

Update on California's Composite Wood Products Regulation

Composite Panel Association
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California Environmental Protection Agency



Air Resources Board

Presentation Overview

- Where are we today?
- Third party certification program
- Enforcement program update
- Implementation actions
- Questions



Where Are We Today?

Chronology of Events

- World-wide market adjusting to “CARB” composite wood products
- Global third party certification program established
- Phase 1 emission standards began January 1, 2009
- Sell-through period for manufacturers, importers, and distributors (Phase 1)
- Focus on enforcement program
- Addressing implementation issues



Third Party Certification Program Update



Third Party Certification (TPC) Program

Third party certifiers (TPCs):

- Verify CARB compliance at manufacturing mill
- Verify manufacturer's ability to provide consistent quality
- Help establish chain of custody at manufacturing level by allowing the use of their TPC number



TPC Program

(continued)

- All TPCs currently fulfilling their roles worldwide
- ATCM has established first ever worldwide composite wood product independent certification infrastructure
- 27 CARB-approved TPCs
- 5 applications under review
(<http://www.arb.ca.gov/toxics/compwood/certifiers.htm>)



CARB Administration of TPC Program

- **Goals**

- Ensure effective TPC programs
- Maintain consistency among TPCs
- Provide guidance on ATCM requirements

- **Plan**

- Establish communication
 - > Individual TPCs
 - > TPC bulletins
- Monitor TPCs
 - > Individual assessment calls
 - > Inter-laboratory comparison testing
 - > CARB staff evaluation
 - > CARB's regional calls with TPCs
- Findings from individual assessments and regional calls



TPC Administration Schedule

- Individual TPC calls March - May 2009
- TPC regional calls mid-June 2009
- CARB/TPC inter-laboratory testing comparison May - June 2009
- TPC bulletin June 2009



Status of Mill Certifications

- Certified U.S. mills (76 mills total)
 - 30 PB mills
 - 18 MDF mills
 - 28 HWPW mills
- Certified foreign mills (461 mills total)
 - 245 certified mills in China
 - 75 certified mills in Southeast Asia
 - 103 certified mills in Europe
 - 38 other (Mexico, S. America, Canada, Australia, NZ)
- CARB website featuring certified mills:
<http://www.arb.ca.gov/toxics/compwood/tpc/listofmills.htm>



Supply of Certified Products

- Staff has monitored supply of CARB certified composite wood products since August 2008
 - latest estimate as of April 2009
- Estimates based on data from TPCs, Wood Based Panels International, and website information



Supply Status

- Current supply of composite wood products is sufficient for California demand
- May reach supply level for U.S. furniture demand later this year
- Some U.S. mills already Phase 2 compliant
 - PB – 4 out of 30
 - MDF – 2 out of 18
 - HWPW – 18 out of 28



NAF/ULEF Program Status

- ATCM allows TPC exemption for manufacturers using no-added formaldehyde (NAF) and some ultra low emitting formaldehyde (ULEF) resin systems
- Requires application; approvals case-by-case
 - CARB Executive Order; 2-year approval
- 17 CARB approved (15 NAF; 2 ULEF)
 - http://www.arb.ca.gov/toxics/compwood/naf_ulef/listofnaf_ulef.htm
 - 4 applications under review



Enforcement Program Update



Enforcement Program Update

- Field inspections
- CARB emission testing
- Investigations and case settlement



Enforcement

Field Inspections

- Inspect products for compliance with labeling requirements
- Check chain of custody documentation
- Field screening of product emissions
- Purchase products/samples at retail, commercial, and internet outlets
- Products/samples sent to laboratory for testing



Enforcement

CARB Emission Testing

- Field screening method
 - FLEC and portable formaldehyde analyzer
- CARB enforcement based on secondary test method
 - Small chamber (ASTM D 6007) deemed equivalent to primary test method (large chamber, ASTM E 1333)

