

## **Appendix H**

### **Burn Authorization**

Burn authorization is a process that ensures burn projects occur in such a way as to minimize smoke impacts on air quality.

The Regional Haze Rule (RHR) requires that visibility in Class I Areas be improved over the long term and on a region-wide scope, and addresses fire emissions as one contributor to regional haze. To achieve this, some sort of burn authorization process is needed as a means to inventory emissions, facilitate emissions reduction, and coordinate burning as necessary to protect National Ambient Air Quality Standards and reduce visibility impairment.

The parts of the burn authorization process under this SMP include smoke management education, burn project registration, and notification. Registration and notification enable the Air Quality Bureau (AQB) to conduct an assessment of cumulative effects by airshed.

#### **H.1. Smoke Management Education**

SMP I – Voluntary

SMP II – Required

In order to burn under the SMP, SMP II burners must have received some form of education or training in smoke management. The AQB has developed a curriculum for smoke management education, which includes topics such as effects of fire emissions, smoke mitigation techniques as well as emission reduction techniques and how to implement them, emission factors, fuel loading and calculation methods, etc. This can be found on the AQB website. All SMP II burners must have reviewed this material, or have completed a training that covers the same topics (e.g., National Wildfire Coordinating Group training), prior to implementing burn projects.

Although not required, SMP I burners are encouraged to voluntarily review the educational material provided by the AQB so as to better their understanding of the protection of air quality through smoke management.

#### **H.2. Registration**

SMP I – Required

SMP II – Required

The RHR promotes the use of a central authority to coordinate burning on a regional scale. Even though New Mexico's Smoke Management Regulation allows burning under the permit-by-rule conditions, there is still the need for some authority to look at cumulative impacts on a larger scale than individual burn locations. The AQB has the information needed to serve as the central coordinating authority because it collects information needed for the emissions inventory and Annual Emission Goal, both required by the RHR. This is the information needed to coordinate burning on an airshed, statewide and regional basis.

All burners under the SMP are required to register burn projects annually. The registration process is done in advance of the burns and provides information on locations and magnitude of

burning statewide and in each airshed, which enables projection of cumulative impacts. For SMP I, the Registration Form is due no later than 10:00 a.m. one business day prior to ignition. To enable the AQB staff to assess cumulative impacts, they need to know the daily amount of each burn project. Therefore, burners under SMP I will need to notify the AQB of burn projects that have been registered and then canceled.

For multiple day burns, one week's worth of burn project information may be submitted together on the Registration Form, as long as maximum daily acreages/number of piles are indicated for each day. For burn projects exceeding one week, SMP I burners must still submit daily burn information, and can use the Notification Continuation Form or submit up to one week's worth of burn information on-line or by phone, fax or email including the following:

- a) Burn Project name
- b) Burn project ID number (issued by the AQB)
- c) Date of planned burn
- d) The maximum acres, or pile volume, to be burned on that day

For SMP II, burners are requested to submit their registrations by November 1<sup>st</sup> of the preceding year, but in instances where that is not feasible, the Registration Form must be submitted no later than two weeks prior to ignition. The registration submittal in November allows the AQB time to develop the Annual Emissions Goal (see Appendix L for a discussion of the Annual Emission Goal).

The Registration Form asks for identifying information about the burn project, location, vegetation type, and an estimate of acreage or pile volume to be burned. Acreage and pile volumes must be as accurate as possible. If plans change and this information needs to be modified, the burner must submit a revised Registration Form containing modified acreage or pile volume at least two weeks prior to the burn project. If the change occurs after the two-week timeframe, the revised information may be indicated on the Notification Form, which is submitted no later than 24 hours in advance of burn ignition.

For grass, shrub land and forests, the Registration Form asks the burner to indicate if the burn project will help **restore** the land to more healthy conditions, or if it will **maintain** existing healthy conditions. This distinction assists the AQB in predicting future levels of fire emissions. For clarification of the difference between "restoration" burn projects and "maintenance" burn projects, see the definitions in this Appendix.

One Registration Form is submitted for each burn project, and the burner defines the scope of their burn project (a burn project is an area that is contiguous and is being treated for the same land management objectives). For example, a pecan grower is pruning 20 acres in the northwest corner of his orchard this year and then burning the trimmings. The burning of the trimmings may last three to four months, but is considered one burn project (same land management objective for all 20 acres and is contiguous); therefore, only one Registration Form is needed. Alternatively, a federal land manager may have several burn projects in a year all geographically separated and for different management objectives (e.g., ecosystem restoration of an overgrown

grassland in the foothills or removal of non-native vegetation along a river corridor). Each of these would be considered a separate burn project, and thus require a separate Registration Form.

Once the AQB reviews a project's Registration Form for completeness, an ID number is assigned to that project. This ID number will be used by the burner and the AQB to track other information for that project (e.g., for notification to the AQB and on the Tracking Form).

