

WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #3

Do Not Mark In this Box

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OCT 7 3 46 PM '93

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: 45CSR7

CITE AUTHORITY W. Va. Code §16-20-5

AMENDMENT TO AN EXISTING RULE: YES ☒ NO ☐

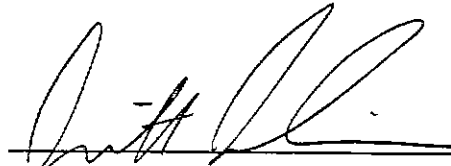
IF YES, SERIES NUMBER OF RULE BEING AMENDED: 45CSR7

TITLE OF RULE BEING AMENDED: "Prevent and Control Particulate Air
Pollution from Manufacturing Process Operations"

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

TITLE OF RULE BEING PROPOSED: _____

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.



Britt A. Bernheim
Secretary, WVA PCC

7.40 w/o
40.50 w

APPENDIX B
FISCAL NOTE FOR PROPOSED RULES

Rule Title: 45CSR7 "Prevent and Control Particulate Air Pollution from Manufacturing Process Operations"

Type of Rule: X Legislative Interpretive Procedural

Agency: Office of Air Quality

Address: 1558 Washington Street, East
Charleston, WV 25311-2599

1. Effect of Proposed Rule	Annual		Fiscal Year		
	Increase	Decrease	Current	Next 1993-94	1994-95
Estimated Total Cost	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Personal Services					
Current Expense					
Repairs and Alterations					
Equipment					
Other					

2. Explanation of above estimates:

The proposed revisions to 45CSR7 affect two ferroalloy plants. The companies owning these facilities are requesting limited regulatory relief from the Commission. If enacted, the proposed rule changes will have no effect on the cost of rule implementation.

3. Objectives of these rules:

The subject matter of the proposed rule changes involve particulate emissions requirements from ferroalloy electric submerged arc furnaces during blowing taphole events, poling, and oxygen lancing operations. The company's affected by current regulations have petitioned the APCC for changes.

4. Explanation of overall economic impact of proposed rule.

A. Economic impact on state government.

Negligible

B. Economic impact on political subdivisions; specific industries; specific groups of citizens.

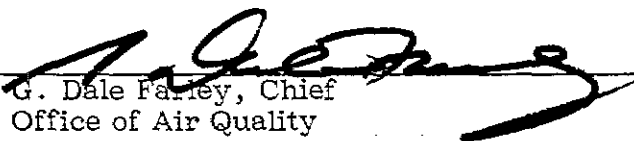
The affected facilities have indicated that complying with current rules are economically infeasible.

C. Economic impact on citizens/public at large.

Negligible

Date: October 7, 1993

Signature of agency head or authorized representative:


G. Dale Farley, Chief
Office of Air Quality

DATE: October 7, 1993

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: G. DALE FARLEY
CHIEF, OFFICE OF AIR QUALITY

LEGISLATIVE RULE TITLE: 45CSR7 - "Regulation to Prevent and Control Particulate Air Pollution from Manufacturing Process Operations"

1. Authorizing statute(s) citation W. Va. Code §16-20-5

2. a. Date filed in State Register with Notice of Hearing:

June 2, July 28, and September 17, 1993

b. What other notice, including advertising, did you give of the hearing?

Class II legal advertisement filed in a newspaper published

in each of the Air Quality Control Regions of West Virginia.

Office of Air Quality Mailing List.

c. Date of hearing(s): July 6, August 9, and

September 29, 1993

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached X No comments received

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

October 7, 1993

f. Name and phone number of agency person to contact for additional information:

G. Dale Farley, Chief

Office of Air Quality

Phone: 558-2275

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

N/A

b. Date of hearing: N/A

c. On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

N/A

d. Attach findings and determinations and reasons:

Attached N/A



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
OFFICE OF THE SECRETARY

State Capitol, Room M-146
Charleston, West Virginia 25305-0310
Telephone: (304) 558-0400
Fax No.: (304) 558-4983

GASTON CAPERTON
Governor

JOHN M. RANSON
Cabinet Secretary

June 2, 1993

Britt A. Bernheim, Secretary
West Virginia Air Pollution
Control Commission
1615 Washington Street, East
Charleston, West Virginia 25311

Re: 45CSR7 - "To Prevent and Control Particulate Air
Pollution From Manufacturing Process
Operations" and

45CSR10 - "To Prevent and Control Air Pollution From the
Emission of Sulfur Oxides"

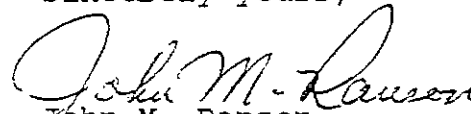
Dear Ms. Bernheim:

Pursuant to West Virginia Code Section 5F-2-2(a)(12), I hereby
consent to the proposal of the rules specified above.

I am authorizing the proposal of these rules with the
understanding that the modifications they propose will be subjected
to public comment and scrutiny before final adoption. I understand
that the Commission will require the affected regulated parties to
provide adequate technical data and documentation to establish that
the proposed changes are needed, and that they can be made without
an unreasonable impact on air quality.

You may attach a copy of this letter to your filing with the
Secretary of State as evidence of my consent.

Sincerely yours,


John M. Ranson
Cabinet Secretary

JMR:ro

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45CSR7

WEST VIRGINIA REGISTER

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June 4, 1993

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Administrative Law Division

*Judy Cooper
Director*

*Missy Phalen
Pam Reece
Administrative Assistants*

*Secretary of State
Administrative Law Division
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1900 Kanawha Blvd. E.
Charleston, WV 25305-0770*

(304)558-6000

CONTENTS

- I. Chronological Index*
- II. Open Government Meetings Listing*
- III. Price List*
- IV. Rule Monitor*
- V. Notices*
 - a. Legislative Rules*
 - b. Interpretive Rules*
 - c. Procedural Rules*
 - d. Emergency Rules*
 - e. Legislative Rule-Making Review Committee*
- VI. Legislative Interims*
- VII. Orders*
- IX. Ethics Commission Opinions*
- X. Attorney General Opinions*
- XI. Other Documents or Information Filed*
- XII. Publication Deadlines and Publication Dates*

LEGISLATIVE

SECRETARY OF STATE

KEN HECHLER

ADMINISTRATIVE LAW DIVISION

Form #1

FILED

JUN 2 4 33 PM '93

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

NOTICE OF PUBLIC HEARING ON A PROPOSED RULE

AGENCY: Air Pollution Control Commission TITLE NUMBER: 45CSR7

RULE TYPE: Legislative; CITE AUTHORITY: W. Va. Code §16-20-5.

AMENDMENT TO AN EXISTING RULE: YES ☒ NO ☐

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 45CSR7

TITLE OF RULE BEING AMENDED: "Regulations to Prevent and Control Particulate Air Pollution from Manufacturing Process Operations"

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

TITLE OF RULE BEING PROPOSED: _____

DATE OF PUBLIC HEARING: Tuesday, July 6, 1993 TIME: 9:00 a.m.

LOCATION OF PUBLIC HEARING: Office of Air Quality
Conference Room
1558 Washington Street, East
Charleston, WV 25311

COMMENTS LIMITED TO: ORAL ☐ WRITTEN ☒ BOTH ☒

COMMENTS MAY ALSO BE MAILED TO THE FOLLOWING ADDRESS:

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

Britt A. Bernheim, Secretary
Air Pollution Control Comm.
1615 Washington Street, East
Charleston, WV 25311

AGENCY: Air Pollution Control Commission TITLE NUMBER: 45CSR10

RULE TYPE: Legislative; CITE AUTHORITY: W. Va. Code §16-20-5

AMENDMENT TO AN EXISTING RULE: YES ☒ NO ☐

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 45CSR10

TITLE OF RULE BEING AMENDED: "To Prevent and Control Air Pollution from the Emission of Sulfur Oxides"

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

TITLE OF RULE BEING PROPOSED: _____

DATE OF PUBLIC HEARING: Tuesday, July 6, 1993 TIME: 9:00 a.m.

LOCATION OF PUBLIC HEARING: Office of Air Quality
Conference Room
1558 Washington Street, East
Charleston, WV 25311

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ATTACH A BRIEF SUMMARY OF YOUR PROPOSAL

Britt A. Bernheim, Secretary
Air Pollution Control Comm.
1615 Washington Street, East
Charleston, WV 25311

July 6, 1993 Agenda



WEST VIRGINIA REGISTER

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Administrative Law Division

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*Missy Phalen
Pam Reece
Administrative Assistants*

*Secretary of State
Administrative Law Division
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Charleston, WV 25305-0770*

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- IV. Rule Monitor*
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 - b. Interpretive Rules*
 - c. Procedural Rules*
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DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2500

n Caperton
overlook
M. Ransick
n Secretary

David C. Callaghan
Director
Ann A. Spenser
Deputy Director

AGENDA
WEST VIRGINIA AIR POLLUTION CONTROL COMMISSION
Conference Room

1558 Washington Street, East
Charleston, West Virginia 25311

July 6, 1993
9:00 a.m.

FILED
JUL 8 1993
OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

I. HEARINGS ON PROPOSED RULES

1. 45CSR28 "Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities" (continuation of January 7, 1993 hearing)

2. 45CSR30 "Requirements for Operating Permits"

3. 45CSR13 "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation"

4. 45CSR25 "To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"

5. 45CSR15 "Emission Standards for Hazardous Air Pollutants"

6. 45CSR16 "Standards of Performance for New Stationary Sources"

7. 45CSR7 "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations"

8. 45CSR10 "To Prevent and Control Air Pollution From the Emission of Sulfur Oxides"

II. COMMISSION MEETING

1. Final Adoption of Rules Authorized by the Legislature.

- a. 45CSR5 "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"

- b. 45CSR14 "Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration"

OTHER

- c. 45CSR19 "Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrastate Pollutants"

- d. 45CSR21 "Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds"

- e. 45CSR29 "Regulation Requiring the Submission of Emission Statements for Volatile Organic Compound Emissions and Oxides of Nitrogen Emissions"

- f. 45CSR31 "Confidential Information"

- g. 45CSR32 "Serious and Minor Violations of Applicable Rules"

2. Election of Chairman.*

3. Election of Vice-Chairman.*

4. Appointment of Secretary.*

5. Such other business as the Commission deems timely and appropriate.

*The following is quoted from the West Virginia Air Pollution Control Law of West Virginia, 16-20-4:

At its first meeting the Commission shall elect from its membership a chairman, and at the first meeting in each fiscal year thereafter the Commission shall elect from its membership a chairman to act during such fiscal year. At similar times the Commission shall elect from its membership a vice-chairman and appoint a secretary. The secretary need not be a member of the Commission.



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

AGENDA

WEST VIRGINIA AIR POLLUTION CONTROL COMMISSION
Conference Room

1558 Washington Street, East
Charleston, West Virginia 25311

July 6, 1993
9:00 a.m.

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

JUL 10 1993

FILED

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6. 45CSR16 "Standards of Performance for New Stationary Sources"
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- c. 45CSR19 "Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants"
 - d. 45CSR21 "Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds"
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WEST VIRGINIA REGISTER

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CONTENTS

Volume X

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July 30, 1993

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A Weekly Publication

Administrative Law Division

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*Missy Phalen
Pam Reece
Administrative Assistants*

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1900 Kanawha Blvd. E.
Charleston, WV 25305-0770*

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I. Chronological Index

II. Open Government Meetings Listing

III. Price List

IV. Rule Monitor

V. Notices

a. Legislative Rules

b. Interpretive Rules

c. Procedural Rules

d. Emergency Rules

e. Legislative Rule-Making Review Committee

VI. Legislative Interims

VII. Orders

IX. Ethics Commission Opinions

X. Attorney General Opinions

XI. Other Documents or Information Filed

XII. Publication Deadlines and Publication Dates

1402

MEETING NOTICES

Open Government Proceedings Act
§6-9A-1

<u>AGENCY</u>	<u>DATE FILED</u>	<u>PURPOSE</u>	<u>MEETING DATE/LOCATION</u>
Air Pollution Control Comm.	7/28/93	Final consideration of proposed rules Title 45-7, 10, 13, 15, 16, & 30 & other business	August 9, 1993, 9:00 a.m. 1558 Washington St. E. Charleston, WV
Barbers & Cosmetologists, Bd. of	7/29/93	Executive meeting	August 8, 1993, 6:00 p.m. Holiday Inn 100 Lodgeville Rd. Clarksburg, WV
Coal Mine Health & Safety, Bd. of	7/29/93	Regular monthly meeting	August 10, 1993, 9:00 a.m. Lakeview Resort & Conference Center Morgantown, WV
Commercial Hazardous Waste Mngt. Facility Siting Bd.	7/14/93	To receive public comment on draft regulations and respond to same.	August 10, 1993, 9:00 p.m. Ofc. of Air Quality 1558 Washington St. Charleston, WV
Consolidated Public Retirement Bd.	7/7/93	Regular business	August 5, 1993, 10:00 a.m. Gov.'s Con. Rm. State Capitol, Suite 157J Charleston, WV
Directors, State College & Univ. Systems Bd. of	7/22/93	Emergency meeting by conference call for purpose of adopting policy for payment of fees by credit cards & installment payments	July 22, 1993, 4:00 p.m. 10th Fl. Con. Rm. 1019 Kanawha Blvd. E. Charleston, WV
Educational Broadcasting Authority	7/20/93	Not specified	August 5, 1993, 1:00 p.m. Studios of WSWP-TV Beckley, WV

*Meeting Notice Does Not Comply With Open Government Proceeding Act



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
AIR POLLUTION CONTROL COMMISSION

1615 Washington Street, East Suite 301
Charleston, West Virginia 25311

Telephone: (304) 558-4002
Telefax: 558-1222

A G E N D A

WEST VIRGINIA AIR POLLUTION CONTROL COMMISSION
Office of Air Quality Conference Room
1558 Washington Street East
Charleston, West Virginia 25311

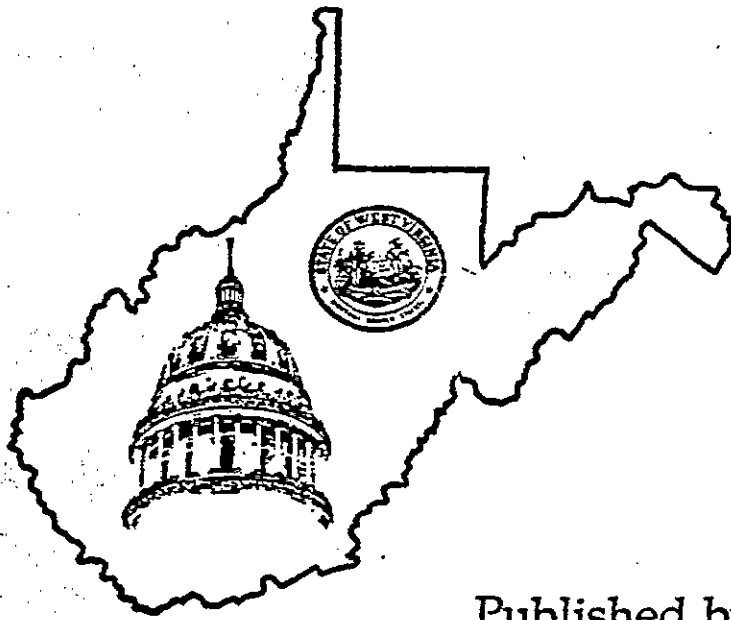
August 9, 1993
9:00 a.m.

I. FINAL CONSIDERATION OF PROPOSED RULES

1. 45 CSR 30 "Requirements for Operating Permits"
2. 45 CSR 13 "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation."
3. 45 CSR 25 "To Prevent and Control Air Pollution from Hazardous Waste Treatment, Storage, or Disposal Facilities."
4. 45 CSR 15 "Emission Standards for Hazardous Air Pollutants."
5. 45 CSR 16 "Standards of Performance for New Stationary Sources."
6. 45 CSR 7 "To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations."
7. 45 CSR 10 "To Prevent and Control Air Pollution from the Emission of Sulfur Oxides."

II. COMMISSION MEETING

Such other business as the Commission deems timely and appropriate.



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Administrative Law Division

*Judy Cooper
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*Missy Phalen
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MEETING NOTICES
Open Government Proceedings Act
§6-9A-1

<u>AGENCY</u>	<u>DATE FILED</u>	<u>PURPOSE</u>	<u>MEETING DATE/LOCATION</u>
Air Pollution Control Comm.	9/10/93	Continued final consideration of proposed rule Title 45-7, consider proposed procedural rule & other business	September 29, 1993, 2:00 p.m. 1558 Washington St. E Charleston, WV
Blennerhassett Historical State Park Commission	9/13/93	Regular business	September 22, 1993, 10:30 a.m. Blennerhassett Museum Parkersburg, WV
Capitol Building Commission	9/8/93	Not specified	September 23, 1993, 10:00 a.m. Commissioner's Con. Rm., 2nd Fl. Cultural Center Charleston, WV
Contractor Licensing Bd.	9/7/93	Not specified	September 28, 1993, 9:00 a.m. Heart-of-Town Holiday Inn Charleston, WV
Drunk Driving Prevention	9/8/93	Rescheduled regular meeting	September 24, 1993, 12:00 noon WV State Police Academy Institute, WV
Engineers, Reg. of Prof.	9/10/93	Regular business	September 27, 1993, 9:30 a.m. 608 Union Bldg. Charleston, WV
Forestry, Div. of	9/14/93	Urban & Community Forestry Council meeting	September 29, 1993, 10:30 a.m. Western Sizzlin Steakhouse Sutton, WV

*Meeting Notice Does Not Comply With Open Government Proceeding Act



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
AIR POLLUTION CONTROL COMMISSION

1615 Washington Street, East Suite 301
Charleston, West Virginia 25311

Telephone: (304) 558-4002
Telefax: 558-1222

A G E N D A

WEST VIRGINIA AIR POLLUTION CONTROL COMMISSION
Office of Air Quality Conference Room
1558 Washington Street East
Charleston, West Virginia 25311

September 29, 1993
2:00 p.m.

I. CONTINUED FINAL CONSIDERATION OF PROPOSED RULE

45 C.S.R. 7 "To Prevent and Control Particulate Air
Pollution from Manufacturing Process
Operations."

II. COMMISSION MEETING

1. Consideration of Proposed Procedural Rules
2. Such other business as the Commission deems timely and appropriate.

OAQ MAILING LIST FOR PUBLIC HEARINGS/MEETINGS

Mr. Larry Myers
Allegheny Power Service Corp.
800 Cabin Hill Drive
Greensburg, Pennsylvania 15601

Mr. Brian Broderick
BNA PLUS
Bureau of National Affairs
1231 25th Street, N.W.
Washington, D.C. 20037

Mr. Greg Scandrett
ERM Midwest
5088 West Washington Street
Charleston, WV 25313

Ms. Becky Fleming
Charleston Daily Mail
1001 Virginia Street, East
Charleston, WV 25301

Mr. Norm Steenstra
Environmental Coordinator
West Virginia Citizen Action Group
1324 Virginia Street, East
Charleston, West Virginia 25301

Mr. Eric Niiler
Charleston Gazette
1002 Virginia Street, East
Charleston, WV 25301

Ms. Joline Brady
103 Timberlake Circle
Scott Depot, WV 25560

Ms. Mildred Holt
P. O. Box 367
Institute, WV 25112

Ms. Lillian Erskin
52 Bailes Drive
Nitro, WV 25143

Ms. Suzanne Tenkhoff
National Institute for Chemical Studies
Nitro/St. Albans Committee
31 Bailes Drive
Nitro, West Virginia 25143

Mr. Charles White
Chairman, Sub-Area Planning
Committee
P. O. Box 113
Institute, West Virginia 25112

Mr. Ray de Bolt
Fire Chief
Charleston Fire Department
808 Virginia Street, West
Charleston, WV 25302

The Honorable William Croye
Mayor, City of Belle
National Institute for Chemical Studies
Upper Kanawha Valley Committee
110 East DuPont Avenue
Belle, West Virginia 25015

Dr. Paul Hill, President
National Institute for Chemical Studies
University of Charleston
2300 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304

Mr. Tim Carroll
Regional Office Supervisor
Northern Panhandle Regional Office
WV Office of Air Quality
1911 Warwood Avenue
Wheeling, West Virginia 26003

Mr. William Taylor
Regional Engineer
North Central Regional Office
WV Office of Air Quality
109 Adams Street, Room M-2
Fairmont, WV 26554-2800

Mr. Robert Parsons
Jackson & Kelly
1600 Laidley Tower
Charleston, WV 25301

Mr. Ira H. Dorfman
Vice-President, Energy & Environment
Ryan-McGinn
2300 Clarendon Blvd., Suite 610
Arlington, VA 22201

Larry G. Kopelman
Special Assistant Attorney General
WV Air Pollution Control Commission
No. 9 Pennsylvania Avenue
Charleston, WV 25302

Ms. Kim Baker
Ohio Valley Environmental Coalition
P. O. Box 970
Proctorville, OH 45669

Ms. Helen Gibbins
6128 Gideon Road
Huntington, WV 25705

Ms. Missy Woolverton
WV Citizen Action Group
1324 Virginia Street, East
Charleston, WV 25301

Ms. Rhonda Hooper
Monsanto
1 Monsanto Road
Nitro, WV 25143

Mr. Richard Poling
Engineer II
c/o WV Division of Highways
P. O. Box 88
Burlington, WV 26710

Ms. Claudia Banner
Appalachian Power Company
P. O. Box 2021
Roanoke, Virginia 24022-2121

Mr. David C. Callaghan
Director, Division of Environmental
Protection
10 McJunkin Road
Nitro, WV 25143-2506

Ms. Kim Baker
OVEC
2830 Collis Avenue
Huntington, WV 25702

Act Foundation
523 Central Avenue
Charleston, WV 25302

John M. Ranson
Cabinet Secretary
WV Department Commerce, Labor, &
Environmental Resources
Capitol Complex
Main Building, Room 146
Charleston, WV 25305-0310

Ms. Pamela Nixon
406 Grandview Point
Dunbar, WV 25064

Mr. Oliver A. Fick
Air Program Manager
Engineering-Science, Inc.
57 Executive Park South, N.E.
Suite 590
Atlanta, Georgia 30329-2265

Mr. Brian Farkas
Public Information Officer
WV Division of Environmental
Protection
10 McJunkin Road
Nitro, WV 25143-2506



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

The Clarksburg Exponent
Legal Ad Department
P. O. Box 2000
Clarksburg, WV 26301

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Donna Riggs
Secretary
WV Air Pollution Control Commission
North Central Regional Office
109 Adams Street, Room M-2
Fairmont, West Virginia 26554-2800

Dear Ms. Riggs:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley *asm*

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

Charleston Daily Mail
Legal Ad Department
1001 Virginia Street, East
Charleston, WV 25301

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

A handwritten signature in cursive script that reads "Dale Farley sam".

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

1558 Washington Street, East
Charleston, WV 25311-2599

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Jeanne Chandler
Librarian
WV Air Pollution Control Commission
1558 Washington Street, East
Charleston, WV 25311

Dear Ms. Chandler:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley *23m*

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

The Herald-Dispatch
Legal Ad Department
P. O. Box 2017
Huntington, WV 25720

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

A handwritten signature in cursive script that reads "Dale Farley" followed by the initials "DM".

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Mr. Matt Onion
Cabell County Public Library
455 9th Street Plaza
Huntington, West Virginia 25701

Dear Mr. Onion:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley *asm*

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

The Parkersburg News
Legal Ad Department
519 Juliana Street
Parkersburg, WV 26102

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure -----



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Dorothy Chittum
Librarian
Parkersburg/Wood County Public Library
3100 Emerson Avenue
Parkersburg, West Virginia 26104

Dear Ms. Chittum:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley sam

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

The Wheeling News-Register and
Intelligencer
Legal Ad Department
1500 Main Street
Wheeling, WV 26003

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Judith Tredway
Regional Engineer
WV Air Pollution Control Commission
Northern Panhandle Regional Office
1911 Warwood Avenue
Wheeling, West Virginia 26003

Dear Ms. Tredway:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley *23m*

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

Elkins Inter-Mountain
Legal Ad Department
P. O. Box 1339
Elkins, WV 26241

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

A handwritten signature in cursive script that reads "Dale Farley" followed by the initials "DFM".

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Elkins-Randolph County Public Library
c/o Librarian
416 Davis Avenue
Elkins, West Virginia 26241

Dear Librarian:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley *asm*

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

Mineral Daily News Tribune
Legal Ad Department
P. O. Box 879
Keyser, West Virginia 26726

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

A handwritten signature in cursive script that reads "Dale Farley".

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

1558 Washington Street, East
Charleston, WV 25311-2599

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Karen Hiser
Librarian
Keyser-Mineral County Public Library
105 North Main Street
Keyser, West Virginia 26726

Dear Ms. Hiser:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley dsm

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

The Evening/Weekend Journal
Legal Ad Department
207 West King Street
Martinsburg, WV 25401

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Peggy Y. Batten
Librarian
Martinsburg-Berkeley County Public Library
101 West King Street
Martinsburg, West Virginia 25401

Dear Ms. Batten:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

Beckley Register/Herald
Legal Ad Department
P. O. Drawer P
Beckley, WV 25801

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

A handwritten signature in cursive script that reads "Dale Farley" followed by the initials "zsm".

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES

DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Susan Vidovich
Librarian
Raleigh County Public Library
P. O. Box 1876
Beckley, West Virginia 25802

Dear Ms. Vidovich:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 556-2275.

Sincerely yours,

Dale Farley sam

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

May 21, 1993

The Record Delta
Legal Ad Department
P. O. Box 550
Buckhannon, WV 26201

Dear Sir:

Please publish the enclosed "Notice of Public Hearing" as a Class II legal advertisement once a week for two (2) successive weeks. Please note that the publications must occur within a period of fourteen consecutive days with at least an interval of six full days between the dates of first and second publication date. The second publication of this Notice must occur on or before June 5, 1993

Please submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 4, 1993

Ms. Ruth B. Six
Librarian
Gassaway Public Library
100 Birch Street
Gassaway, West Virginia 26624

Dear Ms. Six:

On Tuesday, July 6, 1993 the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR7, 45CSR10, 45CSR13, 45CSR15, 45CSR16, 45CSR25, 45CSR28 and 45CSR30. Please retain the enclosed documents for public review until after the July 6th hearing. Also, please have any interested party sign the enclosed register and return the register and any correspondence you may have regarding the proposed legislative rules.

Thank you very much for your cooperation and assistance in this matter. If you have any questions, please direct them to Tammy Mowrer at (304) 558-2275.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

NOTICE OF PUBLIC HEARING

On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

- 45CSR5 "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"
- 45CSR7 "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations"
- 45CSR10 "To Prevent and Control Air Pollution From the Emission of Sulfur Oxides"
- 45CSR13 "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation"
- 45CSR15 "Emission Standards for Hazardous Air Pollutants"
- 45CSR16 "Standards of Performance for New Stationary Sources"
- 45CSR25 "To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"
- 45CSR28 "Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities"
(continuation of January 7, 1993 hearing)
- 45CSR30 "Requirements for Operating Permits"

Upon authorization and promulgation of revisions to the following rules, 45CSR5, 45CSR7, 45CSR10, 45CSR13, and 45CSR28 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia Implementation Plan under the federal Clean Air Act.

Upon authorization and promulgation, 45CSR30 will be submitted to the U.S. Environmental Protection Agency as the rule establishing a comprehensive air quality permitting system consistent with Title V of the federal Clean Air Act Amendments of 1990.

Upon authorization and promulgation of revisions to 45CSR15 and 45CSR16, which adopts by reference federal standards for certain regulated pollutants and sources, the Office of Air Quality will seek federal delegation from the U.S. Environmental Protection Agency to enforce the revised standards.

Upon authorization and promulgation of 45CSR25, the rule will be submitted to U.S. EPA as part of the State Hazardous Waste Management Program.

The hearing will be held in the Commission's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written and oral testimony by all interested parties will be accepted and made part of the record. All questions and comments concerning the proposed rules should be directed to Britt A. Bernheim, Commission Secretary, at the address below:

Britt A. Bernheim, Secretary
West Virginia Air Pollution Control Commission
1615 Washington Street East
Charleston WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the 1 .

AFFIDAVIT OF PUBLICATION

STATE OF WEST VIRGINIA,

KANAWHA COUNTY, TO-WIT:

I, Landra Bigg OF

THE DAILY MAIL, A DAILY REPUBLICAN NEWSPAPER,

PUBLISHED IN THE CITY OF CHARLESTON, KANAWHA COUNTY,

WEST VIRGINIA, DO SOLEMNLY SWEAR THAT THE ANNEXED

NOTICE OF: LEGISLATIVE RULES

WAS DULY PUBLISHED IN SAID PAPER(S) ON THE DATES

LISTED BELOW, AND WAS POSTED AT THE FRONT DOOR OF TH

COURT HOUSE OF SAID KANAWHA COUNTY, WEST VIRGINIA,

ON THE

28TH DAY OF MAY , 1993 .

DATES PUBLISHED:

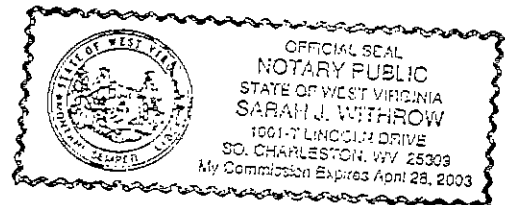
05/27/93 DAILY MAIL 06/03/93 DAILY MAIL

SUBSCRIBED AND SWORN TO BEFORE ME THIS

4TH DAY OF JUNE , 1993 .

Sarah J. Withrow
NOTARY PUBLIC OF KANAWHA COUNTY, WEST VIRGINIA

PRINTERS FEE \$ 90.34



NOTICE OF PUBLIC HEARING

On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

45CSR5 - "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"

45CSR7 - "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations"

45CSR10 - "To Prevent and Control Air Pollution From the Emission of Sulfur Oxides"

45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation"

45CSR15 - "Emission Standards for Hazardous Air Pollutants"

45CSR16 - "Standards of Performance for New Stationary Sources"

45CSR25 - "To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"

45CSR28 - "Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities"

45CSR30 - "Requirements for Operating Permits"

Upon authorization and promulgation of revisions to the following rules, 45CSR5, 45CSR7, 45CSR10, 45CSR13, and 45CSR28 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia Implementation Plan under the federal Clean Air Act.

Upon authorization and promulgation, 45CSR30 will be submitted to the U.S. Environmental Protection Agency as the rule establishing a comprehensive air quality permitting system consistent with Title V of the federal Clean Air Act Amendments of 1990.

Upon authorization and

LEGAL ADVERTISEMENT

promulgation of revisions to 45CSR15 and 45CSR16, which adopts by reference federal standards for certain regulated pollutants and sources, the Office of Air Quality will seek federal delegation from the U.S. Environmental Protection Agency to enforce the revised standards.

Upon authorization and promulgation of 45CSR25, the rule will be submitted to U.S. EPA as part of the State Hazardous Waste Management Program.

The hearing will be held in the Commission's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written and oral testimony by all interested parties will be accepted and made part of the record. All questions and comments concerning the proposed rules should be directed to Britt A. Bernheim, Commission Secretary, at the address below:

Britt A. Bernheim,
Secretary
West Virginia Air Pollution
Control Commission
1615 Washington Street East
Charleston, WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley,
Office of Air Quality
Division of
Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Library of the Office of Air Quality located at the address above.

(124995)

RECEIVED

JUN -9 1993

OFFICE OF ENVIRONMENTAL PROTECTION

NOTICE OF PUBLIC HEARING

On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

45CSR5 "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"
45CSR7 "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations"

45CSR10 "To Prevent and Control Air Pollution From the Emission of Sulfur Oxides"

45CSR13 "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants; Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation"

45CSR15 "Emission Standards for Hazardous Air Pollutants"

45CSR16 "Standards of Performance for New Stationary Sources"

45CSR25 "To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"

45CSR28 "Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities"

45CSR30 "Requirements for Operating Permits"

Upon authorization and promulgation of revisions to the following rules, 45CSR5, 45CSR7, 45CSR10, 45CSR13, and 45CSR28 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia Implementation Plan under the federal Clean Air Act.

Upon authorization and promulgation, 45CSR30 will be submitted to the U.S. Environmental Protection Agency as the rule establishing a comprehensive air quality permitting system consistent with Title 5 of the federal Clean Air Act Amendments of 1990.

Upon authorization and promulgation of revisions to 45CSR15 and 45CSR16, which adopts by reference federal standards for certain regulated pollutants and sources, the Office of Air Quality will seek federal delegation from the U.S. Environmental Protection Agency to enforce the revised standards.

Upon authorization and promulgation of 45CSR25, the rule will be submitted to U.S. EPA as part of the State Hazardous Waste Management Program.

The hearing will be held in the Commission's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written oral testimony by all interested parties will be accepted and made part of the record. All questions and comments concerning the proposed rules should be directed to Britt A. Bernhelm, Commission Secretary, at the address below:

Britt A. Bernhelm, Secretary
West Virginia Air Pollution Control Commission
1615 Washington Street East
Charleston, WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Office of Air Quality, Northern Panhandle Regional Office, 1911 Warwood Avenue, Wheeling, WV.
Intel., May 28, June 4
N.R., May 28, June 4

STATE OF WEST VIRGINIA,
COUNTY OF OHIO.

