

HPVA 2007 Fall Conference

September 10, 2007

“What is the CARB Rule and Why Should I care?”

*Jim Aguila, Manager
Substance Evaluation Section*

California Environmental Protection Agency



Air Resources Board



Overview

- Background on Airborne Toxic Control Measure
- Benefits & Impacts
- Approved ATCM
- April ARB Hearing Summary
- Additional ATCM Modifications
- ATCM Implementation
- 2007/2008 Schedule





BACKGROUND



California's Air Toxic Program

Identification

Potential Toxic Substance

ARB/OEHHA Publishes Draft Report

- Public Workshops
- Comment Periods

SRP Reviews Report

Public Hearing

Risk Management

Evaluates Source Categories

Investigate Risk Reduction Options

- Public Workshops

Publish Staff Report/Proposal

- Public Workshops
- Comment Period

Public Hearing



California Health & Safety Code Requirements



- § 39657 - Requires ARB to identify toxic air contaminants; identify minimum threshold level if any
- § 39658 - Requires ARB to develop Air Toxic Control Measures (ATCMs)
- § 39666 - For compounds with no safe threshold level, the HSC requires the development of control measures based on **best available control technology**, or more effective controls in consideration of costs and risk



Formaldehyde as a Toxic Air Contaminant

- Identified as a Toxic Air Contaminant in 1992
- No level of exposure considered “safe”
- Inhalation causes cancer in the region of the throat behind the nose
- Non-cancer effects



Composite Wood Products Covered Under ATCM

- Hardwood Plywood (HWPW)
 - Veneer core
 - Composite core
- Particleboard (PB)
- Medium Density Fiberboard (MDF)
 - Thickness > 8mm
 - Thickness \leq 8mm (Thin MDF)



North American Composite Wood Industry

- **HWPW**

- 2002 U.S. production: ~2.5 billion sq. feet
- No. of North American mills: 51

- **PB**

- 2002 U.S. production: ~5.4 billion sq. feet
- No. of North American mills: 40

- **MDF**

- 2002 U.S. production: ~2.4 billion sq. feet
- No. of North American mills: 26



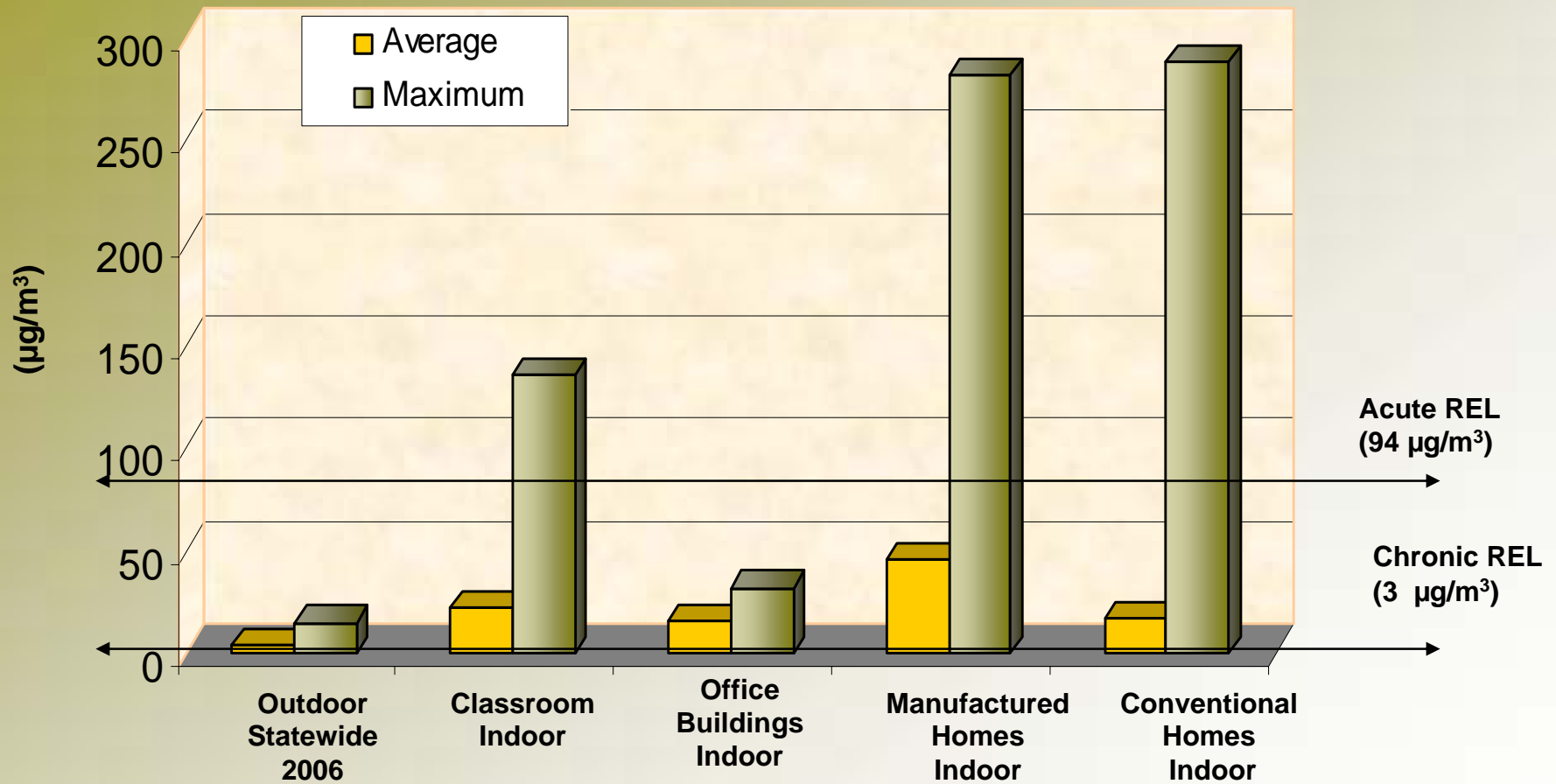
Formaldehyde Emissions from Composite Wood Products

