

Management of Existing Chemical Substances in Canada, *continued*

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Risk Assessment and Management of Existing Chemical Substances in Canada: The Canadian Environmental Protection Act, 1999

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In Canada, like the U.S., there were tens of thousands of “existing” chemicals that remained unreviewed for possible health or environmental effects. In just a few years following passage of key legislation in 1999, however, Health Canada and Environment Canada completed their categorization of some 23,000 chemicals, identifying about 4,300 chemicals for further review, and about 200 high-priority chemicals for detailed assessment. Now those agencies are working through those 200 chemicals systematically, conducting risk evaluations and in some cases recommending risk management actions. Health Canada’s recommendation to ban plastic baby bottles made with bisphenol A rocked the baby bottle market, effectively implementing market deselection. The Canadian approach to chemicals management has implications for the U.S. as the introduction of legislation to overhaul the Toxic Substances Control Act nears. This alert reviews the key provisions of the legislation and how it has been implemented, then makes some observations on lessons for TSCA reform.

1. CEPA 1999’s Mandate for Existing Chemical Substances

The Canadian Environmental Protection Act, 1999 (“CEPA 1999”) entered into force on March, 31, 2000 following an extensive governmental review of its predecessor, the Canadian Environmental Protection Act of 1988.

A key objective of CEPA 1999 is the prevention and management of potential risks posed by toxic substances. In furtherance of this goal, CEPA 1999 established a series of processes to assess whether substances currently in use or being released in Canada are “toxic or capable of becoming toxic” according to the provisions of CEPA 1999 (“CEPA toxic”). Specifically, CEPA 1999 requires Health Canada and Environment Canada (together, the “Ministries”) to: (1) categorize the substances on the Domestic Substances List (“DSL”) (i.e. “legacy” or “existing” substances) according to toxicity and potential for exposure; (2) conduct screening assessments of high-priority substances; (3) conduct in-depth assessments of substances on the Priority Substances List (“PSL”); and (4) add substances that meet the criteria for CEPA toxic to the List of Toxic Substances (Schedule 1) of CEPA 1999 and, if applicable, to the Virtual Elimination List.

a. Categorization

CEPA 1999 mandated the categorization of all 23,000 substances on the DSL by September 13, 2006.¹ The purpose of categorization was to prioritize for further assessment those substances on the DSL that (1) display characteristics of either

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persistence or bioaccumulation and are inherently toxic to humans or non-human organisms (“PBiT”); or (2) present the greatest potential for exposure to people (“GPE”).² Categorization was based on “available information” or, where available information for a substance was insufficient, through cooperation with Canadian or foreign jurisdictions or other interested parties.

Canada completed its categorization of the DSL on schedule in 2006. Of the 23,000 substances, approximately 4,300 were identified as requiring “further action” because they met the PBiT criteria or demonstrated GPE.³ Of these 4,300 substances, the Ministries classified about 1,200 as low-priority, 2,600 as medium-priority, and 500 as high-priority.⁴ All 4,300 “legacy substances” must undergo further study pursuant to a screening-level risk assessment.⁵

b. Screening-Level Risk Assessment

A screening-level risk assessment involves the analysis of a substance to preliminarily determine whether the substance is CEPA toxic. This level of review integrates the assessment of known or potential exposure of a substance with known or potential adverse effects on the environment.⁶ Screening-level risk assessments vary in complexity and, unlike categorization, the Ministries have no strict deadline to complete them.⁷

