



June 10, 2004



All AFMA/ KCMA Membership

Subject: Boiler MACT Initial Notification Requirements and Recommended Data Collection for the September Boiler MACT Workshop

Dear Members:

As many of you already know, the National Emission Standards for Hazardous Air Pollutants for Industrial/Commercial/Institutional Boilers and Process Heaters (the "Boiler MACT") has been signed as a final rule by the Environmental Protection Agency ("EPA"), and will soon be published in the Federal Register ("FR"). This letter and accompanying materials summarize the initial notification requirements for the Boiler MACT; provide you with sample initial notification letters; and present the information and data collection instructions for the Boiler MACT Workshop we plan to hold at this year's conference in September.

## **AFMA "Tool Box" for Boiler MACT Compliance**

This package is AFMA's initial kick-off of the first in a series of compliance tools that we will offer to aid you in determining whether you must comply with the Boiler MACT and, if so, how to bring your facility in compliance in the most cost-effective and efficient manner possible. In addition to this mailer, AFMA is developing a comprehensive manual that will address all aspects of the Boiler MACT that you will be able to use as a reference. Our Boiler MACT subcommittee is presently developing that manual.

In addition, AFMA will be conducting several workshops addressing applicability to and compliance with the Boiler MACT. The first of these workshops will be held at the AFMA Annual Conference in Charlotte in this September. It will address

threshold applicability issues; basic compliance methodologies; and facility-specific compliance issues using data you bring to the conference as described in this letter and the attached enclosures. To take full advantage of the Boiler MACT Conference Workshop at the conference, we highly hope suggest that you will bring your facility-specific data to the Workshops described in the attachments.

## **Initial Notification Requirements.**

The Boiler MACT applies to facilities that are major sources and own or operate a new, existing, or reconstructed boiler or process heater. The MACT divides boilers and process heaters into subcategories: (1) existing or new; (2) large or small; and (3) solid fuel, liquid fuel, or gaseous fuel. Once the Boiler MACT is published in the FR, your facility must submit an initial notification *within 120 days* if you own or operate a boiler subject to the MACT at a major source. AFMA will inform you by e-mail and post a reminder on our website ([www.afma4u.org](http://www.afma4u.org)) when the Boiler MACT is published. in the FR.

You will have three years from the publication date to comply if you have an existing boiler. If your facility will be adding a new or reconstructed boiler, you must comply with the Boiler MACT either by the date of publication or upon startup of the boiler. (You will not have three years from publication of the MACT.) A boiler is considered new or reconstructed if it was constructed/reconstructed after January 13, 2003. The definition of a reconstructed boiler is:

the replacement of components of an affected or a previously nonaffected source to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
- (2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

-40 CFR § 63.2..

Thus, based on whether you have an existing, new, or reconstructed boiler, you should plan your compliance timing, strategies, and notifications accordingly.

The Boiler MACT includes an exclusion from the initial notification requirement for all boilers and process heaters that fall into the existing small

solid fuel category.<sup>1</sup> [40 CFR § 63.7506(c)(1)]. The small solid fuel category includes fire-tube boilers of any size, and any boiler with a rated capacity of less than or equal to 10 MMBtu per hour heat input. [40 CFR § 63.7575]. As such, facilities with existing water-tube boilers must file initial notifications, but facilities with existing fire-tube and existing boilers of 10 MMBtu or less capacity do not have to file initial notifications.

We must caution you that the exclusion of existing fire-tube boilers from many of the requirements of the Boiler MACT, such as initial notification, has been a point of confusion in some states. For example, the environmental authorities in North Carolina and Virginia have shown initial resistance to recognizing the existing fire-tube boiler exclusion from many Boiler MACT requirements, despite the clear language of the final rule and EPA's recognition of the exclusion in the preamble. AFMA is presently working to clarify any confusion or discrepancies that these two states may have. If you receive resistance from the state in which your facility is located, please let me know by telephone or e-mail.

