



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

ecojustice
formerly Sierra Legal

NGO Comments on Government's Proposal to "take no further action" on 754 Low Ecological Concern Substances as published in the Canada Gazette Part 1, Volume 41, Number 25

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Prepared by:

Canadian Environmental Law Association
130 Spadina Avenue, Suite 301
Toronto, ON M5V 2L4
Telephone: (416) 960-2284
Fax: 416-960-9392
Web site: www.cela.ca
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Ecojustice, formerly Sierra Legal
30 St. Patrick Street, Suite 900
Toronto, ON M5T 3A3
Telephone: (416) 368-7533
Fax: (416) 363-2746
Web site: www.sierralegal.org

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Written by:

Fe de Leon, Researcher, Canadian Environmental Law Association
Elaine Macdonald, Senior Scientist, Ecojustice Canada, formerly Sierra Legal
Jessica Ginsburg, Special Projects Counsel, Canadian Environmental Law Association

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1. Introduction

The Canadian Environmental Law Association (CELA) and Ecojustice Canada, formerly Sierra Legal are submitting the following comments in response to the *Publication after screening assessments of 754 substances on the Domestic Substances List (subsection 77 (1) of the Canadian Environmental Protection Act, 1999)* released in the Canada Gazette Part 1, Volume 41, Number 25, Pages 1735-1762 dated June 23, 2007.

CELA is a public interest law group founded in 1970 for the purposes of using and improving laws to protect public health and the environment. Funded as a legal aid clinic specializing in environmental law, CELA represents individuals and citizens' groups in the courts and before tribunals on a wide variety of environmental matters. In addition, CELA staff members are involved in various initiatives related to law reform, public education, and community organization.

Ecojustice Canada, formerly Sierra Legal, is an environmental law charity that acts on behalf of individuals, community groups and environmental organizations on a wide range of environmental matters including the right of Canadians to a healthy environment. Established in 1990, Ecojustice uses law and science to create lasting solutions to Canada's environmental problems by winning landmark cases and setting powerful precedents. Ecojustice also works to ensure environmental laws are fully implemented, enforced and reformed if needed.

According to the categorization results for 23,000 substances on the Domestic Substances List (DSL) under the *Canadian Environmental Protection Act (CEPA)*, the government identified approximately 4300 substances as meeting the categorization criteria set out under s. 73(1)(b) which states:

*The Ministers shall, ... identify the substances on the List that, in their opinion and on the basis of available information, ...
b) are persistent or bioaccumulative in accordance with the regulations, and inherently toxic to human beings or to non-human organisms, as determined by laboratory or other studies.¹*

Out of these 4300 substances, approximately 1,100 were characterized as being "substances of lower ecological concern." The government determined that there was a low likelihood of exposure to these substances due to the low volume data that had been gathered.

The government then applied a rapid screening tool to identify those "low concern" substances that required no additional screening assessment in order to determine whether or not they were toxic or capable or becoming toxic. Following the use of the rapid screening tools, 754 of the 1,100 low concern substances were deemed not to meet the criterion for toxicity as set out in section 64(a), and thus deemed not to require any further action. It is our organizations' view that the government's rapid screening tools do not follow a precautionary approach, a principle

¹ *Canadian Environmental Protection Act, s. 73(1)*

entrenched in CEPA 1999. Furthermore, we are of the opinion that, given the large number of substances requiring screening assessment following the categorization exercise, and given the limited resources available with which to complete this task, the government is currently prioritizing its assessments in an inappropriate manner.

The rapid screening process assesses the likelihood of meeting the criterion for environmental toxicity as set out in paragraph s. 64 (a) of CEPA 1999, but it does not address the likelihood of meeting the criteria set out in s. 64 (b) and (c), the latter of which includes toxicity to human health. Presumably, this limitation is due to the fact that these substances were identified as being PiT (eco) or BiT (eco)² through the categorization process. However, categorization is not equivalent to assessment, and once a substance has been found to meet the categorization criteria under section 73, section 74 requires an assessment of toxicity on the basis of all criteria listed within s. 64 and not simply those components of toxicity that were suggested through the categorization findings.

The proposal to take no further action with respect to 754 substances is based on a supposed finding that "these substances do not meet the criteria set out in s. 64 of the Act"³ Such a finding is at best premature and at worst incorrect. Clearly, the rapid screening process is only intended to be used with respect to s. 64 (a) of CEPA 1999, and it does not screen if substances might be toxic according to s. 64 (b) or (c) of CEPA 1999. Thus, using the rapid screening approach to make determinations of toxicity on the basis of s. 64 as a whole would be an error of law in our opinion.

CELA and Ecojustice have reviewed the list of 754 substances identified as requiring no further action to highlight gaps in the government's approach. Based on our review of the results and the comments provided below, our organizations strongly urge the federal government follow a precautionary approach by reversing its the decision to "to take no further action" on these substances. Rather than concluding at this early stage that these substances require "no further action", the government should pursue an approach that assesses all criteria of s. 64 of CEPA 1999. Such an approach should include the establishment of interim risk management strategies aimed at the continued reductions of these substances to ensure that exposure is minimized, enhanced monitoring regimes, and the timely assessment of both ecological and health data according to CEPA.

RECOMMENDATION: CELA and Ecojustice strongly urge the federal government follow a precautionary approach relating to these substances by reversing its' the decision to "take no further action" on these substances. These substances require an approach that assesses all aspects of s. 64 of CEPA 1999. These substances should be flagged for interim risk management strategies aimed at continued reduction to ensure that exposure is minimized, enhanced monitoring regimes, and the timely assessment of both ecological and health data according to CEPA.

² Persistent and inherently toxic to the environment [PiT(eco)], or Bioaccumulative and inherently toxic to the environment [BiT(eco)]

³ Canada Gazette. Vol. 141, No. 25 — June 23, 2007, p. 1735

2. Weaknesses in government approach on "low concern" substances

2.1 Approach fails to follow a precautionary approach as required under CEPA

Under the CEPA Preamble, the precautionary principle is noted in the following manner:

Whereas the Government of Canada is committed to implementing the precautionary principle that, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation;

Also under s.76.1 of CEPA, it states the following:

When the Ministers are conducting and interpreting the results of
(a) *a screening assessment under Section 74...*

the Minister shall apply a weight of evidence approach and the precautionary principle.

In light of the results of the rapid screening approach, we are pleased to see that 312 substances were identified as requiring further action by government. In this regard, the rapid screening tool was appropriately applied to highlight those substances that should be assigned a higher priority ranking. Using the rapid screening tools in this manner is more consistent with a precautionary approach, given the fact that the original categorization decisions were based on 20 year old data for volume and range of uses.

In contrast, the rapid screening tools were not applied in a precautionary manner in reaching the conclusion that "no further action" was required for 754 substances. Rather, the precautionary approach, which is premised on requiring government action in the absence of sufficient scientific evidence, is completely ignored. In our view, the government's effort to review data from other jurisdictions on volume and range of uses is not sufficiently based in science. Nor does such an inquiry adequately demonstrate that these substances do not pose a threat to the ecosystem based on low volume data alone. The government's approach neglects the importance of gathering toxicity data on non-human organisms as well as human populations. It is our view that these substances should remain on the government's agenda for action until updated data on volume and uses are gathered and evidence is available demonstrating that the toxicity properties of these substances do not pose a threat to the ecosystem, wildlife populations, or human populations.

The NGO submission dated April 5th2007 responding to the government's proposed approach on rapid screening outlined several options to obtain updated data that should be considered. In brief, efforts should include:

- conducting a survey under CEPA s.71 to update the 20 year old data on volume and to identify uses at source and downstream, location of facilities using these substances, current management activities and additional toxicity data for human and non human organisms; and
- requiring annual monitoring of substances through, but not limited to, the National Pollutant Release Inventory and the DSL update. At the current time, the NPRI program tracks over 300 substances but does not include all substances identified through categorization. The government's effort to update the DSL is in its initial developmental phase with no public involvement to date.

RECOMMENDATION: The decision to "take no further action" on 754 substances is inconsistent with the precautionary approach. These substances should be left on the list for future assessment, and interim management strategies should be put in place until such time as it can be demonstrated that these substances do not pose harm to the environment, non-human and human organisms through updated data on volume, range of uses, location and toxicity.

RECOMMENDATION: The use of the rapid screening approach to identify 312 substances for further action is consistent with the precautionary approach. We support the need to assign a higher priority to these substances.

2.2 Approach fails to assess "low concern" substances with respect to all of the criteria set out in section 64 of CEPA 1999.

The document entitled "Technical Approach for "Rapid Screening" of Substances of Lower Ecological Concern published by the Existing Substance Division of Environment Canada"⁴ ("rapid screening tool") referred to in the notice states the following regarding the approach:

Recognizing that the approach is based on the use of conservative assumptions and readily available data, it is applied only to decide either that the substance requires further assessment (beyond the rapid screening approach), or that the substance is unlikely to meet the criterion set out in paragraph 64(a) of CEPA 1999, which states that a substance is considered "toxic" if it is entering or may enter the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity.

However the notice proposes that these substances do not meet any of the criteria set out in s. 64 of the Act⁵. Section 64 of CEPA 1999 is copied below:

64. *For the purposes of this Part and Part 6, except where the expression "inherently toxic" appears, a substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that*

⁴available at <http://www.ec.gc.ca/CEPARRegistry/documents/subs_list/Subs_TechApp/RapidScreening_TOC.cfm>

⁵ Canada Gazette. Vol. 141, No. 25 — June 23, 2007

(a) have or may have an immediate or long-term harmful effect on the environment or its biological diversity;

(b) constitute or may constitute a danger to the environment on which life depends;
or

(c) constitute or may constitute a danger in Canada to human life or health.

Given that the rapid screening tools' utility is limited to assessing toxicity under s. 64(a) of CEPA 1999, no overall conclusion on toxicity can be reached through the use of these tools. It is our contention that the rapid screening tools should be used only to re-prioritize substances of concern and provide added information with respect to s. 64 (a) of CEPA 1999. Results from these tools should not, and can not, be used to draw conclusions regarding s. 64 (b) or (c) of CEPA 1999.

Therefore, the proposal that states that these 754 substances do not meet any of the criteria set out in s. 64 CEPA 1999 is at best premature, and at worst, incorrect. As such, Environment Canada and Health Canada should reverse their decision to "take no further action" on these substances while they complete more thorough assessments.

RECOMMENDATION: The rapid screening tool can only be used to address substances of low ecological concern under s. 64 (a) of CEPA 1999. Results from the rapid screenings of substances should not, and can not, be used to draw conclusions regarding s. 64 (b) or (c) of CEPA 1999. As such, Environment Canada and Health Canada should reverse their decision to "take no further action" on these substances while they complete more thorough assessments.

2.3 Rapid screening assessments lacks consideration of human health toxicity data

In keeping with the precautionary approach and the need to assess substances with respect to s. 64 (b) and (c) of CEPA 1999 in addition to s. 64 (a), the lack of consideration of human toxicity by government is a significant gap. In the NGO submission dated April 5th, 2007, the lack of health toxicity data was highlighted as an issue of concern. The government's response dated June 18th, 2007 was wholly inadequate. It stated:

Based on information available at this time, the risk is likely to be low. Should new information come forward, the human health endpoints will be revisited just the same as the ecological endpoints would be. This is part of our commitment to monitoring results, measuring performance of actions, and adjusting when warranted. (page 2)

The government's response lacks any specific details on how and when such information will be gathered or what information is being relied upon in providing such a statement.

The government's failure to provide human health toxicity data in the results released June 23rd is unacceptable. All available data on human health impacts should be disclosed as part of these

assessments in order to demonstrate that the government approach is consistent with the precautionary principle and other CEPA obligations. In order for the public to provide well-informed comments, the full range of information gathered by the government should be made available. Such an approach would promote transparency and government accountability in the consultation process.

In this regard, it is our position that the absence of human toxicity data in the rapid screening results released in the Canada Gazette on June 23rd demonstrates flawed and incomplete assessments. The absence of either ecological or human health data should be deemed sufficient to invalidate the assessment. By neglecting to review or collect human health toxicity data, the approach may failure to identify some substances of concern for further government action.

Given the absence of human health data, CELA and Ecojustice—with technical advice from Dr. Rich Purdy, independent toxicologist—undertook to review the list of 754 substances identified by government for “no further action” in order to highlight substances that may be suspected of being estrogenic, carcinogenic or endocrine disrupters. The results of this review are available in Appendix A of this submission. While this review was not intended to be comprehensive, the substances identified have potential impacts to human health and thus demonstrate the flawed nature of the rapid screening tools. At a minimum, the substances identified in Appendix A should not be “set aside” as part of the 754 substances and should be left on the list of priority substances for further action.

In cases where human health or ecological toxicity data may not be available to complete the assessments, the government has several options under CEPA to require such information from industrial facilities, including the application of surveys under s. 71.

Further preliminary research on the chemicals identified by Dr. Purdy uncovered some serious health and ecological impacts associated with some of the substances the government is proposing to set aside for no further action. For example, 2,3,4,6 tetrachlorophenol (CAS No. 58-90-2) is a polychlorophenol which, as a group, has been classified by International Agency for Research of Cancer (IARC) as possibly carcinogenic to humans. In addition, polychlorophenols are known to be very toxic to fish and to bioaccumulate in fish.^{6, 7} Benzene, 2-isocyanato-1,3-bis(1-methylethyl)- (CAS No. 28178-42-9) is a suspected gastrointestinal, liver and respiratory toxicant.⁸ Dibenzo[b,def]chrysene-7,14-dione (CAS No. 128-66-5) is known to be carcinogenic to animals but has not yet been classified with respect to human carcinogenicity. Similarly, while insufficient data is available on benzyl bromide (CAS No. 100-39-0) a very similar substances, benzyl chloride, is considered carcinogenic^{9, 10} and is on California's Proposition 65 list of known carcinogens.¹¹

⁶ International Program on Chemical Safety <<http://www.inchem.org/documents/icsc/icsc/eics1089.html>>

⁷ Toxicological Profile of Chlorophenols. US Department of Health. Agency for Toxic Substances and Disease Registry. p.152.and 162 available at <http://www.atsdr.cdc.gov/toxprofiles/tp107.pdf>

⁸ Occupational Safety and Health's Registry of Toxic Effects of Chemical Substances according to source www.scorecard.org

⁹ International Program on Chemical Safety <http://www.inchem.org/documents/iarc/vol29/benzylchloride.html>

¹⁰ International Labour Organization. International Occupational Health and Safety Information Center. http://www.ilo.org/public/english/protection/safework/cis/products/icsc/dtasht/_icsc12/icsc1225.htm

¹¹ See for full copy of Prop 65 chemicals at <http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html>

RECOMMENDATION: The absence of human health toxicity data demonstrates the flawed nature of the rapid screening approach. All screening assessments should include both human health data and ecological data to constitute valid and adequate assessments. As such, the decision to take "no further action" on 754 substances should be considered invalid under CEPA. The lack of specific data required to complete the assessments should trigger government to collect this information from industrial facilities, including through the use of surveys under CEPA within a specified timeframe to be determined by the government.

RECOMMENDATION: All available data on human health impacts should be disclosed as part of these assessments so that the public is fully informed. Such an approach would promote transparency in the consultation process.

RECOMMENDATION: At minimum, the substances identified in Appendix A should not be included on the list of substances for "no further action" and should be left on the list of priority substances for further action by the government.

