



**PERMIT APPLICATION FOR INDIRECT HEATING EQUIPMENT
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION**

**INSTRUCTIONS FOR COMPLETION OF
PERMIT APPLICATION FOR 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.

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. If a different UOM is used in providing the rated capacity input, please specify
- Items 6-7: May be included as part of monitoring plan (if so, please indicate in space provided) attach additional sheets if necessary
- Item 8: Is self-explanatory
- Item 9: Stack type may be a stack with an unobstructed opening discharging in a vertical, or nearly vertical direction (V), A vertical stack with a weather cap or similar obstruction in the exhaust stream (W), A building roof vent or bin vent (R), A stack discharging in a horizontal, or nearly horizontal direction (H), A stack discharging downward, or nearly downward (D), An area or volume source not considered a fugitive (A), A process vent, not otherwise classified (P) or Fugitive emissions where no stack exists (F). 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, should only be used if the stack is 65 meters measured from ground level elevation at the base of the stack and 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. UTM coordinates should be provided for the specified stack. Standard temperature is 68°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).
- Items 11-11: Are self-explanatory
- Item 12: Potential fugitive emissions should be based on emission tests, approved emission factors, etc. All calculations should be attached
- Item 13: Potential point emissions should be based on manufacturers' design, emission tests, approved emission factors, etc. All calculations should be attached



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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):

Source Classification Code(s):

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/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 or any work practice standards which affect emissions:

7. Are you requesting a limitation for permitting? Yes No if "yes", specify the limit and affected unit(s):

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

Yes No (If "yes", ADEM Form 110 must be completed and attached)

9. Stack data (if a control device is installed, the information should be for the control device's stack exit; if multiple stacks associated, provide additional sheet):

Stack No. & Description: _____ Stack Type: _____

| | | | |
|---------------------------------|--------------------------|----------------------------|----------------|
| Stack UTM Coordinate (E-W) | _____ (km) | Stack UTM Coordinate (N-S) | _____ (km) |
| Latitude | _____ (LAT) | Longitude | _____ (LONG) |
| Height above grade | _____ (ft) | Gas temperature at exit | _____ (°F) |
| Inside diameter at exit (round) | _____ (ft) | Gas Velocity | _____ (ft/Sec) |
| Inside area at exit (not round) | _____ (ft ²) | Volume of gas discharged | _____ (ACFM) |
| Base Elevation | _____ (ft) | GEP Stack Height | _____ (ft) |

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

Is this a merged stack (do multiple units use this release point)? Yes No

If yes, provide units:

10. Is this item subject to the Transport Rule 335-3-8-.07 or NOX Budget Program under 335-3-8-.71?

Yes No If "Yes", provide ORIS Plant and Unit ID: _____

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.)

12. Fugitive Emissions:

| POLLUTANT | UNCONTROLLED POTENTIAL EMISSIONS | | CONTROLLED POTENTIAL EMISSIONS | | BASIS OF CALCULATION | REGULATORY EMISSION LIMIT Provide in lb/hr or specify alternative Unit of Measure |
|-------------------|----------------------------------|--------|--------------------------------|--------|----------------------|--|
| | lb/hr | ton/yr | lb/hr | ton/yr | | |
| Total Particulate | | | | | | |
| PM-10 Filterable | | | | | | |
| PM-2.5 Filterable | | | | | | |
| PM-Condensable | | | | | | |
| Sulfur dioxide | | | | | | |
| Nitrogen oxides | | | | | | |
| Carbon monoxide | | | | | | |
| VOC's | | | | | | |
| | | | | | | |

Attach calculation worksheets. Particulate emissions should be speciated to include PM10-filterable, PM2.5-filterable, and PM-condensable. Speciated HAP emissions should also be provided. Attach additional page(s) as necessary.

13. Point Emissions:

| POLLUTANT | UNCONTROLLED POTENTIAL EMISSIONS | | CONTROLLED POTENTIAL EMISSIONS | | BASIS OF CALCULATION | REGULATORY EMISSION LIMIT Provide in lb/hr or specify alternative Unit of Measure |
|-------------------|----------------------------------|--------|--------------------------------|--------|----------------------|--|
| | lb/hr | ton/yr | lb/hr | ton/yr | | |
| Total Particulate | | | | | | |
| PM-10 Filterable | | | | | | |
| PM-2.5 Filterable | | | | | | |
| PM-Condensable | | | | | | |
| Sulfur dioxide | | | | | | |
| Nitrogen oxides | | | | | | |
| Carbon monoxide | | | | | | |
| VOC's | | | | | | |
| | | | | | | |

Attach calculation worksheets. Particulate emissions should be speciated to include PM10-filterable, PM2.5-filterable, and PM-condensable. Speciated HAP emissions should also be provided. Attach additional page(s) as necessary.

Name of person preparing application:

Company of preparer:

Signature:

Date: