

DEPARTMENT OF
ENVIRONMENTAL CONSERVATION



Amendments to State Air Quality Control Plan, Volume II,
Section III.F Open Burning

Public Review Draft

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III.F. OPEN BURNING

1. Introduction

Control of open burning incidences for smoke pollution is the responsibility of the Alaska Department of Environmental Conservation (DEC). Open burning is defined as “the burning of a material which results in the products of combustion being emitted directly into the ambient air without passing through a stack, flare, vent, or other opening of an emission unit from which an air pollutant could be emitted.” All open burning in the state, whether requiring written approval from the Department or not, must be done in a way that maintains maximum combustion efficiency throughout the burning period.

Except when conducting open burning as a Controlled Burn, or Firefighter Training with Structures or Fuel Burning, a person conducting open burning shall ensure that:

- a. the material is kept as dry as possible through the use of a cover or dry storage;
- b. before igniting the burn, non-combustibles are separated to the greatest extent practicable;
- c. natural or artificially induced draft is present
- d. to the greatest extent practicable, combustibles are separated from grass or peat layer; and
- e. combustibles are not allowed to smolder.

Open burning shall comply with the limitations listed under 18 AAC 50.065 (b) – (f):

- (b) Black Smoke Prohibited.
- (c) Toxic and Acid Gases and Particulate Matter Prohibited.
- (d) Adverse Effects Prohibited - Open burning of putrescible garbage, animal carcasses, or petroleum-based material / derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.
- (e) Air Quality Advisory - open burning prohibited in area if the department declares an air quality advisory under 18 AAC 50.245, stating that burning is not permitted in that area for that day.
- (f) Wood Smoke Control Areas – Open burning is prohibited between November 1 and March 31 in a wood smoke control area identified in 18 AAC 50.025(b).

Open burning at landfills is also controlled by solid waste disposal regulations, 18 AAC 60.335. Open burning is prohibited at Class I and II landfills.

2. Who needs an approval?

Certain types of open burning require submittal of an application and written approval from the Department prior to the incident. These applications are:

- a. Fire Fighter Training: Fire fighter training using structures or fuels must be conducted pursuant to 18 AAC 50.065(b), (h), and (i) and requires written DEC approval.
- b. Controlled Burning for Resource Management (Prescribed Burning): Prescribed burning, intentionally set fires to burn off ground and forest cover is usually, but not always, done by

land management agencies. Prescribed burning is subject to obtaining written DEC approval if the intent is to clear 40 acres or more in a year.

- c. Controlled Burning for Land Clearing: Open burning of woody debris material by farmers and developers requires written DEC approval if the intent is to clear and burn 40 acres or more in a year.
- d. Burning Materials that Produce Black Smoke: Open burning of petroleum-based materials, asphalt, rubber products, or other materials in a way that give off black smoke is subject to obtaining written DEC approval.

The Department's "In Situ Burning Guidelines for Alaska, Revision 1, revised August 2008" are for use when mechanical containment and recovery by themselves are incapable of controlling an oil spill, burning is feasible, and the burn will lie a safe distance from populated areas. The document is found at: [http://dec.alaska.gov/spar/perp/docs/ISB-Rev1\(Final-August%202008\).pdf](http://dec.alaska.gov/spar/perp/docs/ISB-Rev1(Final-August%202008).pdf)

3. Approval application requirements

Burning shall not be conducted during stagnant air conditions (fogs or inversions) or when air quality alerts have been posted for the airshed in which the burn is being conducted. If weather conditions change after ignition such that any "sensitive feature" (as listed in the Department's Open Burning Policy & Guidelines) is adversely impacted, the burner must take action to mitigate the smoke impacts from the burn. The final responsibility for smoke control problems rests with the applicant.

Persons with approved open burning plans should contact the DEC meteorologist, at the number listed in the burn approval letter, at least one week prior to a scheduled burn; and arrange with the meteorologist to participate in the pre-burn meteorological conference scheduled with the fire weather team and the National Weather Service prior to ignition.

Written approval is not automatic but must be evaluated for conformance with these guidelines:

- a. FIRE FIGHTER TRAINING - Fire fighter training must conform to 18 AAC 50.065(h) or (i) as noted below. Both trainings require a public notification which conforms to 18 AAC 50.065(j) – Public Notice, and a response to complaints in accordance with 18 AAC 50.065(k) – Complaints.

