This master should be used by designers working on Port of Portland construction projects. Do not alter language unless approved by Port Environmental Affairs.

Use only for projects over $2,000,000.

SECTION 015720 – CONSTRUCTION EQUIPMENT IDLING, FUEL, AND ENGINE STANDARDS

1. GENERAL
   * + 1. DESCRIPTION
          1. This section describes construction equipment idling, fuel, and engine standards.
          2. At all times during performance of the work, the Contractor and its subcontractors shall minimize diesel emissions generated by applicable vehicles and equipment and otherwise comply with all construction equipment idling, fuel, and engine standards set forth in this section. The requirements herein apply to all construction activity, vehicles, and equipment, as specified, unless waived in accordance with Article 1.8 below. Marine propulsion engines and marine auxiliary engines are exempt from these requirements.
       2. DEFINITIONS
          1. Alternative Fuel: A fuel other than petroleum diesel, including without limitation: compressed natural gas (CNG); liquified petroleum gas (LPG); ethanol; electricity; and 99 percent or greater renewable diesel, biodiesel, or renewable diesel/biodiesel blends. The Contractor shall obtain written approval from the Port for the use of any alternative fuel not expressly described in this paragraph.
          2. Applicable Vehicles and Equipment: Any nonroad construction equipment (including but not limited to front-end loaders, excavators, tractors, cranes, and generators) with a diesel engine over 25 horsepower, and diesel-powered on-road concrete mixers and dump trucks.
          3. BACT: Best available control technology.
          4. CARB: The California Air Resources Board, a state regulatory agency charged with regulating the air quality in California.
          5. DERA: The U.S. Diesel Emissions Reduction Act.
          6. Diesel Particulate Matter: The solid or liquid particles found in the air which are released through diesel combustion exhaust. Exposure to diesel particulate matter increases the risk of heart attack, stroke, and cardiovascular disease, exacerbates asthma, and can lead to low-weight and pre-term births. Diesel particulate matter is also a known human carcinogen as determined by the International Agency for Research on Cancer.
          7. DOC: Diesel oxidation catalyst. A flow-through device designed to reduce harmful diesel emissions such as carbon monoxide, hydrocarbons, and diesel particulate emissions, with a diesel particulate matter removal efficiency of at least 20 percent.
          8. DPF: Diesel particulate filter. A device designed to trap diesel particulate matter above a certain size with a removal efficiency of at least 85 percent.
          9. Emission Control Device: Technology added to equipment to reduce harmful emissions; includes DPFs and DOCs.
          10. EPA: The U.S. Environmental Protection Agency: A federal regulatory agency charged with protecting human health and the environment.
          11. Nonroad: Construction equipment and vehicles that fall under the EPA nonroad engine equipment category, which includes all diesel equipment not intended for highway use. For purposes of this section, nonroad includes only diesel construction equipment and vehicles with engines larger than 25 horsepower, which includes tractors, excavators, dozers, scrapers, and other construction equipment and vehicles.
          12. Recognized Service Provider: An installer authorized by the manufacturer of the emission control device.
       3. DIESEL EMISSIONS CONTROLS – VEHICLES AND EQUIPMENT
          1. Limit idling of applicable vehicles and equipment to 5 minutes when the vehicle or equipment is not in use or in motion, except as follows:

When traffic conditions or mechanical difficulties, over which the operator has no control, force the vehicle or equipment to remain motionless.

When operating the vehicle or equipment’s heating, cooling, or auxiliary systems using a diesel-powered engine is necessary to accomplish the intended use.

To bring the vehicle or equipment to the manufacturer’s recommended operating temperature.

When the outdoor temperature is below 40°F or above 90°F.

When needed to repair the vehicle or equipment.

When the safety of work site personnel or visitors may be compromised if the vehicle or equipment is turned off; for example, where the vehicle or equipment protects workers that are working in a trench.

When the vehicle or equipment meets EPA Tier 4 emissions standards or has been retrofitted with a DPF.

Under other circumstances specifically authorized by the Port.

* + - * 1. The Contractor shall post “Five Minute Limit” anti-idling signs near vehicle and equipment work site entrances and/or gathering areas where signage is highly visible to onsite workers. All nonroad vehicles and equipment shall have decals/prompts visible to the operator to remind them to shut down the vehicle or equipment after 5 minutes of inactivity.
      1. ELECTRIFICATION
         1. Lights, compressors, and any other stationary equipment shall be electrical grid-powered to the extent practicable. The Contractor shall apply for a grid power connection as early as possible before commencing construction at any given site and shall distribute power as needed throughout the site(s) so as to ensure the availability of grid power.
      2. DIESEL FUEL AND ENGINE REQUIREMENTS
         1. Diesel equipment and vehicles are required to use renewable R99 diesel fuel unless otherwise approved by the Port.
         2. No applicable vehicles and equipment shall be brought on the work site without meeting the following requirements, unless retrofitted with an Emissions Control Device, powered by Alternative Fuel, or a waiver has been granted by the Port, as specified in this section.

