

## EMISSIONS ACTIVITY CATEGORY FORM STATIONARY INTERNAL COMBUSTION ENGINE

*This form is to be completed for each stationary reciprocating or gas turbine engine. State/Federal regulations which may apply to stationary internal combustion engines are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.*

1. Reason this form is being submitted (Check one)

New Permit       Renewal or Modification of Air Permit Number (e.g. P001)\_\_\_\_\_

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. \_\_\_\_\_

3. Engine type:       Gas turbine       Reciprocating

4. Purpose of engine:  Driving pump or compressor       Driving electrical generator

5. Normal use of engine:       Emergency only       Non-emergency

6. Engine Manufacturer: GE Model No: 7EA

7. Engine exhaust configuration:

- (for turbines only)
- simple cycle (no heat recovery)
  - regenerative cycle (heat recovery to preheat combustion air)
  - cogeneration cycle (heat recovered to produce steam)
  - combined cycle (heat recovered to produce steam which drives generator)

8. Input capacities (million BTU/hr): Rated 1,100 Maximum 1,100 Normal 1,000

Supplemental burner (duct burner) input capacity, if equipped (million BTU/hr):

Rated: \_\_\_\_\_ Maximum \_\_\_\_\_ Normal \_\_\_\_\_

9. Output capacities (Horsepower): Rated: \_\_\_\_\_ Maximum \_\_\_\_\_ Normal \_\_\_\_\_

(Kilowatts): Rated: 105,000 Maximum 105,000 Normal 99,440

(lbs steam/hr)\*:

High Pressure: Rated: 315,000 Maximum 315,000 Normal 309,000

Low Pressure: Rated: 96,000 Maximum 96,000 Normal 63,000

*\*required for cogeneration or combined cycle units only*

10. Type of ignition:  non-spark (diesel)  spark

11. Type of fuel fired (check all that apply):

- single fuel       No. 2 oil, low-sulfur       natural gas       landfill gas  
 dual fuel       No. 2 oil, high-sulfur       diesel       digester gas  
 gasoline       other, explain **Blast Furnace Gas (BFG)**       propane

12. Complete the following table for all fuels identified in question 11 that are used for the engine and any supplemental (duct) burners, if equipped:

Fuel	Heat Content (BTU/unit)	wt.% Ash	wt.% Sulfur	Fuel Usage		
				Estimated Maximum Per Year	Normal Per Hour	Max. Per Hour
Nat. gas	1019 BTU/cu ft		5000 gr/scf	9,456 MMscf	0.32 MMscf	1.08 MMscf
No. 2 oil	BTU/gal			gal	gal	gal
Gasoline	BTU/gal			gal	gal	gal
Diesel	BTU/gal			gal	gal	gal
Landfill/digester gas	BTU/cu ft		ppm	cu ft	cu ft	cu ft
Other (show units)						
<i>List supplemental (duct) burner fuel and information below (show units):</i>						
BFG	126.5 BTU/scf	NA	0.01	76,174 MMscf	7.9 MMscf	8.7 MMscf

13. Type of combustion cycle (check all that apply):

- 2-stroke       4-stroke  
 rich-burn       lean-burn  
 carbureted       fuel injected  
 other, explain **Diffusion Type Combustor**

14. Emissions control techniques (check all that apply):

- prestratified charge       nonselective catalytic reduction (NSCR)  
 catalytic oxidation (CO)       selective catalytic reduction (SCR)  
 air/fuel ratio       injection timing retard (ITR)  
 2-stage rich/lean combustion       2-stage lean/lean combustion  
 water/steam injection       preignition chamber combustion (PCC)  
 other, explain \_\_\_\_\_

For each emissions control technique checked above, explain what pollutants are controlled by each technique:

**Both water/steam injection (when firing NG outside of startup and shutdowns) and SCR will be utilized to control emissions of NOx.**