

# Regulatory Update – What Retailers & Reps need to know about the New NSPS

HPBEXPO

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# NSPS – Danger, but Opportunity as Well

- Timeline
- Key HPBA Inputs
- Coverage - with an update from EPA
- Enforcement

# Major Caveat

- “it ain’t over until it’s over”
- It isn’t over until the “obese female has vocalized”
- It isn’t completed until the final rule has been published in the U.S. Federal Register
- My Prediction – At least one issue we cover today will turn out differently than we expect at this time.

# NSPS Timeline

- Spring 2008 – WESTAR & NESCAUM request EPA review the Woodheater NSPS
- Fall 2008 – HPBA begins organizing manufacturers in preparation for review
- June 2009 – HPBA team meets with EPA to review critical issues for industry
- November 2009 – Industry reps meet with state reps, & EPA team in Portland, OR

# NSPS Timeline (cont'd)

- November 2009- EPA outlines their thinking: “2 phases” for most appliances,
- Everything is ‘in’, including fireplaces
- March 2010 EXPO: EPA - same ppt
- August 2010: SBREFA (Small Business Regulatory Enforcement Fairness Act) EPA presents same ppt
- HPBA organizes SER panel
- State meetings –starting with Jøtul & Maine

# NSPS Timeline (cont'd)

- October 2010 – HPBA team & Rick Curkeet (Intertek/Warnock Hersey) meet with EPA & presents:
  - Curkeet: Test Method Variability Study
  - Ferguson: 5G-5H data comparison
  - HPBA Team: Pellet ash data, standards info
- January 2011 – HPBA team meets with A.A. for Air, Gina McCarthy re: fireplaces

# Update - March 1, 2011

- Following slides are from USEPA - Gil Wood presentation to HPBA Manufacturers' Government Affairs Meeting
- Reflects EPA's current thinking
- Subject to change
  - (although 'options selection meeting' has taken place)

# Key Messages for Manufacturers

- EPA intends to remove the exemption for single-burn rate appliances
- EPA intends to require pellet appliance certification tests and operation with industry-certified pellets
  - Emission data show excellent performance potential with premium wood pellets
  - Pellet fuel quality standards are necessary to ensure both good appliance performance and lower emissions
  - EPA has worked with the Pellet Fuels Institute to encourage their development of a fuel certification program (more on next slide)
- EPA intends to explicitly regulate outdoor and indoor hydronic heaters and forced-air / warm-air furnaces
- EPA intends to require energy audits and encourage heat storage to potentially greatly reduce emissions by reducing over-sizing and reducing frequency of operation at typical dirty low burn rates



# Pellet Fuel Certification Program Needs

- EPA has worked with the Pellet Fuels Institute to encourage pellet manufacturers and appliance manufacturers to agree on a certification program with grades of necessary characteristics
- Limits on bark, dirt, sand, construction and demolition materials\*, chemicals, etc.
- Tailored QA/QC plans, training, transparency
- Testing frequency tailored to results
- Not just 3<sup>rd</sup> party analyses but also 3<sup>rd</sup> party inspections, approval of QA/QC plans, sampling, auditing, corrective actions, certification of conformity, reporting of results
- Mutual Goal: pellets that consumers, manufacturers, and Congress can consistently depend upon as they consider decisions to buy and/or support biomass and as EPA regulates heater emissions

\*PFI is still working on requirements to ensure absence of construction and demolition materials. EPA suggests testing for lead as an indicator.

# Compliance & Enforcement Aspects

- Expand options for certification process --- transition to ISO-accredited labs and ISO-accredited certifying bodies, develop electronic system for submittals and preliminary QA checks
- Improve compliance assurance --- inspections of labs and manufacturers, random audits, monitor websites and trade shows and fairs, alert foreign companies
- Make consumer-friendly --- Burn Wise website, spreadsheets of certifications ranked by emissions, tested efficiency, output
- Require emission tests on each certified type of fuel that manufacturer specifies/warrants for use

# Test Methods

- EPA Method 28 was promulgated with the NSPS in 1988
- EPA & HPBA are participating on numerous American Society for Testing and Materials (ASTM) work groups which will result in some improvements that we will propose
- Continuing concern of variability but ASTM improvements will help. Manufacturers and labs have over 15 years of experience at the WA State levels of 4.5 g/hr and 2.5 g/hr (>85% of stoves already meet)
- HPBA participated in revision of Canadian method B415.1-10. We have reviewed it and will propose using it for forced-air furnaces
- Hydronic heater (HH) voluntary program uses EPA conditional method that EPA will need to modify and propose in the Federal Register
- EPA, New York State Energy Research and Development Authority, and others are participating in ASTM efforts on HH test methods, including Canadian and European techniques. We expect this to result in improvements that we will propose
- We will use ASTM and CSA B415.1-10 efficiency test methods

# EPA Wood Stove Draft Options (for stoves affected by 1988 NSPS)

- 1988 NSPS:
  - 7.5 g/hr for non-catalytic
  - 4.1 g/hr for catalytic
- Draft NSPS 2013 Limit for PM: Match 1995 Washington State Limits
  - 4.5 g/hr for non-catalytic
  - 2.5 g/hr for catalytic
  - On sales-weighted basis, over 85% of EPA-certified stoves meet today
- ❑ EPA considered but does not intend to propose a tighter NSPS 2015 Level that does not subcategorize catalytic stoves
  - 2.5 g/hr for either (~1/4 of “WA stoves” meet today)
  - Cost-effectiveness was of concern
- ❑ Will include CO and visible emission limits and require efficiency test
- ❑ Will ask for input on how to consider “Florida Bungalow Syndrome” and how to ensure proper operation at low burn rates

