

Project 15: Enhancing Trilateral Understanding of Chemicals in Products in North America		Operating Year(s): 2013–2014 1 July 2013–30 June 2015
Planned Budget for two years: \$300,000 Year 1: Total project costs: \$150,000 Year 2: Total project costs: \$150,000		
Strategic Priority/Objective: Healthy Communities and Ecosystems / Greening the Economy in North America		
<p>Project Summary</p> <p>Recognition of the significance of products as a potential source of human and environmental exposure to chemical substances of concern is increasing in Canada, the United States and Mexico, as well as at the global level. Regulators worldwide are aware of significant gaps to identify, assess and manage the risks of chemicals in products. These gaps must be addressed if the global community is to achieve the goal agreed upon at the 2002 Johannesburg World Summit on Sustainable Development (WSSD): ‘By the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health’.</p> <p>The three countries have identified a common interest in addressing the risks of chemicals in products from a functional approach using emerging flame retardants in products as the case study.</p> <p>Flame retardants have been detected worldwide in humans, the environment, wildlife, and biota. As we have recognized the risks to human health and the environment of using older, or ‘legacy’ flame retardants in products, manufacturers have switched to or developed new chemicals to fill this gap—the need to protect consumers from fire remains. These new chemicals that are being used as substitutes are referred to as ‘emerging flame retardants.’ They have the potential to be widely dispersed and some may be of concern.</p> <p>At an international level, this project will contribute to the Strategic Approach to International Chemicals Management (SAICM) program of work on chemicals in products. SAICM is an international policy framework that supports the achievement of the WSSD goal for the global sound management of chemicals. For example, SAICM identified the textiles sector as a key sector of interest with respect to chemicals in products.</p> <p>At the regional level, this project will enhance joint country efforts to identify and manage chemicals in products by yielding information required to support the risk assessment and risk management efforts (where warranted) in North American markets. Information will be gathered on products potentially containing emerging flame retardants. These results will contribute towards a longer term environmental outcome to reduce significant adverse impacts of chemicals of common interest; and, to reduce the North American populations’ exposure to certain chemicals of common interest.</p> <p>This project will gather information on these emerging flame retardants that are intentionally added to products because of their function to reduce the products’ flammability. There remains considerable data needs related to the sources of flame retardants, and particularly their presence in products, which creates challenges for their risk assessment and risk management, where required. The proposed project will</p>		

consider trade flows to enhance understanding of where certain chemicals of concern may be released in one jurisdiction by virtue of their presence in imported products manufactured within another jurisdiction. This approach will yield market and exposure information required to identify human health and environmental risks associated with a subset of chemicals in targeted products. Knowledge will be gained on possible approaches for managing the risks associated with these chemicals and products, where warranted.

Governance Structure (proposed)

SMOC Working Group is to convene a single subcommittee of up to a maximum of 15 members who are subject-matter experts in flame retardants, with representation from the three countries (Canada, Mexico, United States); and SMOC staff representative(s) from each country. Each member of the subcommittee is expected to consult appropriately within his/her community of practice. The SMOC Working Group may consult the Trade and Environment Working Group, as appropriate. A contractor will be engaged to undertake the work identified in the outline of tasks below.

Short-term Outcomes (by June 2014)

Task 1 - A list of products containing select emerging flame retardants found in the North American marketplace noting their place of origin.

Task 1 - Summary report of various manufacturer claims on levels of flame retardants left in textiles and upholstered products at the intended end of life for each product.

Task 1 - Scoping document for proposed targeted product sampling to be conducted, based on findings in Year 1

Task 1 - Quality Assurance Project Plan which includes a sampling plan and identifies existing product testing methodologies.

Long-term Outcomes (by June 2015)

Task 1 - Market surveillance of select emerging flame retardants in products will provide further information regarding which chemicals are found in which products and in what quantities.

Longer-term, environmental outcome (post project)

Significant adverse impacts of chemicals of common concern are reduced; and, the North American populations' exposure to certain chemicals of common concern is reduced.

