

# AQMD Permitting for Diesel IC Engines

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***South Coast Air Quality Management District***



***Mission Bay: Mission Critical***



# Air Quality Regulatory Framework

- **Federal - U.S. Environmental Protection Agency**

- Establishes national ambient air quality standards
- Oversees State Air Programs
- Regulates Mobile Sources (On-Road & Off-Road)
- Establishes Stationary Source Standards



- **State - California Air Resources Board**

- Establishes state ambient air quality standards
- Regulates most mobile sources (On-Road)
- Establishes Toxics Standards



- **Local - South Coast AQMD**

- Monitors and forecast air quality standards
- Adopts local rules and regulations
- Implements state and federal requirements
- Regulates Stationary Sources



# What is South Coast Air Quality Management District?

- Local Air Pollution Control Agency in Southern California (All of Orange & Portions of LA, Riverside & San Bernardino Counties)
- Population of 16.4 million (about half of California State's population)
- Area of 10,743 mi<sup>2</sup>
- **Worst air quality in the U.S. (Ozone & PM 2.5)**



# What Equipment Needs A Permit?

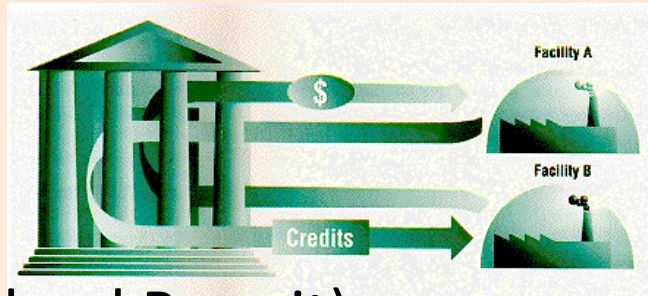
- Equipment not specifically exempt as per SCAQMD's Rule 219
- Equipment that has a potential to either emit or control air contaminants
- Equipment deemed by the Executive Officer to cause a public nuisance or health risk

# SCAQMD's Permitting Program

- Two Step Permitting Process
  - Permits to Construct (New, Modified, Relocated)
  - Permits to Operate (Existing & Newly Constructed, Change of Operator)
- Types of Permits
  - Facility Permits (Major Sources, Title V & RECLAIM)
  - Equipment Permits (Non-major Sources – auto body shops, dry-cleaners, printing operations, etc.,)
- Others
  - Compliance Plans/Emission Reduction Credits/ Change of Operator
- Certification/Registration
  - Emergency Generators
- Filing (Rule 222)
  - Small Boilers, Restaurant Charbroilers, Oil Wells, Negative Air Machines, etc.
- Burn Permit (Rule 444)

# Types of Permits

- Traditional Equipment Permit - Command and Control
- Facility Permit
  - **REgional CLean Air Incentives Market (RECLAIM)**



- Title V (Federal Permit)

# SCAQMD's Permitting Process

- Prescreening/ Completeness Determination
- Engineering Evaluation
  - CEQA Analysis
  - New Source Review Analysis (BACT, Offset, Modeling)
  - Toxics Analysis
  - Prohibitory & Source Specific Rules
- Public Notice/EPA, ARB & Public Comments
- Final Permit Action (Approval/ Denial)

# SCAQMD Registration/Certification Program

- For diesel fired emergency internal combustion engines (ICE)
- CERTIFIED EQUIPMENT PERMIT means a permit issued to a manufacturer or distributor for a specific model or series of models of equipment
- REGISTRATION PERMIT means a permit to construct or permit to operate issued to an owner/operator of equipment which has previously been issued a Certified Equipment Permit by the District.



# AQMD Registration/Certification Program for Emergency IC Engines

- Excludes engines located within 1,000 feet from the outer boundary of a school (K-12), or at RECLAIM or Title V facilities
- Two engines certified with DPF filter
- Reduced Fee (\$657.13 vs. \$2,094.60)
- Quick turn-around (normally within a week)
- More information and list of certified engines
  - <http://www.aqmd.gov/home/permits/equipment-registration>

# Portable Equipment Requirements



Portable Engines of more than 50 bhp require either:

- State of California Portable Equipment Registration Program (PERP) Engine Registration; or
- SCAQMD Engine Permit
- Tier O engines cannot operate in California after December 31, 2009, unless:
  - The engine is emergency or low use; and
  - The engine will be replaced within two years of Tier 4 engines becoming available for that engine's bhp
- General information and application forms
  - <http://www.arb.ca.gov/portable/portable.htm>
- **California Air Pollution Control Officers Association (CAPCOA)**  
**Explanation & Examples of Uses of PERP**
  - [http://www.arb.ca.gov/portable/perp/capcoa\\_document\\_3-12-14.pdf](http://www.arb.ca.gov/portable/perp/capcoa_document_3-12-14.pdf)

