

## **10 CSR 10-6.140 Restriction of Emissions Credit for Reduced Pollutant Concentrations from the Use of Dispersion Techniques**

### **(1) Applicability.**

(A) This rule applies to the procedures to account for emission dispersion techniques used in the calculation of any emission limitation or any revision of any limitation to be established by the director or to be considered for establishment by the Missouri Air Conservation Commission (MACC). This rule also requires that all emission limitations established by the director or by the MACC after December 31, 1970 be reviewed for compliance with this rule.

(B) 40 CFR 51, Appendix W, promulgated as of July 1, 2017 shall apply and is hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.

(C) Exemptions. The provisions of section (3) of this rule do not apply to emission limitation credits from—

1. Stack heights on which construction commenced on or before December 31, 1970, except where pollutants are being emitted from the stacks by source operations which were constructed, reconstructed, or on which major modifications were carried out after December 31, 1970; or

2. Dispersion techniques implemented before December 31, 1970, except where these dispersion techniques are being applied to source operations which were constructed, reconstructed, or on which major modifications were carried out after December 31, 1970.

### **(2) Definitions.**

(A) Commence—For the purposes of major stationary source construction or major modification, the owner or operator has all necessary preconstruction approvals or permits and—

1. Began, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

2. Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(B) Dispersion technique—

1. Any technique designed 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 (1) stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise; and

2. This definition does not include:

A. The reheating of a 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 installation generating the gas stream;

B. The merging of exhaust gas streams where—

I. The installation owner or operator demonstrates that the installation was originally designed and constructed with the merged gas streams;

II. After July 8, 1985, the merging is part of a change in operation at the installation that includes the installation of emissions control equipment and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of dispersion technique shall apply only to the emission limitation for the pollutant affected by a change in operation; or

III. Before July 8, 1985, the merging was part of a change in operation at the installation that included the installation of emissions 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, the director shall presume that merging was significantly motivated by an intent to gain emissions credit for greater dispersion. Without a demonstration by the source owner or operator that merging was not significantly motivated by that intent, the director shall deny credit for the effects of 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 subparagraph (2)(B)1.C. of this rule which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the installation do not exceed five thousand (5,000) tons per year.

(C) Emission limitation—A regulatory requirement, permit condition, or consent agreement which limits the quantity, rate, or concentration of emissions on a continuous basis, including any requirement which limits the level of opacity, prescribes equipment, sets fuel specifications, or prescribes operation or maintenance procedures for an installation to assure continuous emission reduction.

(D) Excessive concentration—

1. For installations seeking credit for reduced ambient pollutant concentrations from stack height exceeding that defined in paragraph (2)(E)2. of this rule, an excessive concentration is 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 are at least forty percent (40%) in excess of the maximum concentration experienced in the absence of the downwash, wakes, or eddy effects, and that contributes to a total concentration due to emissions from all installations that is greater than an ambient air quality standard. For installations subject to the prevention of significant deterioration program as set forth in 10 CSR 10-6.060(8), an excessive concentration means a maximum ground-level concentration due to emissions from a stack due to the same conditions as mentioned previously and is greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations under this definition shall be prescribed by the new source performance regulation as referenced by 10 CSR 10-6.070 for the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where demonstrations are approved by the director, an alternative emission rate shall be established in consultation with the source owner or operator;

2. For installations seeking credit after October 11, 1983, for increases in stack heights up to the heights established under paragraph (2)(E)2. of this rule, an excessive concentration is either—

A. A maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects as provided in paragraph (2)(D)1. of this rule, except that the emission rate used shall be the applicable emission limitation (or, in the absence of this limit, the actual emission rate); or

B. The actual presence of a local nuisance caused by the stack, as determined by the director; and

3. For installations seeking credit after January 12, 1979, for a stack height determined under paragraph (2)(E)2. of this rule where the director requires the use of a field study of fluid model to verify good engineering practice stack height, for installations seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers, and for installations seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not represented adequately by the equations in paragraph (2)(E)2. of this rule, a maximum ground level concentration due in whole or part to downwash, wakes, or eddy effects that is at least forty percent (40%) in excess of the maximum concentration experienced in the absence of downwash, wakes, or eddy effects.

