# WEST VIRGINIA
# SECRETARY OF STATE
**KEN HECHLER**
# ADMINISTRATIVE LAW DIVISION

Form #4

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OFFICE OF WEST VIRGINIA SECRETARY OF STATE

## NOTICE OF RULE MODIFICATION OF A PROPOSED RULE

AGENCY: WV Air Pollution Control Commission TITLE NUMBER: 45

CITE AUTHORITY Chapter 16, Article 20, Section 5
Chapter 16, Article 20, Sections 1 through 13 inclusive

AMENDMENT TO AN EXISTING RULE: YES____ NO X

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 20

TITLE OF RULE BEING PROPOSED: Regulation 20 - "Good Engineering Practice as Applicable to Stack Heights."

THE ABOVE PROPOSED LEGISLATIVE RULE, FOLLOWING REVIEW BY THE LEGISLATIVE RULE MAKING REVIEW COMMITTEE IS HEREBY MODIFIED AS A RESULT OF REVIEW AND COMMENT BY THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE. THE ATTACHED MODIFICATIONS ARE FILED WITH THE SECRETARY OF STATE.

G. Dale Farley
Acting Director

ABSTRACT

Regulation 20 (1988) was adopted by the Commission on the _____ day of _____, _____ and became effective _____ _____, _____, and was filed with the Secretary of State _____, _____, _____.

WEST VIRGINIA ADMINISTRATIVE REGULATIONS

Subject: Regulation 20 - "Good Engineering Practice as Applies to Stack Heights."

Index.

WEST VIRGINIA ADMINISTRATIVE REGULATIONS
Air Pollution Control Commission

Chapter 16-20
Series 20
1988

Subject: Regulation 20 - "Good Engineering Practice as Applicable to Stack Heights."

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**Section 1. General.**

1.1. Scope.

This regulation is promulgated to ensure that the degree of emission limitation required for the control of any air pollutant is not affected by that portion of any stack height which exceeds good engineering practice or by any other dispersion technique.

This regulation adopts good engineering practice for stack heights and prohibits dispersion techniques. In furtherance, this regulation adopts, by reference, the related US EPA Technical Support Documents as contained in the Federal Register dated July 8, 1985, beginning on Page 27892.

1.2. Authority.

This regulation is issued under the authority of the West Virginia Code, Chapter 16, Article 20, Section 5. This regulation relates to West Virginia Code, Chapter 16, Article 20, Sections 1 through 13 inclusive.

1.3. Filing Date.

This regulation was promulgated on the _____ day of _____, 19 ___, and was filed with the office of the Secretary of State the _____ day of _____, 19____.

1.4. Effective Date.

The effective date of this regulation is the _____ day of _____, 19____.

1.5. Type.

This regulation is a legislative rule as defined in the West Virginia Code, Chapter 29A, Article 2.

**Section 2. Definitions.**

2.1. "Stack" shall mean any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

2.2. "Stack in Existence" shall mean that the owner or operator had:

a. begun, or caused to begin, a continuous program of physical onsite construction of the stack on or before December 31, 1970; or

b. 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 on or before December 31, 1970.

2.3. "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; or

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.

d. Such techniques do 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 facility generating the gas stream; or

B. the merging of exhaust gas streams where:

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

(b) after July 8, 1985, 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

(c) before July 8, 1985, such merging was part of a change in operation at the facility 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, an increase in the quantity of pollutants actually emitted prior to the merging, the Director shall presume that merging was significantly motivated

by an intent to gain emissions credit for greater dispersion. If such a demonstration cannot be made by the source owner or operator that such merging was not significantly motivated by such intent, the Director shall deny credit for the effects of such merging in calculating the allowable emissions for the source; or

C. smoke management in agricultural or silvicultural prescribed burning programs; or

D. episodic restrictions on residential woodburning and open burning; or

E. techniques 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.

2.4. "Good Engineering Practice" (GEP) stack height means the greater of:

a. 65 meters, measured from a ground-level elevation at the base of the stack; or

b. A. for stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required,

$$H_g = 2.5H,$$

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

B. for all other stacks,

$$H_g = H + 1.5L,$$

where

$H_g$ = 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 Director may require the use of a field study or fluid model to verify GEP stack height for the source; or

c. the height demonstrated by a fluid model or a 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.