Tasks necessary to reach the environmental outcome:

Gather information on emerging flame retardants of common interest used in products in the North American market to support risk assessment and risk management efforts (where warranted).

Task 1) Gather information on emerging flame retardants of common interest used in products in the North American market to support risk assessment and risk management efforts (where warranted)

Subtask	Project outputs	How does the subtask/output move the project towards the environmental outcome	Timing	Budget (activities)
<p>1.1 Gathering and exchange of information on emerging flame retardants of common interest (see Annex 1) and their use in products.</p> <p>- Gather information, from publicly available sources, on trade flows for each emerging flame retardant of common interest, from both the chemical and products perspective, to identify:</p> <p>1) Where and how the chemical is used both internationally and domestically</p> <p>2) What are the end products, how do these products enter the North American market and in what quantities</p> <p>- Gather information, from publicly available sources, on prevailing flame retardancy standards or requirements for different use categories (i.e., electronics, building materials, textiles, furniture, etc.)</p> <p>- Gather information, from publicly</p>	<p>1.1.1 A list of products containing emerging flame retardants of common interest found in the North American marketplace, noting their place of origin</p> <p>1.1.2 Scoping document for targeted product sampling, including a Quality Assurance Project Plan with existing product testing methodologies</p> <p>1.1.3 Quality Assurance Project Plan</p> <p>1.1.4 Summary document of various manufacturer claims on levels of flame retardants left in textiles and upholstered products at the intended end of life for each product</p> <p>1.1.5 An internal report on outcome of this subtask (no translation/editing costs)</p>	<p>Results can be used for risk assessment and risk management efforts (where warranted)</p> <p>Results can be used in waste management efforts of products at end-of-life</p> <p>Performance Measures:</p> <ul style="list-style-type: none"> - # of products for which reliable data is gathered - An internal report is produced 	Year 1	<p>Year 1: \$132,000 (\$100,000 scoping; \$32,000 preparation for product testing/product testing)</p> <p>Year 2: \$0</p>

<p>available sources, on end-of-life information on textiles and upholstered furniture, focused on products that could be recycled. Determine different technologies used for recycling these products and identify test methodologies used to determine levels of flame retardants left at product end-of-life. Prepare a summary report of claims from various manufactures on levels of flame retardants left in products at the intended end of life for each product.</p> <ul style="list-style-type: none"> - Scoping document for targeted product sampling, including a Quality Assurance Project Plan with existing product testing methodologies - Identify product testing methodologies required to undertake product testing analyses. - Report on outcome of this task. 				
<p>1.2 Targeted product sampling and analysis for selected emerging flame retardants of common interest in products of common interest</p> <ul style="list-style-type: none"> - This subtask will be informed by the outcomes of subtask 1.1 - Consolidate internal report from Subtask 1.1 with the information gathered from this Subtask 1.2 into a public report 	<p>1.2.1 Preliminary market surveillance report, including exposure-related information, of select emerging flame retardants in products.</p> <p>1.2.2 Public report</p>	<p>Results can be used for risk assessment and risk management efforts (where warranted)</p> <ul style="list-style-type: none"> - Identifies which sectors and products are of concern/interest - Exposure profile: which products these chemicals are found in and in what quantities 	Year 2	<p>Year 1: \$0</p> <p>Year 2: \$123,000</p>

		- More extensive, statistically robust product testing may be recommended as subsequent work for future consideration		
1.3 Overhead and Operations - One face-to-face meeting in Montreal in April-May of Year 1 - Teleconferences throughout the project - Document translation as required	N/A	N/A		Year 1: \$18,000 Year 2: \$27,000 (Total: \$45,000)

Explain how this project meets the selection criteria adopted by Council in the Strategic Plan (See below)

The goal of all projects funded by the CEC will be to support the efforts of the Parties to conserve, protect and/or enhance the North American environment. The following criteria will guide the Secretariat, Working Groups, Committees, and other appropriate officials of the Parties in considering cooperative activities for Council approval under operational plans. These selection criteria do not apply for activities to be funded through the NAPECA grant program.