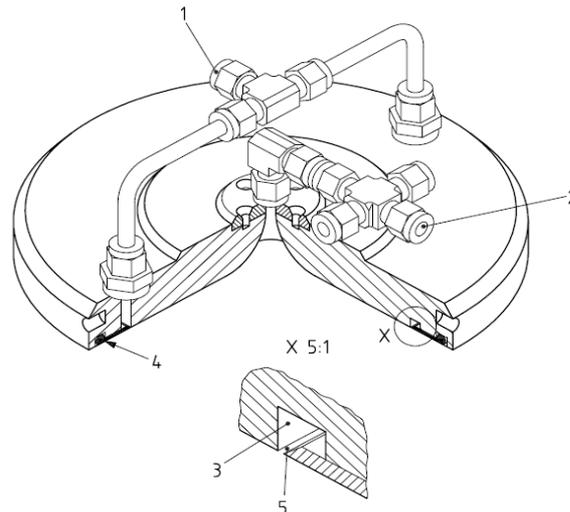


Field Screening Method

FLEC (Field and Laboratory Emissions Cell)

- Markes, International - model 4160-500b
- FLEC volume = $3.50\text{E-}05 \text{ m}^3$
- Sample surface area is $1.77\text{E-}02 \text{ m}^2$

Interscan portable formaldehyde analyzer, 0-500 ppb





STATE OF CALIFORNIA, D.P.R.
