



PELLET FUELS INSTITUTE

PFI Pellet Fuel Standards:

What Retailers Need to Know

www.pelletheat.org



What is the Pellet Fuels Institute?

- Non-profit Trade Association that serves the North American densified fuels industry
- Over 90 member companies comprised of:
 - Pellet Fuel Manufacturers
 - Industry Suppliers
 - Associates (Non-profit orgs, government, universities)
- Mission – to promote energy independence through the efficient use of clean, renewable, densified biomass fuel



History of PFI's Standards Program

- Standards originally adopted in 1995
- Redevelopment started in 2005
- Updated standards were released in 2008
- Standards re-written as an EPA compliant program for use in NSPS in 2010



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EPA NSPS Regulation

(anticipated 2012)


EPA New Source Performance Standards for Residential Wood Heaters

- Applies to cordwood burning fire places and inserts, pellet burning appliances, hydronic heaters and masonry heaters
- Requires that all appliances be certified by an independent third party to EPA emission limits




NSPS Implications for Pellet Appliances

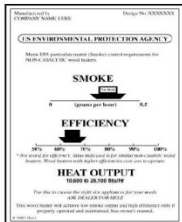
- EPA likely to issue PM limits at 4.5 g/hr* for Pellet Appliances
 - Pellet burning appliances are tested using certified fuel
 - Once certified, pellet burning appliances may only burn the certified fuel they were approved to use
- * Upper limit of expected EPA ruling




List of EPA Certified Wood Stoves
March 14, 2011



Enclosed is the list of wood stoves certified by the United States Environmental Protection Agency (EPA). An EPA certified wood stove or wood heating appliance has been independently tested by an accredited laboratory to meet a particulate emissions limit of 7.5* grams per hour for noncatalytic wood stoves and 4.1* grams per hour for catalytic wood stoves. All wood heating appliances subject to the New Source Performance Standard for New Residential Wood Heaters under the Clean Air Act offered for sale in the United States are required to meet these emission limits. An EPA certified wood stove can be identified by a temporary paper label attached to the front of the wood stove and a permanent metal label affixed to the back or side of the wood stove (See examples below). Please contact John DuPree at 202-564-5950 should you have questions regarding a particular model line or manufacturer.



Temporary Wood Stove Label



Permanent Wood Stove Label

Wood stoves offered for sale in the state of Washington must meet a particulate emissions limit of 4.5 grams per hour for non catalytic wood stoves and 2.5 grams per hour for catalytic wood stoves.



PFI's Standards Program - Purpose

- Provide the certified fuel referenced in EPA's NSPS for certifying pellet burning appliances
- Provide the certified fuel required to be used by consumers in all certified pellet burning appliances
- Increase the consistency and quality of pelletized fuel throughout the industry



