CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

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Mr. Matt Uza
Manager, Regulation 170 Review
Water Policy Branch – Quality Improvement Section
Ministry of the Environment
135 St. Clair Avenue West, 5th Floor
Toronto, Ontario
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Dear Mr. Uza:

RE: PROPOSED AMENDMENTS TO ONTARIO REGULATION 170/03
EBR REGISTRY NO. RA05E005

These are the comments of the Canadian Environmental Law Association ("CELA") with respect to the Ministry's recently proposed amendments to O.Reg. 170/03 (Drinking Water Systems) under the *Safe Drinking Water Act, 2002* ("SDWA"). These comments are being provided to you in accordance with the above-noted EBR Registry notice.

At the outset, CELA wishes to commend the Ministry for seeking stakeholder input into the proposed changes in an open and consultative manner. This proactive approach stands in stark contrast to the negligible public consultation that occurred in relation to the predecessor of O.Reg.170/03 (i.e. O.Reg. 459/00, as amended). We trust that the Ministry's commitment to meaningful public consultation will continue as the Ontario government develops the details of other forthcoming drinking water initiatives (i.e. legislation and regulations regarding source protection, small or private drinking water systems, etc.).

PART I – GENERAL COMMENTS

In general, CELA agrees with the overall intent and suggested wording for the proposed regulatory changes to O.Reg.170/03, except as specifically noted below in Part II of this submission. If implemented, these proposed changes will significantly improve the clarity, effectiveness, and enforceability of the regulation.

However, CELA notes that once the reform package is finalized, the Ministry should undertake comprehensive community education programs and provide appropriate training opportunities so that owners and operators of systems regulated under O.Reg.170/03 are aware of, and comply with, the new regulatory requirements. This is particularly true in relation to the changes affecting year-round non-municipal residential systems, such as the new requirement to register such systems with the Ministry.

In addition, CELA notes that even with reduced or more flexible requirements for year-round non-municipal residential systems, O.Reg.170/03 may still impose capital and operating costs upon the owners of such systems. Accordingly, CELA urges the Ontario government to expeditiously act upon the recent recommendation of the Advisory Council on Drinking Water Quality and Testing that the province should extend its "grant program to assist local municipalities in providing assistance to year-round non-municipal residential systems."[1]

In terms of the proposed reform package, CELA generally supports:

- the continued application of O.Reg. 170/03 to large municipal residential systems, small municipal residential systems, non-municipal year-round municipal systems, and any system serving designated facilities;

- the proposed new or amended definitions under O.Reg. 170/03;

- the revised Table in section 4 of O.Reg. 170/03;

- the revised exemptions, eligibility criteria, and provisions regarding water supply agreements set out in sections 5 and 6;

- the imposition of certain operational and record-keeping standards to small non-electrical drinking water systems that post warning signs pursuant to section 8;

- the new requirement in section 10.1 for owners of regulated drinking water systems to provide timely information to the MOE about such systems;

- the revised record retention provisions in section 13;

- the amended specifications in subsection 1-6 of Schedule 1 for primary disinfection equipment that does not use chlorination or chloramination;

- the clarification in subsection 2-2(3) of Schedule 2, and subsection 9-6(2) of Schedule 9, that certain systems do not have to operate treatment equipment when designated or public facilities served by such systems are not open;

- the amended specifications in subsection 2-6 of Schedule 2 for primary disinfection equipment that does not use chlorination or chloramination;

[1] Advisory Council on Drinking Water Quality and Testing Standards, *Report and Advice on Ontario Regulation 170/03: Smaller, Private Systems* (February 2005), pages 4 and 25 to 26. See also Recommendation 84 of the Part II Report on the Walkerton Inquiry.

