

MISSISSIPPI-RIDEAU SOURCE PROTECTION REGION
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MINUTES

Mississippi-Rideau Source Protection Committee **August 7, 2008** **#9/08**

Present: George Braithwaite Scott Bryce
 Richard Fraser Domenic Idone
 Paul Knowles Patricia Larkin
 Randy Malcolm Peter McLaren
 Beverly Millar Eleanor Renaud
 Jim Riopelle Janet Stavinga (Chair)
 Mary Trudeau

Mark Burnham (Source Protection Authority Liaison)
Katie Fairman (Ministry of the Environment Liaison)

Regrets: Alex Cullen Carol Dillon
 Christine Leadman

Staff: Sommer Casgrain-Robertson Karyn Cornfield
 Emily Saumure Brian Stratton
 Doug Nuttall (Water Resources Engineer, Mississippi Valley Conservation)

Guests: Dr. Anne Carter (Medical Officer of Health, Leeds, Grenville & Lanark District Health Unit)
 Dr. Ian Gemmill (Medical Officer of Health, Kingston, Frontenac, Lennox & Addington Health Unit)
 Dr. Nadine Sicard (Associate Medical Officer of Health, Ottawa Public Health)
 Jane Lyster (Director of Health Protection, Leeds, Grenville & Lanark District Health Unit)
 Jim Mahoney (Supervisor, Safe Drinking Water Branch Ministry of the Environment, Eastern Region, Kingston)
 Pam Sangster (Ministry of Northern Development and Mines, Resident Geologist, Southern Ontario)

1.0 Welcome

Chair Stavinga welcomed everyone to the meeting including members of the public and guests from the Province of Ontario and local Public Health Units. Chair Stavinga also had members from the Mississippi-Rideau Source Protection Committee (MRSPC) introduce themselves and indicate what interest(s) they represent on the Committee.

a) Agenda Review

Chair Stavinga went over the purpose of the meeting and the agenda.

b) Notice of Proxies

Carol Dillon provided her notice of proxy to Patricia Larkin by email.

c) Adoption of the Agenda

Motion 1-08/08

That the Agenda of the Mississippi-Rideau Source Protection Committee meeting of August 7, 2008 be adopted.

Carried

d) Declarations of Interest

None

e) Approval of Minutes

Motion 2-08/08

That the minutes of the Mississippi-Rideau Source Protection Committee meeting of July 3, 2008 be approved.

Carried

f) Status of Action Items

Members were asked if they had any questions or comments about any of the action items. They had none.

g) Correspondence

There were no questions regarding the correspondence.

5.0 MOE Response to Uranium Inquiry

At the request of the Chair, and with the consent of the Committee, agenda item 5.0 was moved up because a number of public delegates and invited guests were present to address this item. Presentations were given by the Ministry of the Environment (MOE) and the Ministry of Northern Development and Mines (MNDM) in response to a letter sent by the MRSPC to the MOE, dated March 5, 2008, seeking clarification about whether uranium activities in the Mississippi-Rideau region had any relation to the *Clean Water Act*. MOE had provided a written response, with supporting information from MNDM, to the MRSPC, dated July 24, 2008. The Health Units had also sent a letter to the MOE dated July 15, 2008 regarding their role in developing educational materials regarding uranium in drinking water.

Presentations from the Province and Public Health Units

Katie Fairman (MOE) introduced guests from the Province and the

Public Health Units (guests are listed on page 1).

Ms. Fairman (MOE) gave a slide presentation (attached) entitled “*Safe Drinking Water Act – Uranium Testing under Ontario Regulation 170/03 for Regulated Drinking Water Systems*”.

Pam Sangster (MNDM) gave a slide presentation (attached) entitled “The Mining Sequence – Staking and Exploration”.

Ms. Fairman (MOE) gave a second slide presentation (attached) entitled “Response to the Mississippi-Rideau Source Protection Committee on Uranium Mining Activities, Naturally Occurring Uranium, and the *Clean Water Act, 2006*”.

Jim Mahoney (MOE) added that a small number of marginal exceedances in the range of 0.021 – 0.023 mg/L have occurred above the Ontario Drinking Water Standard for uranium (0.02 mg /L) in drinking water systems in Ontario over the past four years. He explained that exceedances are dealt with on a case-by-case basis and treatment options are evaluated.

