities and the rest of Newfoundland and Labrador. An increased risk of cancer in the Argentia region was initially observed, but when standardized for age, an increased risk of cancer in the Argentia region was not detected. Although the methodology for this study is slightly different, it is important to note that perceived cancer clusters are common, and similar to this particular study, can often be attributed to the presence of an older population.
Conclusion

Creosote is a probable human carcinogen, as described by IARC and the US EPA. However, much of the available evidence regarding humans, including that available for evaluation by IARC and the US EPA, involves occupational settings. Whether it is a carcinogen when it, or one of its components, is ingested in a water supply, is not known from the evidence and we cannot make inferences from occupational settings. Whether wood treated with creosote was used to manufacture the penstocks used in the Town of Deer Lake’s water distribution system also cannot be confirmed. At the present time, although we acknowledge that there are concerns within the community that the wooden penstocks used between 1970 and 2001 were treated with creosote, we do not have documentation to suggest that the wooden penstocks treated with creosote were used in Deer Lake.

Given the current concern, data available from NLCHI is useful in determining whether the rates of cancer hospitalization and mortality are in excess of what would otherwise be expected in the Town of Deer Lake. The data reviewed suggest that residents of Deer Lake do not experience rates of cancer hospitalization or mortality that is increased relative the rest of Western Health or the rest of NL.

In small communities, particularly those with older populations, such as Deer Lake, cancer can be common. As a result, individuals may feel that there is an increased risk of cancer in their community. However, cancer is a multi-factorial disease; a person’s genetics, environment, and personal practices and behaviours all contribute to a person’s risk of developing cancer. Cancer as a disease is very common, and the risk of cancer increases with age. Increases in the number of cancer cases observed within a population in a particular area is often related to a growing number of older persons in that population. (7)

Recommendations

It is recommended that the following next steps be considered:

- This report should be shared with Western Health, the regional Medical Officers of Health and local physicians.
- Concerns regarding cancer clusters should, where possible, should follow the Centre for Disease Control’s steps for the investigation of cancer clusters so that all inquiries are investigated in a systematic fashion (8).
References


Haseen,

I remembered Rob White was from Deer Lake and have some more info. You can add this in under background.

The water supply for the Town of Deer Lake originates back to the construction of the Deer Lake Power system in 1924. The intake for the town tapped into Penstock 1 with a backup on Penstock 2. These wooden penstocks were treated with creosote on the outside, but not on the inside. The other penstocks used by Deer Lake Power were treated with creosote on both the inside and outside. The Deer Lake drinking water system was one of the first to adopt chlorination in the province, although the exact date is unknown. Chlorination of the drinking water in Deer Lake has likely been practiced for somewhere between 60 and 80 years.
Val;

He knows all of us. You can give him Paula’s contact.

Who would the contact be that I should give him?

Hi Val;

Dr. Abde-Zaher Abdel-Razek is no more with the public service. He was never responsible for drinking water program.

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Telephone: (709)729-2563

Sent from my BlackBerry 10 smartphone on the Bell network.

Good Morning Haseen...

Do you know who this man is referring to? Does he work in Water Resources?

Val
Can your office confirm if aabdelrazek@gov.nl.ca is still working with the NL Gov and is still in charge of NL drinking water? Or does he have another email contact now?

Regards

On Feb 27, 2018 3:42 AM, 'Author Name' wrote:

Good Day

Please pass on to the Minister our thank you for pushing to have the Deer Lake Canal cleaned up of equipment and other debris. Also please be advised I'm told the canal is full of such junk. I was told that on one inspection of the canal the staff lowered the canal by 4 ft more then they usually do and couldn't get their inspection boat pass all the junk that was now at the top of the water. Crane parts old booms etc. This canal needs to be drained as it is designed to do in order to confirm what debris is in our water supply. Look forward to hearing from your office and working together to secure clean drinking water of all debris. We are also told that all penstocks were treated with creosote wood preserver for decades and we would like your office to investigate this claim and confirm for a fact that wood preserver was used on the penstocks in Deer Lake. Let me remind your office that the residents here drank directly from these penstocks for decades. We have residents here that say for a fact they were treated and someone needs to confirm this information for all involved here.

Regards
From: Khan, Haseen  
Sent: Tuesday, February 27, 2018 12:16 PM  
To: Dawe, Paula V <pauladawe@gov.nl.ca>  
Subject: FW: Deer Lake Canal Debris

Paula;

Let us discuss a draft response. Thanks.

From: [mailto:......]  
Sent: Tuesday, February 27, 2018 11:58 AM  
To: Khan, Haseen  
Subject: Fwd: Deer Lake Canal Debris

Please review email to Ministers office.  
-------- Forwarded message --------

From: '......'  
Date: Feb 27, 2018 3:42 AM  
Subject: Deer Lake Canal Debris  
To: <vglynn@gov.nl.ca>  
Cc: 

Good Day

Please pass on to the Minister our thank you for pushing to have the Deer Lake Canal cleaned up of equipment and other debris. Also please be advised I'm told the canal is full of such junk. I was told that on one inspection of the canal the staff lowered the canal by 4 ft more then they usually do and couldn't get their inspection boat pass all the junk that was now at the top of the water. Crane parts old booms etc. This canal needs to be drained as it is designed to do in order to confirm what debris is in our water supply. Look forward to hearing from your office and working together to secure clean drinking water of all debris. We are also told that all penstocks were treated with creosote wood preserver for decades and we would like your office to investigate this claim and confirm for a fact that wood preserver was used on the penstocks in Deer Lake. Let me remind your office that the residents here drank directly from these penstocks for decades. We have residents here that say for a fact they were treated and someone needs to confirm this information for all involved here.