# EPA Pellet Stove Draft Options

- 1988 NSPS:
  - 7.5 g/hr for non-catalytic
  - 4.1 g/hr for catalytic
  - However, most pellet stoves are exempt via the 35:1 air-to-fuel ratio exemption
- Draft NSPS 2013 Limit for PM: Match New Wood Stove NSPS
  - over 2/3 of all pellet stoves meet today
- ❑ EPA considered but does not intend to propose a tighter 2015 level
  - 1/3 of pellet stoves meet 1.0 g/hr, but cost-effectiveness is questionable
- ❑ Certification tests will be on certified premium pellets. We will require testing of all other pellets that are warranted but not have an emission limit for the other pellets
- ❑ EPA will add CO and visible emission limits and require efficiency tests

# EPA Single-Burn-Rate Stove Draft Options

- Exempt from 1988 NSPS
- Estimate >40,000 units sold per year
- Draft NSPS 2014 Limits Equivalent to WA State Wood Stove Limits Adjusted for Easier Burn Rate
  - 3.0 g/hr?
- EPA will request data to potentially support tighter limits
- “Camp stoves” must be labeled for temporary use only
- Test method same as wood stoves, except burn rates
- Will add CO and visible emission limits and require efficiency tests

# EPA Cook Stove Draft Options

- Exempt from 1988 NSPS
- Draft NSPS 2013: Tighter definition and labels
  - Design requirements for “North American traditional cook stove”
    - Estimates of <1000 units per year
    - Not the big “loophole” that some theorized
- EPA will request data for tighter emission limit, such as European Prototype BAT of 3.0 g/hr or U.S. current catalytic research

# EPA Manufactured Fireplace Draft Options

- Most exempt from 1988 NSPS via exemptions for >35:1 air-to-fuel ratio
  - Typical emissions: 12 g/kg where not regulated
- 1995 Washington State limit
  - 7.3 g/kg of wood burned
- EPA 2010 Phase 2 Voluntary Level:
  - 5.1 g/kg
  - 8 models already qualified
- Draft future revised EPA Phase 2 Voluntary Level?
  - 2.7 g/kg? (draft based on air quality modeling significance level)
- Typical California AQMD 2010 regulations:
  - Ban new construction; view potential NSPS as a weakening of restrictions
- Draft NSPS: Not include in NSPS at this time because of concerns about economy and cost-effectiveness
  - Would require new source category listing since most are not “heaters”
- ❑ Burn Wise Option: Encourage Closed Doors
  - Can meet 1 g/kg if consumers would keep the doors closed



# EPA Masonry Heater Draft Options

- Exempt from 1988 NSPS via weight exemption (800 kg)
- Colorado limit: 6 g/kg (similar to ~7.5 g/hr)
- Industry request for EPA to initiate voluntary program
- Largest manufacturer and several others requested NSPS
  - Less than 1000 units constructed per year in U.S., but many more are constructed in Europe because of relatively low emissions and relatively high efficiency and marketing as “green”, efficient renewable biomass heaters
- Draft NSPS 2014 level
  - 2.0 g/hr daily average, 0.32 lb /mmBTU heat output

# EPA Hydronic Heater (HH) Draft Options

- Exempt from 1988 NSPS
- Typical emissions: >4 lb /mmBTU heat output
- EPA 2010 Phase 2 Voluntary Program Qualifying Level
  - 0.32 lb / mmBTU heat output
  - 23 EPA-qualified models already
- Typical State 2010 regulatory level
  - 0.32 lb / mmBTU heat output
- Many local jurisdictions ban HH or have setbacks and stack heights
- Draft NSPS limits for PM
  - 0.32 lb / mmBTU heat output for outdoor HH in 2013 and indoor in 2014
  - 0.15 lb / mmBTU heat output for both outdoor and indoor HH in 2016
    - 7 EPA-qualified models already
    - ~100 models qualified by EN 303-05 are estimated to meet this level
- Draft NSPS limits for CO
  - 1000 mg / m<sup>3</sup> at 12% O<sub>2</sub> in 2013/2014
  - 650 mg / m<sup>3</sup> at 12% O<sub>2</sub> in 2016
- Draft NSPS limit for Visible Emissions
  - 6 minutes per hour in field

# EPA Forced-Air / Warm-Air Furnace Draft Options

- Exempt from 1988 NSPS
- Canadian B415.1-10 level
  - 0.93 lb / mmBTU heat output
- Draft NSPS limit for PM
  - 0.93 lb / mmBTU heat output in 2014
  - Ask for comments on whether limit should be same as for hydronic heaters to avoid competitive imbalance
- Draft NSPS limit for CO
  - 1000 mg / m<sup>3</sup> at 12% O<sub>2</sub>
- Draft NSPS limit for Visible Emissions
  - 6 minutes per hour in field

# EPA Coal Stove Draft Options

- Exempt from 1988 NSPS
- No emission data to determine BDT
- Will request data

# Remaining NSPS Timeline

- June (July) formal proposal published
- 90 day (formal) comment period
- EPA reviews all comments
- EPA Issues formal Final NSPS – approx. one year after proposal
- NSPS will contain series of deadlines – different products merit different deadlines