I, Bonnie Mattern for the publisher of the

WHEELING NEWS-REGISTER
WHEELING INTELLIGENCER

newspapers published in the CITY OF

WHEELING, STATE OF WEST VIRGINIA, hereby certify that the annexed publication was inserted in said newspaper on the following dates:

May 28, June 4, 1993

commencing on the 28 day of May, 19 93

Given under my hand this 8 day of June, 19 93

Bonnie Mattern

Sworn to and subscribed before me this 8th day of

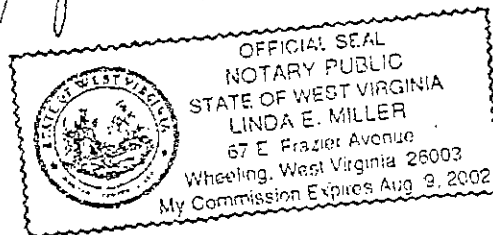
June 19 93 at WHEELING, OHIO COUNTY, WEST VIRGINIA

Linda E. Miller

Notary Public

of, in and for OHIO COUNTY, WEST VIRGINIA.

My Commission expires August 9, 2002



LEGAL ADVERTISEMENTS

NOTICE OF PUBLIC HEARING

On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules: 45CSR5 "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"; 45CSR7 "To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations"; 45CSR10 "To Prevent and Control Air Pollution From the Emission of Sulfur Oxides"; 45CSR13 "Permits for Construction, Modification, Relocation and Operation of Sanitary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation"; 45CSR15 "Emission Standards for Hazardous Air Pollutants"; 45CSR16 "Standards of Performance for New Stationary Sources"; 45CSR25 "To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"; 45CSR28 "Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities" (continuation of January 7, 1993 hearing); 45CSR30 "Requirements for Operating Permits".

Upon authorization and promulgation of revisions to the following rules, 45CSR5, 45CSR7, 45CSR10, 45CSR13, and 45CSR28 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia Implementation Plan under the federal Clean Air Act.

Upon authorization and promulgation, 45CSR30 will be submitted to the U.S. Environmental Protection Agency as the rule establishing a comprehensive air quality permitting system consistent with Title V of the federal Clean Air Act Amendments of 1990.

Upon authorization and promulgation of revisions to 45CSR15 and 45CSR16, which adopts by reference federal standards for certain regulated pollutants and sources, the Office of Air Quality will seek federal delegation from the U.S. Environmental Protection Agency to enforce the revised standards.

Upon authorization and promulgation of 45CSR25, the rule will be submitted to U.S. EPA as part of the State Hazardous Waste Management Program.

The hearing will be held in the Commission's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written and oral testimony by all interested parties will be accepted and made part of the record. All questions and comments concerning the proposed rules should be directed to Britt A. Bornheim, Commission Secretary, at the address below:

Britt A. Bornheim, Secretary
West Virginia Air Pollution
Control Commission
1615 Washington Street East
Charleston, WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Parkersburg/Wood County Public Library, 3100 Emerson Avenue, Parkersburg, West Virginia.

May 28
June 4

N
N

MARCIA MOORE

being first duly sworn, says that the

notice of public hearing-- JULY 6th

hereto attached was printed in the Parkersburg News
daily

newspaper published
in the City of Parkersburg, Wood County, West Virginia, and posted
at the front door of the Court House for two

successive weeks, the first publication and posting thereon being on
the 28th day of MAY 19 93, and subse-
quent publication on the 4th day of JUNE 1993

the day of 19, the day of
19, and the day of 19

Printer's Fee \$ 73.23

6 1/2 " x 10 3/4 = 669.5 words @ 10.9375 Marcia Moore

Subscribed and sworn to before me this 4th day of

July 19 93

Nolan C. Carey

Notary Public for Wood County, West Virginia

My commission expires July 25, 1994

Parkersburg Printing Co. - 5/71

NOTICE OF
PUBLIC HEARING
On Tuesday, July 6,
1993, beginning at 9
a.m., the West Virginia
Air Pollution Control
Commission will hold a
public hearing on the
following proposed legis-
lative rules:
45CSR5 "To Prevent
and Control Air Pollu-
tion From the Opera-
tion of Coal Prepara-
tion Plants and Coal
Handling Operations"
45CSR7 "To Prevent
and Control Particu-
late Air Pollution
From Manufacturing
Process Operations"
45CSR10 "To Prevent
and Control Air Pollu-
tion From the Emission
of Sulfur Oxides"
45CSR13 "Permits for
Construction, Modifi-
cation, Relocation and
Operation of Stationary
Sources of Air
Pollutants, Notification
Requirements, Temporary
Permits, and
Procedures for Eval-
uation"
45CSR15 "Emission
Standards for Hazardous
Air Pollutants"
45CSR16 "Standards
of Performance for
New Stationary
Sources"
45CSR "To Prevent
and Control Air Pollu-
tion From Hazardous
Waste Treatment,
Storage, or Disposal
Facilities"
45CSR "Regulation to
Prevent and Control
Air Pollution From
the Emission of Volatile
Organic Compounds From Vehicle
Refueling Emissions
at Gasoline Dispensing
Facilities"
(continuation of January
7, 1993 hearing)
45CSR30 "Requirements
for Operating
Permits"
Upon authorization
and promulgation of
revisions to the following
rules, 45CSR5,
45CSR10, 45CSR13, and
45CSR28 will be submitted
to the U.S. Environmental
Protection Agency for incorporation
into the West Virginia
Implementation Plan under the federal
Clean Air Act.
Upon authorization
and promulgation,
45CSR30 will be submitted
to the U.S. Environmental
Protection Agency as the rule establishing
a comprehensive air
quality permitting system
consistent with Title V
of the federal
Clean Air Act Amendments
of 1990.
Upon authorization
and promulgation of
revisions to 45CSR15
and 45CSR 16, which
adopts by reference federal
standards for certain
regulated pollutants
and sources, the Office
of Air Quality will seek
federal delegation from
the U.S. Environmental
Protection Agency to
enforce the revised

Upon authorization
and promulgation of
45CSR25, the rule will be
submitted to U.S. EPA
as part of the State Hazardous
Waste Management Program.
The hearing will be
held in the Commission's
Conference Room at 1558
Washington Street East,
Charleston, West Virginia.
The hearing is open to the
public. Written and oral
testimony by all interested
parties will be accepted
and made part of the
record. All questions
and comments concerning
the proposed rules should
be directed to Britt A.
Bernheim, Commission
Secretary, at the address
below:
Britt A. Bernheim,
Secretary
West Virginia
Air Pollution
Control Commission
1615 Washington St. E.
Charleston, WV 25311
(304) 558-4002
Copies of such written
comments should also
be sent to:
G. Dale Farley
Office of
Air Pollution
Division of
Environmental
Protection
1558 Washington St. E.
Charleston, WV
25311-2599
Copies of the proposed
legislative rules will be
available for public review
on or before June 4,
1993, at the Cabell
County Public Library,
455 9th Street Plaza,
Huntington, WV.
at LH-696 5-28,6-4,93

AFFIDAVIT OF PUBLICATION

**WEST VIRGINIA,
COUNTY OF CABELL, TO-WIT:**

Rappold being first duly sworn, depose and say
for The Herald-Dispatch, a corporation, who publishes at Huntington,
West Virginia, the newspaper: The Herald-Dispatch, a independent newspa-
per published seven days each week, Monday through Sunday including New Year's
Day, Fourth of July, Labor Day, Thanksgiving and Christmas; that I have
presented to the Board of Directors of such corporation to execute this affidavit of
publication on behalf of such corporation and the newspaper mentioned herein; that the
affidavit was placed in the left margin of this affidavit and made a part hereof and
number 696 was duly published in

the Herald-Dispatch
for 2 successive weeks, commencing with its issue of the
19th day of May, 19 93, and ending with the issue of the 4th day
of June, 19 93, and was posted at the East door of the
Courthouse
on May, 19 93: that said legal advertisement was
published on the following dates: May 28, 1993
Jun 3 4, 1993

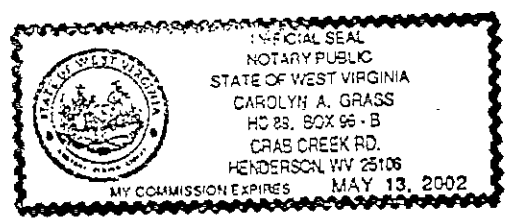
the cost of publishing said annexed advertisement as aforesaid was
paid by me and such newspaper in which such legal advertisement was published
is published regularly, at least as frequently as once a week for at
least the calendar year as prescribed by its mailing permit, and has
been so published in the municipality of Huntington, Cabell County, West Virginia, for
at least one year immediately preceding the date on which the legal advertisement
set forth herein was delivered to such newspaper for publication; that such newspa-
per is a newspaper of "general circulation" as defined in Article 3, Chapter 59, of the
West Virginia Code, within the publication area or areas of the municipality of Hunt-
ington, Cabell and Wayne Counties, West Virginia, and

that such newspaper is circulated to the general public at a definite price or consid-
eration; that such newspaper on each date published consists of not less than four
pages without a cover; and that it is a newspaper to which the general public resorts
for passing events of a political, religious, commercial and social nature, and for cur-
rent happenings, announcements, miscellaneous reading matters, advertisements
and other notices.

Connie Rappold

Taken, subscribed and sworn to before me in my said county this 14th day of
June, 19 93
My commission expires May 13, 2002
Carolyn A. Grass

Notary Public
Cabell County,
West Virginia



AFFIDAVIT OF PUBLICATION

OFFICE OF **BECKLEY NEWSPAPERS INC.**

1993 JUN -11 **BECKLEY, WEST VIRGINIA 25801**

RECEIVED

June 3, 19 93

STATE OF WEST VIRGINIA
COUNTY OF RALEIGH, to wit:

I, Robert E. Zutaut being first duly sworn upon my oath, do depose and say that I am Advertising Manager of Beckley Newspapers Inc., a corporation, publisher of the newspaper entitled The Register-Herald, an Independent newspaper; that I have been duly authorized by the board of directors of such corporation to execute this affidavit of publication; that such newspaper has been published for more than one year prior to publication of the annexed notice described below; that such newspaper is regularly published daily, for at least fifty weeks during the calendar year, in the municipality of Beckley, Raleigh County, West Virginia; that such newspaper is a newspaper of "general circulation," as that term is defined in article three, chapter fifty-nine of the Code of West Virginia, 1931, as amended, within the publication area or areas of the aforesaid municipality and county; that such newspaper averages in length four or more pages, exclusive of any cover, per issue; that such newspaper is circulated to the general public at a definite price of consideration; that such newspaper is a newspaper to which the general public resorts for passing events of a political, religious, commercial and social nature, and for current happenings, announcements, miscellaneous reading matters, advertisements and other notices; that the annexed notice

of Public Hearing

(Description of notice)

was duly published in said newspaper once a week for two successive weeks (Class II), commencing with the issue of the 27th day of may, 1993, and ending with the issue of the 3rd day of June, 1993, (and was posted at the

on the _____ day of _____); that said annexed notice was published on the following dates: _____

5/27 & 6/3/93 and that the cost of publishing said annexed notice as aforesaid was \$ 63.74

Signed R. E. Zutaut
Robert E. Zutaut, Advertising Manager
Beckley Newspapers

Taken, subscribed and sworn to before me in my said county this

3rd day of June 19 93

My commission expires March 27, 2001

Notary Public of Raleigh County,
West Virginia

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
DIANA L. GLOVE
BECKLEY NEWSPAPER
P.O. DRAWER P O R
BECKLEY, WV 25801
June 27, 2001

R/H

COPY OF PUBLICATION

NOTICE OF PUBLIC HEARING
On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

45CSR5 "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"

45CSR7 "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations"

45CSR10 "To Prevent and Control Air Pollution From the Emission of Sulfur Oxides"

45CSR13 "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation"

45CSR15 "Emission Standards for Hazardous Air Pollutants"

45CSR16 "Standards of Performance for New Stationary Sources"

45CSR25 "To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"

45CSR28 "Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities" (continuation of January 7, 1993 hearing)

45CSR30 "Requirements for Operating Permits"

Upon authorization and promulgation of revisions to the following rules, 45CSR5, 45CSR7, 45CSR10, 45CSR13, and 45CSR28 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia Implementation Plan under the federal Clean Air Act.

Upon authorization and promulgation, 45CSR30 will be submitted to the U.S. Environmental Protection Agency as the rule establishing a comprehensive air quality permitting system consistent with Title V of the federal Clean Air Act Amendments of 1990.

Upon authorization and promulgation of revisions to 45CSR15 and 45CSR16, which adopts by reference federal standards for certain regulated pollutants and sources, the Office of Air Quality will seek federal delegation from the U.S. Environmental Protection Agency to enforce the revised standards.

Upon authorization and promulgation of 45CSR25, the rule will be submitted to U.S. EPA as part of the State Hazardous Waste Management Program.

The hearing will be held in the Commission's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written and oral testimony by all interested parties will be accepted and made part of the record. All questions and comments concerning the proposed rules should be directed to Britt A. Bernheim, Commission Secretary, at the address below:
Britt A. Bernheim, Secretary
West Virginia Air Pollution Control Commission
1558 Washington Street East
Charleston, WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:
G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Raleigh County Public Library, P.O. Box 1876, Beckley, WV.
6-3 THU-2 RH

PUBLISHER'S CERTIFICATE

NOTICE OF PUBLIC HEARING

On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

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(continuation of January 7, 1993 hearing)

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Britt A. Bernheim, Secretary
West Virginia Air Pollution
Control Commission
1615 Washington Street East
Charleston, WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Office of Air Quality, North Central Regional Office, 109 Adams Street, Room M-2, Fairmont, WV.

VS.

STATE OF WEST VIRGINIA,
COUNTY OF HARRISON

I, Deborah S. Veltri

Classified Office Manager of THE CLARKSBURG EXPONENT, a newspaper of general circulation published in the City of Clarksburg, County and State aforesaid, do hereby certify that the annexed

Notice of Public Hearing

was published in said THE CLARKSBURG EXPONENT once a week for 2 successive weeks,

commencing on the 26 day of May 1993
and ending on the 2 day of June 1993

The publisher's fee for said publication is \$ 39.29

Given under my hand this 2 day of June 1993

Deborah S. Veltri
Classified Office Mgr. of The Clarksburg Exponent

SEAL

Subscribed and sworn to before me this 2 day
of June 1993

[Signature]
Notary Public in and for Harrison County, WV.

My commission expires on the 24th day of October 1993.

Form CA-15 E

I, as an officer of the News-Tribune, a daily newspaper published at Keyser, Mineral County, West Virginia, hereby certify that the notice

of Public Hearing
in the case of WV Air Pollution
Control Commission

vs. _____

a copy whereof is hereto annexed has been published for
2 consecutive
weeks

in said NEWS-TRIBUNE, the first publication being on the
26th day of,

May
19 93

Given under my hand at Keyser this 2nd
day of June
19 93

A. Judith Kayman
Publisher

Publisher's Fee

\$ 64.31

NOTICE OF PUBLIC HEARING

On Tues., July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

- 45CSR5 "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"
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Britt A. Bernheim, Secretary
West Virginia Air Pollution Control Commission
1615 Washington Street East,
Charleston, WV 25311 (304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Keyser-Mineral County Public Library, 105 North Main Street, Keyser, WV.

State of West Virginia, County of Randolph, ss.

NOTICE OF PUBLIC HEARING

On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

45CSR5 — "To Prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"

45CSR7 — "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations"

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45CSR25 — "To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"

45CSR28 — "Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities" (continuation of January 7, 1993 hearing)

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Britt A. Bernheim, Secretary
West Virginia Air Pollution
Control Commission
1515 Washington Street East
Charleston, WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2500

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Elkins-Randolph County Public Library, 416 Davis Avenue, Elkins, WV.

5-25, 6-2

I, James Hoffman, Publisher of THE INTER-MOUNTAIN, a newspaper published at Elkins, in said county, do hereby certify that the annexed advertisement was published on the following dates:

May 26 June 02

19 93 as required by law.

Given under my hand this 02 day of June, 19 93

James Hoffman
Publisher

Printer's Fee: \$ 7301

Witness me this 02 day of June, 19 93.

Shirley A. Menear
Notary Public

15 day of April, 19 2002

NOTICE OF PUBLIC HEARING

On Tuesday, July 6, 1993, beginning at 9 a.m., the West Virginia Air Pollution Control Commission will hold a public hearing on the following proposed legislative rules:

45CSR15
"To prevent and Control Air Pollution From the Operation of Coal Preparation Plants and Coal Handling Operations"

45CSR7
"To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations"

45CSR10
"To Prevent and Control Air Pollution From the Emission of Sulfur Oxides"

45CSR13
"Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation"

45CSR15
"Emission Standards for Hazardous Air Pollutants"

45CSR16
"Standards of Performance for New Stationary Sources"

45CSR25
"To Prevent and Control Air Pollution From Hazardous Waste Treatment, Storage, or Disposal Facilities"

45CSR26
"Regulation to Prevent and Control Air Pollution From the Emission of Volatile Organic Compounds From Vehicle Refueling Emissions at Gasoline Dispensing Facilities"

45CSR30
"Requirements for Operating Facilities"

Upon authorization and promulgation of revisions to the following rules, 45CSR5, 45CSR7, 45CSR10, 45CSR28 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia Implementation Plan under the federal Clean Air Act.

Upon authorization and promulgation, 45CSR30 will be submitted to the U.S. Environmental Protection Agency as the rule establishing a comprehensive air quality permitting system consistent with Title V of the federal Clean Air Act Amendments of 1990.

Upon authorization and promulgation of revisions to 45CSR15 and 45CSR16, which adopts by reference federal standards for certain standards for certain regulated pollutants and sources, the Office of Air Quality will seek federal delegation from the U.S. Environmental Protection Agency to enforce the revised standards.

Upon authorization and promulgation of 45CSR25, the rule will be submitted to U.S. EPA as part of the State Hazardous Waste Management Program.

The hearing will be held in the Commission's Conference Room at 1558 Washington Street, East, Charleston, West Virginia. The hearing is open to the public. Written and oral testimony by all interested parties will be accepted and made part of the record. All questions and comments concerning the proposed rules should be directed to Britt A. Berhelm, Commission Secretary, at the address below.

Britt A. Berhelm, Secretary
West Virginia
Air Pollution
Control Commission
1615 Washington Street East
Charleston, WV 25311
(304) 558-4002

Copies of such written comments should also be sent to:

G. Dale Farley
Office of Air Quality
Division of
Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Copies of the proposed legislative rules will be available for public review on or before June 4, 1993, at the Martinsburg-Berkeley County Public Library, 101 King Street, Martinsburg, WV 25401.

Certificate of Publication

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WV DEPT. COMM., DIV. ENV. PROTECTION

NOTICE OF PUBLIC HEARING

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COMMISSION MEETING

JULY 6, 1993

NAME	COMPANY AFFILIATION	ADDRESS
Yvonne Clarkson	Allegheny Power (Mon Power)	Greensburg, PA
Claudia Banner	APPALACHIAN POWER	ROANOKE, VA
Geny Coess	Capital Cement	Martinsburg, WV
Tony Vandenberg	Union Carbide Synthetics	→
Bob Parsons	Jackson & Kelly	Charlottesville
Ernest Hoge	Elkhorn Metal Co	Altoona, Pa.
Bob Hice	American Alloys	New Haven, CT
Scott Driskis	BKWM	Pgh. Pa.
Emil Varney	WORK-TU 13	Char. W. Va.
Charles Holt	DuPont	Portsmouth
K. B. Poland	Robinson & Mc Elwee	Charlottesville, VA
W. M. W.	Robson + McEl	Char.
Richard J. Bacon	UNION CARBIDE	S. CHARLESTON
Paul W. Long	WV DEP	Charleston

COMMISSION MEETING

JULY 6, 1993

NAME	COMPANY AFFILIATION	ADDRESS
Chet Vineyard	WV Petro. Mkt.	Suite 912, Atlas Bldg. Chas.
Gary A Jack	Monongahela Power	Fairmont
Dave Yaussey	Robinson & McElwee	Charleston, WV
Talmadge Hager	Elkem Metals Co.	Alloy, WV
Lisa Union	SEI	Chas. WV
Charles M. Boelter	Wilton's Churn	Hghtn. Wb.
Jack Harrison	WV PETROLEUM COMPANY	Chas. WV
Randy Rapp	Vienna Chevron	Vienna WV
Lawrence Pifer	Pitco's Service Center	Muskegon, MI
Marvin Gray	WV Gasoline Dealers	Hunt WV
Jackie Hallum	ACT	
William D. Lupton	Lupton's Management	St. Albans, Vt.
John P. Lupton	Capitol Express	Chas. WV
John P. Lupton	Robinson & McElwee	

COMMISSION MEETING

JULY 6, 1993

NAME	COMPANY AFFILIATION	ADDRESS
W.B. Samples	Wheeling-Pittsburgh Steel	WHEELING
STEVE GOZY	" "	"
Brian Farkas	DEP	N. F. N.Y.
Sean R. Steg	CNG Transmiss Sys Corp.	Clarksburg WV
David M Flannery	Robinson McElwee	Charleston
Bin Raven	WV Coal Association	
CRA Lenbrook	Elken	N. F. N.Y.
Al Kohn	WOWK-TV	
Mark Schultz	WOWK	
Kay H. Galt	Robt. Motzner	600 United Center
Shirley Skaggs	AG's of	Build 3
Barbara D. Hitt	Jackson Kelly	1600 Laidley Tower,

W VA AIR POLLUTION CONTROL COMMISSION MEETING

August 9, 1993

NAME	COMPANY AFFILIATION	ADDRESS
C J BANNER	APPALACHIAN POWER	ROANOKE, VA
Y F Clarkson	APS - Monongahela Power	Greensburg, PA
K.G. Beckett	Robinson & McElwee	Chas. WV
W.R. Samples	Whitling - Pittsburgh Steel	Whitling, WV.
K.B. Paland	Robinson & McElwee	Charleston, WV
D. Yanning	Robinson & McElwee	Charleston WV
Charles T. Pent	Dr Pent	Parkersburg, WV
Scott Seavel	Appalachian Power	Chas.
Bob Foster	Chas Ryan Assoc.	Chas

COMMISSION MEETING
SEPTEMBER 29, 1993

REGISTER

Date	Name	Address	Company Affiliation
9/29/93	T HAGEN	ELKEM PETRO CO	ALCOY LUM
	E HOGAN		
	G. TABOT		
	R ALLENBACK		
	R McLOSKEY		
	R ZECKNER		
9/29/93	S Dismukes	American Alloys	New Haven
↓	B. Hice	↓	↓
	M. Maul	APCC	AG

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WEST VIRGINIA DEPARTMENT OF
COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
WEST VIRGINIA AIR POLLUTION CONTROL COMMISSION

IN RE: Public Hearing - to Prevent and Control
Particulate Pollution From
Manufacturing Process Operations

TRANSCRIPT OF PROCEEDINGS had and on

testimony elicited in the hearing held before the West
Virginia Air Pollution Control Commission in the
Conference Room at 1538 Washington Street, East,
Charleston, Kanawha County, West Virginia, on the 6th day
of July, 1993, commencing at 1:45 p.m.

BEFORE: L. NEWTON THOMAS, JR., Chairman
JOSEPH P. SCHOCK, Commissioner
SAMUEL KUSIC, Commissioner
ALLEN HAMNER, Commissioner
JEAN NEELY, Commissioner

G. DALE FARLEY, Chief, Office of Air
Quality
LARRY KOPELMAN, Special Assistant A.G.
RANDALL SUTER, Staff Attorney
BRITT A. BERNHEIM, Secretary

DONNA KAY MILLER
Certified Court Reporter
7724 Sissonville Drive
Sissonville, West Virginia 25320
(304) 988-9581

P R O C E E D I N G S

(1:45 PM)

CHAIRMAN THOMAS: I would like to call the hearing of the Air Pollution Control Commission to order.

We will now move to consideration of Regulation T. To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations.

This regulation is being offered -- is offering several revisions and suggestions to accommodate, as I understand it, three corporations or plants that have a particular difficulty in complying with the provisions as they are now structured.

Let the record indicate that we have a quorum of the Commissioners present with the attendance of Commissioner Jean Neely, Allen Hamner, Sam Kusic, Joseph Shock, and L. Newton Thomas, Junior.

Let me also state that we have a Court Reporter here who is taking a transcript of these proceedings. Her name is Donna Miller. Any of those

interested in receiving a copy of the transcript will make
arrangements with Ms. Hall following the conclusion of
the hearing.

Q. Now, do you want to give us
further information?

A. Yes, this is a little bit
different with the situation. I know I have talked to William Thomas and
Ernst Bernheim was involved, our secretary, in the
discussions about what could be done with these rules.

This is a situation where pursuant
to maybe potential enforcement action and other factors
and a lot of long term discussions really as to what the
compliance status is for four different companies
excuse me, three companies as relates to Reg 7.

We have companies approaching the
Commission as a rule-making body seeking regulatory
relief. I guess that is the term I would want to use.

What their contention is is that
with respect to the standards of Reg 7 as they would apply

to ferroalloys production facilities, ferroalloys production furnaces in two cases. That is with Elkem Metals and American Alloys, and in one case, a fiberglass manufacturing facility in Vienna.

Each of the companies is stating their position that the rule -- that the state's Regulation as it applies to their process is overly stringent compared to other state regulations or the application of those regulations, and that they cannot economically comply with the rule as it is today as it relates to at least certain operations.

The American Alloys and Elkem situation involves certain emissions -- certain types of emissions associated with submerged arc furnaces, electric submerged arc furnaces.

The terms used in here -- I would let the companies explain that to the Commission's satisfaction and the questions from them -- are so-called blowing taps or blowing tapholes, poling the furnaces, and oxygen lancing.

Those operations, there was some discussion at one point that those essentially fall into the category of almost furnace malfunctions. But they are not malfunctions, I think, in the near future the context of what we think could be handled by the provisions of Regulation 7.

We are talking about furnaces where primary emissions are controlled from the dust settling and so forth by fabric collection units. All of these emissions are associated with furnace conditions wherein the companies would state that their tapping and so forth would not be sufficient or adequate to control emissions for any excess emissions at the roof monitor.

We have asked the two companies for certain kinds of information for our benefit and presumably for the technical rationale document that the Commission would put forward to justify these rule changes and also for the Commission and Office of Air Quality to justify these emission changes within the context of SIP revisions filed with EPA.

The elements of the information that we have asked for with the two ferroalloy facilities is, of course, some regulatory analysis which we are doing independently -- both with our information as they supply it and independently, to see how our regulations would compare with or contrast with other state regulations or federal regulations with respect to new source performance standards to determine that we really are somewhat out in left field with the rule, if that is true.

We have asked the companies for an economic analysis in these instances to show or to demonstrate that these kinds of emissions cannot be controlled economically.

We have asked the two companies to develop emission estimates and to take those emission estimates and also do some sort of an impact analysis to determine what the result of this SIP relaxation would be with respect to some incremental effect on particulate air quality in the areas of the facilities.

So that is data that is,

unfortunately, still somewhat in discussion and under development. I don't think we have conveyed the bulk of the information submitted at this point to the Commission, and we should do that shortly for your information.

What that said, I think we would really leave it to the company -- the two companies involved in this instance with respect to the changes to explain to the Commission what they want and what they are seeking here, what they want to make part of the record for justification of these changes.

Somewhat similar to that but probably more in the vein of a pure SIP relaxation because we are talking about relaxation of emissions standards as applies to the Schuller facility, the fiberglass manufacturing facility in Vienna.

In that instance they have a number of fiberglass swarming lines that data that has developed -- quite a bit of test data they have developed over recent years, and even following some process changes, they have found that those lines in total do not

meet the emission rates. The emission rates do not meet Reg 7 limits.

I think we are talking about a difference -- I think those lines in total under the duplicate source provisions of Regulation 7 are only allowed about 27 or 28 pounds per hour of particulate emissions, and they are asking the Commission for a relaxation to about 48 pounds in those units.

That is a more classic SIP provision. It is obviously something in discussion with EPA, and this has been fairly recent, that probably what is in essence going to be an attainment demonstration around the facility for EPA approval purposes is going to be required.

As I noted to the Chairman this morning, it is my understanding that the Schuller representative may ask for this matter to be continued or delayed in some fashion, simply because they know that that SIP demonstration is going to be something that cannot be accomplished in the time lines that the

Commission has for action on these rules, as far as timely filing with the Legislation.

I will let them speak to that.

With that said, I think it really is in the hands of really the companies that need to explain their position.

CHAIRMAN THOMAS: Thank you. I think you have summarized that very well. Now, I'll let the Commission before we ask for --

COMMISSIONER NEELY: What you told me was 27 and half pounds as an emission reg? Where did you get -- I mean, did you make that up or is that an EPA standard?

MR. FARLEY: Regulation 7 has a set of curves or tables in it. I think we have a text of the rule if you want to follow that and go over to the tables. It may be at the tail end of the rule here the way this is--

COMMISSIONER NEELY: Yes, but I am trying to figure out where they came from.

MR. FARLEY: They came from -- I

can't tell you what original model document they came from, but this rule goes back all the way to 1970, and it was then prepared and re-filed by the Commission as part of the comprehensive implementation plan for particulate matter in the early seventies pursuant to the 1970 Clean Air Act.

As I said, I don't know what the genesis of these tables were as far as what model they came from, who suggested them originally, but they were put in for different types of processes, metallurgical, physical type processes as far as particulate emissions.

It is a table that relates allowable emissions to process weight rate as it is defined in the rule. By that, I mean the amount of throughput of raw materials or charge materials in the process.

This particular regulation has something, which I am sure you will probably hear in the comments, that is referred to as a duplicate source provision. By that, I mean if you have got multiple types of the same thing, five identical furnaces, or in this

case, eight or nine fiberglass manufacturing lines with Schuller, you go into the table with your process weight rate with all of those and it becomes progressively more stringent when you do that. Then you go rate the allowable emissions back to each individual line of furnaces.

So that was a proposal to, as it is noted, make the rule more stringent as the operations got larger.

The proposal that is put forward in the draft as the changes are drafted to you now would remove the applicability of the table. It would give them a plan emissions cap of about 48 pounds an hour and it would restrict each line to a concentration limit of 018 grains per dry standard cubic foot.

So they would be taken out of the process weight table altogether.

COMMISSIONER NEELY: So they have not been in compliance with the standard for 20 years or so; is that right?

MR. FARLEY: That is what we presume based on the recent data, because as much as we understand, the process or the lines have changed somewhat over the years, I guess, with air flows and modifications they have made under what they call fluids management to try to reduce particulate emissions recently, but the presumption is -- and maybe the company can explain what their position is on it.

The presumption is that those lines have probably never complied with Reg 7.

COMMISSIONER SCHOCK: Well, it is obvious, isn't it?

COMMISSIONER NEELY: Yes, you are just practically doubling the thing.

MR. FARLEY: Right.

CHAIRMAN THOMAS: I think maybe we can find out from the representative of the company. Why don't we ask if there is anyone from Schuller International, Inc. here, a representative from Schuller?

MS. POLAND: For the record, I

would state that my name is Kim Brown Poland, an attorney with Robinson & McElwee, and I do represent Schuller International, Incorporated with their plant in Vienna.

Some of you may know this is at the Mansfield facility in Vienna. They have undergone a corporate change of name for their domestic operation.

We are requesting that with respect to the change in Section 4.15 that is being proposed that this hearing be continued until modeling work is completed with respect to that change.

A good deal of modeling work has already been complete by the company. Based on recent conversations with EPA, we expect to do some additional modeling but do not anticipate that that can be completed by the time of the Commission's hearing on August 9th.

So we would ask that the hearing be continued and the comment period be kept open for a period of time until that is completed and we can let the Commission know that we are prepared to go forward without additional information.

CHAIRMAN THOMAS: Granting that request would place this out of the Legislative agenda for the 1994 session. would it not?

MS. POLAND: Yes. We are aware there is a deadline for the submission of rules as a general matter by August 13th and realize that this may push that out of time with respect to that, but we are prepared to address that with the Legislature.

COMMISSIONER SCHOCK: If the modeling has not been completed, where did the 48.6 pounds come from?

MS. POLAND: The 48.6 pounds is a number that is based on the company's assessments and application of the limits of technology, and the folks from the company are prepared to comment and address this fully when we have all of the data in on the modeling to address all of your questions that you might have with respect to it.

I can tell you basically that that number is based on as much reduction as the company can

get within the limits of technology on these particular lines that have very high air volumes, very low throughput.

The total emissions from this facility are actually -- for particulates are actually quite small.

CHRISTIAN THOMAS: Any other questions?

COMMISSIONER NEELY: So we are being asked to put this on hold, but meanwhile, the original Reg 7 is in effect. So your company is out of compliance, right?

MS. POLAND: Pardon me?

COMMISSIONER NEELY: Your company is out of compliance with the reg as it stands now.

MS. POLAND: We are asking for a change in the rule making and have been working with the OAD staff to address that and expect to be involved with the OAD staff also in fashioning a consent order to address the particulate situation at the Vienna plant.

COMMISSIONER NEELY: And how long have you been in business -- I mean, has your client been in business doing this?

MS. POLAND: The plant has been there for quite a long time with varying --

COMMISSIONER NEELY: Doing this product?

MS. POLAND: -- with varying processes. For fiberglass, I am not certain exactly what the date was when we began doing fiberglass manufacturing at the facility, but they have been there since, I think, World War II essentially, since the forties.

COMMISSIONER SCHOCK: Why didn't they come up with a standard of technology that would permit you to comply?

COMMISSIONER NEELY: And why has it taken so long? Why did it take so long to come up with the realization that you can't do it?

MS. POLAND: I don't think that there is -- I don't think that taking so long to come to

that realization is the point. In this particular case, we are addressing that and have been addressing that with the OAO staff.

The company came to the Air Pollution Control Commission staff then, now the OAO, to address this problem and have been working very hard with a number of the OAO staff to address what is a very difficult problem.

As Dale indicated, Reg 7 is an old rule. It is a generic rule, if you will. It doesn't establish standards that take into account anything about what kind of product it is that you produce or how much or anything else that is specific to a type of industry.

It is just a general process weight rule. So it doesn't take into account that you are making fiberglass or that you are making alloys or what it is that you are doing, and over the years the rule has been amended a few times, you will note, to establish specific performance standards for various types of industries.