2.5. "Nearby" as used in Section 2.4 of this regulation is defined for a specific structure or terrain feature; and

a. for purposes of applying the formulae provided in 2.4.b. means that distance up to five (5) times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (½ mile), and

b. for conducting demonstrations under 2.4.c. means not greater than 0.8 km (½ 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 ($H_t$) of the feature, not to exceed two (2) miles if such feature achieves a height ($H_t$), 0.8 km from the stack that is at least 40 percent of the GEP stack height determined by the formulae provided in 2.4.b.B. of this regulation or twenty-six (26) meters, 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.

2.6. "Excessive Concentration" is defined for the purpose of determining good engineering practice stack height under 2.4.c. and means:

a. for sources seeking credit for stack height exceeding that established under 2.4.b., 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 forty (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 Regulation XIV the (Prevention of Significant Deterioration) 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 forty (40) percent in excess of the maximum concentration experienced in the absence 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 Regulation XVI (Standards of Performance for New Stationary Sources) 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;

b. for sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under 2.4.b., either:

A. a maximum ground-level concentration due in whole or part to downwash, wakes or eddy effects as provided in paragraph 2.6.a. except that the emission rate specified by any regulation of the Commission (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

c. for sources seeking credit after January 12, 1979 for a stack height determined under 2.4.b. 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 2.4.b, a maximum ground-level concentration due in whole or part to downwash, wakes or eddy effects that is at least forty (40) percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

2.7. "Allowable Emissions" means the emission rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits or limits enforceable by the Commission which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

a. all other applicable standards as set forth in Regulation XV (Emission Standards for Hazardous Air Pollutants) and Regulation XVI (Standards of Performance for New Stationary Sources);

b. all other applicable emissions limitations or permit conditions, including those with a future compliance date; or

c. The applicable federally enforceable emissions limitations or permit conditions, including those with a future compliance date.

2.8. "Director" shall mean the Director of the West Virginia Air Pollution Control Commission.

2.9. "Air Pollutants" shall mean solids, liquids, or gases which, if discharged into the air, may result in a statutory air pollution.

2.10. "Emission" shall refer to the release, escape, or emission of air pollutants into the air.

2.11. "Air Pollution", 'statutory air pollution', shall have the meaning ascribed to it in Section 2 of Chapter 16, Article 20, of the Code of West Virginia, as amended.

2.12. "Commission" shall mean the West Virginia Air Pollution Control Commission.

2.13. "Ambient Air Quality Standard" shall mean the numerical expression of a specified concentration level for a particular air pollutant in the ambient air and the time-averaging interval over which that concentration level is measured.

2.14. "Stationary Source" shall mean any building, structure, facility, or installation which emits or may emit any air pollutant.

Other words and phrases used in this regulation, unless otherwise indicated, shall have the meaning ascribed to them in Chapter 16, Article 20, Section 2, of the Code of West Virginia, 1931, as amended.

**Section 3. Standards.**

3.1. The degree of emission limits required for control of any air pollutant subject to any regulation of this Commission shall not be affected in any manner by:

a. so much of the stack height of any source as exceeds good engineering practice; or

b. any other dispersion technique.

3.2. Subsection 3.1. shall not apply with respect to:

a. any stack in existence before December 31, 1970; or

b. dispersion techniques implemented on or before December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion techniques by stationary sources, which were constructed, or reconstructed, or for which major modifications, as defined in Regulation XIV (Prevention of Significant Deterioration), were carried out after December 31, 1970; or

c. coal fired steam electric generating units subject to the provisions of Section 118 of the Clean Air Act, which commenced operation before July 1, 1957, and whose stacks were constructed under a construction contract awarded before February 8, 1974.