- ***How does the project contribute to achieving Council's strategic objectives as described within the current Strategic Plan, or as related to other priorities subsequently confirmed by Council?***

This project contributes to the Commission for Environmental Cooperation Strategic Plan (2010–2015) Priority #1, "Healthy Communities and Ecosystems," and Strategic Priority # 3, "Greening the Economy in North America," as it would serve to identify where specific chemicals in products are found to inform risk assessment, risk management, and potential future research activities.

At an international level, this project will also support efforts of the Strategic Approach to International Chemicals Management (SAICM) to address the pressing issue of chemicals in products.

- ***Are the proposed objectives North American in scope? In other words, how are the proposed results relevant to protecting the environment in North America? (For example, what would Council members announce to the press at the successful completion of this project?)***

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At an international level, this project will contribute to the Strategic Approach to International Chemicals Management (SAICM) program of work on chemicals in products. SAICM is an international policy framework that supports the achievement of the WSSD goal for the global sound management of chemicals. As an example, SAICM identified the textiles sector as a key sector of interest with respect to chemicals in products.

At the regional level, this project will enhance joint country efforts to identify and manage chemicals in products by yielding information required to support the risk assessment and risk management efforts (where warranted) in North American markets. These results will contribute towards a longer-term environmental outcome to reduce significant adverse impacts of chemicals of common concern, and to reduce the North American populations' exposure to certain chemicals of common concern.

This consolidated approach may provide leverage on Chemicals in Products issues at the international level.

- ***What are the specific, clear and tangible results that will be achieved and how will progress toward each result be measured over time? Identify performance measures to be used to indicate success at reaching all outcomes and/or performance.***

The approach will involve a data-gaps identification/information gathering stage, followed by a product sampling and analysis phase. Information will be gathered on products containing emerging flame retardants. The selected product sectors and quantities of products will be dependent on the testing costs and budget available.

Please also refer to the table above for performance measures by Task and Subtask.

- ***Explain why the CEC is the most effective vehicle for the Parties to undertake the project, considering:***
 - ***The value-added of doing it under the CEC cooperative program***
 - ***Any other public, private or social organizations that work on such activities***
 - ***Opportunities to cooperate and/or leverage resources with such organizations***

Considering the extent of market integration under NAFTA and the perspective of North America as a common market for myriad imported consumer goods, collaboration on the identification and management of risks posed by chemicals in products would be of significant mutual benefit. The CEC is the most effective vehicle for the Parties to undertake this work, given the CEC's trilateral organizational structure.

- ***Does the project propose a clear timeline for implementation of the activities, including a target end date for CEC's involvement? Where applicable, describe how the work will continue after CEC involvement ends.***

Yes, there is a clear timeline. The project work by the CEC will be completed within two years. However, the work outside the CEC will continue after CEC involvement ends because the information gathered and generated, as well as the experience gained from this project, will feed into each country's program for assessing and managing chemicals. It will also assist all three countries to manage the risks of chemicals in products and will enhance understanding of each country's approach to addressing the risk of chemicals in products, thereby facilitating joint work, where appropriate.

- ***Where applicable, identify with reasonable specificity:***
 - ***Linkages with other relevant CEC projects, past or present, in order to create synergies, capitalize on experience, or avoid duplication***

The SMOC Working Group could consult the CEC Trade and Environment Working Group, as appropriate, to draw upon its experience on market analysis within the chemicals sector. This project builds on the expertise developed under previous SMOC work in reducing the risks to human health and the environment from legacy flame retardants.

- ***The target audience, as well as its receptivity and capacity to use the information that may be produced as a result of the project***

Regulators within the risk assessment and risk management communities within the three Parties comprise the probable target audience for this work. The Parties are receptive to and capable of using this information to assist them in addressing the issue of chemicals in products. At the end of year 2, a public document will be prepared to summarize the findings from the project.