## **Initial Notification Letter Samples.**

Due to the exclusion for existing fire-tube boilers from initial notification, we have drafted two model initial notification letters. As soon as the Boiler MACT is published, you should submit the appropriate cover letter(s) for your affected facilities. The first initial notification letter addresses existing fire-tube boilers only. Although initial notification is not required by the Boiler MACT, AFMA recommends that you send the appropriate state agency a courtesy letter indicating that your existing fire-tube unit is not subject to initial notification requirements, as well as emission limits, work practice standards, performance testing, monitoring, SSM plans, site-specific monitoring plans, recordkeeping, and reporting requirements. This courtesy letter will alleviate confusion between you and the state agency over the requirements with which you must comply.

The second model notification letter addresses existing water-tube boilers with rated capacities of greater than 10 mmBtus per hour. This letter will direct you to add facility-specific information in the indicated blanks.

If your facility has a collection of fire-tube and water-tube boilers, you may send both letters.

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<sup>1</sup> The MACT also has an exception to notifications for existing small liquid fuel and existing small gaseous fuel subcategories. For a comprehensive understanding of all the limited requirements for boiler categories, see 40 CFR 63.7506. We discuss the exceptions in this letter that are most likely to be used by members of the furniture industry.

# Information/ Data Collection Packet.

Please plan to attend this year's annual AFMA conference held at the Renaissance Hotel in Charlotte, North Carolina on September 20th through the 24th. During the conference we will be holding a full day Boiler MACT Workshop on September 21st for you to assess your affected facilities compliance options with the assistance of our technical team. We will address compliance options by subcategory of boiler: existing or new, size and fuel type. The workshop will be address all of these subcategories and identify appropriate compliance options. Subsequent workshops will be held for members that require additional analysis and guidance.

In preparation for this workshop we have provided the enclosed information and data collection packet for your convenience. This information packet will allow our technical team to assist you with determining cost effective compliance options for your facilities. This information is *only required for existing large boilers*, which is defined in the Boiler MACT as water-tube units greater than 10 MMBtu/hr. The packet includes several parts:

- **Part I(a)** General Facility Information - is in tabular format and designed to help you compile boiler information for each facility. Detailed instructions/ explanations are provided after the table. This information is important for the each facility-specific applicability assessment and the consideration of the most cost-effective compliance option.
- **Part I(b)** Other Data Needed For The Workshop – This data is critical for the total selected metals alternative compliance assessment and this information will be useful in the event that a full risk assessment is determined to be the compliance option. Detailed instruction/ explanations are provided following the data pages.
- **Part II** Fuel Sampling Method – In order to have the data necessary to determine a compliance approach you must know the regulated HAP emissions for your unit(s). The rule allows demonstrating compliance by a fuel-testing program. Using this option will simplify continuous compliance requirements and therefore is a logical place to start your assessment. Each facility should have their fuel samples collected and submitted by *Monday, August 2nd* in order to get results back in time for the workshop.
- **Part III** Finishing Material Sampling – If any facility burns lacquer dust in its existing large boilers then this part will provide specific instructions on collecting this fuel.
- **Part IV** Fuels/ Stack Testing Procedures – This part is for facilities that in the next 2 months may have scheduled stack testing for other permitting reasons. If so you may choose to couple that test with the stack testing requirements of the

Boiler MACT. This stack testing requires you to do an inlet fuels analysis at the same time as stack sampling occurs. Please keep in mind that this stack testing is for applicability assessment only. If you are required to demonstrate compliance through stack testing, then you must still do a formal demonstration of compliance by stack testing. This demonstration is required 180 days after the date of compliance.

- **Attachment A** Chain of Custody – The chain of custody is important to keep track of your samples and to be sure proper quality control is transferred to and from the lab. Please include in your lab package.
- **Attachment B** Lab Instructions – These instructions need to be included in your sample package and contain detailed testing instructions to the lab.
- **Attachment C** Lab and Stack Testing Pricing Sheet - We have identified a laboratory that will offer AFMA member discounts based on volume of samples. Provided are typical normal lab costs with and without discounts. We have also provided pricing information for a stack testing company in the event that you are looking to benchmark against or are in need of a recommended stack testing company that offers discounts.