3.3. It is hereby adopted by reference the US EPA Technical Support Documents as contained in the Federal Register dated July 8, 1985, beginning on Page 27892, with such requirements applicable to any such sources controlled by this regulation.

**Section 4. Public Review Procedures.**

4.1. In the event that an applicant for a construction, modification, or relocation permit shall make a demonstration of good engineering practice in accordance with Subsection 2.4.c. of this regulation, the Director shall not issue a construction, modification, or relocation permit to such source with a good engineering practice stack height that exceeds the height allowed by Subsection 2.4.b.A. and B. without first publishing notice of intent to issue such permit as a Class I legal notice in a newspaper of general circulation within the region in which the proposed construction, modification, or relocation would be located. Such legal notice shall contain, as a minimum, the name of the applicant, the type and location of the source, the proposed start-up date, and the expected impact from the source. The legal notice shall provide that the public shall have thirty (30) days within which to make comments to the Director.

4.2. The Director shall make available for public review a copy of the demonstration of good engineering practice in at least one (1) location in

the region in which the proposed source, modification, or relocation shall be located.

4.3. The Director may provide opportunity for a public meeting at which interested persons may appear and submit written or oral comments regarding the demonstration of good engineering practice.

**Section 5. Inconsistency Between Regulations.**

5.1. In the event of any inconsistency between this regulation and any other regulation of the Commission, such inconsistency shall be resolved by the determination of the Director and such determination shall be based upon the application of the more stringent provision, term, condition, method, rule or regulation.

The foregoing is a true and correct copy of the West Virginia Air Pollution Control Commission Regulation 20.

Carl G. Beard, II
Secretary
West Virginia Air Pollution
Control Commission

# WEST VIRGINIA

# SECRETARY OF STATE

**KEN HECHLER**

# ADMINISTRATIVE LAW DIVISION

Form #2

**Do Not Mark In this Box**

FILED IN THE OFFICE OF
THE SECRETARY OF STATE
THIS DATE Sept. 16, 1988
ADMINISTRATIVE LAW DIVISION

## NOTICE OF A COMMENT PERIOD ON A PROPOSED RULE

AGENCY: Air Pollution Control Commission TITLE NUMBER: 45

RULE TYPE: Legislative ; CITE AUTHORITY Chapter 16, Article 20, Section 5 & Chapter 16, Article 20, Sections 1-13

AMENDMENT TO AN EXISTING RULE: YES___ NO_x_

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

_____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: Regulation 20

TITLE OF RULE BEING PROPOSED: "Good Engineering Practice as Applicable to Stack Heights."

ADDITION TO THE
IN ~~LIEU OF~~ A PUBLIC HEARING, A COMMENT PERIOD HAS BEEN ESTABLISHED DURING WHICH ANY INTERESTED PERSON MAY SEND COMMENTS CONCERNING THESE PROPOSED RULES. THIS COMMENT PERIOD WILL END ON December 16, 1988 AT 4:45 p.m.

~~ONLY~~ WRITTEN COMMENTS WILL BE ACCEPTED AND ARE TO BE MAILED TO THE FOLLOWING ADDRESS.

Carl G. Beard, II
Director
WV Air Pollution Contrl Commission
1558 Washington Street, East
Charleston, West Virginia 25311

THE ISSUES TO BE HEARD SHALL BE LIMITED TO THIS PROPOSED RULE.

Carl G. Beard II

ATTACH A **BRIEF** SUMMARY OF YOUR PROPOSAL

# WEST VIRGINIA
# SECRETARY OF STATE
**KEN HECHLER**
# ADMINISTRATIVE LAW DIVISION

Form #1

**Do Not Mark In this Box**

FILED IN THE OFFICE OF
THE SECRETARY OF STATE
THIS DATE Sept. 16, 1988
ADMINISTRATIVE LAW DIVISION

## NOTICE OF PUBLIC HEARING ON A PROPOSED RULE

AGENCY: WV Air Pollution Control Commission TITLE NUMBER: 45

RULE TYPE: Legislative ; CITE AUTHORITY Chapter 16, Article 20, Section 5 & Chapter 16, Article 20, Sections 1-13

AMENDMENT TO AN EXISTING RULE: YES____ NO X

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: Regulation 20

TITLE OF RULE BEING PROPOSED: "Good Engineering Practice as Applicable to Stack Heights."