Dr. Carter (Medical Officer of Health (MOH)) spoke about the role of Public Health Units and the services that they provide to the public. She explained that Public Health Units will review private well water sampling results with the owner and provide information regarding possible health effects and drinking water parameters. She stressed that they strongly encourage private well owners to test the bacteriological quality of their well water once per year. Dr. Carter (MOH) stated that although uranium exploration is a provincial issue, she would commit to meeting with local MOH’s and Mississippi Valley Conservation (MVC) to talk about how best to educate the public and local municipalities about testing and possible health effects of uranium in drinking water. She also clarified that it is ultimately the private well owner’s responsibility to sample their water and to take action should it be required.

Doug Nuttall (MVC) then provided a verbal summary of the statistical results of MVC’s uranium sampling program. MVC conducted a groundwater sampling program in October and November 2007 to characterize the background groundwater quality in the area east of Crotch Lake. Seventeen samples were obtained from fifteen private residential wells and one surface water body. Twelve of the samples had detectable concentrations of uranium while two of the groundwater samples exceeded the Ontario Drinking Water Standard for uranium (0.02 mg/L).

Presentations from Public Delegates

Marilyn Crawford (Community Coalition Against Mining Uranium) asked what the cumulative impacts of drill holes are. She explained that Nova Scotia and British Columbia have placed moratoriums on uranium mining and that New Brunswick has a regulation preventing exploration in designated areas. She highlighted that a public review of Ontario's

Mining Act begins August 11 however a discussion paper has yet to be issued and invitations to public consultation sessions have not yet been extended to stakeholders. Ms. Crawford stated that the *Mining Act* only minimizes risk through rehabilitation of sites and there is no restoration requirement during exploration. Ms. Crawford expressed concern that there would be no discussion about uranium mining during the public review of the *Mining Act*. She added that the MRSPC should consider the depth of the response that was provided by the MOE. Ms. Crawford provided the MRSPC with a copy of her speech and supporting material (attached) and a copy of a report entitled "Citizen's Inquiry into the Impacts of the Uranium Cycle" which will be held on file.

John Kittle (Mississippi Landowners Group) stated that he represents a group of landowners who would be directly affected by contamination of groundwater from uranium exploitation in Frontenac County. He asked that the Province update its population records to reflect that people live close to the area being explored. Mr. Kittle commented on the response from the Province (MOE, MNDM) and Public Health Units, dated July 24, 2008. He asked how the Province knows that the uranium in the water is not due to exploration activities. He requested copies of studies that the Province used to substantiate their findings. He asked the Province to explain why regulatory requirements are waived for over 100 exploratory drill holes in a populated area in the vicinity of existing wells. He questioned why the Province doesn't regulate or monitor mining exploration companies and why authorities are failing to protect our wells. He asked the Province to follow the lead from other provinces and suspend all uranium activities until further study. Mr. Kittle provided the MRSPC with a copy of his speech (attached).

Linda Harvey (Retired Family Physician) explained that drill holes are routes for uranium contamination and that private wells are at risk of contamination. Ms. Harvey stated that uranium in drinking water is a health risk to susceptible populations. She added that uranium mining can result in radioactive contamination and that radioactive material is being used as fill. Ms. Harvey requested that the MRSPC vote to demand cessation of mineral exploration activities.

Howard Robinson (Mississippi Valley Field Naturalists, Water Guardians Network) gave a slide presentation (attached). He stated that Sharbot Lake is not protected and that most of the Mississippi-Rideau Source Protection Region is highly vulnerable. He stated that the issue could get worse and become difficult to fix. He asked if clusters could be included and could MOE revise the scoring system for Highly Vulnerable Aquifers and include heavy metals as threats. Mr. Robinson proposed a moratorium on uranium exploration in all Source Protection Regions in Ontario until risks are better understood.

Wolfe Erlichman stated that if the odds of a mine going forward are 1 in 10,000 then why bother with exploration if the odds are so low. MNDM is a promoter of mining. The miners are looking for investors. Uranium is more to do with promotion and not mining.

Questions and Discussion by Members

Following a five minute break, Committee members asked questions of the representatives from MOE, MNDM and the Public Health Units.

