ChAMP and DfE

GC3 Roundtable, July 2008

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ChAMP and DfE -- Overview

ChAMP Chemical Assessment and Management Program

- Under the Security and Prosperity Partnership, US, Canada, and Mexico will work together to ensure the safe manufacture and use of industrial chemicals

Design for the Environment Program

- Conducts Alternatives Assessments to Inform Substitution to Safer Chemicals
- Differentiates Safer Products

Chemical Assessment and Management Program (ChAMP)

- At the Security and Prosperity Partnership (SPP) Summit in August, 2007, President Bush, Canadian Prime Minister Stephen Harper and Mexican President Felipe Calderon committed to specific goals to:
  - Accelerate and improve effectiveness of actions to safeguard health and environment
  - Provide cost-effectiveness for business and government
  - Retain national regulatory authority
- SPP National Commitments
  - U.S.: Assess and initiate needed action on 6,750 chemicals
  - Canada: Realize its Chemical Management Plan
  - Mexico: Establish a chemical inventory

Chemicals Assessment and Management Program (ChAMP)

- ChAMP encompasses U.S. SPP commitments and possible enhancements to EPA's existing chemical program, which include:
  - HPV Challenge-type program for high production volume "inorganic" chemicals
  - Resetting the TSCA inventory
- Numerous stakeholder meetings and presentations in the first half of this year
  - Focus meetings, webinars, pre-established conference meetings
  - Industry, NGOs, States and Tribes, Federal Partners, Green Chemistry and Commerce Council (GC3)
  - Public Meeting May2