That is the focus of this effort,

is to establish a performance standard for this type of industry because of the duplicate source rule problem.

COMMISSIONER HAMNER: Is the motion to continue in order?

CHAIRMAN THOMAS: Well, I think we will hold that until we see what effect it has on the other request that has been made to modify Reg 7. We will put it on hold until that time.

MS. POLAND: I might add that that request specifically would contemplate that you-all would go ahead with whatever changes to Regulation 7 are otherwise proposed or appropriate with respect to other sources. It simply is with respect to this new section that would be added, Section 4.15, that I am speaking of.

CHAIRMAN THOMAS: You have something they handed you?

MR. FARLEY: I was consulting -- Randy brought something up and I have talked about it with Larry. Maybe we didn't anticipate that.

There was a question raised

procedurally. Since this has been put together, even though it is only one or two pages for insertion at different places in the rule as a set of proposed amendments for Reg 7 or a proposed amendment, we want to look at it that way --

There is a question that was raised by Randy procedurally, can we chop this up? Can we continue part of it and go forward with the rest, and I think both my attorneys here say that they have a problem with that.

CHAIRMAN THOMAS: I can appreciate that.

MR. KOPELMAN: So it could be that going forward, if you want to, because the record stays open for 30 days, then you can always chop it at the end of 30 days when you come back for some final consideration.

If you continue it here, then you might have a non-reversal error. If you don't continue it and just let it go forward, you can always continue it and

drop it out.

COMMISSIONER SCHOCK: What is the consequences of non-compliance with the original 7?

MR. FARLEY: What is the consequences of it?

COMMISSIONER SCHOCK: Yes.

MR. FARLEY: This discussion has been going on here as far as how we are going to resolve this for quite a while. I guess there has been some sensitivity to the company's arguments that maybe our rule was a little out of line with others and they are trying to do more with presenting that argument a little better.

The company has been informed that to close this matter they have had this much -- this is a long period of violation. They are going to have be put under a consent order with non-compliance penalties, but the long term fix of this is can they be --

COMMISSIONER SCHOCK: How much; what are we talking about?

MR. FARLEY: That has not been

negotiated, but probably the longer this goes on, maybe the more that is affected.

COMMISSIONER NEELY: How many more processes in manufacturing of widgets or whatever are there out there lurking in the shadows that you don't know about that are not covered except through this table of values on this curve or whatever you described earlier?

Is this the tip of the iceberg as they say?

MR. FARLEY: To give you an honest answer, basically this regulation was adopted under the so-called example region SIP demonstration technique in the early seventies to be primarily applied --

It is a statewide rule that applies to all particulate sources, but its primary targets originally were in the non-attainment areas of the Ohio River Valley and Kanawha Valley.

We think that most processes out there are covered by this rule -- and I can't tell you all of them because we are finding surprising things from time

to time like this. Most processes out there covered by the rule are in compliance.

There are occasionally places like this where we find very long term non-compliance.

COMMISSIONER WEELEY: Well, they are certainly in the area that you were talking about. Isn't Vienna over on the Ohio River?

MR. FARLEY: Yes, but that was not -- I don't think -- maybe in the original SIPs, but that has not been an area that has been suspect of being a particulate non-attainment area for a long time.

MS. POLAND: That is correct. This area is an attainment area --

MR. FARLEY: It is an attainment area.

MS. POLAND: -- for particulates, yes.

COMMISSIONER SCHOCK: Were you aware of non-compliance prior to the company coming to you and suggesting that 7 be changed?

MR. FARLEY: I think that -- I am not sure when the awareness came about. I think that this is one of those places when we started talking about the operating permits rule was -- I don't want to get off on a tangent here -- where you had an operation that for probably quite a lot of years was not tested for compliance. I don't know if it was or was not.

COMMISSIONER SCHOCK: Well, I would suspect that to be true.

MR. FARLEY: And it was not flagged to be a particular problem based on any visible observations or anything like that.

Somewhere along the line -- I think this really started several years ago when the information started being developed and the company started doing quite a lot of testing, and this kind of thing started coming to light at least on some of the lines.

Some of the lines, I think in the early numbers indicated some of these manufacturing lines met the regs and some didn't per rate of allowable rate.

Early on in the discussion -- that is the reason it is kind of strung out this long -- the company felt that it could meet various types of process modifications and meet the overall emission limit for the facility, and the tract then became again, a SIP provision.

What they were going to pursue was something called a bubble or an alternate emissions control plan when they were allowed through a regulatory change -- essentially, a regulatory change, but it would still be the same emissions, plan emissions cap, but prorating the amount of emissions out of each stack differently.

That was still a required submission to EPA and a change in the rule, and it would have met the same overall environmental -- presumably the possible environmental impact level.

Somewhere -- and I guess that has been several months. I don't remember when that is back to -- it became very clear to the company after whatever

they did that that wasn't going to happen. They simply weren't going to comply with the overall limit and that is when we started talking about consent orders and what are you going to do to fix this problem.

To fix this, obviously, typically you tell them to go under a consent order, probably pay non-compliance penalties, and have a schedule to install whatever necessary equipment or whatever to become in compliance of the rule.

Their argument is they can't do that. It is either -- I am assuming that is their position. They are either in business or they are not, and we are saying that you are going to -- that is not the normal from the regulatory agency standpoint.

The normal fix is not to recommend relaxing the regulations. The question is, do they have a case for that here, and that is what they have to make their case to you for.

COMMISSIONER NEELY: Is this the only fiberglass plant in the world?

MR. FARLEY: No. They have a number, I guess, of this type within their own company. There are quite a lot of -- I guess there are quite a number around of other process types, like a stone process and so forth. There are different types and what they make fiberglass.

COMMISSIONER NEELY: But this is not unique?

MR. FARLEY: It is not unique. They have other plants.

COMMISSIONER NEELY: Then somebody else must be manufacturing this under the same process in some other place and they must have some kind of pounds per hour limitation on them. Do we know what that is?

MS. POLAND: If I might, we have submitted a detailed rationale on the justifications for this rule, which explains not only where we are positioned, but where other states and other facilities are positioned.

So we have detailed all of that

information in the submissions to the Commission so far.

Because we are asking for a continuance until the additional modeling data information is available, I do not have with me here today the technical folks from the company who could answer your questions in more detail with respect to that.

But I will say that a great deal of that information is already located in the documents we have submitted. I can tell you, however, though, that these are the only flame attenuation process fiberglass facilities in the country. They are all operated by Schuller. So, yes, to that extent, it is a unique operation.

COMMISSIONER NEELY: And the one in West Virginia is unique? They don't have them in other states controlled by other states?

MS. POLAND: Yes. There are controls in other states, and one of the points that we have made in the rationale document which you will see, is that if this facility was located simply across the river

from its present location, it would be in full compliance with the Ohio regulations for such a source.

MR. FARLEY: That is what I was looking for.

CHAIRMAN THOMAS: I guess the case that you are planning to make here is that the requirement is too stringent or that this plan because of its technology, should be grandfathered or that there is a difference between particulates, that there ought to be a distinguishing between fiberglass particulates and carbon particulates? Is that --

MS. POLAND: It is a bit of two of the reasons that you cited, that the Rule is too stringent because it takes into account just generic operations and doesn't look at a type of operation.

The duplicate source rule that we have under Regulation 7 in West Virginia is unique. We don't know of any other state, to my knowledge, that has the duplicate source rule in it.

That's the crux of our problem is

that as you have more lines, the duplicate source rule makes your allowable emissions smaller and smaller to be spread over those number of lines.

The result is that if you have a product mix that differs from those lines, that line-to-line, which we do, you may be able to meet it on one line, but not another because the products are so very different between those lines, and the duplicate source rule doesn't take into account any variation among those lines.

CHAIRMAN THOMAS: Okay. I guess I'm trying to --

COMMISSIONER NEELY: But the total emissions is the thing that they are looking for, though, isn't it?

CHAIRMAN THOMAS: Yeah, but I guess I get the implication here that there should be some allowance for different types of particulate. We're talking about a particular regulation that controls the total quantity of the particulates.

MS. POLAND: Yes.

CHAIRMAN THOMAS: And you're saying that there ought to be a consideration for the mix in particulates?

MS. POLAND: The type of production on a given line will affect it. In this case, it is affected by the air flows over the lines and the amount of throughput.

On one line, for example, the company makes a very fine fiber filter that's used for micron size filtering of air for very clean filters in hospitals, for example.

On another line they make insulation that goes into the hood of a car of fiberglass for heat insulation. So we have one very thick product and another one that's ultra fine, both subject essentially to the same standard under this rule.

The collection capabilities, technological capabilities, are vastly different with those types of products. That's the crux of the problem.

CHAIRMAN THOMAS: I assume the

particulate size --

MS. POLAND: It's quantity of material and the ability of current technology to collect any of that material.

That's why I wanted to emphasize, that the problem overall is the application of the duplicate source rule, but the total emissions from this facility are actually very small. The total poundages on an hourly and yearly basis is not what you would think of as a large source.

COMMISSIONER NEELY: Is this the only process that you have for producing fiberglass? You just keep saying the flame attenuation method as if there were other ways of producing the same product.

MS. POLAND: There are other technologies. Chief Farley referred to the rotary spin fiberglass technique. That's a very different kind of technology for making fiberglass. Some companies do it that way.

It would take essentially a

complete rebuild of this plant to go to that type of method. That would be a capital change in the plant.

CHAIRMAN THOMAS: Okay. Any other questions of Ms. Poland? Thank you.

MS. POLAND: Thank you.

CHAIRMAN THOMAS: Are there any other persons in the room who would like to speak to Reg 7? We have Scott Dismukes.

MR. DISMUKES: Good afternoon. My name is Scott Dismukes, and I represent American Alloys. I'm here, as you know, to speak about Regulation 7.

I would like to give you a little background first. Our inquiry and our comments have developed out of some compliance negotiations we've had with the Office of Air Quality.

As we have worked on development of those issues, and actually at the suggestion of the Office of Air Quality, we requested and made a proposal for regulatory revision.

We submitted an extensive

information package on May 12th of this year, copies of which will be provided to you later that address a significant number of the questions in terms of regulatory rationale, et cetera.

As part of our work with the Office of Air Quality, we have, in fact, submitted already a regulatory analysis.

Our economic analysis, although today, based on additional work that we have done both with the State and with the company, we have some revisions on that economic analysis to provide more precise cost figures.

We have done extensive work on developing emission factors, and I think that we have developed some pretty justifiable emission factors.

Those emission factors are included in our May 12th submittal, and, again, I will be providing you based on additional development some changes to those emission factors.

We re-ran the screening model

because originally we used -- our calculations were based on estimates of exhaust gas flow. We found through work with Elkem Metals some actual monitoring data on exhaust gas flows.

We put the actual, as opposed to the estimated data, in with the screening model and we re-ran it, and we will be submitting that data to you as well.

I can also tell you that currently under a consent order, which we signed with the State of West Virginia on April 16th, that that consent order contains interim limits for the particular occurrences for which we're seeking regulatory relief, and those interim limits last pending the outcome of what we're doing in this process through the legislative rule-making committee and the State Legislature.

I can tell you in my discussions with the company that we are currently in compliance with those interim limits.

We are asking the Commission in

conjunction with the Office of Air Quality to address the situation in which Regulation 7 is inconsistent with the regulatory provisions for -- the Federal regulatory provisions for the development of new source performance standards, which the State has incorporated by reference, I believe, in Rule 16.

The State regulations, as they currently exist, regulate existing and new sources more stringently than the federal and new source performance standards for ferroalloy manufacturers.

This results in the imposition of economically infeasible emission control equipment with costs, as we calculate them, up to \$104,000 per ton of control, costs not otherwise imposed in other states.

For example, Ohio, which again right across the river, specifically exempts blowing taps, poling, oxygen lancing, and even casting operations at ferroalloy manufacturers.

This increased cost places West Virginia to ferroalloy manufacturers at a competitive

disadvantage and creates an unhealthy business climate for those industries in this state.

American Alloys is an employee owned company that operates four submerged arc electric furnaces. The employees purchased this company from Mineral in approximately 1988.

The facility itself has been in place since the mid '50s, and the furnaces that are currently operated were installed -- I don't have the precise date, but the late sixties, I believe, and the early seventies, with the exception of the No. 9 furnace, which is a new source and has to comply with the new source performance standards.

Those furnaces, the other furnaces were installed prior to the promulgation of the federal new source performance standards.

This process, which is a smelting process, operates various floats, docks, and back houses to capture and control the particulate matter. It's a continuous dynamic process, which results in an occasional

build-up of gas in the furnace chamber, which occasionally blows.

A blow, the gas builds up and then either shoots out the top of the furnace, or it comes out of the taphole, and it's a rush of high temperature, high velocity gas.

When a blow occurs out of a tap, it occurs when the furnace is being tapped, or when the taphole itself is being poled or oxygen lanced.

You pole or oxygen lance a taphole to clean out the tap to remove slag and any residual metals that are in the tap, so that you have efficient operation of this facility.

These short interim occurrences have been recognized by the U.S. EPA in their new source performance development document as malfunctions, and as such they were resulting from abnormal operations.

Currently, the State of West Virginia's regulations through our analysis and our discussions with the Office of Air Quality state that all

sources, all manufacturing processes which generate fugitive emissions must have some system of control. It's my understanding that that is a RACT requirement.

In fact, however, the federal new source performance standards specifically exempt blowing tapholes and those occurrences which create blowing taps, which are poling and lancing, because they result from non-normal operations at the furnace.

The State's regulations at 5.1, in essence, require controls on all existing sources, as well as new sources, whereas the Federal sources specifically exempt those occurrences.

That's a little inconsistent with the purpose and intent of the new source performance standards, which is to grandfather existing sources, and as technology improves, the installation of better technology will be installed.

The new source performance standards, the regulations which mandate how to develop new source performance standards, require the imposition

of the best demonstrated available technology considering cost.

RACT requirements require an economic feasibility analysis. In fact, the State statute charges you with balancing the social and economic impact of these regulations.

As I stated earlier, we estimate the cost per ton of control to control these sources to be \$104,000 per ton. Our original estimates were included in the May 12th package and will be revised.

They have been revised, one, to include not just operational and maintenance expenses, but also, the annual capitalized cost of the equipment and the installation cost, as well as the increased volume metric air flow as a result of the actual gas emission rate that we've developed and used in our screening model runs.

Our analysis of other state regulations, including a review of the regulations, plus calling all the states in which other ferroalloy manufacturers exist, do not reveal that the other states

require this extra level of control on existing or their new sources.

I can state the materials that we provided on May 12th include all those regulations with a chart, as well as the Ohio regulations specifically exempting new sources.

I would really like to conclude. The new source performance standards are less stringent than the State regs because they exempt these sources and recognize them as malfunctions.

New source performance development regulations require you to consider costs. RACT requires you to consider economic feasibility. In fact, your State law says that you should balance the social and economic costs.

Failing to make this adjustment in the regulations will impose -- well, will continue to impose more stringent regulations and impose \$104,000 per ton of control for the equipment specifically designed to control these sources.

That does not include the cost to control the emissions on the furnaces, and all the existing emission control equipment is astronomical.

We request that you consider the inconsistent impact of these regulations when you balance these costs, and we recommend that you propose that this rule be passed on to the legislative rule-making committee.

I do want to make sure that we include in the record the Office of Air Quality's proposal, our May 12th submittal to the Office of Air Quality, our revised air impact analysis, and our cost projections, all of which I'll be providing to the Commission later on this week.

I'm available for any questions, if you would like.

CHAIRMAN THOMAS: Questions?

COMMISSIONER SCHOCK: Yes. You mentioned you talked to other states besides Ohio?

MR. DISMUKES: Yes.

COMMISSIONER SCHOCK: Which ones?

MR. DISMUKES: Ohio, New York,
Alabama, Tennessee, Washington, Oregon, South Carolina,
Iowa, and Kentucky.

COMMISSIONER SCHOCK: Thank you.

MS. NEELY: Dale, is that correct
what he said, that West Virginia has a higher standard
than anyone else?

MR. FARLEY: My understanding of
the analysis is that the NSPS does exempt and consider
these kind of operations and malfunctions.

One thing I might want to state is
that is kind of a dilemma that states run into. You might
run into a lot of NSPS standards because they are
generic — they are generic sort of standards.

As Mr. Dismukes indicated, they are
supposed to be for the sources being scoped out for the
regulations. They are supposed to be based on the best
demonstrated technology.

Those standards are to be applied

as, I would say, minimal standards for any new facility of the type anywhere in the country, irrespective of air quality considerations.

A lot of the state regulations are sort of like ours. They're old; they have maybe process weight type tables; they have grain weights to consider. They are kind of generic and capture a lot of things.

Probably where states have those kind of rules, they were originally mandated based on some sort of modeling or roll-back in the air quality standards.

The regs may have had a little bit different objectives, but I think that the NSPS provisions do not really cover these operations.

COMMISSIONER NEELY: The other question I had was about the -- what do you call them -- tapholes or something?

MR. DISMUKES: Yes.

MS. NEELY: This is an irregularity? This is a -- how often are we talking about?

MR. FARLEY: We didn't think that the -- as I understand it, I think each company, Elkem and American Alloys, have a little different kind of operating history and operation events.

But my understanding is, at least in talking to the Elkem people -- I'm not sure that it's quite true with American Alloys -- poling, for example, may occur on the frequency of about once per furnace per shift, so it's not something real uncommon. It happens fairly regularly.

MS. NEELY: It sounds like a regular occurrence.

MR. FARLEY: It may be something that results from a furnace on operating in an operative way, but it is a fairly frequent occurrence.

Oxygen lancing, I'll have to ask each company what the frequency of that is. I'm not sure about that.

Blowing tapholes are probably less frequent, as we understand it. They may be something that

falls more typically into a malfunction kind of framework that blows holes.

CHAIRMAN THOMAS: Any other questions?

Thank you very much, Mr. Dismukes.

MR. DISMUKES: Thank you.

CHAIRMAN THOMAS: Does this in any way raise the issue of being a little more stringent than --

MR. FARLEY: I don't think so for two reasons. One, where that provision is in the Code, it grandfathers a lot of these earlier regulations that were put in place in the early seventies under the earliest development process.

The other thing is I think one could argue on any regs that was put in place primarily as a result of the ambient air quality demonstration, it has a different objective and it doesn't necessarily have to be less stringent than, or whatever, the new source standard. That's been a confusing thing for twenty years, but, I mean, that's true.

CHAIRMAN THOMAS: But under the current

language, I guess you have to show cause where you need more stringent standards?

MR. FARLEY: Right, and I think that probably the way the rule is constructed and all, honestly the -- and that is a weakness of a generic-type rule, as you heard from both Schuller and these companies, is a catch-all type rule does not anticipate all the specific little problems of every industry.

I don't know that -- right now the reason we haven't been provided with a package of all this material that's been cited is because it's been a little bit in flux. There was changes being made to it. We're going to try to do some kind of analysis of it.

We're also doing a lot of contact with other states in terms of how the rules apply. We'll try to put all of that together and get it to the Commission right away.

We are not at a point with any of these companies that we're willing to say that they've made their case yet, but we're trying to evaluate

everything that we can.

CHAIRMAN THOMAS: Is there anyone else that wants to make any comments?

MS. LITTLE: I'm Barbara Little. I'm representing Elkem Metals. I'm going to also call on Dr. Bob Allenbach from Elkem and Gene Hogan from Elkem to fill in both on the regulatory history of this problem and then the technical issues that might come up.

We'll try not to overlap what was already said. We basically certainly agreed with the statements made by American Alloy, and also, the concept of what we're dealing with here.

First of all, it should be recognized that in terms of these facilities, 99 percent of all their emissions are controlled and have been in control. They are in compliance with Reg 7.

What we're dealing with is certain operations that are such that they occur on an infrequent and/or uncontrolled basis where the new source performance standards in specific study of this industry determined

that they were not controllable, were not economically controllable in any sense.

Again, we are dealing with Reg 7, which as has been stated, is extremely old, very generic, and certainly didn't take into account various industries. It was essentially across the board.

Indeed, I think at least in my history here, it has not been applied probably in the detail in the past as it is now being applied, Reg 7.

Specifically, there are some real specific standards for certain industries, like coke ovens, but Reg 7 otherwise has been a bit of an artifact and one that is extremely generic.

We are in an attainment area for particulates. There really has not been an issue as to the overall emissions. In fact, it had been the company's original position, and the reason that I guess we're here, our original position was that the fact that these particular operations were exempted under the new source performance standards and specifically exempted -- made it

consistent in construction with Regulation 7.

To basically say that the new source performance standards control, basically, the new source performance standards are very stringent. Basically, the concept is that they are the most stringent controls that we're going to apply to new sources, certainly if you are in an attainment area.

So that level of very high control, we argue, we're willing to meet for our existing facilities, and therefore, it was inconsistent between interpreting Reg 7 and Reg 16.

Due to negotiations that took place on that, we determined that the best way to go to make it clear, so that we didn't have to take it and litigate the issue of the relationship between new source performance standards, Reg 7, and the West Virginia statute, which basically says no more stringent controls unless justified, that we would go for regulatory change.

So that is really the reason we're here is because -- and if you ask, well, have you been

operating this way all along, yes, and it was because we believed that the new source performance standards did exempt us from that.

I think it is relevant to say that Elkem, too, has entered into an order of consent that covers all past operations, and that would deal with everything that has gone on to date.

So any alleged violations of 7 that have occurred would be covered by that consent order in the payment of that penalty.

I think it might be useful for you, if you have any questions, to kind of understand why the new source performance standards did indeed exempt these kinds of activities.

Dr. Allenbach was involved with the group originally negotiating the new source performance standards. He's probably one of the most knowledgeable people in the nation on it since he has all that memory.

These are quite old, I might say. These new source performance standards were in effect --

DR. ALLENBACH: For 19 or 20 years.

MS. LITTLE: Yeah, for some period of time. You know, we've had them in effect for 20 years. It's been the problem that Regulation 7 has not been interpreted, I might say, quite as stringently, I think, as it has been in the past few years as to its applicability.

In other words, that generic regulation has essentially said, "Gee, if you have a specific regulation applicable, shouldn't the specific regulation control," and that's what our understanding had been of the status, the regulatory status of the facility.

If you have any questions of me, I would be glad to answer them. Otherwise, I will have Dr.

Allenbach explain the kind of background of the new source performance standards, and then if you need any more technical concepts of what pooling and a blowing tap is, Mr. Hogan will address that.

CHAIRMAN THOMAS: Questions? If not,

thank you, Barbara.

DR. ALLENBACH: I'm Bob Allenbach, Elkenm, Environmental Director. Going back in history, about 20 years ago U.S. EPA worked with what was called the Ferroalloys Association, which was a group of all the ferroalloy producers in the United States.

We did furnace testing and all at the time to develop the documents and to set the new source performance standards, and they were set for the overall emissions coming off of these submerged arc furnaces.

The two things that Barbara and Scott Dismukes mentioned, the blowing taphole and the poling operations, are brief but uncontrollable; in our words, malfunctions. You can't predict when a blowing tap will occur.

Poling is a necessary operation to keep the furnace in operation and the taphole working. So U.S. EPA in the new source standards for that reason specifically exempted these operations, as Barbara said.

The other thing that happened was,

to clarify this matter better in Ohio, in about the mid eighties the ferroalloy producers of Ohio or in Ohio got together with the state, and to make it very clear put it into the State regulations as a specific exception. It's in the Ohio Regs exempting these same operations.

I, too, like American Alloys' attorney, we checked with the various states and all the other states recognize this same problem, but the same as here in West Virginia, it's a small issue, but when it occurs, it's very visible.

We hadn't been taken to task on it and regulated. I should say that 99 percent of the emissions from our furnaces are controlled and these are the exceptions. Questions on that?

CHAIRMAN THOMAS: Questions? If not, Mr. Hogan.

MR. HOGAN: I will come up. Maybe perhaps, all the questions have been answered. I'm Eugene Hogan. I'm Senior Staff Engineer, Environmental at Elkem Metals Company at Alloy.

I believe it has been covered fairly well what it is. Perhaps in your minds you might have some misunderstanding of what some of the terminology is.

A taphole generally is an opening in a furnace that is created by some mechanical means opening the hole. It usually has a tar plug there that is drilled through, removed, burned, what have you, and the metal then exits the furnace.

The various components we put in the furnace generate gases. They are normally burned on the top of the furnace in a normal burn, but as the mix with its inconsistencies, being a product of nature, does seize up, does cement over, so to speak, you will get gas build up in the furnace.

When this happens, when you open the taphole, it blows out and it releases very quickly, and it may be for up to a five-minute or so duration.

In what we call a light blow, we normally capture it 100 percent. It's during a hard blow

that we do not have a possibility. It would melt any equipment in the area. It's worse than an acetylene flame.

A poling operation is basically where you take a large tree. By that, I mean a tree 20 foot long, and it generally is four to five to six inches in diameter. We attach it to a steel block and we drive it into the taphole.

The purpose of this is to drive back into the furnace itself eight to ten feet and open up a channel.

As the pole goes into the furnace, it's a green pole, has moisture in it, it causes a tiny explosion, which opens up the mixed burden on top of the furnace, and therefore ceases the production of gas underneath the cover.

So, in our experiences, this is the method that we relieve the gas inside the furnace, so that we don't have an eruption on an ongoing basis out of the taphole.

It's a fairly common occurrence with the industry. It's done by all furnace operators that we are aware of, and if you don't do it, you can't operate the furnace.

The emissions from this are relatively insignificant. As they have said, we capture better than 99 percent of our emissions off the furnace. This totals out to about 85 tons per day on the Alloy plant, which is 25 to 30,000 tons a year.

The emissions from a poling and a tap and a blow tap at the same time at the Alloy plant equate out to about two-tenths of a pound per minute; pretty insignificant. When we did our sampling, it's less than .9 milligrams per cubic meter. You can't even see it.

But when you get the immediate release in the air, (indicating), it goes out the top of the building, which is open, and it is noticeable.

We thought we were covered under the new source performance standards. It's never been

addressed in 20 years, and it came up basically three years ago, and we have been talking about what to do about it for three years.

Economically, we did a study which Barbara alluded to, and Dale and the Office of Air Quality has this information.

It is prohibitive to try to collect it. We're talking two-tenths of a pound of material, a thimble full. It would cost the Alloy plant 331 million dollars in their capital equipment to collect it, and it would cost us 41 million dollars a year to operate it for a thimble full of material.

I think economically there is no justification at all. It's just prohibitive. It's uncontrolled in the technology for controlling emission there. It's uncontrollable, in that we don't want it to happen.

All of the 85 tons per day of dust and fumes that we capture we sell. We get a good price for it. We recycle it, so to speak. We are selling it and

the market is opening up very much.

We would rather have even that two-tenths of a pound because we can sell it, but the technology for doing so isn't there, and the only way we could possibly do it is close in all of our buildings and take total emission control in the building itself, and this reflects that cost.

CHAIRMAN THOMAS: Any questions?

Would these reg changes as proposed satisfy the entirety of your concern?

MR. HOGAN: Yes. We do wish to address one thing in that, is that there was a date put on of June 1, 1993. I believe Barbara will

MS. LITTLE: Let me just suggest this. This was something that was not in our proposal, and I understand -- I just, in fact, checked with Dale before lunch there about the date, and the concept was to make sure that we were covering those sources in existence.

All I would say -- and this I

haven't discussed with Dale -- but as a proposal to clarify this, as we try to make it consistent with new source performance standards, all we need to say then is that new or modified sources would be subject to new source performance standards of 40CFR Part 60, Subpart C, so that it's just closed as to the new standards, so that it's understandable then that those two things are consistent.

I think that will be the case any way regulatorily, but just to make it clear, I think that would be a good change. So at Section 5.3 you would simply add this in, "Its new or modified sources will be subject to the new source performance standards of 40CFR Part 60, Subpart C," and that would simply clarify that.

Otherwise, we recommend that the Commission recommend this rule to the legislative rule-making committee and so that we can proceed expeditiously.

As with the order for American Alloys, we have this provision essentially applicable to us for a year until time for the Legislature to be able to

act, but it does expire after a year. So it needs to be acted on by this Legislature if we're going to have any relief. Thank you.

CHAIRMAN THOMAS: Thank you. Are there any others who would like to speak to this Reg 7?

MR. FARLEY: I don't want to waste a lot of time here. I just want to make a couple of comments about some statements. I didn't really have any questions.

The materials that are being submitted by the company, as we say, we are going to try to put that together in some kind of fashion, some kind of structure you can review. It's one document, and some kind of comments will be provided to you because it is sometimes fairly lengthy material.

One thing I wanted to just note from some of the statements that were made, we are still looking at all of this material that's been submitted about quantification, how much emission is, and obviously that factors into how much cost is it per ton, and all of

these other things. We're still trying to analyze that and check with other states on relative regulatory measures.

The reason this came about -- because there was comments made several times about we're maybe doing regs or looking at regs differently now than we used to. I don't know that that's so much the case as the fact that with both of these operations in the past there were a lot of problems.

I think both operations are cleaning up. One operation is probably much farther along than the other one. We're talking about sort of secondary types of problems, other than just furnace refining.

I know there's been a lot of NODs issued some years back and all of that for various kinds of emissions, both boilers. Take Elkem, for example. I know they've got citations on boilers in the process.

One of the things I need to clarify here just for your understanding, the issue about poling came up primarily because EPA came down here. I don't

know if it was in conjunction with one of our people who did an inspection.

They happened to read visible emissions from the Elken facility during poling or poling operations and cited them for violation of our code hazards standards. We've been trying to resolve that ever since, as far as how do you deal with that specific kind of an emission.

But I think there is something that needs to be said here. A lot of the reason these kinds of operations, even though they may be lesser emitting than some of the bigger, more highly -- you know, those operations with higher potential -- even though they're of lesser impact, they are only now in recent years with the cleanup I think, and these companies being better in their operations becoming visible, because before they were sort of lost in the code.

I think that that's something -- it's not so much that we're trying to put a new spin on the reg, but the reg does require these new emissions

controls, and we're saying that that needs to be addressed. It either has to be -- you either have to be exempted or you've got to meet the requirement.

But that's sort of the reason that a lot of this came about, and we'll hopefully get some of that material that's been cited to you, or have them do a direct mailing or whatever. That's all.

CHAIRMAN THOMAS: Now, I want to remind the Commission in Secretary Ranson's letter of consent to the proposed rule changes he indicated that he assumed anything sent to the Commission would require the affected regulated parties to provide adequate technical data and documentation to establish that the proposed changes are needed, and that they could be made without an unreasonable impact on air quality.

His consent is conditioned upon that that he addressed, consideration of the court orders and so on, to be assured that those conditions are met. I suppose he would be able to withdraw his consent.

Is there any other discussion of

Reg 7? If not, let us adjourn the hearing in consideration of Reg 7 and move to --

COMMISSIONER NEELY: 30 days open?

CHAIRMAN THOMAS: For 30 days it will remain -- the record will remain open for 30 days, and we will review the proposed rule on August 9.

(WHEREUPON, the hearing was

concluded at 2:50 p.m.)

REPORTER'S CERTIFICATE

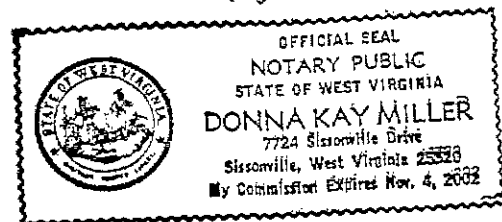
STATE OF WEST VIRGINIA,
COUNTY OF KANAWHA, to-wit:

I, Donna Kay Miller, do hereby
certify that the foregoing is, to the best of my skill and
ability, a true and accurate transcript of all the testimony
adduced or proceedings as set forth in the caption hereof.

Given under my hand this 24th day

of July, 1993.


Donna Kay Miller
Certified Court Reporter



**COMMENTS REGARDING
PROPOSED REVISIONS TO 45 CSR 7
"REGULATIONS TO PREVENT AND CONTROL
PARTICULATE AIR POLLUTION FROM
MANUFACTURING PROCESS OPERATIONS"**

1993 JUL 22 P 4: 56
RECEIVED
WV DIV OF ENVIR. PROTECT.
OFFICE OF AIR QUALITY

Prepared By:

West Virginia Manufacturers Association
Environment, Safety & Health Committee

and

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Charleston, WV 25326
(304) 344-5800

July 22, 1993

**COMMENTS REGARDING
PROPOSED REVISIONS TO 45 CSR 7
"REGULATIONS TO PREVENT AND CONTROL
PARTICULATE AIR POLLUTION FROM
MANUFACTURING PROCESS OPERATIONS"**

The West Virginia Manufacturers Association takes an active interest in the regulatory impact of the Commission's rules on its members. As such, the Manufacturers support the proposed revisions to Series 7 to address the operating concerns of Elkem Metals Company, American Alloys, Inc. and Schuller International, Inc.

Because Series 7 began as a very "generic" rule, we have always believed it to be appropriate to incorporate changes to it over the years to address specific industries and operations. That is what we believe these amendments do, and we urge the Commission to approve and adopt them as proposed.

Respectfully submitted this 22nd day of July, 1993.

West Virginia Manufacturers Association
405 Capitol Street, Suite 503
Charleston, WV 25301
Contact: Karen S. Price, President
Phone: (304) 342-2123



RMT, Inc.
744 Heartland Trail
P.O. Box 8923
Madison, WI 53708-8923
Phone: 608-831-4444
FAX: 608-831-3334

May 13, 1993

Mr. Dale Farley
Division of Environmental Protection
Office of Air Quality
1558 Washington Street East
Charleston, WV 25311

Dear Mr. Farley:

Attached per the request of Mr. Bob Hice of American Alloys is a supplement to RMT's May 11, 1993, document regarding the ambient impact of particulate emission sources at the American Alloys facility in New Haven, West Virginia. The attached table summarizes RMT's estimate of the particulate emission rate during the casting of Furnace #9 chill molds at the facility. The attached table is formatted in the same manner as the Table 1 from our May 11, 1993, document for your ease of reference. Also attached is a calculation sheet documenting the source of the emission data in the table.