There are three possible outcomes of a screening-level risk assessment. First, the Ministries may propose “no further action” under CEPA 1999 for the substance⁸ A “no further action” proposal is common when the Ministries determine that a substance is not “CEPA toxic” or, if the substance is toxic, when the Ministries conclude that actions under other laws or by other jurisdictions within Canada are sufficient to manage the risks in a timely manner.⁹ Second, if the substance meets the criteria for “CEPA toxic,” the Ministries will recommend that the substance be added to the List of Toxic Substances (Schedule 1) of CEPA 1999 and, if applicable, to the Virtual Elimination List.¹⁰ Third, the Ministries may add the substance to the PSL (requiring priority and in-depth investigation) if a more comprehensive risk assessment is needed.¹¹

c. Assessment of the Priority Substances List

CEPA 1999 requires the Ministries to compile the PSL to identify substances that the Ministries have determined should receive priority in assessments of CEPA toxicity.¹² Substances are added to the PSL through several routes. As discussed above, the Ministries may add a substance to the PSL following a screening-level risk assessment. The Ministries may also decide to add a substance to the PSL following the review of another jurisdiction’s decision to prohibit or substantially restrict a substance for environmental or health reasons.¹³ In addition, any person may request

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that the Ministries add a substance to the PSL. CEPA 1999 also contains a catch-all provision that allows the Ministries to add a substance to the PSL “for any other reason.”¹⁴ Once a substance is placed on the PSL, the Ministries have five years to complete an in-depth assessment for the substance.¹⁵

d. “CEPA Toxic” Determinations and Virtual Elimination

CEPA 1999 defines a substance as “toxic” if it is entering or may enter the environment in a quantity or concentration or under conditions that:

- (1) have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- (2) constitute or may constitute a danger to the environment on which life depends; or
- (3) constitute or may constitute a danger in Canada to human life or health.¹⁶

A substance may be found to be “CEPA toxic” following a screening assessment, an in-depth PSL assessment, or a review of another jurisdiction’s decision to prohibit or substantially restrict a substance for environment or health reasons.¹⁷ Once a determination of CEPA toxicity has been made, the Ministries propose to add the substance to the List of Toxic Substances in Schedule 1. The Governor in Council (Governor General of the federal Cabinet) may issue an order adding the substance to Schedule 1 of CEPA 1999 if satisfied that the substance is CEPA toxic.¹⁸ Within two years of the proposed addition of a substance to Schedule 1, the Ministries must issue a proposed regulation or instrument establishing “preventive or control measures” for the substance.¹⁹ The proposal is followed by a 60-day public comment period, and the Ministries are required to finalize the regulation or instrument within 18 months after issuing the proposal.²⁰

The preventive or control measures undertaken with respect to a substance depend on whether the substance meets the criteria for “virtual elimination.” Virtual elimination is reserved for those substances that are bioaccumulative, persistent, and resulting predominantly from human activity.²¹ These “Track 1” substances are targeted for virtual elimination from the environment. There are several options for the management of Track 1 substances:

- ◆ pollution prevention strategies to prevent the measurable release of a Track 1 substance from domestic sources;
- ◆ phase-out of Track 1 substances that cannot be managed successfully;
- ◆ bilateral or multilateral agreements to eliminate Track 1 substances that originate from sources outside Canada; and
- ◆ remediation when a Track 1 substance has already been released into the environment.²²

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Before a final decision is issued for substances targeted for virtual elimination, the Ministries will identify substances proposed for virtual elimination. The proposal is followed by a public comment period in which stakeholders have the opportunity to present scientific evidence relating to whether a substance meets the criteria for virtual elimination.²³ The Ministries are to weigh all scientific evidence before issuing a final decision.

Substances that are CEPA toxic but do not meet the criteria for virtual elimination are “Track 2” substances and are subject to life-cycle management (as determined by the Ministries) to prevent or minimize their release into the environment.²⁴

2. The Chemicals Management Plan Industry Challenge

Canada announced the Chemicals Management Plan (“CMP”) in December 2006 aimed at consolidating the various federal chemicals management programs into a single strategy.²⁵ The CMP established priorities for the assessment and management of the 4,300 legacy substances identified through categorization. As a first priority, the government issued a “Challenge to Industry” (“Challenge”) soliciting information on the properties and uses of approximately 200 chemical substances identified through the categorization process as high priorities for action.²⁶ The information is acquired primarily through the mandatory information gathering provisions of CEPA 1999, although industry and other stakeholders are invited to submit additional information that may assist in formulating the management approach for each substance.²⁷

