

**MEMORANDUM**

**TO:** Karen Sismour  
Regional Permit Manager, Tidewater Regional Office

**FROM:** C. L. Turner  
Director, Office of Air Permit Programs

**SUBJECT:** Permitting and Compliance Issues for Non-road Internal Combustion Engines

**DATE:** December 1, 1999

**Copies:** John M. Daniel, Director, Division of Air Programs Coordination  
John E. Schubert, Air Inspections Coordinator

**Background and Issues Raised**

A number of facilities are known to employ mobile diesel engines to provide compressed air, high-pressure water, or electricity as an integral part of their processes. These engines vary widely in size and emission rates. Many are at facilities which are permitted, although some are not. Types of sources using these engines include shipyards doing abrasive blasting operations, container cranes and "straddle carriers"<sup>1</sup> at Virginia Port Authority terminals, certain rides at Busch Gardens, and cement import/export terminals, among others. These engines frequently have uncontrolled or potential emissions above permit exemption levels. Some types of internal combustion engines have historically been subject to permitting, such as generators<sup>2</sup> and

---

<sup>1</sup> A "straddle carrier" is a diesel-powered wheeled vehicle that moves cranes and other equipment around on a facility. It is essentially shaped like an upside-down U, hanging over equipment it is carrying.

<sup>2</sup> See Memo No. 97-1001, dated January 22, 1997, subject: "Emergency Generators -- Permit Exemption Guidance." This is available at "K:\AGENCY\AIRGIDE\POLICY\97-1001." It is based on an EPA guidance memo issued the preceding year to help determine the potential to emit of seldom-used emergency generators.

crushers. Others, such as hydroblasters and portable air compressors, have not traditionally received permits. The aggregate emissions of such engines and the rest of the facility where they are employed may trigger PSD major source levels. Some of these engines are rental units rather than being owned by the facility where they are employed.

The questions addressed by this Memo are: 1. what is the nature of our regulatory jurisdiction relative to these engines, and 2. what courses of action are open to us once the question of regulatory jurisdiction is resolved.

## **Discussion of Regulatory Jurisdiction**

According to the Regulations for the Control and Abatement of Air Pollution ("the Regulations"), a stationary source is "a building, facility, structure, or installation which emits or may emit any air pollutant."<sup>3</sup> The rules do not specify whether an emission unit which is movable within the facility is stationary. However, the Clean Air Act excludes from its definition of "stationary source" the emissions "resulting from a non-road engine or non-road vehicle as described in section 216."<sup>4</sup> Section 216, in turn, defines "non-road vehicle" as a vehicle that is powered by a non-road engine and that is NOT:

- a motor vehicle, or
- a vehicle used solely for competition.<sup>5</sup>

Thus, internal combustion engines at shipyards that meet the definition of "non-road engines" cannot be regulated as stationary sources. However, if they are not non-road engines, they could be either stationary or mobile sources. For this reason, it is worth examining the "non-road engines" definition in federal rules.

---

<sup>3</sup> See the definitions of "stationary source" in the permit program rules, as follows: for minor new source review, 9 VAC 5-80-10 B.; for PSD, 9 VAC 5-80-1710 C.; for non-attainment major, 9 VAC 5-80-2010 C.; for state operating permits, 9 VAC 5-80-810 C.; and for Title V, 9 VAC 5-80-60 C.

<sup>4</sup> Section 302(z) of the Clean Air Act, as cited in an EPA letter to the South Coast Air Quality Management District, dated March 30, 1993, page 2. This appears in Title III of the Act, pertaining to general provisions.

<sup>5</sup> Clean Air Act Amendments of 1990, Title II, part A, section 216(11). Title II of the Act pertains to "Emission Standards for Moving Sources." Section 216 is one of the authorities for 40 CFR Part 89, the federal rules governing emissions from non-road engines.

## Non-Road Engines under Federal Rules

The federal rules on emissions from non-road engines appear in Title 40, Code of Federal Regulations, Part 89. These rules mandate EPA certification for the manufacture of "non-road engines" that "have a gross power output at or above 37 kilowatts and that are used for any purpose."<sup>6</sup> Non-road engines are defined as:

- engines in or on a piece of equipment that is self-propelled and also accomplishes another function, such as lawn mowers;
- engines that, by themselves or on a piece of equipment, are portable or transportable from one location to another.

Engines used in mining, aircraft, marine vessels, and some other uses are exempted.<sup>7</sup>

The definition in Part 89 provides several "indicia of transportability," which include but are not limited to 1) skids, 2) a carrying handle, 3) a dolly, 4) a trailer, or 5) a platform.<sup>8</sup> The definition continues to specify things that are not non-road engines:

- engines used for motor vehicles or competition vehicles;
- engines subject to an NSPS;<sup>9</sup> and
- engines which are portable, but which stay at one location for 12 consecutive months (including replacement engines) or more (or full seasons at seasonal sources).<sup>10</sup>

Based on these definitions:

**(1) self-propelled cranes, straddle carriers, and other moving or movable machinery with internal combustion engines** are not stationary sources because they are powered by "non-road engines" as defined above;

**(2) Hydroblasters and portable air compressors** are powered by "non-road" engines if

---

<sup>6</sup> Part 89, Sub-part A, section 89.1(a).

<sup>7</sup> Part 89, Sub-part A, section 89.2, definition of "non-road engine," sub-section (1).

<sup>8</sup> See sub-section (1)(iii).

<sup>9</sup> These are limited to stationary gas turbines. See the NSPS at 40 CFR Part 60, sub-part FF.

<sup>10</sup> Part 89, Sub-part A, section 89.2, definition of "non-road engine," sub-section (2).

they possess any of the indicia of transportability mentioned above, and as such are not stationary sources;

**(3) If a piece of equipment is powered by an internal combustion engine but does not possess indicia of transportability**, it may, though it is portable, be treated as a stationary source if it stays in place for 12 consecutive months or more.

**(4) Sources which are movable** only through temporary construction or placement of rails and wheels for their movement, or through disassembly, are stationary sources.

### **Courses of Action**

We have three essential interests in addressing the emissions from these internal combustion engines that can move around industrial or shipyard sites. The first interest is in having these engines meet requirements or standards which may apply to them. The second is in making sure adequate records are kept, so that the Department can tell when or whether the emissions budget is exceeded, or a PSD (or other) threshold is reached. The third is the collection of permit fees, based on annual emissions, from sources that happen to be Title V sources or sources subject to state operating permits.

Inspectors who find internal combustion engines during site visits should look to see whether the engines possess "indicia of transportability" as discussed in this Memo and in Part 89. If they do, or if they are in fact movable under their own power, they are mobile sources, and not a matter of concern for stationary source permitting. If the engines can not move under their own power and have been in the same location for more than 12 consecutive months (possibly since the last annual site visit), they are stationary sources and the inspector may inform the source of the need to submit sufficient information to determine if the engine is subject to permitting. If the engines are discovered during permit review, the permit writer should request sufficient information to determine if emissions exceed the appropriate exemption level and should communicate the existence of the engine to compliance personnel.

I would like to thank you and your staff for their contributions to the drafting of this memorandum, and for your patience in this matter. If you have any questions regarding the content of this memo, please contact Charlie Ellis at (804) 698-4016.