20062306

PPB

112

SPAN

ALARM SET

CALIBRATED
DATE: 7/25/07
Environmental Calibration - Quality

SAMPLE
ZERO → A → BAT.
OFF → B → TEST

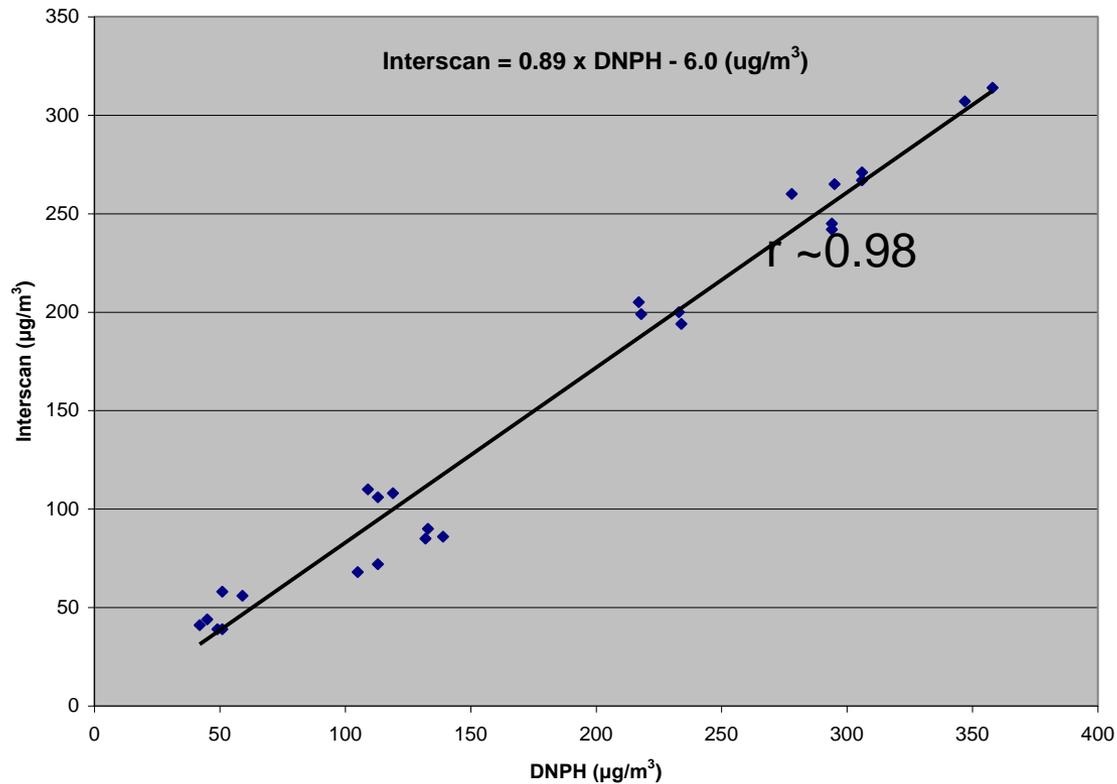
ZERO

scan

HCHO

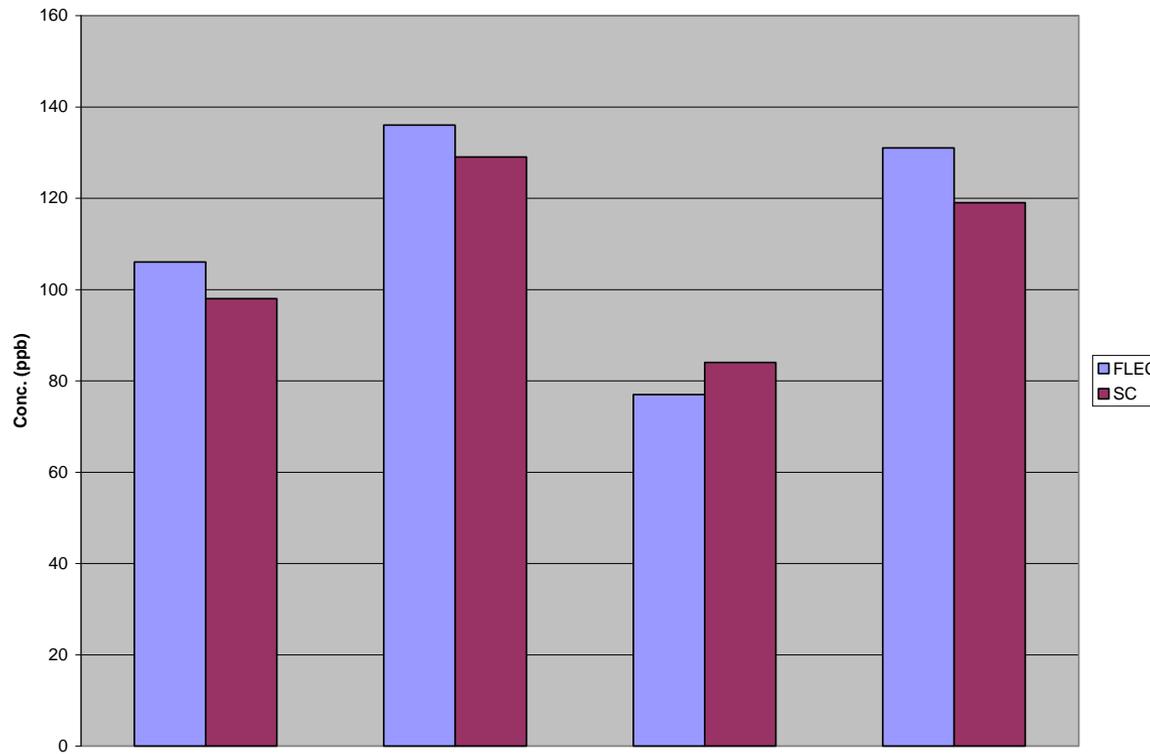
DNPH vs. INTERSCAN

Correlation of results for small chamber air samples analyzed by DNPH-HPLC or Interscan.



