

Ohio EPA
Division of Air Pollution Control
Engineering Section

Engineering Guide #53

Question:

There are several questions relating to the interpretation of the Open Burning Standards in OAC Chapter 3745-19:

1. What are some examples of "recognized horticultural, silvicultural, range or wildlife management practices?"

Are tires an acceptable fuel for fires under this section of the open burning rule? Define "recognized" as it relates to this question.

2. What criteria should be used in determining whether proposed open burning is truly for the purpose of "prevention or control of disease or pests," and not for waste disposal?
3. What are some examples of "ceremonial fires?"
4. What criteria should be used in determining whether a proposed fire is truly for the purpose of "instruction in methods of fire-fighting or for research in the control of fires?"
5. What are some examples of purposes for which permission to open burn may be given due to "emergency or other extraordinary circumstances?"
6. Is open burning for disposal of residential waste or agricultural waste allowable in sparsely populated areas?
7. Under what conditions is a permit required for open burning of land clearing wastes in unrestricted areas?
8. Regarding contractors who are allowed to open burn construction debris:
 - (a) Clarify the general restrictions contained in the rule.
 - (b) Define the term "construction site" and "allowable burn time".

- (c) Can painted or treated wood be burned as construction debris?
- (d) What constitutes a legitimate permit?
- (e) Who should receive the reports required by the House Bill?

Answer:

The intent of the open burning regulations is to prohibit open burning in restricted areas except for very limited purposes. In unrestricted areas, there are also limitations on open burning, but they are somewhat less restrictive. The following answers correspond to the questions above.

1. Open burning for the following purposes would be considered to be recognized horticultural, silvicultural, range or wildlife management practices: protection of blossoms (or fruit) of fruit trees, maintaining productive grazing land, providing non-woody habitat for wildlife, maintaining non-woody vegetated areas in dedicated nature preserves, or destroying vegetation which is competing with the desired vegetation. Such burning is allowed in both restricted and unrestricted areas upon receipt of written permission from the Ohio EPA. The fire shall not be used for waste disposal purposes, and the fuel shall be chosen to minimize the generation and emission of air contaminants.

The burning of tires to accomplish these purposes is not an acceptable practice because the burning of tires releases substantial quantities of smoke, as well as many toxic and carcinogenic fumes.¹ These fumes and other products of combustion have been shown to inhibit plant growth, decrease fruit productivity, and shorten the life span of broad leaf plants.^{2,3,4} It also is clear throughout OAC chapter 3745-19 that where a supplemental fuel is required, the fuel must minimize the generation and emission of air contaminants. The use of tires does not meet that requirement

A "recognized" horticultural practice is a practice for which the applicant can produce written verification from the County Agricultural Extension Agent, Ohio Department of Agriculture, or the U.S. Department of Agriculture concerning the need for and acceptability of the practice.

[See OAC rules 3745-19-03(D)(4), 19-04(B)(3)(e) and

(C)(5) and 19-05(A).]

2. Open burning for "prevention or control of disease or pests" is allowed in both restricted and unrestricted areas upon receipt of written permission from the Ohio EPA. The fire shall not be used for waste disposal purposes, and the fuel shall be chosen to minimize the generation and emission of air contaminants. The party applying for the permit shall provide written verification from the local Health Department, county Agricultural Extension Agent, Ohio Department of Agriculture, or U.S. Department of Agriculture that open burning is an appropriate prevention or control method. Examples of appropriate uses of open burning include destruction of a bee infestation and destruction of insects in infested wooden dunnage originating overseas when reasonable alternatives are not available.

[See OAC rules 3745-19-03(D)(5), 19-04 (C)(6) and 19-05(A).]

3. "Ceremonial fires" are fires that are considered appropriate on the basis of custom or that are used as part of some religious or state occasion. Included would be non-cooking campfires and fires used in gatherings or ceremonies such as pep rallies, scout meetings, youth group meetings, ceremonial burnings for religious purposes and other organized ceremonial burnings. Such burning is allowed in unrestricted areas without notification to or permission from the Ohio EPA. In restricted areas such burning is allowed with written notification to the Ohio EPA at least ten (10) days before the fire is to be set. In both restricted and unrestricted areas, the fire shall be less than five feet by five feet (5' x 5') in dimension and shall burn no longer than three (3) hours. The fuel shall be chosen to minimize the generation and emission of air contaminants, and the fire shall not be used for waste disposal purposes. If the Ohio EPA determines that the proposed open burning in a restricted area is not allowed under the regulations, it must so notify the party. Any ceremonial fire that does not comply with the above-mentioned conditions should be cited for a violation of either OAC rule 3745-19-03 or 3745-19-04, as appropriate.

[See OAC rules 3745-19-03(C)(2), 19-04(B)(4), and 19-05(B).]

