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

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Dear Mr. Madé:

RE: Response to Supplement Canada Gazette, Part I, Vol. No. (July 3, 2010) – Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans for Toluene Diisocyanates (TDIs)

The Canadian Environmental Law Association (CELA) (www.cela.ca) is submitting the following comments in response to the publication of ***Supplement Canada Gazette, Part I, Vol. No. (July 3, 2010) – Proposed Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Specified Substances on Schedule 1 of the Canadian Environmental Protection Act, 1999, Implicated in the Polyurethane and Other Foam Sector (Except Polystyrene).*** These comments follow up on CELA's participation at the consultation meeting coordinated by Environment Canada on March 22, 2010 in Ottawa to discuss pollution prevention plans (P2) for three toluene diisocyanates (TDIs) with the following CAS numbers: 91-08-7; 584-84-9; and 26471-62-5. Furthermore, these comments urge the Government of Canada to effectively manage, that is, focus on phase out and elimination of TDIs, which have been found to be toxic under the *Canadian Environmental Protection Act, 1999* (*CEPA, 1999*) and addressed under the Chemicals Management Plan.

Overall, the adequacy of the Government's proposal to apply a regulatory instrument to manage TDIs has been discussed over the past year. The non-governmental organizations which submitted comments in response to the scope of the risk management regime considered for TDIs, and again through the consultation process to discuss pollution prevention plans for TDIs, articulated that the preferred management approach for TDIs should focus on a phase out and elimination of use of TDIs. It is our view that the notice for P2 plans which focuses on TDIs demonstrates a partial measure towards the preferred approach for a phase out of TDIs. This proposal should be further strengthened using other regulatory instruments to ensure that the government seeks to reduce, with an eventual phase out of use, of TDIs. This could include but should not be limited to adding the TDIs on the *Prohibition of Specific Toxic Substances Regulations* under *CEPA*, applying specific regulations on TDIs that require the development of action plans for reductions from all sources of TDIs beyond the scope of the proposed

P2 plans, initiate a policy dialogue focused on the identification of safe alternatives to TDIs and conducting alternative assessments on safety of these alternatives.

CELA noted the following gaps in the Notice for Pollution Prevention Plans for TDIs. Also during the plenary of the public consultation on TDIs held on March 22, 2010 CELA articulated these comments. The comments and recommendations outlined below continue to be relevant as the government takes steps to manage TDIs under *CEPA*. We hope that measures to address TDIs aim to fulfill the objectives of pollution prevention under *CEPA,* particularly as it further develops P2 plans for the polyurethane and other foam sector. However, to make significant strides towards this, these comments deserve careful consideration by the government.

1) The absence of proposed targets for reduction or elimination of TDIs and timelines for achieving targets does not ensure overall reduction or elimination of use of TDIs

The P2 plans should seek to promote overall reductions and eventual elimination of TDIs. However, it is uncertain if the proposed notice for P2 plans will indeed contribute to an overall reduction of use of TDIs over time. There are several limitations that will hinder the progress towards the overall reduction or elimination of TDIs, including:

- Focus on managing releases of TDIs to the environment, particularly to air, rather than on sources of TDI
- Absence of process to identify and implement alternatives and substitutes;
- Require P2 plans limited to specific sector(s), the polyurethane and other foam sector industry, rather than all sources of TDIs.

One critical element necessary to make significant progress in avoiding the creation of TDIs and promoting the reduction of levels of TDIs over time is establishing specific targets for reduction and elimination. In addition, a specific timeframe in which these targets should be achieved is also an essential element for the risk management of TDIs. The overall risk management approach for TDIs has not included such targets. Indeed, the main tool for managing TDIs is the proposed P2 plan. The absence of reduction or elimination targets and timelines in the notice significantly weakens its effectiveness.

While the proposal includes specific schedules for preparing P2 plans, completion of implementation of the P2 plans, and the submission of interim reports, the proposal fails to provide an overall timeframe which will determine the overall effects of P2 plans from the polyurethane and other foam sectors to an overall reduction or elimination of TDI. This target should be established to demonstrate how the results of P2 plans is intended to contribute to the overall reduction or elimination of TDIs.

We urge the government to apply a reduction of 75% of TDIs from all sectors, including facilities in the polyurethane and other foam sector within 2 years of implementation of pollution prevention plans. The ultimate goal of these P2 plans should be the eventual phase out of TDIs from these facilities within 3 years. Levels for reduction and eventual elimination along with timelines should be included in the notice for P2 plans.

2) The perpetuation of control measures will not achieve pollution prevention.