Small Chamber vs. FLEC

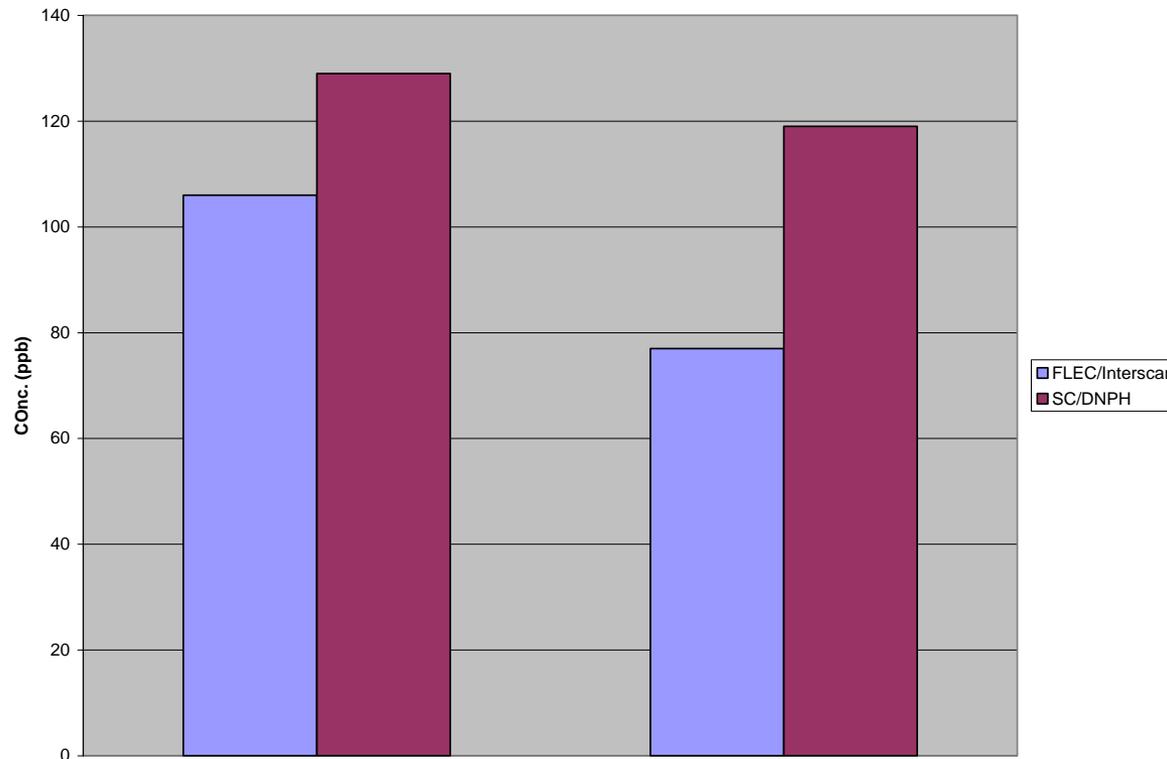
Four particle board specimens were sampled with the small chamber or FLEC using same Q/A ratio.
HCHO detection with Interscan



The concentrations for the two chambers were within 10% of difference.

Small Chamber vs. FLEC/Interscan

Comparison of SC/DNPH and FLEC/INTERSCAN to measure the concentration for two particle board specimens*



* FLEC/INTERSCAN results were lower than those for the SC/DNPH method; this was likely because of the bias of the INTERSCAN compared to DNPH. More evaluations of the INTERSCAN are planned in 2009. ²¹