Please call Mr. Bob Hice if you have any questions regarding this information.

Sincerely,

A handwritten signature in dark ink, appearing to read "Martin J. Stromberger".

Martin J. Stromberger, P.E.
Manager, Industrial Hygiene and
Air Pollution Engineering

vld

cc w/enc: Mr. Bob Wesser
Mr. David White
Mr. Bob Hice

2708.02.0000.MSF:farley

**SUMMARY OF ESTIMATED EMISSIONS FROM FURNACE #9 CASTING
AT AMERICAN ALLOYS, INC.**

Event	Event Duration (minutes)	Event Frequency (number per day)	Emissions per Event (pounds)	Emissions per Day (pounds)	Hourly Emissions (pounds per hour) ¹
Furnace #9 casting	2 to 6	12	33	396	14.8

Note:

¹ Based on a 24-hour average and including a 10-percent settling factor



COMPUTATION SHEET

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX: (608) 831-3334

SHEET 1 OF 1

PROJECT / PROPOSAL NAME AMERICAN Alloys, Inc.	PREPARED By: LEO Date: 4/8/93	CHECKED By: MJS Date: 4/8/93	PROJECT / PROPOSAL NO. 2708.02
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FURNACE #9 CASTING

- BASED ON CURRENT PRODUCTION PRACTICES, FURNACE #9 CASTING OCCURS APPROXIMATELY 12 TIMES PER DAY. THE DURATION OF EACH CAST IS APPROXIMATELY 1-2 MINUTES PER CHILL MOLD AND 2-3 MOLDS PER TAP ARE FILLED.

- BASED ON THE FOLLOWING SOURCE, THE AMOUNT OF ATMOSPHERIC LOSS FROM CASTING PRODUCT IS 0.39%^①.

"ENGINEERING AND COST STUDY OF THE FERROALLOY INDUSTRY", J.O. DEALY AND A.M. KILLIN, U.S. EPA- OAQPS, 450/2-24-008, MAY 1974, P. VI-31.

- ESTIMATED EMISSIONS PER CAST ARE AS FOLLOWS:

$$\begin{aligned} & (50 \text{ TONS FES} / \text{DAY}) (0.0039) (\text{DAY} / 12 \text{ TAPS}) (\frac{2000 \text{ LB}}{\text{TON}}) \\ & = 3.3 \text{ LB PARTICULATE} / \text{TAP} \end{aligned}$$

- ① AVERAGE OF VALUES PROVIDED.



June 23, 1993

WV DIV OF ENVIR. PROTECT.
OFFICE OF AIR QUALITY

1993 JUN 24 A 8:55

RMT, Inc.
744 Heartland Trail
P.O. Box 8923
Madison, WI 53708-8923
Phone: 608-831-4444
FAX: 608-831-3334

RECEIVED

Mr. Paul Rader
Division of Environmental Protection
Office of Air Quality
1558 Washington Street East
Charleston, WV 25311

Dear Mr. Rader:

This letter is to provide you with additional documentation of the basis for RMT's particulate emission rate estimates presented in our May 11, 1993, letter to Mr. Bob Hice of American Alloys, Inc. As we discussed Thursday in our conference call, the additional documentation is necessary to provide a more thorough explanation of the blowing taphole emission estimates.

I have attached for your reference another copy of our emission calculations for furnace poling and blowing tapholes. The basis for the poling emission estimates is the supposition that a specified volume and pressure of gases are built up within the furnace and that those gases are released during the poling activity. Our calculations are based on several technical assumptions:

- Gases within the furnace are primarily comprised of silicon oxide and carbon monoxide and are at a pressure of 20 to 30 inches of water.
- Essentially all of the gas is released during a poling event.
- The initial gas volume trapped within the furnace is approximately one-half the furnace volume.

We believe that the above assumptions are relatively conservative; that is, they would result in conservatively high emission estimates. As you can note, the duration (time) of the release is not factored into our calculations since we are assuming that all of the trapped gases are eventually released.

As we discussed during our conference call, we have assumed that the blowing taphole emissions are equivalent to the poling emissions. We have done so because application of the above technical assumptions to the blowing taphole event would also result in conservatively high emission estimates for that event.

Please call Mr. Bob Hice if you have any questions regarding this information.

Sincerely,


Martin J. Stromberger, P.E.
Manager, Industrial Hygiene and
Air Pollution Engineering

vid

cc w/enc: Mr. David White
Mr. Bob Hice

2708.03 0000:MSF:rader



COMPUTATION SHEET

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX: (608) 831-3334

SHEET

1 OF 10

PROJECT/PROPOSAL NAME AMERICAN Alloys, Inc.	PREPARED By: CGG	DATE: 3/3/93	CHECKED By: MJS	DATE: 4/2/97	PROJECT/PROPOSAL NO. 2708.02
---	----------------------------	---------------------	---------------------------	---------------------	--

POLING

BASED ON CURRENT PRODUCTION PRACTICES, POLING OCCURS AT FURNACE # 9. ONLY THE DURATION OF THE POLING ACTIVITY IS APPROXIMATELY 0.5 TO 1 MINUTE AND OCCURS APPROXIMATELY TWENTY TIMES PER MONTH (0.65 TIMES PER DAY).

AN ESTIMATE OF POLING EMISSIONS CAN BE MADE USING THE FOLLOWING FORMULA:

$$W = 358.9 K Y_2 d^2 \sqrt{\frac{h_w}{V}} \quad (1)$$

where: W = weight discharge of any fluid, pounds/hour
 K = discharge coefficient
 Y_2 = expansion factor
 d = i.d. of orifice, in.
 h_w = differential pressure head, "w.g.
 V = specific volume, ft³/lb

Assume $K = 0.6$

$Y_2 = 1$

$T = 2000^\circ C = 3632^\circ F = 4092^\circ R$

$d = 6-8"$

$h_w = 20-30"$ w.g.

CALCULATE V : 1000 pounds of top-hole gas contains the following

	ft ³ /lb.		Volume (ft ³)
611 lb. SiO ₂	8.6	$8.6 \times 611 \times (4092/520)$	41,350
389 lb. CO	13.5	$13.5 \times 389 \times (4092/520)$	41,330
			82,680

$$\therefore V = \frac{82,680 \text{ ft}^3}{1000 \text{ lb}} = 82.68 \text{ ft}^3/\text{lb}$$

Source: "MANUAL for PROCESS ENGINEERING CALCULATIONS" L. CLARK and R. L. DAVIDSON; p. 176



COMPUTATION SHEET

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX: (608) 831-3334

SHEET

2 OF 10

PROJECT/PROPOSAL NAME AMERICAN ALBYS, INC.	PREPARED By: LEO Date: 4/12/93	CHECKED By: JRG Date: 4-14-93	PROJECT/PROPOSAL NO. 2708.02
---	-----------------------------------	----------------------------------	---------------------------------

$$W = 358.9 (0.6) (1) (6 + 8)^2 \sqrt{\frac{(20 \text{ to } 30)}{82.68}}$$

$$W_{\text{RANGE}} = 6058 \text{ lbs/hr} \times 0.611 = 3701 \text{ lbs SiO}_2/\text{hr}$$

$$3701 \text{ lb SiO}_2/\text{hr} \times \frac{60.16 \text{ mole SiO}_2}{44 \text{ lb mole SiO}_2} = 5047 \text{ lbs SiO}_2/\text{hr}$$

(INSTANTANEOUS POLING EMISSION)

ESTIMATED EMISSIONS FROM POLING ARE AS FOLLOWS:

$$(5047 \text{ lb PARTICULATE/hr}) (1 \text{ hour/60 min.}) (1.0 \text{ min./POLING}) = 84 \text{ lb SiO}_2/\text{POLING}$$

Is A CHECK NEARLY VOLUME OF FURNACE:

FURNACE SPECIFIC DIMENSIONS ARE AS FOLLOWS:

FURNACE	Shell DIAMETER	Shell DEPTH
#2	37'-0"	15'-0"
#5	31'-0"	14'-6"
#7	31'-0"	14'-6"
#9	22'-10"	13'-8"
AVERAGES:	30'-5 1/2" ✓	14'-5" ✓

NOTE: Shell diameter is AN OUTER DIAMETER. ASSUME A 3' THICKNESS FOR THE REFRACTORY (i.e., $\text{ID} = 24'-5 1/2"$). Also ASSUME that when the FURNACE is TOPPED, the GAS IS UNDER A PRESSURE OF 20" - 30" W.C.

$$\text{Gas Volume} = \frac{\pi (24.46')^2}{2} \times \text{DEPTH} \quad (25' = 407.62')$$

407.62' (1000) ✓

$$\text{IF WE LET THE DEPTH OF TRAPPED GASES} = \frac{1}{2} \text{ Shell DEPTH} = 7.21' \quad \checkmark$$

$$\text{Gas Volume} = 3516 \text{ ft}^3 \quad \checkmark$$



COMPUTATION SHEET

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX: (608) 831-3334

SHEET

3 OF 10

PROJECT/PROPOSAL NAME American Alloys, Inc.	PREPARED By: LCO Date: 4/12/93	CHECKED By: JEG Date: 4-14-93	PROJECT/PROPOSAL NO. 2702.02
--	--------------------------------------	-------------------------------------	---------------------------------

$$\frac{(3596 \pm 43)}{\text{EVENT}} \left(\frac{10}{82.68 \pm 43} \right) = 43.5 \text{ lb/event} \quad \checkmark$$

$$43.5 \text{ lb/event} \times 0.611 \frac{\text{lb SiO}_2}{\text{lb gas}} = 26.6 \text{ lb SiO}_2/\text{event} \quad \checkmark$$

$$26.6 \text{ lb SiO}_2/\text{event} \times \frac{60 \text{ lb mole SiO}_2}{44 \text{ lb mole SiO}_2} = 36.2 \text{ lb SiO}_2/\text{event} \quad \checkmark$$

$$\left(\frac{36.2 \text{ lb SiO}_2}{\text{EVENT}} \times \frac{\text{EVENT}}{1.0 \text{ min}} \times \frac{60 \text{ min}}{\text{hour}} \right) = 2174 \text{ lb SiO}_2/\text{hr} \quad \checkmark$$

(INSTANTANEOUS POLING EMISSION)

The difference in these emission rates (84 lb SiO₂/event versus 36.2 lb SiO₂/event) may be explained by the fact that the 20 to 30" w.c. pressure behind the trapped gases would very quickly dissipate as soon as poling begins. If we assume that the 30" w.c. pressure dissipates in 10 seconds, the average pressure over the 1 minute event is 5" w.c. $\checkmark$

$$W_c = 358.9 (0.6) (1) (6 \text{ to } 8)^2 \sqrt{\frac{5}{82.68}}$$

$$W_{\text{avg}} = 2648 \text{ lbs/hr} \times 0.611 = 1618 \text{ lb SiO}_2/\text{hr} \quad \checkmark$$

$$1618 \text{ lb SiO}_2/\text{hr} \times \frac{60 \text{ lb mole SiO}_2}{44 \text{ lb mole SiO}_2} = 2206 \text{ lb SiO}_2/\text{hr} \quad \checkmark$$

(INSTANTANEOUS POLING EMISSION)

$$\left(2206 \text{ lb SiO}_2/\text{hr} \right) \left(\frac{\text{hour}}{60 \text{ min}} \right) \left(\frac{110 \text{ min}}{\text{poling}} \right) = 39.8 \text{ lb SiO}_2/\text{poling} \quad \checkmark$$

ASSUME A WORST CASE POLING EMISSION OF 37 lb SiO₂/poling $\checkmark$



COMPUTATION SHEET

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX: (608) 831-3334

SHEET

4 OF 10

PROJECT/PROPOSAL NAME

AMERICAN ALLOYS, INC.

PREPARED

By: LEO

Date: 3/31/93

CHECKED

By: MJS

Date: 4/2/93

PROJECT/PROPOSAL NO.

2708.02

LEO

4/8/93

MJS 4/9/93

BLOWING TAPHOLES

- BASED ON CURRENT PRODUCTION PRACTICES, BLOWING TAPHOLES WITH ANY SIGNIFICANT EMISSIONS OCCUR APPROXIMATELY ONCE EVERY FOUR DAYS AT #2'S, #7 AND THREE TIMES PER DAY AT #1. THE DURATION OF THESE OCCURRENCES ARE APPROXIMATELY 2-4 MINUTES. HOWEVER, THIS IS CONSIDERED CONSERVATIVE SINCE THE FREQUENCY & DURATION OF BLOWING TAPHOLES VARIES GREATLY.

- BLOWING TAPHOLE EMISSIONS WILL BE ASSUMED TO BE EQUIVALENT TO POLING** (37.10 PART./BLOW)

- * TOTAL OF 3.75 TIMES PER DAY ✓

** "ENGINEERING AND COST STUDY OF THE FERRALLOY INDUSTRY", J.O. DEALY AND R.M. KILLIN; U.S. EPA - OAQPS; 450/2-74-008; MAY 1974

DOEPKEN KEEVICAN WEISS & MEDVED

Professional Corporation

WV DIV OF ENVIR. PROTECTION
OFFICE OF AIR QUALITY

37th Floor, USX Tower

600 Grant Street

Pittsburgh, Pennsylvania 15219

(412) 355-2600

Fax: (412) 355-2609
Telex: 6503761340

Bloomfield Hills, MI
Harrisburg, PA

1993 JUL 19

11:58 AM

RECEIVED

Writer's Direct Dial:

(412) 355-2641

July 14, 1993

VIA FEDERAL EXPRESS

Britt A. Bernheim, Secretary
Air Pollution Control Commission
1615 Washington Street, East
Charleston, WV 25311

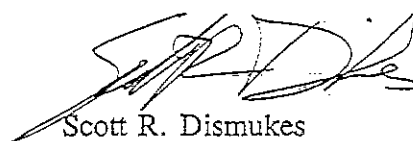
Re: American Alloys, Inc.
Proposed Revision to Regulation 7

Dear Ms. Bernheim:

Enclosed for inclusion in the record, and for consideration by the Air Pollution Control Commissioners, are eight copies of American Alloys, Inc.'s request for revision to West Virginia's Regulation 7, and documents in support thereof. American Alloys, Inc. respectfully requests these documents be included in the record regarding proposed revisions to West Virginia's Regulation 7. This request and supporting documents supplement, and are in addition to the oral comments which American Alloys, Inc. presented during the July 6, 1993 Commission meeting. As we discussed last Tuesday, July 6, 1993, please disseminate one copy of these documents to each of the Air Pollution Control Commissioners.

Please note, this package contains several minor revisions to the material provided to the Office of Air Quality by American Alloys, Inc. on May 12, 1993. These revisions reflect the change in air flow data based on actual rather than estimated air flow rates, and the associated increase in the cost per ton of particulate control required to accommodate the increased air flow.

Very truly yours,



Scott R. Dismukes

SRD/slb

Enclosures

cc: Dale Farley (w/encl.)
David White (w/encl.)

WV DIV OF ENVIR. PROTECT.
OFFICE OF AIR QUALITY

IND JUL 19 A 11:57

FILE 127-102-1

AMERICAN ALLOYS, INC.

Request for Regulatory Review

Pursuant to Section III, Subparagraph 2
of the April 16, 1993 Consent Order,
West Virginia Code § 29A-3-1 et. seq. and
The Rules Governing Hearings, Appeals, and Procedures
before The West Virginia Air Pollution Control Commission
§ 16-20-1 et. seq.

May 12, 1993

Revised July 14, 1993

AMERICAN ALLOYS REQUEST FOR REGULATORY REVIEW

Table of Contents

<u>Title</u>	<u>Page No.</u>
I. Executive Summary	1
II. Proposed Regulatory Revision	2
III. Request for Regulatory Review	3
A. Facility and Process Description	3
B. Regulatory Background	5
C. Discussion	8
1. Domestic Regulation	9
2. NSPS Exemption	11
D. Economic Feasibility	12
IV. Conclusion	15

Appendices

— Appendix A	Comparison of Various State Regulations of Fugitive or Particulate Emissions of Ferroalloy Producers
Attachment	1. Ohio Ambient Air Quality Standards
	2. New York Air Pollution Control Regulations: Parts 212-221
	3. Alabama Air Pollution Control Regulations
	4. Tennessee Air Pollution Control Regulations
	5. Washington Air Pollution Control Regulations
	6. Oregon Air Pollution Control Regulations

	7. South Carolina Ambient Air Quality Standards
	8. Iowa Air Pollution Control Regulations
	9. Kentucky Air Pollution Control Regulations
Appendix B	Economic Feasibility, Revised July 2, 1993 Supplement
Attachment	1. Airotech, Inc. Project Cost Estimate for Fugitive Particulate Emission Control system, January 5, 1993
Appendix C	RMT, Inc. Calculated Emission factors and screening Model Run Analysis, May 11, 1993, revised June 30, 1993 Supplement
Attachment	A. Estimated Process Particulate Emission Rates
Attachment	B. Dispersion Modeling Results
Appendix D	40 CFR 60.260, Subpart Z-Standards of Performance for Ferroalloy Production Facilities
Appendix E	EPA Guideline Documents and Regulations, 40 CFR 60.22 through 60.25
Appendix F	EPA "Supplemental Information on Standards of Performance for Ferroalloy Production Facilities", March 1976
Appendix G	Ohio EPA Feasibility Study
Appendix H	Newspaper Articles on Foreign Dumping
Appendix I	American Alloys Economic Impact Study

I. Executive Summary

American Alloys owns and operates a ferroalloy manufacturing facility located in New Haven, Mason County, West Virginia. American Alloys requests that the State of West Virginia revise Regulation 7 to ensure its ferroalloy manufacturers do not continue to be placed at a competitive disadvantage compared to other domestic ferroalloy manufacturers. Modifications include adding a new Section 5.3 excluding from regulation those fugitive particulate emissions from ferroalloy producing electric submerged arc furnaces generated during blowing taps, poling and oxygen lancing of the tap holes, and by adding new definition Sections 2.38 - 2.45. Unless the Air Pollution Control Commission approves this proposed revision to Regulation 7, West Virginia's ferroalloy manufacturers will continue to be subject to a higher cost of compliance than its major domestic and foreign competitors.

West Virginia's air law establishes the authority for this modification. The proposed modification is consistent with the purposes of West Virginia's air law which requires the state to balance the need for air quality with that of social and economic development. This proposal is consistent with the technical and economic feasibility basis for the exemptions contained in the Federal New Source Performance Standards for Ferroalloy Production Facilities. Furthermore, this regulatory revision will normalize West Virginia's regulatory impact on its ferroalloy industry when compared to fugitive particulate emission regulations for other states in which ferroalloy production facilities are located. For example, Ohio specifically exempts fugitive emissions from ferroalloy production facilities generated by blowing tap holes, poling, oxygen lancing, and casting.

II. Proposed Regulatory Revision

American Alloys requests the West Virginia Air Pollution Control Commission revise Regulation 7 as follows:

1. Add a new Section 5.3 which states "5.3 - The provisions of Sections 3.1, 3.2, and 5.1 shall not apply to particulate matter emitted from the operation of a ferroalloy electric submerged arc furnace in existence prior to June 1, 1993 during blowing tap hole events, poling, and oxygen lancing operations. Poling emissions shall not exceed five (5) minutes in duration during any poling operation."
2. The following definitions need to be added:
 - a. "2.38 - Ferroalloy electric submerged arc furnace shall mean any furnace used in production of ferroalloys wherein electrical energy is converted to heat energy by transmission of current between electrodes partially submerged in the furnace charge."
 - b. "2.39 - Furnace charge means any material introduced into a ferroalloy electric submerged arc furnace, and may consist of but is not limited to ores, slag, carbonaceous material, and limestone."
 - c. "2.40 - Tapping means the removal of slag or product from a ferroalloy electric submerged arc furnace under normal operating conditions, such as removal of metal under normal pressure and movement by gravity down the spout into a ladle."
 - d. "2.41 - Blowing tap means any tap ^{associated} with ferroalloy submerged arc furnace in which an evolution of gas forces or projects jets of flame or metal sparks beyond the ladle, runner, or collection hood."
 - e. "2.44 - Poling shall mean the mechanical means of removing slag or product from the tap hole associated with operations of a ferroalloy electric submerged arc furnace."
 - f. "2.45 - Oxygen lancing of the tap hole shall mean the burning open of the tap hole." *with enriched oxygen or air*

III. Request for Regulatory Review

A. Facility and Process Description

American Alloys operates a ferroalloy manufacturing facility located in New Haven, Mason County, West Virginia. A team of former Foote Mineral Company management and employees purchased the closed facility from Foote in 1988 and restarted the facility's electric submerged arc furnaces in 1989. The ability to re-open the facility required a unique partnership including management and employees, the state, labor unions, banks and several service suppliers.

Ferroalloy manufacturing is a smelting process which produces ferroalloys and silicon metals. This facility currently operates four electric submerged arc furnaces producing various grades of ferroalloy and silicon metal. Three furnaces were installed prior to U.S. EPA's May 4, 1976 promulgation of New Source Performance Standards for Ferroalloy Production Facilities, with the fourth furnace installed during 1989. An electric submerged arc furnace consists of a refractory lined crucible with tap holes through the hearth surface from which metal is intermittently withdrawn. Carbon electrodes are suspended vertically above the hearth, submerged in the raw material charge and convert electric energy into heat within the furnace charge. Hot reaction gases generated during the smelting process carry entrained particulate matter through the furnace charge and result in significant particulate matter emissions from the furnace, referred to as fume. Furnace fume is controlled, being conveyed from the furnace stack via ductwork to a filter collection system, called a baghouse, where particulate matter is captured. When properly maintained the collection efficiency of baghouses is ninety-eight or ninety-nine percent.

The dynamic ferroalloy manufacturing process occasionally results in a build up of gases in the furnace crucible which, when released, results in a rush of high temperature, high velocity gas with significant amounts of entrained particulate matter ("fume"). Gases escape the reaction zone of the crucible through either the top of the furnace ("furnace blow"), or through the tap hole ("blowing tap"). Poling, which can result in a blowing tap, consists of pushing a log timber into the furnace tap hole to clear slag from the furnace tapping channel. Log timbers are used exclusively for this practice because the timber does not chemically react with and consequently contaminate the purity of the product. Oxygen lancing, which can also result in a blowing tap, can be used to burn open tap holes when product purity is not critical. These practices result in temporary acute emissions of fugitive and particulate matter expelled with great force (blow). Casting at the number 9 furnace consists of tapping the electric submerged arc furnace crucible to release molten silicon metal to a ladle which, due to the temperature requirements of the product, is immediately cast into open chill molds. These short term intermittent events or processes generate temporary volumes of fugitive particulate matter released with acute force and velocity which exceeds the capture capability of known and existing point source emission control systems.

B. Regulatory Background

The Clean Air Act ("CAA") establishes a comprehensive federal and state program for the control of air pollution to protect and enhance the quality of the nation's air. 42 U.S.C. § 7401 et seq. The CAA directs the administrator of EPA to formulate "primary" and "secondary" National Ambient Air Quality Standards ("NAAQS") for certain air pollutants. 42 U.S.C. § 7409(a)(1). Primary standards are those which, in the judgment of the administrator,

"are requisite to protect the public health," allowing for an "adequate margin of safety." 42 U.S.C. § 7409(b)(1). Secondary standards are those which are required to "protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollution in the ambient air." 42 U.S.C. § 7409(b)(2). The CAA divides the country into Air Quality Control Regions ("AQCR") and States are required to develop and adopt State Implementation Plans ("SIP") to achieve and maintain the primary and secondary NAAQS within the AQCRs. 42 U.S.C. § 7407(a). AQCRs which do not meet a particular NAAQS are designated as "non-attainment areas" and are subject to more stringent emission control requirements. U.S. EPA recognizes that the majority of West Virginia AQCRs, including Mason County, achieve the NAAQS for particulate matter. 40 C.F.R. § 81.349.

In addition to requiring states to submit SIPs, the CAA has developed minimum technological standards for sources of air pollution called emission control standards. The CAA requires the development of different standards for new and existing sources. These procedures establish minimum standards which allow States, if they choose, to establish more stringent standards. See § 40 C.F.R. § 60.24(g). NSPS is applied to any new facility or modification of an existing facility that commences construction after the date of promulgation of the applicable NSPS. Existing sources constructed or modified prior to the proposed NSPS date are exempt from the NSPS. Each state develops standards of performance for existing sources, using procedures established by EPA regulations. 42 U.S.C. § 7411(d)(1). Existing sources are regulated through SIPs.

EPA developed New Source Performance Standards for emission sources constructed or modified after the effective date of the relevant NSPS. 42 U.S.C. § 7411(b), 40

C.F.R. Part 60. These standards reflect the degree of emission limitation and percentage reduction achievable "through the application of the best technological system of continuous emission reduction" that EPA determines are adequately demonstrated for each category of sources, considering cost. 40 C.F.R. § 60.22(b)(5), (emphasis added) (See Appendix E). The regulatory burden falls most heavily on new sources in which more onerous regulation is justified on the grounds that there is greater flexibility in citing new sources, and it is less expensive for new sources to incorporate innovative control technologies.

West Virginia's standards of performance for the emission of particulate matter from existing production facilities appears at Regulation 7. W.Va. R. § 45-7-1 et seq. Rule 5.1 of Regulation 7 requires facilities to install ~~reasonably~~ ~~available~~ emission controls on all manufacturing processes which generate fugitive particulate emissions. W.Va. R. § 45-7-5. Rule 3.1 prohibits emission of smoke or particulate matter darker than 20% capacity into the open air from any process source operations. ^{with exception for} W.Va. R. § 45-7-3. Rule 4.1 also imposes a ^{5.1 lb/hr} particulate emission standard expressed in total allowable pounds per hour with a variable of pound weight and source operation type. W.Va. R. § 45-7-4.

In 1974 U.S. EPA developed new source performance standards for ferroalloy production facilities utilizing electric arc furnaces subsequently promulgated in the Code of Federal Regulations on May 4, 1976. These standards prohibit the release of gases from a pollution control device to the atmosphere during the production of ferroalloys if the gases contain particulate matter greater than 0.99 lb/megawatt hour. The standard prohibits releasing any gas which measures 15% or greater opacity from a pollution control device and prohibits any release of visible gases during performance demonstrations. The NSPS prohibits the release

from hoods and associated equipment at the tapping station of visible gases for more than 40% of each tapping period during the establishment of flow rates but specifically excludes blowing tap. 40 C.F.R. § 60.260 et seq., (See Appendix D). West Virginia's regulations specifically adopt the NSPS for ferroalloy production by incorporating the reference at W.Va. R. § 45-16-3.

West Virginia's air law establishes the authority for this modification by allowing the Legislative Rule Making Committee to review rules from various agencies as well as "other rules as the Committee deems appropriate." W.Va. Code § 29A-3-10. Our proposed modification is consistent with the purposes of West Virginia's air law which requires the state to balance the need for air quality with that of social and economic development. Furthermore, the modification is consistent with the technical and economic feasibility basis for Federal New Source Performance Standards and, if adopted, will express West Virginia's recognition of U.S. EPA's existing determination that such emissions are uncontrollable, and normalize West Virginia's regulatory impact on its ferroalloy industry when compared to other state's regulations of their ferroalloy industry.

C. Discussion

Consistent with other states which support ferroalloy manufacturing, West Virginia's particulate emission regulations establish emission limits and performance standards for existing sources and incorporate by reference the Federal New Source Performance Standards for Ferroalloy Production Facilities (See Appendix D). However, unlike other state's ferroalloy manufacturers, West Virginia's ferroalloy manufacturers are subject to more stringent particulate emission regulations and thus are placed at a competitive disadvantage compared to other domestic or foreign producers. Section 5.1 of West Virginia Air Pollution Control Commission

Regulation 7 requires ~~reasonably~~ ~~available~~ emission control systems be installed on all manufacturing processes (new or existing sources) which generate fugitive particulate matter without exemption. W.Va. R. § 45-7-5.

American Alloys requests that the State of West Virginia expand Regulation 7's existing regulatory exclusions to include fugitive or particulate emissions from ferroalloy manufacturer's electric submerged arc furnaces generated during blowing taps, poling and oxygen lancing of the tap holes, to ensure its ferroalloy manufacturers do not continue to be placed at a competitive disadvantage. Unless West Virginia expands Regulation 7's exclusions, its ferroalloy manufacturers will continue to be subject to a higher cost of compliance than its major domestic competitors, because other state's air regulations contain exemptions or less stringent requirements.

1. Domestic Regulation

Ferroalloy manufacturers' compete for domestic sales with both foreign and domestic ferroalloy producers and West Virginia's more stringent regulations place its Ferroalloy producers at a competitive disadvantage. For example, the State of Ohio specifically exempts from regulation emissions generated from ferroalloy electric submerged arc furnaces during blowing tap holes, poling, lancing, and casting. OAC § 3745-17-07(B)(7)(C) (See Appendix G and Appendix A, Attachment 1). Ohio's regulation's impose a lower cost of emission control which directly impacts profitability of the cost of goods sold. West Virginia's increased regulatory burden requiring ~~RACT~~ controls on those processes and occurrences exempt from regulation by Federal NSPS places its ferroalloy manufacturers at a competitive disadvantage compared to other domestic ferroalloy manufacturers by increasing the cost of compliance and

reducing profit margins, in an industry already weakened by illegal foreign competition (See Appendix H).

For example, in developing its exemption, Ohio EPA relied on its 1980 study of fugitive emission control which included, among other things, ferroalloy production. "Reasonably Available Control Measures for Fugitive Dust Sources" (September 1980) (Ohio Environmental Protection Agency, Division of Air Pollution Control) [hereinafter Ohio EPA Study], § 2.14, at 2-306 to 2-319 (See Appendix G). Ohio EPA's study concludes that where a blowing tap of ferroalloy furnace occurs, "emission control is infeasible." Ohio EPA Study, § 2.14.4, at 2-313. The study also concludes that "[n]o control is recommended for casting" because control options are not "cost effective." Ohio EPA Study, § 2.14.5, at 2-317.

Overall, the majority of domestic ferroalloy production facilities are located in states which impose less stringent fugitive or particulate emission standards than those imposed by West Virginia. As the chart in Appendix A demonstrates, Ohio, Alabama, Tennessee, Oregon, South Carolina, Iowa and Kentucky each impose less stringent fugitive and particulate emission standards through either less stringent emission standards for existing sources, adoption of federal NSPS, or a combination of both. Furthermore, American Alloys' survey of individual state regulators did not disclose any extra-regulatory requirements.

W. Virginia is all this true not that shows

Unless West Virginia revises regulations to provide an exemption similar to Ohio or at least no more stringent than that imposed on other domestic producers, its ferroalloy manufacturers must continue to shoulder a significantly higher cost of compliance than its competitors due to regulations which impose controls on both new or existing sources more stringent than that required by Federal NSPS.

2. NSPS Exemption

In this instance, normalizing West Virginia's regulatory impact with that of other states like Ohio is consistent with the federal NSPS for the production of ferroalloys. The development document for the Federal NSPS for the production of ferroalloys specifically addressed "blowing tap holes", "poling", and oxygen lancing of the tap hole; as well as other activities/events that created emissions during furnace malfunctions (See Appendix F). During the development of those standards, U.S. EPA reviewed emissions generated during furnace malfunctions. EPA stated that blowing taps are exempted from the requirements 40 C.F.R. § 60.262(a)(5), because this is a process malfunction condition which is not wholly preventable. Periods in which the tapping hood is swung aside for poling and oxygen lancing of the tap hole for the removal of metal or slag from the spout are failures of the process to operate in a normal or usual manner because such events cause blowing taps. As malfunctions, these periods are not subject to the standards. Supplemental Information on Standards of Performance for Ferroalloy Production Facilities, U.S. EPA (March 1976) pages 66-67 (See Appendix F).

The development document clearly indicates that U.S. EPA considers blowing taps [including any activity that creates a blowing tap; i.e. poling or lancing] to be malfunctions which are exempt from compliance with the visible emissions standard at the tapping station for ferroalloy production facilities and specifically indicates such malfunctions are not subject to performance testing under 40 C.F.R. §§ 60.8(c) and 60.1. Until performance tests are developed for determining emission rates during malfunctions in furnace operations, under no circumstances can emissions standards be established for visible emissions during blowing taps or poling and oxygen lancing of the tap holes at ferroalloy production facilities.

D. Economic Feasibility

Stated public policy and the purpose of West Virginia's air law is to achieve and maintain air quality while promoting economic and social development. W.Va. Code § 16-20-1 (1). In general the Federal NSPS base the selection of control technology, in part, on cost. U.S. EPA recognizes the majority of West Virginia's AQCRs including Mason County, achieve the NAAQS for particulate matter. 40 C.F.R. § 81.349. West Virginia should further the public interest by addressing the economic and social development component of its Clean Air Act by recognizing the need to adjust regulations to include a limited exclusion in Regulation 7 for its ferroalloy manufacturers to address competitive disadvantage and economic infeasibility. Regulation 7 should be consistent with the requirements to consider cost in developing the Federal NSPS. The exceptions contained at W.Va. R. § 45-7-11 demonstrate the state can promulgate regulatory exceptions or exclusions under appropriate circumstances. American Alloys appropriate request for regulatory modification assists the state in maintaining its employment and tax base while continuing to protect air quality (See Appendix D).

Logic and the Clean Air Act Regulations dictate New Source Performance Standards are and should be more stringent than those required for existing sources. New Source Performance Standards must be based on the information contained in EPA's development documents. 40 C.F.R. § 60.22(a) (See Appendix E). The emission guidance contained in the development documents reflect the best system of emission reduction that has been adequately demonstrated for the designated facility, considering cost. 40 C.F.R. § 60.22(b)5.

