

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION

INSTRUCTIONS FOR COMPLETION OF
INDIRECT HEATING EQUIPMENT
(FUEL BURNING EQUIPMENT) ADEM FORM 104

All applicable portions of this form should be completed by printing or typing. When any item is not applicable, the letters "NA" should be placed in the left margin beside the item. If the entire ADEM Form 104 is not applicable to your plant or facility, items 1 and 2 and the signature block should be completed and the words "NOT APPLICABLE" should be inserted beneath the signature block. At least one copy of this form must be included in the group of initial permit applications for each facility or plant.

For the purpose of this application, an indirect heat exchanger is defined to be a boiler or other device with the same basic function. Any questions regarding the applicability of this form should be directed to this office.

A separate permit application should be submitted for each indirect heat exchanger that requires a permit.

Items 1-5: Are self-explanatory.

Item 6: May be included as part of monitoring plan (if so, please indicate in space provided)

Item 7: Potential emissions should be based on emission tests, approved emission factors, etc.
All calculations should be attached

Item 8: Is self-explanatory.

Item 9: Potential emissions should be based on manufacturers' design, emission tests, approved emission factors, etc.
All calculations should be attached

Item 10: Stack height is that above ground level. GEP Stack Height, which means *Good Engineering Practice (GEP)* stack height as defined in ADEM Administrative Code r. 335-3-14-.03(2)(a)5., 335-3-15-.02(9)(a)5., or 335-3-16-.02(10)(a)5., as applicable. This space should only be used if a GEP analysis has been performed or if the stack is a grandfathered stack, thus yielding a GEP stack height equivalent to "Height above grade." UTM Coordinates, which means *Universal Transverse Mercator* Coordinates, for Alabama, N-S is between 3337.000km-3875.000km and E-W is between 362.000km-709.000km; Zone 16. Standard temperature is 70°F; standard pressure is 29.92 inches of Hg. Volume of gas discharged can be calculated with the gas velocity (FPS) and stack diameter (Ft).

Item 11: Is self-explanatory.

**PERMIT APPLICATION
FOR
INDIRECT HEATING EQUIPMENT
(FUEL BURNING EQUIPMENT)**

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Do not write in this space

1. Name of facility or organization: _____

2. Unit Description (i.e. No. 1 Power Boiler): _____

Equipment manufacturer's information

Name of manufacturer: _____

Model number: _____

Rated capacity-input: _____ (MMBtu/hr.)

Boiler type: Fire tube Water tube other(specify): _____

Manufactured date: _____

Proposed installation date: _____

Original installation date (if existing): _____

Reconstruction or Modification date (if applicable): _____

3. Type of fuel used:

Primary:

Fuel	Heat Content	Units	Max. % Sulfur	Max. % Ash	Grade No. [fuel oil only]	Supplier [used oil only]
Coal		Btu/lb				
Fuel Oil		Btu/gal				
Natural Gas		Btu/ft ³				
L. P. Gas		Btu/ft ³				
Wood		Btu/lb				
Other (specify)						

Standby:

Fuel	Heat Content	Units	Max. % Sulfur	Max. % Ash	Grade No. [fuel oil only]	Supplier [used oil only]
Coal		Btu/lb				
Fuel Oil		Btu/gal				
Natural Gas		Btu/ft ³				
L. P. Gas		Btu/ft ³				
Wood		Btu/lb				
Other (specify)						

4. Purpose (if multipurpose, note percent in each use category):

Space heat _____ % Power generation _____ % Process heat _____ %

Other (specify): _____

5. Normal schedule of operation:

Hours per day: _____ Days per week: _____ Weeks per year: _____

6. For each regulated pollutant, describe any limitations on source operation which affects emissions or any work practice standard (attach additional page if necessary):

7. Fugitive Emissions (attach calculation worksheets):

POLLUTANT	POTENTIAL EMISSIONS		BASIS OF CALCULATION	REGULATORY EMISSION LIMIT (lb/hr)	REGULATORY EMISSION LIMIT (in units of standard)
	lb/hr	t/yr			
Particulate					
Sulfur dioxide					
Nitrogen oxides					
Carbon monoxide					
VOC's					
Other					

8. Is there any emission control equipment on this emission source?

Yes No (If "yes", complete ADEM Form 110)

9. Point Emissions (attach calculation worksheets):

POLLUTANT	POTENTIAL EMISSIONS		BASIS OF CALCULATION	REGULATORY EMISSION LIMIT (lb/hr)	REGULATORY EMISSION LIMIT (in units of standard)
	lb/hr	t/yr			
Particulate					
Sulfur dioxide					
Nitrogen oxides					
Carbon monoxide					
VOC's					
Other					

10. Stack data:

UTM Coordinate (E-W) _____ (km) UTM Coordinate (N-S) _____ (km)
 Latitude _____ (LAT) Longitude _____ (LONG)
 Height above grade _____ (feet) Gas temperature at exit _____ (°F)
 Inside diameter at exit (round) _____ (feet) Gas Velocity _____ (Ft/Sec)
 Inside area at exit (not round) _____ (sq. feet) Volume of gas discharged _____ (ACFM)
 Base Elevation _____ (feet) GEP Stack Height _____ (feet)

Are sampling ports available? Yes No (If "yes", describe. Draw on separate sheet if necessary):

11. Is this item in compliance with all applicable air pollution rules and regulations?

Yes No (if "no", a compliance schedule, ADEM Form 437, must be attached.)

Name of person preparing application: _____

Signature: _____ Date: _____