Regards
Dear [Name]

Deer Lake Canal Debris

I write in response to your correspondence dated February 27, 2018 concerning debris in the Humber Canal. The process of identifying and removing debris from the Humber Canal is ongoing and will continue into 2018. The priority of the Department is to ensure that any identified debris is removed safely without causing any impairment to drinking water quality for the residents of Deer Lake and Reidville. In the interim, the Department is currently undertaking specialized chemical testing on the Humber Canal water supply. Samples will be collected every 2 weeks and be posted on our website: http://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf

As part of the "Atlantic Region Federal-Provincial Toxic Chemical Survey of Municipal Drinking Water Sources 1985-88" baseline report published by Environment Canada, drinking water used by the Town of Deer Lake was sampled for toxic chemicals. According to the report, Deer Lake source water from the Humber Canal was sampled in 1987. No parameters were flagged of concern for Deer Lake for any of the chemicals tested. Samples were analyzed for inorganic parameters, organic and pesticide parameters (including PCBs and PAHs), and Volatile Organic Materials (VOMs).

I can confirm that the Town of Deer Lake relocated its water intake from the wooden Penstock No. 1 (penstock closest to the access road) used by Deer Lake Power to the penstock headworks located in the Forebay Dam of the Humber Canal in 2001.

We have gathered the following anecdotal information concerning the intake prior to 2001; however, this information has not been confirmed. You may wish to enquire directly with the Town of Deer Lake or Deer Lake Power concerning this matter. The location of the intake for the Town of Deer Lake's drinking water from a penstock may date back to 1925, just after construction of the hydroelectric development. The drinking water intake was located on Penstock 1 with Penstock 2 used as a backup. These two wooden penstocks
may have been treated with creosote on the outside, but were not treated with creosote on the inside. Other penstocks not used as a drinking water source were treated with creosote on both the inside and outside.

I trust this addresses you concerns.

Sincerely,

EDDIE JOYCE, MHA
District of Humber-Bay of Islands
Minister of Municipal Affairs and Environment
Ok, that is what I responded to.

From: Khan, Haseen  
Sent: Tuesday, March 13, 2018 4:04 PM  
To: Dawe, Paula V <pauladawe@gov.nl.ca>  
Subject: FW: Deer Lake Canal Debris

Paula;

This is the email which you could not open.

Haseen Khan, P.Eng.  
Director  
Water Resources Management Division  
Department of Municipal Affairs and Environment  
4th Floor, Confederation Building West Block  
PO Box 8700  
St. John’s NL Canada A1B 4J6  
T (709) 729-2563  
F (709) 729-0320  
E hkhan@gov.nl.ca  
www.mae.gov.nl.ca/waterres/

From: [mailto:]  
Sent: Tuesday, February 27, 2018 3:43 AM  
To: Glynn, Valerie <V Glynn@gov.nl.ca>  
Subject: Deer Lake Canal Debris

Good Day

Please pass on to the Minister our thank you for pushing to have the Deer Lake Canal cleaned up of equipment and other debris. Also please be advised I'm told the canal is full of such junk. I was told that on one inspection of the canal the staff lowered the canal by 4 ft more then they usually do and couldn't get their inspection boat pass all the junk that was now at the top of the water. Crane parts old booms etc. This canal needs to be drained as it is designed to do in order to confirm what debris is in our water supply. Look forward to hearing from your office and working together to secure clean drinking water of all debris. We are also told that all penstocks were treated with creosote wood preserver for decades and we would like your office to investigate this claim and confirm for a fact that wood preserver was used on the penstocks in Deer Lake. Let me remind your office that the residents here drank directly from these penstocks for decades. We have residents here that say for a fact they were treated and someone needs to confirm this information for all involved here.
RE: Deer Lake Canal Debris

I write in response to your correspondence dated February 27, 2018 concerning debris in the Humber Canal. The process of identifying and removing debris from the Humber Canal is ongoing and will continue into 2018. The priority of the Department is to ensure that any identified debris is removed safely without causing any impairment to drinking water quality for the residents of Deer Lake and Reidville. In the interim, the Department is currently undertaking specialized chemical testing on the Humber Canal water supply. Samples will be collected every 2 weeks and be posted on our website: http://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf

As part of the *Atlantic Region Federal-Provincial Toxic Chemical Survey of Municipal Drinking Water Sources 1985-88*, baseline report published by Environment Canada, drinking water used by the Town of Deer Lake was sampled for toxic chemicals. According to the report, Deer Lake source water from the Humber Canal was sampled in 1987. No parameters were flagged as of concern for Deer Lake for any of the chemicals tested. Samples were analyzed for inorganic parameters, organic and pesticide parameters (including PCBs and PAHs), and Volatile Organic Materials (VOMs).

If you need any information on the history of Town’s water supply intake, please contact the Town of Deer Lake directly.

I trust this addresses your concerns.

Sincerely,

EDDIE JOYCE, MHA
District of Humber - Bay of Islands
Minister of Municipal Affairs and Environment
Paula;

Our position is as follows:

1. We are not aware about the use of creosote by DLP.
2. We have no idea which report is being referred to in [redacted]'s correspondence.

In this situation it is impossible for us to provide any response or input.

Haseen,

Complainant is coming back with repeated enquiries and now one to H&CS. I have not responded since my June 4th response. I am not certain what report he is referencing that he got through an ATIPP request either. How do you want to proceed?

Delphine Grynszpan
MOH
709 727 5604

Would you like to reply? Or is there someone else this should be directed to?

Thanks
To: Allison, David <DavidAllison@gov.nl.ca>; Delphine Grynszpan <Delphine.Grynszpan@easternhealth.ca>
Subject: Fwd: Creosote Banned

Good Day All.

Please review email below. It has been confirmed by an environmental engineering firms documents received through an Atipp request that creosote was used in Deer Lakes drinking water on a regular bases in the companies maintenance program on the wooden penstocks. We ask our Health Dept to investigate this asap and study the results it has had on our residents. As per your document Dr Allison that stated there was no documentation showing creosote was used, this was incorrect.

Regards

--------- Forwarded message ---------
From: [Redacted]
Date: Mon, Jun 11, 2018, 11:57 AM
Subject: Re: Creosote Banned
To: Dawe, Paula V <pauladawe@gov.nl.ca>

Good Day Paula

Again we ask.