(E) Good engineering practice (GEP) stack height—The greater of—

1. Sixty-five meters (65 m) measured from the ground-level elevation at the base of the stack;

2. For stacks on which construction commenced on or before January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 CFR 51 and 52,

$$H_g = 2.5H$$

provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation; and for all other stacks,

$$H_g = H + 1.5L$$

Where:

$H_g$  = GEP 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; and

$L$  = lesser dimension, height, or projected width of the nearby structure(s). Provided that the director may require the use of a field study or fluid model to verify GEP stack height for the installation; or

3. The height demonstrated by a fluid model or field study approved by the 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.

(F) Major modification—Any physical change or change in the method of operation at an installation or in the attendant air pollution control equipment that would result in a significant net emissions increase of any pollutant. A physical change or a change in the method of operation, unless previously limited by enforceable permit conditions, shall not include:

1. Routine maintenance, repair, and replacement of parts;
2. Use of an alternative fuel or raw material by reason of an order under sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, a prohibition under the Power Plant and Industrial Fuel Use Act of 1978, or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
3. Use of an alternative fuel or raw material, if prior to January 6, 1975, the source was capable of accommodating the fuel or material, unless the change would be prohibited under any enforceable permit condition which was established after January 6, 1975;
4. An increase in the hours of operation or in the production rate unless the change would be prohibited under any enforceable permit condition which was established after January 6, 1975; or
5. Use of an alternative fuel by reason of an order or rule under section 125 of the Clean Air Act.

(G) Nearby—Nearby, as used in the definition good engineering practice (GEP) stack height in paragraph (2)(E)2. of this rule, is defined for a specific structure or terrain feature—

1. For purposes of applying the formula provided in paragraph (2)(E)2. of this rule, nearby means that distance up to five (5) times the lesser of the height or the width dimension of a structure, but not greater than one-half (1/2) mile; and
2. For conducting fluid modeling or field study demonstrations under paragraph (2)(E)3. of this rule, nearby means not greater than one-half (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 ten (10) times the maximum height of the feature, not to exceed two (2) miles if feature achieves a height one-half (1/2) mile from the stack that is at least forty percent (40%) of the GEP stack height determined by the formula provided in paragraph (2)(E)2. of this rule, or twenty-six meters (26 m), whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.

(H) Stack—Any spatial point in an installation designed to emit air contaminants into ambient air. An accidental opening such as

a crack, fissure, or hole is a source of fugitive emissions, not a stack.

(I) Definitions of certain terms in this rule, other than those specified in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The degree of emission limitation required of any installation for control of any air pollutant must not be affected by that portion of any installation's stack height that exceeds good engineering practice (GEP) or by any other dispersion technique, except as provided in section (1).

(B) Before the director or the MACC establishes an emission limitation that is based on a GEP stack height that exceeds the formula GEP height allowed by this rule, the director must notify the public of the availability of the demonstration study and must provide opportunity for public hearing on it.

(C) This rule does not restrict the actual stack height of any installation or the use of any dispersion technique by any installation.

(4) Reporting and Recordkeeping. (Not applicable)

(5) Test Methods. (Not applicable)

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### EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)  
FRM: 87 FR 31430 (5/24/2022)  
PRM: 87 FR 17050 (3/25/2022)  
State Submission: 1/30/2020 (Electronically received by EPA on 2/11/2020)  
State Final: 10 C.S.R. 10-6 (effective date 1/30/2020)  
APDB File: MO-433; No. EPA-R7-OAR-2022-0285  
Description: The EPA approved revisions to 10 CSR 10-6.140 which restructured the rule into standard rule organizational format, incorporated provisions of 40 CFR Part 51 Appendix W, added definitions specific to this rule, and removed unnecessary words.

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### Difference Between the State and EPA-Approved Regulation

None.

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CFR: 40 C.F.R. 52.1320(c) (67) (i) (B)  
FRM: 54 FR 13184 (3/31/89)  
PRM: 52 FR 44920 (11/23/87)  
State Submission: 8/18/86  
State Proposal: 11 MR 242 (1/16/86)  
State Final: 11 MR 899 (5/1/86)  
APDB File: MO-63  
Description: The EPA approved a new rule restricting emission credit for reduced pollutant concentrations as a result of using dispersion techniques or stack height that exceeds good engineering practice.

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### Difference Between the State and EPA-Approved Regulation

None.

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