# Recent SCAQMD Rule Amendments for Engines

- **Rule 1470 - Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines**  
*(Amended May 12, 2012)*
- **Rule 1472 - Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines**  
*(Adopted March 7, 2008)*
- **Rule 1110.2 - Emissions from Gaseous - and Liquid-Fueled Engines** *(Emergency engines are exempt)*  
*(Amended July 7, 2012)*

# Federal Regulations –NESHAPs and NSPS for Reciprocating Internal Combustion Engines (RICE)

- **National Emission Standard for Hazardous Air Pollutants (NESHAP)** for Reciprocating Internal Combustion Engines (RICE) – [40 Code of Federal Regulations Part 63, Subpart ZZZZ](#) ("the RICE rule")
- **New Source Performance Standards (NSPS)** - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines ([40 CFR Part 60 Subpart JJJJ](#) -- "the Spark Ignition NSPS rule"
- **Standards of Performance for Stationary Compression Ignition Internal Combustion Engines** ([40 CFR Part 60 Subpart IIII](#) - Scroll to reach the Subpart.) – "the Compression Ignition NSPS rule"

# Stationary Backup Generators (General Requirements)

- SCAQMD Permit Required if more than 50 bhp
- New engines must meet Best Available Control Technology (Currently Tier 3 or higher for most engines)
- Total annual operation including emergencies shall not exceed 200 hours



# Rule 1470 (Requirements for Stationary Diesel and Other Combustion Engines)

- Implements the Airborne Toxics Control Measure (ATCM) for Stationary Compression Ignition Engines that was approved by the CARB in February 2004 (CARB ATCM).
- About 6,500 emergency ICE permits were reissued to limit operation for testing and maintenance to 20 hours per calendar year, and not allow the engine to be enrolled in an interruptible service contract with a utility company

# Rule 1470-New Stationary Emergency Standby Diesel-Fueled CI Engine –PM Standards

Engine Size	Application Deemed Complete Date	PM Emission Rate (g/bhp-hr)			
		100 meters or less from school or on school grounds	50 meters or less (from sensitive receptor*)	Greater than 50 meters from sensitive receptors (except for 100 meters or less from a school)	Two or more each <175 HP but cumulative** >175 HP
50 < HP < 175	On or after January 1, 2013	0.01	0.15	0.15	0.01
175 ≤ HP ≤ 750	On or after January 1, 2013	0.01	0.01		
>750 HP	January 1, 2013- June 30, 2015	0.01	0.075		
	On or after July 1, 2015	0.01	0.02		

\*A sensitive receptor means any residence including private homes, condominiums, apartments, and living quarters, schools, preschools, daycare centers, and health facilities such as hospitals or retirement and nursing homes, long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

\*\*Applications for such engines are deemed complete on or after January 1, 2013 and within 18 months of each other.

# Stationary Backup Diesel Generators State Law (Air Toxics Control Measures) & AQMD Rule 1470 (Testing and Maintenance)

Annual Testing and Maintenance of the engine cannot exceed:

- 20 hours if Fine Particulate Matter (PM) exceeds 0.4 g/bhp-hr (tier 0)
- 30 hours if PM is between 0.15 and 0.4 g/bhp-hr (tier 1)
- 50 hours if PM is less than 0.15 g/bhp-hr (tier 2 or better)





# Stationary Backup Diesel Generators Near Schools\*



- If within 1000 ft of a school, a public notice is required before a permit is issued
- If within 328 ft of a school, the engine cannot be tested between 7:30 a.m. and 4:30 p.m. on days when school is in session
- The engine shall meet 0.01 gr/bhp-hr if new; 85% reduction or 0.01 gr/bhp-hr, if existing

\* more stringent than CARB ATCM

# Rule 1472 (Requirements for Multiple Stationary Emergency ICE-Diesel Fueled)

- Applicable to facilities which own and operate 3 or more emergency diesel IC engines
- Initial Notification of Exemption or Compliance Plan
- Three options to reduces diesel PM emissions
  - Reduce the Engine Group Index to less than or equal to 1.0;
  - Meet a diesel PM emission factor of 0.15 g/bhp-hr or less for each engine in the group; or
  - Meet a weighted average diesel PM emission factor for the engines in the engine group of 0.15 g/bhp-hr or less.

# Rule 1110.2 (Emissions from Gaseous and Liquid Fueled Engines)

- For non-emergency IC engines (gaseous or liquid-fueled)
- Requires more source testing, monitoring, inspection and maintenance, and reporting
- By July 1, 2011, requires engines to meet the following emission limits: NO<sub>x</sub> – 11 ppm; VOC – 30 ppm; CO – 250 ppm (15% O<sub>2</sub>)
- Requires new electrical generating engines to meet CARB 2007 Distributed Generation Emission Standards

# For More Information

General information (forms, fees, rules, etc.)

- Visit [www.aqmd.gov](http://www.aqmd.gov)

Permitting Questions?

- Contact Permit Services staff at (909) 396-3385
- Small Business Assistance Office at (909) 396-3529
- Area Sources (for Registration/Certification) at (909) 396-2547