

**Pellet Fuels Institute  
North American Certification of  
Residential/Commercial Densified Fuel**

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# 2008 PFI Standards Components

- PFI Standard Specification for Residential/Commercial Densified Fuel
- PFI QA/QC Program
- Mil-I-45208 QA/QC Template

# PFI's Standard Specification for Residential/Commercial Densified Fuel

## Components that have changed:

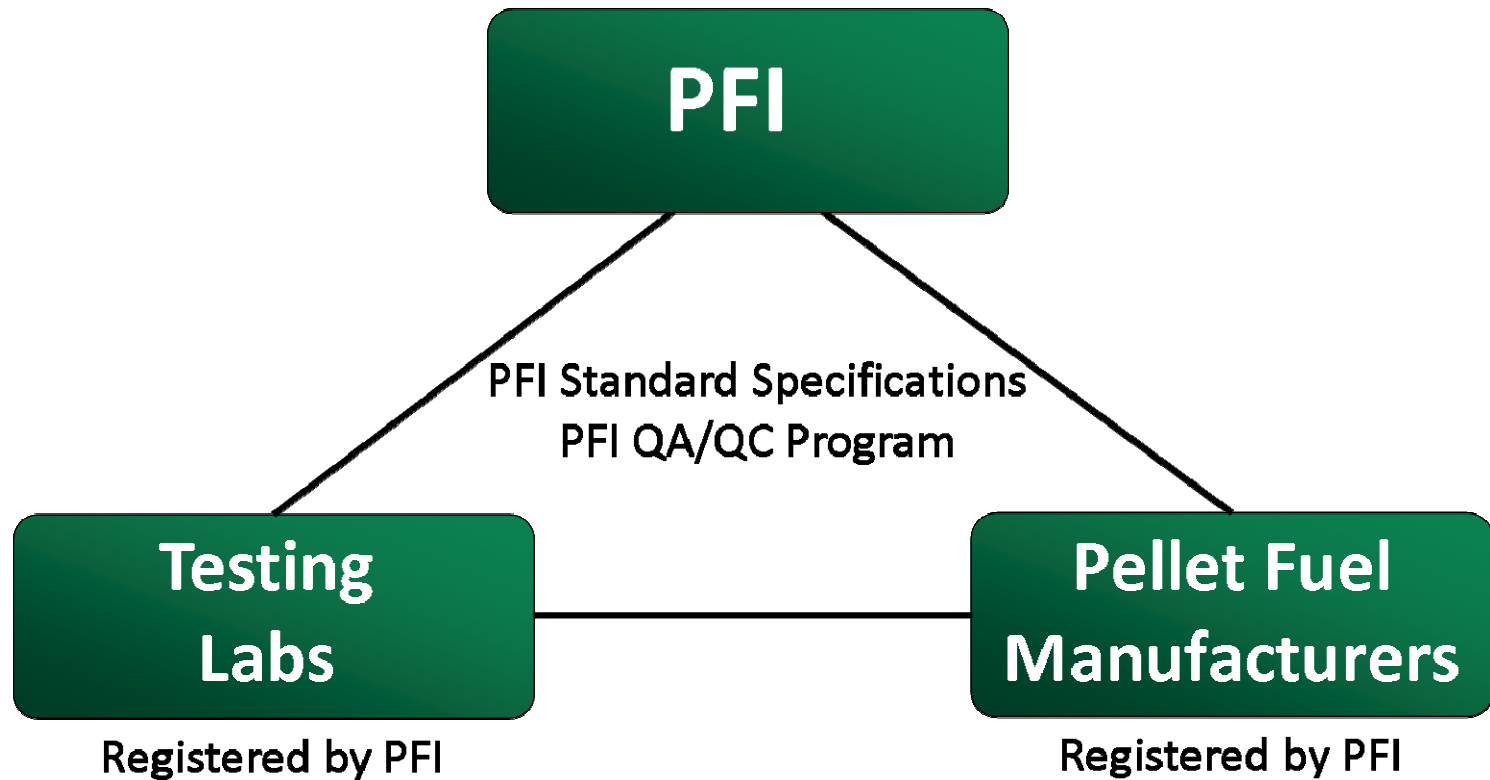
- All references to PFI's QA/QC Program have been removed
- Normative vs Informative Standards
- Specific changes to table 1
- Annex A.I & C.I