- the additions to subsection 2-10(2) of Schedule 2 to ensure that the MOE receives written notices of treatment exemptions for non-municipal year-round residential systems;

- the new exemption in subsections 2-11(1) to (4) of Schedule 2 that conditionally relieves against treatment requirements for non-municipal year-round residential system utilizing groundwater that is not under the direct influence of surface water;

- the clarification in subsection 3-2, para. 1 of Schedule 3 that point-of-entry ("POE") treatment units are only required for the plumbing of buildings or structures that form part of designated or public facilities served by non-residential systems;

- the proposed deletion of the references to "fecal coliform" testing and "background colony counts on the total coliform membrane" in subsection 5-4(1), subpara.3(ii) of Schedule 5; subsections 10-2(2)(a), 10-2(3), 10-3(a), 10-3(c), and 10-4(3)(a) of Schedule 10; subsections 11-2(2)(a) and 11-3(3)(a) of Schedule 11; subsections 12-2(3)(a) and 12-3(3)(a) of Schedule 12; subsection 17-5 of Schedule 17; and subsection 18-5 of Schedule 18;

- the clarification in subsections 6-1.1(1) to (6) of Schedule 6 regarding the actual frequency of weekly, biweekly and monthly testing required by law;

- the proposed deletion of the reference to the Standards Council of Canada in subsection 6-4(3) of Schedule 6;

- the revised standards in subsections 6-5 and 6-7(1)(b) of Schedule 6 regarding alarms and other design and operational requirements for continuous monitoring equipment;

- the new requirement in subsection 7-3, para.1.1 of Schedule 7, and subsection 8-4 of Schedule 8, stipulating that turbidity shall be measured in all wells supplying raw water for drinking water systems (except for certain systems utilizing UV equipment that shuts down water flow if elevated turbidity occurs);

- the new provisions in subsection 7-5 of Schedule 7, subsection 8-5 of Schedule 8, and subsection 9-5 of Schedule 9 that allow operational check tests for chlorine residual and turbidity in certain systems to be carried out by trained persons other than certified operators or water quality analysts;[2]

- the proposed deletion of references in subsection 10-5 of Schedule 10 to prior OWRA approvals providing for less stringent testing or sampling;

- the proposed removal of large municipal non-residential systems from Schedule 11 so that such systems are subject to the microbiological testing requirements under Schedule 12;

[2] However, CELA submits that O.Reg 170/03 (or O.Reg.128/04) should be amended to provide clear regulatory direction as to what constitutes appropriate "training" of persons who undertake operational checks instead of certified operators or water quality analysts.

- the clarification in subsection 11-2(2)(c) of Schedule 11, and subsection 12-2(3)(c) of Schedule 12, that heterotrophic plate count ("HPC") testing for general bacteria population is required only for drinking water systems providing secondary disinfection;

- the proposed elimination of provisions in subsections 11-2(3) to (7) of Schedule 11, and subsections 12-2(4) to (6) of Schedule 12, that currently facilitate the reduction of microbiological testing of distribution samples under certain circumstances;

- the clarification in subsection 11-3(1) of Schedule 11, and subsection 12-3(1) of Schedule 12, that microbiological testing of raw water is not required for drinking water systems using surface water;

- the proposed deletion of the references in subsection 12-2(8) of Schedule 12 to microbiological samples taken under previous drinking water regulations;

- the clarification in subsection 12-4 of Schedule 12 that microbiological testing is not required when certain systems are not supplying water for 7 or more consecutive days to designated or public facilities;

- the proposal to move certain drinking water systems from Schedules 13 and 14 into Schedule 15 in relation to chemical sampling and testing requirements;

- the proposed revocation of Schedule 14;

- the clarification in subsection 15-4(2) of Schedule 15 that chemical testing is not required when certain systems are not supplying water for 60 or more days to designated or public facilities;

- the proposed revisions to subsection 16-3, para. 4 to 6, of Schedule 16 to clarify reporting obligations in relation to low chlorine residual or elevated turbidity;

- the proposed reference in subsection 16-4 of Schedule 16 to the MOE's *Procedure for Disinfection of Drinking Water in Ontario*;

- the clarification in subsection 16-8 of Schedule 16 regarding the particulars of immediate reports of adverse test results;

- the new requirement in subsection 16-10 of Schedule 16 for operating authorities to comply with reporting obligations set out in agreements with owners of drinking water systems;

- the clarification in subsections 17-6, 17-9 to 17-13 of Schedule 17, and subsection 18-6 and 18-9 to 18-13 of Schedule 18, that resampling and testing should be undertaken "as soon as reasonably possible";

- the proposed deletion of subsections 17-7 and 17-8 of Schedule 17, and subsections 18-7 and 18-8 of Schedule 18, regarding HPC testing and background colony units on total coliform membrane filter;

- the new preference in subsections 18-2, para. 2, 18-3, subpara.4(i), and 18-5, para.1 of Schedule 18, and subsection 19-2(1)(a) of Schedule 19, that where possible, water users should utilize alternative sources of drinking water rather than boil water;

- the proposed revocation of Schedule 20 regarding the submission of engineers' reports (although CELA questions why this requirement is being eliminated before the new municipal licencing regime has been implemented – it may be more prudent to leave Schedule 20 intact until the new regime is actually in effect); and

- the proposed revisions to Schedule 21 regarding the timing and content of engineering evaluation reports for certain drinking water systems (see further comments below).

