

RFP Development for Study on Alternatives to decaBDE in Shipping pallets

John James
Maine DEP

Interstate Chemical Clearinghouse
Conference call, January 13, 2011

An Act to Clarify Maine's Phaseout of PBDEs (PL 2009, c. 610)

- Bans the sale of pallets with decaBDE eff. Jan 2012
- Authorizes DEP to grant a 1-yr exemption if:
 1. Safer alternatives do not exist;
 2. Safer alternatives exist, but don't meet fire safety standards;
 3. More time is needed to complete testing of alternatives; or
 4. More time is needed to modify the manufacturing process in order to produce a shipping pallet with safer alternatives.
- Authorizes DEP to "supervise" an alternatives assessment study funded by iGPS, a company that leases pallets containing decaBDE
- Prohibits the replacement of decaBDE with another halogen or any other PBT

Arranging for the assessment study

- Confirmed that iGPS would fund the study and the amount (up to \$250,000)
- Developed a Request for Proposals (RFP)
- Solicited bids
- Hired Pure Strategies, Inc., the only company to bid
- Pure Strategies well qualified, having previously investigated alternatives to decaBDE in electronic enclosures and textiles.*

*See Pure Strategies, Inc., *Decabromodiphenylether: An Investigation of Non-Halogen Substitutes in Electronic Enclosure and Textile Applications*, prepared for Lowell Center for Sustainable Production, University of Mass. Lowell, April 2005.

Developing the RFP:

Resources consulted

- Text of the law
- Google
- Lessons learned from our prior assessment of alternatives to decaBDE
- Other alternatives assessments and protocols
- Solicited review and comment from iGPS, Environmental Health Strategy Center (Mike Beliveau) and TURI (Pam Eliason)

Developing the RFP: resources consulted

The text of law (PL 2009, c. 610):

- Section 7. Defines safer alternative (see next slide)
- Section 9. Requires that study be prepared consistent with current methodologies for alternatives assessment
- Section 11. Directs DEP to study issues related to the ban on replacing decaBDE with another halogenated flame retardant

Developing the RFP: resources consulted

Definition of “safer alternative”

“Safer alternative” as defined in the law means a substitute process, product, material, chemical or strategy that:

- (1) Has not been shown to pose the same or greater potential for harm to human health or the environment as the chemical to be replaced;
- (2) Serves a functionally equivalent purpose that enables applicable fire safety stds and relevant perf. stds to be met;
- (3) Is commercially available on a national basis; and
- (4) Is not cost-prohibitive.

Developing the RFP: resources consulted

Google search

- Yielded key background info:
 - Types of plastics used in pallets
 - Unique fire safety challenge posed by pallets
 - Applicable fire safety std – NFPA 13
 - The pallet war: wood v plastic
- NFPA 13
 - Treats plastic pallets differently than wood pallets because plastic poses a more difficult fire suppression challenge

Developing the RFP: resources consulted

Lessons learned from prior DEP assessment of alternatives to decaBDE

- In 2004, the Maine Legislature passed a law that
 1. Banned the sale of products containing pentaBDE and octaBDE
 2. Directed the Maine DEP and CDC to report annually on the availability of safer alternatives to decaBDE
- We filed three reports (05, 06 and 07), at which point the Legislature banned the sale of TVs with housings containing decaBDE and repealed the annual reporting requirement.

Developing the RFP: resources consulted

2007 findings on decaBDE alternatives

- Most decaBDE (up to 80%) is used in TVs.
- Other uses: upholstered office furniture (~10%); coated wire; electrical parts.
- Safer alternatives are available for TVs. The alternative requires TV makers to use a different type of plastic. (Wood TV cabinets are safer but not widely available).
- For all products in which decaBDE is used, alternatives without decaBDE are available
- No application was identified in which decaBDE is the only FR used or in which decaBDE offered unique or exceptional properties
- **Our research did not identify shipping pallets as a decaBDE application**

Developing the RFP: resources consulted

Other alternatives assessments and assessment protocols

■ Danish EPA

- *Brominated Flame Retardants: Substance Flow Analysis and Assessment of Alternatives* (June 1999)
- *DecaBDE and Alternatives in Electrical and Electronic Equipment* (January 2007)

■ German Environmental Agency

- *Substituting Environmentally Relevant Flame Retardants; Assessment Fundamentals* (June 2001)

■ States Alternatives Assessment Wiki and Protocol (1/2/2009)

Developing the RFP: resources consulted

Stakeholder consultation

- The final bill was shaped largely in negotiations involving iGPS and Mike Beliveau of the Env. Heath Strategy Center
- Both were invited to review the draft RFP; both recommended that it identify the specific “performance stds” to be considered in determining if a potential alternative is “functionally equivalent” to pallets containing decaBDE. See definition of “safer alternative”
- iGPS urged the department to limit the study to consideration of pallets that meet recommended pallet performance specs published by the Grocery Manufacturers Association
 - In particular, iGPS urged the department adopt the GMA recommendation that a pallet weigh no more than 50 pounds as a key goal of the study
- iGPS also took the position that the study should not examine whether it was possible to meet NFPA 13 without using FRs

RFP as issued

- Required tasks were designed to explore 3 possible strategies for substituting decaBDE:
 1. Plastic pallets without flame retardants
 2. Plastic pallets using other chemical retardants
 3. Wood pallets
- Pallets meeting the GMA specs presumed to be functionally equivalent