DATE OF PUBLIC HEARING: November 16, 1988 TIME: 9:15 a.m.*

LOCATION OF PUBLIC HEARING: WV Air Pollution Control Commission
1558 Washington Street, East
Charleston, West Virginia 25311

*Hearing will begin immediately after hearing on TP-2.

COMMENTS LIMITED TO: ORAL____, WRITTEN____, BOTH x

COMMENTS MAY ALSO BE MAILED TO THE FOLLOWING ADDRESS: Same as above.

The Department requests that persons wishing to make comments at the hearing make an effort to submit written comments in order to facilitate the review of these comments.

The issues to be heard shall be limited to the proposed rule.

ATTACH A **BRIEF** SUMMARY OF YOUR PROPOSAL

WEST VIRGINIA LEGISLATURE
LEGISLATIVE RULE-MAKING REVIEW COMMITTEE
Room M-438, State Capitol
Charleston, West Virginia 25305
(304) 340-3286

*Senator Larry A. Tucker, Co-Chairman*
*Delegate Thomas A. Knight, Co-Chairman*

*M. E. Mowery, Counsel*
*Debra A. Graham, Associate Counsel*
*Marie Nickerson, Receiving Clerk*

NOTICE OF ACTIONS TAKEN BY LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

February 22, 1989

TO: Ken Hechler, Secretary of State, State Register

TO: Mr. Dale Farley, Acting Director
WV Air Pollution Control Commission
1558 Washington Street, East
Charleston, WV 25311

FROM: Legislative Rule-Making Review Committee

PROPOSED RULE: Regulation 20 - "Good Engineering Practice as Applicable to Stack Heights."

The Legislative Rule-Making Review Committee recommends that the West Virginia Legislature:

1. Authorize the agency to promulgate the Legislative Rule
   (a) as originally filed ____
   (b) as modified by the agency X

2. Authorize the agency to promulgate part of the Legislative rule; a statement of reasons for such recommendation is attached. ____

3. Authorize the agency to promulgate the Legislative rule with certain amendments; amendments and a statement of reasons for such recommendation is attached. ____

4. Authorize the agency to promulgate the Legislative rule as modified with certain amendments; amendments and a statement of reasons for such recommendation is attached. ____

5. Recommends that the rule be withdrawn; a statement of reasons for such recommendation is attached. ____

Pursuant to Code 29A-3-11(c), this notice has been filed in the State Register and with the agency proposing the rule.

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# WEST VIRGINIA

# SECRETARY OF STATE

**KEN HECHLER**

# ADMINISTRATIVE LAW DIVISION

Form #3

FILED

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OFFICE OF WEST VIRGINIA SECRETARY OF STATE

## NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE AND FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

AGENCY: WV Air Pollution Control Commission TITLE NUMBER: 45

CITE AUTHORITY Chapter 16, Article 20, Section 5 & Chapter 16, Article 20, Sections 1-13

AMENDMENT TO AN EXISTING RULE: YES___ NO X

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: Regulation 20

TITLE OF RULE BEING PROPOSED: "Good Engineering Practice as Applicable to Stack Heights."

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE MAKING REVIEW COMMITTEE FOR THEIR REVIEW.

CARL G. BEARD, II
DIRECTOR

ABSTRACT

Regulation 20 (1988) was adopted by the Commission on the _____ day of _____, _____ and became effective _____ _____, _____, and was filed with the Secretary of State _____, _____, _____.

WEST VIRGINIA ADMINISTRATIVE REGULATIONS

Subject: Regulation 20 - "Good Engineering Practice as Applies to Stack Heights."

Index.

WEST VIRGINIA ADMINISTRATIVE REGULATIONS
Air Pollution Control Commission

Chapter 16-20
Series 20
1988



Subject: Regulation 20 - "Good Engineering Practice as Applicable to Stack Heights."