PART II – SPECIFIC COMMENTS

CELA's specific comments on legal, technical or implementation issues arising under certain proposed changes to O.Reg. 170/03 are described below.

Issue #1:Transported Water for Non-Residential Systems

Section 7 of O.Reg.170/03 currently provides a conditional exemption for non-residential systems receiving treated drinking water from another regulated drinking system. The proposed amendment to O.Reg.170/03 retains and clarifies this exemption, and imposes additional requirements to ensure that the receiving storage tank or cistern is adequately constructed and maintained to prevent water contamination.

CELA supports the proposed amendment, but we note that section 7, as amended, only deals with the two end points (i.e. *treatment* by the supplying system and *storage* by the receiving system), but not the actual transportation or delivery of the water itself between the supplier and receiver. Given that poorly maintained equipment (i.e. insecure tanks or valves on water trucks) or careless delivery practices (i.e. placement of hoses on the ground prior to connection) can potentially contaminate water, CELA submits that O.Reg. 170/03 should specify further operational criteria for the section 7 exemption to be applicable.

CELA RECOMMENDATION #1: O.Reg. 170/03 should specify that the section 7 exemption for transported water for non-residential systems does not apply unless the drinking water is collected, transported and delivered in a manner that prevents surface water or other foreign materials from coming into contact with the drinking water.

Issue #2: Relief Against Filtration Requirements – Groundwater Under the Influence of Surface Water

Proposed subsections 2-3(2) to (5) of Schedule 2 of O.Reg.170/03 adds new provisions that would permit year-round non-municipal residential systems using groundwater to obtain relief from filtration requirements, provided that the requisite notice is filed under subsection 2-12. As

described below, CELA submits that the requisite notice should be completed by a professional engineer or hydrogeologist, rather than a licenced well technician.

More importantly, while CELA does not object to having an exemption procedure regarding filtration standards, we strongly submit that groundwater systems under the direct influence of surface water should still be required to disinfect the water if filtration is not required. In the absence of filtration, disinfection would be the only line of defence for persons consuming wellwater that is known to be vulnerable to surface water contaminants.

CELA RECOMMENDATION #2: O.Reg. 170/03 should clarify that for year-round non-municipal residential systems using groundwater under the direct influence of surface water, the owners of such systems must still provide disinfection even if they obtain an exemption from filtration requirements.

Issue #3: Notices from Licenced Well Technicians

The proposed subsection 2-12 of Schedule 2 of O.Reg.170/03 contains a new requirement for non-municipal year-round residential systems that use groundwater not under the influence of surface water, and that wish to obtain an exemption from applicable treatment requirements (see subsection 2-11). In effect, this treatment exemption may be obtained if the system owner submits a written notice from a licenced well technician, who is supposed to express his or her opinion on a number of items prescribed by subsection 2-12(1)(a) to (q). Among other things, these items deal with surface drainage, flooding, water quality, pollution sources, structural integrity, and other related matters.

In principle, CELA does not object to having an exemption procedure for systems using groundwater that is not under the direct influence of groundwater. However, CELA has two main concerns about using licenced well technicians as the persons who must "sign off" on the issues listed in subsection 2-12(1)(a) to (q).

First, the term "well technician licence" is not defined in subsection 2-12, but there is a cross-reference to the definitions in section 35 of the *Ontario Water Resources Act* and Regulation 903 (Wells): see subsection 2-12(2). Unfortunately, section 5 of Regulation 903 prescribes four different classes of well technician licence (i.e. well drilling, well digging or boring, other well construction, and pump installation). Therefore, it is unclear to CELA whether subsection 2-12 is intended to allow holders of any of these four types of licences to sign the requisite notice under Schedule 2-12. Indeed, it seems highly incongruous that a person who is simply licenced to install well pumps would be authorized to express opinions on the various technical, structural and environmental considerations listed in subsection 2-12(a) to (q).

