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PERMITTING GUIDANCE

DATE: April 2, 2014

TO: Air Quality Permitting Staff and the Regulated Community

THROUGH: Ted Schooley, Permit Program Manager

FROM: Liz Bisbey-Kuehn, Minor Source Section

SUBJECT: The regulation of non-road engines under 20.2.70, 20.2.72, and 20.2.73 NMAC

This guidance document discusses the authority of the NMED Air Quality Bureau (Bureau) to regulate non-road engines, as defined in 40 CFR 89.2[(1)], under 20.2.70 NMAC, Operating Permits; 20.2.72 NMAC, Construction Permits; and 20.2.73 NMAC, Notice of Intent and Emissions Inventory Requirements. The issue has been raised of whether New Mexico has the authority to regulate non-road engines, as defined in 40 CFR 89.2, in an air quality permit or Notice of Intent (NOI) issued by the Department. This guidance document is meant to assist Bureau staff and the regulated community in understanding what equipment should be included in air quality permit applications submitted to the Bureau and the regulatory basis for doing so.

Based on the discussions and evidence provided below, the Bureau has the authority to regulate non-road engines under 20.2.72 and 20.2.73 NMAC, except as specifically prohibited under Section 209 of the Clean Air Act (CAA)[(2)].

History of the Regulation of Non-Road Engines under the Clean Air Act

Prior to the CAA Amendments of 1990, non-road engines were regulated as a stationary source under the Federal PSD permitting program's definition of stationary source. As part of the 1990 CAA amendments, the EPA was granted new authority to establish specific emission limitations for non-road engines and further modified how these engines were to be regulated under the CAA by specifically exempting non-road engines from the federal definition of stationary source if the engines met certain applicability criteria.

In 1997, the EPA further clarified their interpretation of the authority of states to regulate non-road engines in a state air permitting program. Specifically, the EPA stated:

> *EPA believes that states are not precluded under section 209 from regulating the use and operation of non-road engines, such as regulations on hours of usage, daily mass emission limits, or sulfur limits on fuel; nor are permits regulating such operations precluded, once the engine is no longer new. EPA believes that states are precluded from requiring retrofitting of used non-road engines except that states are permitted to adopt and enforce any such retrofitting requirements identical to California requirements which have been authorized by EPA under section 209 of the Clean Air Act.*

This authority is found at Appendix A to Subpart A of 40 CFR 89 and is attached to this guidance document for reference.

The term "new" is defined by the EPA to mean showroom new, meaning never before operated or purchased by an operator.

The unambiguous language in Appendix A to Subpart A of 40 CFR 89 grants states the explicit authority to regulate non-road engines in state permitting programs. In addition, other states have requested and received waivers from the EPA in accordance with the requirements of Section 209 of the CAA to impose emission limitations on non-road engines. An overview of requirements for non-road engines in California and Texas is discussed below.

California Air Resources Board Adoption of Standards for Non-Road Engines

Below is an excerpt from the EPA's Control of Emissions from Nonroad Spark-Ignition Engines and Equipment; Final Rule. A link to the entire document is provided below.
http://www.gpo.gov/fdsys/pkg/FR-2008-10-08/html/E8-21093.htm

> *The California Air Resources Board (California ARB) has adopted requirements for five groups of nonroad engines: (1) Diesel- and Otto-cycle small off-road engines rated under 19 kW; (2) spark-ignition engines used for marine propulsion; (3) land-based nonroad recreational engines, including those used in all-terrain vehicles, off-highway motorcycles, go-carts, and other similar vehicles; (4) new nonroad spark-ignition engines rated over 19 kW not used in recreational applications; and (5) new land-based nonroad diesel engines rated over 130 kW. They have also approved a voluntary registration and control program for existing portable equipment.*
>
> *In the 1990s California ARB adopted Tier 1 and Tier 2 standards for Small SI engines consistent with the federal requirements. In 2003, they moved beyond the federal program by adopting exhaust HC+NO X emission standards of 10 g/kW-hr for Class I engines starting in the 2007 model year and 8 g/kW-hr for Class II engines starting in the 2008 model year. In the same rule they adopted evaporative emission standards for nonhandheld equipment, requiring control of fuel tank permeation, fuel line permeation, diurnal emissions, and running losses.*