After seeing in the environmental study that (all wooden penstocks) in Deer Lake were treated the same with creosote and sawdust including the one we drank from. Can your department please explain how this happened? How many gallons of toxic creosote was used in and around Deer Lakes drinking water supply from 1970 when it took over responsibly for water supply safety in NL?

Regards

--------- Forwarded message ---------
On Wed, Jun 6, 2018, 7:49 AM [Redacted] wrote:

Good Day Paula

After seeing in the environmental study that all wooden penstocks in Deer Lake were treated the same with creosote and sawdust including the one we drank from. Can your department please explain how this happened? How many gallons of toxic creosote was used in and around Deer Lakes drinking water supply from 1970 when it took over responsibly for water supply safety in NL?

Regards

--------- Forwarded message ---------
On Mon, Jun 4, 2018, 11:41 PM [Redacted] wrote:

On Mon, Jun 4, 2018, 10:58 PM [Redacted] wrote:

Paula. How disappointing to hear your department say that water from the canal that creosote was used in is not considered a fresh water supply or Deer Lakes drinking water supply. Shameful. Had all the respect in
the world for you until this email. Stand up and be accountable. Please explain how canal water and water running through the penstocks leading into our lake is not considered a fresh water supplies? Again shameful. You sound like Dwight Ball trying to protect a company he has business ties to. Are you saying creosote was not used on penstock # 1? LOL. That's laughable. Read the report it states creosote is used on all the penstocks.

Regards

On Mon, Jun 4, 2018, 1:29 PM Dawe, Paula V, <pauladawe@gov.nl.ca> wrote:

The document you attached in your other email references penstocks 4,5 and 6. It is my understanding that neither of these penstocks were used as the intake for the Town of Deer Lake’s drinking water at any point. The penstock area downstream of the dam and above the power plant is not considered to be in or near a body of freshwater. I do not have any information concerning your last question.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

From: <pauladawe@gov.nl.ca>
Sent: Tuesday, May 29, 2018 1:50 AM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Re: Creosote Banned

Paula

Can you explain how creosote was used directly into the town of Deer Lakes water supply in 1997 if it was banned in 1992. And can you tell us how many times and total number of gallons of creosote was used in our water supply over the years that our Govt knew about?
Regards

On Mon, May 28, 2018, 9:47 AM Dawe, Paula V, <pauladawe@gov.nl.ca> wrote:


Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

From: [REDACTED] >
Sent: Sunday, May 27, 2018 11:16 AM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Creosote Banned

Good Day Paula

Can your department confirm what year creosote was banned in NL in and around water supplies?

Regards
Jamie,

[Redacted] has not provided the specific location. [Redacted] As you are aware, we are regularly monitoring the drinking water supply specifically for hydrocarbons as we monitor the work to remove debris from the Canal. There has been no contamination in the drinking water.

Would you like an official response prepared?

Dana

From: Dawe, Paula V
Sent: Tuesday, July 3, 2018 3:55 PM
To: Khan, Haseen <hkhan@gov.nl.ca>; Spurrell, Dana <DanaSpurrell@gov.nl.ca>
Subject: FW: Deer Lake water supply

FYI

From: [Redacted]
Sent: Tuesday, July 3, 2018 11:46 AM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Re: Deer Lake water supply

Let’s meet there. As we are starting to lose trust in your dept.

On Tue, Jul 3, 2018, 11:01 AM Dawe, Paula V, <pauladawe@gov.nl.ca> wrote:

[Redacted]

Thank you for the videos. Can you please clarify the location at which the videos are taken? The location where the soil sample was taken? If you could provide coordinates or a map indicating the location, that would be helpful.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program
Good Day

This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

https://youtu.be/tyh0uyXl9Us

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No the old intake that was moved around 2001.

Sent from my BlackBerry 10 smartphone on the Bell network.

Haseen/Paula,

Carla is wondering if this in relation to the temporary pumps that Deer Lake Power is installing for the work in relation to the drum removal. Any advise?

Thanks,
Annette

Folks- please have a look through your files for any relevant information. We've had a similar request so you probably know where to look. Chris/Carla- you'll have to scan anything.

Lisa;

I am forwarding this to Paula for appropriate action. However, please note that WRMD may not have any information on questions being asked in this request. In my opinion the Town of Deer Lake and Deer Lake Power are the most appropriate agencies to answer these questions. Thanks.

WRMD might have issued permits for intake relocation but the permit or application for the permit will not answer any of these questions.
Haseen

From: Sullivan, Lisa  
Sent: Friday, June 29, 2018 2:41 PM  
To: Khan, Haseen <hkhan@gov.nl.ca>; Spurrell, Dana <DanaSpurrell@gov.nl.ca>  
Cc: Chippett, Jamie <JamieChippett@gov.nl.ca>; Kelly, Tara <tarakelly@gov.nl.ca>; Tizzard, Heather <HeatherTizzard@gov.nl.ca>; Janes, Jackie <JackieJanes@gov.nl.ca>; Simms, Randy <RandySimms@gov.nl.ca>; Shea, Erin <ErinShea@gov.nl.ca>; Thompson, Emily <EmilyThompson@gov.nl.ca>; Askary, Ali <AliAskary@gov.nl.ca>; Rowsell, Nicole <nicolerowsell@gov.nl.ca>; Mulrooney, Paul <PaulMulrooney@gov.nl.ca>  
Subject: New ATIPP Request - MAE/57/2018  
Importance: High

Good afternoon,

On June 29, 2018, a request for information was received for the following:

“Deer Lakes water supply. Any information regarding it being moved from penstock number 1 to coming directly out of the canal. Why was this changed, health reasons etc ? Who’s idea was it. Reasons for this move. Whos idea was it to add pressure pumps and how was the costing of these pumps paid for? Information on how creosote was being used on the penstocks directly in Deer Lakes water supply even years after it was banned in NL to be used near fresh water supplies.”

Please provide the appropriate responsive documents or information to me (lisas@gov.nl.ca) **within 3 days** so that the legislative timelines may be met. Should the number of records or the time to extract the information be excessive or if a third party is involved, please notify me as soon as possible so that I may take appropriate action. If any records relate to legal advice or may contain cabinet confidences, please identify them, as additional consultations may be required.