Second, and more importantly, it appears to CELA that the opinions required by subsection 2-12 are best left to those with professional training, expertise and accreditation, such as professional engineers or geoscientists (i.e. hydrogeologists). In fact, it appears that a number of opinions contemplated by subsection 2-12 can only be expressed by persons licenced under the *Professional Geoscientists Act, 2000,* which defines the practice of geoscience as follows:

> An individual practices professional geoscience when he or she performs an activity that requires the knowledge, understanding and application of principles of geoscience and that concerns the safeguarding of the welfare of the public or the safeguarding of life, health or property, including the natural environment (section 2).

Accordingly, CELA recommends that in order to obtain an exemption from treatment under Schedule 2 of O.Reg.170/03, the written notice under subsection 2-12 must be prepared and signed by a professional engineer or professional geoscientist.

CELA RECOMMENDATION #3: Subsection 2-12 of Schedule 2 of O.Reg.170/03 should be amended to specify that a written notice must be signed by a professional engineer or professional geoscientist before a treatment exemption may be obtained.

Issue #4:Reducing Chlorine Residual Testing in Distribution Systems

Subsection 7-2(3) of Schedule 7 of O.Reg.170/03 currently requires owners of municipal residential systems providing secondary disinfection to undertake daily tests for chlorine residual in water distribution systems. Similar obligations to undertake daily testing are currently imposed upon owners of non-municipal year-round residential systems, non-municipal large residential systems, large municipal non-residential systems, non-municipal seasonal residential systems, small non-municipal non-residential systems, and small municipal non-residential systems: see subsection 8-3(3) of Schedule 8, and subsection 9-3(3) of Schedule 9, of O.Reg.170/03.

The proposed amendment to subsection 7-2(3) would, in essence, give system owners two options: (a) continue to collect one sample per day, or (b) collect four samples on one day and take three samples another day, provided the sampling sets are at least 48 hours apart and taken from different locations within the distribution system. Similar amendments have been proposed in relation to drinking water systems subject to subsections 8-3(3) and 9-3(3).

In CELA's view, the current requirement to test daily for chlorine residual should continue to apply to large municipal residential systems in order to maximize the protection of the large numbers of Ontarians served by such systems. Moreover, we are unaware of any compelling evidence that large municipalities have been unable to afford the relatively simple task of testing chlorine residual within distribution systems.

For other classes of regulated drinking water systems, CELA does not object to providing greater flexibility in chlorine residual testing, but we remain concerned about allowing five or six days to elapse between sampling sets. In our view, this "gap" may not be conducive to the timely detection of problems arising from upset conditions (i.e. equipment failure, power outages, significant storm events, etc.), or sudden localized breaches within the distribution system that may facilitate the ingress of microbiological contaminants. Therefore, CELA recommends that for these other classes of regulated drinking water systems, Schedules 7, 8 and 9 of O.Reg.170/03 should specifically identify the kinds of exceptional circumstances where daily chlorine residual testing is required.

CELA RECOMMENDATION #4: O.Reg. 170/03 should continue to require large municipal residential systems to undertake daily testing of chlorine residual within distribution systems. For other classes of regulated drinking water systems that wish to undertake less frequent testing, Schedules 7, 8 and 9 of O.Reg.170/03 should prescribe the types of "upset" conditions that will trigger daily testing for chlorine residual until the prescribed condition ceases or is rectified.

Issue #5: Transferring Ownership of Municipal Non-Residential Systems

Section 51 of the SDWA currently provides that where a municipality transfers ownership of a municipal drinking water system to a non-municipal entity, the system is still deemed to be "municipal" and subject to all requirements for such systems under the Act.

The proposed amendment to O.Reg.170/03 (section 9.1) narrows the application of this deeming provision by stipulating that section 51 of the SDWA does not apply to the transfer of ownership of large and small municipal non-residential systems. The apparent rationale for this change is to make it easier for municipalities to sell non-residential systems (e.g. municipal buildings that contain designated facilities) to private buyers.