While the government website[1] states that Notices do not prescribe the form of P2 plans, the proposed P2 plans for TDIs do very little to support the intent of pollution prevention. Pollution prevention is defined in *CEPA 1999* as "the use of processes, practices, materials, products, substances or energy that avoid or minimize the creation of pollutants and waste and reduce the overall risk to the environment or human health."[2] Various elements of the proposed P2 plans appear to focus on minimization rather than avoidance in the creation of TDIs. The notice does very little to promote the phase out and elimination of TDIs in the polyurethane and other foam sector. There are a number of details in the Notice that tend to shift the focus from real pollution prevention efforts towards only improving control measures that are currently in place. For example, the development of P2 plans focuses on the application of "best environmental techniques" (referred to in section 3 of the notice), defined in the notice but severely limited by the accompanying terms such as "economically achievable." Furthermore, the term "techniques" focuses on plant equipment used in the process as well as the design, lay-out and maintenance of the plant. Since it is expected that the cost associated with potential updates or improvements to available technology will be a significant factor for affected facilities, it is expected that facilities will focus their investment in improving current technology rather than replace technology that may seek to replace the use of TDIs. In other words, the proposal lacks any specificity on changes that may be required in the process to accommodate a switch in feedstock from TDIs to alternatives to TDIs.

In addition, section 3(1)4a of the notice also notes a detection limit of 0.2 ug/m^3 for the purpose of sampling and measuring TDIs in ambient air. The establishment of the detection limit further perpetuates the emphasis of simply seeking controlling releases of TDIs to the environment, instead of phase out and elimination. These detection limits can change over time due to several factors including the sensitivity of available detection technology. The presence of these detection limits would guide facilities to avoid exceedances of the detection limit rather than invest time and resources towards those processes that prevent and avoid the releases, including a shift away from the use of TDIs in the first place.

If the pollution prevention objectives under CEPA are to be fully achieved, we would support a greater focus in the notices on real prevention methods rather than controlling releases.

3) Proposed threshold for requiring P2 plans set too low to require all facilities to consider pollution prevention measures

We noted in the March 2010 consultation and again here that the 100 kg/year use threshold of TDIs is far too high. There is no basis for establishing the threshold at 100 kg/year but it is a use level that has been applied for other activities undertaken by the government to collect data under the CMP. For example, this threshold has been used for surveys conducted under CEPA section 71, the update of selected substances on the Domestic Substances List, and now it is also under discussion for applying

[1] Environment Canada. 2010. "Pollution Prevention (P2) Plans." Accessed 25 August 2010: http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=BC71EA4E-1
[2] Government of Canada. 1999. *Canadian Environmental Protection Act.* Section 3 - Definitions

regulations to address industrial releases of siloxane (D4).[3] By establishing the use/reporting threshold for developing pollution prevention at 100 kg/year, there will be a very limited number of facilities required to meet the proposed notice. Only the bigger facilities producing foams will be captured under this scenario leaving many small to medium size businesses unaccounted for in pollution prevention plans or any management regime for TDIs. During the plenary of the March 2010 consultation, the proposed threshold was estimated to capture ***only*** 2 facilities. No substantial scenario has been presented by government to demonstrate the number and type of facilities that would be required to prepare P2 plans for different threshold levels. It is unclear how many facilities in the polyurethane and other foam sector will not be required to comply with the Notice, and how much these facilities contribute to the overall use, release and disposal of TDI. This information is needed. The current proposed use levels is a significant flaw in the approach as there are many more small to medium sized facilities whose combined usage is considerable and should be required to manage TDIs.

We are deeply concerned that the scope of the plans will not adequately result in the levels of reduction of TDIs needed to protect the environment and human health because the approach will only apply to a few facilities. While 85% of the TDIs are used in the manufacture of flexible polyurethane foam, we do not know how much of the TDIs used by the sector will be reduced by the facilities required to prepare pollution prevention plans. ***We strongly oppose the use of 100 kg/year as the threshold for P2 plans. The use threshold level should be lowered to 20 kg/year to capture more facilities. We also urge the government to require pollution prevention plans for all facilities, without exceptions.*** Such an approach will ensure that all facilities are required to undertake a process that will evaluate plant operations and consider where preventative measures can be undertaken.

4) Opportunities to promote alternatives in a pollution prevention approach too limited

Throughout the CMP implementation process, non-governmental organizations have expressed the need to consider alternatives to replace CEPA toxic substances as an important element in efforts to promote the phase out or prohibition of toxic chemicals. The discussions on alternatives have been limited to date within the scope of the CMP overall as well as in the risk management discussions on TDIs. However, with the proposed notice for P2 plans for TDIs in polyurethane and other foams sector, the opportunities to expand on these efforts are appropriate and timely.