2.4 Limited government resources should be directed to medium priority substances

Environmental organizations have indicated repeatedly, through meetings and submissions, that the government's focus on low concern substances is a misuse of limited government resources with approximately 4300 substances being identified for action under categorization. When the government announced the Chemicals Management Plan (CMP) in December 2006, it failed to set an agenda for approximately 2300 of the 4300 substances identified as meeting the criteria for categorization. The 2300 substances were considered medium priorities. In contrast, the rapid screening approach was quickly proposed for the low ecological concern substances. Despite concerns raised by public interest organizations that a comprehensive plan was needed on *all* substances, the government's focus on applying the rapid screening approach to low concern substances demonstrates its eagerness to simply reduce through whatever means possible the number of substances to be addressed. The piecemeal nature of the CMP has created significant confusion regarding government's focus and underlying objectives in managing toxic substances in Canada.

The government's choice to direct limited resources towards the low concern substances is questionable and may have long term implications to public health.

Throughout the consultation on the DSL categorization, there was significant debate between industry and environmental stakeholders on whether substances considered low concern should be left on the final list of substances meeting the categorization criteria. Based on the requirements of categorization under CEPA, public interest groups (including CELA) argued that any and all substances meeting the categorization criteria must be identified and released by government in the final list of results. Appropriately, those substances considered to be of low ecological concern were indeed included in the final results of categorization as announced in December 2006. However, the government immediately publicized the use of a rapid screening

approach to address low concern substances and eliminate them from the list. The application of the rapid screening tool to low concern substances appears to favour the interests of industry in ensuring that little attention is given to these substances. The public is given very little support to adequately challenge the validity of these results.

At this time, it is our continued position that low concern substances, as with high- and medium-priority substances, should be assessed in a manner that ensures the protection of human health and environment. The effectiveness of these assessments will depend on whether the government requires increased industry responsibility and accountability under CEPA.

RECOMMENDATION: The government should release its long-term and interim plan to assess and manage medium priority substances and identify the resources that will be made available to undertake this work.

2.5 Require up-to-date data for low concern substances

The government's approach to low concern substances is flawed, mainly due to the lack of recent data available for range of use and quantity of substances present in Canada. CELA and Ecojustice propose that the government's decision on the 754 substances be reserved until the data have been updated and reviewed, including human health toxicity data, use and volume data.

To achieve this, the government should strongly consider using the following tools to address data gaps on low concern substances:

1. Apply the Significant New Activity (SNAC) notices under the *New Substances Notification Regulations* (NSN) of CEPA— The government has proposed this regime for approximately 200-plus high priority substances under the CMP. We urge that a similar approach be undertaken with these low concern substances to ensure that the government is notified of changes to the current status of these substances. Furthermore, given that these substances have been identified through categorization as meeting the criteria outlined in CEPA, these substances should be flagged differently than other substances being routed through the SNAC process. Accordingly, notifiers interested in these substances should be required to fulfill the data requirements equivalent to the highest volume schedule under the NSN, and provide additional toxicity data (i.e., neurodevelopmental, endocrine disruptions and chronic toxicity). NGOs have also recommended this approach for those high priority substances under the CMP that the government believes are not currently in use in Canada.¹²
2. Conduct surveys under s. 71 of CEPA – the use of surveys has been discussed in previous submissions¹³ by NGOs on categorization and on the adequacy of assessments conducted

¹² See CELA letter to Minister of Environment and Minister of Health on Categorization Deadline under the *Canadian Environmental Protection Act, 1999* dated September 15, 2006 at www.cela.ca/uploads/f8e04c51a8e04041f6f7faa046b03a7c/546_DSL_CEPA.pdf, publication number 546

¹³ Note: CELA and other NGOs have provided comments on surveys conducted by government under the categorization process. Comments outlined in this letter are relevant to the implementation of the CMP.

on low concern substances (see earlier sections of this submission). To date, the use of surveys by government under CEPA has been very limited and narrow in scope.

The data gap that exists for many low concern substances offers an ideal opportunity for s. 71 surveys to be used to inform government's efforts to set priorities under the CMP. Should surveys be conducted, data collection should focus on volume, use, location of facilities, and current management regimes.

3. Update NPRI to improve tracking on releases and transfer data on these substances— Various discussions are now underway by government, and in particular the NPRI working group, to re-scope the NPRI to incorporate the results of categorization. The general public has not been informed of the results of these discussions. CELA, Great Lakes United and STORM provided substantive comments on the importance of adding substances identified through categorization.¹⁴ The low concern substances should not be excluded from such discussions and should be added to the NPRI in the near future.

To obtain the most up-to-date information on a specific substance, all three tools should be utilized. In so doing, the government would promote improved accountability from affected industries and greater transparency to the public.

Finally, the government announcement in December 2006 highlighted the need for a cyclical update of the DSL. There have been no further details provided on how such an update could be undertaken, who would participate in the development or implementation of the update, whether such an update would be part of a new inventory, and finally, the scope of such an update. Our organization views this as an important topic for public dialogue. As an initial comment, we feel this initiative should include a comprehensive exploration of the DSL's relationship with existing inventories such as the National Pollutant Release Inventory.

RECOMMENDATION: CELA and Ecojustice propose that the government's decision on the 754 substances be reserved until the data have been updated, including human health toxicity data, use and volume data.

RECOMMENDATION: To obtain the most up-to-date information on a specific substance, all three tools should be utilized (i.e., SNACs, surveys under s. 71, and update NPRI). In so doing, the government would promote improved accountability from affected industries and greater transparency to the public.

See: Letter to Environment Canada regarding a Domestic Substances List (DSL) categorization survey (March 16, 2006) http://cela.ca/uploads/f8e04c51a8e04041f6f7faa046b03a7c/537EC_surveys.pdf, CELA publication #537

¹⁴ CELA, Great Lakes United and STORM Coalition Inc.. April 12, 2007) Utilization of the National Pollutant Release Inventory for Substances under Canada's Chemicals Management Plan at http://cela.ca/uploads/f8e04c51a8e04041f6f7faa046b03a7c/579NPRI_DSL.pdf, CELA publication 579

2.6 Expanding the scope of assessments on substances

2.6.1 Incorporate cumulative effects in ecological and health assessments

Over the years, public interest groups have identified a number of limitations to the current risk assessment approach on substances. Limitations in risk assessments include the following:

- responsibility of industry in providing toxicity data and other information in a timely manner is limited in the current Canadian regime. The government is responsible for demonstrating level of harm or risk to human population and environment.
- the length of time to complete full assessments is significant. Generally, no efforts to minimize exposure of the human population and environment to substances while assessments are completed.
- Generally, risk assessments results are based on available data.
- The government should shift the responsibility to industry to provide data that demonstrate the safety of its substances in a timely manner before approval for use in the market is granted.
- most assessments are done on a chemical by chemical approach as oppose to class approach to substances;
- safety margins establish do not effectively consider the exposure to children and other vulnerable subpopulations;
- absence of consideration on available safe alternatives;
- the absence of consideration of cumulative effects of substances demonstrating similar mechanisms (e.g. class approach) or similar hazardous impacts (e.g. carcinogens, endocrine disrupters, neurodevelopmental, reproductive and developmental, respiratory, etc.).
- generally, the impacts of complex mixtures in assessments are not addressed in assessments.

Public interest organizations, including CELA and Ecojustice have provided substantive comments on the limitations of risk assessments on substances over the past few decades through consultations and legislative reviews of the *Canadian Environmental Protection Act* and *Pesticides Control Products Act*. In May 2007, the House of Commons Standing Committee on Environment and Sustainable Development released its report on the review of the *Canadian Environmental Protection Act*.¹⁵ Among its many recommendations, the Committee made several recommendations aimed at improving how assessments are conducted. The government's response to this report is expected to be released in September 2007.

