FEDERAL PSD/TITLE V STATIONARY SOURCE PERMITTING EXCLUSION OF NONROAD ENGINES

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ABSTRACT
The PSD and Title V programs derive their applicability based on the aggregate air emissions from on-site equipment at each facility. Many railyards operate small combustion equipment such as gasoline-powered welders, compressors, and generators. These units may qualify as nonroad engines. Air emissions from nonroad engines need not be included in a facility’s aggregate air emissions when determining applicability of the Federal PSD or Federal Title V programs.

This paper discusses the definition of a nonroad engine and the application of the nonroad engine definition to portable or transportable internal combustion engines used in conjunction with units such as welders, compressors, etc. It details the negative applicability of the Federal PSD and Title V programs through regulatory citations, references, and guidance documents. Finally, the benefits to exclusion from Federal PSD and Title V permitting are discussed.

EXECUTIVE SUMMARY
Title 40 of the Code of Federal Regulations, Part 52, Section 21 (40 CFR Part 52, §52.21) Prevention of significant deterioration of air quality is applicable to major stationary sources of air pollutants. Similarly, 40 CFR Part 71 Federal Operating Permit Programs is applicable to major sources of air pollutants. The Clean Air Act (CAA), as amended through the 1990 Clean Air Act Amendments (CAAAs), defines “stationary source” in Title III, General Provisions, Section 302, Definitions, paragraph (z) [CAA §302(z)] such that any source of air emissions resulting directly from a nonroad engine is not regulated as a stationary source under the CAA.

The definition of a nonroad engine in Title II, Emission Standards for Moving Sources, Section 216, Definitions of the CAA is codified in several parts of the CFR, such as 40 CFR Parts 89 and 90. As defined in these parts, internal combustion engines that are mobile (i.e., portable or transportable) engines are considered nonroad engines. Therefore, internal...
combustion engines used in welders, compressors, generators, etc., that do not stay at any single site at a building, structure, facility, or installation for 12 consecutive months or more, are nonroad engines.

Facilities can realize many benefits from the exclusion of nonroad engines from federal PSD and/or Title V permitting. PSD facilities are often required to conduct air dispersion modeling and control technology reviews as part of efforts to authorize new or modified emission units. Title V facilities are typically burdened with compliance certifications, and recordkeeping and monitoring requirements, among other things. These additional hurdles to permitting and continuous compliance at a facility can significantly increase the cost of capital projects and day-to-day operations.

Please note that this paper does not discuss the Federal requirements of 40 CFR Parts 89 through 92, related to mobile sources. Nor does this paper discuss state/district permitting program nuances for agencies which have State Implementation Plan (SIP)-authorized or delegated status for the PSD and/or Title V permitting programs.

**DETERMINATION OF NONROAD ENGINES**

The United States Congress gave the United States Environmental Protection Agency (U.S. EPA) the authority to regulate mobile sources such as locomotives, aircraft, marine vessels, and nonroad engines in Title II, *Emission Standards for Moving Sources* (Title II) of the CAA. The U.S. EPA has exercised its authority to regulate these sources of air pollutants by promulgating regulations and requirements in 40 CFR. Specifically, 40 CFR Parts 89 and 90 regulate air emissions from nonroad compression and small spark-ignition engines, respectively. The definition of nonroad engine provided in these Federal regulations is provided below.

Per 40 CFR Parts 89 and 90, §89.2 and §90.3, *Definitions*,

> **Nonroad engine means:**

> (1) Except as discussed in paragraph (2) of this definition, [a nonroad engine is] any internal combustion engine:

> (i) In or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes, and bulldozers); or

> (ii) In or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or

> (iii) That, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of
transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

(2) An internal combustion engine is not a nonroad engine if:

(i) The engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under section 202 of the Act; or

(ii) The engine is regulated by a federal New Source Performance Standard promulgated under section 111 of the Act; or

(iii) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any site at a building, structure, facility, or installation. Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. This paragraph does not apply to an engine after the engine is removed from the location.

The above definition incorporates the requirements of the nonroad engine definition contained in Section 216, Definitions of Title II of the CAA, which states that a nonroad engine is not a motor vehicle or a vehicle used solely for competitions, and is not subject to regulations under Title I, Air Pollution Prevention and Control, Section 111, Standards of Performance for New Stationary Sources or Title II, Emission Standards for Moving Sources, Section 202, Establishment of Standards of the CAA.