Wildland Fire Use does not require advance registration. Instead, once the fire reaches 10 acres in size, the fire must be registered with the AQB using the two-page registration form used by SMP II. There is no registration for wildfires.

### H.2.1. Waivers

Waivers may be requested for time of day and setback restrictions, and use of emission reduction techniques. If a burner anticipates the need for a waiver, it should be submitted no later than two weeks in advance of ignition. This gives the AQB and the burner time to consult and discuss the reasons why a waiver should be granted. Once the AQB staff receives the waiver request, they have seven days to consider the waiver and inform the burner of an approval or denial. The burner must receive written confirmation of the waiver prior to igniting the burn.

#### H.2.1.1. Ventilation Category Waivers

A request for waiver of ventilation category must be submitted no later than 10:00 a.m. one business day prior to planned ignition date (i.e., the notification deadline). The waiver submittal timeframe, in this case, is set to accommodate the limited time for assessing meteorological conditions. However, the waiver request may be sent in with the registration to obtain a waiver for the entire project. In all waiver requests, waivers may only be approved by a written response from the AQB.

### **H.3. AQB Notification**

SMP I – Included in Registration

SMP II – Required

The burn project notification is due to the AQB by 10:00 a.m. one business day prior to ignition.<sup>1</sup> For SMP II, notification may be accomplished on-line or by phone, mail, e-mail, or fax using the Notification Form provided or other format as long as the following information is included:

- a) Burn Project name
- b) Burn project ID number (issued by the AQB)
- c) Date of planned burn
- d) The maximum acres, or pile volume, to be burned on that day

Notification is required for each day of burning. For multiple day burns, one week's worth of notifications may be submitted together, as long as maximum daily acreages/number of piles are given for each day.

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<sup>1</sup> For burn projects planned for a Sunday or Monday, the notification is due by the preceding Friday. For burn projects that fall on holidays, the notification must be submitted to the AQB by the preceding business day.

The AQB will verify the receipt of the burn notification by 11:00 a.m. If the burner has not heard back from the AQB by 11:00 a.m., the burner must make a good faith effort to contact the AQB one more time by an alternate mode of communication (e.g., if the notification information was submitted by e-mail, burner calls the AQB). If the burner still has not heard from the AQB by 3:00 p.m. of the business day on which the notification was submitted, the notification is deemed received by default.

The burner must not burn more than the acreage or volume for that day given in the notification to the AQB because airshed assessment is based on daily notification information. Should the conditions on that day be such that there is an opportunity to burn additional acreage/volume, the burner must first consult with the AQB to obtain a waiver. The burner must not proceed with the additional acreage/volume without the waiver being granted.

Daily notification is required for Wildland Fire Use (once it reaches 10 acres). A summary of acres burned will be submitted to the AQB by 10:00 a.m. each day the burn is in progress. This can be accomplished by phone, email or fax using the ICS 209 Form (or equivalent), the AQB notification form, or any other format that provides the pertinent information.

#### H.3.1. Burn Project Cancellation

With information from the Registration and the Notification Forms, along with meteorological forecasts, the AQB will assess each airshed based on existing and proposed impacts. To assist the AQB in making accurate assessments of daily burn activity, burners need to notify the AQB of burn projects that have been canceled. Burners under SMP I will need to notify the AQB of burn projects that have been registered and then canceled. Burners under SMP II need only contact the AQB of canceled burn projects for which notification information has been submitted. To notify the AQB of a canceled burn project, the burner provides the AQB with the burn project ID number, Burn Project Name, and the date for which the cancellation applies. The cancellation can be done by submitting the Cancellation Form or providing the above information to the AQB by phone, email or fax.

#### **H.4. Airshed/Cumulative Effects Assessment Explained**

For SMP II, the Smoke Management Regulation allows burning under ventilation categories of Good and above. This is subject to an analysis of cumulative impacts by the AQB once the burner has notified the AQB.

To determine if cumulative impacts to a particular airshed, or part of an airshed, are potentially excessive, the AQB will compile information on the project burns as well as predicted meteorological conditions including:

1. Number of burns scheduled in a particular airshed for that day, including Wildland Fire Use projects in progress.
2. Proximity of burn projects to each other and to Class I and non-attainment areas.
3. Size of the proposed burn projects.
4. Magnitude of the impacts from other states, from wildfire, and/or other source(s) of air quality impacts.

## 5. Cumulative effects on NAAQS or NMAAQs.

If the burner does not receive notification from the AQB by 3:00 p.m. the business day prior to the planned burn that modification or postponement is required, the burner is permitted to burn as planned. This applies only to SMP II; SMP I burn projects will not be required to modify or postpone. Nor does this potential for modification apply to Wildfire or Wildland Fire Use.