CARB in 1998 adopted requirements that apply to new nonroad engines rated over 25 hp produced for California, with standards phasing in from 2001 through 2004. Texas has adopted these initial California ARB emission standards statewide starting in 2004.

Texas Commission on Environmental Quality (TCEQ)

As noted above, Texas adopted emission standards as adopted by CARB for certain non-road engines. The citation of the Texas rule is Chapter 114 - Control of Air Pollution from Motor Vehicles, SUBCHAPTER I: NON-ROAD ENGINES, DIVISION 3: Non-Road Large Spark-Ignition Engine. The rule is attached to this document for reference.

New Mexico Air Quality Permit and NOI Regulation Includes Definition to Regulate Non-Road Engines under 20.2.72 and 20.2.73 NMAC

The definition of stationary source in New Mexico's preconstruction permit regulation and NOI registration regulation contains the term "portable source" that provides state authority to include non-road engines in permitting decisions.

The term "portable stationary source" was incorporated into the preconstruction permit regulation when this revision became effective on September 17, 1987. The public hearing to revise the regulation was held on December 2, 1986. The public hearing transcript contains the verbal testimony presented at the hearing and provides an explanation of the Bureau's position and intent of the requested revisions to the regulation. Below are excerpts from the transcript that reference the term and the associated discussions regarding the term at the hearing.

The first is an excerpt from the hearing from the Bureau's witness, Bruce Nicholson, the manager of the permits and modeling analysis section of the Air Quality Bureau. Bruce is referring to the definitions in the proposed regulation. The first quote discusses removing the term "batch" from the definition of portable stationary source. The definition of portable stationary source is numbered Definition 24 in the current regulation, and not 21 as it appears in the transcript.

The second quote discusses that the terms "temporary installations" and "portable stationary source" are now included in the definition of stationary source. The definition of stationary source is numbered Definition 30 in the current regulation, and not 28 as it appears in the transcript. (Pages 300-303, 86-12-02 Transcripts, Volume 2).

"Definition 21, the term "portable stationary source" is not used in the original 702, but is used here. The August 22 definition was changed slightly to delete the term "batch," since this refers to a special kind of asphalt plant and our intent in the language was to be more general."

"Definition 28, the correct number for this definition is 28. The definition of "stationary source" appears in the original 702, and the definition of "source" appears in the state act. Those two definitions are the same except that the definition in the act contains the term "equipment" in the list. ***We have further clarified in our language that this term as***

> ***used in the proposed regulation includes both temporary and portable installations or operations*** *[emphasis added].* *Clearly, the example I gave of an asphalt plant is a portable stationary source, which is covered under new source performance standard and is required to be reviewed.* ***As indicated previously, the permit process is to review sources in part for attainment and maintenance of standards and to prevent or abate air pollution. It does not make sense that if a source can be moved or is temporary, then it should escape statutory mandates relating to air pollution or regulation*** *[emphasis added].* *The term "stationary source" or "source" is used in numerous places in this proposed regulation. Most importantly, it is used in the applicability section of Part Two, Section A which defines what sources this regulation applies to. This definition does not establish regulation applicability of sources; rather, it is meant to define the larger universe of air contaminant emitters which might possibly be subject to the regulation. Part Two, Section A limits this larger group."*

The following excerpt from the hearing from the Bureau's witness, Bruce Nicholson, discusses the applicability of temporary and portable sources to this regulation. Bruce testifies that these sources are subject to permit review and that the temporary activity does not negate the requirements that ambient air quality be maintained to protect public health. (Page 316, 86-12-02 Transcripts, Volume 2).