Historical Quality Issues with Pelletized Fuels

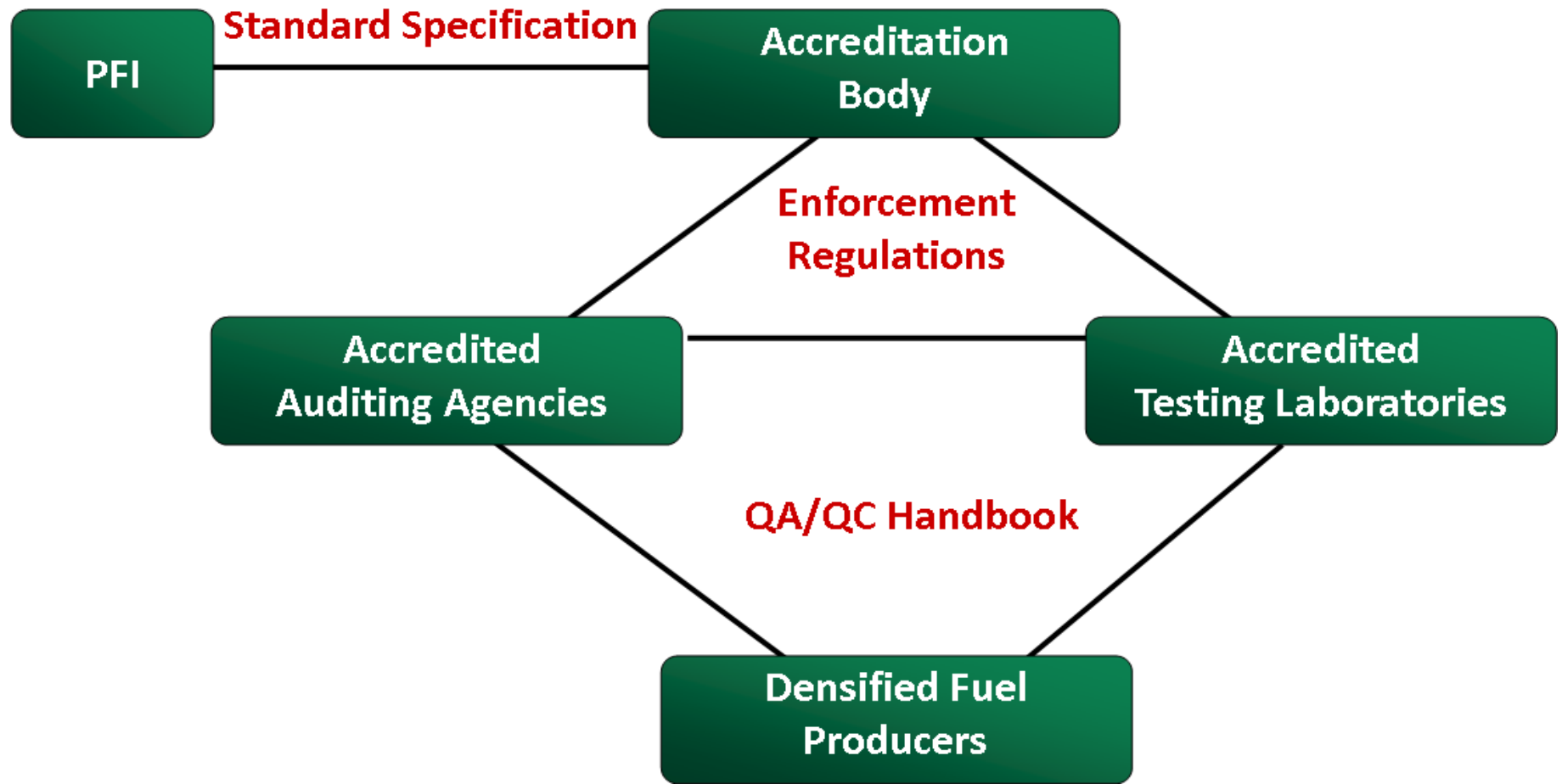
- Quality claims on the bag do not necessarily reflect what is in the bag
- Variable performance even within the same grade
- Inappropriate materials are showing up in pellets
- There is nowhere to report non-compliant product or unethical practices



New Structure PFI's Program

Issuer / Maintainer / Promoter

Implementer / Enforcer





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PFI's Program Documents

<http://pelletheat.org/pfi-standards/what-are-the-pfi-standards/>

- PFI Standard Specifications for Residential/Commercial Densified Fuel
- PFI Residential/Commercial Densified Fuel QA/QC Handbook
- Residential/Commercial Densified Fuel Enforcement Regulations

www.pelletheat.org



PFI's Responsibilities

- Develop / Issue / Maintain / Promote the Standards
- Contracts and monitors the accreditation body
- Pursues technical research to improve upon the standards
- Maintains a website registration of all compliant parties
- Pursues any misuse of the certification mark



Accreditation Body

- Accredits auditing agencies and testing laboratories
- Implements and enforces the program
- Maintains the Enforcement Regulations
- Administers a laboratory proficiency program
- Pursues product complaints



Accredited Auditing Agencies

- Certifies the production of densified fuel manufacturers
- Authorizes production facilities to use PFI's Quality Mark
- Conducts regular audits and extracts samples for third party verification
- Revokes authority to use the Quality Mark if necessary



Accredited Testing Laboratories

- Provides QA/QC testing for fuel producers – “As Needed”
- Provides testing for samples collected by auditing agencies
- Participates in the Accreditation Body’s proficiency testing program



Densified Fuel Producers

- Develop an in-house QA/QC program based on:
 - PFI QA/QC Handbook
 - PFI Standard Specification
- Select an auditing agency and test lab
- Demonstrate compliance with certification system components
- Maintain compliance through periodic audits, inspection and testing




PFI QA/QC Handbook - Includes

- Responsibilities
- Training
- Documentation
- Records
- Management of Change
- Raw Material Control
- Equipment & Operating processes
- QA/QC Testing
- Third Party Inspection & Monitoring
- Inspection Criteria
- Re-inspection Criteria
- Non Conformance
- Storage/Handling/Delivery
- Labeling



PFI's Quality Mark

- Displayed on front lower third of the bag
- Additives may not exceed 2% by weight (type must be stated)
- Material class must be stated
- Higher heating valued stated as-received and must reflect a minimum BTU guarantee – verified by audit
- Auditor Agency logo inserted on bag
- Manufacturers may provide other guarantees as long as their claims are demonstrated through audit (e.g. Ash Content As-Received: <0.50%)

PFI GRADED FUEL 

PFI Densified Fuel Grade: Premium

Grade Requirements:
Reg. #1234

Bulk Density:	40–46 lbs/ft ³
Diameter:	.230–.285 in/5.84–7.25 mm
Durability:	≥96.5
Fines:	≤0.50%
Ash Content (as received):	≤1%
Length:	≤1% >1.5 in.
Moisture:	≤8.0%
Chlorides:	≤300 ppm

Manufacturers Guaranteed Analysis:

Type of Material:	Softwood fiber
Additives:	2.0% corn oil by weight
Minimum Higher Heating Value (as received):	8,000 BTU

Other Manufacturers Guarantees:

*Approved Auditing Agency Logo
Displayed Here*

© For more information, please visit the PFI website at www.pelletheat.org.