Fire Fighter Training with Structures: A fire service must comply with 18 AAC 50.065(h) when burning structures for fire fighter training.

i. The following information is required:

- 1) Obtain DEC approval of the proposed location;
- 2) Inspect, test and remove asbestos containing materials;

- 3) Insure the structure does not contain putrescible garbage, electric batteries, stored chemicals (e.g. fertilizers, pesticides, paints, glues, sealers, tars, solvents, household cleaners, or photographic reagents), linoleum, plastics, rubber, tires, insulated wire, hazardous waste, lead piping, plastic piping 4 inches or more in diameter, or urethane or other plastic foam insulation;
 - 4) Ensure a fire service representative is on site before igniting the structure;
 - 5) Burn only one main structure at a time;
 - 6) Structure information and its location;
 - 7) Attach map showing sensitive features and other facilities as listed in the application; and
 - 8) If burning is to occur outside the Municipality of Anchorage, the City and Borough of Juneau, the City of Fairbanks, or the City of North Pole, identify the proximity of the closest neighbor(s) and approximate number of occupied structures within a one-mile radius of the burn site.
- ii. Fire Fighter Training with Fuels must comply with 18 AAC 50.065(i) when burning fuels for fire fighter training. The following information is required:
- 1) Amount of fuel to be burned;
 - 2) Legal Description of Burn Site;
 - 3) Description of Burn Material;
 - 4) Anticipated Burn Date and Duration;
 - 5) Attach a map of the burn area; show sensitive features and other facilities as listed in the application; and
 - 6) If burning is to occur outside the Municipality of Anchorage, the City and Borough of Juneau, the City of Fairbanks, or the City of North Pole, identify the proximity of the closest neighbor(s) and approximate number of occupied structures within a one-mile radius of the burn site.

Note: No ADEC approval is needed if the fire fighter training with fuels meets all four of the following conditions:

- 1) The fuel is uncontaminated;
- 2) The fire service burns less than 600 gallons per year and 250 gallons per day;
- 3) The fire service provides public notice in accordance with 18 AAC 50.065(j) before burning more than 20 gallons of fuel; and

- 4) the fire service makes a reasonable effort to respond to public complaints in accordance with 18 AAC 50.065(k), and keeps a record of all complaints received concerning the burn.

b. RESOURCE MANAGEMENT AND LAND CLEARING

i. GENERAL PROVISIONS

The Alaska Enhanced Smoke Management Plan should be followed for Controlled Burning for Resource Management and Land Clearing Approvals. This plan was developed in consultation with the Alaska Wildland Fire Coordinating Group.

Open burning should be done, as rapidly and safely as other considerations permit, to develop maximum heat energy per unit time and vent the smoke to the highest elevation possible. The burn material should be as dry as possible to create a high heat energy, less smoke, and a more efficient burn.

A. Persons seeking approval to open burn under the **Controlled Burning for Resource Management** or for **Land Clearing** are required to submit a plan addressing the following smoke management and control concerns:

1. The location, duration, and inclusive dates considered for the burn;
2. The location of all sensitive features that should not be impacted by smoke;
3. How the public will be informed prior to, during, and after the burning;
4. How the burner will coordinate with other concerned agencies, including the Responsible Authorities in control of sensitive features;
5. The source of the weather forecast and how it will be used to prevent smoke impacts;
6. How weather changes will be monitored and what will be done to reduce or mitigate smoke impacts if unfavorable weather should occur after ignition.
7. What will be done to validate predicted smoke dispersion;
8. Proposed techniques to be used to enhance the active fire phase and reduce the smoldering phase;
9. How authorities in control of sensitive features will be contacted if visibility decreases;
10. Alternative disposal options for material being controlled burned;
11. How the burner will coordinate with air quality authorities having jurisdiction;
12. Indicate the type of vegetation to be burned, pre-burn and post-burn fuel loading estimates and ignition technique to be used;
13. For prescribed fires, indicate whether the fire is considered “anthropogenic” or “natural” per ESMP Guidelines¹;
14. Provide the approximate emissions expected for each burn and method used to estimate; and

¹ Enhanced Smoke Management Plan, page 11, #13: The WRAP document, “Policy for Categorizing Fire Emissions” explains what is considered a natural source of fire and what is considered a human-caused source of fire, see <http://www.wrapair.org/forums/fejf/docs.html> .

15. Air monitoring to be conducted. Identify how the burn may affect / potentially impact air quality at smoke sensitive features, and how the visibility in Class I areas will be monitored.