Although the CAA requires new sources to achieve the highest emission control level that is technologically and economically feasible, EPA cannot require a level of control technology that is technologically and economically infeasible. Bunker Hill Company v. EPA, 572 F.2d 1286 (9th Cir 1977). Moreover, the New Source Performance Standards prescribe allowable emission rates except when impracticable. Cases in which emission rates are impracticable will be identified in the development document. 40 C.F.R. § 60.24(b)1 (See Appendix E). U.S. EPA's NSPS development document for the ferroalloy industry specifically recognizes blowing taps and those occurrences which cause blowing taps (i.e. poling and oxygen lancing of the tap holes) are malfunctions whose emissions are uncontrollable. Supplemental Information on Standards of Performance for Ferroalloy Production Facilities, U.S. EPA (March 1976) pages 33-34, 66-67 (See Appendix F). Thus, it is important to recognize that federal regulations and case law mandate new source performance standards must be technically and economically feasible, or conversely new source performance standards cannot impose emission control standards that are technically and economically infeasible.

The Economic calculations contained in Appendix B clearly demonstrate that failure to amend Regulation 7 results in significant adverse economic impact. Building evacuation is the only currently available technology to control fugitive or particulate emissions generated from blowing tap holes and poling and oxygen lancing of tap holes. As Airotech's January 5, 1993 feasibility study demonstrates, the estimated \$2,199,000.00 cost to install building evacuation plus installation of make-up air equipment imposes an exceptionally high economic impact (See Appendix B, Attachment B1). Moreover, Attachment B demonstrates the annual operational cost for building evacuation imposes an estimated \$28,620.90 cost per ton of control.

Factoring in an amortized capital expenditure for equipment and installation raises the cost per ton of particulate control to \$37,616.94. (Appendix B, July 2, 1993 Supplement) Moreover, revising the building evacuation cost estimate to account for the revised airflow rates required to maintain OSHA workplace air standards (See Appendix C, June 30, 1993 Supplement) increases the cost per ton of particulate control to \$104,916.34. (Appendix B, July 2, 1993 Supplement). Clearly the social and economic benefit of imposing this economically infeasible cost of control compared to the impact of the insignificant annual emissions from these malfunctions is negative. (See Appendix C, June 30, 1993 Supplement).

IV. Conclusion

Section 5.1 of West Virginia Air Pollution Control Commission Regulation 7 fails to exclude from regulation those uncontrollable emissions generated during operational malfunctions from existing and new sources and thus regulates existing and new sources more stringently than Federal NSPS and other states supporting ferroalloy manufacturing. Section 5.1 requires the installation of reasonably available emission controls on all manufacturing processes which generate fugitive particulate emissions. W.Va. R. § 45-7-5. Our proposed modification requests West Virginia recognize and extend to existing and new sources the conclusion contained in U.S. EPA's development documents. U.S. EPA's conclusion is that emissions generated during operational malfunctions caused by blowing taps and those occurrences which cause blowing taps are economically infeasible to control and thus, are exempted from regulation of new sources. Moreover, fugitive or particulate emissions generated by these occurrences are regulated less stringently by a majority of states. More stringent regulation by West Virginia

places its ferroalloy industry at a competitive disadvantage, and thus they should be excluded from regulation.

**Comparison of Various State Regulations of
Fugitive or Particulate Emissions For Ferroalloy Producers**

State	Contact Person	Opacity Existing Source	Opacity New Source
OH	Tom Coleman, OEPA (614) 644-3598	Not to exceed 20% and not greater than 60% for six consecutive minutes in any sixty minute period. Exemptions: (c) blowing taps, poling and oxygen lancing of the tap hole and casting operations associated with ferroalloy electric arc furnaces. Ohio Admin Code § 3745-17-07(A)(1a-b) and (B)(7)	40 CFR 60 Appendix A Ohio Admin. Code § 3745-17-30(B)(1)
NY	Bob Majewski (518) 457-7450 Permit limits comply with regulatory standards. Not aware of any Consent Orders.	Not to exceed 20% for any six consecutive minute period. N. Y. Comp. Codes R. & Regs. tit. 6 § 212.5(a)	40 CFR 60.260-60.266 (Subpart Z) N. Y. Comp. Codes R. & Regs. tit. 6 § 200.10
AL	George Cox, Engineer (205) 271-7861 Permit limits comply with regulatory standards. Not aware of any Consent Orders.	Not to exceed 20% and not greater than 40% for any six minute period in any sixty minute period. Ala. Admin. Code r. 335-3-4-.01(1)	40 CFR 60.260-60.266 (Subpart Z) Ala. Admin. Code r. 335-3-10-.02(26)

State	Contact Person	Opacity Existing Source	Opacity New Source
TN	Mark Clark (615) 521-2488	Not to exceed 20% in any five minute period in any one hour or more than twenty minutes in any twenty-four hour period. T.C.R.R. § 1200-3-5-.01(1)	Tapping period - 40% per period; Blowing tap - no limitation on visible emissions T.C.R.R. § 1200-3-16-.27(3)(5)
WA	Bob Swackamer, Environmental Engineer, III (509) 575-2804 Permit limits comply with regulatory standards. Not aware of any Consent Orders.	Not to exceed 20% in any three minute period in any one hour period. Wash. Admin. Code § 173-400-040(1)	40 CFR 60.260-60.266 (Subpart Z) Wash. Admin. Code § 173-400-115
OR	Bob Harris, Mineral Industries Coordinator (503) 229-5259 Permit limits comply with regulatory standards. Not aware of any Consent Orders.	Not to exceed 40% in any three minute period in any one hour period. Or. Admin. R. 340-21-015(1)(a)	40 CFR 60.260-60.266 (Subpart Z) Blowing tap is exempt Or. Admin. R. 340-25-620(1)(d)
SC	Robbie Brown, Permit Engineer for Metals Refining (803) 734-4528 Permit limits comply with regulatory standards. Not aware of any Consent Orders.	Not to exceed 40% in any six minute period in any one hour period or twenty-four minutes in any twenty-four period, however, 40% may be exceeded for soot blowing, but not to exceed 60%. S.C. Code Regs. 62.5 Section I(A)	Not to exceed 20% for 6 minutes, 20% may be exceeded but not more than 60% for soot blowing S.C. Code Regs. 62.5 Section I(B) 40 CFR 60.260-60.266 Not Adopted

State	Contact Person	Opacity Existing Source	Opacity New Source
IO	Doug Campbell (515) 281-8930 Permit limits comply with regulatory standards. Not aware of any Consent Orders.	Not to exceed 40% in any six minute period in any sixty minute period. Iowa Admin. Code r. 23.3 (2)(d) and Iowa Admin. Code r. 24.1(1))	40 CFR 60.260-60.266 (Subpart Z) Iowa Admin. Code r. 23.1(2)(w)
KY	Ed Frazier, Supervisor of Metallurgy Section (502) 564-3382 Permit limits comply with regulatory standards. Not aware of any Consent Orders.	Not to exceed 3% when control device has dispersed discharge; 15% for gases resulting from routine smelting/melting operations; 20% for gases associated with metallurgical treatment; 25% as a result of tapping operations; 40% for gases occurring during metallurgical treatment; 40% for gases occurring during pouring of metal from slag ladles into castbeds or molds; 15% from any dust-handling equipment 401 Ky. Admin. Regs. 61:070 Section 3	40% of each tapping period, no limitations for tapping period when blowing tap occurs. 401 KAR 59:160 Section 3(1)(d) 15% per six minute period. 401 Ky. Admin. Regs. 59:160 Section 5(2)

Ohio Ambient Air Quality Standards

OHIO AMBIENT AIR QUALITY STANDARDS

(Ohio Administrative Code, Title 3745 — Environmental Protection Agency; Chapters 3745-17, -18, -23, -71; As amended through December 6, 1991)

[Editor's note: For standards affecting carbon monoxide, see sections 3745-21-02 through 3745-21-04, published at 476:0501.]

Chapter 3745-17

Emissions of Particulate Matter

(Adopted effective September 25, 1978; Amended effective June 18, 1980; March 25, 1981; August 1, 1982; October 1, 1983; October 15, 1983; June 14, 1991; December 6, 1991)

3745-17-01 Definitions

(A) Except as otherwise provided in this rule, the definitions in rule 3745-15-01 of the Administrative Code shall apply to this chapter.

(B) As used in Chapter 3745-17 of the Administrative Code:

(1) "Banked condition" means the condition where fuel is burned on the grates of fuel burning equipment at rates which are sufficient to maintain ignition only.

(2) "British thermal unit" (also denoted as "Btu") means the amount of heat required to raise one pound of water one degree Fahrenheit.

(3) "Facility" means any building, structure, installation, operation, or combination thereof which contains one or more stationary source(s) of air contaminants. As used in paragraph (C) of rule 3745-17-08 of the Administrative Code, the definition of facility shall not include agricultural activities, such as the tilling of land, the harvesting of crops, the application of fertilizers, pesticides or herbi-

cides, and grain drying, which are conducted on a farm.

(4) "Fuel" means wood, refuse, natural gas, coke oven gas, petroleum, coal, and any combustible solid, liquid, or gas derived from such materials.

(5) "Fuel burning equipment" means any furnace or boiler, and any appurtenances thereto such as stacks, ducting and similar apparatus, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer, where the products of combustion do not come into contact with process materials.

(6) "Fugitive dust" means particulate matter which is emitted from any source by means other than a stack.

(7) "Fugitive dust source" means any source which emits fugitive dust or which emitted fugitive dust prior to the installation of any control equipment that was installed on or after February 15, 1972.

(8) "Grain elevator" means any plant or installation at which grain is unloaded, handled, cleaned, dried, stored, or loaded, except those located at the following: animal food, pet food or cereal manufacturers; breweries, livestock feedlots, wheat flour, wet corn, dry corn or rice mills or soybean oil extraction plants.

(9) "Incinerator" means any equipment, machine device, article, contrivance, structure, or part of a structure used to burn liquid, semi-solid or solid refuse or to process salvageable materials by burning other than by open burning as defined in rule 3745-19-01 of the Administrative Code.

(10) "Opacity" means the degree to which emissions reduce the transmission

of light and obscure the view of the background.

(11) "Particulate emissions" means particulate matter measurable by the applicable test methods in "Appendix A" of 40 CFR, Part 60 "Standards of Performance for New Stationary Sources," as such appendix existed on July 1, 1990.

(12) "Particulate matter" means any material, except water in uncombined form, that is or has been airborne, and exists as a liquid or a solid at standard conditions.

(13) "Permanent storage capacity" means grain storage capacity which is inside a building, bin or silo.

(14) "Process weight" means the total weight of all materials introduced into the source operation, including solid fuels, but excluding gaseous fuels and liquid fuels when they are used solely as fuels, and excluding air introduced for the purpose of combustion.

(15) "Reasonably available control measures" means the control technology which enables a particular fugitive dust source to achieve the lowest particulate matter emission level possible and which is reasonably available considering technological feasibility and cost-effectiveness.

(16) "Refuse" means any discarded matter, or any matter which is to be reduced in volume, or otherwise changed in chemical or physical properties, in order to facilitate its discard, removal or disposal.

(17) "Salvageable material" means any material which is to be reduced in volume, or otherwise changed in chemical or physical properties, in order to facilitate its reuse.

(18) "Single fuel burning unit" means any single, enclosed combustion chamber

parts to accomplish emission control or process modification by April 1, 1992:

(ii) Initiate on-site construction or installation of emission control equipment or process change by September 1, 1992;

(iii) Complete on-site construction or installation of emission control equipment or process change by August 1, 1993; and

(iv) Achieve final compliance by September 1, 1993.

(g) For paragraphs (I)(5), (I)(16), and (I)(18) of rule 3745-17-12 of the Administrative Code:

(i) Award contracts for emission control systems or process modifications; or, issue orders for the purchase of component parts to accomplish emission control or process modification by April 1, 1993;

(ii) Initiate on-site construction or installation of emission control equipment or process change by January 1, 1994;

(iii) Complete on-site construction or installation of emission control equipment or process change by December 1, 1994; and

(iv) Achieve final compliance by December 31, 1994.

(6) Any owner or operator of an air contaminant source, which is subject to the requirements of rule 3745-17-13 of the Administrative Code, shall achieve compliance with said requirements as expeditiously as practicable, but not later than the deadlines established in the following schedules:

(a) For paragraphs (F)(1)(a), (F)(5), (F)(6), (F)(7)(d), (F)(7)(e), (F)(8), and (F)(9) of rule 3745-17-13 of the Administrative Code, compliance with said requirements shall be achieved by the effective date of this rule.

(b) For paragraphs (B)(1), (C), (D)(1), (E)(3), (E)(4), (F)(2), (F)(3), and (G) of rule 3745-17-13 of the Administrative Code:

(i) Award contracts for emission control systems or process modifications; or, issue orders for the purchase of component parts to accomplish emission control or process modification by July 1, 1992; and

(ii) Achieve final compliance by November 1, 1992.

(c) For paragraphs (B)(3) and (D)(2) of rule 3745-17-13 of the Administrative Code:

(i) Award contracts for emission control systems or process modifications; or, issue orders for the purchase of component

parts to accomplish emission control or process modification by July 1, 1992;

(ii) Initiate on-site construction or installation of emission control equipment or process change by October 1, 1992;

(iii) Complete on-site construction or installation of emission control equipment or process change by March 1, 1993; and

(iv) Achieve final compliance by April 1, 1993.

(d) For paragraphs (B)(2), (D)(3), (E)(1), (E)(2), (E)(5), (E)(6)(a) to (E)(6)(c), (F)(1)(b) to (F)(1)(e), (F)(4), and (F)(7)(a) to (F)(7)(c) of rule 3745-17-13 of the Administrative Code:

(i) Award contracts for emission control systems or process modifications; or, issue orders for the purchase of component parts to accomplish emission control or process modification by July 1, 1992;

(ii) Initiate on-site construction or installation of emission control equipment or process change by April 1, 1993;

(iii) Complete on-site construction or installation of emission control equipment or process change by December 1, 1993; and

(iv) Achieve final compliance by December 31, 1993.

3745-17-05 Non-degradation policy

The significant and avoidable deterioration of air quality in any part of the area where presently existing air quality is equal to or better than that required by rule 3745-17-02 of the Administrative Code shall be prohibited.

3745-17-06 Classification of regions— Repealed

3745-17-07 Control of visible particulate emissions from stationary sources

(A) Visible particulate emission limitations for stack emissions:

(1) General limitations:

(a) Except as otherwise specified in paragraphs (A)(1)(b), (A)(2) and (A)(3) of this rule, visible particulate emissions from any stack shall not exceed twenty per cent opacity, as a six-minute average.

(b) Except as otherwise specified in paragraphs (A)(2) and (A)(3) of this rule, visible particulate emissions from any stack may exceed twenty per cent opacity, as a six-minute average, for not more than six consecutive minutes in any sixty minutes, but shall not exceed sixty per cent opacity, as a six-minute average, at any time.

(2) It shall be deemed not to be a violation of this rule where the presence of uncombined water is the only reason for failure of a stack emission to meet the requirements of this rule.

(3) The visible particulate emission limitations established in paragraph (A)(1) of this rule shall not apply to the following:

(a) The start-up of the following fuel burning equipment:

(i) For any fuel burning equipment which are equipped with baghouses or electrostatic precipitators, until the exhaust gases have achieved a temperature of two hundred fifty degrees Fahrenheit at the inlet of the baghouses or electrostatic precipitators, provided that the director may incorporate a higher start-up temperature in the permit or variance for such source for which an applicant demonstrates to the satisfaction of the director that the higher temperature is needed for safety considerations or to prevent damage to the control equipment; and

(ii) For any fuel burning equipment which are uncontrolled or which are equipped solely with mechanical collectors (including mechanical collectors which are equipped with sidestream separators or similar devices) for the control of particulate emissions, for a period of not more than three hours from the moment of start-up, provided that the director may incorporate a longer start-up time period in the permit or variance for such source for which an applicant demonstrates to the satisfaction of the director that the longer time period is required.

(b) The shutdown of the following fuel burning equipment:

(i) For any fuel burning equipment which are equipped with baghouses or electrostatic precipitators, after the temperature of the exhaust gases has dropped below two hundred fifty degrees Fahrenheit at the inlet of the baghouses or electrostatic precipitators, provided that the director may incorporate a higher shutdown temperature in the permit or variance for such source for which an applicant demonstrates to the satisfaction of the director that the higher temperature is needed for safety considerations or to prevent damage to the control equipment; and

(ii) For any fuel burning equipment which are uncontrolled or which are

equipped solely with mechanical collectors (including mechanical collectors which are equipped with sidestream separators or similar devices) for the control of particulate emissions, for a period of not more than three hours, provided that the director may incorporate a longer shutdown time period in the permit or variance for such source for which an applicant demonstrates to the satisfaction of the director that the longer time period is required.

(c) The malfunction of any air contaminant source or the malfunction/shutdown of air pollution control equipment associated with any air contaminant source, if the owner or operator of said air contaminant source or air pollution control equipment complies with the requirements of rule 3745-15-06 of the Administrative Code and none of the conditions listed in paragraph (C) of rule 3745-15-06 of the Administrative Code exists:

(d) Intermittent soot-blowing operations (the cleaning of heat transfer surfaces with pressurized air or steam) for fuel burning equipment which are uncontrolled or which are equipped solely with mechanical collectors (including mechanical collectors which are equipped with sidestream separators or similar devices) for the control of particulate emissions, provided that the owner or operator of such fuel burning equipment maintains a daily record which clearly documents the date, beginning time and ending time for all intermittent soot-blowing operations;

(e) Salt glazing operations conducted in a gas-fired periodic brick or tile kiln, for a period of not more than two hours during any twenty-one consecutive days of operation of said kiln;

(f) Intermittent ash removal operations (the dumping or pulling of ash) for fuel burning equipment which are uncontrolled or which are equipped solely with mechanical collectors (including mechanical collectors which are equipped with sidestream separators or similar devices) for the control of particulate emissions, provided that the owner or operator of such fuel burning equipment maintains a daily record which clearly documents the date, beginning time and ending time for all intermittent ash removal operations;

(g) The commencement of increased coal firing from a banked condition for fuel burning equipment, for a period not to exceed thirty minutes;

(h) Any air contaminant source which is not subject to the requirements of paragraphs (B)(3) and (B)(4) of rule 3745-17-08 of the Administrative Code, or rule 3745-17-09, 3745-17-10 or 3745-17-11 of the Administrative Code; and

(i) Any air contaminant source for which an equivalent visible particulate emission limitation has been established by the director pursuant to paragraph (C) of this rule.

(B) Visible particulate emission limitations for fugitive dust:

(1) Except as provided in paragraphs (B)(2) to (B)(7) of this rule, visible particulate emissions from any fugitive dust source shall not exceed twenty per cent opacity as a three-minute average.

(2) Visible particulate emissions from the fugitive dust sources associated with a coke oven battery shall not exceed any of the following:

(a) There shall be no visible particulate emissions from any charging operations except for a period of time not to exceed one hundred twenty-five seconds during any five consecutive charges. One charge, which represents the charge with the highest visible particulate emissions value of twenty consecutive charges observed, may be exempted from this visible particulate emission limitation.

(b) At no time shall there be visible particulate emissions from more than ten per cent of the offtake piping.

(c) At no time shall there be visible particulate emissions from more than five per cent of the charging hole lids.

(d) For visible particulate emissions from oven doors:

(i) For the Still coke oven battery (OEPA source number B919) at the "Armco Steel Company, L.P., Middletown Works" (OEPA premise number 1409010006), located on Crawford street, Middletown, Ohio, at no time shall there be visible particulate emissions from more than sixteen per cent of the oven doors.

(ii) For all other coke oven batteries, at no time shall there be visible particulate emissions from more than ten per cent of the oven doors. Two oven doors, which represent the last oven charged prior to the commencement of visible particulate emission readings performed in accordance with paragraph (B)(2)(c) of rule 3745-17-03 of the Administrative Code,

shall be exempted from this visible emission limitation.

(iii) For purposes of this paragraph, an oven door and the associated chuck door on the pusher side of the battery shall be considered as one door.

(e) Visible particulate emissions from any pushing operations shall not exceed twenty per cent opacity read above the battery top. For purposes of this paragraph, the duration of a pushing operation shall commence with the moving (or pushing) of the coke mass from an oven and shall conclude when the quench car enters the quench tower.

(3) Visible particulate emissions of fugitive dust from electric arc furnace shop roof monitors, argon-oxygen decarburization shop roof monitors, blast furnace casthouses and sintering operations shall not exceed twenty per cent opacity as a six-minute average.

(4) There shall be no visible particulate emissions from any paved roadway or parking area except for a period of time not to exceed six minutes during any sixty-minute observation period.

(5) There shall be no visible particulate emissions from any unpaved roadway or parking area except for a period of time not to exceed thirteen minutes during any sixty-minute observation period.

(6) There shall be no visible particulate emissions from any material storage piles except for a period of time not to exceed thirteen minutes during any sixty-minute observation period.

(7) The visible particulate emission limitations specified in paragraphs (B)(1) to (B)(6) of this rule shall not apply to the following:

(a) Ship loading spouts at grain terminals;

(b) Blasting at mineral extraction operations;

(c) Blowing taps, poling and oxygen lancing of the tap hole and casting operations associated with ferroalloy electric arc furnaces;

(d) Any fugitive dust source which is exempted from the requirements of paragraph (B) of rule 3745-17-08 of the Administrative Code;

(e) Any fugitive dust source which is not located within the geographical area specified in appendix A of rule 3745-17-08 of the Administrative Code, unless the director, in accordance with

paragraph (A)(2) of rule 3745-17-08 of the Administrative Code, requires the owner or operator to submit and implement a control program which will bring the fugitive dust source into compliance with the requirements of paragraph (B) of rule 3745-17-08 of the Administrative Code; and

(f) The malfunction of any air contaminant source or the malfunction/shutdown of air pollution control equipment associated with any air contaminant source, if the owner or operator of said air contaminant source or air pollution control equipment complies with the requirements of rule 3745-15-06 of the Administrative Code and none of the conditions listed in paragraph (C) of rule 3745-15-06 of the Administrative Code exists.

(8) It shall be deemed not to be a violation of this rule where the presence of uncombined water is the only reason for failure of a fugitive dust emission to meet the requirements of this rule.

(C) Equivalent visible particulate emission limitations:

(1) For the purpose of establishing an equivalent visible particulate emission limitation, any owner or operator of an air contaminant source which is subject to the requirements of paragraph (A)(1) of this rule may request the director to determine the average opacity of the emissions from said source during any performance test(s) conducted pursuant to paragraph (B) of rule 3745-17-03 of the Administrative Code. Any such request shall be made in writing at the time the test specifications and procedures are submitted to the director pursuant to paragraph (B)(6) of rule 3745-17-03 of the Administrative Code.

(2) If, upon review of such owner's or operator's written report of the results of the performance test(s), it is the director's judgment that the air contaminant source is in compliance with all applicable emission limitations for which the performance tests were conducted, but fails to comply with the requirements of paragraph (A)(1) of this rule, the director shall notify the owner or operator as expeditiously as practicable that he may request the director to establish an equivalent visible particulate emission limitation for the source. Such request shall be made in writing within thirty days following receipt of the notification from the director.

(3) Any written request for an equivalent visible particulate emission limitation from an owner or operator of an air contaminant source shall include information which demonstrates the following:

(a) That the performance tests were conducted in accordance with the conditions and procedures accepted by the director pursuant to paragraph (B)(6) of rule 3745-17-03 of the Administrative Code; and

(b) That the air contaminant source and any associated air pollution control equipment were operated and maintained in a manner so as to minimize the opacity of the emissions during the performance test(s).

(4) If an owner or operator of an air contaminant source complies with the requirements of paragraphs (C)(1) to (C)(3) of this rule, the director may establish an equivalent visible particulate emission limitation for said source. Any such equivalent visible particulate emission limitation shall be specified in the terms and conditions of the permit, variance or order issued by the director for said source.

(D) Any revision approved by the director in accordance with paragraphs (A)(3)(a)(i), (A)(3)(a)(ii), (A)(3)(b)(i), (A)(3)(b)(ii), and (C)(4) of this rule shall not revise the federally enforceable requirements of the state implementation plan until approved by the U.S. environmental protection agency.

3745-17-08 Restriction of emission of fugitive dust

(A) Applicability:

(1) Except as otherwise indicated in paragraph (A)(3) of this rule, the requirements of paragraph (B) of this rule shall apply to any fugitive dust source which is located within the areas identified in "Appendix A" of this rule. Except as additional time for achieving compliance is provided in paragraph (B) of rule 3745-17-04 of the Administrative Code, any such source shall comply with the requirements of paragraph (B) of this rule upon the effective date of this rule.

(2) Notwithstanding the exemptions in paragraph (A)(3) of this rule, the requirements of paragraph (B) of this rule shall apply to any fugitive dust source regardless of location if, in the director's judgment, probable cause exists to believe that such source is causing or contributing to a

nuisance in violation of rule 3745-15-07 of the Administrative Code. In such cases, the director may require the owner or operator of the fugitive dust source to apply for and obtain a permit to operate for the source in accordance with rule 3745-35-02 of the Administrative Code, and/or require the owner or operator to submit and implement a control program which will bring the fugitive dust source into compliance with the requirements of paragraph (B) of this rule as expeditiously as practicable.

(3) The requirements of paragraph (B) of this rule shall not apply to:

(a) Any fugitive dust source which is located at a grain elevator having a permanent storage capacity of less than 2.5 million bushels;

(b) Fugitive dust generated by the following sources at the "Armco Steel Company, L.P., Inc., Middletown Works" (OEPA premise number 1409010006), located on Crawford street, Middletown, Ohio:

(i) Number 3 blast furnace (OEPA source number P025);

(ii) Number 15 basic oxygen furnace (OEPA source number P026); and

(iii) Number 16 basic oxygen furnace (OEPA source number P027);

(c) Fugitive dust generated from publicly owned roadways and parking lots, provided the fugitive dust is not directly caused by the deposition of materials due to industrial, commercial, or construction activities; and

(d) Fugitive dust generated from the tilling and wind erosion of farm land.

(B) No person shall cause or permit any fugitive dust source to be operated; or any materials to be handled, transported, or stored; or a building or its appurtenances or a road to be used, constructed, altered, repaired, or demolished without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne. Such reasonably available control measures shall include, but not be limited to, one or more of the following which are appropriate to minimize or eliminate visible emissions of fugitive dust:

(1) The use of water or other suitable dust suppression chemicals for the control of fugitive dust from the demolition of existing buildings or structures, construc-

New York Air Pollution Control Regulations:
Parts 212-221

to the outdoor atmosphere through a single emission point and the applicable emission standard for one or more of such devices or contrivances if vented separately to the outdoor atmosphere is a concentration standard (grains per standard cubic foot), the permissible emission rate through such emission point shall not exceed the quantity that would be allowed if said emissions were through separate emission points.

(d) Where a source owner can demonstrate to the satisfaction of the commissioner that he will apply best available control technology, the commissioner may specify a less restrictive permissible emission rate, emission standard or degree of air cleaning for such source than required under this Part provided that the less restrictive requirement is equivalent to that which can be achieved through the application of best available control technology.

(e) A process emission source, subject to the Federal new source performance standards in 40 CFR part 60, the national emission standards for hazardous air pollutants in 40 CFR part 61, or to the polychlorinated biphenyl disposal criteria in 40 CFR part 761 satisfies the requirements of this Part if the source owner can demonstrate that the source is in compliance with the respective Federal regulation.

212.5 Opacity of emissions limited. (a) No person will cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source, except only the emission of uncombined water.

(b) Upon written application by a source owner or operator, the commissioner, at his discretion may accept for an emission source an equivalent opacity standard exceeding the opacity standard of subdivision (a) of this section, if the source owner can demonstrate through acceptable tests for such source that he is in compliance with all applicable emission requirements other than the opacity stand-

ard and that the source and any associated emission control equipment is being operated and maintained in a manner acceptable to the commissioner. An equivalent opacity standard for an emission source will only be granted where reasonably available control technology, as determined by the commissioner, has been utilized. In such cases, the source owner or operator will not cause or allow emissions to exceed the equivalent opacity.

212.6 Exceptions. The following process emission sources are not subject to the provisions of this Part:

(a) process emission sources which are exempt under section 201.6 of this Title;

(b) kilns and clinker coolers in portland cement plants with respect to particulate emissions and opacity of emissions only;

(c) ferrous jobbing foundry melting furnaces in operation on or prior to February 6, 1968 with respect to particulate emissions only;

(d) by-product coke oven batteries with respect to opacity, sulfur compound emissions and emissions of particulates which are given an A rating;

(e) petroleum liquid storage and transfer facilities subject to Part 229 or Part 230 of this Title, with respect to petroleum liquids which are not given an A rating;

(f) process emission sources other than kilns and clinker coolers in a portland cement plant with respect to opacity of emissions only;

(g) process emission sources in a sulfuric or nitric acid plant which are regulated by Part 224 of this Title with respect to emissions of nitrogen oxides, oxides of sulfur, sulfuric acid mist and smoke;

(h) process emission sources in a petroleum refinery subject to Part 223 of this Title with respect to sulfur compound emissions and emissions of volatile organic compounds which are not given an A rating;

(i) process emission sources from which emissions of oxides of sulfur are attributable only to sulfur in fuel with respect to emissions of oxides of sulfur;

(j) solvent metal cleaning processes subject to Part 226 of this Title with respect to emissions of volatile organic compounds which are not given an A rating;

(k) iron and/or steel processes with respect to opacity and emissions of particulates which are not given an A rating;

(l) surface coating operations subject to Part 228 of this Title with respect to emissions of volatile organic compounds which are not given an A rating;

(m) process emission sources subject to Part 205 of this Title with an omission rate potential less than 3.5 pounds per hour of volatile organic compounds and which are not given an A rating;

(n) perchloroethylene dry cleaning facilities subject to Part 232 of this Title;

(o) synthesized pharmaceutical manufacturing processes subject to Part 233 of this Title with respect to emissions of volatile organic compounds which are not given an A rating;

(p) graphic arts processes subject to Part 234 of this Title with respect to emissions of volatile organic compounds which are not given an A rating; and

(q) primary aluminum reduction plant processes subject to Part 209 of this Title with respect to opacity and emissions of total fluorides.

212.7 Sampling. For the purpose of ascertaining compliance with this Part, the commissioner may obtain or require the owner or operator of a process emission source to provide a sample of any type 5 or 6 refuse (see Table 1 of Appendix 2 of Part 219 for classifications of refuse) where such refuse is an input material of the process.

212.8 Compliance schedule. Process emission sources in the New York City metropolitan area which are subject to Table 3 of this section are required to comply with the applicable emission standard within six months after the expiration date of the current certificate to operate.

200.10 Federal standards and requirements. (a) Any air contamination source which is subject to the federal new source performance standards (NSPS) set forth in 40 CFR 60 and listed in subdivision 200.10(b), table 2, of this Part, or to the national emission standards for hazardous air pollutants (NESHAPS) set forth in 40 CFR 61 and listed in subdivision 200.10(c), table 3, of this Part, must be in compliance with the federal standards as well as any applicable state standards to which it is subject. The United States

Environmental Protection Agency has delegated authority to the New York State Department of Environmental Conservation to issue permits to construct to sources, in accordance with Part 201 of this Title, for the construction or modification of any stationary source subject to federal NSPS or NESHAPS, and to implement and enforce the federal standards and requirements listed in tables 2 and 3 of this Part. No person shall commence construction or proceed with a modification of an air contamination source subject

to 40 CFR 60 or 40 CFR 61 without obtaining a valid permit to construct issued by the commissioner. Copies of delegated federal standards are available for public inspection and copying at the New York State Department of Environmental Conservation, Division of Air Resources, 50 Wolf Road, Albany, New York 12233. Also, any volume of the Code of Federal Regulations (CFR) can be obtained by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

(b) Table 2

TABLE 2
DELEGATE FEDERAL LAW SOURCE
PERFORMANCE STANDARDS OF 40 CFR 60

40 CFR 60 SUBPART	SOURCE CATEGORY	PAGE NUMBERS IN JULY 1, 1989 EDITION OF 40 CFR 60
D	Fossil-Fuel Fired Steam General for which Construction Com- menced After August 17, 1971 (Steam Generators and Lignite Fired Steam Generators)	242-263
Db	Industrial-Commercial-Institutional Steam Generating Units (only for units which are subject to the certifi- cation requirements of Part 201 of this Title)	275-294
E	Incinerators	294-295
F	Portland Cement Plants	296-298
G	Nitric Acid Plants	298-299

40 CFR 61 SUBPART	SOURCE CATEGORY	PAGE NUMBERS IN JULY 1, 1989 EDITION OF 40 CFR 61
H	Sulfuric Acid Plants	300-302
I	Asphalt Plants	302
J	Petroleum Refineries	303-308
K	Storage Vessels for Petroleum Liquids Constructed After June 11, 1973, and prior to May 19, 1978.	309-310
Ka	Storage Vessels for Petroleum Liquids Constructed After May 18, 1978 and prior to July 24, 1984.	310-315
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquids) Constructed After July 23, 1984.	315-324
L	Secondary Lead Smelters	324-325
M	Secondary Brass and Bronze Ingot Production Plants	325-326
N	Iron and Steel Plants	326-328
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities	328-332
O	Sewage Treatment Plants	332-337
P	Primary Copper Smelters	337-340
Q	Primary Zinc Smelters	340-342
R	Primary Lead Smelters	342-343
S	Primary Aluminum Reduction Plants	344-346
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	346-347
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	347-349
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	349-350
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	350-351
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate	351-353
Y	Coal Preparation Plants	353-354
Z	Ferroalloy Production Facilities	354-359
AA	Steel Plants: Electric Arc Furnaces	359-364
AAa	Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Steel Plants	364-370
BB	Kraft Pulp Mills	370-375
CC	Glass Manufacturing Plants	375-379
DD	Grain Elevators	379-381

Alabama Air Pollution Control Regulations

(v) a final combustion chamber which maintains a minimum temperature of 1800°F;

(vi) a lockout feed system;

(vii) modulating burner(s) in the final combustion chamber; and

(viii) a properly maintained and operated temperature recorder on the final combustion chamber.