Nonroad Equipment:

Only EPA Tier 4 nonroad engines are allowed.

On-Road Concrete Mixers and Dump Trucks:

Only 2007 and newer diesel concrete mixers and dump trucks are allowed.

* + - 1. ALTERNATIVE EMISSIONS CONTROL DEVICE RETROFITS
         1. Applicable vehicles and equipment which do not meet the diesel engine standards under this section may alternatively be retrofitted with an Emissions Control Device utilizing the BACT described below.

DPFs, or an Emissions Control Device with an equivalent removal efficiency, shall be used wherever the use of such a device is feasible in the opinion of a Recognized Service Provider. Both active and passive filter regeneration mechanisms shall be considered for DPFs.

A DOC may be used on a limited basis as described in this section, in cases where a DPF is determined by a Recognized Service Provider to be infeasible for technical or safety reasons. The Contractor shall provide a statement from a Recognized Service Provider that a DPF is not suitable for the vehicle or equipment.

As of January 1, 2024, new DOC retrofits are not allowed.

Beginning on January 1, 2025, existing DOC retrofits will no longer be allowed except that small business firms certified under a state, federal or veteran-owned program administered by the Oregon State Certification Office for Business Inclusion and Diversity or the Washington State Office of Minority & Women’s Business Enterprises may continue to use vehicles or equipment that have been retrofitted with a DOC prior to 2024.

Allowable DPFs are those that are on the EPA’s and/or CARB’s verified technology list at the time of retrofit acquisition.

Allowable DOCs for on-road concrete mixers and dump trucks are those that are on the EPA’s Verified Retrofit Technology List and CARB’s then-current list of verified retrofits.

All BACT devices shall be maintained in good working order for the duration of the project.

* + - 1. VEHICLE AND EQUIPMENT REGISTRATION
         1. At least 45 days prior to commencing work, the Contractor shall submit a vehicle plan showing all applicable vehicles and equipment to be used on the work site. Include information showing the registration of all applicable vehicles and equipment in the database located on the Clean Air Construction Standards website at [www.Portland.gov/cac/TheYard](http://www.Portland.gov/cac/TheYard). The Contractor shall ensure that all subcontractors register their applicable vehicles and equipment in the same manner within the same period. No work shall commence until the Port has verified compliance with the registration requirements set forth in this subsection. Required vehicle/equipment information includes:

Owner name or rental agency name.

Owner role (e.g., Contractor, subcontractor, supplier).

Type (e.g., excavator, dozer, loader).

Engine information including manufacturer, serial number, and family number (information on locating engine information is provided in the Clean Air Construction Standards website).

On-road or nonroad.

Model year.

Horsepower.

Diesel Engines: Indicate whether any EPA- or CARB-verified aftermarket emissions control devices have been installed, and the type of control device (DPF or DOC).

* + - 1. WAIVERS; EXEMPTION
         1. When submitting the vehicle plan required under Article 1.7, the Contractor may request a waiver from the Port for each vehicle or piece of equipment that cannot meet the engine emissions tier or BACT requirements set forth in this section. All technology and safety-based waiver requests shall be accompanied by a written statement from a Recognized Service Provider substantiating the basis of the waiver request. The Contractor shall receive an approved waiver from the Port before bringing any non-compliant vehicle or piece of equipment to the work site.
         2. Technology Waiver. A technology waiver may be granted when:

The vehicle or equipment cannot be retrofitted with BACT device for a valid mechanical reason.

A retrofitted engine would not function properly.

A retrofit device would void the engine warranty.

No EPA- or CARB-certified BACT device exists for the specific engine.

No compliant rental equipment is available within 100 miles of the work site.

* + - * 1. Safety Waiver. The vehicle or equipment may qualify for a safety waiver when the required BACT device would obscure operator lines of sight or otherwise impact worker safety.
        2. Unique Circumstances Waiver. A waiver may be provided by the Port during the course of the project when a noncompliant vehicle or piece of equipment is required to respond to an emergency, as a substitute for another vehicle or piece of equipment in need of repair/maintenance, or other unforeseen circumstance. In such cases, the Contractor may orally request approval for an exemption, then must also provide a written waiver request after initial oral approval. Such exemptions shall be valid only for the duration of the unique circumstance provided for under this paragraph.
      1. COMPLIANCE
         1. Should the Port discover, during the course of the project, that the Contractor or its subcontractors or suppliers are violating any requirements set forth in this section, the Port may issue a notice to the Contractor stating the specifics of the violation and the timeframe within which the Contractor must remedy the violation. The remedy timeframe will not exceed 30 days. If the Contractor fails to remedy the violation in accordance with the Port’s notice, the Port may order the Contractor to stop work until the violation is remedied, or exercise other remedies available to the Port under this contract.  The Contractor will not be allowed an extension of the contract time or a change in the contract price as a result of the violation.

END OF SECTION 015720