I hope you find the enclosed information helpful to begin bringing the Boiler MACT into focus for your facilities. We urge you to acquaint yourself with the requirements in the Boiler MACT and to determine what requirements will apply to you. A full copy of the Boiler MACT can be printed from the EPA website.<sup>2</sup> I am also soliciting questions concerning the MACT from all members so that they can be addressed in our comprehensive Boiler MACT Manual, “Frequently Asked Questions Section.” Accordingly, please do not hesitate to contact me concerning any questions you might have concerning the MACT or the information presented in this packet. I look forward to seeing you all at the conference in September.

Sincerely,

AFMA



Bill Perdue

cc: Alan McConnell, KPS  
Liz Williamson, KPS  
Chris Stenger, CH2M HILL

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<sup>2</sup> See <http://www.epa.gov/ttn/atw/boiler/boilersfinalrule.pdf>

# Boiler MACT Workshop Preparation for Existing Watertube Boilers Greater than 10 MMBtu/ Hr

## PART IA - GENERAL INFORMATION

**Purpose:** Procedure for gathering the information needed to bring to the September workshop to assess each facility's applicability and alternatives for compliance with this MACT. This information will also be used to develop a site-specific fuel analysis plan as required to be submitted to EPA and your state permitting authority . Instructions for completing Part IA are provided after Table 1.

1. Title V Facility Name: \_\_\_\_\_

2. Title V Facility Location \_\_\_\_\_

TABLE 1 Existing Boiler Information						
3. Unit Name:	4. Description of Boiler  (Active, Idle, Temporary, or Decommissioned)	5. Boiler Size Name Plate Rating  (MMBtu/ Hour)	6. Boiler Configuration  [Watertube or Firetube]	7. Fuel Burned  [Biomass, Coal, Oil, Natural Gas, or Specify Other]	8. Duration Each Fuel is Burned  (Hours/ Year)	9. Permitted Fuel Throughput Limit  (Tons/Year)



# Boiler MACT Workshop Preparation

## PART IA - GENERAL INFORMATION INSTRUCTIONS

1. Record the name of the Facility that holds the Title V permit.
2. Record the City, County, and State where the Title V permitted Facility is located.
3. Record the name of each boiler. Use this table to record all boilers located at the facility (include both watertube and firetube, permitted or un-permitted). If the boiler is permitted, use the same name listed on the Title V permit.
  - **Firetube** refers to the design of the boiler where fire, or hot flue gases from the burner, are channeled through tubes that are surrounded by the fluid to be heated. The body of the boiler is the pressure vessel and contains the fluid. In most cases, this fluid is water that will be circulated for heating purposes or converted to steam for process use.
  - **Watertube** design is the exact opposite of a fire tube. Here the water flows through the tubes which is incased in a furnace in which the burner's hot exhaust gases pass over the surface of the tubes.
4. The Description of the Boilers should be noted as *Active*, *Idle*, *Temporary*, or *Decommissioned*. These terms are defined below (as defined in Subpart 63).
  - **Active** refers to boilers that are currently in operation and are listed on the permit.
  - **Idle** refers to boilers that are not currently in operation, but are still listed on the permit.
  - **Temporary** refers to boilers that are designed and are capable of being carried or moved from one location to another. A temporary boiler that remains at a location for more than 180 days is no longer considered to be a temporary boiler.
  - **Decommissioned** refers to boilers that are not in operation and are not listed on the Title V Permit.
5. Record the name plate heat rating of each boiler or the de-rated heat rate of the boiler.
6. Record each boiler configuration as either watertube or firetube.
7. Enter the type of fuel burned for each boiler. For example, Biomass, Coal, Oil, Natural Gas, finishing material etc. Additionally, if more than one fuel is used please specify. If you have other fuel, including a mixture of fuel material, please list them all so that we can help you assess what fuel category you will be in.
  - Biomass - is unadulterated wood, wood residue, and wood products (e.g. trees, tree stumps, tree limbs, bark, lumber, sawdust, sanderdust, chips, scraps, slabs, millings, and shavings).
    - Unadulterated means wood or wood products that have not been painted, pigment-stained, or pressure treated with compounds, plywood, particle board, oriented strand board and other types of wood products bound by glues and resins.