The Challenge divided the 200 highest-priority substances into twelve smaller “batches” of 12 to 20 substances for review according to a staggered timeline. There are nine stages of the review process for each batch:

- (1) Notice identifying substances in the batch;
- (2) Information gathering (consisting of mandatory survey and voluntary questionnaires);
- (3) Release of draft screening assessments for each substance;
- (4) 60-day public comment period for the draft screening assessments;
- (5) Release of final screening assessments for each substance;
- (6) Release of proposed risk management approach for substances determined to be “CEPA toxic” in the final screening assessment;
- (7) 60-day public comment period for the proposed risk management approach;
- (8) Issuance of proposed order adding CEPA toxic substances to Schedule 1; and
- (9) Release of regulatory impact analysis statement notifying the public and decision-makers of regulatory decisions and their health/environmental/social impacts.

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The chemicals identified in each batch are posted on the Government of Canada’s website, along with a summary of the status of chemicals in each batch and all related documents.²⁸ In addition, notices regarding stages (1), (3), (8), and (9) have been published in the Canada Gazette.

3. Status of the Challenge Review Process and Highlighted Substances of Interest

The Ministries have published notices identifying all twelve batches of Challenge substances. Because the batches proceed according to a staggered schedule of review, the batches are at different stages of the review process. Review of Batch 1 is nearly complete, and the Ministries have issued a “Proposed Order Adding Toxic Substances to Schedule 1 to the Canadian Environmental Protection Act, 1999” for those chemicals determined to be “CEPA toxic.”²⁹ Public comment on the proposed risk management documents (stage 7) concluded September 3, 2008. Depending on the nature of the comments received, the Ministries may determine that further discussions or a Board of Review are warranted,³⁰ or alternatively may publish a Final Order on these substances in the Canada Gazette. Batch 12, on the other hand, is at the beginning of the process. The substances that will be reviewed in Batch 12 were identified in September 2009.³¹ The release of Draft Screening Assessments on September 5, 2009 for the fourteen substances in Batch 7³² marked the halfway point in the Canadian Ministries’ review of the 200 priority substances. According to the tentative Chemicals Management Plan timeline, the Canadian government expects to complete its review of all 200 substances by early 2011.³³

The Ministries have already made critical decisions with respect to several substances of potential interest to chemical and product manufacturers. Below is a summary of the status of bisphenol A, acrylamide, and TCEP under the Canadian Chemicals Management Plan review process.

Bisphenol A: Bisphenol A (“BPA”) was among the substances identified in Batch 2 of the Challenge.^[34] The Ministries concluded that BPA met the criteria for “CEPA toxic” and issued a proposed order to add it to Schedule 1. The assessment revealed that BPA does not persist significantly under aerobic conditions. However, the slow degradation of the substance under conditions with low or no oxygen coupled with its significant production and use led the Ministries to conclude that levels of BPA could increase in the environment. The assessment also noted that BPA is “acutely toxic” to aquatic organisms and that concerns regarding neurobehavioral effects in infants had been identified.³⁵ Because BPA does not meet the criteria for virtual elimination, it will be managed using a life-cycle approach to prevent or minimize its release into the environment.³⁶ This includes: (1) a ban on

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the importation, sale, and advertising of baby bottles made with BPA monomer; (2) engaging industry in the development of codes and practices to reduce, to as low as reasonably achievable, levels of BPA in infant formula; (3) consideration of regulations restricting BPA in industrial effluent; (4) exploring options for regulating the recycling or disposal of products containing BPA; and (5) further information gathering, monitoring and research.³⁷ On June 27, 2009, the Ministries published an Order Amending Schedule I to the Hazardous Products Act, which implemented the ban on baby bottles containing BPA.³⁸