However, we are extremely discouraged that the notice, which is aimed specifically to promote pollution prevention to address TDIs fails to make progress on alternatives; there is currently no explicit focus on the need to identify and consider the adoption of non toxic alternatives to TDIs in the polyurethane and other foam sectors. This is not only a flaw in the notice released for public comments but a limitation within the framework of *CEPA 1999*, which does not include legal obligations to identify and assess safe alternatives for toxic chemicals.

The government should take these opportunities to explore options that would further the goals of pollution prevention and greater commitment to identify alternatives, particularly in P2 plans as would be appropriate. ***Therefore, facilities in the polyurethane and other foam sectors should be required to identify alternatives - chemicals and processes that do not exhibit the toxic properties of TDIs and can be considered safe replacements for TDIs over time. It should be noted further that it would be***

[3] See Environment Canada. July 2010. Consultation Document: Octamethylcyclotetrasiloxane (D4) Chemical Abstracts Service Registry Number 556-67-2. pg. 14, section 5.2.1 (Application and exclusion)

necessary to conduct an alternative assessment for all potential alternatives. The assessment of alternatives would aim to evaluate the inherent hazards of each alternative rather than conduct the usual risk based approach that relies on assessing the exposure and hazard potential of chemicals.

The government should seize opportunities that promote the identification, evaluation and implementation of alternatives to toxic chemicals. Although information on alternatives may not yet be known, a more fulsome focus on alternatives should be considered as they provide opportunities for growth and innovation in the industry that do not rely on TDI for producing foam, particularly polyurethane foam.

5) Consideration of full life cycle absent in P2

The focus of the P2 requirements will be releases to air of TDIs, with specific attention to point and stack releases. In our view, the focus of pollution prevention strategies and the development of P2 plans should consider the full life cycle of the TDIs in polyurethane foams and other foam facilities. Although the assessment results indicated that releases of TDIs to air is the major source of release to the environment, the attempts to promote prevention should not diminish the focus of releases to all environmental media. ***The scope of the notice should be expanded to ensure that all sources of releases of TDIs be evaluated and the best available techniques be applied to avoid the opportunity for facilities to reduce or eliminate releases to air by shifting releases of TDIs to other environmental media, such as water or land.***

Furthermore, consideration of the life cycle approach in the notice has not been fully accounted. As with the assessment approach, there has been little to no consideration of break down products, by-products and metabolites from TDIs that may be the result of the use, release and disposal of TDIs. For TDIs, the range of by-products, breakdown products and metabolites resulting from the use of TDIs are unknown. Some effort should be taken to identify these products because there may be cases where they may be more toxic than TDIs themselves. The Notice does provide the opportunity to add other substances in the scope of the Notice. ***Therefore, we urge the government to consider the expansion of the list of substances to include all breakdown products, by-products and metabolites of TDI that are toxic.***

Finally, the waste stream and disposal methods as a source of reducing TDIs are not a focus of the Notice. However, the TDIs used in the polyurethane and other foam sector end up in the production of various household furniture, automotive upholestry, mattresses, pillows, packaging and carpet underlay. The eventual disposal of products containing TDIs is not addressed under the Notice. ***The government should give further consideration in the Notice to potential TDIs releases in the disposal of household and automotive products containing TDIs.***

6) Public reporting on implementation progress required

Details of P2 plans are not required to be disclosed to the public but declarations on the preparation and implementation of the plans are required under *CEPA*. The lack of access to the P2 plans continues to limit transparency to the public, which has been consistently noted by NGOs. However, the public knowledge on the impacts of P2 plans in achieving the objectives of *CEPA* on pollution prevention or the risk management objectives for toxic chemicals like TDIs remains limited. For plants required to

comply with the Notice for P2 plans, their public accountability on their progress to meet their obligations should be acknowledged and supported. This is especially so for those plants located in close proximity to neighbourhoods. There is particular concern that the Notice does not provide any provisions for communicating with the public, with particular emphasis on the neighbouring community, during situations where there the releases of TDIs has exceeded the proposed 0.2 ug/m^3 in a 24hr time period or the implications from a regulatory perspective for non-compliance.

Public knowledge on progress relies on adequate reporting to the public on progress of implementation efforts. However, the Notice requires interim reports to be submitted to the Minister on three occasions but there is a lack of detail on the type of report available to the public. This gap should be addressed. ***Public reporting should be made more explicit in the Notice. Furthermore, the details of reporting to the public on achieving pollution prevention should include the levels of reductions achieved by facilities, the methods applied to achieve reductions, comparison of results from previous years; and for facilities that do not achieve reductions of TDIs provide rationale and action plan for making reductions. These results should be released on an annual basis for public comments.***

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