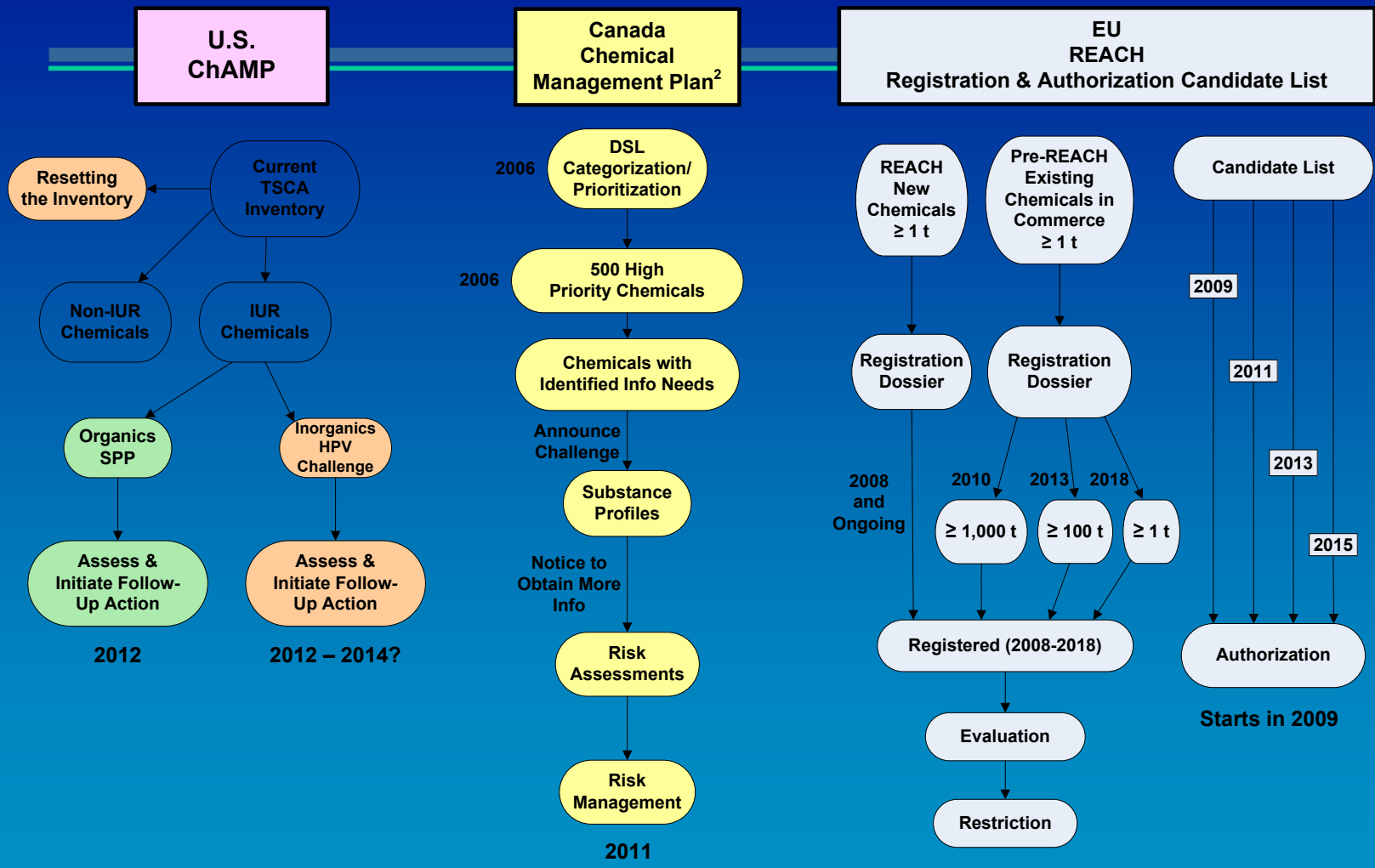
U.S. Commitments Under SPP

- By the end of 2012:
  - Assess and initiate needed action on the over 6,750 existing chemicals produced above 25,000 lbs/yr the U.S.
  - Includes High Production Volume (HPV) and Moderate Production Volume (MPV) chemicals
    - Builds off of prior efforts:
      - HPV Challenge
      - IUR Reporting
      - Canadian categorization, etc.
  - Make and publicly release screening level decisions and initiate needed action

Timing of Actions Under SPP and Their Relationship to Timing Under REACH

- Parallel schedules for priority chemical assessments should allow U.S. and Canada to share/coordinate timing of data and assessments and follow-up action, where appropriate
- Because the REACH 1st registration deadline (HPV chemicals) is Dec. 2010 and the 1st authorization candidate list is expected in late 2008, REACH submitters and evaluators will benefit from U.S. and Canadian work
- REACH registration dossiers can meet future follow-up testing needs for U.S. HPVs/MPVs and IHPVs
- Schedule for completion of North American assessment work (2012) compares favorably to timing of REACH registration schedule (2010-2018)
- U.S. (EPA), Canada (Environment and Health Canada) and EC (DG Environment, DG Enterprise, and European Chemical Agency) officials met in December 2007 to consider cooperative efforts and will meet again in November 2008.

Comparing U.S., Canada, and EU Approaches



[1] DSL = Canadian Environmental Protection Act Domestic Substances List
[2] Other aspects of the CMP are not shown on this figure.

1,000 t = 2.2 M lbs.; 100 t = 220k lbs.; 1 t = 2.2k lbs.

ChAMP – Next Steps

- Will provide stakeholder feedback and OPPTS recommendation to the Administrator this summer and, as appropriate, begin implementing program enhancements
- In 2008 will continue to refine the process and treatment for HPV/MPV assessment/prioritization documents
- By October 1, complete 150 HPV Risk-based Prioritizations; 55 MPV Hazard Based Prioritizations

DfE Informs Substitution to Safer Chemicals

- Informed substitution goals:
  - Provide the best information that is available or can be modeled;
  - Enable effective choice; and
  - Minimize the likelihood of unintended consequences.
  - Key Considerations:
    - The environment and human health; and
    - Cost effectiveness and technological feasibility.

Critical Decision Elements

Alternatives should:

- Be technologically feasible;
- Deliver the same or better value in cost and performance;
- Provide an improved profile for health and environmental issues;
- Account for economic and social considerations; and
- Have potential to result in lasting change.