Following the April 2008 release of a draft screening assessment on BPA, which coincided with a similar draft analysis from the National Toxicology Program in the U.S., the market for plastic baby bottles made with BPA swiftly began to shrink.³⁹

Acrylamide: 2-Propenamide (“acrylamide”) was identified in Batch 5 of the Challenge.⁴⁰ The Ministries concluded that acrylamide is “CEPA toxic” and issued a proposed order adding the substance to Schedule 1.⁴¹ The assessment focused primarily on the human health risks of acrylamide because the substance does not meet the PBiT criteria for aquatic organisms. Noting increased incidences of tumors in several experiments and the carcinogenic potential of acrylamide, the Ministries concluded that the substance may constitute a danger in Canada to human life or health within the meaning of § 64(c) of CEPA 1999.⁴² Acrylamide does not meet the criteria for virtual elimination and will therefore be managed using a life-cycle approach, including (1) development of acrylamide reduction processes by the food industry; (2) issuance of consumption advice by Health Canada to consumers on how to reduce exposure to acrylamide in food sources; and (3) listing acrylamide on the Health Canada Cosmetic Ingredient Hotlist (an administrative tool to help manufacturers satisfy the cosmetic safety provisions of section 16 of the Food and Drugs Act).⁴³

TCEP: Ethanol, 2-chloro-, phosphate (3:1) or tris (2-chloroethyl) phosphate (“TCEP”) was also identified in Batch 5 of the Challenge. The Ministries concluded that the substance is “CEPA toxic” and issued a proposed order adding TCEP to Schedule 1.⁴⁴ According to the assessment, TCEP has effects of carcinogenicity and impaired fertility. The assessment therefore concluded that TCEP is entering the environment in a quantity or concentration or under conditions that may constitute a danger in Canada to human life or health within the meaning of § 64(c) of CEPA 1999.⁴⁵ TCEP will not be targeted for virtual elimination and will instead be

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managed using a life-cycle approach. The risk management approach under consideration is a ban on the use of TCEP in home products such as polyurethane foam in furniture; electronic products; adhesives; non-apparel textiles; upholstery; carpets; rubber and plastics; and paints and varnishes.⁴⁶

4. CEPA 1999 as a Model for U.S. State and Federal Toxic Substances Regulation

Canada's efforts in the assessment and management of existing chemicals may serve as a bellwether for other jurisdictions confronting the challenges of effective and efficient regulation of chemicals. Canada's determinations with respect to specific substances appear to have prompted several U.S. states to follow suit. For example, Health Canada and Environment Canada reports in 2008 that BPA indicating the potential risks of BPA at current exposure levels attracted public attention and prompted a wave of regulatory activity at the U.S. state and federal level.⁴⁷

The CMP and Industry Challenge pursuant to CEPA 1999 may also directly influence reform and implementation of the Toxic Substances Control Act ("TSCA"). On September 29, 2009, Environmental Protection Agency ("EPA") Administrator Lisa Jackson announced President Obama's plans to push for legislative reform of TSCA. Administrator Jackson also announced plans for a "major effort" to strengthen EPA's current chemical management program and "increase the pace" of the agency's efforts to address potentially toxic chemicals.⁴⁸ Canada's experience through CEPA 1999 and the Challenge will likely prove instructive. One of EPA's "Essential Principles" for chemicals management reform is the expansion of EPA authority allowing the agency to set priorities for conducting safety reviews on existing chemicals based on relevant risk and exposure considerations.⁴⁹ Canada's ability under CEPA 1999 to evaluate some 23,000 chemicals at a heightened pace, to identify some 4,300 priority chemicals, and to review in detail some 200 high-priority chemicals suggests that CEPA 1999 and its related initiatives provide a model likely to be considered in the Congressional debates on amending TSCA. Indeed, the Government Accountability Office and others have explicitly pointed to CEPA as a model for amending TSCA.⁵⁰

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¹ Canadian Environmental Protection Act, 1999, § 73(1), available at <http://laws.justice.gc.ca/en/C-15.31/text.html> [hereinafter CEPA 1999]; see also A Guide to Understanding the Canadian Environmental Protection Act, 1999 (Dec. 10, 2004), available at http://www.ec.gc.ca/CEPARegistry/the_act/guide04/guide04_e.pdf.

