

# 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 \_\_\_\_\_

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



# 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.