4. A permit is required in both restricted and unrestricted

areas for open burning for the purposes of "instruction in methods of fire-fighting or for research in the control of fires." Permission for such fires should be given only when they will be used by qualified personnel to train firefighters in fire suppression techniques or to research fire control methods. Having firefighters water or supervise the burning of old buildings, brush piles or debris does not qualify as instruction in methods of firefighting if the firefighters are not actively involved in suppressing the fire. It is appropriate to restart fires and allow the materials used for fire training to burn completely after the fire training has been accomplished.

If a structure is to be burned for training, a complete and accurate asbestos demolition notification form must be submitted at least 10 working days prior to the training, and all friable and non-friable asbestos containing materials must be removed from the structure prior to burning.

Additionally, it is recommended that all DO/LAA offices require that all asphalt (petroleum based) shingles be removed from the building prior to the commencement of the burning exercise. Deliberate burning of these materials releases large amounts of pollutants (some toxic) into the ambient air needlessly.

[See OAC rules 3745-19-03(D)(2), 19-04(C)(2) and 19-05(A).]

5. "Emergency or other extraordinary circumstances" cover such special situations as the use of open burning for:
 - (a) Disposal of flood debris accumulated on property located near a waterway when the site is inaccessible for mechanical removal methods.
 - (b) Preventing damage to property or injury to persons. (One such example involved the burning of coal underneath a frozen above-ground water pipe which was used for dewatering of a quarry. If the line had not been thawed, the water level would have risen in the quarry and destroyed or damaged equipment on the quarry floor.)
 - (c) Disposal of fallen trees and branches caused by a very severe and unusual storm such as the tornado

that hit Xenia. (A good barometer in this case would be whether the Governor had declared the area a disaster area or relief agencies are involved.) Communities must make other arrangements to dispose of the trees and branches which fall in normal storms.

- (d) Permission may be given by the Ohio EPA on-scene coordinator (OSC) for burning of oil at spills after notifying the Ohio EPA Emergency Response Duty Officer. The OSC should contact the local or district air office to advise them of the pending burn. The OSC shall follow the guidelines set forth in Sections 308.1 through 308.12 of the oil and hazardous substance contingency plan.

With the exception of the emergency burning described in 5.(d) a permit is required for such burning in both restricted and unrestricted areas. A permit should include such conditions as may be necessary to minimize the impact upon air quality and prevent the creation of a public nuisance.

- 6. Open burning for disposal of residential waste or agricultural waste is not allowed in restricted areas even if they are sparsely populated unless the proposed open burning qualifies under the provisions discussed in answers 1, 2, or 5 above or is allowed under OAC rule 3745-19-03(D)(1).

Open burning for disposal of residential waste and agricultural waste generated on the premises is allowed in unrestricted areas without notification or permit. OAC rule 3745-19-04(B)(3) establishes five conditions which must be observed in such burning:

- (a) The fire is set only when atmospheric conditions will readily dissipate contaminants.
- (b) The fire does not create a visibility hazard on roadways, railroad tracks or air fields.
- (c) The fire is located at a point on the premises no less than 1,000 feet from any inhabited building.
- (d) The wastes are stacked and dried to provide the best practicable condition for efficient burning.

- (e) No materials are burned which contain rubber, grease, asphalt or liquid petroleum products.

Burning during stagnant air conditions (i.e., wind speeds of 2 miles per hour or less), causing a visibility hazard, burning wet or unstacked wastes, burning petroleum based products, and setting fires within 1,000 feet of inhabited buildings are violations of these conditions. There are many properties in unrestricted areas where open burning is prohibited by this rule due to the proximity of neighboring houses, businesses, etc.

- 7. Open burning of "land clearing waste" in an unrestricted area requires a permit under OAC rule 3745-19-04(C)(4). "Land clearing wastes" is now clearly defined in OAC rule 3745-19-01(E). It is appropriate to ask the applicant to demonstrate that all useful plant matter (i.e., firewood, possible chipping of brush, etc.) will be removed prior to the requested burn.

If a permit is granted for such open burning of on-site land clearing waste, the following conditions must be observed, at a minimum:

- (a) The fire is set only when atmospheric conditions will readily dissipate the contaminants.
- (b) The fire does not create a visibility hazard on roadways, railroad tracks or air fields.
- (c) The fire is located at a point on the premises no less than 1,000 feet from any inhabited building.
- (d) An air curtain destructor or other device or method determined by the Director to be at least as effective is used to curtail the release of air contaminants.

Burning during stagnant air conditions (i.e., wind speeds of 2 miles per hour or less), causing a visibility hazard, setting fires within 1,000 feet of neighboring houses, and failing to use an air curtain destructor or other approved device are violations of these conditions.

