

Stationary Engines Federal Facilities Webinar

40 CFR Part 60 Subparts IIII and JJJJ and 40 CFR Part 63 Subpart ZZZZ







EPA Region 1: Cutler Enforcement Case & Common Violations

Steve Rapp, Region 1 Air Technical Unit Manager

Naval Computer and Telecommunications Area Master Station Located in Cutler, Maine

- Four 4,066 hp & one 906 hp engines
 - All five of these engines subject to 40 CFR Part 63, Subpart ZZZZ
 - Navy did not retrofit and test engines before compliance deadline in 2013
 - ► As part of 2017 settlement with EPA, Navy:
 - Installed pollution control equipment on all five engines;
 - Completed initial performance tests to demonstrate that the engines meet the national emissions standards;
 - Submitted required notifications and compliance status reports to EPA;
 - Paid a penalty of \$811,000 for violations of the Clean Air Act.

Engine Compliance Issues Observed on Inspections

- Lack of pollution controls, e.g., catalyst system
- Incorrect certifications/labels
- Failure to test or testing not performed at challenging loads
- Lack of records: hrs. of use, maintenance, parameter monitoring, etc.
- For emergency engines:
 - failure to change oil/filter & inspect hoses/belts every 500 hours or annually
 - Failure to inspect air cleaner (CI) or spark plugs (SI) every 1,000 hours or annually
- Lack of reports and plans:
 - notification of compliance status (§63.6645(a) and 63.9(h)
 - percent load report (§ 63.6620(i))
 - site specific monitoring plan (§ 63.6625(b)(1))
 - performance evaluation of continuous parameter monitoring system, e.g., temperature monitor at inlet of oxidation catalyst (§ 63.8(e)(4)
 - semiannual reports (§ 63.665)



EPA Region 4: Fort Gordon Enforcement Case & Cooperative Federalism

Kevin Taylor, Region 4 Air Enforcement Inspector

Cooperative Federalism

- EPA Region 4 and the Georgia Environmental Protection Division
- Together, Creating Tangible Environmental Results for the American People

Fort Gordon RICE MACT Compliance Issues

- RICE MACT Engines did not achieve the regulatory CO limit of 23 ppmvd by the October 30, 2013 deadline.
- By failing to prove compliance by the October 2013 deadline, compliance was not demonstrated for the RICE MACT compliance date of May 3, 2013.
- Did not submit Notification of Compliance Status Report following testing noncompliance in October 2013

Fort Gordon RICE MACT Compliance Achievements

- Failing engines were shut down to minimize environmental impact
- Catalytic converters were installed on all 9 engines and tested well above the 70% reduction with controls and was also well below the 23 ppmvd initial uncontrolled engine CO regulatory limit.



Stationary Engines 40 CFR Part 60 Subparts IIII and JJJJ and 40 CFR Part 63 Subpart ZZZZ

Sara Ayres, EPA Office of Enforcement and Compliance Melanie King, EPA Office of Air and Radiation

Agenda

Overview:

- What is a stationary engine?
- Why do we regulate stationary engines?
- Which rules cover stationary engines?

NESHAP:

- RICE NESHAP Background
- Requirements for Emergency RICE at Area Sources of Hazardous Air Pollutants (HAP)
- Requirements for Non-Emergency RICE at Area Sources of HAP
- Requirements for RICE at Major Sources of HAP
- Information needed to evaluate facility compliance NSPS:
- Compression Ignition NSPS (Subpart IIII)
- Spark Ignition NSPS (Subpart JJJJ)
- Information needed to evaluate facility compliance

Review of Compliance Assistance Resources

What is a stationary engine?

NESHAP: "Stationary reciprocating internal combustion engine (RICE):

- any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work; and
- is not mobile (is not a nonroad engine as defined at 40 CFR 1068.30 and is not used to propel a motor vehicle or a vehicle used solely for competition).

NSPS: "Stationary internal combustion engine (ICE):

- any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work; and
- is not mobile (is not a nonroad engine as defined at 40 CFR 1068.30 and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition); and
- include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines."

Stationary Engines use pistons that alternatively move back and forth to convert pressure into rotating motion. Compression ignition (CI) engines are usually powered by diesel fuel and have no spark plug. Spark ignition (SI) engines have a spark plug and are often powered by natural gas (for stationary engines).