> *"Section A.5. provides that both temporary and portable sources are subject to permit review. Some portable sources are subject to NSPS, and all portable and temporary sources meeting the applicability requirements of the regulation may emit air contaminants which may cause air pollution. Furthermore, the evaluation of ambient air standards or toxic air pollutants is site-specific because of geography, meteorology, operations and fence-line boundaries. These need to be considered during the review or in relocation protocols. In the case of a temporary source, it does not matter if the contaminants are, for example, emitted for three months only. The Division must insure that ambient air standards and public health are not placed in jeopardy."*

20.2.72 NMAC defines the term "stationary source" as follows:

> *"Stationary source" or "source" means any building, structure, equipment, facility, installation (including temporary installations), operation or portable stationary source which emits or may emit any air contaminant. Any research facility may group its sources for the purpose of this Part at the discretion of the Secretary.*

20.2.73 NMAC defines the term "stationary source" as follows:

> *"Stationary source" or "source" means any building, structure, equipment, facility, installation (including temporary installations), operation or portable stationary source which emits or may emit any air contaminant; any research facility may group its sources for the purpose of this part at the discretion of the secretary of the department.*

20.2.72 and 20.2.73 NMAC define the term "portable stationary source" as follows:

> *"Portable stationary source" means a source which can be relocated to another operating site with limited dismantling and reassembly, including for example but not limited to moveable sand and gravel processing operations and asphalt plants.*

Bureau staff reviewed active regular NSR permits issued to the construction industry from the year 1983 to the year 2005 to determine if the change to the definition of stationary source to include portable sources impacted the permitting of engines and generators in air quality permits. A total of 49 active regular NSR permits were issued over this period, 14 of these did not have engines/generators listed in the air quality permit. Of those 14 NSR permits, 3 were issued prior to the inclusion of the term portable stationary source in to the preconstruction regulation (between 1983 and 1987). Based on the above, 35 out of 46 (76%) NSR permits include engines and/or generators as regulated equipment between 1987 and 2005. The Bureau concludes the change in the definition did impact the permitting of these engines/generators as prior to the change, 100% of permits issued did not contain an engine/generator and after 1987, 76% of the permits issued did contain an engine/generator as part of the source.

Applicability of Non-Road Engines to Title V Permit Program

The Bureau requires that non-road engines only be included in a Title V permit application if those units are regulated in an existing NSR permit.

The definition of stationary source in 20.2.70 NMAC does not include the term "portable source" and therefore, by definition, the non-road engine is not a stationary source. Therefore, the emissions from unregulated (not regulated in a NSR permit) non-road engines at a Title V source would not be aggregated for purposes of determining Title V applicability.

20.2.70 NMAC defines the term "stationary source" as follows:

> *"Stationary source" or "source" means any building, structure, facility, or installation, or any combination thereof that emits or may emit any regulated air pollutant or any pollutant listed under Section 112(b) of the federal act.*

Uses of Non-Road Engines in New Mexico

Non-road engines constitute a significant source of air emissions in New Mexico, and the Department requires that these sources undergo an applicability analysis, and if air quality permitting is required, a demonstration that the operation of the equipment will not cause any exceedances of the National or New Mexico Ambient Air Quality Standards.

Many industries in New Mexico utilize non-road engines as part of normal operations. These include, but are not limited to, the aggregate industry, oil and gas industry, mining industry and federal facilities. Perhaps the most common is the aggregate and asphalt construction industry which operates portable engines and attached electrical generators to provide electrical power to operate the aggregate processing equipment. The operation of the aggregate processing equipment is dependent upon the use of non-road engines, as absent any available line power the aggregate processing equipment could not operate without a source of electric power. As such,

the portable generators are integral to the operation of the aggregate processing equipment. Note that these sources have historically been included in both the Department's facility-specific permits and general construction permits established for this industry type.