Given the vulnerability of persons who are typically served drinking water in designated facilities (i.e. schools, youth camps, day care centres, hostels, social care facility, health care facility, etc.), CELA does not support the proposed amendment. As pointed out by Mr. Justice O'Connor at the Walkerton Inquiry, there are no compelling public policy reasons to facilitate the transfer of municipal systems to the private sector:

> Given that municipal responsibility and accountability flow from municipal ownership, I see no advantage for safety reasons to turning over ownership of municipal water systems to either the provincial government or to the private sector. Changes in the ownership regime for water systems would raise a number of significant issues in relation to the recommendations in this report. I have premised many recommendations on continued municipal ownership of water systems.[3]

Arguably, in order to ensure consistency with the views of Mr. Justice O'Connor regarding privatization, section 51 of the SDWA should generally prohibit transfers of ownership of municipal drinking water systems, in whole or in part. However, when enacting section 51, the Ontario Legislature has apparently elected to leave the door open to future transfers of ownership of municipal systems, provided that such systems are required to meet all prescribed requirements for municipal systems (rather than the less rigorous standards for smaller or private systems). In our view, the deeming provision in section 51 is an important safeguard that should remain intact and undisturbed by O.Reg.170/03. Accordingly, CELA recommends that the proposed section 9.1 should be deleted.

CELA RECOMMENDATION #5: Proposed section 9.1 of O.Reg.170/03 should be deleted so that all municipal drinking water systems remain subject to prescribed municipal

[3] Part II report of the Walkerton Inquiry, page 323.

standards even where such systems are sold or otherwise transferred to other persons, corporations or entities.

Issue #6: Annual Reporting by Owners of Drinking Water Systems

Section 11 of O.Reg.170/03 currently requires owners of drinking water systems to prepare annual reports on prescribed matters, and to file such reports with the MOE Director.

The proposed amendment to section 11 generally retains the obligation to prepare annual reports, but dispenses with the requirement to file the reports with the MOE Director. In other words, the owners must still spend resources to prepare the reports, and must presumably keep them on file so that they are available for public or agency inspection. However, there would no longer be an obligation to actually send annual reports to the regulatory agency for review, record-keeping, or follow-up action.

For the purposes of enhancing accountability and community "right to know", CELA strongly supports the requirement to prepare annual reports. However, we are unclear why such reports would not be routinely forwarded to the MOE on annual basis. Once the annual reports are prepared, the additional expense of mailing copies to the MOE is negligible from the perspective of the system operators.

In addition, receiving annual reports would permit the MOE to acquire invaluable system-specific records about the operation, management and performance of individual systems. Retaining such records within the MOE would provide immediate access by provincial staff to key information in the event of catastrophic problems within a particular drinking water system. On this point, Mr. Justice O'Connor noted that important system-specific information was not readily available to the MOE staff overseeing Walkerton's waterworks, and he found that this institutional deficiency contributed to the oversight failures associated with the tragic events of May 2000.[4]

In addition, collecting, analyzing and aggregating the content of annual reports (i.e. at the local, regional or provincial level) would permit the Chief Drinking Water Inspector to better perform his/her statutory duties to provide "advice and recommendations" on drinking water matters, and to prepare annual reports "on the overall performance of drinking water systems in Ontario" (see section 7 of the SDWA). Moreover, access to annual reports by system owners would also facilitate provincial trend analysis and issue identification in the annual reports to be filed in the Ontario Legislature by the Minister (assuming that subsection 3(4) of the SDWA is proclaimed into force).

For these reasons, CELA does not support the proposed amendment that requires annual reports to be prepared by system owners, but not actually provided to the MOE. If there is value in the content of annual reports, then they should not buried in system owners' filing cabinets. Instead, there should be a steady flow of information to the MOE from system owners so that the MOE can more effectively carry out its regulatory activities and policy development functions under the SDWA.

[4] Part I Report of the Walkerton Inquiry, pages 347 to 350.

CELA RECOMMENDATION #6: The proposed amendment to section 11 of O.Reg. 170/03 should be deleted so that owners of regulated drinking water systems are still required to provide copies of annual reports to the MOE Director.

Issue #7: Reducing Microbiological Testing of Distribution Samples

Under subsection 11-2(1) of Schedule 11 of O.Reg.170/03, owners of certain drinking water systems (i.e. small municipal residential, non-municipal year-round residential, etc.) are currently required to undertake microbiological testing of distribution samples once per week if chlorination or chloramination is provided, or twice per week if chlorination or chloramination is not provided.

Similarly, under subsection 12-2(1) of Schedule 12 of O.Reg.170/03, owners of other classes of drinking water systems (i.e. small municipal non-residential, non-municipal seasonal residential, etc.) are currently required to undertake microbiological testing of distribution samples once every two weeks if chlorination or chloramination is provided, or once per week if chlorination or chloramination is not provided.

