



PELLET FUELS INSTITUTE

PFI Standards Program Symposium: *PFI Annual Conference* *Sawgrass - 2011*

Moderator:

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Co-Chair, PFI Standards Committee



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PFI Standards Program Symposium: *Developing a Written Quality Management Program*

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Who needs to write a QA/QC Program???

- All producers that intend to qualify under the program
- Each individual production facility that the producer intends to qualify under the program
- Anyone who intends to place a quality mark on a bag (independent packaging operations)
- Others?



Find a Template!!!

- QA/QC handbook
- MIL-I-45208
- ISO 7001
- Industry QA/QC Manuals



Select the Grade(s) you intend to produce

- Premium/Standard/Utility
- Do you intend to produce non-graded fuel?
- You will need to assure separation of graded vs non-graded fuel as well as the separation of fuel that is graded differently
- Co-mingling results in the necessity to label all fuel as the lower grade or as non-graded fuel



6.1 Overview/Required Components

- 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



6.2 Quality Responsibility and Authority

- Must appoint a Quality Manager, such as an employee who is trained in quality control procedures
- To minimize conflict of interest, it is best if this person is not responsible for production or finance
- Must identify who makes decisions if the quality manager is not present and outline the hierarchy of the reporting structure



6.3 Training

- The program must specify that quality training is required on an as needed basis at a minimum of annually for all involved employees
- Training must cover production requirements as well as applicable standards and specifications



6.4 Documentation

Documentation must encompass the following:

- Administrative
- Raw Materials Receiving
- Production Process
- Quality Verification of Finished Product
- Periodic Inspections
- Customer Complaints



6.5 Records

The following records are to be kept for a minimum of 5 years:

- All documents specified in 6.4
- Inspection Instructions
- Standard Operating Procedures
- Testing Procedures
- Test Reports and Data Generated



6.6 Management of Change

- Changes to specifications and production processes shall be documented
- Quality Manager is responsible for informing and training all involved employees



6.7 Raw Material Control

- Raw materials must be inspected upon receipt to verify minimum specifications are met to produce the intended grade
- May use supplier certification
- No chemically treated materials
- Construction waste debris and post consumer recycled wood treated in accordance with Appendix A.



6.8 Equipment and Operating Processes

- Adequate equipment must be available and regularly inspected
- Process must exclude contaminants
- Regular checks for soil and debris
- Equipment cleaned if necessary
- Proper handling of co-mingled materials
- Evaluate production during malfunctions



6.9 QA/QC Testing

- QA/QC testing must be performed to demonstrate densified fuel compliance with the intended grade specifications (may use an internal or external laboratory)
- Internal laboratory methods must be checked periodically against the test results from an accredited laboratory



6.9 QA/QC Testing

- The frequency and location of sampling and testing for QA/QC purposes must be sufficient to mitigate reasonable doubts concerning pellet quality compliance with grade specifications.
- In-house laboratories may use alternate test methods provided they are periodically checked with an accredited laboratory



6.9 QA/QC Testing

- All in-house testing equipment must be maintained and calibrated in accordance with manufacturer specifications and/or other applicable standards



6.10 Third Party Inspection and Monitoring

- Audits conducted monthly with one audit sample collected 1,000 tons of production
- Bags shall be date stamped and/or numbered by the bagging system to assure time or quantity separation of the samples



6.11 Inspection and Re-inspection Conformance Criteria

- Inspection vs. Re-inspection
- Inspection - considered conforming if 95% of the audit samples are in compliance with all grade criteria and outliers obey the 10%/2% rule
- Reinspection – considered conforming if the sample obeys the 10%/2% rule



6.12 Non-conforming Materials

- Non-conforming materials must be identified, documented, segregated, evaluated and dispositioned to prevent unintended use or delivery
- Applies to raw materials, in-process product, final product, and customer returned product



6.13 Corrective Action Requests

- A corrective action request must be initiated promptly to correct assignable conditions that could result in defective product
- These assignable conditions must be corrected on an expedited, high priority basis
- Quality Manager monitors the progress of the corrective action



6.14 Product Storage, Handling and Delivery

- Quality marked product must be packaged, stored, handled, transported, and/or delivered in a manner that will maintain the integrity of the fuel
- Densified fuel must not be exposed to moisture, e.g., condensation, rain, snow
- Handling areas and equipment must be clean
- Product should not be co-mingled



Thank You!

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