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² CEPA 1999, § 73(1).

³ CEPA Environmental Registry, “How Were Substances on the DSL Categorized?” http://www.ec.gc.ca/CEPARegistry/subs_list/dsl/s2.cfm.

⁴ Government of Canada, An Overview of the Chemicals Management Plan (March 2009), *available at* http://www.cnhhe-rcshe.ca/pdf/CMP%20webinar_March%205%202009.ppt.

⁵ CEPA 1999, § 74.

⁶ CEPA Environmental Registry, Existing Substances Evaluation, “Screening Assessments (SAs),” <http://www.ec.gc.ca/substances/ese/eng/dsl/sra.cfm>.

⁷ Government of Canada, Chemical Substances, “What is Risk Assessment?” <http://www.chemicalsubstanceschimiques.gc.ca/about-afpropos/manage-gestion/what-quoi-eng.php>.

⁸ CEPA 1999, §§ 74, 77(2).

⁹ A Guide to Understanding the Canadian Environmental Protection Act, 1999, at 9 (Dec. 10, 2004), *available at* http://www.ec.gc.ca/CEPARegistry/the_act/guide04/guide04_e.pdf.

¹⁰ CEPA 1999, §§ 74, 77(2).

¹¹ *Id.*

¹² CEPA 1999, § 76.

¹³ *Id.* § 75(3); A Guide to Understanding the Canadian Environmental Protection Act, 1999, at 9 (Dec. 10, 2004), *available at* http://www.ec.gc.ca/CEPARegistry/the_act/guide04/guide04_e.pdf. CEPA 1999 requires the Ministries to review the decisions of other jurisdictions that have prohibited or substantially restricted a substance for environmental or health reasons. During this review, the Ministries may determine that the substance is “CEPA toxic,” that “no further action” under CEPA is required, or that addition to the PSL is required for further assessment.

¹⁴ CEPA 1999, § 76(5)(3).

¹⁵ *Id.* § 78.

¹⁵ *Id.* § 64.

¹⁷ *Id.* § 75(3); A Guide to Understanding the Canadian Environmental Protection Act, 1999, at 12.

¹⁸ CEPA 1999, § 90(1).

¹⁹ *Id.* § 91(1). A Guide to Understanding the Canadian Environmental Protection Act, 1999, at 12.

²⁰ A Guide to Understanding the Canadian Environmental Protection Act, 1999, at 12–13.

²¹ Toxic Substances Management Policy, at 5 (1995), *available at* <http://www.ec.gc.ca/toxics/TSMP/en/tsmp.pdf>. Some elements of the Toxic Substances Management Policy, including the objective of virtual elimination from the environment of Track 1 substances, have been integrated into law through CEPA 1999. *See* CEPA Environmental Registry, Overview of the Existing Substances Program, at 2, *available at* http://www.environment-canada.ca/ceparegistry/subs_list/ExSubOverview/OverviewOfESP_en.pdf.

²² *Id.*

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²³ *Id.*

²⁴ *Id.* at 7. While all substances determined to be CEPA toxic are managed as either Track 1 Track 2 substances, there are other risk assessment processes used to identify substances that comprise Tracks 1 and 2.

²⁵ Government of Canada, An Overview of the Chemicals Management Plan (March 2009), *available at* http://www.cnhhe-rcshe.ca/pdf/CMP%20webinar_March%205%202009.ppt.

