

Thames – Sydenham and Region Drinking Water Source Protection Source Protection Committee Discussion Paper

Report to Chair and members
Thames – Sydenham and Region
Source Protection Committee

Agenda # 2009.07.10.a

Cc SP Management Committee

Date July 7, 2009

Prepared By Chitra Gowda, Technical Coordinator
and Chris Tasker, SP Project Manager

Re: Increased Use of the Cedar Springs Rifle Range

Background

- Following a telephone discussion, the Lower Thames Valley Conservation Authority received a letter dated February 27, 2009 from James D. Wickett (attached) regarding the intensification of use of Cedar Springs Rifle Range and raised questions regarding the current and future lead levels in the drinking water, munitions discharged into the Lake Erie and leaching from the bank. The letter had the following enclosures: correspondence from Ms. Wickett of Cedar Springs; correspondence from Peter G. MacKay, the Minister of National Defense (attached); an Environmental Assessment Screening Report dated October 2008; copies of parcel sketches showing the DND, neighbouring properties, Chatham-Kent water pump facility and intake; copy of the danger zone warning; and a copy of Chatham Daily News article on additions to the Rifle Range
- In his letter, James D. Wickett requests the Source Water Protection Committee to identify potential threats to the drinking water intake and mitigation measures, and asks that he be kept informed of the steps the SPC intends to take in this regard

Discussion

- The Cedar Springs Rifle Range property is owned by the Minister of Militia and Defense, and the jurisdiction of source protection planning must be considered
- The increased firing activity at a Rifle Range is not one of the 21 prescribed drinking water threats in Reg. 287/07. The threat categories by which lead may be a threat to drinking water depending on circumstances (release mechanism and quantity) are: sewage system or sewage works, tailings from mines, waste disposal site and storage of snow
- Lead in surface soil in an intake protection zone may be identified as a 'condition' (a threat to a drinking water source resulting from a past activity) if it exceeds 1000 µg/g in surface soil as per Technical Rule 126 (4)
- In a letter dated May 20, 2008 from Peter G. MacKay the Minister of National Defense, to Ms. Wickett, the Minister states that the DND is vigilant with respect to safety and environmental issues and advises that the range is not expanding but is being improved to provide more effective training to soldiers
- The Minister further states that monitoring by DND is performed annually on soils and waters for lead and other substances, there is no detectable contamination, and several

endangered species are higher in number in the rifle range than elsewhere in the region. A threshold is established for the maximum number of rounds fired on each target before soil remediation must occur, and that a complete remediation was done in summer 2007

- In the Thames Watershed and Region Watershed Characterization Report, intake raw water quality data from 2000 to 2005 was reviewed. Lead levels in the intake raw water (to the Chatham and South Kent water treatment plants) were well below half of the treated drinking water standard for lead (the standard being 10 $\mu\text{g/l}$ at the point of consumption), ranging between 0.08 to 2.5 $\mu\text{g/l}$ from 1990 to 2005, with 2 to 12 samples analyzed per year.
- Based on a discussion with the operating authority of the Chatham and South Kent water treatment plants lead is not considered a parameter of concern at the intake. This is supported by a Chatham Kent Public Utilities Commission (PUC) information report to council dated May 28, regarding PUC concerns about the Cedar Springs Rifle Range. The report indicates that the current lead sample results do not indicate that the location or past activity at the rifle range have adversely affected the raw water to the treatment plants, and PUC administration anticipates that increased activity at the rifle range will not impact raw water quality, however PUC staff continuously review lead sample results.

Minister
of National Defence



Ministre
de la Défense nationale

Ottawa, Canada K1A 0K2

MAY 20 2008

Ms. Jann Parry Wickett
PO Box 131
18094 Equus Trail Private
Cedar Springs ON N0P 1E0

Dear Ms. Wickett:

Thank you for your letter of March 13, 2008, concerning the Cedar Springs Rifle Range. I appreciate your providing me with the opportunity to address your concerns.

I assure you the Department of National Defence (DND) is vigilant with respect to safety and environmental issues, particularly on our ranges and training areas.

The Cedar Springs Rifle Range is an important Canadian Forces training area that is used extensively by our Reserve soldiers. I am advised that more than 200 personnel have been prepared for deployments to Afghanistan using this range, and it is also frequently used by law enforcement agencies to maintain their weapon proficiency. The range is not expanding, but is being improved to provide a better and more effective training experience. The local availability of this capability is crucial to our ability to train our Reserve soldiers effectively and efficiently.

The advertisement to which you refer is placed in newspapers annually to warn personnel about the risks associated with a rifle range. The Danger Area is intended to warn boaters of the safety boundaries of the range, and the 1000 metres is the actual width of the DND property. It is important to note that the range has been situated to allow firing without affecting neighbouring properties in the safety template, and the range training area is clearly marked by a fence with signs indicating that trespassing is prohibited and that there are dangers within the range area. Furthermore, I understand that every spring buoys are placed in the water in the danger area, and safety sentries are posted whenever firing is occurring. The sentries indicate when a vessel approaches the safety template, and firing is stopped immediately until the vessel moves out of the danger area.