- ***The beneficiaries of capacity building activities that the project may include***

- Not applicable

- ***The relevant stakeholders, with particular attention to communities, academia, NGOs and industry, and their involvement and contribution to a successful outcome***

The following stakeholders may be engaged, as appropriate, in the implementation of this project and/or in disseminating the project results:

- Industry associations
- Universities and research centers
- Nongovernmental organizations (NGOs)

Annex I – Preliminary List of Emerging Flame Retardants of Interest

No.	CAS NO.	Chemical Name
1	13674-84-5 and 6145-73-9	2-Propanol, 1-chloro-, phosphate (TCPP)
2	13674-87-8	2-Propanol, 1,3-dichloro-, phosphate (3:1) (TDCPP)
3	26040-51-7	1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-bis(2-ethylhexyl) ester (TBPH)
4	84852-53-9	Benzene, 1,1'-(1,2-ethanediyl)bis[2,3,4,5,6-pentabromo-; Decabromodiphenyl ethane (DBDPE)
5	183658-27-7	2,3,4,5-Tetrabromobenzoic acid 2-ethylhexylester (TBB)
6	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- (HCCPD)
7	78-40-0	Phosphoric acid, triethyl ester (TEP)
8	78-42-2	Phosphoric acid, tris(2-ethylhexyl) ester (TEHP)
9	78-51-3	Ethanol, 2-butoxy-, phosphate (3:1) (TBEP)
10	108-78-1	1,3,5-Triazine-2,4,6-triamine (Melamine)
11	298-07-7	Phosphoric acid, bis(2-ethylhexyl) ester
12	1330-78-5	Phosphoric acid, tris(methylphenyl) ester (TCP)
13	3278-89-5	2,4,6-Tribromophenyl allyl ether (ATE)
14	13560-89-9	1,4:7,10-Dimethanodibenzo[a,e]cyclooctene, 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro- (DP)
15	25155-23-1	Phenol, dimethyl-1,1',1''-phosphate [Phenol, dimethyl-, phosphate (3:1)]
16	26446-73-1	Phosphoric acid, bis(methylphenyl) phenyl ester
17	29761-21-5	Phosphoric acid, isodecyl diphenyl ester
18	32588-76-4	1,2-Bis(tetrabromophthalimido) ethane, [1H-Isoindole-1,3(2H)-dione, 2,2'-(1,2-ethanediyl)bis[4,5,6,7-tetrabromo] (EBTBP)
19	56803-37-3	Phosphoric acid, (1,1-dimethylethyl)phenyl diphenyl ester
20	68527-01-5	Alkenes, C12-30 α -, bromo chloro
21	68527-02-6	Alkenes, C12-24, chloro
22	68937-41-7	Phenol, isopropylated, phosphate (3:1) (PIP)

No.	CAS NO.	Chemical Name
23	77098-07-8	2-(2-Hydroxyethoxy)ethyl 2-hydroxypropyl 3,4,5,6-tetrabromobenzenedicarboxylate
24	20566-35-2	3,4,5,6-Tetrabromo-1,2-benzenedicarboxylic acid, mixed esters with diethylene glycol and propylene glycol
25	7415-86-3	'1,2- (2,3-dibromopropyl) benzenedicarboxylate
26	115-96-8	Tris(2-chloroethyl) phosphate (TCEP)
27	25637-99-4 and 3194-55-6	Hexabromocyclododecane (HBCD) and related congeners
28	3194-57-8	1,2,5,6-Tetrabromocyclooctane
29	58965-66-5	1,2,4,5-tetrabromo-3,6-bis(pentabromophenoxy)-benzene or Tetradecabromo-1,4-diphenoxybenzene
30	61262-53-1	1,1'-[1,2-Ethanediy]bis(oxy)]bis[2,3,4,5,6-pentabromo-benzene] or 1,2-Bis(2,3,4,5,6-pentabromophenoxy) ethane
31	37853-59-1	1,1'-[1,2-Ethanediy]bis(oxy)]bis[2,4,6-tribromobenzene] or 1,2-bis (2,4,6-Tribromophenoxy) ethane (TBE)
32	25713-60-4	2,4,6-Tris-(2,4,6-tribromophenoxy)-1,3,5-triazine
33	35109-60-5	Benzene, 1,3,5-tribromo-2-(2,3-dibromopropoxy)- (DPTE)