We would like to highlight two aspects of assessments that should be adopted in the government's approach to assessments on substances.

¹⁵ Report of the Standing Committee on Environment and Sustainable Development. *The Canadian Environmental Protection Act, 1999 – Five-Year Review: Closing the Gaps*. April 2007. 39th Parliament, 1st Session

See following Standing Committee recommendations: 13,17, 23, 26 as examples for addressing limitations of assessments

a. Conduct cumulative effects of substances based on similar mechanisms – consideration of class of substances

Substances considered low concern as well as other substances expected to undergo assessment should include a review of cumulative effects of substances with similar structure and modes of activity. There is ongoing dialogue that the current assessment on substances is inefficient and leads to an underestimate of impact to human health and environment because the focus is on a chemical by chemical basis.

However, over the past decade the work of various jurisdictions demonstrated the need to conduct cumulative risk assessments. This approach considers the additive effects of all substances in a class of substances, not only from the exposure of a single substance. The US Environmental Protection Agency has published guidance for performing such risk assessments. Health Canada's Pest Management Regulatory Agency understands the need for cumulative risk assessment and performs them. Environment Canada has undertaken a number of assessments that have taken this approach. For example, its assessment of polychlorinated dibenzodioxins and polychlorinated dibenzofurans as a structural class was conducted in the 1990s and determined them to have immediate and long-term harmful effects on the environment. The structural class was deemed CEPA toxic. Such an approach should be furthered in the work expected on the results of categorization.¹⁶

For purposes of demonstrating the need to incorporate a cumulative assessment on substances belonging to the same class, Appendix B identifies 20 substances that contain bisphenol A or may degrade into bisphenol A by-products. It is our view that the government include these substances in its current efforts under the industry challenge to assess bisphenol A.

RECOMMENDATION: Appendix B identifies some 20 substances that contain bisphenol A or may degrade into bisphenol A by-products. It is our view that the government include these substances in its current efforts under the industry challenge to assess bisphenol A.

b. Conduct cumulative effects of substances based on specific hazardous endpoints

Similar to the points made in the previous section, assessments should also consider cumulative effects of substances found to have similar health endpoints such as carcinogens. If the government considered the impacts of each of these substances individually, the impacts may be insignificant. However, if considered in a cumulative manner along with other known or suspected cancer causing substances, the impact to human health and the environment may be significant.

While a class approach to substances have been taken in the past by Environment Canada, the current approach to conduct cumulative assessments on substances as conducted by Environment Canada and Health Canada are inconsistent at best. Furthermore, no assessments that consider the cumulative effects of a specific hazardous endpoint have been undertaken by either department. By ignoring the cumulative approach they are missing many classes of substances that are acting in concert. For example in the list of 754 proposed to be eliminated from further

¹⁶ Personal communication with Rich Purdy, toxicologist on August 27, 2007

evaluation are more than 100 substances that structurally similar to substances that bind to the estrogen binding site (Appendix A). In addition there are more than 1400 on the DSL that have similar structures. All of these substances should be evaluated together because the public and wildlife are potentially exposed to them all. There might not be enough of any one to cause harm or even 10 together but harm is much more likely when we are exposed to hundreds or thousands estrogen mimics.

It might be argued that the science of performing cumulative risk assessments is not mature enough to use. However, if CEPA is truly to follow a precautionary principle, the incorporation of cumulative effect in assessment should be mandatory.¹⁷

RECOMMENDATION: Substances identified in Appendix A should be assessed for its cumulative effects as potentially carcinogenic or endocrine disrupting substances.

3. Additional background on rapid screening approach

Over the past year and a half, several environmental organizations, including CELA have provided substantive comments expressing their concerns with the use of the rapid screening approach. These concerns are outlined in the following submissions:

1) Letter from CELA titled, Categorization of DSL substances under CEPA 1999: Application of rapid screening tools for categorized substances of low concern (July 6, 2006)

2) CELA, World Wildlife Fund Canada and York Environmental Alliance, Categorization of DSL substances under CEPA 1999: Application of rapid screening tools for categorized substances of low ecological concern (April 5, 2007)

http://cela.ca/uploads/f8e04c51a8e04041f6f7faa046b03a7c/571_CEN.pdf

The comments and recommendations submitted in these correspondences remain relevant to the results obtained by applying the rapid screening tool to over 1050 substances. To be brief, the following recommendations/comments are highlighted from the NGO submission dated April 5, 2007. The government response to the NGO submission was dated June 18, 2007. The response by government to the following NGO recommendations listed below were addressed inadequately. Therefore, these recommendations (Table 1) remain very relevant to this submission.

¹⁷ Personal communication with Dr, Rich Purdy, toxicologist on August 27th, 2007

Table 1: Selected recommendations from NGO submission dated April 5, 2007

Recommendation: We urge the government not to apply the rapid screening tool for "setting aside" substances considered of low ecological concerns and deeming that no further work is required. Rather, the application of the rapid screening tool should be focused on identifying substances that require elevation to higher priority levels for further work.

Recommendation: Related to the concerns notes below, we strongly reject the suggestion that the rapid screening approach could be applied to higher priority substances.

Recommendation: Since the quantity data available for DSL substances is 20 years old, it is our view that industry should provide updated information on volumes in commerce for each of the 1200 substances. The application of surveys for this purpose would be both appropriate and timely.

Recommendation: We recommend that further efforts be undertaken by government to gather data on quantities in use and exposure. Such efforts should include expansion and enhancement of the National Pollutant Release Inventory (NPRI) program to track releases and transfer of all substances identified through the categorization process.

Recommendation: Initially, government should also collect data on quantity and range of use for all DSL substances through surveys under section 71 of CEPA. Mandatory updates of such information should be required through Section 70 of CEPA. To facilitate this recommendation, we propose that a new subsection be added to CEPA section 70, that requires proponents to supply biennial information on their DSL substances' type and quantity of use.

Recommendation: Since the government's prioritization of work on DSL chemicals is strongly linked to the quantities in commerce, it is imperative that EC obtain accurate quantity in use data prior to "setting aside" any of these "low concern" substances.

Recommendation: If a substance is flagged by a mechanical filter, it should automatically receive a higher prioritization and more in-depth assessment.

Recommendation: Before proceeding further with use of the RAIDAR model, government should require industry to provide robust experimental data on the chemical and physical properties of the 1200 substances identified as candidates for the rapid screening tool, as this data is critical for proper functioning of the RAIDAR model.

Recommendation: With the exception of flagging substances as higher priorities, we recommend that no action be taken at this time on the 1200 substances considered to be of low ecological concern. These substances should be retained on the categorization list until work is completed on the high and medium priority substances.

Comments from page 5-6 of submission dated April 5, 2007:

- The Technical document further states: "Environment Canada recognizes that there is the potential for a limited number of cases where some level of risk is not identified, but is confident that other "feeders" will capture any significant cases." What is the basis for this confidence? How will the government review and respond to information submitted through the other "feeders" outlined in the *Canadian Environmental Protection Act*?
- Over the past year, NGOs have asked both EC and HC to articulate a priority-setting process for substances identified through other *CEPA* feeders (i.e., public nomination, emerging science, and decisions by other jurisdictions) relative to the priorities set for categorized-in substances. NGOs had hoped to see details on how and when substances

identified through these other streams would be addressed in light of the concurrent categorization process. The process and criteria for establishing these priorities should be transparent; however, we have yet to receive feedback of this nature from either department.

- EC has not discussed how human health toxicity data will be reviewed at the screening assessment phase for substances that are low priority. Despite the fact that Health Canada may not identify these substances as high priorities, there is nonetheless a need to consider toxicity data and exposure data from human health together with ecological data. For example, if a substance has been found to be inherently toxic to humans, this would suggest that additional attention is required at the assessment phase. We would like to see an assessment scheme that better integrates the consideration of available human health and ecological data.