- Drill Holes, Fractured Rock, Artesian Conditions & Abandoned Wells

A member asked how deep the drill holes are and if water can get into them. Ms. Sangster (MNDM) responded that no drilling has been done in the current round of mineral exploration. Mainly shallow holes have been drilled in the past. Historical drill-hole data is available. MNDM agreed to provide drill-hole data to MRSPC and Mississippi Valley Conservation.

A member asked what the difference is between unplugged drill holes and fractured rock. Ms. Sangster (MNDM) responded that there is no difference.

A member asked if plugging of drill holes is required, particularly under artesian conditions. Ms. Sangster (MNDM) responded that permits may be required for drill holes under certain circumstances (i.e. oil and gas), but are not required in every case. Mr. Nutall (MVC) responded that drill holes must be plugged if water reaches the surface. Best Management Practices are required for all mining practices.

A member asked if discharges to the human environment under artesian conditions are looked at. Mr. Nuttall (MVC) responded that wells must be capped under Ontario Regulation 903. Ms. Fairman (MOE) commented that abandoned wells are supposed to be capped by the property owner.

A member asked if regulations prevented drilling through deposits or do they have to stay within the deposit. Ms. Sangster (MNDM) stated that there was no regulation that requires that the drilling stay within the deposit.

- Effects of Uranium on Human Health

Members asked about the human health effects of uranium. The MOH's responded that the safe consumption limit of uranium is 0.02 mg/L. This means that humans can safely drink 1.5 L of water each day containing 0.02 mg/L of uranium. This accounts for uranium that you get from other sources (e.g. food, environment, etc.). The safe consumption limit is determined based on the concentration at the lowest observed effect in animals divided by a safety factor of 50. Water containing uranium greater than the safe consumption limit shouldn't be ingested in the long term and in which case an alternative source of water should be found. The cumulative effects of uranium depend on the excretion rate, that is, the rate at which it passes through the body. Uranium enters the body mainly by ingestion (water and food). When uranium is ingested through food and water, a small amount is absorbed but most of it is excreted. Uranium is not easily inhaled because it's a heavy metal (is not easily airborne). Too much heavy metal can cause kidney damage.

- Private Well Treatment Solutions

A member asked how uranium can be removed from wells that exceed safe consumption limits. The MOH's responded that uranium can be treated by reverse osmosis and ion exchange. Half of the treated drinking water will be lost so the treatment system is put on one tap only. Filters should be kept clean.

- Public Education on Uranium

Chair Stavinga requested that the Public Health Units work with MVC to develop effective ways of raising public and municipal awareness about local uranium. The MOH's responded that health units can produce content for educational material that municipalities could distribute (i.e. in the tax bill). The message will be to not only test for uranium but to test for bacteriological parameters as well and must be consistent across the Province. Chair Stavinga encouraged the MOH's to draw from material that has been developed by H2O Chelsea.

- Uranium Exceedances under the *Safe Drinking Water Act*

A member asked what happens if uranium exceeds maximum levels in one of the drinking water systems defined in Regulation 170 under the *Safe Drinking Water Act* (SDWA)? Ms. Fairman (MOE) responded that if a drinking water system regulated under the SDWA has high uranium concentrations in the raw water that provincial staff and local health units will be notified and will work closely with the owner of the system to protect public health and ensure a safe potable water supply.

A member stated that there is a serious potential problem of uranium contamination with an increase in mining activities. They stated that they would prefer to see uranium dealt with under the *Clean Water Act* rather than at the back-end of the SDWA.

- Drinking Water Threats & Issues Assessment

Members asked for clarification about the assessment of threats and issues on drinking water and its relevance to uranium activities. Ms. Fairman (MOE) explained the MRSPC will be required to list all activities that are or would be drinking water threats in each of the four vulnerable areas: Wellhead Protection Areas (WHPA), Intake Protection Zones (IPZ), Highly Vulnerable Aquifers (HVA), and Significant Groundwater Recharge Areas (SGRA). They then identify where these activities pose a significant risk to drinking water. Risk is determined by multiplying the vulnerability score (out of 10) by the hazard ranking (out of 10). Any activity with a risk score of 80 (or above) is considered a significant drinking water threat. Significant drinking water threats can only be identified in two of the four vulnerable areas: WHPAs and IPZs. Significant drinking water threats can not be identified in HVAs and SGRAs because they can only achieve a maximum score of 60, therefore, threats inventories will only be done in WHPAs and IPZs.