**Advisory Date:** July 16, 2018  
**Due Date:** July 30, 2018

If you have any questions or concerns please let me know.

Thanks for your attention

Lisa Sullivan  
**ATIPP Coordinator**  
**Municipal Affairs and Environment**  
**Government of Newfoundland and Labrador**  
P.O. Box 8700  
St. John’s, NL A1B 4J6

Email: lisas@gov.nl.ca  
Phone: 709-729-7183

ATIPP MAE-21-2019 39
From: Khan, Haseen  
Sent: Monday, July 16, 2018 4:06 PM  
To: Spurrell, Dana  
Subject: Fw: Dead fish on the Deer Lake beach  
Attachments: Creosote spill_Deer Lake Power_Deer Lake, NL.pdf

Dana;

FYI.

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Telephone: (709)729-2563

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Khan, Ali <akhan@gov.nl.ca>  
Sent: Monday, July 16, 2018 3:08 PM  
To: Khan, Haseen  
Subject: FW: Dead fish on the Deer Lake beach

FYI

Regards,
Ali
Amir Ali Khan, Ph.D, P.Eng
Manager
Water Rights, Investigations, and Modelling Section
Water Resources Management Division
Department of Municipal Affairs and Environment
Government of Newfoundland and Labrador
4th Floor, Confederation Building, West Block
PO Box 8700, St. John's NL Canada A1B 4J6
Ph No (709) 729-2295
Fax No (709) 729-0320

From: Roberge, Michelle [mailto:Michelle.Roberge@dfo-mpo.gc.ca]  
Sent: Monday, July 16, 2018 3:08 PM  
To: Khan, Ali  
Cc: dfo.fpp.nl / ppp.t-n-e-l.mpo (DFO/MPO)  
Subject: RE: Dead fish on the Deer Lake beach

Hi Ali,
Given this incident was related to a deleterious substance, DFO will not be following up; Environment and Climate Change Canada (ECCC) administers the pollution prevention provisions of the *Fisheries Act*. Attached is updated NEEC report which I’m sure you have received.

Michelle

**Michelle M. Roberge**  
Team Leader, Triage and Planning  
Fisheries Protection Program-Regulatory Review  
Fisheries and Oceans Canada  
St. John’s NL A1C 5X1  
Tel: (709)772-6072  
E-mail: michelle.roberge@dfo-mpo.gc.ca

---

**From:** Khan, Ali [mailto:akhan@gov.nl.ca]  
**Sent:** July-16-18 9:22 AM  
**To:** Roberge, Michelle  
**Subject:** FW: Dead fish on the Deer Lake beach

Hi Michelle

Would DFO be following up on this?

Regards,

Ali

Amir Ali Khan, Ph.D, P.Eng  
Manager  
Water Rights, Investigations, and Modelling Section  
Water Resources Management Division  
Department of Municipal Affairs and Environment  
Government of Newfoundland and Labrador  
4th Floor, Confederation Building, West Block  
PO Box 8700, St. John's NL Canada A1B 4J6  
Ph No (709) 729-2295  
Fax No (709) 729-0320  

---

**From:** Khan, Haseen  
**Sent:** Monday, July 16, 2018 8:58 AM  
**To:** Khan, Ali  
**Subject:** FW: Dead fish on the Deer Lake beach

Ali;

DFO has also been provided with a copy of this video. Would you mind to check with your contacts in DFO if they are going to follow up on this? Thanks.

Haseen Khan, P.Eng.  
Director  
Water Resources Management Division  
Department of Municipal Affairs and Environment
From: Dawe, Paula V  
Sent: Friday, July 13, 2018 10:57 AM  
To: Khan, Haseen <hkhan@gov.nl.ca>  
Subject: FW: Dead fish on the Deer Lake beach

FYI

From: [Redacted]  
Sent: Friday, July 13, 2018 10:17 AM  
To: Dawe, Paula V <pauladawe@gov.nl.ca>  
Subject: Dead fish on the Deer Lake beach

Good Day.

More video for your review.  
https://youtu.be/mmWcqRq1yF4

Can you confirm the date your dept will be here to do a site visit with us?

Regards

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I wanted to let you know that based on your complaint, staff from the Department of Municipal Affairs and Environment (MAE) investigated the construction site at Deer Lake Power (DLP) where penstock replacement is currently underway, and collected water samples of runoff from the site and from the spillway stream prior to where it discharges into Deer Lake. During the site visit, it was observed that old pieces of creosote treated wood from, possibly the 20’s era wooden penstock, were buried in the ground and had been disturbed during construction. When these old wooden fragments were exposed to water leaking from the penstock system, especially in the newly constructed site drainage channels, an oily sheen would come off of the exposed wood. Ambient water quality results from the two sampling sites indicated the presence of Polycyclic Aromatic Hydrocarbons (PAHs) above the CCME water quality guidelines for the protection of aquatic life.

MAE has communicated these results to DLP and has directed DLP to take necessary action to ensure levels of PAHs are reduced to below the CCME water quality guidelines for the protection of aquatic life.

The DLP penstocks are located downstream of the Town of Deer Lake’s drinking water intake, and runoff from the construction site around the penstocks has no impact on the Town of Deer Lake’s drinking water system. Special sampling of the Town of Deer Lake’s drinking water for hydrocarbons has been ongoing since February 2018 with results posted here: [https://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf](https://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf)

There have been no exceedances of the Guidelines for Canadian Drinking Water Quality detected as part of this special drinking water quality sampling program to date.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

Good Day

This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

[https://youtu.be/tyh0uyXl9Us](https://youtu.be/tyh0uyXl9Us)
Haseen,

Responses to my emails I’ve sent on this.
Hi Paula,

This email is to confirm that Stantec has been asked by Kruger to assess the situation below.

We are currently preparing a plan on their behalf. I am on vacation this week but will have something to you as soon as I can.