Based on the level of response by government in its June 18th, 2007 correspondence to NGOs concerns', NGO input and recommendations have not been successfully adopted in the government's approach to substances of lower ecological concern. Therefore, in the context of the results of rapid screening approach, we are resubmitting the above recommendations to seek additional details on the government approach to the lower concern substances under CEPA. Specifically, the following are integral elements to the government's approach:

- elements of priority setting agenda for assessment and interim management strategies for medium and lower priority substances;
- explicit explanation on the government's decision making mechanisms to consider data submitted on substances under the seven feeders of CEPA;
- The process for development and updating of relevant inventories on substances, including the proposed cyclical update of the DSL to update volume and range of use data and the National Pollutant Release Inventory;
- Demonstration on how substances (if applicable) which have been identified as requiring no further action under the rapid screening approach will be captured as "part of a broader assessment of the family related substances at a later date" (page 2 of government response dated June 18th, 2007).

4. Conclusions

The use of the rapid screening tools to identify 754 low priority substances for "no further action" is inappropriate and inconsistent with the government's obligations under CEPA. It is inappropriate due to the fact that these tools were designed as a means of highlighting those low concern substances that required a higher level of priority action. It is inconsistent with CEPA in that it 1) fails to apply the precautionary principle, and 2) fails to assess human health toxicity under s. 64.

Government has many tools at its disposal with which to move forward with its assessment of these 754 substances. While we feel that government resources should instead be directed at high- and medium-priority substances at this time, we recognize that interim risk management strategies may be required for this low priority grouping. In order to proceed according to the precautionary principle, the government should reverse its decision to "take no further action" on these substances until additional toxicity data can be gathered from industry. The government should require industry to demonstrate that these substances do not pose harm through the provision of updated information on volume, range of uses, location and toxicity. In order to collect this information, the government should consider using a range of CEPA tools, including

those set out in s. 71. All data, particularly data that pertains to human health impacts, should be made publicly available in a timely manner.

Until such time as a full, informed assessment of both ecological and human health toxicity can be performed, no final decision on these substances should be made.

Thank you for providing us with an opportunity to comment on this proposal. If you have any questions or require additional information, please do not hesitate to contact us.

For additional information, contact:

Fe de Leon
Researcher
Canadian Environmental Law Association
416-960-2284 ext. 223

Elaine Macdonald
Senior Scientist
Ecojustice Canada, formerly Sierra Legal
416-368-7533 ext. 27

Appendix A - Examples of substances from the list of 754 substances identified as requiring "no further action" by government that are probable carcinogens, estrogenic and teratogenic substances

CAS Number	NAME
58-90-2	Phenol, 2,3,4,6-tetrachloro-
101-75-7	Benzenamine, N-phenyl-4-(phenylazo)-
100-39-0	Benzene, (bromomethyl)-
117-97-5	Benzenethiol, pentachloro-, zinc salt
128-66-5	Dibenzo[b,def]chrysene-7,14-dione
139-60-6	1,4-Benzenediamine, N,N'-bis(1-ethyl-3-methylpentyl)-
366-29-0	[1,1'-Biphenyl]-4,4'-diamine, N,N,N',N'-tetramethyl-
992-59-6	1-Naphthalenesulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-amino-, disodium salt
2150-54-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4,5-dihydroxy-, tetrasodium salt
2429-71-2	1-Naphthalenesulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-hydroxy-, disodium salt
2829-42-7	Benzoic acid, 3,3'-[carbonylbis(imino-4,1-phenyleneazo)]bis[6-hydroxy-, disodium salt
2870-32-8	Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[(4-ethoxyphenyl)azo]-, disodium salt
4608-12-2	Phenazinium, 3-(dimethylamino)-7-[[4-(dimethylamino)phenyl]azo]-5-phenyl-, chloride
4702-64-1	9,10-Anthracenedione, 4,8-diamino-1,5-dihydroxy-2-(4-methoxyphenyl)-
6262-07-3	2-Naphthalenesulfonic acid, 6-hydroxy-5-[[4-[(phenylamino)-3-sulfophenyl]azo]-1-naphthalenyl]azo]-, disodium salt
6406-87-7	2-Naphthalenesulfonic acid, 5-[(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo]-8-[[4-(phenylazo)-7-sulfo-1-naphthalenyl]azo]-, trisodium salt
6420-22-0	2,7-Naphthalenedisulfonic acid, 5-amino-3-[[4'-[(6-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo]-3,3'-dimethyl[1,1'-biphenyl]-4-yl]azo]-4-hydroxy-, trisodium salt
6449-35-0	1-Naphthalenesulfonic acid, 3-[[4'-[(6-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]-4-hydroxy-, disodium salt
6470-20-8	[1,1'-Biphenyl]-2,2'-disulfonic acid, 4-[(4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azo]-4'-[(2-hydroxy-1-naphthalenyl)azo]-, disodium salt
6507-77-3	1,3-Naphthalenedisulfonic acid, 7-hydroxy-8-[[4-[1-[4-(4-hydroxyphenyl)azo]phenyl]cyclohexyl]phenyl]azo]-, disodium salt
6548-29-4	2,7-Naphthalenedisulfonic acid, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[3-amino-, tetrasodium salt
6548-30-7	1,3-Naphthalenedisulfonic acid, 8-[[3,3'-dimethoxy-4'-[[4-[[4-(4-methylphenyl)sulfonyl]oxy]phenyl]azo][1,1'-biphenyl]-4-yl]azo]-7-hydroxy-, disodium salt
6708-61-8	1-Triazine, 1-(4-nitro-1-naphthalenyl)-3-[4-(phenylazo)phenyl]-
6837-45-2	Phenazinium, 3-amino-7-(dimethylamino)-5-(2,4-dimethylphenyl)-1,4-dimethyl-, chloride
10114-47-3	7-Benzothiazolesulfonic acid, 2,2'-(azodi-4,1-phenylene)bis[6-methyl-, disodium salt
10130-53-7	Benzenesulfonic acid, 2,2'-[(4,8-diamino-3,7-dibromo-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)diimino]bis[5-methyl-, disodium salt
10169-02-5	[1,1'-Biphenyl]-2,2'-disulfonic acid, 4,4'-bis[(2-hydroxy-1-naphthalenyl)azo]-, disodium salt
10187-52-7	Phenol, 2,2'-methylenebis[4-chloro-, monosodium salt
10482-42-5	2-Naphthalenesulfonic acid, 5-[(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo]-8-[[4-