What is a nonroad engine?

Engines in nonroad vehicles and mobile equipment:

40 CFR Part 1068.30: Nonroad engine is an internal combustion engine that is:

self-propelled;



 intended to be propelled while performing its function;



capable of being carried or moved on wheels, skids, carrying handles, dollies, trailers, or platforms.



An internal combustion engine is <u>NOT</u> a nonroad engine if it:

- propels a motor vehicle, an aircraft, or equipment used for competition;
- is regulated under the NSPS;
 - Is a portable engine that remains at a single location for more than 12 consecutive months (or less at a seasonal source).

Why do we regulate Stationary Engines?

- Stationary engines are common combustion sources that can impact air quality and public health.
- They are commonly used:
 - at power and manufacturing plants to generate electricity or power pumps and compressors,
 - at oil and gas production facilities and midstream operations,
 - in emergencies to produce electricity or pump water for flood and fire control.
- Estimates of the number of existing engines are almost 1 million¹ with new engines coming into service all the time.

1. 957,832 per Table 4-7 of the Regulatory Impact Analysis (RIA) for Existing Stationary Compression Ignition Engines NESHAP, February 2010,

Why do we regulate Stationary Engines?

Pollutants emitted from stationary engines include:

- formaldehyde,
- acrolein,
- acetaldehyde,
- methanol,
- carbon monoxide (CO),
- nitrogen oxides (NOx),
- volatile organic compounds (VOCs), and
- particulate matter (PM).
- Exposure may cause:
 - irritation of the eyes, skin and mucous membranes;
 - central nervous system problems; and
 - breathing issues, especially asthma among children and seniors.

Which rules cover stationary engines?

- National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE)
 - 40 CFR Part 63 Subpart ZZZZ
- New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE)
 - 40 CFR Part 60 Subpart IIII
- NSPS for Stationary Spark Ignition (SI) ICE
 - 40 CFR Part 60 Subpart JJJJ

Stationary Engine Rule Applicability





National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE)

40 CFR Part 63 Subpart ZZZZ





RICE NESHAP Background

- Regulates HAP emissions from stationary RICE at both major and area sources
 - ▶ <u>Major</u>: ≥10 tons/year single HAP or ≥25 tons/year total HAP
 - Area: less than major source threshold for HAP
- All sizes of engines are covered
- Both new and existing engines are covered
- Limited exemption for engines that meet all of the following:
 - Existing emergency engine definition in Subpart ZZZZ
 - Located at residential, institutional, or commercial area sources (<u>guidance memo</u> has list of common NAICS codes)
 - ▶ Not used for local reliability as described in §63.6640(f)(4)(ii).

General Sub-Categorization Approach



Existing vs. New Engines

The date construction commenced determines if the RICE is existing or new:



- Determining construction date: owner/operator has entered into a contractual obligation to undertake and complete, within a reasonable amount of time, a continuous program for the on-site installation of the engine
 - Does not include moving an engine to a new location



Requirements for Emergency RICE at Area Sources of HAP

What is an Emergency Engine?

An Emergency Stationary RICE:

- "… is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment … when electric power from the local utility … is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc." (Subpart ZZZZ definitions Section §63.6675)
- Operates in non-emergency situations only as specified in the rule

Emergency Engine Operational Limitations

- Unlimited use for emergencies (e.g., power outage, fire, flood)
- 100 hr/yr for:
 - maintenance/testing
- ► 50 hr/yr of the 100 hr/yr allocation can be used for:
 - non-emergency situations if no financial arrangement
 - Iocal reliability as part of a financial arrangement with another entity if:
 - it is an existing RICE at an area source;
 - the engine is dispatched by local transmission/distribution system operator;
 - the dispatch intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads;
 - the dispatch follows reliability, emergency operation, or similar protocols that follow specific NERC, regional, state, public utility commission, or local standards or guidelines;
 - Power is provided only to facility or to support local distribution system; and
 - owner/operator identifies and records dispatch and standard that is being followed.