Kelly Johnson, Ph.D
Team Lead, Environmental Remediation
Direct: (709) 576-1458
Mobile: (709) 682-5628
Fax: (709) 576-2126
Stantec Consulting Ltd.
141 Kelsey Drive
St. John's NL A1B 0L2 CA

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

From: Fisher, Glenn <Glenn.Fisher@kruger.com>
Sent: Tuesday, August 21, 2018 10:24 AM
To: Johnson, Kelly (St. John's) <Kelly.Johnson@stantec.com>
Subject: Site Runoff

Kelly

Please have a look at the below and give me or Larry a call to review.

From: Tiller, Paulette On Behalf Of Marks, Larry
Sent: August-20-18 9:39 AM
To: Fisher, Glenn <Glenn.Fisher@kruger.com>
Subject: FW: Site Runoff

From: Dawe, Paula V <mailto:pauladawe@gov.nl.ca>
Sent: August-20-18 8:45 AM
To: Marks, Larry <Larry.Marks@kruger.com>
Subject: Site Runoff
Potential copyright material

If you wish to obtain a copy please contact the ATIPP Office at (709) 729-7072 or atipoffice@gov.nl.ca.
Thank you for your reply. Again I request a site visit with you to see first hand all the areas we have confirmed where toxic creosote contamination has been found in and around the Deer Lake Drinking Water Supply. Pls advise us on a time that is convenient for you to meet on this urgent matter.

Regards

On Tue, Jul 3, 2018, 7:31 AM Dawe, Paula V, <pauladawe@gov.nl.ca> wrote:

Thank you for the videos. Can you please clarify the location at which the videos are taken? The location where the soil sample was taken? If you could provide coordinates or a map indicating the location, that would be helpful.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

Good Day
This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

https://youtu.be/tyh0uyXI9Us

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Dana;

FYI. WRMD has no intention for a follow up investigation as requested by [REDACTED]. An investigation was undertaken on the original complaint, source of the contamination was identified and the polluter (DLP) is working to address the issue.

Haseen

Responses to my emails I’ve sent on this.
Bernice;

Please see the email sent to [redacted] You can share this with Premier’s office. Thanks.

Dana;

FYI. As per your direction we will follow up with DLP in one week time.

I wanted to let you know that based on your complaint, staff from the Department of Municipal Affairs and Environment (MAE) investigated the construction site at Deer Lake Power (DLP) where penstock replacement is currently underway, and collected water samples of runoff from the site and from the spillway stream prior to where it discharges into Deer Lake. During the site visit, it was observed that old pieces of creosote treated wood from, possibly the 20’s era wooden penstock, were buried in the ground and had been disturbed during construction. When these old wooden fragments were exposed to water leaking from the penstock system, especially in the newly constructed site drainage channels, an oily sheen would come off of the exposed wood. Ambient water quality results from the two sampling sites indicated the presence of Polycyclic Aromatic Hydrocarbons (PAHs) above the CCME water quality guidelines for the protection of aquatic life.

MAE has communicated these results to DLP and has directed DLP to take necessary action to ensure levels of PAHs are reduced to below the CCME water quality guidelines for the protection of aquatic life.

The DLP penstocks are located downstream of the Town of Deer Lake’s drinking water intake, and runoff from the construction site around the penstocks has no impact on the Town of Deer Lake’s drinking water system. Special sampling of the Town of Deer Lake’s drinking water for hydrocarbons has been ongoing since February 2018 with results posted here: https://www.mae.gov.nl.ca/waterres.quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf There have been no exceedances of the Guidelines for Canadian Drinking Water Quality detected as part of this special drinking water quality sampling program to date.

Paula Dawe, P.Eng.
Manager
From: [Redacted]
Sent: Saturday, June 30, 2018 1:41 PM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Deer Lake water supply

Good Day

This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

https://youtu.be/tyh0uyX19Us
Hello Ms. Hayden,

Paula Dawe forwarded your health-related questions to me for a response.

Currently, there are no national standards for Polycyclic Aromatic Hydrocarbons (PAHs) in recreational water, as the risk of exposure through swimming is deemed to be low. The 2012 Guidelines for Canadian Recreational Water Quality state the following:

“Very small quantities of oily substances make water aesthetically unattractive. Oils can form films, and some volatile components may create odours or impart a taste to water (WHO, 2003a). Oil and grease may foul equipment, shorelines or the bodies of swimmers. The possibility exists that recreational users might still use the water in cases of low contamination. The risk of toxicity from exposure to oily substances through ingestion, skin absorption or inhalation of vapours during recreational water activity is regarded to be low. Oils and greases of animal or vegetable origin are generally considered to be non-toxic to humans. Similarly, it is recognized that petroleum compounds become organoleptically objectionable at concentrations far below the levels required for chronic human toxicity. Thus, the consumption of oil-polluted water is unlikely to be a significant source of exposure for humans (Train, 1979).”

Similarly, there are no national standards for maximum acceptable limits of PAHs in fish sold in Canada. Any potential risk to human health from the consumption of PAHs would only occur over the long term, and not from single point exposures. However, it is generally recommended that people should limit their consumption of PAHs, including any foods that have been smoked, barbequed, deep fried, or charcoal-broiled. The Department of Municipal Affairs and Environment has provided direction to Deer Lake Power to make efforts to reduce the amount of hydrocarbons entering Deer Lake in order to bring the measured levels of PAHs to within the CCME water quality guidelines for the protection of aquatic life. These efforts will also protect human health from any potential long term exposure risk from consuming fish in this area.

Please feel free to contact me if you need any clarification about the information above, or if have any other health-related questions about this issue.

Sincerely,
Douglas

Douglas Howse  B.Sc., B.A.Sc., CPHI (C)
Manager of Environmental Public Health
Public Health Division
Department of Health and Community Services
Tel: (709) 729-3422
Subject: FW: Deer Lake water supply
Importance: High

Doug,

These are health related questions, so I am forwarding to you.