In addition, the above definition includes the following specific requirement: the engines must be portable or transportable and not stay at any site at a building, structure, facility, or installation for 12 consecutive months or more. It was necessary for the U.S. EPA to incorporate this additional requirement [i.e., 40 CFR Parts 89 and 90, §§89.2 and §90.3, paragraphs (1)(iii) and (2)(iii)] since the CAA act definition of a nonroad engine taken verbatim from CAA §216 would allow an interpretation that even “stationary” engines that are not subject to a Federal New Source Performance Standard (NSPS) or Section 202 of the CAA would be considered a nonroad engine. In the context of the CAA, this clarification is not needed because “nonroad engine” is defined within Title II of the CAA which regulates “moving sources” of air pollutants.

The U.S. EPA has not promulgated a Federal NSPS for internal combustion engines, stationary or otherwise, under 40 CFR Part 60, Standards of Performance for New Stationary Sources. In addition, internal combustion engines used to operate welders, compressors, generators, etc., are not regulated under Section 202 of Title II of the CAA because they are not motor vehicle engines.
Therefore, engines operating welders, compressors, generators, etc., that meet the requirements of 40 CFR Parts 89 and 90, §89.2 and §90.3, Definitions, paragraphs (1)(iii) and (2)(iii) under nonroad engines (i.e., are portable or transportable and do not stay at any site at a building, structure, facility, or installation for 12 consecutive months or more) are considered nonroad engines. It is important to note that U.S. EPA Region IV has concurred that “location” refers to a single site at a building, structure, facility, or installation. Therefore, an engine (designed to be and capable of being moved) that moves from a single site (i.e., coordinate) within an owner/operator’s property to another single site (i.e., coordinate) within the same owner/operator’s property, meets the definition of nonroad engine. The U.S. EPA has concurred with this interpretation.1, 2

In addition, the 1990 CAAA directed the U.S. EPA to study nonroad engines and regulate them in the event the engines contribute to urban air pollution. The U.S. EPA determined that nonroad engines emit large amounts of nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM). Therefore, the U.S. EPA initiated regulatory programs outlined in the CFR (e.g., Parts 89 and 90) for several categories of nonroad engines. In a program update document entitled Reducing Air Pollution from Nonroad Engines dated April 2003, the U.S. EPA summarized the status of the programs for the various nonroad engine categories.3 In the April 2003 program update, the U.S. EPA provided examples of nonroad engines, which include, but are not limited to, welders, compressors, and generators.

The U.S. EPA’s technical highlight, Emission Regulations for Stationary and Mobile Engines, dated September 2002, also provides the U.S. EPA’s position on nonroad engines.4 The document explains that engines used in stationary equipment, such as generators when mounted on trailers (i.e., made to be portable or transportable), are considered nonroad engines. However, an engine manufactured for a stationary application that is converted to a mobile application may require certification as a nonroad engine.

EXCLUSION OF NONROAD ENGINES FROM FEDERAL PSD APPLICABILITY

This section of the paper presents the regulatory basis for the exclusion of nonroad engines from regulation under the Federal PSD program. It should be noted that this discussion is confined to regulated entities located in areas where the U.S. EPA has not granted authority of the PSD program to the state and/or local agencies through a SIP (i.e., “SIP-authorized”) under 40 CFR

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1 A March 12, 1996 letter from Mr. Brian Beals, U.S. EPA, to Mr. Edward Cutrer, Georgia Department of Natural Resources is available at the following URL: [http://www.epa.gov/Region7/programs/artd/air/title5/t5memos/19960312.pdf](http://www.epa.gov/Region7/programs/artd/air/title5/t5memos/19960312.pdf)
3 U.S. EPA’s Program Update, Reducing Air Pollution from Nonroad Engines, is available at the following URL: [http://www.epa.gov/nonroad/03011.pdf](http://www.epa.gov/nonroad/03011.pdf)

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Part 51 or has delegated authority of the PSD program to the state and/or local agencies under 40 CFR §52.21.⁵

Pursuant to 40 CFR Part 52, §52.21(a)(2), the requirements of the Federal PSD program are applicable to any “major stationary source” as defined in 40 CFR Part 52, §52.21(b).⁶ In general, “major stationary source,” pursuant to 40 CFR Part 52, §52.21(b)(1), means:

(a) Any of the 28 stationary sources listed in 40 CFR Part 52, §52.21(b)(1)(i)(a) which emits, or has the potential to emit, 100 tons per year (tpy) or more of any pollutant subject to regulation under the CAA.