Existing engine:

- Change oil/filter & inspect hoses/ belts every 500 hours or annually; inspect air cleaner (CI) or spark plugs (SI) every 1,000 hours or annually
 - May use oil analysis program
- Operate/maintain per manufacturer's instructions or owner-developed maintenance plan
- Minimize startup/idle
- Non-resettable hour meter
- Retain records of hours of operation and maintenance for 5 years
- Initial notifications <u>NOT</u> required

New engine:

- Meet Stationary Engine NSPS
 - Part 60 Subpart IIII if CI; part 60 subpart JJJJ if SI

Oil Analysis Programs

Parameter	Condemning Limits
Total Base Number (TBN) (CI RICE only)	<30% of the TBN of the oil when new
Total Acid Number (TAN) (SI RICE only)	Increases by more than 3.0 mg of potassium hydroxide per gram from TAN of the oil when new
Viscosity	Changed by more than 20% from the viscosity of the oil when new
% Water Content by volume	>0.5

- Oil analysis must be performed at same frequency specified for oil changes
- If condemned, change oil within 2 business days
 - Owner/operator must keep records of the analysis

Fuel Requirements

 Requirements apply to emergency CI RICE >100 HP and displacement <30 liters/cylinder that are:
 Operated for local reliability (up to 50 hr/yr)

Beginning January 1, 2015, these engines were required to begin using ultra low sulfur diesel fuel

Existing inventory (purchased prior to (1/1/2015) may be depleted

Reporting Requirements

- Requirements apply to emergency RICE >100 HP that are operated for local reliability (up to 50 hr/yr)
- Beginning with 2015 operation, facilities were required to begin reporting electronically by March 31 of following year:
 - Facility name/address,
 - Engine rating, model year, lat/long
 - Date, start time, end time of operation
 - Entity that dispatched engine for local reliability and situation that necessitated dispatch
 - Deviations from fuel requirement
- Submit report electronically through the Compliance and Emissions Data Reporting Interface (CEDRI) on EPA's Central Data Exchange at <u>http://www.epa.gov/cdx</u>



Requirements for Non-Emergency RICE at Area Sources of HAP

Emission Standards: Existing Non-Emergency RICE at Area Sources

HP	Engine Subcategory				
			Non-emergency		
	Compression Ignition	Spark Ignition 2SLB	Spark Ignition 4S in remote areas	Spark Ignition 4S not in remote areas	SI LFG/DG
≤300	Change oil/filter & inspect air cleaner every 1,000 hours or annually; inspect hoses/belts every 500 hours or annually	Change oil/filter, inspect spark plugs, & inspect hoses/ belts every 4,320 hours or annually	Change oil/ filter, ir inspect hoses/belts operation	nspect spark plugs, & every 1,440 hours of or annually	Change oil/ filter, inspect spark plugs, & inspect hoses/ belts every 1,440 hours of operation or annually
300-500	49 ppm CO or 70% CO reduction				
>500	23 ppm CO or 70% CO reduction		Change oil/ filter, inspect spark plugs, & inspect hoses/belts every 2,160 hours of operation or annually	If engine used >24 hrs/yr: 4SLB: Install oxidation catalyst 4SRB: Install NSCR	

New Non-Emergency RICE Located at Area Sources: meet Stationary Engine NSPS
 Part 60 Subpart IIII if CI; Part 60 Subpart JJJJ if SI

Engine Subcategory	Compliance Requirements
•Existing non-emergency CI >300 HP at area source	 Initial emission performance test Subsequent performance testing every 8,760 hours of operation or 3 years for engines >500 HP (5 years if limited use) Operating limitations - catalyst pressure drop and inlet temperature for engines >500 HP Notifications Semiannual compliance reports (annual if limited use) Ultra low sulfur diesel (ULSD) Crankcase emission control requirements
•Existing non-emergency SI 4SLB/4SRB >500 HP at area source used >24 hours/year and not in remote area	 Initial and annual catalyst activity checks High temperature engine shutdown or continuously monitor catalyst inlet temperature Notifications Semiannual compliance reports

Engine Subcategory	Compliance Requirements
 Existing non-emergency: black start at area source CI ≤300 HP at area source SI ≤500 HP at area source SI 2SLB >500 HP at area source SI LFG/DG >500 HP at area source SI 4SLB/4SRB >500 HP at area source used ≤24 hours/year or in remote area 	 Operate/maintain engine & control device per manufacturer's instructions or owner-developed maintenance plan May use oil analysis program instead of prescribed oil change frequency Keep records of maintenance Notifications not required



