



OAQ PROCESS INFORMATION APPLICATION
PI-02C: Combustion – Turbines & Reciprocating
Internal Combustion Engines

State Form 52537 (R2 / 1-10)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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NOTES:

- The purpose of this form is to specify details that pertain only to turbines and internal combustion engines.
- Complete one PI-02C form for each emissions unit. If there are multiple emission units that are identical in nature, capacity, and use, you may use one PI-02C form to summarize the units.
- Detailed instructions for this form are available on the Air Permit Application Forms website.
- All information submitted to IDEM will be made available to the public unless it is submitted under a claim of confidentiality. Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in 326 IAC 17.1-4-1. Failure to follow these requirements exactly will result in your information becoming a public record, available for anyone to inspect and photocopy.

PART A: Process Unit Details

Part A specifies operating information that is unique to turbines and reciprocating internal combustion engines. Definitions and additional explanation of terminology are included in the instructions for this form.

1. Unit ID:	
2. Type of Combustion Unit	
<input type="checkbox"/> Turbine:	<input type="checkbox"/> Simple Cycle <input type="checkbox"/> Regenerative Cycle <input type="checkbox"/> Cogeneration <input type="checkbox"/> Combined Cycle
<input type="checkbox"/> Reciprocating Internal Combustion Engine:	<input type="checkbox"/> 2-stroke lean-burn <input type="checkbox"/> 4-stroke lean-burn <input type="checkbox"/> 4-stroke rich-burn
3. Combustion Process:	<input type="checkbox"/> Diffusion Flame Combustion <input type="checkbox"/> Lean-Premix Staged Combustion
4. Ignition Type:	<input type="checkbox"/> Spark <input type="checkbox"/> Compression
5. Power Output:	horsepower (hp) megawatts (MW)
6. Duty Cycle:	hours per year (hr/yr)
7. Fuel Used:	<input type="checkbox"/> Natural Gas Only <input type="checkbox"/> Other – Attach completed PI-02F.
8. Does this combustion unit supply power to an emergency generator?	<input type="checkbox"/> Yes <input type="checkbox"/> No

This space was intentionally left blank.

PART B: Emission Controls and Limitations

Part B identifies control technology, control techniques or other process limitations that impact air emissions.

9. Add-On Control Technology: *Identify all control technologies used for this process. Attach completed CE-01 (unless "none").*

- | | |
|---|---|
| <input type="checkbox"/> None | |
| <input type="checkbox"/> Catalytic Oxidation – Attach CE-06 | <input type="checkbox"/> NO _x Reduction – Attach CE-09 |
| <input type="checkbox"/> Other (specify): | – Attach CE-10. |

10. Control Techniques: *Identify all control techniques used for this process.*

- | | |
|--|---|
| <input type="checkbox"/> None (explain): | |
| <input type="checkbox"/> Air-To-Fuel Ratio Adjustments | <input type="checkbox"/> Aromatic Content Increase |
| <input type="checkbox"/> Boiling Point adjusted to 10% and 90% | <input type="checkbox"/> Cetane Number |
| <input type="checkbox"/> Charge Cooling | <input type="checkbox"/> Combustion Chamber Modifications |
| <input type="checkbox"/> Derating | <input type="checkbox"/> Electronic Timing & Metering |
| <input type="checkbox"/> Exhaust Gas Recirculation | <input type="checkbox"/> Fuel Additives |
| <input type="checkbox"/> Fuel Injection Pressure | <input type="checkbox"/> Injection Rate Control |
| <input type="checkbox"/> Injection Timing Retard | <input type="checkbox"/> Injector Nozzle Geometry |
| <input type="checkbox"/> Lean Combustion | <input type="checkbox"/> Low Sulfur Content Fuel |
| <input type="checkbox"/> Oil Consumption Control | <input type="checkbox"/> Pre-ignition Chamber Combustion |
| <input type="checkbox"/> Rapid Spill Nozzles | <input type="checkbox"/> Turbocharging |
| <input type="checkbox"/> Two Stage Lean / Lean Combustion | <input type="checkbox"/> Two Stage Rich / Lean Combustion |
| <input type="checkbox"/> Water/Fuel Emulsions | <input type="checkbox"/> Water / Steam Injection |
| <input type="checkbox"/> Other (specify): | – Attach completed GSD-09. |

11. Process Limitations / Additional Information: *Identify any acceptable process limitations. Attach additional information if necessary.*