Activities can also be categorized as drinking water quality threats if they

are associated with a particular drinking water quality issue. If a parameter is found at a municipal residential drinking water intake or well and exceeds the Ontario Drinking Water Quality Standards after treatment then it is considered a drinking water issue. A parameter showing a trend in increasing concentrations that may eventually exceed the Ontario Drinking Water Quality Standard may also be considered an issue. Once an issue is identified, there will be an assessment of the activities, conditions and/or naturally occurring activities that are associated with that issue. Activities and conditions can be categorized as significant drinking water threats when they are associated with a drinking water quality issue.

Drinking water threats can only result from human-based activities. Naturally occurring uranium does not constitute a drinking water threat. However, all mining and exploration activities can be evaluated to see if they pose a significant threat to drinking water. Inventories of significant drinking water threats will be done in WHPAs and IPZs only.

A member asked if there was funding available to do a threats and issues inventory in HVAs and SGRAs. Mr. Stratton responded that the draft Regulation and Rules only require an inventory for significant threats to drinking water. Inventories are not required in HVAs and SGRAs because these areas can only achieve moderate threats (a maximum risk score of 60).

Chair Stavinga commented that nothing precludes the MRSPC from developing policies that identify *potential* drinking water issues. Ms. Fairman (MOE) clarified that mandatory policies are only required for significant drinking water threats.

Members recommended that the Committee actively support the section in the proposed Assessment Report Technical Rules that allows the identification of uranium as a significant drinking water issue. A member drafted an amendment to this effect during the meeting (see agenda item 6.0).

- Monitoring and Further Study

A member asked if there was justification for further study of uranium given the complexity of the aquifers and geology. The MOHs explained that their role is in monitoring of the process and assistance in problem identification. The local uranium is naturally occurring. Exceedances of uranium may be caused by old mines. Generations of people have been exposed to this water.

Ms. Sangster (MNDM) responded that the uranium is naturally occurring and exposed at the surface due to weathering and previous exploration. The Ontario Geology Survey has mapping across Southern Ontario showing vulnerable geologic formations.

A member asked if all of the wells can be monitored. The MOH's explained that the available data shows that two wells with exceedances are widely scattered and thousands of wells closer to the mineral

exploration area are not exceedances. It is not possible to make predictions of uranium levels with the current data. Mr. Nuttall (MVC) described the local geology and the solubility of uranium. The sampling wells are 200 to 400 feet deep in limestone under granite. Uranium is insoluble at 3.5 parts per billion at a pH of 7. The solubility of uranium depends on the pH of the water, which depends on the material. Given the type of geology, the uranium is not likely to dissolve. Because of the complexity of the geology and the unknowns, a comprehensive hydro-geologic study would be required to evaluate the risk of contamination.

- Environmental Effects of Mineral Exploration Activities

Chair Stavinga asked if links between MNDM and the regulatory agencies and municipalities can be strengthened to better coordinate exploration activities and minimize their environmental effects. Ms. Sangster (MNDM) responded that MNDM meets monthly with Ministry of Municipal Affairs and Housing to discuss the “one-window approach to planning”. They participate in official planning.

Members expressed concern about the environmental impacts from exploratory activities such as stripping and trenching. Ms. Sangster (MNDM) responded that regulations require that stripping and trenching areas be rehabilitated. Stripping and trenching is not allowed within 120 metres of a water body.

- Proxy Comments (by Patricia Larkin for Carol Dillon)

Patricia Larkin read from Carol Dillon’s proxy email. Ms. Dillon requests that the MRSPC ask Health Canada for information on the effect of uranium exploration and mining on human health. Mr. Nuttall (MVC) responded that there is information about uranium in drinking water on Health Canada’s website however health effects may not be explained.

Motion 3-08/08

That the Mississippi-Rideau Source Protection Committee receive the attached letter from Ian R. Smith, Director, Source Protection Programs Branch, Ontario Ministry of the Environment, dated July 24, 2008 for information.