4. Incinerators subject to this subparagraph shall comply with the following emission limits:

(i) particulate emissions shall not exceed 0.08 gr/dscf, adjusted to 7% oxygen;

(ii) carbon monoxide (CO) shall not exceed 100 ppm; and

(iii) visible emissions shall not exceed 10% opacity.

5. The owner/operator shall notify the Department in writing within 15 working days if the quantity of waste burned in any calendar week exceeds 40,000 lbs.

(c) Large existing (greater than 1150 lb/hr capacity or used to burn greater than 40,000 lb/wk).

1. Incinerators subject to this subparagraph shall have the same requirements as 335-3-3-.04(3)(b)1., 2., 3. (i), (ii), (iii), (v), (vi), (vii), (viii), and 4.(ii).

2. Incinerators subject to this subparagraph shall maintain a minimum residence time of 2 seconds in the final combustion chamber.

3. Incinerators subject to this subparagraph shall comply with the following emission limits:

(i) particulate emissions shall not exceed 0.02 gr/dscf, adjusted to 7% oxygen;

(ii) the hydrochloric acid (HCl) emissions shall not exceed 4 lb/hr or an emission rate less than 10% of the uncontrolled emission rate (90% or greater removal efficiency); and

(iii) visible emissions shall not exceed 5% opacity.

4. The owner/operator must have successfully completed an approved operator training program.

(4) New Medical Waste Incinerators

(a) All incinerators subject to this paragraph shall be constructed with the following minimum operational and design requirements:

1. a solid hearth;

2. more than one combustion chamber;

3. at least one burner in each combustion chamber;

4. a final combustion chamber which maintains a minimum residence time of 2 seconds;

5. a final combustion chamber which maintains a minimum temperature of 1800°F;

6. modulating burner(s) in the final combustion chamber; and

7. a properly maintained and operated temperature recorder on the final combustion chamber.

(b) Incinerators subject to this paragraph shall comply with the following emission limits:

1. carbon monoxide (CO) shall not exceed 100 ppm; and

2. hydrochloric acid (HCl) shall not exceed 4 lb/hr or an emission rate less than 10% of the uncontrolled emission rate (90% or greater removal efficiency).

(c) In addition to the foregoing requirements, the provisions applicable to new incinerators according to capacities are as follows:

1. Small new (less than 100 lb/hr capacity).

(i) Each incinerator subject to this subparagraph shall comply with the following emission limits:

(I) particulate emissions shall not exceed .08 gr/dscf, adjusted to 7% oxygen; and

(II) visible emissions shall not exceed 10% opacity.

2. Medium New (greater than or equal to 100 lb/hr but less than or equal to 1000 lb/hr capacity).

(i) Each incinerator subject to this subparagraph shall comply with the following emission limits:

(I) particulate emissions shall not exceed .05 gr/dscf, adjusted to 7% oxygen; and

(II) visible emissions shall not exceed 5% opacity.

(ii) Each incinerator subject to this subparagraph shall be equipped with a lockout feed system.

3. Large New (greater than 1000 lb/hr capacity).

(i) Each incinerator subject to this subparagraph shall not exceed the following emission limits:

(I) particulate emissions shall not exceed .02 gr/dscf, adjusted to 7% oxygen; and

(II) visible emissions shall not exceed 5% opacity.

(ii) Each incinerator subject to this subparagraph shall be equipped with a lockout feed system.

(iii) Each owner/operator must have successfully completed an approved operator training program.

CHAPTER 335-3-4 — CONTROL OF PARTICULATE EMISSIONS

335-3-4-.01 Visible Emissions.

(1) Visible Emissions Restrictions for Stationary Sources.

(a) Except as provided in Paragraphs 335-3-4-.01(1)(b), (c), (d), or (e), no person shall discharge into the atmosphere from any source of emission any air contaminant of an equivalent opacity greater than that designated as twenty percent (20%) opacity, as determined by a six (6) minute average.

(b) During one six (6) minute period in any sixty (60) minute period, a person may discharge into the atmosphere from any source of emission any air contaminant of an equivalent opacity not greater than that designated as forty percent (40%) opacity.

(c) The Director may approve exceptions to this Rule or specific sources which hold permits under Chapter 335-3-14; provided, however, such exceptions may be made for startup, shutdown, load change, and rate change or other short, intermittent periods of time upon terms approved by the Director and made a part of such permit.

(d) The Director may also approve exceptions to this Section in accordance with the following provisions:

1. The owner or operator of the affected source shall request in writing for the Director to provide an opportunity for the determination of the opacity of emissions during sampling and testing required pursuant to Rule 335-3-1-.08.

2. Upon receipt from such owner or operator of the written report of the results of the sampling and testing conducted pursuant to Rule 335-3-1-.08, the Director will make a finding concerning compliance with opacity and other applicable standards.

3. If the Director determines that an affected source is in compliance with all applicable standards for which the sampling and testing are being conducted in accordance with Rule 335-3-1-.08 but

disassembled or reassembled for the purpose of repair and maintenance in proper working order.

(2) Components and parts of emission control systems may be removed and replaced with like components and parts intended by the manufacturer for such replacement.

(3) The provisions of this Rule shall not apply to salvage operations on wrecked motor vehicles when the engine is so damaged that it will not be used again for the purpose of powering a motor vehicle on a highway.

335-3-9-.07 Effective Date.

The provisions of this Chapter shall become effective sixty (60) days from the date of its adoption and promulgation.

Chapter 335-3-10 Standards of Performance for New Stationary Sources

335-3-10-.01 General.

(1) The Environmental Protection Agency Regulations, and the Appendices applicable thereto, governing Standards of Performance for New Stationary Sources (40 CFR 60 and Appendices) designated in Rules 335-3-10-.02 and 03 are incorporated by reference as they exist in 40 CFR 60 (1990), 56 FR 12299 (March 22, 1991) and 56 FR 20497 (May 3, 1991), as amended by the word or phrase substitutions given in Rule 335-3-10-.04. References for specific documents containing the complete text of subject regulations are given in Appendix C to these Regulations.

The materials incorporated by reference are available for purchase and inspection at the Department's offices at 1751 Cong. W.L. Dickinson Drive, Montgomery, Alabama 36109.

(2) Chapters 335-3-3, -4, -5, -6, -7, and -8 shall not apply to source categories subject to this Chapter for the specific pollutants to which a standard under this Chapter applies.

(3) Definitions. For purposes of this Chapter, the definitions listed in 40 CFR 60.2 will apply.

335-3-10-.02 Designated Standards of Performance.

(1) Subpart D — Fossil Fuel-Fired Steam Generators for which construction

is commenced after August 17, 1971.

(a) Subpart Da — Electric Utility Steam Generating Units for which construction is commenced after September 18, 1978.

(b) Subpart Db — Industrial-Commercial-Institutional Steam Generating Units.

(c) Subpart Dc — Small Industrial-Commercial-Institutional Steam Generating Units.

(2) Reserved.

(3) Subpart E — Incinerators.

(a) Subpart Ea — Municipal Waste Combustors.

(4) Subpart F — Portland Cement Plants.

(5) Subpart G — Nitric Acid Plants.

(6) Subpart H — Sulfuric Acid Plants.

(7) Subpart I — Hot Mix Asphalt Facilities.

(8) Subpart J — Petroleum Refineries.

(9) Subpart K — Storage Vessels for Petroleum Liquids constructed after June 11, 1973 and prior to May 19, 1978.

(a) Subpart Ka — Storage Vessels for Petroleum Liquids constructed after May 18, 1978.

(b) Subpart Kb — Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 12, 1984.

(10) Reserved.

(11) Reserved.

(12) Subpart L — Secondary Lead Smelters.

(13) Subpart M — Secondary Brass and Bronze Ingot Production Plants.

(14) Subpart N — Iron and Steel Plants.

(a) Subpart Na — Standards of Performance for Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for which construction is commenced after January 20, 1983.

(15) Subpart O — Sewage Treatment Plants.

(16) Subpart P — Primary Copper Smelters.

(17) Subpart Q — Primary Zinc Smelters.

(18) Subpart R — Primary Lead Smelters.

(19) Subpart S — Primary Aluminum Reduction Plants.

(20) Subpart T — Wet Process Phosphoric Acid Plants.

(21) Subpart U — Superphosphoric Acid Plants.

(22) Subpart V — Diammonium Phosphate Plants.

(23) Subpart W — Triple Superphosphate Plants.

(24) Subpart X — Granular Triple Superphosphate Storage Facilities.

(25) Subpart Y — Coal Preparation Plants.

(26) Subpart Z — Ferralloy Production Facilities.

(27) Subpart AA — Steel Plants (Electric arc furnaces and dust-handling equipment).

(a) Subpart AAa — Steel Plants: Electric Arc Furnaces and Argon Oxygen — Decarburization Vessels.

(28) Subpart BB — Kraft Pulp Mills.

(29) Subpart CC — Standards of Performance for Glass Manufacturing Plants.

(30) Subpart DD — Grain Elevators.

(31) Subpart EE — Surface Coating of Metal Furniture.

(32) Subpart FF — Reserved.

(33) Subpart GG — Stationary Gas Turbines.

(34) Subpart HH — Lime Manufacturing Plants.

(35) Subpart II — Reserved.

(36) Subpart JJ — Reserved.

(37) Subpart KK — Lead-Acid Battery Manufacture.

(38) Subpart LL — Metallic Mineral Processing Plants.

(39) Subpart MM — Automobile and Light-Duty Truck Surface Coating Operations.

(40) Subpart NN — Phosphate Rock Plants.

(41) Subpart OO — Reserved.

(42) Subpart PP — Ammonium Sulfate Manufacturing.

(43) Subpart QQ — Graphic Arts Industry: Publication Rotogravure Printing.

(44) Subpart RR — Pressure Sensitive Tape and Label Surface Coating Industry.

(45) Subpart SS — Industrial Surface Coating — Large Appliances.

(46) Subpart TT — Metal Coil Surface Coating Operations.

(47) Subpart UU — Asphalt Processing and Asphalt Roofing Manufacture.

Tennessee Air Pollution Control Regulations

(h) Such other open burning as may be approved by the Technical Secretary where there is no other practical, safe, and/or lawful method of disposal.

1200-3-4.05 PERMITS FOR OPEN BURNING.

(1) Open Burning of all other types of materials, except those specifically exempted in Rule 1200-3-4-.04, may be conducted only when authorized by a specific permit issued by the Tennessee Department of Health and Environment, Division of Air Pollution Control before burning commences and then only when done in conformity with the following conditions and any special conditions and terms of the permit:

(a) The site of such burning is not nearer than one-half mile to an airport, hospital, nursing home, school, designated primary or secondary highway, national reservation, national or state park, wildlife area, national or state forest, and/or residences except such residences as may be located on the same property as the burning site.

(b) The site of such burning is not nearer than five hundred (500) feet to any registered sanitary landfill, or other land disposal sites for combustible solid waste, or other similar facilities.

(c) Burning must be conducted within time periods and in accordance with the requirements designated by the Technical Secretary. As a general rule, open burning will not be permitted except between the hours of 9:00 a.m. and 3:30 p.m.

(d) All material to be burned must be dry and in all other respects be in a state to sustain good combustion.

(e) No fire shall be ignited while any air pollution emergency episode is in effect in the area of the burn.

(f) Open burning must be conducted when ambient conditions are such that good dispersion of combustion products will result.

(2) Open burning of material is not allowed where conditions specified in subparagraphs (a) through (f) above are not met unless an air curtain destructor (or equivalent disposal method as determined by the Technical Secretary) is to be used. When an air curtain destructor is used, the following conditions must be met:

(a) The open burning site must be at least five hundred (500) feet from any designated primary and secondary highways.

(b) The open burning site must be at

least one thousand (1,000) feet from any school, national or state park, national reservation, national or state forest, wildlife area, and/or residence not on the same property as the air curtain destructor.

(c) The open burning site must be at least one-half (1/4) mile from any airport, nursing home or hospital.

(d) The plume from the air curtain destructor must meet the visible emission standards specified in Rule 1200-3-5-.01(1); however, for certain materials the Technical Secretary may allow one start-up period in excess of the standard, per day, not to exceed 20 minutes in 24 hours.

(e) All material to be burned must be dry and in other respects be in a state to sustain good combustion.

(f) Burning must be conducted within time periods and in accordance with the requirements designated by the Technical Secretary.

(g) No fire shall be ignited while any air pollution emergency episode is in effect in the area of the burn.

(h) Open burning must be conducted when ambient conditions are such that good dispersion of combustion products will result.

(3) Applications for open burning permits shall be made on forms available from the Tennessee Department of Health and Environment, Division of Air Pollution Control, and shall be submitted to the Technical Secretary or designated representative no later than ten (10) days prior to commencing open burning. Failure to submit completed forms or to supply requested supplementary information concerning a proposed open burning operation shall constitute just cause for refusing issuance of a permit.

(4) An open burning permit shall be subject to revocation if emissions from the permitted fires is deemed by the Technical Secretary or his designee to jeopardize public health or welfare, or create a public nuisance or safety hazard.

(5) Failure to obtain a valid burning permit from this agency or failure to adhere to provisions and conditions of the issued permit shall be construed as a violation of this Chapter and is subject to applicable provisions of the rules and statutes of the Tennessee Department of Health and Environment, Division of Air Pollution Control and such corrective/punitive measures that may be deemed appropriate by the Technical Secretary of

the Tennessee Air Pollution Control Board.

(6) Obtaining an open burning permit as required in this Chapter does not relieve any person of the responsibility to obtain a permit required by any other agency, or of complying with other requirements set forth by other such agencies. Particular attention is directed to *Tennessee Code Annotated*, Section 39-3-226.

CHAPTER 1200-3-5 VISIBLE EMISSION REGULATIONS

1200-3-5-.01 GENERAL STANDARDS.

(1) No person shall cause, suffer, allow permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that, for fuel burning installations with fuel burning equipment of input capacity greater than 600 x 10⁴ Btu per hour, no person shall cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six-minute period per one (1) hour of not more than forty (40) percent opacity.

(2) Regardless of the visible emission standard contained in this chapter, all sources identified in Chapter 1200-3-19 of these regulations shall comply with the visible emission standards contained therein.

(3) Upon mutual agreement of any air contaminant source and the Technical Secretary, an emission limit more restrictive than that otherwise specified in this Chapter may be established. This emission limit shall be stated as a special condition for any permit or order issued concerning the source. Violation of this agreed to, more stringent emission standard shall result in revocation of the issued permit.

(4) Regardless of the visible emissions standard contained in this chapter, all sources identified in Rule 1200-3-9-.01(4) of these regulations shall comply with the visible emission standards set pursuant to Rule 1200-3-9.

(5) The visible emission limits set forth in Rule 1200-3-5-.01, shall apply unless a

TABLE 3
(continued)

- | | |
|---|--|
| 2. Coal and oil-fired process steam generating facilities. | a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.
b. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
c. Taking the action called for in the emergency plan. |
| 3. Manufacturing industries of the following classifications:

Primary Metals Industries

Petroleum Refining

Chemical Industries

Mineral Processing Industries

Grain Industry

Paper and Allied Products | a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
b. Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances.
c. Maximum reduction of heat load demands for processing.
d. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing. |

CHAPTER 1200-3-16
NEW SOURCE PERFORMANCE
STANDARDS
1200-3-16-.01 GENERAL PROVISIONS.

(1) When a standard for visible emissions, particulate matter, sulfur oxides, or any other pollutant is specified for an affected facility in this chapter, it will supersede the standards in any other rule of the regulations. Otherwise, all the provisions of the other regulations, concerning those pollutants shall remain in full effect for all sources regulated under this chapter.

(2) No person shall cause, suffer, allow, or permit emissions in excess of the standards in this chapter.

(3) Applicability. Unless specifically defined in subsequent rules, the provisions of this chapter shall apply to the owner or operator of any source which contains any new or modified affected facility commenced after the date specified in each rule. Regardless of the specific emission standards contained in this chapter, new and/or modified sources in or significantly

impacting upon a nonattainment area must comply with the provisions of paragraph 1200-3-9-.01(5). Regardless of specific emission standards contained in this chapter, all sources identified in paragraph 1200-3-9-.01(4) of these regulations shall comply with the standards set pursuant to Chapter 1200-3-9.

(4)(a) Definitions. As used in this chapter, all terms not defined herein shall have the meaning given them in Chapter 1200-3-2.

1. "Affected facility" means, with reference to a stationary source, any apparatus to which a standard is applicable.

2. "Capital expenditure" means an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable "annual asset guidelines repair allowance percentage" specified in the latest edition of Internal Revenue Service Publication 534 and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code.

3. "Continuous monitoring system" means the total equipment, required under

the emission monitoring paragraphs in applicable rules, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

4. "Existing facility" means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this chapter, and the construction or modification of which was commenced before the date specified in a given rule; or any apparatus which could be altered in such a way as to be of that type.

5. "One-Hour Period" means any 60 minute period commencing on the hour.

6. "Modification" means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any pollutant (to which a standard applies) into the atmosphere not previously emitted. The application of this definition is further defined in paragraph (9) of this rule.

7. "Monitoring device" means the total

capture equipment including other equipment or process(es) ducted to the same control device;

5. Rated (design) capacity of process equipment;

6. Those data required under subparagraph (5)(i) of this rule:

(i) List of change and tap weights and materials;

(ii) Heat times and process log;

(iii) Control device operation log; and

(iv) Continuous monitor or Reference Method 9 data.

7. Test dates and times;

8. Test company;

9. Test company representatives;

10. Test observers from outside agency;

11. Description of test methodology used; including any deviation from standard reference methods;

12. Schematic of sampling location;

13. Number of sampling points;

14. Description of sampling equipment;

15. Listing of sampling equipment calibrations and procedures;

16. Field and laboratory data sheets;

17. Description of sample recovery procedures;

18. Sampling equipment leak check results;

19. Description of quality assurance procedures;

20. Description of analytical procedures;

21. Notation of sample blank corrections; and

22. Sample emission calculations.

(d) During any performance test required under 1200-3-16-.01(5)(g), no gaseous diluents may be added to the effluent gas stream after the fabric in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.

(e) When more than one control device serves the EAF(s) being tested, the concentration of particulate matter shall be determined using the following equation:

$$C_s = \frac{\sum_{n=1}^N (C_s Q_s)_n}{\sum_{n=1}^N (Q_s)_n}$$

Where:

C_s = concentration of particulate matter in mg/dscm (gr/dscf) as determined by Method 5.

N = total number of control devices tested.

Q_s = volumetric flow rate of the effluent gas stream in dscm/hr (dscf/hr) as determined by Method 2.

$(C_s Q_s)_n$ or $(Q_s)_n$ = value of the applicable parameter for each control device tested.

(f) Any control device subject to the provisions of this rule shall be designed and constructed to allow measurement of emissions using applicable test methods and procedures.

(g) Where emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this rule but controlled by a common capture system and control device, the owner or operator may use any of the following procedures during a performance test:

1. Base compliance on control of the combined emissions.

2. Utilize a method acceptable to the Technical Secretary which compensates for the emissions from the facilities not subject to this rule.

3. Any combination of the criteria of parts (g)1. and (g)2. of this paragraph.

(h) Where emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this rule, the owner or operator may use any of the following procedures for demonstrating compliance with 1200-3-16-.26(3)(a)3:

1. Base compliance on control of the combined emissions.

2. Shut down operation of facilities not subject to the provisions of this rule.

3. Any combination of the criteria of parts (h)1. and (h)2. of this paragraph.

(i) Visible emissions observations of modular, multiple-stack, negative-pressure or positive-pressure fabric filters shall occur at least once per day of operation. The observations shall occur when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9, and, for at

least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Reference Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in subparagraph (3)(a) of this rule.

(j) Unless the presence of inclement weather makes concurrent testing infeasible, the owner or operator shall conduct concurrently the performance tests required under 1200-3-16-.01(5)(g) to demonstrate compliance with parts 1, 2 and 3, of subparagraph 1200-3-16-.26(3)(a).

(7) Recordkeeping and Reporting Requirements

(a) Operation at a furnace static pressure that exceeds the value established under subparagraph (5)(f) of this rule and either operation of control system fan motor amperes at values exceeding ± 15 percent of the value established under subparagraph (5)(c) of this rule or operation at flow rates lower than those established by subparagraph (5)(c) of this rule may be considered by the Technical Secretary to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Technical Secretary semiannually.

(b) When the owner or operator of an EAF is required to demonstrate compliance with the standard under parts (6)(g)2. and (6)(g)3. of this rule, the owner or operator shall obtain approval from the Technical Secretary of the procedure(s) that will be used to determine compliance. Notification of the procedure(s) to be used must be postmarked 30 days prior to the performance test.

1200-3-16-.27 FERROALLOY PRODUCTION FACILITIES.

(1) Applicability

The provisions of this rule are applicable to the following affected facilities commenced on or after February 9, 1977: Electric submerged arc furnaces which

produce silicon metal, ferrosilicon, calcium silicon, silicomanganese zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, ferromanganese silicon, or calcium carbide; and dust handling equipment.

(2) Definitions

(a) "Electric submerged arc furnace" means any furnace wherein electrical energy is converted to heat energy by transmission of current between electrodes partially submerged in the furnace charge.

(b) "Furnace charge" means any material introduced into the electric material arc furnace and may consist of, but is not limited to, ores, slag, carbonaceous material, and limestone.

(c) "Product change" means any change in the composition of the furnace charge that would cause the electric submerged arc furnace to become subject to a different mass standard applicable under this rule.

(d) "Slag" means the more or less completely fused and vitrified matter separated during the reduction of a metal from its ore.

(e) "Tapping" means the removal of slag or product from the electrical submerged arc furnace under normal operating conditions such as removal of metal under normal pressure and movement by gravity down the spout into the ladle.

(f) "Tapping period" means the time duration from initiation of the process of opening tap until plugging of the tap hole is completed.

(g) "Furnace cycle" means the time period from completion of a furnace product tap to the completion of the next consecutive product tap.

(h) "Tapping station" means that general area where molten product or slag is removed from the electric submerged arc furnace.

(i) "Blowing tap" means any tap in which an evolution of gas forces or projects jets of flame or metal sparks beyond the ladle, runner, or collection hood.

(j) "Furnace power input" means the resistive electrical power consumption of an electric submerged arc furnace as measured in kilowatts.

(k) "Dust-handling equipment" means any equipment used to handle particulate matter collected by the air pollution control device (and located at or near such

device) serving any electric submerged arc furnace subject to this rule.

(l) "Control device" means the air pollution control equipment used to remove particulate matter generated by an electric submerged arc furnace from an effluent gas stream.

(m) "Capture system" means the equipment (including hoods, ducts, fans, dampers, etc.) used to capture or transport particulate matter generated by an affected electric submerged arc furnace to the control device.

(n) "Standard ferromanganese" means that alloy as defined by A.S.T.M. designation A99-66.

(o) "Silicomanganese" means that alloy as defined by A.S.T.M. designation A483-66.

(p) "Calcium carbide" means material containing 70 to 85 percent calcium carbide by weight.

(q) "High-carbon ferrochrome" means that alloy as defined by A.S.T.M. designation A101-66 grades HCl through HC6.

(r) "Charge chrome" means that alloy containing 52 to 70 percent by weight chromium, 5 to 8 percent by weight carbon, and 3 to 6 percent by weight silicon.

(s) "Silvery iron" means any ferrosilicon, as defined by A.S.T.M. designation A100-69, which contains less than 30 percent silicon.

(t) "Ferrochrome silicon" means that alloy as defined by A.S.T.M. designation A482-66.

(u) "Silicomanganese zirconium" means that alloy containing 60 to 65 percent by weight silicon, 1.5 to 2.5 percent by weight calcium, 5 to 7 percent by weight zirconium, 0.75 to 1.25 percent by weight aluminum, 5 to 7 percent by weight manganese, and 2 to 3 percent by weight barium.

(v) "Calcium silicon" means that alloy as defined by A.S.T.M. designation A495-64.

(w) "Ferrosilicon" means that alloy as defined by A.S.T.M. designation A100-69 grades A, B, C, D, and E which contains 50 or more percent silicon by weight.

(x) "Silicon metal" means any silicon alloy containing more than 96 percent silicon by weight.

(y) "Ferromanganese silicon" means that alloy containing 63 to 66 percent by weight manganese, 28 to 32 percent by weight silicon, and a maximum of 0.08

percent by weight carbon.

(3) Standards for Particulate Matter and Opacity

(a) On and after the date on which the performance test required to be conducted by paragraph .01(5) of this chapter is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which:

1. Exit from a control device and contain particulate matter in excess of 0.45 kg/MW-hr (0.99 lb/MW-hr) while silicon metal, ferrosilicon, calcium silicon, or silicomanganese zirconium is being produced.

2. Exit from a control device and contain particulate matter in excess of 0.23 kg/MW-hr (0.51 lb/MW-hr) while high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, calcium carbide, ferrochrome silicon, ferromanganese silicon, or silvery iron is being produced.

3. Exit from a control device and exhibit 15 percent opacity or greater.

4. Exit from an electric submerged arc furnace and escape the capture system and are visible without the aid of instruments. The requirements under this part apply only during periods when flow rates are being established under subparagraph (6) (d) of this rule.

5. Escape the capture system at the tapping station and are visible without the aid of instruments for more than 40 percent of each tapping period. There are no limitations on visible emissions under this part when a blowing tap occurs. The requirements under this subparagraph apply only during periods when flow rates are being established under subparagraph (6)(d) of this rule.

(b) On and after the date on which the performance test required to be conducted by paragraph .01(5) of this chapter is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any dust-handling equipment any gases which exhibit 10 percent opacity or greater.

(4) Standard for Carbon Monoxide

(a) On and after the date on which the performance test required to be conducted by paragraph .01(5) of this chapter is completed, no owner or operator subject to the provisions of this subpart shall cause

Washington Air Pollution Control Regulations

(65) "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct.

(66) "Stack height" means the height of an emission point measured from the ground-level elevation at the base of the stack.

(67) "Standard conditions" means a temperature of 20°C (68°F) and a pressure of 760mm (29.92 inches) of mercury.

(68) "Sulfuric acid plant" means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, or acid sludge.

(69) "Total reduced sulfur, (TRS)" means the sum of the sulfur compounds hydrogen sulfide, mercaptans, dimethyl sulfide, dimethyl disulfide, and any other organic sulfides emitted and measured by EPA method 16 or an approved equivalent method and expressed as hydrogen sulfide.

(70) "Total suspended particulate" means particulate matter as measured by the method described in 40 CFR Part 50 Appendix B as in effect on July 1, 1988.

(71) "United States Environmental Protection Agency, (USEPA)" shall be referred to as EPA.

(72) "Visibility impairment" means any perceptible degradation in visibility (visual range, contrast, coloration) not caused by natural conditions.

(73) "Visibility impairment of Class I areas" means visibility impairment within the area and visibility impairment of any formally designated integral vista associated with the area.

(74) "Volatile organic compound, (VOC)" means any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the USEPA administrator designates as having negligible photochemical reactivity. VOC may be measured by a reference method, an equivalent method, an alternative method or by procedures specified under 40 CFR Part 60. A reference method, an equivalent method, or an alternative method, however, may also measure nonreactive organic compounds. In such cases, an owner or operator may exclude the nonreactive organic compounds when determining compliance with a standard. This reactivity policy exempts the following compounds per the Federal Register: Methane, ethane, trichlorofluoromethane, dichlorodifluoromethane, chlorodifluoromethane, trifluoromethane, trichlorotrifluoroethane, dichlorotetrafluoroethane, chloropentafluoroethane, methylene chloride, and 1,1,1-trichloroethane (methyl chloroform).

WAC 173-400-040 GENERAL STANDARDS FOR MAXIMUM EMISSIONS. All sources and emissions units are required to meet the emission standards of this chapter. Where an emission standard listed in another

chapter is applicable to a specific emissions unit, such standard will take precedent over a general emission standard listed in this chapter. When two or more emissions units are connected to a common stack and the operator elects not to provide the means or facilities to sample emissions from the individual emissions units and the relative contributions of the individual emissions units to the common discharge are not readily distinguishable, then the emissions of the common stack must meet the most restrictive standard of any of the connected emissions units. Further, all emissions units are required to use reasonably available control technology (RACT) which may be determined for some sources or source categories to be more stringent than the applicable emission limitations of any chapter of Title 173 WAC. Where current controls are determined to be less than RACT, ecology or the authority shall, on a case-by-case basis, define RACT for each source or source category and issue a regulatory order to the source or sources for installation of RACT.

(1) Visible emissions. No person shall cause or permit the emission for more than three minutes, in any one hour, of an air contaminant from any emissions unit which at the emission point, or within a reasonable distance of the emission point, exceeds twenty percent opacity except:

(a) When the emissions occur due to soot blowing/grate cleaning and the operator can demonstrate that the emissions will not exceed twenty percent opacity for more than fifteen minutes in any eight consecutive hours. The intent of this provision is to permit the soot blowing and grate cleaning necessary to the operation of boiler facilities. This practice, except for testing and trouble shooting, is to be scheduled for the same approximate times each day and ecology or the authority shall be advised of the schedule.

(b) When the owner or operator of a source supplies valid data to show that the presence of uncombined water is the only reason for the opacity to exceed twenty percent.

(c) When two or more sources are connected to a common stack, ecology or the authority may allow or require the use of an alternate time period if it is more representative of normal operations.

(d) When an alternate opacity limit has been established per RCW 70.94.331(2)(c).

(2) Fallout. No person shall cause or permit the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner(s) or operator(s) of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited.

(3) Fugitive emissions. The owner or operator of any emissions unit engaging in materials handling, construc-

sufficient information to enable ecology or the authority to determine that the operation will comply with the emission standards for a new source, and will not cause a violation of applicable ambient air quality standards and, if in a nonattainment area, will not interfere with scheduled attainment of ambient standards. The permission to operate shall be for a limited period of time (one year or less) and ecology or the authority may set specific conditions for operation during that period. A temporary source shall be required to comply with all applicable emission standards.

(8) Commencement of construction. The owner(s) or operator(s) of the new source shall not commence construction until the applicable notice of construction has been approved.

WAC 173-400-115 STANDARDS OF PERFORMANCE FOR NEW SOURCES. Title 40, Code of Federal Regulations, Part 60 (standards of performance for new stationary sources), as promulgated prior to July 1, 1989, is adopted by reference except for sections 60.5 (determination of construction or modification) and 60.6 (review of plans).

(1) Sections 60.5 and 60.6 Title 40, Code of Federal Regulations, are not incorporated herein because they provide for preconstruction review of new sources only on request. Such review under the state program is mandatory and an order of approval is required prior to construction, installation or establishment of a new source.

(2) As of July 1, 1989, the federal regulations adopted by reference hereby set standards of performance affecting facilities for the following described subparts of 40 CFR Part 60:

[Editor's note: The Washington Department of Ecology has adopted by reference 40 CFR 60 Subparts D, Da, E-N, O-R, T-AA, CC — XX, and FFF-HHH. See Environment Reporter, Federal Regulations — 2, page 121:1501.]

Compliance with the standards for affected facilities within these source categories shall be determined by performance tests and visual observations of opacity as set forth in the regulations adopted by reference.

Note: For fossil fuel fired steam generators referenced by Subpart D and Da above, units greater than 250 megawatts are governed by the energy facility site evaluation council (EFSEC) in Title 463 WAC.

WAC 173-400-120 BUBBLE RULES.

(1) Applicability. The owner(s) or operator(s) of any source(s) may apply for a bubble for any contaminant regulated by state or federal law for which the emission requirement may be stated as an allowable limit in weight of contaminant per unit time for the emissions units involved.

(2) Conditions. A bubble may be authorized provided the following conditions have been demonstrated to the satisfaction of ecology or the authority.

(a) The contaminants exchanged must be of the same type, that is, particulates for particulates, sulfur dioxide for sulfur dioxide, etc.

(b) The bubble will not interfere with the attainment and maintenance of air quality standards.

(c) The bubble will not result in a delay in compliance by any source, nor a delay in any existing enforcement action.

(d) The bubble will not supersede NSPS, NESHAPS, BACT, or LAER. The emissions of hazardous (NESHAPS) contaminants shall not be increased.

(e) The bubble will not result in an increase in the sum of actual emission rates of the contaminant involved from the emissions units involved.

(f) A bubble may not be authorized only for opacity limits. However, if the emission limit for particulates for a given emissions unit is increased as part of a bubble, the opacity limit for the given emissions unit may be increased subject to the following limitations:

(i) The new opacity limit shall be specific for the given emissions unit;

(ii) The new opacity limit shall be consistent with the new particulates limit;

(iii) An opacity greater than sixty percent shall never be authorized;

(iv) If the given emissions unit emits or has the potential to emit 100 tons per year or more of particulate matter, the opacity shall be monitored continuously.

(g) The emission limits of the bubble are equivalent to existing limits in enforceability.

(h) Concurrently with or prior to the authorization of a bubble, each affected source shall receive or have received a regulatory order that establishes total allowable emissions from the source of the contaminant being bubbled, expressed as weight of the contaminant per unit time. The new total allowable emissions shall be considered RACT.

(i) There will be no net adverse impact upon air quality from the establishment of new emission requirements for a specific source or emissions unit. Determination of net adverse impact shall include but not be limited to public perception of opacity and public perception of odorous contaminants.

(j) Specific situations may require additional demonstration as requested by ecology or the authority.

(3) Jurisdiction. Whenever a bubble application involves emissions units, some of which are under the jurisdiction of ecology and some of which are under the jurisdiction of an authority, approval will require concurrence by both authorities. The new emission limits for each emissions unit will be enforced by the authority of original jurisdiction.