# Table 1 PFI Fuel Grade Requirements

Fuel Property	Residential/Commercial Densified Fuel Standards - See Notes 1 & 2			
	PFI Super Premium	PFI Premium	PFI Standard	PFI Utility
<b>Normative Information - Mandatory</b>				
Bulk Density, lb./cubic foot	40.0 - 46.0	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	0.230 - 0.285
Diameter, mm	5.84 - 7.25	5.84 - 7.25	5.84 - 7.25	5.84 - 7.25
Pellet Durability Index	≥ 96.5	≥ 96.5	≥ 95.0	≥ 95.0
Fines, % (at the mill gate)	≤ 0.50	≤ 0.50	≤ 1.0	≤ 1.0
Inorganic Ash, %	≤ 0.50	≤ 1.0	≤ 2.0	≤ 6.0
Length, % greater than 1.50 inches	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Moisture, %	≤ 8.0	≤ 8.0	≤ 10.0	≤ 10.0
Chloride, ppm	≤ 300	≤ 300	≤ 300	≤ 300
<b>Informative Only - Not Mandatory</b>				
Ash Fusion	NA	NA	NA	NA
Heating Value	NA	NA	NA	NA

# PFI's 2008 QA/QC Program Prior Structure

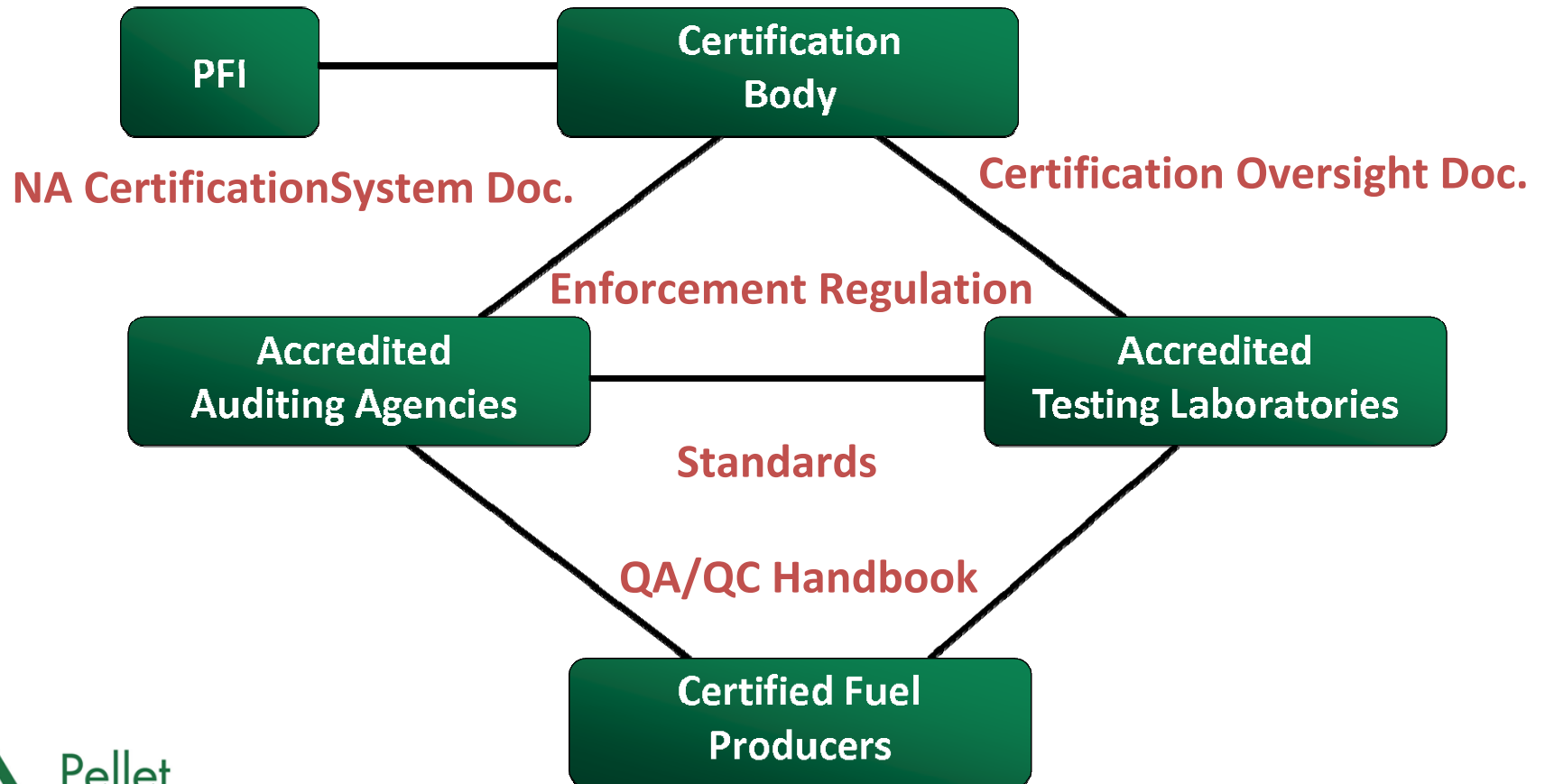
Issuer / Maintainer / Implementer / Enforcer / Promoter