I’ve also attached the map where the samples were taken, lab results, and the aquatic guidelines we looked at.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

From: Maxine Hayden <deerlaketownmanager@nf.aibn.com>
Sent: Tuesday, September 11, 2018 9:12 AM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: FW: Deer Lake water supply
Importance: High

September 11, 2018
Hi Paula
Would this in any way affect people who are swimming on the beach or using the beach?
Also a lot of people fish in front of the power house would this have any effect? would it effect any fish in that area?
Maxine

From: Deer Lake Town Office [mailto:deerglake@nf.aibn.com]
Sent: Monday, August 27, 2018 4:38 PM
To: 'Maxine Hayden'; Lori Humphrey
Subject: FW: Deer Lake water supply

From: Dawe, Paula V [mailto:pauladawe@gov.nl.ca]
Sent: Monday, August 27, 2018 4:04 PM
To: Deer Lake Town Office
Cc: 'deerlake@nf.aibn.com'
Subject: RE: Deer Lake water supply

I wanted to let you know that based on your complaint, staff from the Department of Municipal Affairs and Environment (MAE) investigated the construction site at Deer Lake Power (DLP) where penstock replacement is currently underway, and collected water samples of runoff from the site and from the spillway stream prior to where it discharges into Deer Lake. During the site visit, it was observed that old pieces of creosote treated wood from, possibly the 20’s era wooden penstock, were buried in the ground and had been disturbed during construction. When these old wooden fragments were exposed to water leaking from the penstock system, especially in the newly constructed site drainage channels, an oily sheen would come off of the exposed wood. Ambient water quality results from the two sampling sites indicated
the presence of Polycyclic Aromatic Hydrocarbons (PAHs) above the CCME water quality guidelines for the protection of aquatic life.

MAE has communicated these results to DLP and has directed DLP to take necessary action to ensure levels of PAHs are reduced to below the CCME water quality guidelines for the protection of aquatic life.

The DLP penstocks are located downstream of the Town of Deer Lake’s drinking water intake, and runoff from the construction site around the penstocks has no impact on the Town of Deer Lake’s drinking water system. Special sampling of the Town of Deer Lake’s drinking water for hydrocarbons has been ongoing since February 2018 with results posted here: https://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf There have been no exceedances of the Guidelines for Canadian Drinking Water Quality detected as part of this special drinking water quality sampling program to date.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

From: [redacted]
Sent: Saturday, June 30, 2018 1:41 PM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Deer Lake water supply

Good Day

This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

https://youtu.be/tyh0uyX19Us

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Potential copyright material

If you wish to obtain a copy please contact the ATIPP Office at (709) 729-7072 or atippoffice@gov.nl.ca.
Dana;

We don't have new results to confirm either way.

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Telephone: (709)729-2563

Sent from my BlackBerry 10 smartphone on the Bell network.

Haseen,

Do we know if recent actions by DLP have improved the water quality to meet the CCME water quality guidelines for the protection of aquatic life?

Dana

---

From: Khan, Haseen
Sent: Tuesday, September 11, 2018 9:31 AM
To: Spurrell, Dana <DanaSpurrell@gov.nl.ca>
Subject: FW: Deer Lake water supply
Importance: High

Dana;

FYI

---

From: Dawe, Paula V
Sent: Tuesday, September 11, 2018 9:28 AM
To: Howse, Doug G. <douglashowse@gov.nl.ca>
Cc: Khan, Haseen <hkhan@gov.nl.ca>
Subject: FW: Deer Lake water supply
Importance: High

Doug,
These are health related questions, so I am forwarding to you.

I’ve also attached the map where the samples were taken, lab results, and the aquatic guidelines we looked at.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

From: Maxine Hayden <deerraketownmanager@nf.aibn.com>
Sent: Tuesday, September 11, 2018 9:12 AM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: FW: Deer Lake water supply
Importance: High

September 11, 2018
Hi Paula
Would this in any way affect people who are swimming on the beach or using the beach?
Also a lot of people fish in front of the power house would this have any effect? would it effect any fish in that area?.. posted on his face book page about the high concentrations of toxic hydrocarbons.

Maxine

From: Deer Lake Town Office [mailto:deerlake@nf.aibn.com]
Sent: Monday, August 27, 2018 4:38 PM
To: ‘Maxine Hayden’; Lori Humphrey
Subject: FW: Deer Lake water supply

From: Dawe, Paula V [mailto:pauladawe@gov.nl.ca]
Sent: Monday, August 27, 2018 4:04 PM
To: ‘deerlake@nf.aibn.com’
Cc: ‘deerlake@nf.aibn.com’
Subject: RE: Deer Lake water supply

I wanted to let you know that based on your complaint, staff from the Department of Municipal Affairs and Environment (MAE) investigated the construction site at Deer Lake Power (DLP) where penstock replacement is currently underway, and collected water samples of runoff from the site and from the spillway stream prior to where it discharges into Deer Lake. During the site visit, it was observed that old pieces of creosote treated wood from, possibly the 20’s era wooden penstock, were buried in the ground and had been disturbed during construction. When these old wooden fragments were exposed to water leaking from the penstock system, especially in the newly constructed site drainage channels, an oily sheen would come off of the exposed wood. Ambient water quality results from the two sampling sites indicated the presence of Polycyclic Aromatic Hydrocarbons (PAHs) above the CCME water quality guidelines for the protection of aquatic life.

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The DLP penstocks are located downstream of the Town of Deer Lake’s drinking water intake, and runoff from the construction site around the penstocks has no impact on the Town of Deer Lake’s drinking water system. Special sampling of the Town of Deer Lake’s drinking water for hydrocarbons has been ongoing since February 2018 with results posted here: https://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf
There have been no exceedances of the Guidelines for Canadian Drinking Water Quality detected as part of this special drinking water quality sampling program to date.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

From: [REDACTED]
Sent: Saturday, June 30, 2018 1:41 PM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Deer Lake water supply

Good Day

This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

https://youtu.be/tyh0uyXl9Us

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Haseen,

I provided this response after my site visit on July 18, 2018 and after follow up sampling was conducted. I sent the attached email in response, but there were no plans to visit the site with him.

