

SECTION 0066G – CLEAN DIESEL SPECIFICATION

Header:

CLEAN CONSTRUCTION DIESEL OPERATIONS REQUIREMENTS

Provision Body:

DESCRIPTION - This work consists of compliance with Clean Diesel Emission standards as required by the County of Allegheny. Comply with County of Allegheny Ordinance 16-20-OR.

Definitions

- A. Best Available Retrofit Technology ("BART") means technology verified by the United States Environmental Protection Agency ("US EPA") or the California Board Resources Board ("CARB") that achieves reductions in particulate matter emissions at the highest classification level for verified diesel emission control strategies for particulate matter (VDECS) and is applicable to a particular engine and application. Such technology shall not result in a net increase in nitrogen oxides.
- B. Covered Equipment means Non-road Construction Equipment or On-road Vehicles subject to the provisions of this Article.
- C. Non-road Construction Equipment means a vehicle or equipment that is powered by a diesel engine fifty (50) horsepower and greater, and that is not a motor vehicle or a vehicle used solely for competition, which shall include, but not be limited to, backhoes, bulldozers, compressors, cranes, excavators, generators, and similar equipment; non-road vehicles do not include locomotives or marine vessels. Non-road Construction Equipment does not include a stationary source, except that this term shall apply to diesel-powered Stationary Generators, compressors, or similar equipment used in any County Construction Project.
- D. On-road Vehicle means a self-propelled vehicle designed for transporting persons or property on a street or highway that operates on diesel fuel and that has a gross vehicle weight rating of fourteen thousand (14,000) pounds or more. For purposes of this Article, On-road Vehicle requirements shall only be applicable to concrete delivery trucks and dump trucks.
- E. Stationary Generator means a non-mobile machine that uses diesel fuel to produce electrical energy.

1.0 General Requirements

- 1.1 Electric Power Preferred. To the extent practicable, electric power from the grid shall be used and a Contractor shall make a concerted effort to ensure electric powered equipment is used in lieu of diesel or gasoline engines where practicable. Some examples are dewatering pumps, ventilation fans, compressors, welders, electric cranes, and electric hoists.
- 1.2 Clean Construction Diesel Operation (CCDO) Requirements.

1.2.A Non-Road Engines

All non-road Construction Equipment powered by diesel engines that is on a Project Site shall comply with the table below. The Contractor shall remain responsible for the installation of retrofits and equipment safety.

Horsepower	Requirement
$> 0 \leq 49$	Exempt from the requirement of County Ordinance 16-20-OR.
$\geq 50 \leq 74$	Tier 4 or Tier 3 with diesel particulate filter or Tier 2 with diesel particulate filter
$\geq 75 \leq 749$	Tier 4 or Tier 4i or Tier 3 with diesel particulate filter or Tier 2 with diesel particulate filter

- i. Any retrofit device including diesel particulate filter that is installed as an aftermarket component shall be US EPA or CARB verified for Non-road applications.
- ii. In the event diesel particulate filter technology cannot be installed for technical reasons, a Contractor can request a waiver (i.e. approval to use an alternate retrofit technology) per the applicable regulations.

1.2.B On-road Vehicles (On-road Highway Diesel Engines used in concrete trucks and dump trucks):

- i. All ready mix concrete delivery trucks and dump trucks (does not include third party suppliers) shall have model year 2007 or newer diesel engines, or be dealer approved retrofitted with a verified emission control device (that is retrofit-needed for pre-2007 engines to bring them to 2007 emission standards). The Contractor can submit truck fleet information for approval and obtain clearance for the fleet at one time.
- ii. Any On-road Vehicles with an auxiliary diesel engine must also comply with the table set forth above in Section 1.2.A and 1.2.A(i) and (ii) as applicable.

1.3 Ultra-low sulfur diesel fuel (ULSD) with maximum sulfur content of 15 parts per million (PPM) by weight shall be the only diesel fuel that can be used on site. Any equipment brought to site already fueled shall have ULSD fuel.

1.4 Sensitive receptors. Contractors must:

- 1.4.A Ensure that exhaust from diesel engines is located away from fresh air intakes, air conditioners, windows, schools, playgrounds, and residential buildings; and

- 1.4.B Establish truck staging zones with consideration to the impact of diesel emissions on abutters and the general public.
- 1.5 Emission control device maintenance required:
 - 1.5.A Follow emission control device and engine manufacturer's recommendations on the maintenance and operation of the retrofit device and the engine;
 - 1.5.B Inspect the emission control device and the exhaust system for possible leaks and damage;
 - 1.5.C Monitor warning lights associated with each retrofit device and service the filter as specified by the filter manufacturer;
 - 1.5.D Remove soot and ash from the filter as often as specified by the filter manufacturer. Dispose soot and ash in an environmentally responsible way; and
 - 1.5.E Ensure the equipment operator is trained and understands the operation and functioning of the diesel particulate filter, back pressure monitor, and the warning lights.
- 1.6 Idling. Idling time while at the Project Site shall not exceed five (5) consecutive minutes and is governed by two regulations currently in effect, and as amended from time to time.
 - 1.6.A On-road: Pennsylvania's Diesel-Powered Motor Vehicle Idling Act 124 (35 P.S. §4601).
 - 1.6.B Non-road: Allegheny County Air Quality Regulation, Article XXI (§2105.93 in use off-road diesel-powered mobile equipment engine idling).