If there are other air quality impacts such as wildfire or impacts from another state or Mexico, the AQB will notify the burner if some modification or postponement is required. Modification will be determined in consultation with the burner(s). In such cases, the AQB will notify the burner by 3:00 p.m. the business day prior in the most expedient way possible. Modification could include the need to monitor with instrument(s), a reduction in acreage, wind direction alteration, or a postponement until a better day. If requested by the burner, the AQB will follow with a letter documenting what modification is required, the reasons for the modification, and how the decision to modify was reached.

Little data existed at the time this document was written to project what percentage of burns in New Mexico may have to be modified on the basis of cumulative impacts to any given airshed. Data from other states indicates that fewer than 10% of burn projects would have to be modified or postponed. This could occur under conditions such as multiple burns in one airshed or one part of an airshed (such as spring field and ditch burning in the middle Rio Grande Valley, or several federal land manager units taking advantage of a burn window in the upper Rio Grande Valley), or burning or wildfire in another state impacting New Mexico (such as a wildfire in Arizona sending smoke into southwestern New Mexico).

The AQB will determine what appropriate action is needed to mitigate the potential impacts based on the following questions:

- Will monitoring provide reassurance that the impacts are not contributing to a NAAQS exceedance? If monitoring is necessary, on which burns, and where should monitors be placed? Are there enough resources (i.e., instruments and personnel) available from AQB and/or burner(s)?
- Do the emissions need to be reduced through modifying burn size/acreage or utilizing additional ERTs? If modification is needed, which burns should be modified?
- Does the burn need to be postponed? If postponement is necessary, which burns should be postponed?

### H.4.1. Burn Modification Prioritization

In the event that an airshed is determined to be at maximum capacity, the AQB will prioritize burn projects for modification in the following order:

- 1) No modification possible at this time: Other jurisdictions such as states, tribes, countries, and wildfire. Rationale: Not within the AQB's authority.
- 2) No modification required:
  - Wildland Fire Use. Rationale: Naturally ignited
  - Open Burning. Rationale: Burners unknown.

SMP I. Rationale: Minimal Impacts.

3) Modification Possible: SMP II

Registration Form Submittal date for SMP II. Rationale: First come, first served.

Registration Form Number of ERTs planned. Rationale: Emission reductions

## **H.5. Definitions**

Airshed – a geographic area based on watershed boundaries that, because of topography, meteorology, and/or climate, is frequently affected by the same air mass.

Burn Project – in prescribed burning and wildland fire use, an area that is contiguous and is being treated for the same land management objective(s).

Cumulative Impacts – the effect on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency, entity or person undertakes such action. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time.

Maintenance Burns – A prescribed fire or wildland fire use, in an ecosystem that is currently in an ecologically functional and fire resilient condition, which is utilized to mimic the natural role of fire.

NAAQS – National Ambient Air Quality Standards; maximum recommended concentrations of criteria pollutants to maintain reasonable standards of air quality.

NMAAQs – New Mexico Ambient Air Quality Standards; maximum allowable concentrations of air pollutants in the ambient air as specified in 20.2.3 NMAC.

Restoration Burns – The re-establishment of natural vegetation and fire-resilient condition accomplished through the use of prescribed fire or wildland fire use to reduce unwanted and/or unnatural levels of biomass.

Wildland Fire Use – the management of naturally ignited (i.e., lightning) wildfire to accomplish specific pre-stated resource objectives in predefined geographic areas, also known as fire use, wildland fire use, prescribed natural fire, and fire for resource benefit.

## **H.6. References**

### **Regional Haze Rule**

Published in the Federal Register on July 1, 1999, 64 FR 35714.

[http://www.epa.gov/ttn/oarpg/t1/fr\\_notices/rhfedreg.pdf](http://www.epa.gov/ttn/oarpg/t1/fr_notices/rhfedreg.pdf)

### **WRAP Policy on Enhanced Smoke Management Programs for Visibility**

Approved by the Western Regional Air Partnership, November 12, 2002.

[http://www.wrapair.org/forums/fejf/documents/esmptt/policy/030115\\_ESMP\\_Policy.pdf](http://www.wrapair.org/forums/fejf/documents/esmptt/policy/030115_ESMP_Policy.pdf)

**H.7. NMED Air Quality Bureau  
Smoke Management Program Contact Information**

Hours

8:00 a.m. – 5:00 p.m. Monday through Friday.

Website

[http://www.nmenv.state.nm.us/aqb/SMP/smp\\_index.html](http://www.nmenv.state.nm.us/aqb/SMP/smp_index.html)

E-mail

[smoke@nmenv.state.nm.us](mailto:smoke@nmenv.state.nm.us)

Telephone

(505) 827-8038

(800) 224-7009, extension 8038

Fax

(505) 827-1543

Address

2048 Galisteo Street

Santa Fe, NM 87505