

MINUTE ORDER NO. 87-15

Pursuant to public notice and hearing, and after consideration of all comments received, the Commission hereby adopts the following revisions to the State Implementation Plan for Air Pollution Control:

SECTION 3. Is hereby revised to add the following subsections (r) through (y).

(r)(i) "Dispersion technique" means any technique which attempts to affect the concentration of a pollutant in the ambient air by:

(A) Using that portion of a stack which exceeds good engineering practice stack height;

(B) Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or

(C) Increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.

(ii) The preceding sentence does not include:

(A) The reheating of gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

(B) The merging of exhaust gas streams where:

(1) The source owner or operator demonstrates that the facility was originally designed and constructed with such merged gas streams;

(2) After July 8, 1983, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of "dispersion techniques" shall apply only to the emission limitation for the pollutant affected by such change in operation; or

(3) Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of Bmissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emission limitation or, in the event that no emission limitation was in existence prior to the merging, an increase in the quantity of pollutants actually emitted prior to the merging, the reviewing agency shall presume that merging was significantly motivated by an intent to gain emissions credit for greater dispersion. Absent a demonstration by the source owner or operator that merging was not significantly motivated by such intent, the reviewing agency shall deny credit for the effects of such merging in calculating the allowable emissions for the source;

(C) Smoke management in agricultural or silvicultural prescribed burning programs;

(D) Episodic restrictions on residential woodburning and open burning; or

(E) Techniques under subsection (r)(i)(C) which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year.

(s) "Good engineering practice" (GEP) stack height means the greater of:

(i) 65 meters, measured from the ground-level elevation at the base of the stack:

(ii)(A) For stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 CFR Parts 51 and 52,

$$Hg=2.5H,$$

provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation;

(B) For all other stacks,

$$Hg=H + 1.5L,$$

where

Hg=good engineering practice stack height, measured from the ground-level elevation at the base of the stack,

H=height of nearby structure(s) measured from the ground-level elevation at the base of the stack,

L=lesser dimension, height or projected width, of nearby structure(s)

provided that the EPA or Director may require the use of a field study or fluid model to verify GEP stack height for the source; or A

(iii) The height demonstrated by a fluid model or a field study approved by the EPA or Director, which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, nearby structures or nearby terrain features.

(t) "Nearby" as used in subsection (s) of this section is defined for a specific structure or terrain feature; and

(i) for purposes of applying the formulae provided in subsection (s)(ii) means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (1/2 mile), and

(ii) for conducting demonstrations under subsection (s)(iii) means not greater than 0.8 km (1/2 mile), except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to 10 times the maximum height (Ht) of the feature, not to exceed 2 miles if such feature achieves a height (Ht) 0.8 km from the stack that is at least 40 percent of the GEP stack height determined by the formulae provided in subsection (s)(ii)(B) of this part or 26 meters, whichever is greater, as measured from the ground level elevation at the base of the stack. The height of the structure of terrain feature is measured from the ground level elevation at the base of the stack.

(u) "Excessive concentration" is defined for the purpose of determining good engineering practice stack height under subsection (s)(iii) and means:

(i) for sources seeking credit for stack height exceeding that established under subsection (s)(ii), a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all sources that is greater than an ambient air quality standard. For sources subject to the prevention of significant deterioration program, an excessive concentration alternatively means a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash,

wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations under this part shall be prescribed by the New Source Performance Standard that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the Director, an alternative emission rate shall be established in consultation with the source owner or operator;

(ii) for sources seeking credit after October 1, 1983, for increases in existing stack heights up to the heights established under subsection (s)(ii), either

(a) a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects as provided in paragraph (u)(i) of this subsection, except that the emission rate specified by the State Implementation Plan (or, in the absence of such a limit, the actual emission rate) shall be used, or

(b) the actual presence of a local nuisance caused by the existing stack, as determined by the Director; and

(iii) for sources seeking credit after January 12, 1979 for a stack height determined under subsection (s)(ii) where the Director requires the use of a field study or fluid model to verify GEP stack height, for sources seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers, and for sources seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not adequately represented by the equations in subsection (s)(ii), a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects that is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

(v) "Major modification" means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emission increase of any pollutant subject to regulation under the Clean Air Act.

(w) "Emission limitation" and "emission standards" means a requirement established by the Director or the EPA which limits the quantity, rate or concentration of emission of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

(x)"Stack" means any point in a source designed to emit solids, liquids or gases into the air, including a pipe or duct but not including flares.

(y)"Stack in existence" means that the owner or operator had (1) begun, or caused to begin, a continuous program of physical on-site construction of the stack or (2) entered into binding agreements or contractual obligations, which could not be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.

SECTION 5. is hereby revised to add the following subsections (f) through (g)

(f) The degree of emission limitation required of any source for control of any air pollutant must not be affected by so much of any source's stack height that exceeds good engineering practice or by any other dispersion technique, except as provided in section 5(g). Before submittal of a new or revised emission limitation, to EPA, that is based on good engineering practice stack height that exceeds the height allowed by section 3(s)(i) or (ii), the director will notify the public of the availability of the demonstration study and will provide opportunity for public hearing on it. This section does not restrict, in any manner, the actual stack height of any source.

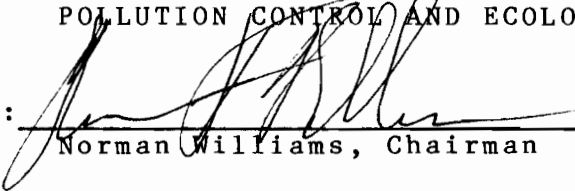
(g) The provision of section 5(f) shall not apply to (1) stack heights in existence, or dispersion technique implemented on or before December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion technique by sources, as defined in section 111 (a)(3) of the Clean Air Act, which were constructed, or reconstructed, or for which major modifications, as defined in section 3 (v) were carried out after December 31, 1970; or (2) Coal fired steam electric generating units subject to the provision of section 118 of the Clean Air Act, which commenced operation before July 2, 1957, and whose stacks were constructed under a construction contract awarded before February 8, 1974.

EFFECTIVE DATE

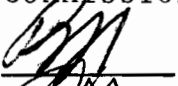

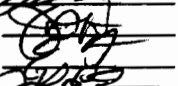
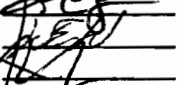
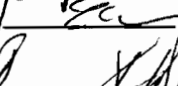

This regulation and any amendment thereof shall be in full force and effect twenty days after filing with the Secretary of State."

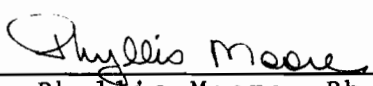
Promulgated this 22 day of May, 1987.


BY ORDER OF THE COMMISSION ON
POLLUTION CONTROL AND ECOLOGY

BY: 
Norman Williams, Chairman

COMMISSIONERS







CHAIRMAN

ATTEST: 
Phyllis Moore, Ph.D.
Director

APPROVED: 
Bill Clinton, Governor
State of Arkansas

SUBMITTED BY: Wilson Tolefree DATE PASSED: 5-22-87