# Certification System - Based on an Accredited Auditing Structure

Issuer / Maintainer / Promoter

Implementer / Enforcer



# Certification System – PFI's Role

- Issuer / Maintainer / Promoter
- Pursues technical research to improve upon the standards
- Administers objection proceedings
- Contracts the certification body
- Pursues any misuse of the certification system

# Certification Body

- Accredits auditing agencies and testing laboratories
- Administers a laboratory proficiency program
- Provides enforcement oversight



# American Lumber Standard Committee (ALSC)

- ALSC is nationally & internationally recognized
- Oversees the certification systems for:
  - White lumber
  - Pressure treated lumber
  - Pallets
  - Packaging for exported lumber
- These certification systems already have an auditing structure in place that appears compatible with the pellet fuels industry
- Appears to be the most cost effective option

# Accredited Auditing Agencies

- Inspect densified fuel production facilities
- Issue certificates
- Provides periodic monitoring
- Revokes certificates

# Accredited Testing Laboratories

- Provides QA/QC testing for fuel producers – “As Needed”
- Provides testing for samples collected by auditing agencies

# 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

# Certification System Fee Structure

- Fees need to cover the cost of the program
- All entities will pay application fees
- All entities will pay for the cost of audits performed at their facilities
- ALSC fees will be paid by the auditing agencies through auditing fees they collect
- PFI will be adding a 5% surcharge to ALSC fees to cover PFI's program costs
- Internal costs for QA/QC and testing

# PFI Certification Mark

**PFI CERTIFIED FUEL**



**PFI Fuel Grade: Super Premium**

**Manufacturers Guaranteed Analysis:**  
Reg. #1234

Type of Material:	Softwood fiber
Additives:	2.0% corn oil by weight
Bulk Density:	40–46 lbs/ft <sup>3</sup>
Diameter:	.230–.285 in/5.84–7.25 mm
Durability:	≥96.5
Fines:	≤0.50%
Ash Content (as received):	0.5%
Length:	≤1% >1.5 in.
Moisture:	≤8.0%
Chlorides:	≤300 ppm

© For more information, please visit the PFI website at [www.pelletheat.org](http://www.pelletheat.org).

- Bar graphs have been removed
- “Certified” as compared to “Registered”
- Must be displayed on the front, bottom third of the bag
- Additives may not exceed 2% by wt – type to be stated
- Material class must be stated

# PFI QA/QC Handbook

- Outlines the minimum requirements for densified fuel production facilities
- Provides the basis for establishing an in-house quality management plan

# PFI QA/QC Handbook - Includes

- Responsibilities
- Training
- Documentation
- Records
- Management of change
- Raw material control
- Equipment processes
- QA/QC testing
- Non conformance
- Corrective actions
- Storage/handling/delivery
- Labeling



# PFI QA/QC Handbook - Sources

- “Old” standards specification document
- “Old” QA/QC program document
- MIL-I-45208 template
- M3-05 quality control procedures for wood preserving plants
- EN plus handbook

# Chemically Treated/Contaminated Wood

- De Minimus levels are allowed, however are otherwise prohibited
- Excludes all materials pressed, formed, treated or contaminated with any bonding agent, resin, preservative, surface coating or other finishing, or any other chemical compound
- Excludes construction waste debris, recycled pallets, post consumer recycled wood

# Quality Control of Daily Productions

- Requires in-house lab for bulk density, fines, pellet length, diameter and moisture content
- Additional parameters may be analyzed at the discretion of the facility
- May use alternate test methods provided they are cross checked twice annually
- Testing must be sufficient to mitigate reasonable doubts concerning pellet quality compliance
- Auditing agency may stipulate additional parameters as well as sampling frequency and location if reasonable doubts exist

# Final Quality Assurance Inspection & Testing

- Final inspection and testing must be performed on all certified product
- Rate to be determined
- Can be performed in-house (must be cross checked twice annually) or by an accredited laboratory
- Must use specified methods
- Will be tied in with audit frequency

# Certification System Task List / Time Line

- Program is now out for comment
  - Webinar scheduled for July 29<sup>th</sup>
  - Comments received until August 31<sup>st</sup>
- Standards Committee needs to develop ASAP
  - Enforcement regulation document
  - Oversight standard document
- Final revisions in September
- Implementation October 1<sup>st</sup>

**Thank You!**

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