Enforcement

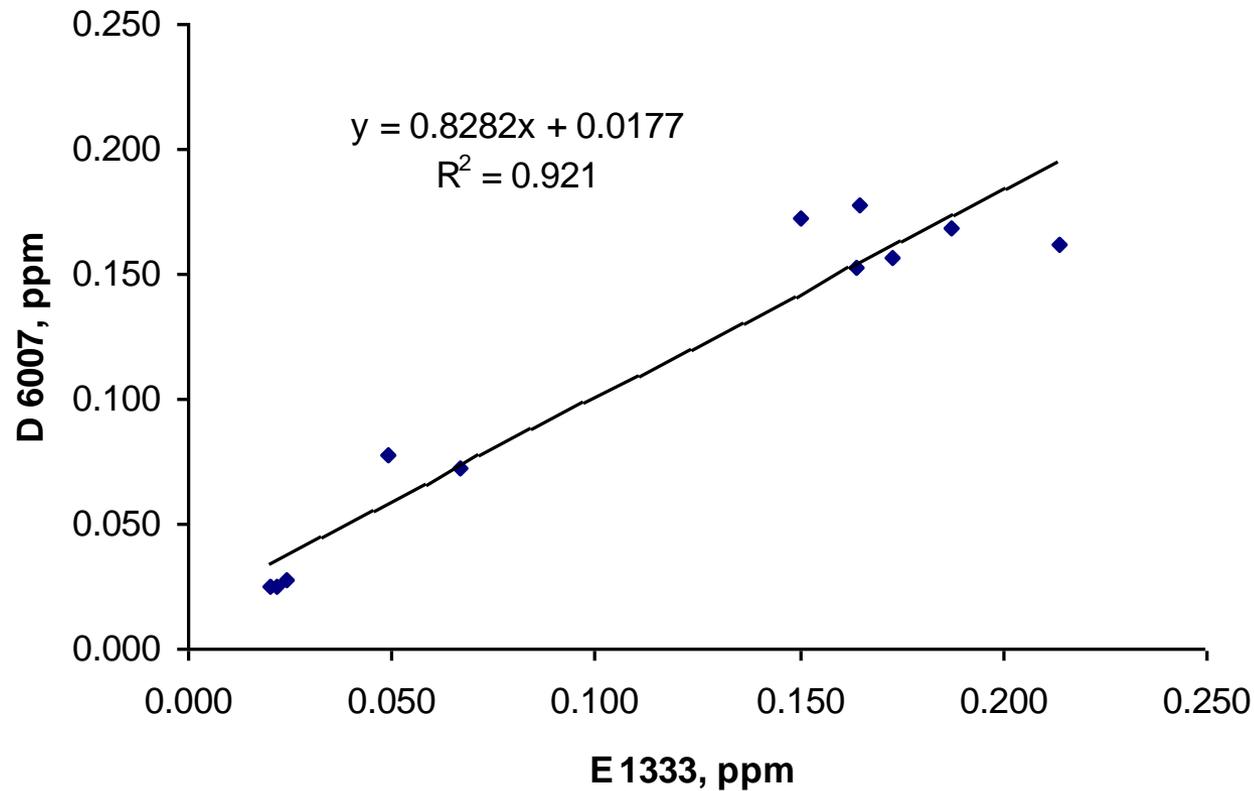
Test Method

- CARB has 6 small chambers
 - 20 L volume
 - Dinitrophenyl hydrazine (DNPH) with High Performance Liquid Chromatography (HPLC) analysis
- Chambers passed equivalence testing for secondary test method after comparison testing with California Dept. of Public Health (DPH) large chamber



CARB Equivalence

Low and High Emission Range



Enforcement

Testing of Panels

- Method for testing formaldehyde emissions from panels is established
- Same method allows testing of panels or finished goods that are laminated on one side



Enforcement

Finished Goods Test Method (FGTM)

- CARB working with industry representatives to develop approach to test finished goods
- CARB and DPH conducting emission studies on various products
- CARB will share progress on testing approach with interested stakeholders



Enforcement

Finished Goods Test Method (FGTM)

- Purpose – to determine if a composite wood substrate in a finished good complies with emissions limits
- Finished good sample preparation protocol:
 - Sample handling
 - Sample deconstruction
- Chamber test method
 - CARB small chamber
 - Method will incorporate test method variability



FGTM

Deconstruction Variability Parameters

- Panel type
 - HWPW, MDF, PB
- Laminate/covering type:
 - Wood veneer, synthetic, coatings
- Deconstruction method
 - Sanding vs. planing
- Surface layer removal
- Sample conditioning

