

# How to Comply with EPA Regulations for Stationary Reciprocating Internal Combustion Engines (“RICE”)



Roy Crystal, EPA  
Region 1 (New  
England)

# Compliance Requirements & Challenges

- Be aware of “what is an emergency engine?” as defined in final RICE NESHAP/NSPS amendments, properly classify your engines by compliance date & manage accordingly
- Use engine too much (time limits) – sources may become subject to RICE NESHAP non-emergency engine requirements!
- Be aware of new distinction between emergency demand response (up to 100 hours/yr) & operation to supply power for local system reliability as part of financial arrangement w. another entity (up to 50 hours/yr, meet criteria)
- Submit overdue initial notifications ASAP

# Compliance Requirements & Challenges – contd.

- If operating an emergency engine, record hours of use (non-resettable hour meter required)
- Record maintenance performed
- Operate/maintain acc. to manufacturer's written instructions or develop maintenance plan
- By RICE NESHAP compliance dates (5/3/13 CI, 10/19/13 SI) must have controls installed & meet all other compliance requirements; stack test due 180 days after
- One year compliance extensions to install controls – due date 1/3/13 for CI; 6/21/13 for SI

# Preparing for a Performance Test

- Submit Notification of Performance Test at least 60 days in advance of test date
- EPA region may require test protocol for performance tests (submit with notification); may observe test; procedures vary by region
- EPA Guidance Documents 042 and 043 for Test Protocols and Test Reports
  - <http://www.epa.gov/ttn/emc/guidInd.html>

# Where to Locate Performance Test Requirements

- III- 60.4212, 60.4213 and Table 7
- JJJ- 60.4244 and Table 2
- ZZZ- 63.6620 and Table 4
- These provisions enumerate parameters to be measured and sampling methods to be used.

# Test Program Sequence of Events

1. **Select an emissions testing company**  
Criteria: experience and recommendations
2. **Testing company conducts a site visit**
  - a. determines if stack duct extensions needed and delineates where to place the sampling ports in the inlet and outlet ducts on the control device.
  - b. electrical power for sampling equipment
  - c. how the power out is determined and recording of same.

# Test Program Sequence of Events

- d. safety requirements
  - e. requirements for safe access to ports - e.g., scaffold or lift
  - f. fuel flow measurements
3. Testing company prepares site-specific test plan according to Guideline Document GD-042
- a. delineates parameters to be measured
  - b. delineates sampling and analytical methods

# Test Program Sequence of Events

- c. delineates number of test runs, duration of test runs and minimum sample volumes for each method.
- d. describes facility engine type, max load, fuel type, load to be used during test; other operational parameters.
- e. delineates sampling locations,
- f. calculations,
- g. calibrations.



# Test Program Sequence of Events

4. Source submits test plan to EPA and state agency at least 60 days prior to the test date.
5. EPA/state agency reviews the test plan and either accepts as is or requests revisions.
6. If needed the test company revises the test plan and the source resubmits to agency.

# Test Program Sequence of Events

7. Agency accepts the test plan.
8. Agency may request an onsite pretest meeting.
9. Testing company conducts the test program.

# Test Program Sequence of Events

10. Test company prepares an emissions test report according to Guideline Document GD-043, and submits to source.
11. Source submits report to agency within 45-60 days of completion of test.
12. EPA reviews the report and either accepts it or requests clarifications, revisions etc.
13. Test company addresses comments & submits final document to source, which then submits final document to agency.

# Considering Engine Retrofit or Replacement

- Explore availability of new technologies
- Get several quotes – they may vary widely
- Compare efficiency of current & new engines & fuel costs
- Carefully assess capital and operating cost tradeoffs – use business math techniques like calculating Net Present Value of investment & rate of return

# Some Useful Compliance Tools

- EPA R. 1 & 10 RICE webpages - [www.epa.gov/region1/RICE](http://www.epa.gov/region1/RICE), [http://yosemite.epa.gov/R10/airpage.nsf/Enforcement/rice\\_rules](http://yosemite.epa.gov/R10/airpage.nsf/Enforcement/rice_rules) - “plain language” summary of RICE NESHAP & NSPS, sample Initial Notification and Notification of Compliance Status Forms, events, state contacts, links
- EPA Technology Transfer Network Air Toxics website RICE page - [www.epa.gov/ttn/atw/rice/ricepg/html#IMP](http://www.epa.gov/ttn/atw/rice/ricepg/html#IMP) - proposed and final rules, fact sheets on Jan. 2013 NESHAP & NSPS amendments, link to Federal Register final amendments, Q & A
- EPA Combustion Portal – [www.combustionportal.org](http://www.combustionportal.org), “calculator” for CI RICE NESHAP; summary of NSPS standards

# Need More Help or Info?

**Roy Crystal, Region 1 RICE Assistance Lead**  
**[Crystal.roy@epa.gov](mailto:Crystal.roy@epa.gov), 617-918-1745**

**Susan Lancey, Region 1 Air Toxics Coordinator**  
**(contact for RICE applicability determinations)**  
**[Lancey.Susan@epa.gov](mailto:Lancey.Susan@epa.gov), 617-918-1656**

**Regional RICE Contacts**  
**for Other EPA Regions – address your questions to**  
**RICE contact for the region where the engine is located**

**<http://www.epa.gov/ttn/atw/rice/EPARegionalRICEcontacts.pdf>**

# EPA Regions