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	(phenylazo)-6-sulfo -1-naphthalenyl]azo]-, trisodium salt
14239-23-7	Benzenediazonium, 2,5-dichloro-, (T-4)-tetrachlorozincate(2-) (2:1)
14239-24-8	Benzenediazonium, 4-methoxy-2-nitro-, (T-4)-tetrachlorozincate(2-) (2:1)
15443-06-8	Copper, bis(1-phenyl-1,3-pentanedionato-O,O')-
15590-62-2	Hexanoic acid, 2-ethyl-, lithium salt
17947-32-9	2-Naphthalenecarboxamide, 3-hydroxy-N-(4-methoxyphenyl)-4-(phenylazo)-
20845-92-5	Hexanoic acid, 2-ethyl-, rhodium(3+) salt
21519-06-2	3H-Pyrazol-3-one, 2,4-dihydro-2-(3-hydroxyphenyl)-5-methyl-4-[[4-(phenylazo)phenyl]azo]-
23501-81-7	1,3-Diazetidone-2,4-dione, 1,3-bis(6-isocyanatohexyl)-
26021-20-5	Acetamide, N-[2-[(2-bromo-4,6-dinitrophenyl)azo]-5-[(2-cyanoethyl)(2-hydroxyethyl)amino]-4-methoxyphenyl]-
26140-67-0	1H-Pyrrole-2,5-dione, 1,1'-(methylenedi-4,1-phenylene)bis-, polymer with 4,4'-methylenebis[benzenamine]
26864-36-8	8-Oxa-3,5-dithia-4-stibetetradecanoic acid, 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-7-oxo-, 2-ethylhexyl ester
28178-42-9	Benzene, 2-isocyanato-1,3-bis(1-methylethyl)-
29694-85-7	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with methyloxirane
30787-41-8	9,10-Anthracenedione, 1,5-diamino-2,6-dibromo-4,8-dihydroxy-
37295-33-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, α -hydro- ω -hydroxypoly[oxy(methyl-1,2-ethanediy)] and 1,1'-methylenebis[4-isocyanatocyclohexane]
38294-64-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine and (chloromethyl)oxirane
42357-98-2	1H-Benz[de]isoquinoline-1,3(2H)-dione, 6-hydroxy-5-[(2-methoxy-4-nitrophenyl)azo]-2-methyl-
42358-36-1	1H-Benz[de]isoquinoline-1,3(2H)-dione, 2-ethyl-6-hydroxy-5-[(2-methoxy-4-nitrophenyl)azo]-
51988-24-0	Benzenesulfonic acid, 3-[[4-[(4-hydroxy-3-methylphenyl)azo]-3-methoxyphenyl]azo]-, monolithium salt
52469-00-8	Formaldehyde, polymer with [1,1'-biphenyl]-4-ol and 4-(1,1-dimethylethyl)phenol
53523-90-3	Benzoic acid, 3,3'-[1,2-ethenediy]bis[(3-sulfo-4,1-phenylene)azo]]bis[6-hydroxy-5-methyl-, tetralithium salt
58104-55-5	2-Naphthalenesulfonamide, 6-hydroxy-N-(2-hydroxyethyl)-N-methyl-5-[[4-(phenylazo)phenyl]azo]-
62133-79-3	2-Naphthalenesulfonic acid, 5-[[4-[ethyl[(3-sulfophenyl)methyl]amino]phenyl]azo]-8-(phenylazo)-, disodium salt
62133-80-6	2-Naphthalenesulfonic acid, 8-[[4-[ethyl[(3-sulfophenyl)methyl]amino]phenyl]azo]-5-(phenylazo)-, disodium salt
65328-60-1	1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-, polymer with 4-methyl-benzenediamine and 4,4'-methylenebis[benzenamine]
67905-67-3	Propanenitrile, 3-[butyl[4-[(6-nitro-2-benzothiazolyl)azo]phenyl]amino]-
68036-95-3	Oxirane, methyl-, polymer with oxirane, ether with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol]
68214-46-0	Formaldehyde, polymer with (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol], methyloxirane, methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1), 4-nonylphenol and oxirane
68214-63-1	3-Pyridinecarbonitrile, 5-[(3,4-dichlorophenyl)azo]-1,2-dihydro-6-hydroxy-4-methyl-2-oxo-1-(phenylamino)-
68309-99-9	Aluminate(1-), (2-ethyl-1-hexanolato)tris(2-propanolato)-, hydrogen, (T-4)-
68585-28-4	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with 3,3'-[oxybis(2,1-ethanediyloxy)]bis[1-propanamine]
68610-10-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with (Z)-N-9-octadecenyl-1,3-propanediamine

68892-00-2	Benzoic acid, 2-hydroxy-, polymer with 4-(1,1-dimethylethyl)phenol, formaldehyde and 4,4'-(1-methylethylidene)bis[phenol]
68910-26-9	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with diethylenetriamine and 4-methyl-2-pentanone
68954-74-5	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 2-(1-methylethyl)-1H-imidazole-modified
68988-23-8	Benzoic acid, 2-hydroxy-, reaction products with benzyl alc., bisphenol A epichlorohydrin polymer and 4,4'-methylenebis[benzenamine]
68992-01-8	3-Pyridinecarbonitrile, 1-(2-ethylhexyl)-1,2-dihydro-6-hydroxy-5-[(4-methoxy-2-nitrophenyl)azo]-4-methyl-2-oxo-
69961-73-5	Naphthalenesulfonic acid, polymer with formaldehyde and 4,4'-sulfonylbis[phenol], sodium salt
70210-05-8	2,7-Naphthalenedisulfonic acid, 3-[[2,4-bis(2-methylphenoxy)phenyl]azo]-4-hydroxy-5-[[4-(4-methylphenyl)sulfonyl]amino]-, disodium salt
70210-28-5	Benzoic acid, 5-[[4'-[[6-amino-5-(1H-benzotriazol-5-ylazo)-1-hydroxy-3-sulfo-2-naphthalenyl]azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]-2-hydroxy-4-methyl-, disodium salt
70210-34-3	2,7-Naphthalenedisulfonic acid, 5-[[2,4-dihydroxy-5-[[4-[(4-nitro-2-sulfophenyl)amino]phenyl]azo]phenyl]azo]-4-hydroxy-3-[[4-[(4-nitro-2-sulfophenyl)amino]phenyl]azo]-, tetrasodium salt
70703-43-4	Formaldehyde, polymer with 1,3-benzenediamine, (chloromethyl)oxirane, 4,4'-methylenebis[benzenamine], 4,4'-(1-methylethylidene)bis[phenol], 3-oxiranyl-7-oxabicyclo[4.1.0]heptane and phenol
70750-15-1	Formaldehyde, polymer with 4,4'-(1-methylethylidene)bis[phenol], Bu ether
71033-04-0	2-Butenedioic acid, 2-mercapto-, polymer with 2-ethylhexyl 2-propenoate, 2-mercaptoethanol, methyl 2-methyl-2-propenoate and N,N',2-tris(6-isocyanatoethyl)imidodicarbonic diamide
71033-21-1	Benzothiazolesulfonic acid, 2,2'-(azodi-4,1-phenylene)bis[6-methyl-, disodium salt
71215-83-3	Benzoic acid, 5-[[4'-[(2-amino-8-hydroxy-6-sulfo-1-naphthalenyl)azo]-2,2'-dichloro[1,1'-biphenyl]-4-yl]azo]-2-hydroxy-, disodium salt
71550-22-6	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, tetralithium salt
71873-49-9	Benzoic acid, 4,4'-[1,2-ethenediylbis[(3-sulfo-4,1-phenylene)-ONN-azoxy-4,1-phenyleneazo]]bis-, tetrasodium salt
72139-21-0	Benzoic acid, 3,3'-[(1,4-dioxo-2-butene-1,4-diyl)bis(imino-4,1-phenyleneazo)]bis[6-hydroxy-, disodium salt
72245-56-8	2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4-[[4-[(2,4-diaminophenyl)azo]phenyl]amino]carbonyl]phenyl]azo]-5-hydroxy-6-(phenylazo)-, sodium salt
72252-59-6	[1,1'-Biphenyl]-3,3'-dicarboxylic acid, 4-[[5-[[5-(aminosulfonyl)-2-hydroxyphenyl]azo]-1-hydroxy-6-(phenylamino)-3-sulfo-2-naphthalenyl]azo]-4'-[[1-[(3-carboxy-4-hydroxyphenyl)amino]carbonyl]-2-oxopropyl]azo]-, tetrasodium salt
72361-40-1	Pyridinium, 1-[2-[[4-[(2-bromo-4,6-dinitrophenyl)azo]-3-methylphenyl]ethylamino]ethyl]-, chloride
72391-23-2	Benzenesulfonic acid, 2(or 5)-[[1-amino-4-[[3-[[[(chloroacetyl)amino]methyl]-2,4,6-trimethylphenyl]amino]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-5(or 2)-(1,1-dimethylethyl)-, monosodium salt
72496-92-5	Naphthalenesulfonic acid, 5-[[2,4-dihydroxy-5-[[4-[(4-nitro-2-sulfophenyl)amino]phenyl]azo]phenyl]azo]-8-[[4-[(4-nitro-2-sulfophenyl)amino]phenyl]azo]-, trisodium salt
72749-87-2	2-Naphthalenesulfonic acid, 7,7'-(carbonyldiimino)bis[4-hydroxy-3-[(2-methylphenyl)azo]-, disodium salt
72828-67-2	1,3-Naphthalenedisulfonic acid, 7-hydroxy-8-[[4-[1-[4-[(4-hydroxyphenyl)azo]phenyl]cyclohexyl]phenyl]azo]-, potassium sodium salt
72828-83-2	2,7-Naphthalenedisulfonic acid, 5-(benzoylamino)-3-[[2-(2-cyclohexylphenoxy)phenyl]azo]-4-hydroxy-, disodium salt
72968-80-0	2-Naphthalenesulfonic acid, 5-[[4-[[4-(4-methylphenyl)sulfonyl]oxy]phenyl]azo]-8-[[4-[(4-nitro-2-sulfophenyl)amino]phenyl]azo]-, disodium salt