8. Record the preferred amount of time each fuel is burned as specified in the Title V Permit, if applicable. Otherwise, specify actual time each fuel is burned annually. Please specify whether it is the permitted time or the actual time.
9. Record the annual allowable fuel throughput limit specified in the Title V permit, otherwise specify the actual fuel input. Please specify whether fuel throughput is allowable or actual.

# Boiler MACT Workshop Preparation

## PART IB – DATA FOR WATERTUBE BOILER TOTAL SELECTED METALS COMPLIANCE ALTERNATIVE

**Purpose:** The purpose of this information is to collect data for risk based assessments for your watertube boilers. This information in general will be used to determine whether your boiler meets the total selected metals emissions standards in Appendix A, Table 3 of the Boiler MACT (sum of seven selected metals excluding manganese) and will also provide additional information in the event a full risk assessment is determined as an option.

Instructions for completing Part IB are provided after Table 3.

1. Please attach a Detailed Site Map as described in the Part IB Instructions.
2. Fill out Table 2 for Stack Data below.

**TABLE 2**  
Stack Data

3. Boiler Unit	4. Stack Coordinates		5. Stack Height from Ground (ft)	6. Stack Height from Top of Building (ft)	7. Stack Diameter (ft)	8. Stack Temperature @ Full Load (°F)	9. Distance from Stack to the Nearest Fence Line (ft)	10. Is it Possible to Extend Your Stack Height? (Y/N)	11. Control Device	12. Control Device Removal Efficiency (%)
	Northing (ft)	Easting (ft)								







# Boiler MACT Workshop Preparation

## PART IB - INSTRUCTIONS

1. The County Seat Tax Assessors Office will have maps showing major buildings on site as well as property boundaries. These maps should be to scale and can be obtained at the County Seat. Additionally, some counties have GIS (Geographical Information System) for which information and maps concerning the facility property are available on the County website. Contact the tax assessors or GIS department at your local county seat to find out what information they have available. Obtain and bring a detailed map of the facility indicating ALL the following components:
  - All the major buildings on site
  - Scaled with a readable scale (Example: 1 inch = 100 feet)
  - A north arrow
  - Clearly marked property boundary around the entire facility
  - Marked locations of all boiler stacks
  - Provide UTM Grids
3. Record the name of each boiler (watertube AND firetube). Use this table to record **all** active boilers located at the facility (both watertube and firetube, permitted and not, subject to the emission requirements in the MACT and not). If the boiler is permitted, use the same name listed on the Title V permit. Please also include idle boilers in this analysis.
4. If you do not know UTM coordinates for each stack, then provide northings and eastings for your facility, which is usually provided for Title V permit applications.
5. Record the height each boiler stack measured from the ground surface (total height of the boiler stack). This information is available on equipment specifications of each boiler. Additionally, this information may be obtained from previous Title V Permit application documents or air dispersion records.
6. Record the height of each boiler stack from the top of the building roof to the outlet. This can be obtained by subtracting the building height from the height of the boiler stack measured from the ground surface.
7. Record the diameter of each boiler stack. This information can be found on the boiler equipment specifications.
8. Record the maximum temperature of each boiler stack. This is the maximum operational temperature found on the boiler equipment specifications.
9. Measure and record the distance from each boiler stack to the nearest property line (fence line). This information may be available in your files if air dispersion modeling has been performed in the past or if the Title V permitting authority requires this information to be

included in the Title V Permit Application. Additionally, this information can be obtained using the above generated Detailed Map of the facility.