- Hardwood plywood
 - 240 tons per year
- Particleboard
 - 450 tons per year
- Medium density fiberboard
 - 190 tons per year
- Total ~ 900 tons per year





Typical Formaldehyde Levels



70 years at 1 $\mu\text{g}/\text{m}^3$ = 6 lifetime cancers per million



United States Emission Standards

- Set in 1985 by U.S. Dept. of Housing and Urban Development (HUD)
- Applies only to PB and HWPW in manufactured homes
- Limits surface emissions
- High emission rate compared to Europe, Australia, and Japan



International Emission Standards

- Lower than current U.S. standard
- Programs are fundamentally different; not directly comparable
- Generally not emission caps



Need for Control

- U.S. HUD standard not protective
- Childhood risk (9 years)*: 23-63 cancer cases per million
- Lifetime risk (70 years)*: 86-231 cancer cases per million

* Based on total daily average formaldehyde exposure



Benefits and Impacts



Emissions, Exposure, and Risk Reductions

- **Emission reductions**
 - 180 tons per year - Phase 1
 - 500 tons per year - Phase 2
- **Exposure reductions***
 - 15% - Phase 1
 - 40% - Phase 2
- **Lifetime cancer risk reductions***
 - Baseline 86-231 cases
 - 12-35 cases reduced – Phase 1
 - 35-97 cases reduced – Phase 2

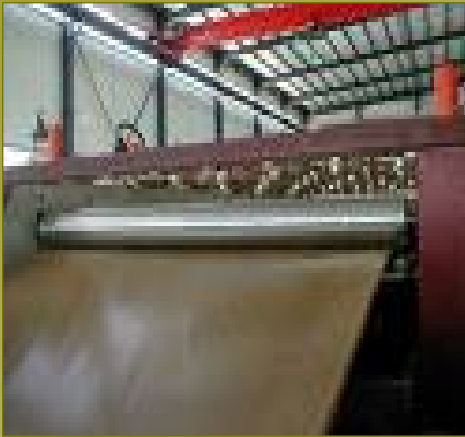
* Based on total daily average formaldehyde exposure



Emissions, Exposure, and Risk Reductions

Product	Phase 1 (\$/panel)	Phase 2 (\$/panel)
HWPW	< \$0.20	\$4 to 6
PB	< \$1	\$3 to \$4
MDF	< \$1	\$4 to \$6

Total Annual Industry-wide Cost:	\$19 million	\$127 million
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Airborne Toxic Control Measure

Approved by the ARB on April 26, 2007



ATCM Applicability

- Panel manufacturers
- Distributors
- Importers
- Fabricators
- Retailers



ATCM Provisions

- Applies to products sold, supplied, used, or manufactured for sale in California
- Emission standards for raw boards
- Sell-through
- Exemptions
- Enforcement



Requirements for HWPW Manufacturers

- Emission Standards in Two Phases
- Third Party Certification
- Quality Assurance
- Product Labeling
- Statement of Compliance
- Record Keeping
- Sell Through





Rationale for Phase 1 Standards

- Sets an industry cap; over half of HWPW manufacturers need to lower emissions
- Curtails low-cost, high-emitting imported products
- Establishes enforcement program



Approved Phase 1 Standards

Product	Jan 1, 2009	Jul 1, 2009
HWPW-VC	0.08 ppm	-----
HWPW-CC	-----	0.08 ppm
PB	0.18 ppm	-----
MDF	0.21 ppm	-----
Thin MDF	0.21 ppm	-----



Rationale for Phase 2 Standards

- Defines Best Available Control Technologies (BACT)
 - Technology forcing
- Sets levels similar to Japanese F^{****}