²⁶ “Notice of intent to develop and implement measures to assess and manage the risks posed by certain substances to the health of Canadians and their environment,” Canada Gazette Vol. 140, No. 49 (Dec. 9, 2006), *available at* <http://www.gazette.gc.ca/archives/p1/2006/2006-12-09/html/notice-avis-eng.html>; see also Government of Canada, Challenge for Substances That Are a High Priority for Action, *available at* <http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/index-eng.php> [hereinafter Government of Canada, Industry Challenge Website].

²⁷ CEPA 1999, § 71; Government of Canada, Industry Challenge, *supra* note 26.

²⁸ Government of Canada, Industry Challenge Website, *supra* note 25.

²⁹ Proposed Order Adding Toxic Substances to Schedule I to the Canadian Environmental Protection Act, 1999, Canada Gazette Vol. 142, No. 38 (Sept. 20, 2008), *available at* <http://www.gazette.gc.ca/rp-pr/p1/2008/2008-09-20/pdf/g1-14238.pdf#page=39>.

³⁰ CEPA 1999 provides that any person may file a notice of objection during the comment period requesting that a Board of Review be established where the Ministries have concluded that a substance is CEPA toxic but have not recommended that the substance be added to Schedule 1. The Board of Review inquires into the nature and extent of the danger posed by the substance and publishes a report with recommendations to the Ministries. CEPA 1999, §§ 77(8), 333.

³¹ Notice of Identification of the Twelfth Batch of Substances in the Challenge, Canada Gazette Vol. 143, No. 39 (Sept. 26, 2009), *available at* <http://gazette.gc.ca/rp-pr/p1/2009/2009-09-26/html/notice-avis-eng.html#d107>.

³² Government of Canada, Chemical Substances, Chemical Substances in Batch 7 of the Challenge, <http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/batch-lot-7/index-eng.php>.

³³ Government of Canada, Chemicals Management Plan – Challenge Timeline (Tentative), http://www.ec.gc.ca/substances/ese/eng/challenge/challenge_timeline_en.pdf.

³⁴ Notice of Second Release of Technical Information Relevant to Substances Identified in the Challenge, Canada Gazette Vol. 141, No. 19 (May 12, 2007), *available at* <http://canadagazette.gc.ca/archives/p1/2007/2007-05-12/html/notice-avis-eng.html#i5>.

³⁵ Proposed Order Adding a Toxic Substance to Schedule 1 to the Canadian Environmental Protection Act, 1999, and Regulatory Impact Analysis Statement (Bisphenol A) (May 16, 2009), *available at* <http://www.gazette.gc.ca/rp-pr/p1/2009/2009-05-16/pdf/g1-14320.pdf#page=27>.

³⁶ Proposed Risk Management Approach for Bisphenol A, at 4 (Oct. 2008), *available at* http://www.ec.gc.ca/substances/ese/eng/challenge/batch2/batch2_80-05-7_rm_en.pdf.

²⁷ *Id.* at 13–16.

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³⁸ Order Amending Schedule I to the Hazardous Products Act (bisphenol A), Canada Gazette Vol. 143, No. 26 (June 27, 2009), available at <http://www.gazette.gc.ca/rp-pr/p1/2009/2009-06-27/html/reg5-eng.html>.

³⁹ See Beveridge & Diamond, P.C., “Bisphenol A Developments in 2008: The Year in Review” (Jan. 9, 2009), available at http://www.bdlaw.com/assets/attachments/BD_Client_Alert_-_Bisphenol_A_Developments_in_2008_-_The_Year_in_Review.pdf.

⁴⁰ Notice of Fifth Release of Technical Information Relevant to Substances Identified in the Challenge, Canada Gazette Vol. 142 No. 7 (Feb. 16, 2008), available at <http://www.gazette.gc.ca/rp-pr/p1/2008/2008-02-16/html/notice-avis-eng.html#d101>.