10. If needed, can the existing stack foundation and stack supports handle additional stack sections? Please record yes or no beside each identified boiler stack in Table 2. If yes, please note the maximum allowable amount of additional stack sections, from the structural engineering report.
11. Record any and all control devices associated with each boiler. Examples of control devices include mechanical exhausters, ESPs, scrubbers, baghouses, etc.
12. Record the control device removal efficiency if known. These efficiencies may be obtained from stack tests or EPA AP-42. For example the typical range for mechanical collectors listed by AP-42 is 40-50% per unit.
13. Check with the local city/county-zoning department in which the facility is located to find out if there are any restrictions on height restrictions. If there are restrictions, note what the restrictions.
14. In Table 3, please record the major buildings on the facility property and the heights of each major building on the facility property.

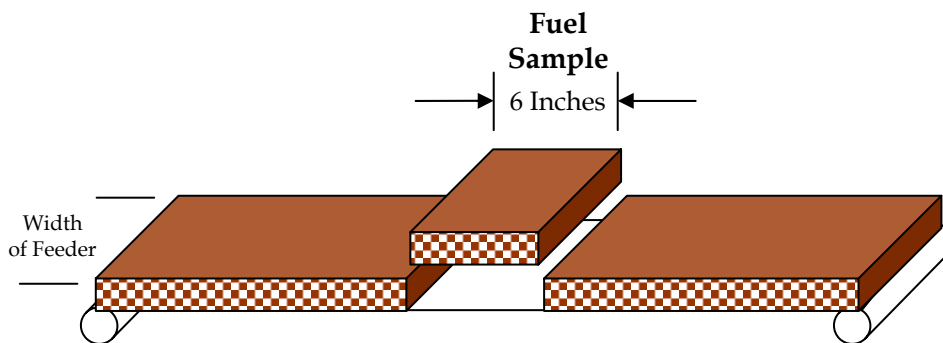
## Boiler MACT Workshop Preparation

### PART II - FUEL SAMPLING METHOD (Per §63.7521(c))

- Take pictures of all sample locations and of sampling for part of file documentation.

#### Solid Fuel (i.e. biomass, coal (non-mixed fuel only))

- Biomass, for our purposes) means unadulterated wood, wood residue and wood products. Unadulterated means wood or wood products that have not been painted, pigment stained, or pressure treated; also means plywood, particle board, strand board and other types of wood bound by glue and resins.
- Please note, **SAMPLES MUST BE SENT TO THE LABORATORY BY MONDAY, AUGUST 2, 2004.**
- Obtain samples in the following manner:
  - **Belt or Screw Feeder** (Minimum of 3 Samples)
    1. Stop feeder and withdraw a 6-inch wide sample from the full width of the belt or screw. Make sure to get fines and large course material.



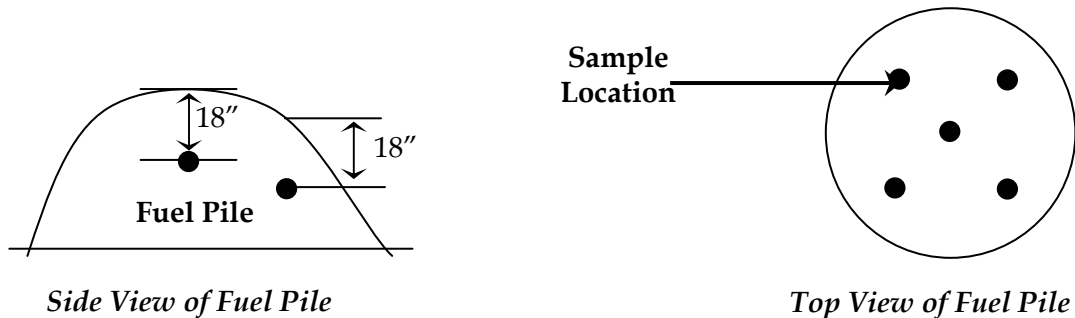
2. Sample must be **2 lbs minimum** and place in a clean plastic ziplock bag and label the bag
3. Fill out the Chain of Custody.
4. Repeat two more times with each sample being 1-hour apart during continuous feed of
5. Sign chain of custody sheet (included in Attachment A)
6. Please indicate the number of each type of sample (biomass, coal, etc.) being sent to the lab on the top of the Lab Instructions (Lab Instructions are provided in Attachment C).