**Section 1. General.**

1.1. Scope.

This regulation is promulgated to ensure that the degree of emission limitation required for the control of any air pollutant is not affected by that portion of any stack height which exceeds good engineering practice or by any other dispersion technique.

This regulation adopts good engineering practice for stack heights and prohibits dispersion techniques. In furtherance, this regulation adopts, by reference, the related US EPA Technical Support Documents as contained in the Federal Register dated July 8, 1985, beginning on Page 27892.

1.2. Authority.

This regulation is issued under the authority of the West Virginia Code, Chapter 16, Article 20, Section 5. This regulation relates to West Virginia Code, Chapter 16, Article 20, Sections 1 through 13 inclusive.

1.3. Filing Date.

This regulation was promulgated on the _____ day of _____, 19 ___, and was filed with the office of the Secretary of State the _____ day of _____, 19____.

1.4. Effective Date.

The effective date of this regulation is the _____ day of _____, 19____.

1.5. Type.

This regulation is a legislative rule as defined in the West Virginia Code, Chapter 29A, Article 2.

**Section 2. Definitions.**

2.1. "Stack" shall mean any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

2.2. "Stack in Existence" shall mean that the owner or operator had:

a. begun, or caused to begin, a continuous program of physical onsite construction of the stack ~~on or before December 31, 1970~~; or

b. 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 ~~on or before December 31, 1970~~.

2.3. "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; or

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.

d. Such techniques do 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 facility generating the gas stream; or

B. the merging of exhaust gas streams where:

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

(b) after July 8, 1985, 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

(c) before July 8, 1985, such merging was part of a change in operation at the facility 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, an increase in the quantity of pollutants actually emitted prior to the merging, the Director shall presume that merging was significantly motivated

by an intent to gain emissions credit for greater dispersion. If such a demonstration cannot be made by the source owner or operator that such merging was not significantly motivated by such intent, the Director shall deny credit for the effects of such merging in calculating the allowable emissions for the source; or

C. smoke management in agricultural or silvicultural prescribed burning programs; or

D. episodic restrictions on residential woodburning and open burning; or

E. techniques 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.

2.4. "Good Engineering Practice" (GEP) stack height means the greater of:

a. 65 meters, measured from a ground-level elevation at the base of the stack; or

b. A. for stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required,

$$H_g = 2.5H,$$

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

B. for all other stacks,

$$H_g = H + 1.5L,$$

where

$H_g$ = 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 Director may require the use of a field study or fluid model to verify GEP stack height for the source; or

c. the height demonstrated by a fluid model or a 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.

2.5. "Nearby" as used in Section 2.4 of this regulation is defined for a specific structure or terrain feature; and

a. for purposes of applying the formulae provided in 2.4.b. means that distance up to five (5) times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (½ mile), and

b. for conducting demonstrations under 2.4.c. means not greater than 0.8 km (½ 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 ($H_t$) of the feature, not to exceed two (2) miles if such feature achieves a height ($H_t$), 0.8 km from the stack that is at least 40 percent of the GEP stack height determined by the formulae provided in 2.4.b.B. of this regulation or twenty-six (26) meters, 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.

2.6. "Excessive Concentration" is defined for the purpose of determining good engineering practice stack height under 2.4.c. and means:

a. for sources seeking credit for stack height exceeding that established under 2.4.b., 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 forty (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 Regulation XIV the (Prevention of Significant Deterioration) 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 forty (40) percent in excess of the maximum concentration experienced in the absence 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 Regulation XVI (Standards of Performance for New Stationary Sources) 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;

b. for sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under 2.4.b., either:

A. a maximum ground-level concentration due in whole or part to downwash, wakes or eddy effects as provided in paragraph 2.6.a. except that the emission rate specified by any regulation of the Commission (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

c. for sources seeking credit after January 12, 1979 for a stack height determined under 2.4.b. 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 2.4.b, a maximum ground-level concentration due in whole or part to downwash, wakes or eddy effects that is at least forty (40) percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

2.7. "Allowable Emissions" means the emission rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits or limits enforceable by the Commission which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

a. all other applicable standards as set forth in Regulation XV (Emission Standards for Hazardous Air Pollutants) and Regulation XVI (Standards of Performance for New Stationary Sources);

b. all other applicable emissions limitations or permit conditions, including those with a future compliance date; or

c. The applicable federally enforceable emissions limitations or permit conditions, including those with a future compliance date.