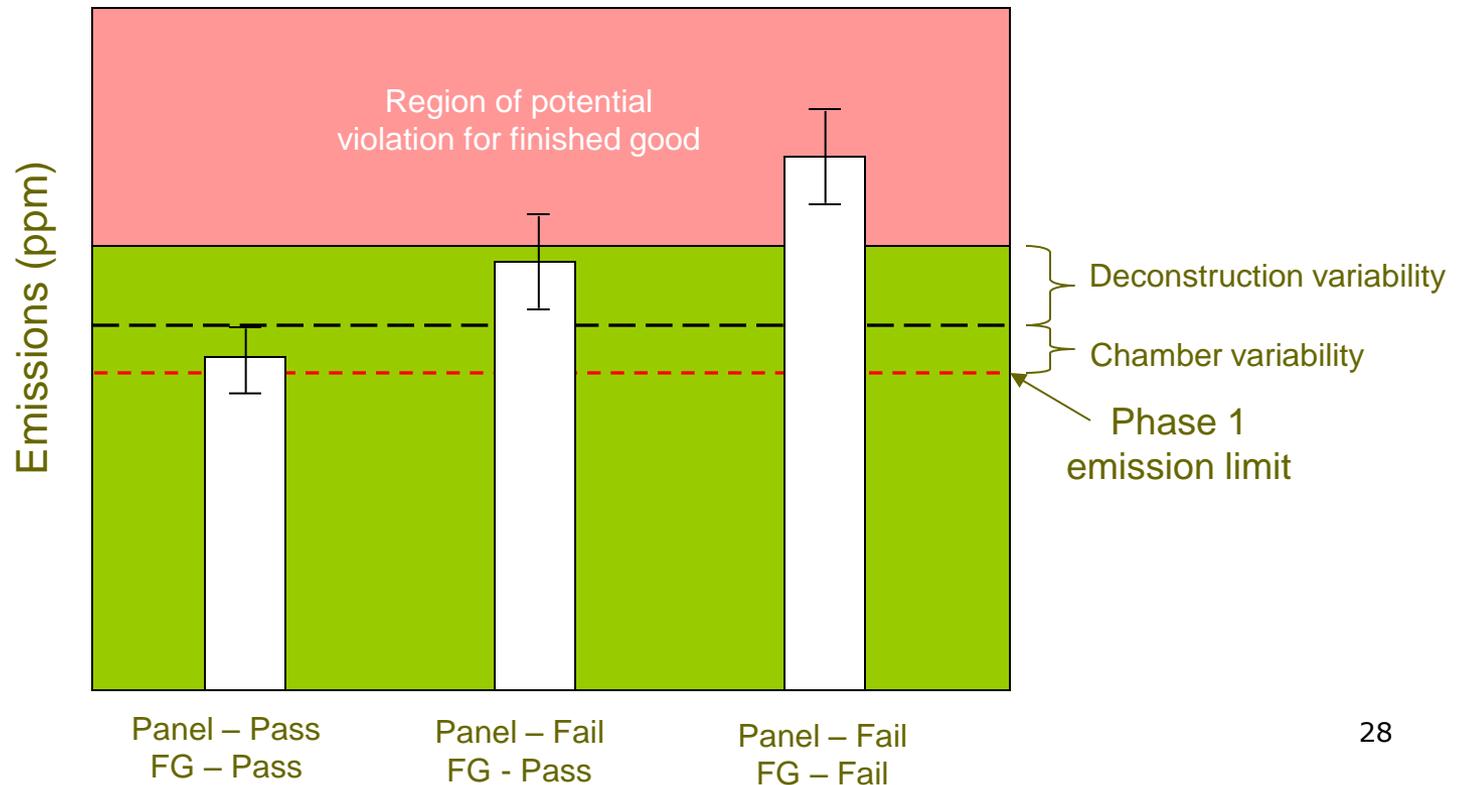


FGTM

Variability

Two sources of variability:

- Variability of the chamber test method
- Variability due to deconstruction of finished goods (FG)



Enforcement

Investigations and Case Settlement

- Evaluate information regarding non-complying products
- Determine responsible party
- Issue Notice of Violation
- Liability and case settlement



Enforcement

Assistance and Outreach

- Enforcement advisories
- Outreach at conferences and trade shows
- Site visits
- Press releases
- Staff consultations



Regulatory Advisory



November 12, 2008

Composite Wood Products ATCM Advisory: 08-01 Certification of "Non-complying Lots" Produced by CARB Certified Manufacturers

This regulatory advisory is primarily directed to manufacturers of composite wood products and is intended to provide information regarding the handling of "non-complying lots." This advisory will explain provisions that can be applied by a manufacturer for inventories produced before being recognized as a producer of CARB compliant composite wood products by an approved third party certifier.

