

# New and Emerging HHW

Establishing an effective  
Disposal/Recycling program for  
the Next Generation of Smoke  
Detectors

**USED OIL/HHW 2015 TRAINING AND CONFERENCE**

Sheraton Universal Hotel

April 9, 2015



# Background

## SB 745

- ▶ As of July 1, 2014, any battery-powered smoke alarm or combination (smoke and carbon monoxide) alarm approved for sale by the State Fire Marshal must be powered by a sealed, 10-year battery. (Hard-wired smoke detectors are still acceptable)
- ▶ By July 1, 2015, retailers can only stock the sealed-in, long life battery smoke detectors.
- ▶ Replacement of old style detectors is required when tenants change or when property is transferred.
- ▶ Nothing in the legislation addresses end-of-life considerations for the new generation of smoke detectors, which are not permitted in landfills...
- ▶ nor the anticipated massive increase in traditional ionization smoke detectors expected to be disposed of when replaced.

# Smoke Alarm Disposal

## Brief Background

- ▶ There are two basic types of smoke detectors: Photovoltaic, (which can be handled as simple universal waste) and ionization detectors. (Containing a trace amount of Americium-241)
- ▶ The radiation given off by a single ionization detector is not a health issue. (< 1 mrem/yr.)
- ▶ The State Department of Public Health, Radiologic Health Branch reports that disposal of traditional ionization smoke alarms into landfills is permissible.
- ▶ Upon contacting the State PH-RHB for information regarding battery imbedded smoke alarms, they directed me to Cal-EPA.

## DEPARTMENT OF PUBLIC HEALTH RADIOLOGIC HEALTH BRANCH



### ■ Exempt Sources

- Fiestaware™
- Smoke Detectors
- Uranium or Thorium compounds less than 0.05% by weight U+Th
- Self-luminous products
  - Tritium
  - Krypton-85
  - Promethium-147



## DEPARTMENT OF PUBLIC HEALTH RADIOLOGIC HEALTH BRANCH



### ■ RHB and Landfills

- RHB regulates disposal of licensed materials
- No RHB regulations specific to landfills
- No requirements regarding monitoring

# Current Disposal Options:

## ▶ Return to Manufacturer

- ▶ Not convenient
- ▶ Not cheap
- ▶ Not done

## ▶ Landfilling

- ▶ Currently permitted\* for traditional removable battery detectors but not for the new generation of detectors with imbedded batteries \*According to DPH - RHB

## ▶ Third party recyclers (Curie Environmental, Lighting Resources)

- ▶ Expensive (But will likely get cheaper)
- ▶ Not designed for household quantities

## ▶ Stockpile until viable option emerges

- ▶ Most popular current option
- ▶ What Cal Fire is advising
- ▶ Not recommended if large quantities stockpiled

# Other Potential Options

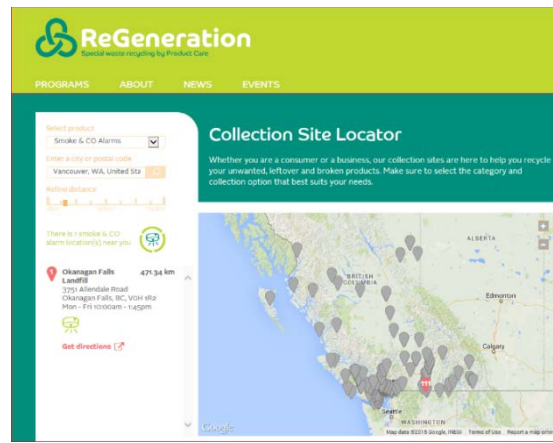
- ▶ The local retail model (Local take-back ordinance)



Local ordinances requiring retail operations to take back products.

Politically untenable in many areas. May result in diminished availability to purchase and significantly higher prices.

- ▶ The British Columbia model



Permanent, no cost, take-back locations funded by industry. Widely used by residents.

[www.regeneration.ca/programs/smoke-co-alarms/british-columbia/](http://www.regeneration.ca/programs/smoke-co-alarms/british-columbia/)

# Industry Responses

## When contacted about take-back options

- ▶ **BRK** Dicon Global, First Alert, Garrison, North America

Call first for address and account number , \$1/alarm, need model number (accepts up to 5 units)

- ▶ **Gentex**

Does not want returned detectors. Will assess fee.

- ▶ **Kidde** Life Saver, Frynetics Inc., Nighthawk

No acceptance program. They will process\* if received. Declined to participate in pilot program.

- ▶ **Honeywell** System Sensor

Requires prior notification and return authorization number. Charges \$3.00 fee.

\*Dispose of

# Conclusions

- ▶ The new generation of smoke detectors with the 10-year non-removable Lithium batteries will start to reach their end-of-life in the next few years.
- ▶ There are currently no options for their take-back, disposal or recycling in California.
- ▶ Stockpiling is not an long-term option due to the potential accumulation of radioactive materials.
- ▶ British Columbia has established a take-back program for smoke detectors that could act as a model for the State. [www.bclaws.ca/Recon/document/ID/freeside/449\\_2004](http://www.bclaws.ca/Recon/document/ID/freeside/449_2004)
- ▶ Stay tuned.



**COMING SOON** (HOPEFULLY)

**CONVENIENT  
SMOKE ALARM  
DISPOSAL**

STARRING THE USUAL CAST OF INTREPID STATE & LOCAL HHW FOLKS AND PRODUCT STEWARDSHIP ADVOCATES

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