⁴¹ Proposed Order Adding Toxic Substances to Schedule 1 to the Canadian Environmental Protection Act, 1999, and Regulatory Impact Analysis Statement (Acrylamide and TCEP) (Oct. 3, 2009), available at <http://www.gazette.gc.ca/rp-pr/p1/2009/2009-10-03/pdf/g1-14340.pdf#page=87>.

⁴² Publication of Final Screening Assessment of a Substance — 2-Propenamamide (acrylamide), CAS No. 79-06-1 — Specified on the Domestic Substances List, Supplement to the Canada Gazette Vol. 143 No. 34 (Aug. 22, 2009), available at <http://gazette.gc.ca/rp-pr/p1/2009/2009-08-22/pdf/g1-14334.pdf#page=134>.

⁴³ Proposed Risk Management Approach for 2-Propenamamide (Acrylamide), at 4, 11–14 (Aug. 2009), available at http://www.ec.gc.ca/substances/ese/eng/challenge/batch5/batch5_79-06-1_rm_en.pdf.

⁴⁴ Proposed Order Adding Toxic Substances to Schedule 1 to the Canadian Environmental Protection Act, 1999, and Regulatory Impact Analysis Statement (Acrylamide and TCEP) (Oct. 3, 2009), available at <http://www.gazette.gc.ca/rp-pr/p1/2009/2009-10-03/pdf/g1-14340.pdf#page=87>.

⁴⁵ Publication of Final Screening Assessment of a Substance — Ethanol, 2-chloro-, phosphate (3:1) (TCEP), CAS No. 115-96-8 — Specified on the Domestic Substances List, Supplement to the Canada Gazette Vol. 143 No. 34 (Aug. 22, 2009), available at <http://gazette.gc.ca/rp-pr/p1/2009/2009-08-22/pdf/g1-14334.pdf#page=137>.

⁴⁶ Proposed Risk Management Approach for Ethanol, 2-chloro-, phosphate (3:1) or tris (2-chloroethyl) phosphate (TCEP), at 11, (Aug. 2009), available at http://www.ec.gc.ca/substances/ese/eng/challenge/batch5/batch5_115-96-8_rm_en.pdf.

⁴⁷ Bisphenol A Ban Proposals Proliferate, Beveridge & Diamond, P.C. (April 17, 2009), available at <http://www.bdlaw.com/news-548.html>.

⁴⁸ EPA News Release (HQ), “Leaders Praise EPA Administrator Lisa P. Jackson’s Plans for Chemical Reform,” (Oct. 1, 2009), available at <http://yosemite.epa.gov/opa/admpress.nsf/0/b8e19f7695981c748525764200740ee8?OpenDocument>.

⁴⁹ Environmental Protection Agency, Essential Principles for Reform of Chemicals Management Legislation, <http://www.epa.gov/oppt/existingchemicals/pubs/principles.html>.

⁵⁰ See, e.g., Government Accountability Office, GAO No. 05-458, Chemical Regulation: Options Exist to Improve EPA’s Ability to Assess Health Risks and Manage Its Chemical Review Program (June 2005)

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("GAO Report 2005"), available at <http://www.gao.gov/new.items/d05458.pdf>; Government Accountability Office, GAO No. 07-825, Chemical Regulation: Comparison of U.S. and Recently Enacted European Union Approaches to Protect against the Risks of Toxic Chemicals (August 2007), available at <http://www.gao.gov/new.items/d07825.pdf>; Environmental Defense Fund, Not That Innocent: A Comparative Analysis of Canadian, European Union and United States Policies on Industrial Chemicals (April 2007), available at http://www.environmentaldefense.org/documents/6149_NotThatInnocent_Fullreport.pdf; Richard A. Denison, Ten Essential Elements in TSCA Reform, 39 *Envtl. L. Rep.* 10020 (2009), available at http://www.edf.org/documents/9279_Denison_10_Elements_TSCA_Reform.pdf.