2.8. "Director" shall mean the Director of the West Virginia Air Pollution Control Commission.

2.9. "Air Pollutants" shall mean solids, liquids, or gases which, if discharged into the air, may result in a statutory air pollution.

2.10. "Emission" shall refer to the release, escape, or emission of air pollutants into the air.

2.11. "Air Pollution", 'statutory air pollution', shall have the meaning ascribed to it in Section 2 of Chapter 16, Article 20, of the Code of West Virginia, as amended.

2.12. "Commission" shall mean the West Virginia Air Pollution Control Commission.

2.13. "Ambient Air Quality Standard" shall mean the numerical expression of a specified concentration level for a particular air pollutant in the ambient air and the time-averaging interval over which that concentration level is measured.

2.14. "Stationary Source" shall mean any building, structure, facility, or installation which emits or may emit any air pollutant.

Other words and phrases used in this regulation, unless otherwise indicated, shall have the meaning ascribed to them in Chapter 16, Article 20, Section 2, of the Code of West Virginia, 1931, as amended.

**Section 3. Standards.**

3.1. The degree of emission limits required for control of any air pollutant subject to any regulation of this Commission shall not be affected in any manner by:

a. so much of the stack height of any source as exceeds good engineering practice; or

b. any other dispersion technique.

3.2. Subsection 3.1. shall not apply with respect to:

a. any stack in existence before December 31, 1970; or

b. dispersion techniques implemented on or before December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion techniques by stationary sources, which were constructed, or reconstructed, or for which major modifications, as defined in Regulation XIV (Prevention of Significant Deterioration), were carried out after December 31, 1970; or

c. coal fired steam electric generating units subject to the provisions of Section 118 of the Clean Air Act, which commenced operation before July 1, 1957, and whose stacks were constructed under a construction contract awarded before February 8, 1974.

3.3. It is hereby adopted by reference the US EPA Technical Support Documents as contained in the Federal Register dated July 8, 1985, beginning on Page 27892, with such requirements applicable to any such sources controlled by this regulation.

**Section 4. Public Review Procedures.**

4.1. In the event that an applicant for a construction, modification, or relocation permit shall make a demonstration of good engineering practice in accordance with Subsection 2.4.c. of this regulation, the Director shall not issue a construction, modification, or relocation permit to such source with a good engineering practice stack height that exceeds the height allowed by Subsection 2.4.b.A. and B. without first publishing notice of intent to issue such permit as a Class I legal notice in a newspaper of general circulation within the region in which the proposed construction, modification, or relocation would be located. Such legal notice shall contain, as a minimum, the name of the applicant, the type and location of the source, the proposed start-up date, and the expected impact from the source. The legal notice shall provide that the public shall have thirty (30) days within which to make comments to the Director.

4.2. The Director shall make available for public review a copy of the demonstration of good engineering practice in at least one (1) location in

the region in which the proposed source, modification, or relocation shall be located.

4.3. The Director may provide opportunity for a public meeting at which interested persons may appear and submit written or oral comments regarding the demonstration of good engineering practice.

**Section 5. Inconsistency Between Regulations.**

5.1. In the event of any inconsistency between this regulation and any other regulation of the Commission, such inconsistency shall be resolved by the determination of the Director and such determination shall be based upon the application of the more stringent provision, term, condition, method, rule or regulation.

The foregoing is a true and correct copy of the West Virginia Air Pollution Control Commission Regulation 20.

Carl G. Beard, II
Secretary
West Virginia Air Pollution
Control Commission