Background

In 2007, the California Air Resources Board (CARB) approved an airborne toxic control measure (ATCM) to reduce formaldehyde emissions from composite wood products. On January 1, 2009, the ATCM's Phase 1 emission standards will take effect for hardwood plywood with veneer core, particleboard, medium density fiberboard (MDF), and thin MDF (thickness 8 millimeters or less). The Phase 1 emission standard for hardwood plywood composite core will take effect on July 1, 2009. To be in compliance with the ATCM, domestic and foreign manufacturers are required to retain the services of a CARB approved independent third party certifier (TPC) to verify that their manufacturing mill production is in compliance with the applicable emission standards.

Numerous manufacturing mills have received their TPC approval as a producer of CARB certified composite wood products. Some of these certified mills have accumulated inventories of composite wood products that were produced before they received their official CARB certification approval by the TPC. CARB recognizes that some of these composite wood products emit formaldehyde at levels below the Phase 1 emission standards. These products that were produced before the mill was CARB certified may be retroactively certified using the "non-complying lots" provision in the ATCM.

"Non-complying Lots"

The ATCM provisions for "non-complying lots" may be utilized by manufacturers for panels that are still in their possession or under their control. Manufacturers that produce non-complying composite wood products, such as products produced before obtaining CARB certification, may retroactively deem those inventories as CARB compliant if they follow the provisions for "non-complying lots" specified in California Code of Regulations, title 17, section 93120.12, Appendix 2, subsections (g)(5)-(g)(8).

Below is a brief summary of the steps that must be followed, although manufacturers should read the full regulatory language to understand all of the requirements that must be met:

- 1) Manufacturers must have valid third party certification, per section 93120(3)(b).
- 2) The manufacturer's TPC must be notified.
- 3) If necessary, the "non-complying lot" may be treated to reduce formaldehyde emissions by using a scavenger or handled by other means, such as aging.

Page 1 of 2



Implementation Actions



Sell-through Periods

- Downturn in the economy
- Inventory turn over concerns due to slow economy
 - American Home Furnishings Alliance (AHFA)
 - California Retailers Association (CRA)
 - International Wood Products Association (IWPA)
 - Western Home Furnishings Association (WHFA)
 - Moulding and Millwork Producers Association (MMPA)
 - Recreation Vehicle Industry Association (RVIA)
 - California panel distributors
- CARB to provide limited 4 months relief to panel distributors and panel retailers; CARB survey to re-evaluate
Link to advisory:
<http://www.arb.ca.gov/toxics/compwood/outreach/advisories.htm>
- Monitor the current sell-through provisions for finished goods



Laminated Products vs. HWPW-Composite Core Panels

- Staff intends to re-evaluate laminated products issues in 2009-2010 timeframe
- Short-term response
 - Staff will provide clarifications via a Regulatory Advisory
- Long-term response
 - Undergo formal process with all interested stakeholders as part of any pre-regulatory work
 - Study needed to understand emission differences between laminated products and HWPW-composite core
 - After fact finding, determination will be made as to proper course of action



National Standards for Pressed Wood Products

- U.S. EPA Notice of Proposed Rulemaking issued in December 2008
 - Currently conducting industry survey
- CARB to participate as stakeholder in U.S. EPA's rulemaking



ATCM Implementation Focus for 2009

- Global supply monitoring
- Finished good test method development
- TPC program administration
- NAF/ULEF applications
- U.S. EPA proposed rulemaking
- Continuing outreach
- Intend to initiate rulemaking process late 2009 for amendments to ATCM



For More Information

Visit our website:

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



Or contact us:

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