The proposed amendment to subsection 11-2(1) would reduce the frequency of microbiological testing to once every two weeks if prescribed treatment equipment is provided, or once per week if there is no treatment. Similarly, the proposed amendment to subsection 12-2(1) would reduce the frequency of microbiological testing to once per month if prescribed treatment equipment is provided, or once every two weeks if there is no treatment.

CELA does not support the proposed reduction of microbiological testing within systems subject to Schedules 11 and 12. Given the public health risks posed by fast-acting waterborne pathogens, it is necessary to detect (and correct) the presence of such contaminants in the drinking water system as soon as possible. Moreover, as noted by Mr. Justice O'Connor, measuring the presence or absence of microbial contaminants in a timely manner is an important way of "auditing the integrity of treatment".[5]

Accordingly, we remain concerned about the proposal to limit microbiological testing to extended timeframes ranging up to one month, during which time people could be potentially exposed to bacteriological contaminants that have entered drinking water systems in the interim. In short, CELA is not aware of any cogent public health rationale for reducing current microbiological testing requirements, and we recommend the deletion of these proposed amendments.

CELA RECOMMENDATION #7: The proposed amendments to subsection 11-2(1) of Schedule 11 and subsection 12-2(1) of Schedule 12 should be deleted so that the frequency of microbiological testing is not reduced for the classes of drinking water systems subject to Schedules 11 and 12 of O.Reg.170/03.

[5] Part II Report of the Walkerton Inquiry, page 248.

Issue #8: Reducing Frequency of Testing for Organic and Inorganic Parameters

Under subsections 13-2 and 13-4 of O.Reg. 170/03, owners of small municipal residential systems and year-round non-municipal residential systems are currently required to test for organic and inorganic parameters once per year if surface water is used, and once every three years if groundwater is used.
The proposed amendments to subsections 13-2 and 13-4 would reduce this testing frequency to once every five years, regardless of whether the raw water used by the system is surface water or groundwater.

CELA agrees that it may be desirable to reduce the frequency of such testing, but we submit that the proposed five year interval is too lengthy, particularly if, during the interim, new sources of chemical pollutants (i.e. landfill sites, intensive livestock operations, fuel storage facilities, etc.) are established or expanded in close proximity to drinking water sources. In such cases, persons should not be exposed to drinking water drawn from such sources for up to five years without testing for chemical pollutants. Therefore, CELA recommends that the prescribed minimum for testing frequency should be three years, but there should be procedural requirements and substantive criteria that would allow system owners to apply for the Director's permission to undertake less frequent testing if warranted in the circumstances (i.e. negligible risk of chemical contamination).

In making this recommendation, CELA notes that once approved source protection plans are in place in forthcoming years (i.e. identifying areas of high, medium or low risk), it may be possible to revisit the issue of testing frequency (i.e. by prescribing less frequent testing in low risk situations).

CELA RECOMMENDATION #8: Subsections 13-2 and 13-4 of O.Reg.170/03 should be amended to prescribe an organics and inorganics testing frequency of three years for small municipal residential systems and year-round non-municipal residential systems. These subsections should be further amended to allow system owners to apply for the Director's permission to undertake less frequent testing where warranted in the circumstances.

Issue #9: Corrective Action Regarding Chlorine Residual

Where low chlorine residual levels are detected and reported, subsection 17-4, para.1 of Schedule 17 of O.Reg.170/03 currently requires owners of large municipal residential systems to undertake corrective action by restoring secondary disinfection levels in the affected parts of the distribution system to 0.2 mg/l where the system provides chlorination, and to 1.0 mg/l where the system provides chloramination. Similarly, subsection 18-4 of Schedule 18 requires other classes of drinking water systems to restore secondary disinfection levels to 0.2 mg/l.

The proposed amendment to subsection 17-4 would greatly reduce the prescribed chlorine residuals to 0.05 mg/l and 0.25 mg/l respectively. The MOE's apparent rationale for this reduction is that the current thresholds "may be difficult or undesirable in some situations." Similarly, the proposed amendment to subsection 18-4 suggests a lower threshold of 0.05 mg/l

for systems providing chlorination, and a new threshold of 0.25 mg/l for systems providing chloramination.