Oregon Air Pollution Control Regulations

(2) Umpqua Basin, defined as the area bounded by the following line: Beginning at the SW corner of Section 2, T19S, R9W, on the Douglas-Lane County lines and extending due south to the SW corner of Section 14, T32S, R9W, on the Douglas-Curry County lines; thence easterly on the Douglas-Curry and Douglas-Josephine County lines to the intersection of the Douglas, Josephine, and Jackson County lines; thence easterly on the Douglas-Jackson County line to the intersection of the Umpqua National Forest boundary on the NW corner of Section 32, T32S, R3W; thence northerly on the Umpqua National Forest boundary to the NE corner of Section 36, T25S, R2W; thence west to the NW corner of Section 36, T25S, R4W; thence north to the Douglas-Lane County line; thence westerly on the Douglas-Lane County line to the starting point.

(3) Rogue Basin, defined as the area bounded by the following line: Beginning at the NE corner of T32S, R2E, W.M.; thence south along range line 2E to the SE corner of T39S; thence west along township line 39S to the NE corner of T40S, R7W; thence south to the SE corner of T40S, R9W; thence north on range line 9W to the NE corner of T39S, R9W; thence east to the NE corner of T39S, R8W; thence north on range line 8W to the SE corner of Section 1, T33S, R8W on the Josephine-Douglas County line; thence east on the Josephine-Douglas and Jackson-Douglas County lines to the NE corner of T32S, R1W; thence east along township line 32S to the NE corner of T32S, R2E to the point of beginning.

(4) Within incorporated cities having a population of four thousand (4000) or more, and within three (3) miles of the corporate limits of any such city.

Visible Air Contaminant Limitations

340-21-015 (1) Existing sources outside special control areas. No person shall cause, suffer, allow, or permit the emission of any air contaminant into the atmosphere from any existing air contaminant source located outside a special control area for a permit or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated as No. 2 on the Ringlemann Chart; or

(b) Equal to or greater than 40% opacity.

(2) New sources in all areas and existing sources within special control areas: No person shall cause, suffer, allow, or permit the emission of any air contaminant into the atmosphere from any new air contaminant source, or from any existing source within a special control area, for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated as No. 1 on the Ringlemann Chart; or

(b) Equal to or greater than 20% opacity.

(3) Exceptions to sections (1) and (2) of this rule:

(a) Where the presence of uncombined water is the only reason for failure of any emission to meet the requirements of sections (1) and (2) of this rule, such sections shall not apply;

(b) Existing fuel burning equipment utilizing wood wastes and located within special control areas shall comply with the emission limitations of section (1) of this rule in lieu of section (2) of this rule.

Fuel Burning Equipment Limitations

340-21-020 (1) No person shall cause, suffer, allow, or permit the emission of particulate matter, from any fuel burning equipment in excess of:

(a) 0.2 grains per standard cubic foot for existing sources;

(b) 0.1 grains per standard cubic foot for new sources.

(2) For sources burning salt laden wood waste on July 1, 1981, where salt in the fuel is the only reason for failure to comply with the above limits and when the salt in the fuel results from storage or transportation of logs in salt water, the resulting salt portion of the emissions shall be exempted from subsection (1)(a) or (b) of this rule and rule 340-21-015. In no case shall sources burning salt laden wood waste exceed 0.6 grains per standard cubic foot. Sources which utilize this exemption, to demonstrate compliance otherwise with subsection (1)(a) or (b) of this rule, shall:

(a) Not exceed a darkness of Ringlemann 2 from the boiler stacks for more than three minutes in any one hour;

(b) Submit the results of a particulate emissions source test of the boiler stacks bi-annually.

Refuse Burning Equipment Limitations

340-21-025 No person shall cause, suffer, allow, or permit the emission of particulate matter from any refuse burning equipment in excess of:

(1) For equipment designed to burn 200 pounds of refuse per hour or less, 0.3 grains per standard cubic foot; or

(2) For equipment designed to burn more than 200 pounds of refuse per hour:

(a) 0.2 grains per standard cubic foot for existing sources, or

(b) 0.1 grains per standard cubic foot for new sources, except that small to medium size municipal waste incinerators located in coastal areas as defined in OAR 340-21-005(1) shall be subject to OAR 340-21-027 and larger municipal incinerators shall be subject to provisions of OAR 340-20-220 to 340-20-275.

Municipal Waste Incinerator in Coastal Areas

340-21-027 (1) No person shall cause, suffer, allow, or permit the operation of any municipal waste incinerator in coastal areas which violates the following emission limits and requirements:

(a) Particulate Emissions:

(A) For municipal waste incinerators capable of processing not more than 50 tons/day of wastes, 0.2 grains per standard cubic foot of exhaust gases.

(B) For municipal waste incinerators capable of processing greater than 50 tons/day of wastes, 0.03 grains per standard cubic foot of exhaust gases.

(b) Minimum Exhaust Gas Temperatures:

(A) Prior to the initial charge of wastes and for the first 30 minutes of incineration of the initial charge, 1600°F. for one second.

(B) For the period beginning 30 minutes after the initial charge of wastes to the time of the final charge, 1800°F. for one second or 1700°F. for two seconds or a temperature and corresponding residence time linearly interpolated between the aforementioned two points.

(C) For a two hour period after the final charge of waste, 1600°F. for one second.

(c) Visible Emissions and Particle Fall-out Limitations of OAR 340-21-015 and 340-31-045, respectively.

(2) Each operator of a municipal waste incinerator in a coastal area shall monitor the exhaust gas temperatures of each of its

blown or a bottom-blown BOPF and contain particulate matter in excess of 23 mg/dscm (0.010 gr/dscf).

(c) Exit from a control device used solely for the collection of secondary emissions from a top-blown BOPF or from hot metal transfer or skimming for a top-blown or a bottom-blown BOPF and exhibit more than 5 percent opacity.

(d) A fume suppression system used to control secondary emissions from an affected facility is not subject to paragraphs (b) and (c) of this standard.

(e) A control device used to collect both primary and secondary emissions from a BOPF is not subject to paragraphs (b) and (c) of this standard.

Standards of Performance for Sewage Treatment Plants

340-25-605 The pertinent federal rules are 40 CFR 60.150 to 60.154, also known as Subpart O. The following emission standards, summarizing the federal standards set forth in Subpart O, apply to each incinerator which burns the sludge produced by municipal sewage treatment facilities: Standards for Particulate Matter. No owner or operator of any sewage sludge incinerator subject to the provisions of this rule shall discharge or cause the discharge into the atmosphere of:

(1) Particulate matter at a rate in excess of 0.65 g/Kg. (1.30 lb./ton) dry sludge input.

(2) Any gases which exhibit 20 percent opacity or greater.

Standards of Performance for Electric Utility Steam Generating Units

340-25-610 The pertinent federal rules are 40 CFR 60.40a to 60.49a, also known as Subpart Da. The following emission standards, summarizing the federal standards set forth in Subpart Da, apply to each electric utility steam generating unit that is capable of combusting more than 73 megawatts (250 million Btu/hour) heat input of fossil fuel (either alone or in combination with any other fuel) and for which construction commenced after September 18, 1973:

(1) *Standards for Particulate Matter.* No owner or operator subject to the provision of this rule shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of:

(a) 13 ng/J (0.030 lb./million Btu) heat input derived from the combustion of solid, liquid, or gaseous fuel;

(b) 1.00 percent of the potential combustion concentration when combusting solid fuel; and

(c) 30 percent of the potential combustion

concentration when combusting liquid fuel;

(d) An opacity of 20 percent, except for one 6-minute period per hour of not more than 27 percent opacity.

(2) *Standards for Sulfur Dioxide.* No owner or operator subject to the provisions of this rule shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

(a) 520 ng/J (1.20 lb. per million Btu) heat input for solid fuel or solid-derived fuel and 10 percent of the potential combustion concentration (90 percent reduction); or

(b) 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 ng/J (0.60 lb. per million Btu) heat input for solid fuel or solid-derived fuel;

(c) 340 ng/J (0.80 lb. per million Btu) heat input from liquid or gaseous fuels and 10 percent of the potential combustion concentration (90 percent reduction); or

(d) When emissions are less than 80 ng/J (0.20 lb. per million Btu) heat input from liquid or gaseous fuels, 100 percent of the potential combustion concentration (zero percent reduction);

(e) 520 ng/J (1.20 lb. per million Btu) heat input from any affected facility which combusts 100 percent anthracite or is classified as a resource recovery facility.

(3) *Standards for Nitrogen Oxides.* No owner or operator subject to the provisions of this rule shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides in excess of:

(a) 86 ng/J heat input for gaseous fuels except for coal-derived gaseous fuels;

(b) 130 ng/J heat input for liquid fuels except for coal-derived or shale oil;

(c) 210 ng/J heat input for coal-derived gaseous, liquid, and solid fuels; for shale oil; or for subbituminous coal;

(d) 260 ng/J heat input from bituminous and anthracite coal; from lignite except as noted in subsection (e) of this section; from all other solid fossil fuels not specified elsewhere in this rule;

(e) 340 ng/J heat input from any solid fuel containing more than 25% by weight of lignite mined in the Dakotas or Montana and is combusted in a slag tap furnace;

(f) No limit for any solid fuel containing more than 25% by weight of coal refuse.

Standards of Performance for Coal Preparation Plants

340-25-615 The pertinent federal rules are 40 CFR 60.250 to 60.254, also known as Subpart Y. These standards, summarizing

the federal standards set forth in Subpart Y, for Particulate Matter and for Visible Emissions apply only to coal preparation plants which process more than 200 tons of coal per day. An owner or operator shall not cause to be discharged into the atmosphere from:

(1) Any thermal dryer, gases which:

(a) Contain particulate matter in excess of 0.070 g/dscm (0.031 gr/dscf);

(b) Exhibit 20 percent opacity or greater;

(2) Any pneumatic coal cleaning equipment, gases which:

(a) Contain particulate matter in excess of 0.040 g/dscm (0.018 gr/dscf);

(b) Exhibit 10 percent opacity or greater.

Standards of Performance for Ferroalloy Production Facilities

340-25-620 The pertinent federal rules are 40 CFR 60.260 to 60.266, also known as Subpart Z. These standards, summarizing the federal standards set forth in Subpart Z, for Ferroalloy plants are applicable only to electric submerged arc furnaces and to dust handling equipment, built or modified after October 21, 1974:

(1) *Standard for Particulate Matter and Visible Emissions from Electric Arc Furnaces.* No owner or operator shall cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which:

(a) Exit from a control device and contain particulate matter in excess of 0.45 Kg/MW-hr (0.99 lb/MW-hr) while silicon metal, ferrosilicon, calcium silicon, or silicomanganese zirconium is being produced;

(b) Exit from a control device and contain particulate matter in excess of 0.23 Kg/MW-hr (0.51 lb/MW-hr) while high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, calcium carbide, ferrochrome silicon, ferromanganese silicon, or silvery iron is being produced;

(c) Exit from a control device and exhibit 15 percent opacity or greater;

(d) Escape the capture system at the tapping station and are visible for more than 40 percent of each tapping period, except a blowing tap is exempted.

(2) *Standard for Visible Emissions From Dust Handling Equipment.* No owner or operator shall cause to be discharged into the atmosphere from any dust-handling equipment any gases which exhibit 10 percent opacity or greater.

(3) *Standard for Carbon Monoxide.* No owner or operator shall cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which contain, on a dry basis, 20 or greater volume percent of carbon monoxide.

South Carolina Ambient Air Quality Standards

SOUTH CAROLINA AMBIENT AIR QUALITY STANDARDS

(South Carolina Department of Health and Environmental Control; Regulation 61-62.5 — Air Pollution Control Standards; Amended effective May 22, 1982; February 25, 1983; April 22, 1983; June 24, 1983; May 24, 1985; February 28, 1986; November 27, 1987; February 26, 1988; April 22, 1988; January 19, 1989; February 24, 1989; March 24, 1989; May 25, 1990; August 24, 1990; Corrected February 22, 1991; Amended effective May 24, 1991; June 26, 1992)

CONTENTS

Standard No. 1 — Emissions from Fuel Burning Operations
Standard No. 2 — Ambient Air Quality Standards
Standard No. 3 — Waste Combustion and Reduction
Standard No. 3.1 — Medical Waste Incineration
Standard No. 4 — Emissions from Process Industries
Standard No. 5 — Volatile Organic Compounds
Standard No. 5.1 — Lowest Achievable Emission Rate ("LAER") Applicable to Volatile Organic Compounds
Standard No. 6 — Alternative Emission Limitation Options
Standard No. 7 — Prevention of Significant Deterioration
Standard No. 8 — Toxic Air Pollutants

REGULATION NO. 62.5 AIR POLLUTION CONTROL STANDARDS

STANDARD NO. 1 EMISSIONS FROM FUEL BURNING OPERATIONS

SECTION I — VISIBLE EMISSIONS

A. Existing Sources

No one shall discharge to the ambient air from any existing source constructed prior to February 11, 1971, smoke which exceeds an opacity of forty (40) percent. For a total of six (6) minutes in one hour or twenty-four (24) minutes in a twenty-four

(24) hour period, forty (40) percent opacity may be exceeded for soot blowing, but shall in no case exceed an opacity of sixty (60) percent.

B. New Sources

No one shall discharge to the ambient air from any source constructed on or after February 11, 1971, smoke which exceeds an opacity of twenty (20) percent. For a total of six (6) minutes in one hour or twenty-four (24) minutes in a twenty-four (24) hour period, twenty (20) percent opacity may be exceeded for soot blowing, but shall in no case exceed an opacity of sixty (60) percent.

C. Special Provisions

The opacity standards set forth above do not apply during startup or shutdown. Owners and operators shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the owner or operator shall maintain a log of the time, magnitude, duration and any other pertinent information to determine periods of startup and shutdown and make available to the Department upon request.

D. Test Method

The method which is approved by the Department for determining compliance with opacity limitations under this Section is EPA Reference Method 9 (40 CFR 60, Appendix A, as revised July 1, 1986).

Alternate methods may be utilized only if approved in advance by the Department and by the Environmental Protection Agency.

SECTION II — PARTICULATE MATTER EMISSIONS

A. Allowable Discharge

The allowable discharge of particulate matter resulting from fuel burning operations shall be limited to the values obtained by use of Figure 1 and/or Part B. (For the purpose of determining heat input, total equipment capacity refers to total equipment capacity discharging through each stack. If a boiler has more than one (1) stack the total rated capacity will be the boiler rated capacity discharging to these stacks). Interpolation of Figure 1 for fuel burning operations of 1300 million BTU per hour heat input and larger shall be accomplished by use of the equation:

$$E = 57.84 P^{-0.637}$$

where E = the allowable emission rate in pounds per million BTU heat input, and P = million BTU heat input per hour

B. Special Provisions

All fuel burning operations of 10 million BTU per hour heat input and smaller constructed prior to February 11, 1971, shall be allowed 0.8 pounds per million BTU input.

good dust control practices as determined by the Department taking into consideration economic reasonableness, the seriousness of the dust conditions, and anticipated benefits, and may include but not be limited to the following:

1. Use, where possible, of water or chemicals for control of dust in demolition or construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt (cut back asphalt is prohibited), water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces which can give rise to airborne dust;

3. Installation and use of hoods, scrubbers, fabric filters or other dust cleaning devices where feasible and effective to capture and contain fugitive particulate matter while handling dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. The paving of roadways and the prompt removal of earth or other materials from paved streets that have been deposited by vehicular traffic, earth moving equipment, water erosion or other means;

5. Stabilization of long term storage piles by vegetation or appropriate chemicals and reclamation of mined areas;

6. Modifying the process or materials handling system;

7. Use of a slurry to move material if feasible;

8. Use of traveling booms, telescopic chutes, rotary stackers, adequate shrouding of openings in containers to be filled;

9. Avoid use of front end loader in handling dry dusty materials unless there is no other reasonable option;

10. Impose strict slow speed limits for vehicular traffic on plant property or construction/destruction sites;

11. Ensure proper loading of trucks, trailers, front end loaders, etc., to prevent spillage on paved roadways.

(b) No visible dust in excess of 10% opacity will be allowed to come from transfer points of any conveyor system for raw material or finished product unless the source/plant owner can demonstrate to the satisfaction of the Department that such control is not feasible.

(c) No new source/plant will be granted a permit to construct in a non-attainment area for primary standards if any part of materials handling of dry and dusty material is to be done with a front end loader, dump truck, or similar type handling which permits excessive dust to escape to the ambient air.

Section II — Control of Fugitive Particulate Matter in Problem Areas

(a) For the purpose of this section, problem areas are defined as areas in which ambient levels of particulate

matter are at or near primary standards; areas where an undesirable level of air pollution exists; areas in which excessive levels of fugitive particulate matter result in complaints from the general public; areas in which fugitive particulate matter is determined to be impacting upon a non-attainment area.

(b) No person shall cause or permit any fugitive particulate matter that can reasonably be controlled to escape into the ambient air. Such reasonable control shall be in accordance with recognized and generally accepted methods as determined by the Department and may include, but not be limited to, the following:

1. Restrictions as applicable and contained in Section I;

2. Enclosure of any dust generating process to prevent fugitive emissions/dust; and

3. Modification or reduction of materials handling to minimize the generation of dust.

Section III — Control of Fugitive Particulate Matter Statewide

(a) Emissions of fugitive particulate matter shall be controlled in such a manner and to the degree that it does not create an undesirable level of air pollution.

(b) Restrictions and requirements may be contained in operating permits on a case-by-case basis that are deemed appropriate and necessary to control fugitive particulate matter in accordance with reasonably available control technology.

(c) No source/plant shall use any method of materials handling which will generate fugitive particulate matter that is not fully described in the permit application.

(d) Volatile organic compounds shall not be used for dust control purposes. Oil treatment is also prohibited.

Section IV — Effective Date

The effective date of this regulation is July 1, 1979.

REGULATION 62.7

GOOD ENGINEERING PRACTICE STACK HEIGHT

Section I. — General

The purpose of this regulation is to prevent the use of tall stacks or other dispersion techniques from affecting the emissions limitations required to meet National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increments. This Regulation does not, in any manner, restrict the actual physical stack height nor the actual use of dispersion techniques at any source. Rather, it sets limits on the

Iowa Air Pollution Control Regulations

(5) If a credit for solids removal is given in accordance with subparagraph (3), the credit for qualified aeration shall still be given. The applicant shall submit evidence of the biochemical oxygen demand (five day) (BOD₅) of the waste after the solids removal so that the aeration credit can be calculated based on an adjustment rate of .50 pound for each pound of solids removed.

(6) American Society of Agricultural Engineer's Standards, "Manure Production and Characteristics", D384, shall be used in determining the biochemical oxygen demand (five day) production and volatile solid production of various animal species.

c. [Rescinded.]

d. *Sulfate*. It is recommended that, if the sulfate content of the water supply exceeds 250 mg/l, then an alternate supply of water for dilution should be sought.

e. *Initial lagoon loading*. Prior to the discharge of any waste to the lagoon, the lagoon shall be filled to a minimum of fifty percent of its minimum design volume with fresh water and until the lagoon is filled to its minimum design volume, equal amounts of fresh water shall be added to the lagoon at any time wastes are discharged to the lagoon.

23.5(2) *Criteria for approval of industrial anaerobic lagoons*

a. Lagoons designed to treat 100,000 gpd or less.

(1) The sulfate content of the water supply shall not exceed 250 mg/l. However, this paragraph does not apply to an expansion of an industrial anaerobic lagoon facility which was constructed prior to February 22, 1979.

(2) The design loading rate for the total lagoon volume shall not be less than ten pounds nor more than twenty pounds of biochemical oxygen demand (five day) per thousand cubic feet per day.

b. Lagoons designed to treat more than 100,000 gpd.

(1) The sulfate content of the water supply shall not exceed 100 mg/l. However, this paragraph does not apply to an expansion of an industrial anaerobic lagoon facility which was constructed prior to February 22, 1979.

(2) The design loading rate for the total lagoon volume shall not be less than ten (10) pounds nor more than twenty (20) pounds of biochemical oxygen demand (five day) per thousand cubic feet per day.

23.6(455B) *Alternative emission limits (the "bubble concept")*.

Emission limits for individual emission points included in 23.3(455B) [except 23.3(2)"d", 23.3(2)"b"(3), and 23.3(3)"a"(3)] and 23.4(455B) [except 23.4(12)"b" and 23.4(6)] may be replaced by alternative emission limits. The alternative emission limits must be consistent with 22.7(455B) and 25.1(12). Under this rule, less stringent control limits where costs of emission control are high may be allowed in exchange for more stringent control limits where costs of control are less expensive.

CHAPTER 24 EXCESS EMISSION

24.1(455B) *Excess emission reporting*.

24.1(1) *Excess emission during periods of startup, shutdown, or cleaning of control equipment*. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to a period or periods aggregating not more than six (6) minutes in any sixty (60) minutes.

24.1(2) *Oral report of excess emissions*. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown or cleaning) shall be reported to the appropriate regional office of the department within eight (8) hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in subrule 25.1(6).

An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in subrule 25.1(1) if the incident of excess emission continues for less than thirty (30) minutes and does not exceed the applicable visible emission standard by more than ten percent (10%) opacity.

The oral report may be made in person or by telephone and shall include as a minimum the following:

a. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.

b. The estimated quantity of the excess emission.

c. The time and expected duration of the excess emissions.

d. The cause of the excess emission.

e. The steps being taken to remedy the excess emission.

f. The steps being taken to limit the excess emission in the interim period.

24.1(3) *Written report of excess emission*. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven (7) days of the onset of the upset condition, and shall include as a minimum the following:

a. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.

b. The estimated quantity of the excess emission.

c. The time and duration of the excess emission.

d. The cause of the excess emission.

e. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

f. The steps that were taken to limit the excess emission.

g. If the owner claims that the excess emission was due to malfunction, documentation to support this claim.

24.1(4) *Excess emissions*. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was

d. *Visible emissions.* No person shall allow, cause or permit the emission of visible air contaminants of a density or shade equal to or darker than that designated as Number 2 on the Ringelmann Chart, or 40 percent (40%) opacity, into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, except as provided below and in chapter 24.

(1) *Residential heating equipment.* Residential heating equipment serving dwellings of four (4) family units or less is exempt.

(2) *Gasoline-powered vehicles.* No person shall allow, cause or permit the emission of visible air contaminants from gasoline-powered motor vehicles for longer than five (5) consecutive seconds.

(3) *Diesel-powered vehicles.* No person shall allow, cause or permit the emission of visible air contaminants from diesel-powered motor vehicles of a shade or density equal to or darker than that designated as Number 2 on the Ringelmann Chart, or 40 percent (40%) opacity, for longer than five (5) consecutive seconds.

(4) *Diesel-powered locomotives.* No person shall allow, cause or permit the emission of visible air contaminants from diesel-powered locomotives of a shade or density equal to or darker than that designated as Number 2 on the Ringelmann Chart, or 40 percent (40%) opacity, except for a maximum period of forty (40) consecutive seconds during acceleration under load, or for a period of four (4) consecutive minutes when a locomotive is loaded after a period of idling.

(5) *Startup and testing.* Initial start and warmup of a cold engine, the testing of an engine for trouble, diagnosis or repair, or engine research and development activities, is exempt.

(6) *Uncombined water.* The provisions of this paragraph shall apply to any emission which would be in violation of these

provisions except for the presence of uncombined water, such as condensed water vapor.

23.3(3) *Sulphur compounds.* The provisions of this subrule shall apply to any installation from which sulfur compounds are emitted into the atmosphere.

a. *Sulfur dioxide from use of solid fuels.*

(1) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from an existing solid fuel burning unit, (i.e., a unit which was in operation or for which components had been purchased, or which was under construction prior to September 23, 1970), in an amount greater than 6 pounds, replicated maximum two-hour average, per million Btu of heat input if such unit is located within the following counties: Black Hawk, Clinton, Des Moines, Dubuque, Jackson, Lee, Linn, Lousia, Muscatine, and Scott.

(2) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from an existing solid fuel-burning unit, (i.e., a unit which was in operation or for which components had been purchased, or which was under construction prior to September 23, 1970), in an amount greater than 5 pounds, replicated maximum two-hour average, per million Btu of heat input if such unit is located within the remaining 89 counties of the state not listed in subparagraph 23.3(3)"a"(1).

(3) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from any new solid fuel-burning unit (i.e., a unit which was not in operation or for which components had not been purchased, or which was not under construction prior to September 23, 1970) which has a capacity of 250 million BTU or less per hour heat input, in an amount greater than six (6) pounds, replicated maximum two (2)-hour average, per million BTU of heat input.

(4) Subparagraphs (1) through (3) notwithstanding, a fossil fuel-fired steam generator to which 23.1(2)"a" or 23.1(2)"z" applies shall comply with 23.1(2)"a" or 23.1(2)"z".

b. *Sulfur dioxide from use of liquid fuels.* No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere in an amount greater than 2.5 pounds of sulfur dioxide, replicated maximum two (2)-hour average, per million BTU of heat input from a liquid fuel-burning unit. Notwithstanding this paragraph, a fossil fuel-fired steam generator to which 23.1(2)"a" or 23.1(2)"z" applies shall comply with 23.1(2)"a" or 23.1(2)"z".

c. *Sulfur dioxide from sulfuric acid manufacture.* After January 1, 1975, no person shall allow, cause or permit the emission of sulfur dioxide from an existing sulfuric acid manufacturing plant in excess of thirty (30) pounds of sulfur dioxide, maximum two (2)-hour average, per ton of product calculated as one hundred percent (100%) sulfuric acid.

d. *Acid mist from sulfuric acid manufacture.* After January 1, 1974, no person shall allow, cause or permit the emission of acid mist calculated as sulfuric acid from an existing sulfuric acid manufacturing plant in excess of 0.5 pounds, maximum two (2)-hour average, per ton of product calculated as one hundred percent (100%) sulfuric acid.

e. *Other processes capable of emitting sulfur dioxide.* After January 1, 1974, no person shall allow, cause or permit the emission of sulfur dioxide from any process, other than sulfuric acid manufacture, in excess of 500 parts per million, based on volume. This paragraph shall not apply to devices which have been installed for air pollution abatement purposes where it is demonstrated by the owner of the source that the ambient air quality standards are not being exceeded.

source operation unless a specific emission standard for the process involved is prescribed elsewhere in this chapter, in which case the specific standard shall apply.

23.3(2) *Particulate matter.* No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in chapter 24.

a. *Process weight rate.* The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 22.2(455B), 23.1(455B), 23.4(455B) and chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.

TABLE I
ALLOWABLE RATE OF EMISSION
BASED ON PROCESS WEIGHT
RATE*

Process Weight Rate		Emission Rate		Process Weight Rate		Emission Rate	
Lb/Hr	Tons/Hr	Lb/Hr	Tons/Hr	Lb/Hr	Tons/Hr	Lb/Hr	Tons/Hr
100	0.05	0.55	16,000	8.00	16.5		
200	0.10	0.83	18,000	9.00	17.9		
400	0.20	1.40	20,000	10.00	19.2		
600	0.30	1.83	30,000	15.00	24.2		
800	0.40	2.22	40,000	20.00	30.5		
1,000	0.50	2.58	50,000	25.00	35.4		
1,500	0.75	3.38	60,000	30.00	40.0		
2,000	1.00	4.10	70,000	35.00	41.5		
2,500	1.25	4.76	80,000	40.00	42.5		
3,000	1.50	5.38	90,000	45.00	43.6		
3,500	1.75	5.96	100,000	50.00	44.6		
4,000	2.00	6.52	120,000	60.00	46.3		
5,000	2.50	7.53	140,000	70.00	47.3		
6,000	3.00	8.56	160,000	80.00	49.0		
7,000	3.50	9.49	200,000	100.00	51.2		
8,000	4.00	10.4	1,000,000	500.00	69.0		
9,000	4.50	11.2	2,000,000	1,000.00	77.6		
10,000	5.00	12.0	6,000,000	3,000.00	92.7		
12,000	6.00	13.6					

* Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by the use of the equation

$$E = 4.10 P^{0.47}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation

$$E = 55.0 P^{0.11-40}$$

* Effective date of 9/21/83 delayed 70 days by the administrative rules review committee on 9/14/83.

where E = rate of emission in lb/hr, and
 P = process weight in tons/hr

b. *Combustion for indirect heating.* Emissions of particulate matter from the combustion of fuel for indirect heating or for power generation shall be limited by the ASME Standard APS-1, Second Edition, November, 1968, "Recommended Guide for the Control of Dust Emission—Combustion for Indirect Heat Exchangers". For the purpose of this paragraph, the allowable emissions shall be calculated from equation (15) in that standard, with $Comax^2 = 50$ micrograms per cubic meter. Allowable emissions from a single stack may be estimated from Figure 1. The maximum ground level dust concentrations designated are above the background level. For plants with 4,000 million BTU/hour input or more, the "a" factor shall be 1.0. In plants with less than 4,000 million BTU/hour input, appropriate "a" factors, less than 1.0, shall be applied. Pertinent correction factors, as specified in the standard, shall be applied for installations with multiple stacks. However, for fuel-burning units in operation on January 13, 1976, the maximum allowable emissions calculated under APS-1 for the facility's equipment configuration on January 13, 1976, shall not be increased even if the changes

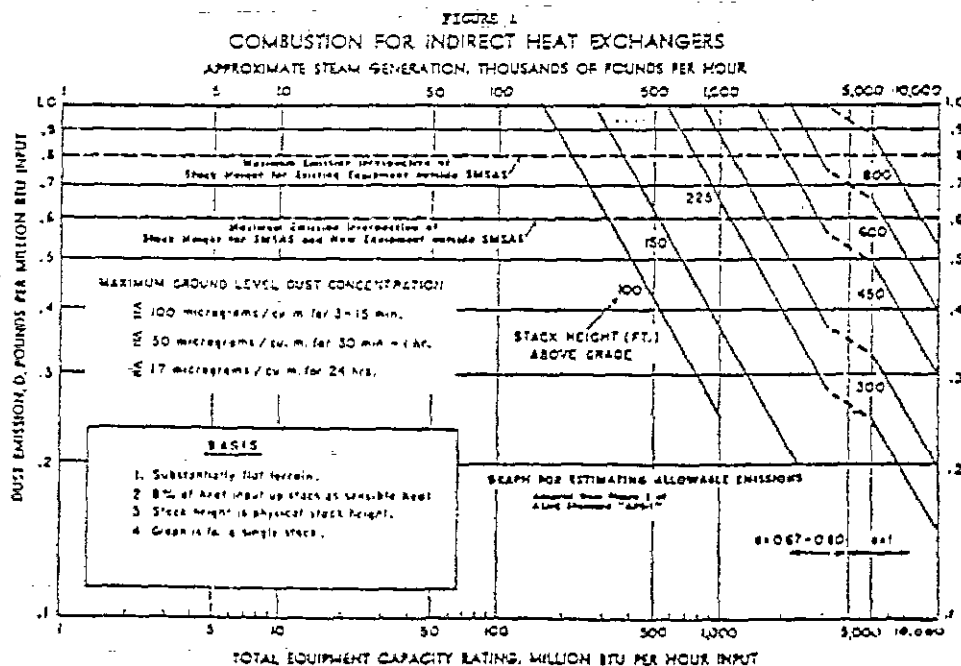
in the equipment configuration would otherwise allow a recalculation and a higher maximum allowable emission under APS-1.

(1) Outside any standard metropolitan statistical area, the maximum allowable emissions from each stack, irrespective of stack height, shall be 0.8 pounds of particulates per million BTU input.

(2) Inside any standard metropolitan statistical area, the maximum allowable emission from each stack, irrespective of stack height, shall be 0.6 pounds of particulates per million BTU input.

(3) For a new fossil fuel-fired steam generating unit of more than 250 million BTU per hour heat input, 23.1(2) "a" shall apply. For a new unit of between 150 million and 250 million (inclusive) BTU per hour heat input, the maximum allowable emissions from such new unit shall be 0.2 pounds of particulates per million BTU of heat input. For a new unit of less than 150 million BTU per hour heat input, the maximum allowable emissions from such new unit shall be 0.6 pounds of particulates per million BTU of heat input.

(4) Measurements of emissions from a particulate source will be made in accordance with the provisions of chapter 25.



ance schedule and the final compliance date will not be delayed by the use of alternative emission limits.

22.7(2) Demonstration requirements. The applicant for the alternative emission control program shall have the burden of demonstrating that:

a. The alternative emission control program will not interfere with the attainment and maintenance of ambient air quality standards, including the reasonable further progress or prevention of significant deterioration requirements of the Clean Air Act;

b. The alternative emission limits are equivalent to existing emission limits in pollution reduction, enforceability, and environmental impact; (In the case of a particulate nonattainment area, the difference between the allowable emission rate and the actual emission rate, as of January 1, 1978, cannot be credited in the emissions tradeoff.)

c. The pollutants being exchanged are comparable and within the same pollutant category;

d. Hazardous air pollutants designated in 40 CFR Part 61 will not be exchanged for nonhazardous air pollutants;

e. The alternative program will not result in any delay in compliance by any source.

Specific situations may require additional demonstration as specified at 44 FR 71780-71788, December 11, 1979, or as requested by the director.

22.7(3) Approval process.

a. The director shall review all alternative emission control program proposals and shall make recommendations on all completed demonstrations to the commission.

b. After receiving recommendation from the director and public comments made available through the hearing process, the commission may approve or disapprove the alternative emission control program proposal.

c. If approved by the commission, the program will be forwarded to the EPA regional administrator as a revision to the State Implementation Plan. The alternative emission control program must receive the approval of the EPA regional administrator prior to becoming effective.

CHAPTER 23 EMISSION STANDARDS FOR CONTAMINANTS

23.1(455B) Emission standards.