5 debris items were identified in the canal area and this was communicated to DLP.

---

From: Khan, Haseen <hkhan@gov.nl.ca>
Sent: Wednesday, December 12, 2018 8:45 AM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: FW: Site visit

Paula;

Can we discuss this? I think we responded and closed the file.

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Department of Municipal Affairs and Environment
4th Floor, Confederation Building West Block
PO Box 8700
St. John's NL Canada A1B 4J6
T (709) 729-2563
F (709) 729-0320
E hkhan@gov.nl.ca
www.mae.gov.nl.ca/waterres/

---

From: Ball, Dwight <DwightBall@gov.nl.ca>
Sent: Tuesday, July 31, 2018 1:31 PM
To: Premier of NL <Premier@gov.nl.ca>
Subject: FW: Site visit

---

From: [Redacted] <Redacted>
Sent: Tuesday, July 31, 2018 11:31 AM
To: Dawe, Paula V <pauladawe@gov.nl.ca>; Ball, Dwight <DwightBall@gov.nl.ca>; Young, Jason <jasonYoung@gov.nl.ca>
Subject: Site visit
Good Day

I'm still waiting for a reply on the toxic creosote site visit. Also I've waiting for my invite to visit the canal equipment dump sites as talked about in emails last year. Can you confirm a clean plan is now in place and the dates the plan will be acted on.

Regards
I wanted to let you know that based on your complaint, staff from the Department of Municipal Affairs and Environment (MAE) investigated the construction site at Deer Lake Power (DLP) where penstock replacement is currently underway, and collected water samples of runoff from the site and from the spillway stream prior to where it discharges into Deer Lake. During the site visit, it was observed that old pieces of creosote treated wood from, possibly the 20’s era wooden penstock, were buried in the ground and had been disturbed during construction. When these old wooden fragments were exposed to water leaking from the penstock system, especially in the newly constructed site drainage channels, an oily sheen would come off of the exposed wood. Ambient water quality results from the two sampling sites indicated the presence of Polycyclic Aromatic Hydrocarbons (PAHs) above the CCME water quality guidelines for the protection of aquatic life.

MAE has communicated these results to DLP and has directed DLP to take necessary action to ensure levels of PAHs are reduced to below the CCME water quality guidelines for the protection of aquatic life.

The DLP penstocks are located downstream of the Town of Deer Lake’s drinking water intake, and runoff from the construction site around the penstocks has no impact on the Town of Deer Lake’s drinking water system. Special sampling of the Town of Deer Lake’s drinking water for hydrocarbons has been ongoing since February 2018 with results posted here: https://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf. There have been no exceedances of the Guidelines for Canadian Drinking Water Quality detected as part of this special drinking water quality sampling program to date.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

Good Day

This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

https://youtu.be/tyh0uyX19Us
Collins, Ryan

From: [redacted]
Sent: Monday, August 27, 2018 5:23 PM
To: Dawe, Paula V
Subject: Re: Deer Lake water supply

Thank you for your reply. Again I request a site visit with you to see first hand all the areas we have confirmed where toxic creosote contamination has been found in and around the Deer Lake Drinking Water Supply. Pls advise us on a time that is convenient for you to meet on this urgent matter.

Regards

[signature]

On Tue, Jul 3, 2018, 7:31 AM Dawe, Paula V, <pauladawe@gov.nl.ca> wrote:

[signature]

Thank you for the videos. Can you please clarify the location at which the videos are taken? The location where the soil sample was taken? If you could provide coordinates or a map indicating the location, that would be helpful.

Paula Dawe, P.Eng.
Manager
Drinking Water & Wastewater Section, Dam Safety Program

From: [redacted]
Sent: Saturday, June 30, 2018 1:41 PM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Deer Lake water supply

Good Day
This is happening as we speak the smell of creosote would kill a horse as they say. We need our Gov't to step in here this is a toxic and illegal dumping site of old materials from under the penstock we drank from and only feet from our water supply today. When will we see action?

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Collins, Ryan

From: Khan, Haseen
Sent: Friday, December 28, 2018 1:25 PM
To: Spurrell, Dana
Subject: FW: Concerned resident

Dana;

FYI

Haseen Khan
Director
Water Resources Management Division
Department of Municipal Affairs and Environment
4th Floor West Block Confederation Building
PO Box 8700
St. John's NL, Canada A1B 4J6
T (709) 729-2563
F (709) 729-0320
Email hkhan@gov.nl.ca
www.mae.gov.nl.ca/waterres/

From: Khan, Haseen
Sent: Friday, December 28, 2018 12:42 PM
To: Dawe, Paula V
Subject: RE: Concerned resident

Thanks Paula.

Haseen Khan
Director
Water Resources Management Division
Department of Municipal Affairs and Environment
4th Floor West Block Confederation Building
PO Box 8700
St. John's NL, Canada A1B 4J6
T (709) 729-2563
F (709) 729-0320
Email hkhan@gov.nl.ca
www.mae.gov.nl.ca/waterres/

From: Dawe, Paula V
Sent: Friday, December 28, 2018 10:52 AM
To: Khan, Haseen
Subject: FW: Concerned resident

FYI
This is a message I received from a resident of Deer Lake whom was a [redacted] You guys have been avoiding this for years now what I've been telling your dept and as the years go by and you are forced to investigate more complaints everything I've been saying to coming to light. If you knew how many friends and family we have all lost out here from cancer and sickness it would turn your stomach. I have the cancer and sickness numbers from Atipp to prove it. We lead NL (which leads Canada) by the way. Stand up and do what's right here for the people of Deer Lake.