In CELA's view, these significant rollbacks of the current thresholds have not been adequately justified. The fact that the current thresholds may be problematic "in some situations" does not necessarily lead to the conclusion that they should be sharply reduced in all situations. Unless and until the MOE conducts a proper risk analysis of the public health consequences of rolling back the long-standing chlorine residual thresholds, CELA submits that the current thresholds should remain intact and be equally applied across the board. In this regard, we note that the MOE has decided to retain the "old" chlorine thresholds prescribed as corrective action where *E. coli*, total coliforms or *Aeromonas* spp. have been detected and reported (i.e. 0.2 mg/l for systems providing chlorination, and 1.0 mg/l for systems providing chloramination): see subsections 18-5, 18-6 and 18-9 of Schedule 18.

In our view, if the current levels prove to be "difficult" or "undesirable" in individual situations, then perhaps the Director should be empowered to authorize time-limited variances from the prescribed levels on a case-by-case basis.

CELA RECOMMENDATION #9: The current chlorine residual thresholds prescribed by subsection 17-4 of Schedule 17, and subsection 18-4 of Schedule 18, should be identical and remain intact unless and until the MOE conducts a proper risk assessment which demonstrates that significantly lowering the thresholds will pose negligible risks to public health and safety. If necessary, subsections 17-4 and 18-4 could be amended to empower the Director to issue time-limited variances from the prescribed thresholds on a case-by-case basis.

Issue #10: Follow-Up on Engineering Evaluation Reports

For several classes of drinking water systems, subsection 21-4 of Schedule 21 of O.Reg. 170/03 currently requires the submission of further engineering evaluation reports once every five or ten years, depending on whether the system uses surface water or groundwater.

The proposed amendment to subsection 21-4 would wholly eliminate the need for any subsequent engineering evaluation reports, provided that the intitial report was duly filed with the Director.

CELA does not support the wholesale removal of the obligation to file follow-up engineering evaluation reports. In our view, it is extremely important that the findings and conclusions of the initial report should be periodically reviewed and updated to ensure their accuracy and reliability. This is particular true where there are post-report changes in circumstances (i.e. new conditions affecting the raw water supply), modifications to treatment or distribution equipment, or multiple adverse test results. Therefore, CELA submits that subsection 21-4 should be amended to prescribe criteria or "triggers" when further engineering evaluation reports shall be required.

CELA RECOMMENDATION #10: Subsection 21-4 of Schedule 21 of O.Reg.170/03 should be amended to specify criteria or circumstances that will trigger the need for further

engineering evaluation reports (i.e. changes in raw water supply, equipment modifications, adverse test results, etc.).

Issue #11: POE Treatment vs. Centralized Treatment

The EBR Registry Notice for the proposed amendments to O.Reg.170/03 also solicits public comment on various issues related to the potential use of POE treatment units rather than centralized primary treatment equipment in certain drinking water systems. However, no specific POE proposals have been included in the current package of amendments to O.Reg.170/03.

In principle, CELA agrees that POE treatment may be an effective and efficient alternative for some smaller residential systems, and we strongly urge the Ministry to proactively explore POE as practical option in appropriate circumstances. However, as noted in the EBR Registry notice, there are a number of technical, legal and administrative details that must be resolved in order to proceed with POE-related amendments.

CELA suggests that in order to obtain meaningful feedback on these issues, the MOE should not simply rely upon the current EBR posting. Instead, the MOE should be proactive in this matter and should, among other things, convene a small working group consisting of representatives from the owners and users of small systems which might utilize POE treatment rather than centralized treatment. To help facilitate and focus the working group's discussions, it would also be helpful for the MOE to put on the table its draft ideas in this matter, rather than simply pose a series of open-ended questions. It goes without saying that any concrete amendments emerging from the working group should get wider circulation (i.e. through the EBR and other means) before the MOE finalizes and implements POE-related amendments to O.Reg.170/03.

Alternatively, the Minister should refer this matter to the Advisory Council on Drinking Water Quality and Testing Standards under the SDWA for its advice and recommendations regarding POE treatment. If so, then the Advisory Council could solicit public input and apply its own expertise to develop appropriate POE standards.

CELA RECOMMENDATION #11: For the purposes of developing POE-related amendments for small residential systems, the MOE should establish a small working group consisting of owners and users of such systems. In the alternative, the Minister should refer this matter to the Advisory Council on Drinking Water Quality and Testing Standards under the SDWA.

