PERMIT APPLICATION FOR MANUFACTURING OR PROCESSING OPERATION
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION

INSTRUCTIONS FOR COMPLETION OF
PERMIT APPLICATION FOR manufacturing OR PROCESSING OPERATION INDIRECT HEATING EQUIPMENT
ADEM FORM 105

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. A separate copy of this Form is to be completed for each process, operation, machine or other source which has the potential for emission of contaminants to the atmosphere. Two or more pieces of equipment may be grouped as a single permit unit.

Items 1 & 2:	Self-explanatory
Item 3:	Identify the equipment as specific type; i.e., state "open hearth furnace", "electric arc furnace", etc., rather than the general term, "furnace". When two or more pieces of equipment are grouped as a unit, then the individual component of the unit must be identified. If the unit receives input material from, or provides input material to, another operation in your facility, the relationship should be made clear. SCC can be found through EPA's SCC Web Services Search.
Item 4:	Self-explanatory
Item 5:	All raw materials input to the unit are to be identified, including solid fuels such as coal or coke. Exclude fuels for indirect heat exchangers; these are to be included on ADEM Form 104.
Item 6:	Do not include those fuels used in indirect heat exchangers, for which ADEM Form 104 is provided. If unit of measure other than MMBtu/hr is needed, please provide
Item 7:	List all products, including intermediates used in other operations, and those which are not usable because they do not meet specifications.
Items 8 & 9:	May be included as part of monitoring plan (if so, please indicate in space provided). Attach additional sheets if necessary
Item 10:	If the answer to this item is "yes", the application will not be considered complete unless ADEM Form 110 is attached
Item 11:	Each stack, vent, etc. which may emit air contaminants is to be separately identified with a number which is also used in Item 13. 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. 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 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 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). Emission points not associated with a stack or vent should be labeled as "fugitives”.
Item 12:	Each air contaminant which is known or suspected to be emitted from each emission point is to be listed. The allowable emission specified in the Regulation must be stated. The Department must be assured that the owner or operator has a clear understanding of the allowable emission rate.
Item 13:	If applications for more than one process are being submitted for a facility, the use of a single flow diagram for the entire facility is allowed. Use of one flow diagram is suggested for integrated operations. Points of air contaminant emissions are to be numbered to correspond with those points listed in Item 10.
Item 14:	If the answer is no, then an ADEM Form 437 form should be attached.
Item 15:	Self-explanatory
Item 16:	This item is designed to determine if there are any fugitive dust problems associated with material handling of either the raw materials or finished products used in the process.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION

			-					-				

Do not write in this space

1. Name of facility or organization: .....

2. Briefly describe the operation of this unit or process in your facility: (separate forms are to be submitted for each type of process or for multiple units of one process type. If the unit or process receives input material from, or provides input material to, another operation, please indicate the relationship between the operations.) An application should be completed for each alternative operating scenario.

Operating scenario number: .....

3. Type of unit or process (e.g., calcining kiln, cupola furnace): .....

Source Classification Code(s): .....

Equipment manufacturer's information

Make: ..... Model: .....

Rated process capacity (manufacturer's or designer's guaranteed maximum): .....

Manufactured date: .....

Proposed installation date: .....

Original installation date (if existing): .....

Reconstruction/Modification date (if applicable): .....

4. Normal schedule of operation:

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

Peak production season (if any): .....

5. Materials (feed input) used in unit or process (include solid fuel materials used, if any):

Material	Process Rate Average (lb/hr)	Maximum (lb/hr)	Quantity tons/year

6. Total heat input capacity of process heating equipment (exclude fuel used by indirect heating equipment previously described on ADEM Form 104):_____MMBtu/hr

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						

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)						

7. Products of process or unit:

Products	Quantity/year	Units of production

8. For each regulated pollutant, describe any limitations on source operation or any work practice standards which affect emissions:

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

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

☐Yes ☐No (if "yes", ADEM Form 110 must be completed and attached).

11. Air contaminant emission points: (Each point of emission should be listed separately and numbered so that it can be located on the attached flow diagram):

Emission Point	Emission Point Type	Merged Stack**	Stack											
			UTM Coordinates		Geographic Coordinates		Height Above Grade (Feet)	GEP Stack Height (Feet)	Base Elevation (Feet)	Inside Diameter for Round Opening (Feet)	Inside Area if NOT Round Opening (sq. feet)	Gas Exit Velocity (Feet/ Sec)	Volume of Gas Discharged (ACFM)	Exit Gas Temp. (ºF)
			E-W (km)	N-S (km)	LAT	LONG								
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												
		☐												

* Std temperature is 68ºF - Std pressure is 29.92" in Hg.

** If this is a merged stack with multiple units using this release point, please provide additional information including which units and any diffierent operating scenarios.

12. Air contaminants emitted: Basis of estimate (material balance, stack test, emission factor, etc.) must be clearly indicated on calculations. Attach calculation worksheets. Fugitive emissions must be included (enter on separate line and check box for Fugitive). Particulate emissions should be speciated to include PM10-filterable, PM2.5-filterable, and PM-condensible. Speciated HAP emissions should also be provided. Attach additional page(s) as necessary.

EMISSION POINT	FUGITIVE Check if Fugitive	POLLUTANT	UNCONTROLLED POTENTIAL EMISSIONS		CONTROLLED POTENTIAL EMISSIONS		BASIS OF CALCULATION	REGULATORY EMISSION LIMIT Provide in lb/hr or specify alternative UOM
			lb/hr	ton/yr	lb/hr	ton/yr		
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							
	☐							

13. On a separage sheet, provide a flow diagram to:
    (1) Illustrate input of raw materials,
    (2) Label production processes, process fuel combustion, process equipment and air pollution control equipment,
    (3) Illustrate locations of air contaminant release so that emission points under item 10 can be identified.

14. Is this unit or process in compliance with all applicable air pollution rules and regulations?

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

15. Does the input material or product from this process or unit contain finely divided materials which could become airborne?

☐Yes ☐No

16. If "yes", is this material stored in piles or in some other facility as to make possible the creation of fugitive dust problems?

☐Yes ☐No

List storage piles or other facility (if any):

Type of material	Particle size (diameter or screen size)	Pile size or facility (average tons)	Methods utilized to control fugitive emissions (wetted, covered, etc.)

Name of person preparing application: .....

Company of preparer .....

Signature: ..... Date: .....