

US EPA ARCHIVE DOCUMENT



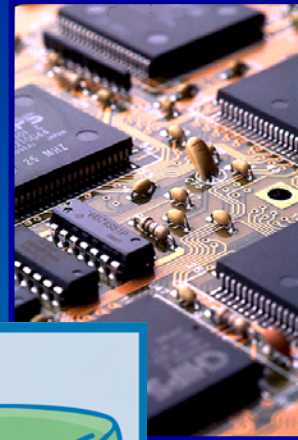
U.S. EPA Design for the Environment Program

Safer Product Labeling and Alternatives Analysis

PPDC Workgroup
October 13, 2009

Contents

- **Alternatives Assessments**
 - Alternatives Analysis for Flame Retardants
 - Furniture Foam
 - Printed Circuit Boards
 - Life Cycle Assessment – Nano-Enabled Batteries for Electric Vehicles
- **DfE Safer Product Labeling Program**
 - Criteria
 - Safer Ingredients
 - Entering the pilot



What DfE is About

- Goals
 - Safer Alternative Chemicals
 - Safer Products
- Central Elements
 - OPPTS technical tools and expertise
 - Multi-stakeholder participation
- Results
 - Industry partners reduced more than 330 million pounds of chemicals of concern last year



Furniture Flame Retardancy Partnership Alternatives Assessment (Completed)



- **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.
 - Need for fire safety will likely increase based on planned national standards.
 - Report provides data to inform industry.
 - Decision-making for alternatives to this 19 million pound per year chemical.
- **The Report**
 - Summary assessments of chemicals in flame retardant formulations.
 - Tables summarizing EPA assessment for environmental and human health endpoints.
 - Detailed hazard reviews.

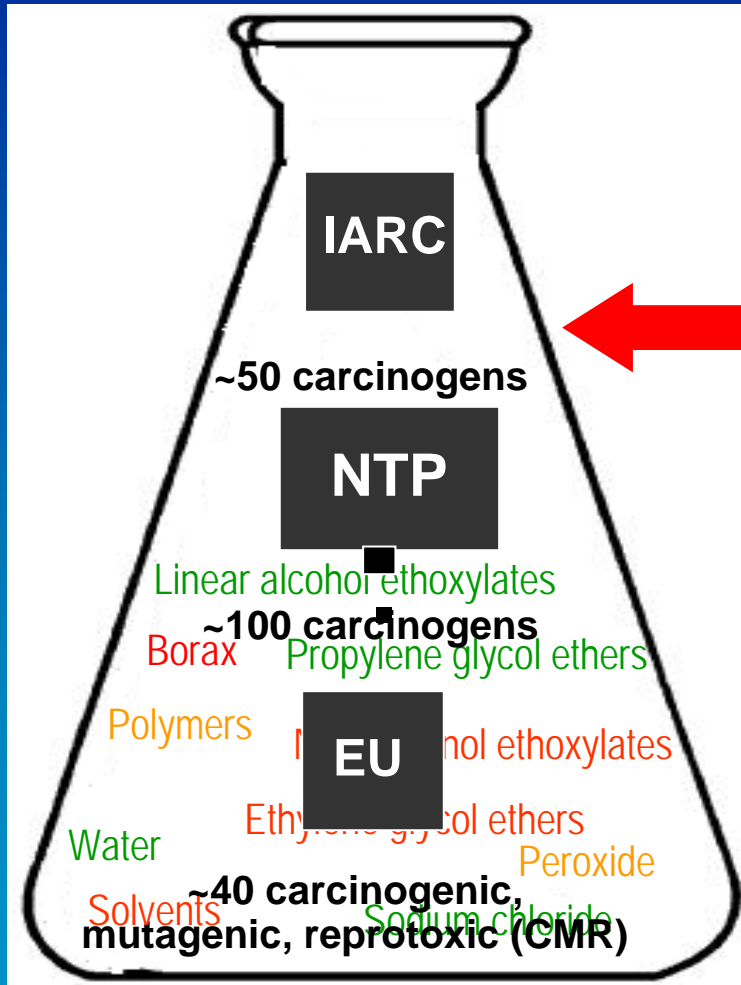


DfE Safer Product Labeling

- Cleaning products
 - Household
 - Industrial and Institutional
 - Direct release, car-wash, boat wash, graffiti removers, etc...
- Biological-based products
 - Holding tank treatments
 - Bioremediation products
- Deicers
- Aircraft conversion coatings
- Industrial coatings
- Inks
- Odor removal
- Field paint
- Tire balancing liquid



A Stringent Approach for Differentiating Products



Assess human health and environmental endpoints for **Tens of thousands of chemicals in commerce** every producing chemical.

- Does not allow dilution of toxicity
- Acute mammalian toxicity
- Ensures chemicals of known concern

One approach
(1) are carcinogenic with problematic but poorly understood chemicals

- Environmentalists
- These "black list" chemicals are only a tiny fraction of chemicals in commerce
- Neurotoxicity
- Repeated dose toxicity

- (2) Conduct whole product toxicity testing, focus on
- Stabilizers & impurities
 - respiratory and skin sensitization
 - Preservatives
 - But more can be done
 - Environmental toxicity and fate

Review – 3 Basic Components

1) Review every ingredient by functional use class

- To promote green chemistry
- To understand toxicity
 - Literature
 - Analogous chemicals – SAR

2) Review formulation as a whole

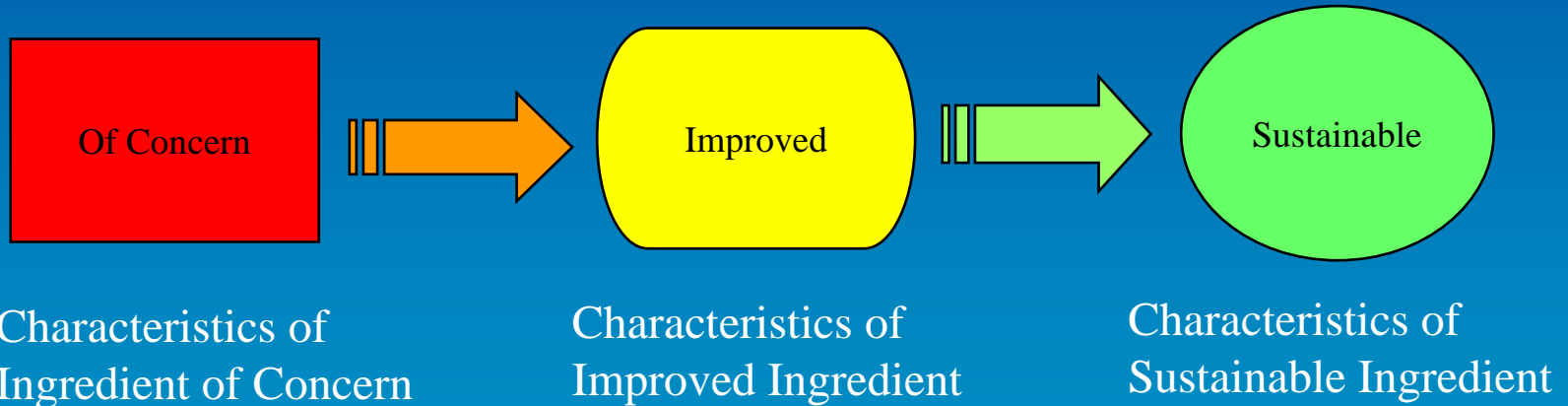
- Synergistic effects
- pH
- Performance testing