Requirements for RICE at Major Sources of HAP

Emission Standards: Existing RICE at Major Sources

HP	Engine Subcategory					
		Ν	Ion-emergency	,		Emergency
	CI	SI 2SLB	SI 4SLB	SI 4SRB	SI LFG/DG	
<100	Change oil an 1,000 hours o	Change oil and filter and inspect air cleaner (CI) or spark plugs (SI) every 1,000 hours of operation or annually; inspect hoses and belts every 500 hours of operation or annually				
100-300	230 ppm CO	225 ppm CO	47 ppm CO	10.3 ppm CH ₂ O	177 ppm CO	every 500 hours or
300-500	49 ppm CO or 70% CO reduction					inspect air cleaner (CI) or spark plugs (SI) every 1,000 hours or annually
>500	23 ppm CO or 70% CO reduction	No standards	No standards	350 ppb CH ₂ O or 76% CH ₂ O reduction	No standards	No standards

Note: Existing limited use engines >500 HP at major sources do not have to meet any emission standards. Existing black start engines ≤500 HP at major 33 sources must meet work practice standards.

Emission Standards – New RICE at Major Sources

HP	Engine Subcategory					
		Non-emergency				
	CI	SI 2SLB	SI 4SLB	SI 4SRB	SI LFG/DG	
<250	Comply with CI NSPS	Comply with SI NSPS	Comply with SI NSPS	Comply with SI NSPS	Comply with SI NSPS	Comply with CI/SI NSPS
250- 500			14 ppm CH ₂ O or			
>500	580 ppb CH ₂ O or 70% CO reduction	12 ppm CH ₂ O or 58% CO reduction	93% CO reduction	350 ppb CH ₂ O or 76% CH ₂ O reduction	No standards	No standards

Note: New limited use engines >500 HP at major sources do not have to meet any emission standards under the NESHAP.

Engine Subcategory	Compliance Requirements
Existing non-emergency: •CI ≥100 HP at major source •SI 100-500 HP at major source	 Initial emission performance test with % load report and performance evaluation of continuous monitoring system associated with test Subsequent performance testing every 8,760 hours of operation or 3 years for engines >500 HP (5 years if limited use) Operating limitations - catalyst pressure drop and inlet temperature for engines >500 HP Notifications Semiannual compliance reports (annual if limited use)
	Existing non-emergency CI >300 HP also need to use: •Ultra low sulfur diesel (ULSD) •Crankcase emission control requirements

Engine Subcategory	Compliance Requirements
Existing non-emergency:	 Initial emission performance test
•SI 4SRB >500 HP at major source	•Subsequent performance testing semiannually
	(can reduce frequency to annual)*
New non-emergency:	 Operating limitations - catalyst pressure drop and
•SI 2SLB >500 HP at major source	inlet temperature
•SI 4SLB >250 HP at major source	•Notifications
•SI 4SRB >500 HP at major source	 Semiannual compliance reports
•CI>500 HP at major source	
•New emergency/limited use	 Initial notification
>500 HP at major source	
•New non-emergency LFG/DG	•Initial notification
>500 HP at major source	•Monitor/record fuel usage daily
	•Annual report of fuel usage

*Subsequent testing required for 4SRB engine complying with formaldehyde % reduction standard only if engine is ≥5,000 HP

Engine Subcategory	Compliance Requirements
 Existing emergency/black start ≤500 HP at major source Existing non-emergency <100 HP at major source 	 Operate/maintain engine & control device per manufacturer's instructions or owner-developed maintenance plan May use oil analysis program instead of prescribed oil change frequency Emergency engines must have hour meter and record hours of operation Keep records of maintenance Notifications not required



New Source Performance Standards for Stationary Internal Combustion Engines 40 CFR Part 60 Subparts IIII and JJJJ







Stationary Compression Ignition Internal Combustion Engine NSPS Subpart IIII

CI ICE NSPS Applicability

CI Engines:

- constructed (ordered) after July 11, 2005 <u>and</u> manufactured after April 1, 2006 (July 1, 2006 for fire pump engines)
- modified/reconstructed after July 11, 2005



Engine Manufacturer Compliance Requirements

 Engine manufacturers must certify 2007 model year and later engines with a displacement <30 liters/cylinder
 Certification = EPA Certificate of Conformity

UNITED STATES	UNITED STATES EN CERTI WITH TI	D STATES ENVIRONMENTAL PROTECTION AGENCY 2012 MODEL YEAR CERTIFICATE OF CONFORMITY WITH THE CLEAN AIR ACT OF 1990		OF TRANSPORTATION D AIR QUALITY BOR, MICHIGAN 48105
Certificate Issued To: Perkii (U.S. M Certificate Number: CPKXL	ns Engines Co Ltd anufacturer or Importer) 04.4NJ1-007	Effective Date: 09/02/2011 Expiration Date: 12/31/2012	Karl J. Simón, Director Compliance and Innovative Strategies Div	Issue Date: 09/02/2011
Model Year: 2012 Manufacturer Type: Original Engine Family: CPKXL04.4N	Engine Manufacturer J1	Ma En Fu Aft No	bile/Stationary Indicator: Stationary issions Power Category: 75≪kW<130 I Type: Non-Standard Fuel, Diesel er Treatment Devices: No After Treatment Devices Inst - after Treatment Devices: Electronic Control	alled

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in these provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



Owner/Operator Compliance Requirements

2007 model year and later*

- Purchase <u>certified</u> engine
 - Emission standards generally equivalent to "Tier" standards for nonroad engines
- Install, configure, operate and maintain engine per manufacturer's instructions or manufacturer-approved procedures
 - Owner/operator performance testing not required
- If operated differently than manufacturer's recommendations, must do performance test to show compliance
- Use ultra low sulfur diesel fuel

Monitoring/Recordkeeping/Reporting

Engine Type	Requirement
Emergency Engines	•Non-resettable hour meter and records of operation if engine does not meet non-emergency engine standards
Equipped with diesel particulate filter (DPF)	 Backpressure monitor and records of corrective actions
Non-emergency >3,000 HP or with displacement >10 liters/cylinder	 Submit initial notification Keep records of notifications and engine maintenance If certified, keep records of documentation of engine certification If not certified, keep records of compliance demonstrations



Stationary Spark Ignition Internal Combustion Engine NSPS Subpart JJJJ

SI ICE NSPS Applicability

SI engines constructed (ordered) after June 12, 2006 and

Manufactured On/After	Engine Type
July 1, 2007	≥500 HP (except lean burn 500≤HP<1,350)
January 1, 2008	Lean burn 500≤HP<1,350
July 1, 2008	<500 HP
January 1, 2009	Emergency >25 HP

Modified/reconstructed after June 12, 2006

Note: engine manufacturers must certify stationary SI engines ≤25 HP and engines >25 HP that are gasoline or rich burn LPG

Emission Standards (In General)

Engine	Standards	
≤25 HP (all engines)	Part 90 or Part 1054 standards for new nonroad SI engines	
Non-emergency gasoline and rich burn LPG	Part 1048 standards for new nonroad SI engines	
Non-emergency natural gas and lean burn LPG 25 <hp<100< td=""><td colspan="2">Part 1048 standards for new nonroad SI engines (or other options)</td></hp<100<>	Part 1048 standards for new nonroad SI engines (or other options)	
≥100 HP and not gasoline or rich burn LPG	Standards in Table 1 of subpart JJJJ, Part 1048 standards for some engines	

Owners/operators of gasoline engines must use gasoline that meets the sulfur limit in 40 CFR Part 80.195 – cap of 80 ppm

Compliance Requirements for Owners/Operators

Certified engines

- Install, configure, operate and maintain engine according to manufacturer's instructions
- If a facility does not operate/maintain according to manufacturer's instructions, they must:
 - keep maintenance plan and maintenance records
 - operate consistent with good air pollution control practices
 - 100≤HP≤500 initial performance test
 - >500 HP initial performance test and subsequent every 8,760 hours or 3 years, whichever is first

Compliance Requirements for Owners/Operators

Non-certified engines:

- Maintenance plan
- Performance testing
 - 25<HP≤500 initial test
 - >500 HP initial test and subsequent every 8,760 hours or 3 years, whichever is first
 - Conduct within 10% of peak (or highest achievable) load

Monitoring/recordkeeping/reporting includes:

- Non-resettable hour meter and records of operation for emergency engines
- Documentation of certification
- Records of engine maintenance
- Initial notification for non-certified engines >500 HP
- Results of performance testing within 60 days of test

Watch out . . . Labels can be Misleading



Important Emission Control Information

(Certificate of Conformity)

The Biogas / Digester Gas Engine incorporated into this CHP (Combined Heat & Power) Module complies with United States EPA Emissions Regulations and Standards for SI Engines > 100HP (except Gasoline and Rich-Burn LPG), Stationary SI Landfill / Digester Gas Engines and Lean-Burn Gas Engines, 40 CFR Part 60, Table I to Subpart JJJJ of Part 60 (73 FR 3591, Jan. 18 2008, as amended by 73 FR 59176, Oct. 8, 2008).

Engine Model:	Core: 2G-KWK-370 BG	Displacement:	21,93 Liter
Engine Family:	2G ^e CHP MAN E2842 LE322	Arrangement:	V12
Exhaust Emissions	2G® GEM Control	Compression:	12,0:1
Control System:	Bachmann MX213	Fuel :	Digester Gas
Load Output Rating	370 KW 496,17 BHP	NOx:	below EPA Max Limits
Rated Speed:	1800 RPM	CO:	below EPA Max Limits
Application:	Continuous / Digester Gas	VOC:	below EPA Max Limits
Valve Lash:	In. 0.50 mm / Ex. 0.50 mm	Idle Speed:	No other Adjustments needed
Serial Number:	SK0912C-BMLB-370188	Ignition Timing:	20 Degrees BTDC
ID Number	G3223	Date Of Manufacture:	17.01.2013
Manufacturer:	2G Energietechnik GmbH	Country of Origin:	Germany

WARNING

INJURY MAY RESULT AND WARRANTY IS VOIDED IF FUEL TYPE, RATE, RPM, TUNE UP SPECIFICATIONS, ORPERATING CONDITIONS, OR ALTITUDES EXCEED PUBLISHED MAXIMUM VALUES FOR THIS MODEL AND APPLICATION.

2G Energietechnik GmbH Benzstr. 3 - D-48619 Heek - Germany

Compliance Resources

RICE compliance assistance materials on EPA's website:

- <u>https://www.epa.gov/stationary-engines/guidance-and-tools-implementing-stationary-engine-requirements</u>
- This site includes a regulation navigation tool that allows you to input the specifications of your engine and the tool provides regulatory citations that apply to your engine subcategory.
- The site also provides sample notification and reporting forms, frequently asked questions, and presentations/webinars.
- The site contains information on the NESHAP and the two NSPS rules.
- The main site: <u>https://www.epa.gov/stationary-engines/</u> also provides general information about engine regulations and contact information for RICE experts in each EPA region.
- Link to spreadsheets listing which engine families have been certified: <u>https://www.epa.gov/compliance-and-fuel-economydata/annual-certification-data-engines-and-equipment</u>

Speaker Contact Information

- Steve Rapp, EPA New England, Air Technical Unit Manager, <u>Rapp.Steve@epa.gov</u>
- Kevin Taylor, EPA Region 4, Air Enforcement Inspector, <u>Taylor.Kevin@epa.gov</u>
- Melanie King, EPA Office of Air and Radiation, Energy Strategies Group, <u>King.Melanie@epa.gov</u>
- Sara Ayres, EPA Office of Enforcement and Compliance Assurance, Office of Compliance, <u>Ayres.Sara@epa.gov</u>
- Chelsea Dixon, EPA Office of Enforcement and Compliance Assurance, Federal Facilities Enforcement Office, <u>Dixon.Chelsea@epa.gov</u>
- Anne Fenn, EPA Region 1, Federal Facilities Program Manager, <u>Fenn.Anne@epa.gov</u>
- Shelia Hollimon, EPA Region 4, Federal Facilities Program Manager, <u>Hollimon.Shelia@epa.gov</u>