7. Place samples and lab instructions in an express package (lab instructions are provided in Attachment C) and send to a certified lab. A list of national labs is provided in Attachment B.

**OR**

□ **Fuel Pile or Truck** (Minimum of 5 Samples)

1. Locate at a minimum 5 sample locations. Locations are to be uniform over the entire pile, equally spaced covering the surface of the pile.
2. At each location, dig 18-inches, use a clean, flat, square shovel to take a sample, include large pieces. Make sure the shovel is clean to prevent cross contamination.
3. Put into clean plastic ziplock bag and label the bag.
4. Sign chain of custody sheet (included in Attachment A).
5. Please indicate the number of each type of sample (biomass, coal, etc.) being sent to the lab on the top of the Lab Instructions (Lab Instructions are provided in Attachment C).
6. Place samples and lab instructions in an express package (lab instructions are provided in Attachment C) and send to a certified lab. A list of national labs is provided in Attachment B.



□ **Mixed Fuel (i.e Wood and Finishing Material)**

- If fuel is mixed, meaning there is a combination of fuel (i.e. wood and finishing material, wood and coal, etc.) then you must perform the sampling procedure described above for each fuel component individually before the fuels are mixed. This must be done for each fuel used in any boiler. For example, if the fuel used in a boiler is a mixture of wood and coal, the wood would be sampled individually and the coal would be sampled individually, not together as a mixture.
- Sign chain of custody sheet (included in Attachment A)
- Place samples and laboratory instructions in an express package (Laboratory Instructions are provided in Attachment C) and send to a certified lab. A list of national labs is provided in Attachment B.

# **Boiler MACT Workshop Preparation**

## **PART III – FINISHING MATERIAL SAMPLING**

If you burn Finishing Material, you will need to do the following:

- You will need to sample and test each finishing material (i.e., lacquer dust, booth coaters, filter, topcoats, etc) separately. If finishing materials are mixed, then you must perform the sampling procedure for each fuel component individually before the fuels are mixed.
1. Collect a minimum of 3 samples of each finishing material. Each sample must be at least 2 lbs. Place each sample in a clean plastic ziplock bag and label.
  2. Fill out chain of custody form.
  3. Please indicate the number of samples (finishing material) being sent to the lab on the top of the Lab Instructions (Lab Instructions are provided in Attachment C).
  4. Place samples and lab instructions in an express package (lab instructions are provided in Attachment C) and send to a certified lab. A list of national labs is provided in Attachment B.

# Boiler MACT Workshop Preparation

## PART IV - FUELS/ STACK TESTING PROTOCOL

### Stack Testing:

- If you are stack testing for Title V renewal or annual compliance purposes and wish to perform Boiler MACT stack testing as well, you must sample the fuel at the same time as you are performing the stack test. A fuel sample must of each fuel type must be collected during each of the three 1-hour runs of the stack test. *However*, it is recommended to perform a stand-alone fuels test before performing a stack test. Performing a stand alone fuels test may limit the number of metals and chloride that will need to be analyzed by the stack test if the fuel test results come back “low” for some or all of these compounds.
- If you perform stack testing, the following is the EPA prescribed method for EACH fuel type. Provide this Method information to Stack Testing Company:
  - Select Number of Traverse Points: Method 1 in Appendix A to Part 60.
  - Determine Velocity and Volumetric Flowrate of The Stack Gas: Method 2, 2F, or 2G in Appendix A to Part 60 of this chapter.
  - Determine Oxygen and CO<sub>2</sub> Concentrations of The Stack Gas: Method 3A, or 3B, in Appendix A to Part 60 of this chapter.
  - Measure The Moisture Content of The Stack Gas: Method 4 in Appendix A to Part 60 of this chapter.
  - Measure Particulate Matter Emission Concentration: Method 5 or 17 (positive pressure fabric filters must use Method 5D) in Appendix A to Part 60 of this chapter.
  - Measure the following metals emission concentrations (Arsenic, Beryllium, Cadmium, Chromium, Lead, Manganese, Nickel and Selenium): Method 29 in Appendix A to Part 60 of this chapter.
  - Measure the Hydrogen Chloride emission concentration: Method 26 or 26A in Appendix A to Part 60 of this chapter.
  - Measure the Mercury emission concentration: Method 29 in Appendix A to Part 60 of this chapter, or Method 101A in Appendix B to Part 61 of this chapter, or ASTM Method D6784-02.
  - Data Results: Provide all concentrations in pounds of pollutant per MMBtu of heat content. Provide a hardcopy of the lab certified results.