PART III – CONCLUSIONS AND SUMMARY OF RECOMMENDATIONS

CELA appreciates this opportunity to review and comment upon the proposed amendments to O.Reg.170/03. CELA submits that protection of public health is the paramount objective in this exercise, and economic considerations should not "trump" measures that are reasonably necessary to safeguard Ontarians' drinking water. At the same time, CELA acknowledges that it does not serve the public interest to have regulatory requirements that are so technically obtuse or fiscally onerous that drinking water system owners and operators find it more expedient to not comply with provincial standards. In our view, most of the proposed changes strike an

acceptable balance between protecting public health and ensuring the afforability of testing and treatment requirements under the SDWA.

Nevertheless, there are a number of key issues that require further consideration or revision by the Ministry, as follows:

CELA RECOMMENDATION #1: O.Reg. 170/03 should specify that the section 7 exemption for transported water for non-residential systems does not apply unless the drinking water is collected, transported and delivered in a manner that prevents surface water or other foreign materials from coming into contact with the drinking water.

CELA RECOMMENDATION #2: O.Reg. 170/03 should clarify that for year-round non-municipal residential systems using groundwater under the direct influence of surface water, the owners of such systems must still provide disinfection even if they obtain an exemption from filtration requirements.

CELA RECOMMENDATION #3: Subsection 2-12 of Schedule 2 of O.Reg.170/03 should be amended to specify that a written notice must be signed by a professional engineer or professional geoscientist before a treatment exemption may be obtained.

CELA RECOMMENDATION #4: O.Reg. 170/03 should continue to require large municipal residential systems to undertake daily testing of chlorine residual within distribution systems. For other classes of regulated drinking water systems that wish to undertake less frequent testing, Schedules 7, 8 and 9 of O.Reg.170/03 should prescribe the types of "upset" conditions that will trigger daily testing for chlorine residual until the prescribed condition ceases or is rectified.

CELA RECOMMENDATION #5: Proposed section 9.1 of O.Reg.170/03 should be deleted so that all municipal drinking water systems remain subject to prescribed municipal standards even where such systems are sold or otherwise transferred to other persons, corporations or entities.

CELA RECOMMENDATION #6: The proposed amendment to section 11 of O.Reg. 170/03 should be deleted so that owners of regulated drinking water systems are still required to provide copies of annual reports to the MOE Director.

CELA RECOMMENDATION #7: The proposed amendments to subsection 11-2(1) of Schedule 11 and subsection 12-2(1) of Schedule 12 should be deleted so that the frequency of microbiological testing is not reduced for the classes of drinking water systems subject to Schedules 11 and 12 of O.Reg.170/03.

CELA RECOMMENDATION #8: Subsections 13-2 and 13-4 of O.Reg.170/03 should be amended to prescribe an organics and inorganics testing frequency of three years for small municipal residential systems and year-round non-municipal residential systems. These subsections should be further amended to allow system owners to apply for the Director's permission to undertake less frequent testing where warranted in the circumstances.

CELA RECOMMENDATION #9: The current chlorine residual thresholds prescribed by subsection 17-4 of Schedule 17, and subsection 18-4 of Schedule 18, should be identical and remain intact unless and until the MOE conducts a proper risk assessment which demonstrates that significantly lowering the thresholds will pose negligible risks to public health and safety. If necessary, subsections 17-4 and 18-4 could be amended to empower the Director to issue time-limited variances from the prescribed thresholds on a case-by-case basis.

CELA RECOMMENDATION #10: Subsection 21-4 of Schedule 21 of O.Reg.170/03 should be amended to specify criteria or circumstances that will trigger the need for further engineering evaluation reports (i.e. changes in raw water supply, equipment modifications, adverse test results, etc.).

CELA RECOMMENDATION #11: For the purposes of developing POE-related amendments for small residential systems, the MOE should establish a small working group consisting of owners and users of such systems. In the alternative, the Minister should refer this matter to the Advisory Council on Drinking Water Quality and Testing Standards under the SDWA.

We trust that the foregoing recommendations by CELA will be taken into account as the Ministry finalizes the proposed reforms to O.Reg.170/03. Please contact the undersigned if you have any questions or comments about this matter.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

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Ms. Mary Todorow, ACTO