Carried

Motion 4-08/08

That the Mississippi-Rideau Source Protection Committee receive the attached letter from Dr. Anne O. Carter, Medical Officer of Health and Chief Executive Officer, Leeds, Grenville & Lanark District Health Unit, dated July 15, 2008 for information.

Carried

2.0 Community Outreach

Updates of past and upcoming events and activities were provided. There was nothing further reported.

3.0 Proposed Terms of Reference

Sommer Casgrain-Robertson reported on the status of the *proposed* Terms of Reference. The *proposed* Terms of Reference for the MRSPC have been posted for public comment until September 5, 2008. The Source Protection Authorities will submit the *proposed* Terms of Reference, public comments and their own comments to the Province by October 20, 2008.

A member asked if they should comment on the Terms of Reference again. Ms. Casgrain-Robertson said that anyone whose comments or concerns are still outstanding may wish to resubmit those specific concerns. The package submitted to the MOE for approval will contain a summary of the comments received on the draft version and any comments received on the proposed version will be attached in full.

A member noted that the Quebec and Ontario labels on the Ottawa River map were reversed. Staff will correct the provincial labels on the Ottawa River map in the *proposed* Terms of Reference.

4.0 MRSPC Meeting Schedule Revised

Ms. Casgrain-Robertson reported that previously scheduled meetings for September through December 2008 have been cancelled because the MRSPC has finished the first phase of its work. Over the past eight months the SPC has gotten up to speed on the *Clean Water Act*, developed governing policies, approved a public engagement strategy, reviewed all *preliminary draft* technical reports and developed *proposed* Terms of Reference. The Committee must now await the completion of the remaining *preliminary draft* technical studies before they can proceed with their next task which is developing *proposed* Assessment Reports.

MOE had indicated that final Assessment Report Regulations and Rules will be posted in September. It is therefore proposed that the Committee reconvene on January 8, 2009 and meet four times throughout 2009. Meeting four times during the year will allow staff to undertake public consultation on *draft* technical studies in between meetings in preparation for *proposed* Assessment Reports being due by the end of next year.

Staff was asked to send out agenda packages to MRSPC members at least three weeks before the January 8, 2009 meeting and two weeks before all other meetings.

Motion 5-08/08

That the Mississippi-Rideau Source Protection Committee approves the following meeting schedule for 2009:

- Thursday, January 8, 2009
 - 1pm, RVCA
- Thursday, April 2, 2009
 - 7pm, location TBD (meet & greet at 6pm)
- Thursday, September 3, 2009
 - 7pm, location TBD (meet & greet at 6pm)
- Thursday, December 3, 2009
 - 1pm, RVCA

Carried

6.0 EBR Comments on Draft Assessment Report Documents

Members reviewed and discussed comments prepared by staff for submission to the Environmental Bill of Rights Registry (EBR) regarding proposed Assessment Report Regulations and Technical Rules.

Comment 1 in Staff Report

Climate Change – Rule 18 (13)

Members discussed climate change with respect to source protection. One member commented that there is still much debate on whether or not human-induced climate change actually exists - the science is conflicting and lacks credible data. The member noted that climate change regulations may have large effects on industry. Chair Stavinga explained that the province is requiring us to look at climate change as part of source protection and the comment proposed by staff states that MOE must provide sufficient guidance around modeling and climate change scenarios if they want us to do this.

Comment 4 in Staff Report

Under Comment 4, specifically regarding Rule 70 of the Technical Rules, Ms. Trudeau presented the following amendments:

- to include potential significant episodes or spills outside the Mississippi-Rideau Source Protection Region that may impact drinking water quality; and
- that the Province provides guidance on management of these issues arising from the fact that IPZ-3 may extend beyond the Mississippi-Rideau Source Protection Region.

Under Comment 4, specifically regarding the management of the Ottawa River watershed, Ms. Trudeau presented the following amendment:

- That the MRSPC endorse and promote to the Government of Ontario the

creation of an inter-jurisdictional committee empowered to protect the water quality, water quantity and ecological integrity of the Ottawa River through a watershed approach, including coordinated research, collaborative development of decision-making tools, and coherent and consistent policies, programs and public outreach initiatives for the river.