**ATTACHMENT A**  
**Chain of Custody**

**Boiler MACT  
Fuel(s) Samples  
CHAIN OF CUSTODY FORM**

<b>Report To:</b>	
Facility Name:	Purchase Order / LOG IN #:
Project Name	Project Number:
Address to Send Results:	Address to Bill (if different):
Telephone Number for Follow-up:	Fax Number (For Sending Data)
Name of Sampler (Print):	Sampler Contact Number:
Signature of Sampler/Date:	

Fuel Sample ID (mark clearly on ziplock bag)	Date/ Time	Fuel Type	Sampling Location (pile or conveyor)

<b>Chain of Custody Record</b>			
Relinquished by:	Date/Hr:	Received by:	Date/Hr:
Relinquished by:	Date/Hr:	Received by:	Date/Hr:
Relinquished by:	Date/Hr:	Received by:	Date/Hr:
Relinquished by:	Date/Hr:	Received by:	Date/Hr:

**ATTACHMENT B**  
**Lab/ Stack Testing Info**



Columbia Analytical Services  
 8540 Baycenter Road  
 Jacksonville, FL 32256  
 Phone: 904-739-2277  
 Fax: 904-739-2011  
 Project Manager: Tom Kissinger (tkissinger@jax.caslab.com)

<b>Quote Number:</b>	CH2M Hill MACT 5-04
<b>Attention:</b>	Jennifer Claghorn
<b>Company:</b>	CH2M Hill
<b>Address:</b>	4824 Parkway Plaza Blvd. Charlotte, NC 29217
<b>Phone:</b>	704-329-0073 x233
<b>Fax:</b>	704-329-0141
<b>Email:</b>	<a href="mailto:jennifer.claghorn@ch2m.com">jennifer.claghorn@ch2m.com</a>

Date Quote 5/20/2004  
 Valid Until: 5/20/2005

**Project Notes or Special Requirements**

Matrix S/L is Solid or Liquid  
 10% Discount to all unit costs except for BOILER MACT Sample prep if greater than 200 samples.

Method	Test Description, Service or Supplies	Matrix	TAT <sup>1</sup>	Unit Price	Quantity	Extended Price
1311	TCLP Preparation	S/L	14	\$ 25.00	1	\$ 25.00
1311	TCLP Zero Headspace Extraction	S/L	14	\$ 25.00	1	\$ 25.00
8260	TCLP Volatiles	S/L	14	\$ 80.00	1	\$ 80.00
8270	TCLP Semivolatiles	S/L	14	\$ 150.00	1	\$ 150.00
8081	TCLP Pesticides	S/L	14	\$ 100.00	1	\$ 100.00
6000/7000	TCLP Metals	S/L	14	\$ 55.00	1	\$ 55.00
8151	TCLP Herbicides	S/L	14	\$ 150.00	1	\$ 150.00
<b>BOILER MACT ANALYSES</b>						
	Sample Preparation/Grinding	S/L	14	\$ 25.00	1	\$ 25.00
160.3M	Moisture	S/L	14	\$ 15.00	1	\$ 15.00
ASTM D5865 or E711-8	Heat Content/BTU	S/L	14	\$ 75.00	1	\$ 75.00
7470/7471	Mercury	S/L	14	\$ 25.00	1	\$ 25.00
5050/9056	Chloride	S/L	14	\$ 35.00	1	\$ 35.00
6020	Metals (Ni, Pb, Cd, Mn, As, Cr)	S/L	14	\$ 100.00	1	\$ 100.00

<sup>1</sup>Turn Around Time. Measured in calendar days.

