JEFFERSON COUNTY DEPARTMENT OF HEALTH
Environmental Health Services
Air and Radiation Protection Division
P.O. Box 2648, Birmingham, AL 35202 (205)930-1239

Permit Application for Stationary Internal Combustion Engines

Do not write in this space

Name of Firm or Organization _____

Plant Location _____

Purpose of Application

- ☐ Initial installation of a new engine (an engine that has never been in service at any location)
- ☐ Initial installation of a used engine (an engine that has been in service at another location)
- ☐ Modification/Reconstruction of an engine currently installed at the facility
- ☐ Update information for an engine currently installed at the facility
- ☐ Initial permitting of an existing engine

Type of Application

- ☐ Title V
- ☐ Synthetic Minor Operating Permit
- ☐ Air Permit

Engine Identification Number or Description _____

Manufacturer's Name _____ Model Number _____

Serial Number _____ Model Year _____

Engine Applicability Dates

New engines: Ordered ____/____/____ Manufactured ____/____/____ Reconstructed ____/____

New or used engines, current or planned location: Installed ____/____/____ Modified ____/____/____

Used engines: Date unit was first placed into service at any location ____/____/____

Engine Specifications:

Engine Type (check)

- ☐ Simple Cycle Turbine
- ☐ Combined Cycle Turbine
- ☐ Regenerative Cycle Turbine
- ☐ Reciprocating Engine

Ignition Type (check)

- ☐ Spark
- ☐ Compression
- ☐ N/A

Maximum Brake Horsepower (bhp) _____

Maximum Engine Power (kWm) _____

Maximum Heat Input (MMBtu/hr) _____

Engine Displacement (cc) _____

Cylinder Displacement (liters per cylinder) _____

Non-resettable hour meter? (yes/no) _____

Air/Fuel Mix (check)

- ☐ Rich-Burn RICE
- ☐ Lean-Burn RICE
- ☐ Diffusion Flame Turbine
- ☐ Lean Premix Turbine
- ☐ Other _____

Piston Movement (check)

- ☐ 2-Stroke RICE
- ☐ 4-Stroke RICE
- ☐ N/A
- ☐ Other: _____

Engine Function (check all that apply)

- ☐ Compression
- ☐ Electrical Generation (maximum electrical output: _____
- ☐ Fire Pump Driver
- ☐ Other Pump Driver
- ☐ Research and Development
- ☐ Test Cell/Stand
- ☐ Other, please describe: _____

Engine Operation (check all that apply)

- ☐ Emergency Use Only
- ☐ Limited Use (<100 hours/year)
- ☐ Non-Emergency excluding testing and maintenance
  Hours/day _____, days/week _____, weeks/year _____, peak season (if any) _____
- ☐ Testing and Maintenance
  Hours/day _____, days/week _____, weeks/year _____, peak season (if any) _____
- ☐ Black Start (engine's only purpose is to start up a combustion turbine)
- ☐ Peaking/Peak Shaving (standby unit used during periods of high demand that are not emergencies)
- ☐ Demand Response (supply local power grid during emergencies), agreed hours/year _____

SCC Code: _____

Fuel Information

	Fuel Type/Description	Sulfur Content (indicate % by weight OR ppm)	Fuel-Bound Nitrogen Content (indicate % by weight OR ppm)	Percent (%) of Gross Heat Input on Annual Basis
Primary Fuel				
Secondary/Backup				

Exhaust Stack Parameters (if a control device is installed, the information should be for the control device stack's exit)

Height Above Grade (feet) _____ Inside Diameter (feet) _____ Exhaust Volume (ACFM) _____

Base Elevation (feet) _____ Exhaust Temperature (°F) _____ Sampling Ports? (yes/no) _____

Pollution Control Information:

Device/ Technology Types (check all that apply)

- ☐ No Controls
- ☐ Air-to-Fuel Ratio Controller
- ☐ Water or Steam Injection
- ☐ Low NO_X Burners
- ☐ Oxidation Catalyst
- ☐ Selective Non-Catalytic Reduction (SNCR)
- ☐ Non-Selective Catalytic Reduction (NSCR/3-way catalyst)
- ☐ Selective Catalytic Reduction (SCR)
- ☐ Particulate Filter
- ☐ Other _____
- ☐ Other _____
- ☐ Other _____

Control Efficiencies (Typical Operation)

NO_X _____

CO _____

VOC _____

Formaldehyde _____

Operating Parameters (if any):

Point Source Emissions (You must attach calculations and, if used as the basis for emission estimates, manufacturer specification sheets and stack test results):

Pollutant	Uncontrolled[1] Potential Emissions Rate		Controlled[1,2] Potential Emission Rate		Basis for Potential Emissions (e.g. AP-42, Manufacturer Data)
	lb/hr	ton/yr	lb/hr	ton/yr	
NO_X					
CO					
VOC					
PM					
SO_2					
Formaldehyde					
Total HAP					

[1]Potential emissions should be calculated based on 8,760 hr/yr and maximum operation unless an enforceable limit will be applicable.

[2]If the pollutant is uncontrolled, leave blank.

Comments, Clarifying or Supplemental Information (optional):

Applicable Regulations (Mark all that apply):

- ☐ 40 CFR 63, Subpart YYYY, NESHAP for Stationary Combustion Turbines
- ☐ 40 CFR 60, Subpart GG, NSPS for Stationary Gas Turbines
- ☐ 40 CFR 60, Subpart KKKK, NSPS for Stationary Combustion Turbines
- ☐ Other: _____
- ☐ 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE
- ☐ 40 CFR 60, Subpart IIII, NSPS for Stationary Compression ICE
- ☐ 40 CFR 60, Subpart JJJJ, NSPS for Stationary Spark Ignition ICE
- ☐ Other: _____

Regulatory Standards, Limitations, and Requirements:

Pollutant/Parameter	Rate/Value	Units of Standard	Regulatory Basis[3]	Engine Potential Emissions Rate (in units of standard)
Example: NO_X + NMHC	*6.4*	g/kW-hr	NSPS Subpart IIII	*4.95* g/kW-hr
Example: Annual Operation	*6,000*	hr/yr	SMS-PSD	NA

[3]For federal Regulations, specify which NSPS or NESHAP is the basis. If a synthetic minor limit is being requested or is already applicable, specify either SMS-PSD or SMS-Title V

For engines subject to emission standards under NSPS, Subpart IIII or NSPS, Subpart JJJJ, is this engine certified by the manufacturer pursuant to the applicable regulation to meet the applicable emission standards?

- ☐ Not Applicable
- ☐ No
- ☐ Yes (If yes, attach a copy if the certification)

For emergency and limited use engines, is the engine equipped with a non-resettable hour meter?

- ☐ Not Applicable
- ☐ No
- ☐ Yes

Compliance Status:

Is this engine in compliance with all applicable air pollution rules and regulations?

- ☐ Yes
- ☐ No (If no, must attach form ENV-AP-114)

Name of Person Preparing Application _____

Title _____ Date _____

Phone Number _____

Signature _____