MATERIAL - Provide all materials and equipment necessary to perform the work.

CONSTRUCTION – Comply with County of Allegheny Clean Diesel Emissions requirements as noted below:

1.1 Prior to commencing any County Construction Project (a "Project"), a Contractor must comply with the provisions of County Ordinance 16-20-OR. pertaining to CCDO, including all requirements incorporated into the designated Contract.

1.2 The following protocol must be followed by a CCDO Covered Contractor:

1.2.A The Contractor shall submit in writing and in digital format, properly labeled and as one set for each piece of Covered Equipment, the following documents **prior** to bringing such construction equipment, concrete delivery trucks, and dump trucks to the Project site:

- i. Clear digital photograph of the entire equipment showing contractor machine ID number and the model of the equipment
- ii. Readable digital photograph of the complete machine data plate

- iii. Readable digital photograph of the complete engine data plate
- iv. Readable digital photograph of the complete retrofit data plate
- v. Equipment log <Blank Equipment Log attached> with all entries correctly populated- identify the following for each equipment
 - a. Equipment type: on road (highway) or non-road
 - b. Equipment description: hydraulic excavator, crawler loader, wheeled crane, etc.
 - c. Equipment specification: manufacturer, model, serial number, year manufactured
 - d. Engine specification: manufacturer, model, family name/number, year of manufacture, serial number, horsepower, tier
 - e. Retrofit specification: manufacturer, model, serial number, year of manufacture, part number, type of retrofit, verification from CARB or EPA, and for previously used retrofit, letter from the manufacturer attesting to its functional capability as verified
- vi. Proof that engines meet or are exempt from all specifications set forth in Section 2.0 of these Regulations. Examples: Official manufacturer confirmation statement or picture of engine data plate showing compliance with applicable EPA standards for Tier and horsepower requirements and CARB verification for BART applicable to a specific engine.

1.2. B Covered Equipment on arrival at the Project Site shall be verified by the County for compliance prior to use. Covered Equipment found to be non-compliant on inspection shall be immediately removed from the Project Site. The County shall provide written approval and the Contractor shall provide compliance CCDO sticker(s) for all approved vehicles at the Project Site. Contractor is required to place CCDO stickers on each piece of Covered Equipment to verify the County's pre-approval. Covered Equipment shall not be operated on the site until the County-provided compliance sticker is affixed to the equipment and the contractor has added the following information to the equipment log:

- i. Sticker number;
- ii. Date machine is placed into service; and
- iii. Hour meter reading on date Non-road equipment is placed into service.

1.2.C The Contractor shall also submit the following information according to the schedule listed:

- i. *As applicable:*
 - a. Provide date and hour meter reading when Covered Equipment is placed into service; and
- Provide date and hour meter reading when Covered Equipment is removed from service
- ii. *Monthly* (within 5 days after end of prior month) *at a Project Meeting with the County:*
 - a. Fuel tickets and fuel summary from fuel supplier identifying fuel quality and quantity by non-road machine by date
 - b. For on road concrete trucks and dump trucks provide odometer reading at start and end of month and fuel consumption
 - c. Updated equipment log for the month.

1.2.D Prior to commencing construction, the Contractor shall establish and identify (with signage) generator sites and truck-staging zones at the Project Site for vehicles waiting to load or unload material on-site located away from sensitive receptors, such as building fresh air intakes, to the extent possible. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities. Contractor must submit a Diesel Emission Mitigation Plan ("DEMP") when work is required within fifty (50) feet to sensitive receptors such as schools, hospitals, nursing homes, fresh air intakes, windows, etc. No construction shall proceed until the DEMP is submitted in writing to and approved by the County.

1.3 Contractor shall update the submittals required herein to the extent additional Covered Equipment will be needed for the Construction Project after it commences. This update should be provided to the County prior to the use of such Covered Equipment at the Project Site.

MEASUREMENT AND PAYMENT – All reporting, compliance, and other requirements associated with this specification are incidental to the project and will not be paid for separately.

END OF SPECIAL PROVISION