Citations

(1) Definition of Non-Road Engine from 40 CFR 89.2

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 single 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.

(2) Section 209 of the Clean Air Act

(a) Prohibition
No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part. No State shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition precedent to the initial retail sale, titling (if any), or registration of such motor vehicle, motor vehicle engine, or equipment.

(b) Waiver
(1)The Administrator shall, after notice and opportunity for public hearing, waive application of this section to any State which has adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or new motor vehicle engines prior to March 30, 1966, if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. No such waiver shall be granted if the Administrator finds that—
(A) the determination of the State is arbitrary and capricious,

(B) such State does not need such State standards to meet compelling and extraordinary conditions, or

(C) such State standards and accompanying enforcement procedures are not consistent with section 7521(a) of this title.

(2) If each State standard is at least as stringent as the comparable applicable Federal standard, such State standard shall be deemed to be at least as protective of health and welfare as such Federal standards for purposes of paragraph (1).

(3) In the case of any new motor vehicle or new motor vehicle engine to which State standards apply pursuant to a waiver granted under paragraph (1), compliance with such State standards shall be treated as compliance with applicable Federal standards for purposes of this subchapter.

(c) Certification of vehicle parts or engine parts
Whenever a regulation with respect to any motor vehicle part or motor vehicle engine part is in effect under section 7541(a)(2) of this title, no State or political subdivision thereof shall adopt or attempt to enforce any standard or any requirement of certification, inspection, or approval which relates to motor vehicle emissions and is applicable to the same aspect of such part. The preceding sentence shall not apply in the case of a State with respect to which a waiver is in effect under subsection (b) of this section.

(d) Control, regulation, or restrictions on registered or licensed motor vehicles

Nothing in this part shall preclude or deny to any State or political subdivision thereof the right otherwise to control, regulate, or restrict the use, operation, or movement of registered or licensed motor vehicles.

(e) Nonroad engines or vehicles
(1) Prohibition on certain State standards
No State or any political subdivision thereof shall adopt or attempt to enforce any standard or other requirement relating to the control of emissions from either of the following new nonroad engines or nonroad vehicles subject to regulation under this chapter—

(A) New engines which are used in construction equipment or vehicles or used in farm equipment or vehicles and which are smaller than 175 horsepower.

(B) New locomotives or new engines used in locomotives.

Subsection (b) of this section shall not apply for purposes of this paragraph.

(2) Other nonroad engines or vehicles
(A) In the case of any nonroad vehicles or engines other than those referred to in subparagraph (A) or (B) of paragraph (1), the Administrator shall, after notice and opportunity for public hearing, authorize California to adopt and enforce standards and other requirements relating to the control of emissions from such vehicles or engines if California determines that California standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. No such authorization shall be granted if the Administrator finds that—
(i) the determination of California is arbitrary and capricious,

(ii) California does not need such California standards to meet compelling and extraordinary conditions, or

(iii) California standards and accompanying enforcement procedures are not consistent with this section.

(B) Any State other than California which has plan provisions approved under part D of subchapter I of this chapter may adopt and enforce, after notice to the Administrator, for any period, standards relating to control of emissions from nonroad vehicles or engines (other than those referred to in subparagraph (A) or (B) of paragraph (1)) and take such other actions as are referred to in subparagraph (A) of this paragraph respecting such vehicles or engines if—
(i) such standards and implementation and enforcement are identical, for the period concerned, to the California standards authorized by the Administrator under subparagraph (A), and

(ii) California and such State adopt such standards at least 2 years before commencement of the period for which the standards take effect.

The Administrator shall issue regulations to implement this subsection.

Attachments

1) Appendix A to Subpart A of 40 CFR 89
2) TAC, Chapter 114, Control of Air Pollution from Motor Vehicles, Subchapter I, Non-Road Engines, Division 3: Non-Road Large Spark-Ignition Engine