B. Persons with approved open burning plans should contact the DEC meteorologist, at the number listed in the burn approval letter, at least one week prior to a scheduled burn. Arrange with the meteorologist to participate in the pre-burn meteorological conference scheduled with the fire weather team and the National Weather Service prior to ignition.

ii. RESOURCE MANAGEMENT (PRESCRIBED BURNING)

Controlled Burning for Resource Management (prescribed burning), intentionally set fires to burn off ground and forest cover, is usually, but not always, done by land management agencies. Prescribed burning is subject to written DEC approval if the intent is to clear 40 acres or more in a year.

Land Management Agencies, when conducting prescribed burning, shall follow the Alaska Enhanced Smoke Management Plan, including the 15 items listed above under the General Provisions.

Plans for burning that may impact sensitive areas such as population centers or airports will require more specific detail than plans for remote areas. A complete burn plan is required for each prescribed burn.

iii. LAND CLEARING

Open burning of woody debris material by farmers and developers requires written DEC approval if the intent is to clear and burn 40 acres or more per year.

The applicant, when conducting Land Clearing / Agricultural Burning, shall follow the Alaska Enhanced Smoke Management Plan, including the 15 items listed above under the 'General Provisions'.

Burning of dried material is important because:

- A. Higher heat energy with a related tall convection columns can be developed;
- B. Cured material produces less smoke per unit volume than green material; and the medium size and larger fuels can be more effectively burned when cured and thus more satisfactorily remove the fire hazard.

iv. BLACK SMOKE

Open burning of petroleum-based materials, asphalt, rubber products, or other materials in a way that gives off black smoke requires written DEC approval. Open burning should be done using reasonable procedures to minimize adverse environmental effects and limit the amount of smoke generated.

Open burning of asbestos, items listed in 18 AAC 50.065(c), and/or items listed under 18 AAC 50.065 (h)(1)(C)(i) – (viii) is strictly prohibited.

Open burning of oil or gas well flow tests must conform to 18 AAC 50.065(b)(1). DEC intends to eliminate open burning of liquid hydrocarbons because reasonable alternative measures are generally available.

Open burning to contain petroleum spills must comport with the In Situ Burning Guidelines for Alaska, and through the approval of the Unified Command.

The Open Burning Black Smoke Approval application includes:

- A. Amount of fuel to be burned;
- B. Legal description of burn site;
- C. Description of burn material;
- D. Anticipated burn date and duration;
- E. Other disposal options;
- F. Enhanced burning information;
- G. Attach a map of the burn area; show sensitive features and other facilities as listed in the application;
- H. In addition to public notice requirements, notifications shall also be made to the Federal Aviation Administration (FAA), state troopers, military, fire department, adjacent land managers, etc., who are potentially affected by visibility or adverse smoke impacts prior to ignition; and
- I. Metrological /weather forecasting information.

4. Approval Issuance

- a. The following conditions as modified to fit the specific open burning situation may be included in the letter of approval:
 - i. The applicant will be required to obtain meteorological information as listed in the burn approval letter. If the wind direction would allow smoke to impact on sensitive features, burning may be denied for that period.
 - ii. DEC shall be notified by noon the business day prior to any planned burned by calling the number listed in the burn approval letter. The information requested in the burn approval shall be provided.
 - iii. Notify the public through local news media or the post office at least three days prior to the burn; include the information listed in the burn approval letter.
 - iv. Notify the local fire departments, the FAA Office and /or the Airport Control Tower before each burn event (as applicable).
 - v. Use test burns to evaluate smoke dispersion.

- vi. Follow the Alaska Enhanced Smoke Management Plan.
- vii. Record complaints received concerning excess smoke (if any), include information listed in the burn approval; maintain records of complaints during the life of the burn approval, providing copies to DEC upon request.
- viii. If the department determines that the airshed is being overloaded with smoke, smoke mitigation and / or a termination of the existing and proposed burning may be required. Limitations may have to be placed on the day burning commences.
- ix. A post burn summary report containing the information listed in the burn approval letter and as required under the Enhanced Smoke Management Plan, Appendix D, should be sent to the department within 30 days after the burn, as listed in the approval letter.
- x. The approval letter will have a date of expiration.

5. Open Burning Prohibition

Open burning can be prohibited on an area-by-area basis if an air quality advisory has been posted or is listed on the DEC website or has been broadcast on a radio or television covering the area of concern. This advisory may be for several days, and renewed for subsequent days. The advisory will be based on an assessment that inadequate air ventilation is available which would inhibit the dispersal of pollutants, such as inversions and low wind speeds.