

NATURAL RESOURCES CONSERVATION SERVICE
INTERIM CONSERVATION PRACTICE STANDARD
COMBUSTION SYSTEM AIR EMISSIONS MANAGEMENT

(No.)

Code 723

DEFINITION

Installing, replacing, or retrofitting an agricultural combustion system and/or related components or devices.

PURPOSE

The purpose of this standard is to manage air emissions from agricultural combustion systems. Specifically, this standard is intended to address the particulate matter and ozone precursors air resource concerns by reducing emissions of oxides of nitrogen and/or fine particulate matter that arise from the use of any type of combustion system.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to any agricultural operation that operates an agricultural combustion system, including stationary, portable, mobile, and self-propelled equipment. The combustion system must be used primarily for agricultural and/or forestry activities.

CRITERIA

The new or replacement combustion system and related components or devices shall be sized appropriately to accomplish its intended task.

The new, replacement, or retrofit combustion system and related components or devices shall utilize a non-combustion power source or cleaner-burning technologies, techniques, and/or fuels, or allow for the reduced operation of an existing combustion system.

Retrofit can include actions or combinations of actions that are intended to reduce emissions of oxides of nitrogen and/or fine particulate matter. Examples of individual retrofit actions include:

- Adding an emissions control device,
- Altering air/fuel mixtures,
- Adding a device that allows for reduced operation of an existing combustion system, and/or
- Other physical modifications or changes in combustion techniques that reduce emissions formation and release.

Where required, the new, replacement, or retrofit combustion system and related components or devices shall be certified to meet currently-applicable federal, state, and local standards and guidelines.

When installing a new diesel-powered engine, the newest-available EPA engine TIER technology shall be chosen.

The new, replacement, or retrofit combustion system and related components or devices shall be operated and maintained in accordance with the manufacturer's recommendations.

All replaced combustion systems shall be rendered inoperable or used to replace higher-emitting combustion systems.

- Certification of inoperability can be accomplished by:
 - Obtaining a receipt for the combustion system disposal from a scrap metal recycling operation and keeping this receipt available for inspection; or
 - Punching a permanent hole through the engine block or combustion chamber of the combustion system (minimum size to be determined by federal, state, or local guidelines at <http://www.valleyair.org>) and maintaining a certification for inspection that this process has been completed;

or

<p>Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard contact your Natural Resources Conservation Service State Office, or download it from the electronic Field Office Technical Guide for your state.</p>

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- Certification of use as a replacement system can be accomplished by providing certification of inoperability of one or more higher-emitting combustion system(s).

CONSIDERATIONS

Installation of new, or replacement of existing, combustion systems with non-combustion renewable energy sources, such as solar, wind, and water, will provide the greatest air quality benefit.

To maximize the air quality benefits of this practice, replacement combustion systems should be similar in size and hours of operation to the existing combustion systems.

Cultural Resources Considerations

NRCS policy is to avoid any effect to cultural resources and protect them in their original location. Determine if installation of this practice or associated practices in the plan could have an effect on cultural resources. The National Historic Preservation Act may require consultation with the California State Historic Preservation Officer. <http://www.nrcs.usda.gov/technical/cultural.html> is the primary website for cultural resources information. The California Environmental Handbook and the California Environmental Assessment Worksheet also provide guidance on how the NRCS must account for cultural resources. The e-Field Office Technical Guide, Section II contains general information, with Web sites for additional information.

Document any specific considerations for cultural resources in the design docket and the Practice Requirements worksheet.

Endangered Species Considerations

If during the Environmental Assessment NRCS determines that installation of this practice, along with any others proposed, will have an effect on any federal or state listed Rare, Threatened or Endangered species or their habitat, NRCS will advise the client of the requirements of the Endangered Species Act and recommend alternative conservation treatments that avoid the adverse effects. Further assistance will be provided only if the client selects one of the alternative conservation treatments for installation; or with concurrence of the client, NRCS initiates consultations concerning the listed species with the U.S. Fish and Wildlife Service, National Marine

Fisheries Service and/or California Department of Fish and Game.

PLANS AND SPECIFICATIONS

Specifications for application of this practice shall be prepared for each site or planning unit according to the criteria. Specifications shall be recorded using State-developed specification sheets, job sheets, practice requirement sheets, narrative statements in conservation plans, or other acceptable documents.

As a minimum, the plans and specifications shall provide the following:

1. Identification and description of the existing combustion system and related components or devices, if applicable, and the new or replacement combustion system and related components or devices. If the combustion system is being retrofitted, identification and description of the type of modifications being made to the existing system.
2. Requirements on disposal of replaced combustion system and related components or devices, including assuring permanent disabling and rendering inoperable.
3. Documentation requirements to determine combustion system usage and resulting air pollutant emissions.

OPERATION AND MAINTENANCE

An operation and maintenance plan shall be developed that is consistent with the purposes of this practice, its intended life, safety requirements, and the criteria used for its design.

NRCS recommends that records be retained and updated for a minimum of five years from the beginning of operation of a replacement or retrofitted combustion system. The recommended records to be retained include:

- Total actual hours operated
- Types and amounts of fuel used in the combustion system(s), or electricity used for electric motors
- Documentation of maintenance conducted on the replacement or

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retrofitted combustion system and
related components or devices

REFERENCES

NRCS National Air Quality and Atmospheric
Change Technology Development Team, West
National Technology Support Center, Portland,
Oregon