His message;

I knew about the drums of transformer oil that DLP. dumped there years ago. I was told by a DLP employee, [redacted] the drums are only the surface of what Bowaters & DLP dumped in that canal to dispose of. Transformers, Machine parts, generator parts, other barrels contaminated full of creosote, asbestos paneling from the buildings, the list goes on and on, all they do now is deny it and cover it up its time for the people of Deer Lake to file the largest class action lawsuit they ever seen for poisoning the residents, myself included. Corrupt corporations like Kruger & DLP along with their corrupt counterparts in the Deer lake council and the corrupt NFLD government needs to be made and example of and exposed for their criminal corruption, and held accountable by paying out compensation to the people of the town, and they all need to rot is a prison.
I’m concerned there might be other questions you might need to prepare for like:

- How long have the drums been next to the intake, how did they end up there, and what was in them?
- What else has been dumped in the Humber Canal?
- Has this debris dumped in the Humber Canal impacted the health of Deer Lake residents?

I had another email from [REDACTED] today (see attached).

You might want to mention that:

- Special sampling results on the Deer Lake Water supply are posted online at: https://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf
- As part of the “Atlantic Region Federal-Provincial Toxic Chemical Survey of Municipal Drinking Water Sources 1985-88” baseline report published by Environment Canada, drinking water used by the Town of Deer Lake was sampled for toxic chemicals. According to the report, Deer Lake source water from the Humber Canal was sampled in 1987. No parameters were flagged of concern for Deer Lake for any of the chemicals tested. Samples were analyzed for inorganic parameters, organic and pesticide parameters (including PCBs and PAHs), and Volatile Organic Materials (VOMs).

Erin,

See edits below. Paula, feel free to add anything that you feel is missed here.

Hi Dana,
I understand Haseen is out of office. Could you review these? Requested to be prepared given the ATIPP response.
Thanks,
E.
Hi Haseen,
Please see the following KM's for review. There was an ATIPP released on this topic and we need to update our KM's.
Thanks,
E.

**KEY MESSAGES**

**Municipal Affairs and Environment**
**Debris in the Humber Canal**
December 27, 2018

**Summary:**

- The Department is working with the consultant (Stantec) regarding plans for the safe removal of debris in the Humber Canal which is also acceptable to the communities of Deer Lake and Reidville. The canal is part of a protected public water supply area that provides water to both towns.
- Deer Lake Power has been granted a permit for a temporary water supply intake and has applied for a permit to monitor the water quality. The department is waiting for additional information from Stantec regarding redesigned plans for a temporary intake system that will supply water while the removal is underway.

**Anticipated Questions:**

- What are you doing about the water since people have been using it for a long time?
- What else are you testing for? Don’t you do regular testing?
- Will you allow Deer Lake Power to proceed with removing this debris?

**Key Messages:**

- The safety of residents is our number one concern and protection of drinking water sources is a priority for our government.

- We have no reason to believe there is a risk to public safety at this time; however, we have acted with an abundance of caution and have continued to conduct specialized chemical drinking water tests in addition to regular testing. Results indicate that the water is fine.

- We are continuing to work with the consultant to finalize a remediation plan that ensures there is an acceptable temporary water supply and monitoring program during the debris removal process.

- Work on removal of the debris can only be undertaken by Deer Lake Power once the department is satisfied that the plan that’s in place is appropriate and that the work can be done safely.
This is a message I received from a resident of Deer Lake whom was a [REDACTED] You guys have been avoiding this for years now what I've been telling your dept and as the years go by and you are forced to investigate more complaints everything I've been saying to coming to light. If you knew how many friends and family we have all lost out here from cancer and sickness it would turn your stomach. I have the cancer and sickness numbers from Atipp to prove it. We lead NL (which leads Canada) by the way. Stand up and do what's right here for the people of Deer Lake.

His message;

I knew about the drums of transformer oil that DLP dumped there years ago. I was told by a DLP employee, [REDACTED] the drums are only the surface of what Bowaters & DLP dumped in that canal to dispose of. Transformers, Machine parts, generator parts, other barrels contaminated full of creosote, asbestos paneling from the buildings, the list goes on and on, all they do now is deny it and cover it up. Its time for the people of Deer Lake to file the largest class action lawsuit they ever seen for poisoning the residents, myself included. Corrupt corporations like Kruger & DLP along with their corrupt counterparts in the Deer lake council and the corrupt NFLD government needs to be made and example of and exposed for their criminal corruption, and held accountable by paying out compensation to the people of the town, and they all need to rot is a prison.
Collins, Ryan

From: Khan, Haseen
Sent: Tuesday, January 8, 2019 1:21 PM
To: Spurrell, Dana
Subject: FW: Culpability

Dana;

FYI

From: Dawe, Paula V <pauladawe@gov.nl.ca>
Sent: Tuesday, January 8, 2019 1:06 PM
To: Khan, Haseen <hkhan@gov.nl.ca>
Subject: FW: Culpability

FYI

From: [redacted]
Sent: Tuesday, January 8, 2019 12:00 PM
To: Dawe, Paula V <pauladawe@gov.nl.ca>
Subject: Re: Culpability

Good Day Paula

Can I ask why the sediment samples taken in our water supply next to the drums (positive for PAHs and other contamination) are not posted on this link. Do your department not consider these results relevant? Has it been confirmed yet what these drums were carrying? Creosote was used everywhere around the canal, should we assume this is what the drums where used for? Does it concern your department as to when this drums rusted through what the resident's of Deer Lake would have been subjected to in their water supply at that time. Also can you confirm your dept reps are fully trained on taking water samples in fast moving waters? Thank you for your time.

Regards

[redacted]

On Jan 8, 2019 11:25 AM, "Dawe, Paula V" <pauladawe@gov.nl.ca> wrote:

[redacted]

I am afraid that I cannot provide legal advice to the general public so I cannot provide any advice on possible liability.

The Department will continue to monitor drinking water quality for the Town of Deer Lake for hydrocarbons until the plan for removal of the drums can be effected. All data from this special sampling program has been posted publically on our website: https://www.mae.gov.nl.ca/waterres/quality/drinkingwater/pdf/Water_Quality_Results_DeerLake.pdf
Good Day Paula

I have a question for you and your department. If canal manager's were aware of this toxic contamination dumped in their canal that we were drinking from and didn't report it. Could they be culpable under any legislation Federal or Provincial to your knowledge?

Regards

[Signature]