(b) Any other stationary source which emits, or has the potential to emit, 250 tpy or more of any air pollutant subject to regulation under the CAA.

(c) Any other stationary source category, which, as of August 7, 1980, is regulated under Section 111 (related to NSPS) or 112 (related to Hazardous Air Pollutants) of the CAA.

Per 40 CFR Part 52, §52.21(b), Definitions,

(5) Stationary source means any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.

(6) Building, structure, facility, or installation means all of the pollutant emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same “Major Group” (i.e., which have the same first two digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U. S. Government Printing Office stock numbers 4101–0066 and 003–005–00176–0, respectively).

In the definitions provided above, the U.S. EPA does not explicitly address the status of nonroad engines (or mobile sources) relating to Federal PSD applicability. It is likely that the U.S. EPA promulgated the above definition while operating under the supposition that it is tacit knowledge that mobile sources (i.e., nonroad engines) are regulated under Federal programs deriving their authority from Title II of the CAA (e.g., 40 CFR Parts 85 through 92). However, stationary source is defined in the CAA in Title III, General Provisions, Section 302, Definitions in a form that explicitly excludes nonroad engines.

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⁵ PSD delegation information is available within 40 CFR Part 52, Subparts B through DDD.
⁶ 40 CFR Part 52, §52.21, Prevention of Significant Deterioration of Air Quality, is available at the following URL: http://a257.g.akamaitech.net/7/257/2422/20oct20031500/edocket.access.gpo.gov/cfr_2003/julqtr/pdf/40cfr52.21.pdf

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Per CAA §302(z),

Stationary Source - The term “stationary source” means generally any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in section 216.

As explained in the previous sections of this paper, internal combustion engines such as welders, generators, compressors, etc., that are portable or transportable meet the definition of a nonroad engine as defined in the CFR which incorporates all of the requirements of Section 216 of Title II of the CAA. As such, these nonroad engines are not regulated under 40 CFR Part 52, §52.21.

In addition, U.S. EPA Region IX has made the determination that nonroad engines are not included in Federal permitting programs. In a letter to the Law Office of Marc Chytilo dated December 14, 2001, U.S. EPA Region IX states that under CAA §302(z) nonroad engines are excluded from the definition of “stationary source” and are, therefore, exempt from Federal stationary source permitting requirements (i.e., Federal Title V and NSR permitting).

EXCLUSION OF NONROAD ENGINES FROM FEDERAL TITLE V APPLICABILITY

This section of the paper presents the regulatory basis for the exclusion of nonroad engines from regulation under the Federal Title V program. It should be noted that this discussion is confined to regulated entities located in areas where the U.S. EPA has not delegated authority of the Title V program to the state and/or local agencies.

Pursuant to 40 CFR Part 71, §71.3(a), the requirements of the Federal Title V program are applicable to the following:

(a) Part 71 sources. The following sources are subject to the permitting requirements under this part:

(1) Any major source;
(2) Any source, including an area source, subject to a standard, limitation, or other requirement under section 111 of the Act;
(3) Any source, including an area source, subject to a standard or other requirement under section 112 of the Act, except that a source is not required to obtain a permit solely because it is subject to regulations or requirements under section 112(r) of the Act;
(4) Any affected source; and
(5) Any source in a source category designated by the Administrator pursuant to this section.

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7 U.S. EPA Region IX Letter to the Law Office of Marc Chytilo (refer to “Our Response to Comment #12, page 11), is available at the following URL: http://www.epa.gov/Region7/programs/artd/air/title5/t5memos/camarc.pdf
8 Title V delegation information is available within 40 CFR Part 71.

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“Major source” is defined in 40 CFR Part 71, §71.2. In general, “major source,” pursuant to 40 CFR Part 71, §71.2 means:

(a) Any stationary source (or group of stationary sources located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)) belonging to a single major industrial grouping, and are described in (b), (c), or (d) below.