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72905-89-6	Thiosulfuric acid, disodium salt, reaction products with 4-(6-methyl-2-benzothiazolyl)benzenamine, p-phenylenediamine, sodium sulfide (Na ₂ (S)) and sulphur
72968-81-1	2-Naphthalenesulfonic acid, 8-[[4-[[4-(4-methylphenyl)sulfonyl]oxy]phenyl]azo]-5-[[4-[[4-nitro-2-sulfophenyl]amino]phenyl]azo]-, disodium salt
72986-61-9	2-Naphthalenesulfonic acid, 8-[[4-[[4-(4-nitro-2-sulfophenyl)amino]phenyl]azo]-5-[[4-[[4-(phenylsulfonyl)oxy]phenyl]azo]-, disodium salt
75150-14-0	1,4-Benzenedisulfonic acid, 2-[[4-[[4-[[1-hydroxy-6-(phenylamino)-3-sulfo-2-naphthalenyl]azo]-1-naphthalenyl]azo]-6-sulfo-1-naphthalenyl]azo]-, ammonium
75199-12-1	Benzenesulfonic acid, 4-hydroxy-, polymer with formaldehyde and 4,4'-sulfonylbis[phenol], sodium salt
75199-20-1	1,3'-Bipyridinium, 1',2'-dihydro-6'-hydroxy-3,4'-dimethyl-2'-oxo-5'-[[4-(phenylazo)phenyl]azo]-, chloride
75659-72-2	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, monolithium trisodium salt
75659-73-3	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, dilithium disodium salt
75673-18-6	2,7-Naphthalenedisulfonic acid, 5-amino-4-hydroxy-3-[[4'-[[1-hydroxy-4-sulfo-2-naphthalenyl]azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]-, monolithium disodium salt
75673-19-7	2,7-Naphthalenedisulfonic acid, 5-amino-4-hydroxy-3-[[4'-[[1-hydroxy-4-sulfo-2-naphthalenyl]azo]-3,3'-dimethoxy[1,1'-biphenyl]-4-yl]azo]-, dilithium monosodium salt
75673-34-6	1-Naphthalenesulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-hydroxy-, dilithium salt
75673-35-7	1-Naphthalenesulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-hydroxy-, monolithium monosodium salt
75701-47-2	Benzenesulfonic acid, 3,3'-(1-methylethylidene)bis[6-hydroxy-, disodium salt, polymer with formaldehyde and 4,4'-sulfonylbis[phenol]
75752-17-9	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-, trilithium monosodium salt
82640-16-2	Formaldehyde, polymers with sulfonated 1,1'-oxybis[methylbenzene] and sulfonylbis[phenol], ammonium sodium salts
83006-74-0	1-Naphthalenesulfonic acid, 8-(phenylamino)-5-[[4-[[5-sulfo-1-naphthalenyl]azo]-1-naphthalenyl]azo]-, ammonium sodium salt
83006-77-3	1-Naphthalenesulfonic acid, 8-(phenylamino)-5-[[4-[[3-sulfophenyl]azo]-1-naphthalenyl]azo]-, ammonium sodium salt
83027-64-9	Benzenesulfonic acid, 2,2'(or 3,3')-[(4,8-diamino-3,7-dibromo-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)diimino]bis[5(or 6)-methyl-, disodium salt
83221-56-1	2-Naphthalenesulfonic acid, 7,7'-(carbonyldiimino)bis[4-hydroxy-3-(phenylazo)-, sodium salt
83221-60-7	1,6-Naphthalenedisulfonic acid, 4-[[4-[[1-hydroxy-6-(phenylamino)-3-sulfo-2-naphthalenyl]azo]-1-naphthalenyl]azo]-, ammonium sodium salt
83221-63-0	2,7-Naphthalenedisulfonic acid, 4-amino-3-[[4'-[[2,4-diaminophenyl]azo]-2,2'-disulfo[1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)-, sodium salt
83221-68-5	2-Naphthalenesulfonic acid, 6-[[2,4-diaminophenyl]azo]-3-[[4-[[4-[[7-[[2,4-diaminophenyl]azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trilithium salt
83221-69-6	2-Naphthalenesulfonic acid, 6-[[2,4-diaminophenyl]azo]-3-[[4-[[4-[[7-[[2,4-diaminophenyl]azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, lithium sodium salt
83221-72-1	2,7-Naphthalenedisulfonic acid, 4-amino-3,6-bis[[4-[[2,4-diaminophenyl]azo]phenyl]azo]-5-hydroxy-, lithium sodium salt
83221-73-2	Benzoic acid, 4,4'-[carbonylbis[imino(1-hydroxy-3-sulfo-6,2-naphthalenediyl)azo]]bis-, sodium salt
83232-28-4	2-Naphthalenesulfonic acid, 7,7'-(carbonyldiimino)bis[3-[[4-(acetylamino)phenyl]azo]-4-hydroxy-, sodium salt
83232-29-5	2-Naphthalenesulfonic acid, 3-[[4-(acetylamino)phenyl]azo]-4-hydroxy-7-[[[5-hydroxy-6-(phenylazo)-7-sulfo-2-naphthalenyl]amino]carbonyl]amino]-, sodium salt
83232-31-9	2-Naphthalenesulfonic acid, 7,7'-(carbonyldiimino)bis[4-hydroxy-3-[(2-methyl-4-sulfophenyl)azo]-, sodium salt