- 8. OAC Chapter 3745-19 does not allow open burning for the disposal of construction debris. Notwithstanding any requirement of OAC Chapter 3745-19, Ohio Revised Code Section 3704.11(C) allows "any municipal corporation or

township" to "issue permits to contractors engaged in the construction of buildings for the open burning of construction debris only on the construction site, lot, or recorded plat referred to in the permit application." There are several restrictions on this burning. The burning must be "supervised by an employee at all times." "Construction debris which may be burned under this section [ORC 3704.11(C)] shall be limited to natural wood, lumber, paper, cardboard, and wooden boxes but not including any product having a rubber or petroleum base." No burning is allowed "during an air pollution alert, warning or emergency for the area of the construction site."

It seems clear that the intent of the ORC is to allow open burning only for the specific purpose mentioned (i.e., "any municipal corporation or township may issue permits to contractors engaged in the construction of buildings for the open burning of construction debris only on the construction site").

There is no reference to site preparation, demolition debris, etc. The language clearly states "construction of buildings;" hence, a construction site is a prepared site where new construction of a building is underway. If the permit issuing body does not define burn times in the permit, then burning can continue as long as "such burning is supervised by an employee."

Regarding the burning of a painted or treated lumber, we must refer to the rule language which states in part "natural wood, lumber, paper, cardboard, and wooden boxes but not including any product having a rubber or petroleum base". It appears that when the contractors lobbied for this exception to burn, the request was for burning debris from the construction of the building. If the contractors were trying to get permission to burn land clearing or demolition waste, the House Bill would specify that (i.e., brush, tree refuse, stumps, demolition waste, etc.). It can be assumed, therefore, that natural wood means unpainted or untreated lumber, and does not include land clearing waste or treated material.

The DAPC is not authorizing this activity. If the governing body is properly founded under law, the permits are issued by someone in authority, and the permit properly address the requirements of the ORC, the permits are legal.

Each district office or local agency (DO/LAA) should send out notices to townships and municipal corporations engaged in issuing permits to contractors for burning construction debris. The notices should be sent the first of each calendar year requiring the report by February 1 for the previous calendar year. Pursuant to ORC 3704.11, the notice must require the following information:

- A. the number of permits issued
- B. the number of permits renewed
- C. the number of permits revoked

The DO/LAA is not limited to this basic information. The offices can and probably should ask for a few additional pieces of information, such as, the name and address of the contractor the permit was issued to and the location, effective date and expiration date of the permits. Obviously, the easiest way to get this information is to ask that your office receive copies of the permits.

Some DO/LAA's have expressed concern that this activity can be permitted by the various governing bodies but the DO/LAA's would be saddled with complaints they cannot resolve. This is a legitimate concern. One way to deal with this problem would be to notify the political subdivision involved that your office will not respond to complaints involving contractor burning. Require the permit grantor to provide the DO/LAA with a copy of the permit at the time it is issued. Note: this action will eliminate the need for annual reports and will keep the DO/LAA informed of these activities. The permit should contain the vital information including the telephone number of the grantor. Complaints received by DO/LAA's that involve this type of burning shall be referred to the person issuing permission for resolution.

The only defense DO/LAA's have against this practice is to try to discourage municipalities/townships from participating in this activity. Pointing out some of the pitfalls should help, e.g. the permit grantor will have to resolve complaints, there will be an increase in open burning in general because residents will assume they can burn if they observe this practice in their community. This will result in more complaints, increased fire department runs, hard feelings among residents when the situation is explained to them and degradation of air quality in the community.

A contractor is allowed to open burn construction debris without an Ohio EPA permit in both restricted and unrestricted areas as long as he has a permit to open burn from the appropriate municipal corporation or township and complies with the restrictions mentioned above. Any contractor burning construction debris without a permit to open burn should be cited for violation of either OAC rule 3745-19-03 or 19-04, as appropriate. Any contractor who burns with a permit which does not comply with the restrictions given in ORC 3704.11(C) should be cited for a violation of ORC 3704.11(C) and ORC 3704.05(G).

- (1) USEPA and Control Technology Center (CTC), "Characterization of Emissions from the Simulated Open Burning of Scrap Tires", Jan. 1990.
- (2) "Bulletin of Environmental Contamination and Toxicology": Pg. 105-111, July 1983, "Toxicity Assessment of Chlorobenzenes Using Bacteria", D. Liu and K. Thomson.
- (3) "Environmental Pollution" 43 No. 4: 263-270 1987 "The Effects of Coal-Smoke Pollutants on the Growth, Yield and Leaf Epidermal Features of *Abelmoschus esculentus*."
- (4) "Environmental Pollution" 52 No. 3: 183-192 1988 "Growth and Premature Leaf Fall in American Aspen as a Bioindication for Ozone".

December 17, 1986, February 20, 1992 (revised),
July 22, 1994 (revised)