Approved Phase 2 Standards

Product	Jan 1, 2010	Jan 1, 2011	Jan 1, 2012	Jul 1, 2012
HWPW-VC	0.05 ppm		-----	-----
HWPW-CC		-----	-----	0.05 ppm
PB		0.09 ppm	-----	-----
MDF		0.11 ppm	-----	-----
Thin MDF		-----	0.13 ppm	-----



Sell-through

- Allows sale of non-compliant products manufactured before standard effective date
- Time period limited
- Differing sell-through periods for manufacturers, distributors, importers, fabricators, and retailers



Exemptions

- Products subject to HUD standards
- Windows with <5 vol% composite wood
- Garage and exterior doors; doors with <3 vol% composite wood or made with waterproof resin
- Military specification plywood
- Vehicles



CWP ATCM Enforcement Program

- Third Party Certification
- Statements of Compliance
- Record Keeping
- Product Labeling
- Facility Inspections
- Compliance Testing



April ARB Hearing Summary



Air Resources Board Action

at April 26th Hearing

- Approved staff's proposed modified regulation (7-0 vote)
- Directed staff to provide enforcement program update for Board in 2008



Additional ATCM Modifications Approved by the Board at the April Hearing



Additional Modifications to the Original Proposal

Under Consideration:

- Performance-based compliance option for ultra low-emitting resin systems
- Sell-through provision dates
- Definition of “architectural plywood”
- Other clarifications



ATCM Rulemaking Process

- Staff Report released to public on March 9, 2007
- ARB approved ATCM on April 26th, 2007
- ATCM modifications for public comment
- Complete FSOR
- Submit rulemaking file to OAL
- OAL approval and codification into California Code of Regulations



Composite Wood Products ATCM Implementation



Importance of Enforcement



- Strong enforcement infrastructure plan
- Necessary to achieve ATCM benefits
- Fair competition between imports and domestic products
- Essential to viability of industry



CARB Enforcement Program Update

- Approach similar to consumer products regulation
- Will ensure that finished goods are fabricated with lower emitting boards
- ARB testing capabilities
- Procurement of FLEC Chamber & Interscan HCHO detector
 - Field screening device





ARB Testing Capabilities

Timeline

2007

3rd Qtr.

Action

Prepare Small Test Chambers

Status

In progress

4th Qtr.

Begin Small Chamber Cert.
Evaluate Field Screening Equip.
Finished Product Evaluation
Draft CARB Lab Analytical Method

CDPH*
Procured
CDPH

2008

1st Qtr.

Small Chamber Round Robin
Testing & Refine Testing Methods

Looking for
participants

3rd Qtr.

Complete Lab Protocols

January 2009

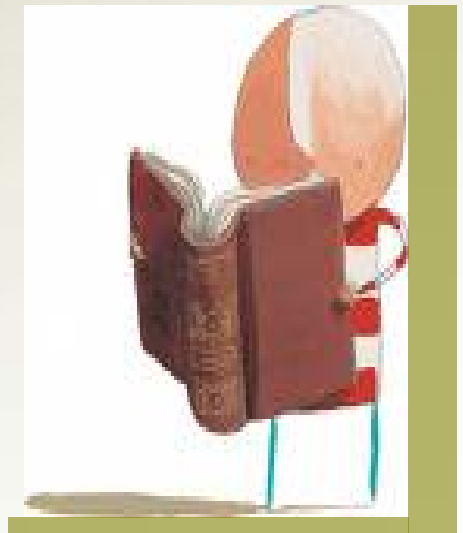
Implementation of ATCM

* California Department of Public Health



Education and Outreach

- Fact sheets (domestic, international)
- FAQ's
- Enforcement advisories
- Conferences
- Meetings





CWP ATCM Website Update

- Emphasize implementation
- Provide transparency
- Add FAQ Webpage
- List TPCs
- On-line TPC application
- Information on NAF products
- Webinars





Third Party Certification is Key

- Regulation will have a global impact on CWP commodity trading
 - international TPCs are essential
- Staff developing TPC review criteria
- Maintaining a web-based registry of approved TPCs
- Outreach
 - Meeting with potential TPCs
 - Asian contacts
 - TPC webinar



CWP ATCM Schedule

2007

3rd Qtr.

- Submit ATCM rulemaking file to OAL
- CDPH chamber studies

4th Qtr.

- Release modified regulation to public
- ARB small to large chamber correlation
- Develop review criteria for TPC's and NAF's

2008

1st Qtr.

- Review first TPC and NAF applications
- Small chamber round robin testing

2nd/3rd Qtr.

- ARB Status Report
- Finalize lab protocol for enforcement sampling





For More Information

Visit our website:

<http://www.arb.ca.gov/toxics/compwood/compwood.htm>



Or, contact us:

Jim Aguila, Manager

Substance Evaluation Section

(916) 322-8283

jaguila@arb.ca.gov