(b) A major source of Hazardous Air Pollutants (HAPs) with air emissions of individual HAPs of 10 tpy or 25 tpy of the combination of all HAPs.

(c) A major stationary source of air pollutants or any group of stationary sources as defined in Section 302 of the CAA that directly emits or has the potential to emit 100 tpy or more of any air pollutant.

(d) A major stationary source as defined in Part D of Title I of the CAA. (This relates to nonattainment areas.)

Per 40 CFR Part 71, §71.2, Definitions,

Stationary source means any building, structure, facility, or installation that emits or may emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act.

In the definition provided above, the U.S. EPA does not explicitly address the status of nonroad engines (or mobile sources) relating to Federal Title V applicability. As noted previously for PSD, it is likely that the U.S. EPA promulgated the above definition while operating under the supposition that it is tacit knowledge that mobile sources (i.e., nonroad engines) are regulated under Federal programs deriving their authority from Title II of the CAA (e.g., 40 CFR Parts 85 through 92). However, stationary source is defined in CAA §302(z) in a form that explicitly excludes nonroad engines, as discussed above.

Also as previously noted, U.S. EPA Region IX has made the determination that nonroad engines are not included in Federal permitting programs. In the letter to the Law Office of Marc Chytilo, U.S. EPA Region IX states that under CAA §302(z) nonroad engines are excluded from the definition of “stationary source” and are, therefore, exempt from Federal stationary source permitting requirements (i.e., Federal Title V and NSR permitting).

BENEFITS TO EXCLUSION FROM FEDERAL PSD/TITLE V PERMITTING

A facility may recognize benefits from being excluded from Federal PSD and/or Title V permitting requirements. In general terms, a PSD facility may be subject to extensive air dispersion modeling requirements when attempting to authorize new or modified sources, such as site-wide air dispersion modeling and/or regional air dispersion modeling to determine impacts of

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9 40 CFR Part 71, Federal Operating Permit Programs, is available at the following URL: http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr71_03.html

10 U.S. EPA Region IX Letter to the Law Office of Marc Chytilo (refer to “Our Response to Comment #12, page 11), is available at the following URL: http://www.epa.gov/Region7/programs/artd/air/title5/t5memos/camarc.pdf

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air contaminants. A PSD facility may also be subject to Best Available Control Technology (BACT) requirements for new and/or modified equipment. Control technology reviews to determine BACT involve a cost analysis on a per ton pollutant removed basis. Based on the reviews, facilities may be required to incorporate add-on controls to capital projects that can increase project costs significantly. In addition, a PSD facility may be subject to obtaining (i.e., generating or purchasing) emission offsets to offset new sources of air pollution.

Although the Title V permit is not intended to incorporate any additional air quality regulatory requirements at a site, Title V facilities are required to submit an annual compliance certification report. Annual compliance certifications often necessitate a facility to maintain detailed operations records and for a “Responsible Official” to certify the information prior to submittal. In addition to the compliance certification, Title V facilities may also be required to conduct compliance assurance and/or periodic monitoring. Compliance assurance monitoring (CAM) and periodic monitoring (PM) refer to the activities required of a source to demonstrate compliance with a regulatory requirement and may include source testing, source monitoring, recordkeeping, and reporting of results. CAM and PM may represent a significant expense to a facility with regard to time, effort, and technology.

**SUMMARY**

Air emissions from nonroad engines need not be included in a facility’s aggregate air emissions when determining the applicability of the Federal PSD or Federal Title V stationary source permitting programs. Facilities should identify the equipment at their facilities, determine the applicability of the nonroad engine definition to selected equipment, and be cognizant of the nuances of SIP-authorized or delegated Federal programs. As this paper only discusses the Federal permitting programs (i.e., PSD and Title V), the local agency may implement these stationary source programs in its region more stringently than the Federal programs direct. However, the local agency may not have encountered this situation previously, and, in most cases, the burden of proof lies on the applicant. Therefore, this guidance may facilitate communication with a local agency concerning stationary source permitting.

As this paper does not discuss the Federal requirements related to mobile sources, it is also recommended that facilities review these regulations for additional potential requirements.