<b>Deliverables:</b>	Tier I	<b>SubTotal =:</b> \$ 860.00
<b>Quality Assurance Plan:</b>	LAB QAM	<b>Other Charges</b>
<b>Data Qualifiers:</b>	CAS Standard	<b>Applicable Tax</b>
<b>EDD:</b>	None	<b>Total =&gt;</b> \$ 860.00

The lab and stack test firm have both demonstrated knowledge of the rule and the methods required for compliance. Only one lab was listed because it is offering volume discounts to AFMA members.

*Please notify Bill Perdue, as soon as possible but at least by July 9<sup>th</sup> concerning the number of samples that you will be sending to the lab, so that AFMA can lock in much lower volume discount rates with the lab.*

ESS is offering AFMA membership discounts, please contact them directly for pricing. You are free to choose your own stack testing firm, but please make sure that they are certified to do the methods required by this rule.

**National Labs:**

Columbia Analytical Services, Inc.  
6517 NW 27th Place  
Gainesville, FL 32606  
Contact: Karen Daniels  
(352) 336-8899

Approximate Cost per sample is \$302.50, but costs may vary.

Finishing materials will require additional analysis to determine hazardous waste characteristics. The Approximate Cost per sample for this analysis is \$643.50.

**Stack Testing**

Environmental Source Samplers, Inc.  
9801 Kinsey Avenue, Suite 175  
Huntersville, NC 28078  
704/875-1000

**ATTACHMENT C**  
**Lab Instructions**

# Lab Instructions

## Contents:

The following package contains:

- \_\_\_\_\_ Number of Biomass (wood) Fuel Samples
- \_\_\_\_\_ Number of Coal Samples
- \_\_\_\_\_ Number of Finishing Waste containing Overspray Booth Coaters (Chlorine)
- \_\_\_\_\_ Number of Other, specify \_\_\_\_\_.
- 1 Chain of Custody Form

## Background:

These samples are to be tested per the requirements set forth in the recently promulgated NESHAP for Industrial/ Commercial/ Institutional Boilers & Process Heaters (known as the Boiler MACT). The constituents to be tested are selected metals and chlorine as described below.

## Test Procedure:

### (1) Sample Prep:

- a) Composite Fuel Sample Per Boiler MACT Section §63.7521 (d) (1) through (7), lab must take every precaution not to contaminate sample from the use of metal grinders.
- b) Prepare Compositated Fuel Samples - Using SW-846-3050B (for solid samples) or SW-846-3020A (for liquid samples) or ASTM D2013-01 (for coal) or ASTM D5198-92 (2003) (for biomass) or specify equivalent.

(2) Chloride: Please provide validation for using an alternative method of using SW-846 method 9056, Ion Chromatography (with a prep step SW-846 5050) in lieu of the Boiler Rule methods SW-846-9250 or ASTM E776-87 (1996) (for biomass). If proposed method will provide a more representative sample then please document this case and use.

(3) Moisture Content: ASTM D3173-02 or ASTM E871-82 (1998) or please specify equivalent.

(4) Heat Content: ASTM D5865-03a (for coal) or ASTM E711-87 (1996) (for biomass) or specify equivalent.

(5) Mercury: ASTM D3684-01 (for coal) or SW-846-7471A (for solid samples) or SW-846 7470A (for liquid samples)

(6) Arsenic, Beryllium, Cadmium, Chromium, Lead, Manganese, Nickel and Selenium: Please provide validation for using an alternative method of using SW-846-6020, in lieu of SW-846-6010B or ASTM D3683-94 (2000) (for coal) or ASTM E885-88 (1996) (for biomass).

(7) Data Results: Provide all concentrations in pounds of pollutant per MMBtu of heat content. Provide a hardcopy of the lab certified results.

(8) For Samples labeled as Finishing Material perform a TCLP of the material.