Key Benefits of Standards Program

- Fuel manufacturers follow prescribed quality management practices assuring greater consistency between similarly labeled products
- Quality Mark clearly identifies certified fuel
- Provides three grades but allows manufacturers to provide additional guarantees if their quality reliably exceeds grade standards



Premium, Standard & Utility Grades

Fuel Property	Residential/Commercial Densified Fuel Standards See Notes 1 - 3		
	PFI Premium	PFI Standard	PFI Utility
Normative Information - Mandatory			
Bulk Density, lb./cubic foot	40.0 - 46.0	38.0 - 46.0	38.0 - 46.0
Diameter, inches	0.230 - 0.285	0.230 - 0.285	0.230 - 0.285
Diameter, mm	5.84 - 7.25	5.84 - 7.25	5.84 - 7.25
Pellet Durability Index	≥ 96.5	≥ 95.0	≥ 95.0
Fines, % (at the mill gate)	≤ 0.50	≤ 1.0	≤ 1.0
Inorganic Ash, %	≤ 1.0	≤ 2.0	≤ 6.0
Length, % greater than 1.50 inches	≤ 1.0	≤ 1.0	≤ 1.0
Moisture, %	≤ 8.0	≤ 10.0	≤ 10.0
Chloride, ppm	≤ 300	≤ 300	≤ 300
Heating Value	NA	NA	NA
Informative Only - Not Mandatory			
Ash Fusion	NA	NA	NA



Key Benefits of Standards Program

- Third party verification through an accredited auditing structure
- Provides standardized test methods for producers
- Registration system for quality compliance



Similar Initiatives In Europe

- CEN TC 335
- ISO TC 238
- EN Plus
- European Pellet Council



How PFI's Standards Program Will Satisfy its Intended Purpose

- Provide the certified fuel referenced in EPA's NSPS for certifying pellet burning appliances
- Provide the certified fuel required to be used by consumers in all certified pellet burning appliances
- Dramatically increase the consistency and quality of pelletized fuel throughout the industry



How Can Retailers Get Involved??

- Monitor the progress of PFI's Standards Program
- Provide feedback to PFI to improve the program
- <http://pelletheat.org/pfi-standards>



How Can Retailers Get Involved??

- Encourage Education for others in your region
 - Fuel Manufacturers, Appliance Manufacturers, Retailers, Consumers
- Have Employees Participate in PFI Standards Webinars or View Online PowerPoint Presentations



How Can Retailers Get Involved??

- Learn how to recognize fuel that is certified
 - Verify that PFI's Quality Mark is on the bag
 - Verify that the producer is registered with PFI's Standards Program
 - <http://pelletheat.org/pfi-standards>
- Non-Certified producers violating the mark or using other marks deceptively similar must be reported
- Contact Jennifer Hedrick, PFI Executive Director at hedrick@pelletheat.org or 703-522-6778



PFI Standards Program Timeline

- The program is currently in the implementation phase
- It will still take several months to put the necessary pieces in place
- It is currently anticipated that you will begin to see PFI's Quality Mark appear on bags in 2012



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PFI Standards Pledge Letter



Pellet
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PFI Standards Pledge

Twenty-seven companies representing 41 pellet mills have signed the PFI Standards Pledge, indicating that they support the use of consistent, third party audited standards and the quality control which these standards represent. These companies expect to begin the fuel certification process as soon as auditors are available in their region and have committed their support to the PFI Standards Program. These companies include:

Allegheny Pellet Corp.
American Wood Fibers
Barefoot Pellet Co.
Bear Mountain Forest Products
Curran Renewable Energy
Dansons Inc.
Energex Pellet Fuel
Fiber By-Products Corp.
Fiber Resources, Inc.
Forest Energy Corporation
Hassell & Hughes Lumber Co.
Henry County Hardwoods
Indeck Energy
Inferno Wood Pellets

Lignetics, Inc.
Maine Woods Pellet Company
Marth
New England Wood Pellet
O'Malley Timber Products
Ozark Hardwood Products
Pellheat, Inc.
Pennington Seed Inc.
QB Corporation
Somerset Pellet Fuel
Spearfish Pellet Company LLC
West Oregon Wood Products
Wood Fibers, Inc.

Twenty-seven companies (representing 41 mills) have pledged their commitment to enroll in the PFI Standards Program.

*A North American trade association promoting energy independence through
the efficient use of clean, renewable, densified biomass fuel.*

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For more information:

Contact Jennifer Hedrick at

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