	sodium salt
83290-91-9	9,10-Anthracenedione, dibromo-1,8-diamino-4,5-dihydroxy-
83400-10-6	1,5-Naphthalenedisulfonic acid, 2-[[8-[[2,3-dichloro-6-quinoxaliny]carbonyl]amino]-1-hydroxy-3,6-disulfo-2-naphthalenyl]azo]-, lithium sodium salt
83721-46-4	Methanesulfonamide, 1-chloro-N-[4,5-dichloro-2-(2,4-dichlorophenoxy)phenyl]-, sodium salt
83783-96-4	2,7-Naphthalenedisulfonic acid, 5-amino-3-[[4-[2-[4-[(7-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo]-2-sulfo]phenyl]ethenyl]-3-sulfo]phenyl]azo]-4-hydroxy-, lithium sodium salt, compd. with 2,2'-(methylimino)bis[ethanol]
83783-99-7	Benzoic acid, 3,3'-[1,2-ethenediylbis[(3-sulfo-4,1-phenylene)azo]]bis[6-hydroxy-5-methyl-, lithium sodium salt, compd. with 2,2'-(methylimino)bis[ethanol]
83968-83-6	9,10-Anthracenedione, 1-amino-4-[[4-[(dimethylamino)methyl]phenyl]amino]-, monoacetate
83969-13-5	1,3,4-Thiadiazolium, 5-[bis(1-methylethyl)amino]-2-[[4-(dimethylamino)phenyl]azo]-3-methyl-, sulfate (2:1)
84559-92-2	2,7-Naphthalenedisulfonic acid, 3,3'-[azoxybis[(2-methoxy-4,1-phenylene)azo]]bis[4,5-dihydroxy-, tetralithium salt
84962-50-5	Benzenesulfonic acid, 2,5-dichloro-4-[[2-(dibutylamino)-4-methyl-6-[[2-(4-sulfo]phenyl)ethyl]amino]-5-pyrimidinyl]azo]-, sodium salt
85392-23-0	Benzenesulfonamide, 4-[(1-amino-9,10-dihydro-4-hydroxy-9,10-dioxo-2-anthracenyl)thio]-N-(3-ethoxypropyl)-
89923-60-4	Benzenesulfonic acid, 3,3'-[(2,2'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis[azo(4,5-dihydro-3-methyl-5-oxo-1H-pyrazole-4,1-diyl)]]bis[4-chloro-, disodium salt
91696-28-5	9,10-Anthracenedione, 1,5-diamino-4,8-dihydroxy-, brominated
93803-37-3	2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-3-[[4-[5-[(4-hydroxyphenyl)azo]-1H-benzimidazol-2-yl]phenyl]azo]-6-(phenylazo)-, disodium salt
93940-21-7	1-Triazene-1-carbonitrile, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis-
102082-94-0	2,7-Naphthalenedisulfonic acid, 4-amino-6-[[4-[[4-[(2,4-diaminophenyl)azo]phenyl]amino]sulfonyl]phenyl]azo]-5-hydroxy-3-[(4-nitrophenyl)azo]-, lithium salt
104376-58-1	Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol], (1,1,3,3-tetramethylbutyl)phenyl ester
105839-25-6	Fatty acids, C18-unsatd., dimers, polymers with bisphenol A, epichlorohydrin and triethylenetetramine
106028-58-4	2,7-Naphthalenedisulfonic acid, 6-amino-4-hydroxy-3-[[7-sulfo-4-(4-sulfo]phenyl)azo]-1-naphthalenyl]azo]-, tetralithium salt
108624-00-6	2,7-Naphthalenedisulfonic acid, 4-amino-6-[[5-[(5-chloro-2,6-difluoro-4-pyrimidinyl)amino]-2-sulfo]phenyl]azo]-5-hydroxy-3-[[4-[[2-sulfo]oxy]ethyl]sulfonyl]phenyl]azo]-, lithium sodium salt
109066-19-5	Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,6-diisocyanatohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 4,4'-(1-methylethylidene)bis[phenol] and methyloxirane, compd. with 2-(dimethylamino)ethanol
109159-24-2	Hexanedioic acid, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 1,4-butanediol, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol] and methyloxirane, 2-ethyl-1-hexanol-blocked
109159-25-3	Hexanedioic acid, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 1,4-butanediol, 1,6-hexanediol, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol] and methyloxirane, 2-ethyl-1-hexanol-blocked
111905-65-8	Fatty acids, C18-unsatd., dimers, polymers with acrylonitrile-1,4-butanediol reaction product, bisphenol A, epichlorohydrin and ethylenediamine
121028-80-6	Furan, tetrahydro-, polymer with 4,4'-diisocyanato-3,3'-dimethyl-1,1'-biphenyl and oxirane
124578-10-5	Formaldehyde, polymer with phenol and 4,4'-thiobis[phenol], sulfomethylated
129212-18-6	2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with (chloromethyl)oxirane, N,N-dimethyl-1,3-propanediamine, ethenylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, ethyl 2-propenoate, 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-

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	trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol], 2-oxepanone and tetradecyl oxirane
129870-79-7	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with butylated formaldehyde-phenol polymer
139349-56-7	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, triethoxyphenylsilane and 3-(triethoxysilyl)-1-propanamine

Source: Rapid Screening of Substances of Lower Ecological Concern: Results of the Ecological Screening Assessment, Appendix C Appendix C: Substances Not Meeting the Criterion Under Paragraph 64(a) of CEPA 1999 (Environment Canada, March 20, 2007); and in the *Canada Gazette* Part 1, Vol. 141: no. 25, Appendix C: Substances Not Meeting the Criterion Under Paragraph 64(a) of CEPA 1999 25.

Appendix B – Substances containing bisphenol A or metabolize to bisphenol A

CAS Number	NAME
29694-85-7	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with methyloxirane
37295-33-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, α -hydro- ω -hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,1'-methylenebis[4-isocyanatocyclohexane]
38294-64-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine and (chloromethyl)oxirane
52469-00-8	Formaldehyde, polymer with [1,1'-biphenyl]-4-ol and 4-(1,1-dimethylethyl)phenol
68036-95-3	Oxirane, methyl-, polymer with oxirane, ether with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol]
68214-46-0	Formaldehyde, polymer with (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol], methyloxirane, methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1), 4-nonylphenol and oxirane
68585-28-4	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with 3,3'-[oxybis(2,1-ethanediyloxy)]bis[1-propanamine]
68610-10-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with (Z)-N-9-octadecenyl-1,3-propanediamine
68892-00-2	Benzoic acid, 2-hydroxy-, polymer with 4-(1,1-dimethylethyl)phenol, formaldehyde and 4,4'-(1-methylethylidene)bis[phenol]
68910-26-9	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with diethylenetriamine and 4-methyl-2-pentanone
68954-74-5	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 2-(1-methylethyl)-1H-imidazole-modified
68988-23-8	Benzoic acid, 2-hydroxy-, reaction products with benzyl alc., bisphenol A epichlorohydrin polymer and 4,4'-methylenebis[benzenamine]
70703-43-4	Formaldehyde, polymer with 1,3-benzenediamine, (chloromethyl)oxirane, 4,4'-methylenebis[benzenamine], 4,4'-(1-methylethylidene)bis[phenol], 3-oxiranyl-7-oxabicyclo[4.1.0]heptane and phenol
70750-15-1	Formaldehyde, polymer with 4,4'-(1-methylethylidene)bis[phenol], Bu ether
104376-58-1	Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol], (1,1,3,3-tetramethylbutyl)phenyl ester
105839-25-6	Fatty acids, C18-unsatd., dimers, polymers with bisphenol A, epichlorohydrin and triethylenetetramine
109066-19-5	Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,6-diisocyanatohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 4,4'-(1-methylethylidene)bis[phenol] and methyloxirane, compd. with 2-(dimethylamino)ethanol
109159-24-2	Hexanedioic acid, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 1,4-butanediol, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol] and methyloxirane, 2-ethyl-1-hexanol-blocked
109159-25-3	Hexanedioic acid, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 1,4-butanediol, 1,6-hexanediol, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol] and methyloxirane, 2-ethyl-1-hexanol-blocked
111905-65-8	Fatty acids, C18-unsatd., dimers, polymers with acrylonitrile-1,4-butanediol reaction product, bisphenol A, epichlorohydrin and ethylenediamine
129212-18-6	2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with (chloromethyl)oxirane, N,N-dimethyl-1,3-propanediamine, ethenylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, ethyl 2-propenoate, 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-

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Source: Subset of Appendix A. Also see reference: Rapid Screening of Substances of Lower Ecological Concern: Results of the Ecological Screening Assessment, Appendix C Appendix C: Substances Not Meeting the Criterion Under Paragraph 64(a) of CEPA 1999 (Environment Canada, March 20, 2007); and in the *Canada Gazette* Part 1, Vol. 141: no. 25, Appendix C: Substances Not Meeting the Criterion Under Paragraph 64(a) of CEPA 1999 25.