Alternatives Analsyis: PBDE in Furniture

- Predominant flame retardant (pentaBDE) was being found increasingly in human tissue, breast milk and the environment.
  - This flame retardant was phased-out at the end of 2004.
  - Report provides data to inform industry decision-making for alternatives to this 19 million pound per year chemical.
- DfE evaluated the alternatives and provided summary data and detailed hazard reviews.
- Chemical manufacturers provided 14 technically-viable, cost effective alternatives.
- Manufacturers moved to alternatives and OPPT issued a SNUR to require notification before future production
- Method now being applied for Printed Circuit Board FRs

Furniture Flame Retardancy Partnership

Results: Data Presentation

Human Health Hazard Concern | **Ecotoxicity Hazard Concern** | **Environmental Hazard Concern**

Company	Chemical	% in Formulation[3]	Human Health Effects							Ecotoxicity		Environmental		Potential Routes of Exposure							Reactive or Additive?
														Worker			General Population				
			Cancer Hazard	Skin Sensitizer	Reproductive	Developmental	Neurological	Systemic	Genotoxicity	Acute	Chronic	Persistence	Bioaccumulation	Inhalation	Dermal	Ingestion	Inhalation	Dermal	Ingestion	Aquatic	
Albemarle	SAYTEX RZ-243																				
	Proprietary E Tetrabromophthalate diol diester		L	L	L*	L*	L	M*	L	L	H	L[?]	L	N	Y	Y	N	N	Y	Y	Additive
	Proprietary B Aryl phosphate		L	L	M*	M*	M	M*	L	H	H	L	M	N	Y	Y	N	Y	N	N	Additive
	Triphenyl Phosphate CAS # 115-86-6		L	L	L	L	L	M	L	H	H	L	L	Y	Y	Y	Y	Y	Y	Y	Additive
Ameribrom	FR513																				
	Tribromoneopentyl Alcohol CAS # 36483-57-5		M	L	M	M	M	M	M	M	M	L	L	Y	Y	Y	N	N	Y	Y	Reactive
Great Lakes	Firemaster 550																				
	Proprietary F Halogenated aryl ester		L	L	M	M	L	M	L	H	H	L[?]	L	N	Y	Y	N	Y	Y	Y	Additive
	Proprietary G Triaryl phosphate, isopropylated		L	L	M*	M*	M	M*	L	H	H	L	M	N	Y	Y	N	Y	N	N	Additive
	Triphenyl Phosphate CAS # 115-86-6		L	L	L	L	L	M	L	H	H	L	L	Y	Y	Y	Y	Y	Y	Y	Additive
	Proprietary H Halogenated aryl ester		L	L	M	M	L	M	L	H	H	L[?]	L	N	Y	Y	N	Y	Y	Y	Additive

DfE Product Recognition Program

Recognition for Safer Chemical Products

- Every chemical ingredient is reviewed according to its functional use (helps inform substitution):
  - Surfactants (Screen finalized)
  - Solvents (Screen finalized)
  - Chelating and Sequestering Agents (Screen in progress)
  - Fragrances (Screen nearing completion)

- Chemicals that share functionality often share toxicological qualities.
- Review of available data, enhanced via ChAMP, and application of SAR to fill gaps, inform substitution.

The Safer Detergents Stewardship Initiative (SDSI)

- **Environmental stewardship program to encourage the use of safer surfactants**
- **High-level Agency recognition for…**
  - Formulators
  - Chemical manufacturers
  - Retailers/Distributors
  - Institutional purchasers
  - Advocates
- **Promotes the goals of EPA's Ambient Water Quality Criteria (AWQC) for Nonylphenol (NP) and harmonizes with international environmental protection efforts**
- **More than 60 companies and NGOs have applied**

ChAMP and DfE

- ChAMP review and analysis will provide information that will enhance DfE's informed substitution-based programs.
- Alternatives Assessments:
  - ChAMP may identify high priority "chemicals of concern." for partnership development.
  - ChAMP may identify safer alternatives for a range of functional uses.
- Formulator – Differentiating Safer Products
  - ChAMP assessments will enrich DfE Formulator chemical reviews and
  - facilitate development of screens for safer chemicals by functional use class (e.g., surfactants, solvents, and fragrances).
- ChAMP review may identify opportunities for a targeted green chemistry challenge.

For More Information…..

http://epa.gov/champ/

http://epa.gov/dfe/