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Canada

Handguns, rifles, and machine guns are fired at the Cedar Springs Rifle Range, and these weapons are extremely accurate and very reliable. There is no use of high explosives; however, training pyrotechnics are used. To further minimize the risk of ricochets or misfires, DND ensures that a safety zone is properly located. This range has been in use for a long time, and there remains the possibility that live rounds and explosives from previous generations may surface. While this is extremely unlikely outside the range training area, the Department operates under the tightest of safety standards and wishes to minimize any risk.

Environmental stewardship of all of our ranges is a priority, and impacts are consistently monitored by DND with annual tests on the soils and waters to determine lead content and other contamination. I am advised that to date there has not been any detectable contamination. As part of these stewardship practices, thresholds have been established that determine the maximum number of rounds that may be fired on each target before soil remediation must occur. It should be noted that a complete remediation was done at Cedar Springs during the summer of 2007. In addition to the monitoring of lead, our environmental officers monitor endangered species, and because of the additional safeguards several endangered species, such as the Fowler's Toad and the Grey Fox, are higher in number within the Cedar Springs Range than elsewhere in the region.

The Cedar Springs Range is a vital component of our ability to train our Reserve soldiers, and relocating to a more isolated area would compromise our ability to train them efficiently. Most of their training is conducted on weekends, and it is essential that the limited time available not be spent travelling to distant training areas. The Department is aware of the environmental and safety implications of operating this range and is confident that it operates under the strictest safety standards and with minimal adverse impact on the environment.

I trust this information is of assistance, and thank you again for writing.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter G. MacKay", written in a cursive style.

Peter G. MacKay

James D. Wickett
18094 Equus Trail, Box 131
Cedar Springs, Ontario
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(519) 676-2151

RECEIVED
MAR 03 2009
LOWER THAMES VALLEY
CONSERVATION AUTHORITY

February 27, 2009

Lower Thames Valley Conservation Authority
100 Thames Street
Chatham, Ontario
N7L 2Y8

Attention: Chitra Gowda

RE: INTENSIFICATION OF USE OF CEDAR SPRINGS RIFLE RANGE

Further to our telephone conversation of February 26, 2009 I enclose herewith copy of environmental assessment screening report and decision which I have obtained from the Canadian Environmental Assessment Registry.

You will note that while the report at the bottom of page 27 acknowledges that the development onsite will increase training activities on the range which will likely increase usage of services on the site, there is no consideration for the impact of the increased firing activity to the target area on the bank of Lake Erie and into the DND danger area in Lake Erie. I confirm that the rifle range property and the danger area prescribed by the Department of National Defence in Lake Erie are directly adjacent to the municipal water intake for the Municipality of Chatham-Kent.

I further confirm that I have provided a package of information to the chair and members of the Lower Thames Valley Conservation Authority wherein the Minister of National Defence, the Honourable Peter Mackay, acknowledges monitoring and remediation activities in respect of lead. The warning which is placed twice annually in the local newspaper by the Department of National Defence further indicates the shooting of munitions into the danger area in Lake Erie. With the acknowledged increase of activity at the rifle range, at the very least, it is incumbent upon the Department of National Defence, before utilizing their new facility to perform an appropriate environmental assessment to answer the questions:

1. Are there any safe levels of lead in drinking water?
2. If so, are the current levels of lead and other substances from munitions discharged into the lake and leaching from the bank of the lake presently at safe levels.
3. If so, can it be determined when the levels of lead and other substances from munitions discharged into the lake and leaching from the bank of lake will reach unsafe levels considering that this site has already been used as a firing range for over 60 years.

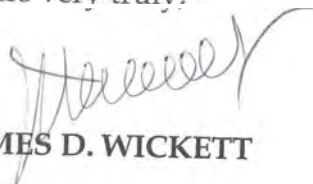
I would appreciate it if you would bring all of this to the attention of the Source Water Protection Committee. It is my understanding that the work of the Committee will involve the identification of threats to source water and measures to mitigate these threats within the next 2 years. This timeline would seem to correspond to a certain extent with the timeline for the use of the additions to the Cedar Springs rifle range as set out in page 8 of the environmental screening with a timeframe of March 2010.

It would certainly be of great benefit to the Municipality of Chatham-Kent if the Department of National Defence would delay the use of the firing range component of their facility until the Source Water Protection Committee had completed their mandate with respect to the identification of threats and measures to mitigate threats to the Municipality's water intake abutting the rifle range property.

I would appreciate it if you could keep me advised as to the steps which the Source Water Protection Committee intends to take in this regard.

Thank you, I remain,

Yours very truly,



JAMES D. WICKETT

JDW/ep

Encl.