3) Partnership Agreement

Continuous Improvement: *As innovation occurs, continuum may shift*

•Continuum of Improvement

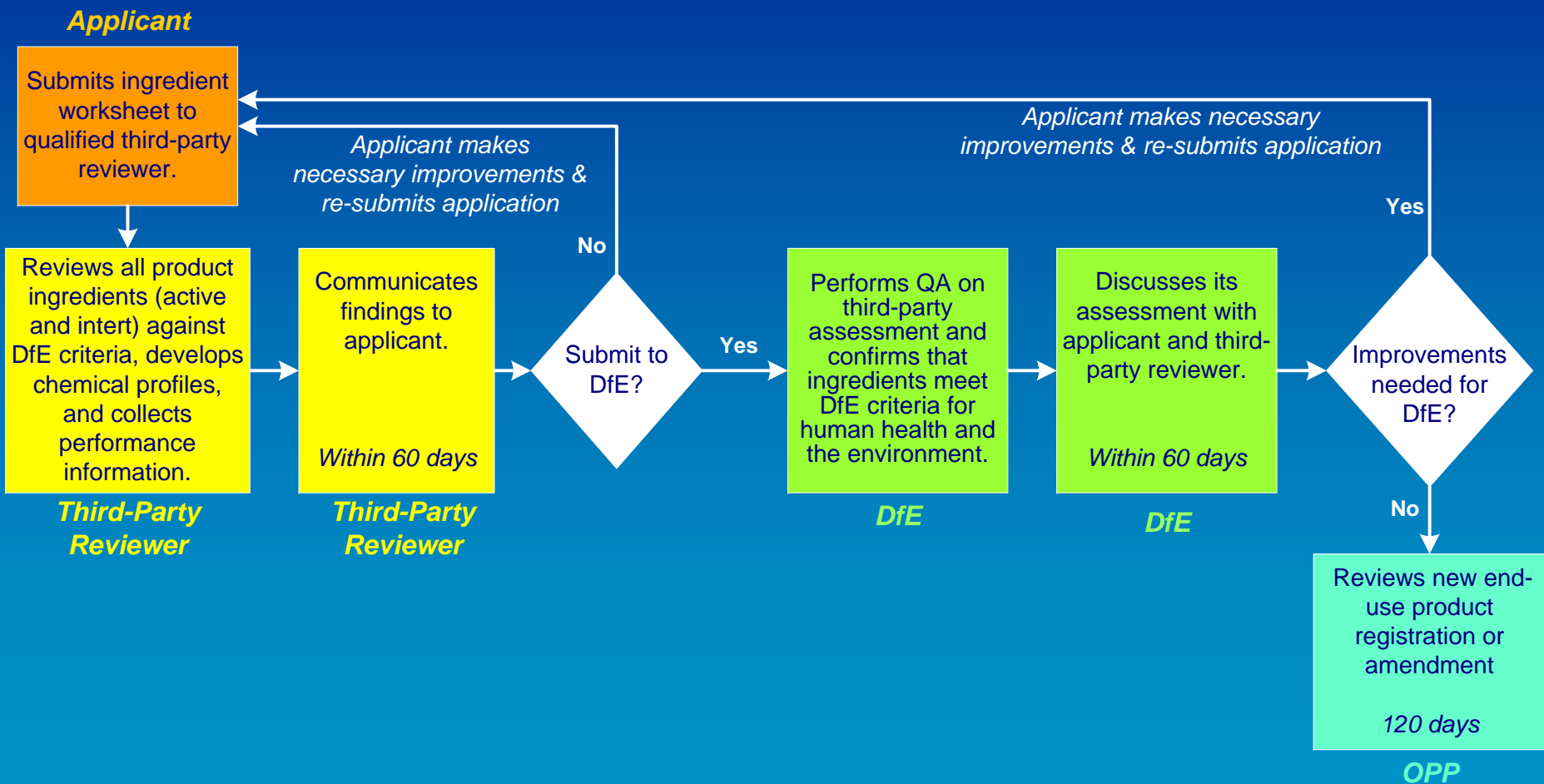
•Formula Ingredient by Functional Class



DfE Evaluation of Products in the Pilot

- The Whole Product Will Be Evaluated Against:
 - DfE Criteria for Safer Cleaning Products
- Each Inert Ingredient Will Be Evaluated Against:
 - DfE Criteria for Safer Cleaning Products
 - DfE Screens for Safer Chemicals
- Active Ingredients Will Be Evaluated Against:
 - DfE General Screen

Steps to Obtaining DfE Logo for a Currently Registered Product



More Information

- DfE Criteria for Safer Cleaning Products
- DfE Screens for Safer Chemicals
- Logistics for Partnering

www.epa.gov/dfe



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