- The Government of Ontario is requested to initiate creation of this inter-jurisdictional committee and, in addition to representation of its own applicable ministries, Ontario is requested to invite the federal government, applicable ministries of the Province of Quebec, municipalities with intakes or discharges to the river, industrial sector representatives and Hydro authorities to participate in the development of terms of reference for the committee.

A member asked if IPZ-3 for the drinking water intakes on the Ottawa River will include the nuclear plant at Chalk River. Staff responded that IPZ-3 for the intakes on the Ottawa River is limited to the boundary of the Mississippi-Rideau Source Protection Region. The nuclear plant at Chalk River will not be included.

A member asked if the MRSPC can request that the mandate of the Ottawa River Regulation Board be expanded.

A member asked Ms. Trudeau what legislation would apply to a committee that is established to serve the Ottawa River watershed. Ms. Trudeau responded that there is no legislation yet that would apply to an Ottawa River watershed inter-jurisdictional committee.

Chair Stavinga commented that the Ottawa River watershed is beyond the scope of the MRSPC and requires facilitation from the Province.

Members requested that the motion for an inter-jurisdictional Committee for the Ottawa River watershed be circulated to member Conservation Authorities and neighbouring SPCs for them to consider.

Other Issues

Ms. Trudeau recommended that the section in the staff report titled “Identification of Issues in HVA’s and SGRA’s” – including Uranium” be moved from “Other Issues” and made into Comment 13 and amended as follows (additions are underlined and deletions are stricken):

Part XI.1, Rule (108) states that if a parameter is found at a surface water intake or well, and is found to exceed the Ontario Drinking Water Quality Standards after water treatment (if any), then it is considered an issue. Additionally, if analysis reveals a trend of increasing concentration of a parameter that may exceed the Ontario Drinking Water Quality Standards in the future, then that parameter may also be considered an issue.

It is noted ~~It is noted~~ It is important, in any revisions made as a result of the EBR comments, that issues continue to can be potentially identified in both

municipal and non-municipal systems (i.e. private wells). It is ~~staff's understanding~~ also important that, based on the finalized Technical Rules, uranium found in a private well at a level above the Ontario Drinking Water Quality Standards would be identified as an issue in the Assessment Report.

Equally, if any other drinking water issues are known, their identification is left to the discretion of the Source Protection Committee.

Under **Part XI.1, Rule (109)**, once a drinking water issue is identified; the assessment report is required to describe the activities, conditions and/or naturally occurring activities that are associated with that issue. If this information cannot be readily ascertained, then the assessment report must include a plan for verifying this information (to be included in a future assessment report).

We strongly recommend that the proposed expansion be retained for the application within SGRAs and HVAs of the categorization of activities and conditions as significant drinking water threats when they are associated with a drinking water quality issue (i.e. Part XI.1 (2)).

Comments from the Ontario Farm Environmental Coalition

Richard Fraser provided the attached comments from the Ontario Farm Environmental Coalition (OFEC) on the draft Assessment Report Regulation and Technical Rules. Brian Stratton responded to each comment and noted which ones were addressed by the draft EBR comments prepared by staff. Mr. Fraser commented that the Province does not understand compensation from an agricultural perspective, particularly regarding nutrient management rules.

Staff agreed to contact MOE for clarity on how the draft AR Regulation and Technical Rules affect nutrient management rules.

Given a Council commitment, Peter McLaren left the meeting at 6 pm.

Staff will provide Richard Fraser with a written response to the comments prepared by OFEC on the draft Assessment Report Regulation and Technical Rules.

Motion 6-08/08

That the Mississippi-Rideau Source Protection Committee submits the comments recommended in this staff report as amended to the Environmental Bill of Rights Registry regarding Registry Postings 010-3866, 010-3873 and 010-3893 (draft Assessment Report Regulations and Technical Rules).

Carried

5.0 Other Business

None

6.0 Member Inquiries

None

7.0 Next Meeting

Date: Thursday, January 8, 2009

Time: 1:00 pm

Location: Rideau Valley Conservation Authority

8.0 Adjournment

The meeting was adjourned at 6:15 pm.

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Janet Stavinga
Chair

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Karyn Cornfield
Recording Secretary