23.1(1) In general. The federal standards of performance for new stationary sources (new source performance standards) shall be applicable as specified in subrule 23.1(2). The federal standards for

hazardous air pollutants (national emissions standards for hazardous air pollutants) shall be applicable as specified in subrule 23.1(3). Compliance with emission standards specified elsewhere in this chapter shall be in accordance with chapter 21 of these rules.

23.1(2) New source performance standards. The federal standards of performance for new stationary sources, as defined in 40 Code of Federal Regulations Part 60 as amended or corrected through January 29, 1988, are adopted by reference and shall apply to the following affected facilities. The corresponding 40 C.F.R. Part 60 subpart designation is in parentheses. Reference test methods (Appendix A), performance specifications (Appendix B) determination of emission rate change (Appendix C), quality assurance procedures (Appendix F) and the general provisions (Subpart A) of 40 C.F.R. Part 60 also apply to the affected facilities.

a. **Fossil fuel-fired steam generators.** A fossil fuel-fired steam generating unit of more than 250 million BTU heat input for which construction, reconstruction, or modification is commenced after August 17, 1971. Any facility covered under paragraph "z" is not covered under this paragraph. (Subpart D)

b. **Incinerators.** An incinerator of more than 50 tons per day charging rate. (Subpart E)

c. **Portland cement plants.** Any of the following in a portland cement plant: Kiln; clinker cooler; raw mill system; finish mill system; raw mill dryer; raw material storage; clinker storage; finished product storage; conveyor transfer points; bagging and bulk loading and unloading systems. (Subpart F)

d. **Nitric acid plants.** A nitric acid production unit. (Subpart G)

e. **Sulfuric acid plants.** A sulfuric acid production unit. (Subpart H)

f. **Asphalt concrete plants.** An asphalt concrete plant. (Subpart I)

g. **Petroleum refineries.** Any of the following at a petroleum refinery: Fluid catalytic cracking unit catalyst regenerator; fluid catalytic cracking unit incinerator-waste heat boilers; fuel gas combustion devices; and claus sulfur recovery plants greater than 20 long tons per day. (Subpart J)

h. **Secondary lead smelters.** Any of the following in a secondary lead smelter: Pot furnaces of more than 250 kilograms (550 pounds) charging capacity; blast (cupola) furnaces; and reverberatory furnaces. (Subpart L)

i. **Secondary brass and bronze ingot production plants.** Any of the following at

a secondary brass and bronze ingot production plant: reverberatory and electric furnaces of 1000/kilograms (2205 pounds) or greater production capacity and blast (cupola) furnaces of 250 kilograms per hour (550 pounds per hour) or greater production capacity. (Subpart M)

j. **Iron and steel plants.** A basic oxygen process furnace. (Subpart N)

k. **Sewage treatment plants.** An incinerator which burns the sludge produced by municipal sewage treatment plants. (Subpart O)

l. **Steel plants.** Either of the following at a steel plant: Electric arc furnaces and dust handling equipment, the construction, modification, or reconstruction of which commenced after October 21, 1974, and on or before August 17, 1983. (Subpart AA)

m. **Primary copper smelters.** Any of the following at a primary copper smelter: Dryer, roaster, smelting furnace and copper converter. (Subpart P)

n. **Primary zinc smelters.** Either of the following at a primary zinc smelter: A roaster or a sintering machine. (Subpart Q)

o. **Primary lead smelter.** Any of the following at a primary lead smelter: Sintering machine, sintering machine discharge end, blast furnace, dross reverberatory furnace, converter and electric smelting furnaces. (Subpart R)

p. **Primary aluminum reduction plants.** Either of the following at a primary aluminum reduction plant: Potroom groups and anode bake plants. (Subpart S)

q. **Wet process phosphoric acid plants in the phosphate fertilizer industry.** A wet process phosphoric acid plant, which includes any combination of the following: Reactors, filters, evaporators and hotwells. (Subpart T)

r. **Superphosphoric acid plants in the phosphate fertilizer industry.** A superphosphoric acid plant, which includes any combination of the following: Evaporators, hotwells, acid sumps, and cooling tanks. (Subpart U)

s. **Diammonium phosphate plants in the phosphate fertilizer industry.** A granular diammonium phosphate plant, which includes any combination of the following: Reactors, granulators, dryers, coolers, screens and mills. (Subpart V)

t. **Triple superphosphate plants in the phosphate fertilizer industry.** A triple superphosphate plant, which includes any combination of the following: Mixers, curing belts (dens), reactors, granulators, dryers, cookers, screens, mills and facilities which store run-of-pile triple superphosphate. (Subpart W)

u. Granular triple superphosphate storage facilities in the phosphate fertilizer industry. A granular triple superphosphate storage facility, which includes any combination of the following: Storage or curing piles, conveyors, elevators, screens and mills. (Subpart X)

v. Coal preparation plants. Any of the following at a coal preparation plant which processes more than 200 tons per day: Thermal dryers; pneumatic coal cleaning equipment (air tables); coal processing and conveying equipment (including breakers and crushers); coal storage systems; and coal transfer and loading systems. (Subpart Y)

w. Ferroalloy production. Any of the following: Electric submerged arc furnaces which produce silicon metal, ferrosilicon, calcium silicon, silicomanganese zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome standard ferromanganese, silicomanganese, ferromanganese silicon, or calcium carbide; and dust-handling equipment. (Subpart Z)

x. Kraft pulp mills. Any of the following in a kraft pulp mill: Digester system; brown stock washer system; multiple effect evaporator system; black liquor oxidation system; recovery furnace; smelt dissolving tank; lime kiln; and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of the standard of performance are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation. (Subpart BB)

y. Lime manufacturing plants. A rotary lime kiln or a lime hydrator used in the manufacture of lime at other than a kraft pulp mill. (Subpart HH)

z. Electric utility steam generating units. An electric utility steam generating unit that is capable of combusting more than 250 million BTUs per hour (73 megawatts) heat input of fossil fuel for which construction or modification or reconstruction is commenced after September 18, 1978, or an electric utility combined cycle gas turbine that is capable of combusting more than 250 million BTUs per hour (73 megawatts) heat input of fossil fuel in the steam generator. (Subpart Da)

aa. Stationary gas turbines. Any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self-propelled. It may, however, be mounted on a vehicle for portability. (Subpart GG)

bb. Petroleum storage vessels. Unless exempted, any storage vessel for petroleum

liquids for which the construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978, having a storage capacity greater than 151,412 liters (40,000 gallons). (Subpart K)

cc. Petroleum storage vessels. Unless exempted, any storage vessel for petroleum liquids for which the construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984, having storage capacity greater than 151,416 liters (40,000 gallons). (Subpart Ka)

dd. Glass manufacturing plants. Any glass melting furnace. (Subpart CC)

ee. Automobile and light-duty truck surface coating operations at assembly plants. Any of the following in an automobile or light-duty truck assembly plant: Prime coat operations, guide coat operations, and topcoat operations. (Subpart MM)

ff. Ammonium sulfate manufacture. Any of the following in the ammonium sulfate industry: Ammonium sulfate dryers in the caprolactam by-product, synthetic, and coke oven by-product sectors of the industry. (Subpart PP)

gg. Surface coating of metal furniture. Any metal furniture surface coating operation in which organic coatings are applied. (Subpart EE)

hh. Lead-acid battery manufacturing plants. Any lead-acid battery manufacturing plant which uses any of the following: Grid casting, paste mixing, three-process operation, lead oxide manufacturing, lead reclamation, other lead-emitting operations. (Subpart KK)

ii. Phosphate rock plants. Any phosphate rock plant which has a maximum plant production capacity greater than four tons per hour including the following: Dryers, calciners, grinders, and ground rock handling and storage facilities, except those facilities producing or preparing phosphate rock solely for consumption in elemental phosphorus production. (Subpart NN)

jj. Graphic arts industry. Publication rotogravure printing. Any publication rotogravure printing press except proof presses. (Subpart QQ)

kk. Industrial surface coating — large appliances. Any surface coating operation in a large appliance surface coating line. (Subpart SS)

ll. Metal coil surface coating. Any of the following at a metal coil surface coating operation: Prime coat operation, finish coat operation, and each prime and finish coat operation combined when the finish coat is applied wet on wet over the prime

coat and both coatings are cured simultaneously. (Subpart TT)

mm. Asphalt processing and asphalt roofing manufacturing. Any saturator, mineral handling and storage facility at asphalt roofing plants; and any asphalt storage tank and any blowing still at asphalt processing plants, petroleum refineries, and asphalt roofing plants. (Subpart UU)

nn. Equipment leaks of VOC in the synthetic organic chemicals manufacturing industry. Any pumps, compressors, pressure relief devices, sampling systems, valves and lines which handle volatile organic compounds (VOC). (Subpart VV)

oo. Beverage can surface coating. Any beverage can surface coating lines for two-piece steel or aluminum containers in which soft drinks or beer are sold. (Subpart WW)

pp. Bulk gasoline terminals. The total of all loading racks at bulk gasoline terminals which deliver liquid product into gasoline tank trucks. (Subpart XX)

qq. Pressure sensitive tape and label surface coating operations. Any coating line used in the tape manufacture of pressure sensitive tape and label materials. (Subpart RR)

rr. Metallic mineral processing plants. Any ore processing and handling equipment. (Subpart LL)

ss. Synthetic fiber production facilities. Any solvent-spun synthetic fiber process that produces more than 500 megagrams of fiber per year. (Subpart HHH)

tt. Equipment leaks of VOC in petroleum refineries. A compressor and all equipment (defined in 40 C.F.R. Part 60.591) within a process unit for which the construction, reconstruction, or modification commenced after January 4, 1983. (Subpart GGG)

uu. Flexible vinyl and urethane coating and printing. Each rotogravure printing line used to print or coat flexible vinyl or urethane products. (Subpart FFF)

vv. Petroleum dry cleaners. Petroleum dry cleaning plant with a total manufacturer's rated dryer capacity equal to or greater than 38 kilograms (84 pounds); Petroleum solvent dry cleaning dryers, washers, filters, stills, and settling tanks. (Subpart JJJ)

ww. Electric arc furnaces and argon-oxygen decarburization vessels constructed after August 17, 1983. Steel plants that

Kentucky Air Pollution Control Regulations

an engineering analysis by the department of: the control system design, control device efficiency, control system capture efficiency and any other factors that could influence the performance of the system. If so requested by the department, performance tests as specified by the department shall be conducted in order to determine the efficiency of the control device.

401 KAR 61:065. Existing nitric acid plants.

Section 1. Applicability. The provisions of this regulation shall apply to each affected facility which means each nitric acid production unit commenced before the classification date defined below.

Section 2. Definitions. As used in this regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010.

(1) "Nitric acid production unit" means any facility producing weak nitric acid by either the pressure or atmospheric pressure process.

(2) "Weak acid production unit" means acid which is thirty (30) to seventy (70) percent by weight in strength.

(3) "Classification date" means August 17, 1971.

Section 3. Standard for Nitrogen Oxides. On and after the date on which the performance test required to be conducted by 401 KAR 61:005, Section 2, is completed, no owner or operator subject to the provisions of this regulation shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain nitrogen oxides, expressed as nitrogen dioxide, in excess of 2.9 kg per metric ton of acid produced (5.8 lb. per ton), the production being expressed as 100 percent nitric acid.

(2) Exhibit ten (10) percent opacity, or greater.

Section 4. Test Methods and Procedures. (1) The reference methods as defined in Appendix A of 40 CFR 60, filed by reference in 401 KAR 50:015, except as provided for in 401 KAR 50:045, shall be used to determine compliance with the standard prescribed in Section 3 as follows:

(a) Reference Method 7 for the concentration of nitrogen oxides;

(b) Reference Method 1 for sample and velocity traverses;

(c) Reference Method 2 for velocity and volumetric flow rate; and

(d) Reference Method 3 for gas analysis.

(2) The sampling point shall be the center of the stack or duct at a point no closer to the walls than one (1) meter (3.28 feet). Each run shall consist of at least four (4) grab samples taken at approximately fifteen (15) minute intervals. The arithmetic mean of the samples shall constitute the run value. A velocity traverse shall be performed once per run.

(3) Acid production rate, expressed in metric tons per hour of 100 percent nitric acid, shall be determined during each testing period by suitable methods and shall be confirmed by a material balance over the production system.

(4) For each run, nitrogen oxides, expressed in g/metric ton of 100 percent nitric acid, shall be determined by dividing the emission rate in g/hour by the acid production rate. The emission rate shall be determined by the equation:

$$g/hr = (Qx) (c)$$

where:

Qx = volumetric flow rate of the effluent in dscm/hr, and

c = nitrogen oxides concentration in g/dscm.

401 KAR 61:070. Existing ferroalloy production facilities.

Section 1. Applicability. The provisions of this regulation are applicable to the following affected facilities commenced before the classification date defined below: electric submerged arc furnaces which produce silicon metal, ferrosilicon, calcium silicon, silicomanganese, zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, ferromanganese silicon, or calcium carbide; and dust-handling equipment.

Section 2. Definitions. As used in this regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010.

(1) "Electric submerged arc furnace" means any furnace wherein electrical energy is converted to heat energy by transmission of current between electrodes partially submerged in the furnace charge.

(2) "Furnace charge" means any material introduced into the electric submerged arc furnace and may consist of, but is not limited to ores, slag, carbonaceous material, and limestone.

(3) "Product change" means any change in the composition of the furnace charge that would cause the electric submerged arc furnace to become subject to a different mass standard applicable under Section 3.

(4) "Slag" means the more or less completely fused and vitrified matter separated during the reduction of metal from its ore.

(5) "Tapping" means the removal of slag or product from the electric submerged arc furnace under normal operating conditions such as removal of metal under normal pressure and movement by gravity down the spout into the ladle.

(6) "Tapping period" means the time duration from initiation of the process of opening the tap hole until plugging of the tap hole is complete.

(7) "Furnace cycle" means the time period from completion of a furnace product tap to the completion of the next consecutive product tap.

(8) "Tapping station" means that general area where molten product or slag is removed from the electric submerged arc furnace.

(9) "Blowing tap" means any tap in which an evolution of gas forces or projects jets of flame or metal sparks beyond the ladle, runner or collection hood.

(10) "Furnace power input" means the resistive electrical power consumption of an electric submerged arc furnace as measured in kilowatts.

(11) "Dust-handling equipment" means any equipment used to handle particulate matter collected by the air pollution control device (and located at or near such device) serving any electric submerged arc furnace subject to this regulation.

(12) "Control device" means the air pollution control equipment used to remove particulate matter generated by an electric submerged arc furnace from an effluent gas stream.

(13) "Capture system" means the equipment (including hoods, ducts, fans, dampers, etc.) used to capture or transport particulate matter generated by an affected electric submerged arc furnace to the control device.

(14) "Standard ferromanganese" means that alloy as defined by ASTM A-99-66(71) (ASTM designations are filed by reference in 401 KAR 50:015).

(15) "Silicomanganese" means that alloy as defined by ASTM A-483-64(74).

(16) "Calcium carbide" means material containing seventy (70) to eighty-five (85) percent calcium carbide by weight.

(17) "High-carbon ferrochrome" means that alloy as defined by ASTM A-101-73 grade HC1 through HC6.

(18) "Charge chrome" means that alloy containing fifty-two (52) to seventy (70) percent by weight chromium, five (5) to eight (8) percent by weight carbon, and three (3) to six (6) percent by weight silicon.

(19) "Silvery iron" means any ferrosilicon, as defined by ASTM A-100-69(74), which contains less than thirty (30) percent silicon.

(20) "Ferrochrome silicon" means that alloy as defined by ASTM A-482-66(71).

(21) "Silicomanganese zirconium" means that alloy containing sixty (60) to sixty-five (65) percent by weight silicon, 1.5 to 2.5 percent by weight calcium, five (5) to seven (7) percent by weight zirconium, 0.75 to 1.25 percent by weight aluminum, five (5) to seven (7) percent by weight manganese, and two (2) to three (3) percent by weight barium.

(22) "Calcium silicon" means that alloy as defined by ASTM A-495-64(70).

(23) "Ferrosilicon" means that alloy as defined by ASTM A-100-69(74) grades A,B,C,D, and E which contains fifty (50) or more percent by weight silicon.

(24) "Silicon metal" means any silicon alloy containing more than ninety-six (96) percent silicon by weight.

(25) "Ferromanganese silicon" means that alloy containing sixty-three (63) to sixty-six (66) percent by weight manganese, twenty-eight (28) to thirty-two (32) percent by weight silicon, and a maximum of 0.08 percent by weight carbon.

(26) "Classification date" means October 21, 1974.

(27) "Concentrated discharge" means that the outlet from a control device consists of either stacks (one (1) or more) or openings on the device's top or side which has (have) a total area less than five (5) percent of the corresponding top or side and which has (have) a length of not more than twice the width.

(28) "Dispersed discharge" means that the outlet from a control device consists of opening(s) on the device's top or side which has (have) a total area exceeding five (5) percent of the corresponding top or side or which has (have) a length more than

twice the width. A control device may have both dispersed and concentrated discharges.

Section 3. Standard for Particulate Matter. (1) On and after the date on which the performance test required to be conducted by 401 KAR 61:005 is completed, no owner or operator subject to the provisions of this regulation shall cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which:

(a) Exit from a control device and exhibit an opacity equal to or greater than three (3) percent, where control device has dispersed discharge.

(b) Exit from any building opening and exhibit an opacity equal to or greater than:

1. Fifteen (15) percent for those gases which are the result of routine smelting/melting operations where no auxiliary operations will occur;

2. Twenty (20) percent for those gases which are from a furnace associated with metallurgical treatment while no auxiliary operations are occurring;

3. Twenty-five (25) percent for those gases which are the result of tapping operations;

4. Forty (40) percent for those gases which occur only during a metallurgical treatment; or

5. Forty (40) percent for those gases which occur during the pouring of metal from slag ladles into castbeds or molds.

(2) On and after the date on which the performance test required to be conducted by 401 KAR 61:005 is completed, no owner or operator subject to the provisions of this regulation shall cause to be discharged into the atmosphere from any dust-handling equipment any gases which exhibit fifteen (15) percent opacity or greater.

Section 4. Test Methods and Procedures. Reference Method 9 in Appendix A of 40 CFR 60, filed by reference in 401 KAR 50:015, except as provided in 401 KAR 50:045, shall be used to determine compliance with the standards prescribed in Section 3.

401 KAR 61:075. Steel plants and foundries using existing electric arc furnaces.

Section 1. Applicability. The provisions of this regulation apply to the following affected facilities in steel plants and

foundries commenced before the classification date defined below: electric arc furnaces and/or associated metallurgical equipment located in the same shop as well as associated dust-handling equipment.

Section 2. Definitions. As used in this regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010.

(1) "Electric arc furnace (EAF)" means any furnace that produces molten steel and heats the charge materials with electric arcs from carbon electrodes. Furnaces from which the molten steel is cast into the shape of finished products, such as in a foundry, are affected facilities included within the scope of this definition. Furnaces which, as the primary source of iron, continuously fed pre-reduced ore pellets are not affected facilities within the scope of this definition.

(2) "Dust-handling equipment" means any equipment used to handle particulate matter collected by the control device and located at or near the control device for an EAF subject to this regulation.

(3) "Control device" means the air pollution control equipment used to remove particulate matter generated by an EAF(s) from the effluent gas stream.

(4) "Capture system" means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture or transport particulate matter generated by an EAF and associated metallurgical equipment to the air pollution control device.

(5) "Associated metallurgical equipment" in the shop includes but is not limited to scrap pre-heaters and degreasers, and equipment for hot metal transfer, charging, lancing, boiling, slagging and de-slagging, tapping, inoculating, teeming, hot-topping, vacuum degassing, continuous casting, etc.

(6) "Charge" means the addition of iron and steel scrap or other materials into the top of an electric arc furnace.

(7) "Charging period" means the time period commencing at the moment an EAF starts to open and ending three (3) minutes after the EAF roof is returned to its closed position.

(8) "Tap" means the pouring of molten steel from an EAF.

(9) "Tapping period" means the time period commencing at the moment an EAF begins to tilt to pour and ending

tuminous, or lignite by ASTM D-388-66(72).

(5) "Cyclonic flow" means a spiraling movement of exhaust gases within a duct or stack.

(6) "Thermal dryer" means any facility in which the moisture content of bituminous coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere.

(7) "Pneumatic coal-cleaning equipment" means any facility which classifies bituminous coal by size or separates bituminous coal from refuse by application of air stream(s).

(8) "Coal processing and conveying equipment" means any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts.

(9) "Coal storage system" means any facility used to store coal including open storage piles.

(10) "Transfer and loading system" means any facility used to transfer and load coal for shipment.

Section 3. Standards for Particulate Matter. (1) On and after the date on which the performance test required to be conducted by 401 KAR 59:005, Section 2, is completed, an owner or operator subject to the provisions of this regulation shall not cause to be discharged into the atmosphere from any thermal dryer, gases which:

(a) Contain particulate matter in excess of 0.070 g/dscf (0.031 gr/dscf).

(b) Exhibit twenty (20) percent opacity or greater.

(2) On and after the date on which the performance test required to be conducted by 401 KAR 59:005, Section 2, is completed, an owner or operator subject to the provisions of this regulation shall not cause to be discharged into the atmosphere from any pneumatic coal-cleaning equipment, gases which:

(a) Contain particulate matter in excess of 0.040 g/dscf (0.018 gr/dscf).

(b) Exhibit ten (10) percent opacity or greater.

(3) On and after the date on which the performance test required to be conducted by 401 KAR 59:005 Section 2, is completed, an owner or operator subject to the

provisions of this regulation shall not cause to be discharged into the atmosphere from any coal processing and/or conveying equipment, coal storage system, or coal transfer and/or loading system processing coal gases which exhibit twenty (20) percent opacity or greater.

Section 4. Monitoring of Operations.

(1) The owner or operator of any thermal dryer shall install, calibrate, maintain, and continuously operate monitoring devices as follows:

(a) A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within plus or minus three (3) Fahrenheit.

(b) For affected facilities that use venturi scrubber emission control equipment:

1. A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within plus or minus one (1) inch water gage.

2. A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within plus or minus five (5) percent of design water supply pressure. The pressure sensor or tap must be located close to the water discharge point. The department may be consulted for approval of alternative locations.

(2) All monitoring devices under subsection (1) of this section are to be recalibrated annually in accordance with procedures under 401 KAR 59:005, Section 4(2).

Section 5. Test Methods and Procedures. (1) The reference methods as defined in Appendix A of 40 CFR 60, filed by reference in 401 KAR 50:015, except as provided in 401 KAR 50:045 and in Section 3, are to be used to determine compliance with the standards prescribed in Section 3 as follows:

(a) Reference Method 5 for the concentration of particulate matter and associated moisture content;

(b) Reference Method 1 for sample and velocity traverses;

(c) Reference Method 2 for velocity and volumetric flow rate;

(d) Reference Method 3 for gas analysis; and

(e) Reference Method 9 for visible emissions.

(2) For Reference Method 5, the sampling time for each run is at least sixty (60) minutes and the minimum sample volume is 0.85 dscm (thirty (30) dscf) except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the department. Sampling is not to be started until thirty (30) minutes after startup and is to be terminated before shutdown procedures commence. The owner or operator of the affected facility shall eliminate cyclonic flow during performance tests in a manner acceptable to the department.

(3) The owner or operator shall construct the facility so that particulate emissions from thermal dryers or pneumatic coal-cleaning equipment can be accurately determined by applicable test methods and procedures under subsection (1) of this section.

401 KAR 59:160. New ferroalloy production facilities.

Section 1. Applicability. The provisions of this regulation are applicable to the following affected facilities: electric submerged arc furnaces which produce silicon metal, ferrosilicon, calcium silicon, silicomanganese zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, ferromanganese silicon, or calcium carbide; and dust-handling equipment, commenced on or after the classification date defined below.

Section 2. Definitions. As used in this regulation all terms not defined herein shall have the meaning given them in 401 KAR 50:010.

(1) "Electric submerged arc furnace" means any furnace wherein electrical energy is converted to heat energy by transmission of current between electrodes partially submerged in the furnace charge.

(2) "Furnace charge" means any material introduced into the electric submerged arc furnace and may consist of, but is not limited to, ores, slag, carbonaceous material, and limestone.

(3) "Product change" means any change in the composition of the furnace charge that would cause the electric submerged arc furnace to become subject to a different mass standard applicable under this regulation.

(4) "Slag" means the more or less completely fused and vitrified matter separated during the reduction of metal from its ore.

(5) "Tapping" means the removal of slag or product from the electric submerged arc furnace under normal operating conditions such as removal of metal under normal pressure and movement by gravity down the spout into the ladle.

(6) "Tapping period" means the time duration from initiation of the process of opening the tap hole until plugging of the tap hole is complete.

(7) "Furnace cycle" means the time period from completion of a furnace product tap to the completion of the next consecutive product tap.

(8) "Tapping station" means that general area where molten product or slag is removed from the electric submerged arc furnace.

(9) "Blowing tap" means any tap in which an evolution of gas forces or projects jets of flame or metal sparks beyond the ladle, runner or collection hood.

(10) "Furnace power input" means the resistive electrical power consumption of an electric submerged arc furnace as measured in kilowatts.

(11) "Dust-handling equipment" means any equipment used to handle particulate matter collected by the air pollution control device (and located at or near such device) serving any electric submerged arc furnace subject to this regulation.

(12) "Control device" means the air pollution control equipment used to remove particulate matter generated by an electric submerged arc furnace from an effluent gas stream.

(13) "Classification date" means October 21, 1974.

(14) "Capture system" means the equipment (including hoods, ducts, fans, dampers, etc.) used to capture or transport particulate matter generated by an affected electric submerged arc furnace to the control device.

(15) "Standard ferromanganese" means that alloy as defined by ASTM A-99-66(71). (ASTM designations are filed by reference in 401 KAR 50:015.)

(16) "Silicomanganese" means that alloy as defined by ASTM A-483-64(74).

(17) "Calcium carbide" means material containing seventy (70) to eighty-five (85) percent calcium carbide by weight.

(18) "High-carbon ferrochrome" means that alloy as defined by ASTM A-101-73 grades HC1 through HC6.

(19) "Charge chrome" means that alloy containing fifty-two (52) to seventy (70) percent by weight chromium, five (5) to eight (8) percent by weight carbon, and three (3) to six (6) percent by weight silicon.

(20) "Silvery iron" means any ferrosilicon, as defined by ASTM A-100-69(74), which contains less than thirty (30) percent silicon.

(21) "Ferrochrome silicon" means that alloy as defined by ASTM A-482-66(71).

(22) "Silicomanganese zirconium" means that alloy containing sixty (60) to sixty-five (65) percent by weight silicon, 1.5 to 2.5 percent by weight calcium, five (5) to seven (7) percent by weight zirconium, 0.75 to 1.25 percent by weight aluminum, five (5) to seven (7) percent by weight manganese, and two (2) to three (3) percent by weight barium.

(23) "Calcium silicon" means that alloy as defined by ASTM A-495-64(70).

(24) "Ferrosilicon" means that alloy as defined by ASTM A-100-69 grades A, B, C, D, and E which contains fifty (50) or more percent by weight silicon.

(25) "Silicon metal" means any silicon alloy containing more than ninety-six (96) percent silicon by weight.

(26) "Ferromanganese silicon" means that alloy containing sixty-three (63) to sixty-six (66) percent by weight manganese, twenty-eight (28) to thirty-two (32) percent by weight silicon, and a maximum of 0.08 percent by weight carbon.

(27) "Concentrated discharge" means that the outlet from a control device consists of either stacks (one (1) or more) or openings on the device's top or side which has (have) a total area less than five (5) percent of the corresponding top or side and which has (have) a length of not more than twice the width.

(28) "Dispersed discharge" means that the outlet from a control device consists of opening(s) on the device's top or side which has (have) a total area exceeding five (5) percent of the corresponding top or side or which have a length more than twice the width. A control device may have both dispersed and concentrated discharges.

Section 3. Standard for Particulate Matter. (1) On and after the date on which the performance test required to be

conducted by 401 KAR 59:005, Section 2, is completed, no owner or operator subject to the provisions of this regulation shall cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which:

(a) Exit from a control device and contain particulate matter in excess of:

1. 0.45 kg/MW-hr (0.99 lb/MW-hr) while silicon metal, ferrosilicon, calcium silicon, or silicomanganese zirconium is being produced.

2. 0.23 kg/MW-hr (0.51 lb/MW-hr) while high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, calcium carbide, ferrochrome silicon, ferromanganese silicon, or silvery iron is being produced.

(b) Exit from a control device and exhibit an opacity equal to or greater than:

1. Three (3) percent where a control device located in or impacting on a non-attainment area for particulates has dispersed discharge.

2. Fifteen (15) percent for all other control devices.

(c) Exit from an electric submerged arc furnace and escape the capture system and are visible without the aid of instruments. The requirements under this paragraph apply only during periods when flow rates are being established under Section 6(4).

(d) Escape the capture system at the tapping station and are visible without the aid of instruments for more than forty (40) percent of each tapping period. There are no limitations on visible emissions under this paragraph when a blowing tap occurs. The requirements under this paragraph apply only during periods when flow rates are being established under Section 6(4).

(2) On and after the date on which the performance test required to be conducted by 401 KAR 59:005, Section 2, is completed, no owner or operator subject to the provisions of this regulation shall cause to be discharged into the atmosphere from any dust-handling equipment any gases which exhibit ten (10) percent opacity or greater.

Section 4. Standard for Carbon Monoxide. On and after the date on which the performance test required to be conducted by 401 KAR 59:005, Section 2, is completed, no owner or operator subject to the provisions of this regulation shall cause to be discharged into the atmosphere from

Amendment to Cost per Ton of Control
for Blowing Tapholes, Poling and Oxygen Lancing of Tapholes
at American Alloys

If the \$2,199,000.00 cost for initial equipment installation is depreciated using a seven (7) year declining balance method, consistent with "Tax" policies, then an average of \$285,714.00 per year must be added to the operation and maintenance cost to represent the decline in equipment value.

\$909,000 Operational Cost + \$285,714 Capital Amortization
= \$1,194,714 Cost per Year

<u>\$1,194,714 Cost</u>	X	<u>1 Year</u>	
Year		31.76 Ton	--

= \$37,616.94 Cost per Ton of particulate control for Blowing Tapholes, Poling and Oxygen Lancing of Tapholes.

The original building evacuation cost estimation assumed that the building could function as a temporary storage vessel until the atmosphere was ventilated through emission control equipment. Ventilation flow rates were estimated so that OSHA Permissible Exposure Limits for respirable dust would not be exceeded at the production floor. This estimation strategy failed to consider that not all employees work on the production floor. Specifically, an overhead crane operator's work area is very near the building's roof. Ventilation flow rates need to be estimated so that crane operators are not subjected to an atmosphere where OSHA Permissible Exposure Limits are exceeded. This drastically reduces the potential volume of the building which could be utilized as a storage vessel, and dramatically increases the minimum air flow rate for ventilation. Ventilating building atmosphere and replacing with make-up air requires a minimum air flow rate of 3,000,000 ACFM to ensure that no employee is subjected to an atmosphere where OSHA Permissible Exposure Limits for respirable dust are exceeded.

Increasing the ventilation air flow requirements means increasing the estimated equipment capacities, which results in increased costs for installation and operation. The revised project cost estimate to design, fabricate, and install control equipment associated with building evacuation would be \$4,236,000.00. The estimated annual operational cost of this equipment would be \$2,727,000.00 per year.

If the \$4,236,000.00 cost for initial equipment installation is depreciated using a seven (7) year declining balance method, consistent with "Tax" policies, then an average of \$605,142.00 per year must be added to the operational cost to represent the decline in equipment value

\$2,727,000.00 Operational Costs + \$605,142.86 Amortization

= \$3,332,142.86 Costs

<u>\$3,332,142.86 Costs</u>	X	<u>1 Year</u>
Year		31.76 Tons

= \$104,916.34 Cost per Ton of Particulate Control for Blowing
Tapholes, Poling and Oxygen Lancing of Tapholes.

Cost per Ton of Control for
Blowing Tapholes, Poling, and Oxygen Lancing
Occurring at American Alloys, Inc.

The only control technology currently available to capture emission from blowing tapholes and poling and oxygen lancing of the taphole would be building evacuation. The external building walls would be sealed and the building roof transformed into a hood, ventilating the building atmosphere through a baghouse, and replacing the removed atmosphere with make-up air. Ventilating 100% of building atmosphere and replacing with make-up air requires a minimum air flow rate of 270,000 ACFM to maintain building atmosphere below OSHA Permissible Exposure Limits for respirable dust.

Project cost estimate to design, fabricate, and install control equipment associated with a building evacuation strategy would be \$2,199,000.00.¹ The estimated annual operational cost of this equipment would be \$909,000.00 per year assuming the equipment is utilized 100% of the time, approximately 8,760 hours per year, and an electricity cost of \$0.10 per KW-hr. (based on a feasibility study prepared by Airotech, Inc. for American Alloys dated January 5, 1993 (See Attachment B1)).

Emissions from poling, oxygen lancing, and blowing taps were estimated to average 7.25 pounds particulates per hour (based on emission factors developed by RMT, Inc. for American Alloys dated May 15, 1993 (See Appendix C)).

$$\begin{aligned} \frac{\text{Tons of Particulate}}{\text{Year}} &= \frac{7.25 \text{ Pounds}}{\text{Hour}} \times \frac{8760 \text{ Hours}}{\text{Year}} \times \frac{1 \text{ Ton}}{2000 \text{ Pound}} \\ &= 31.76 \text{ Tons of Particulate/Year} \\ &= \frac{\$909,000 \text{ Operational Cost}}{\text{Year}} \times \frac{1 \text{ Year}}{31.76 \text{ Tons}} \\ &= \$28,620.90 \text{ Operational Cost per ton of} \\ &\quad \text{particulate control for Poling, oxygen} \\ &\quad \text{lancing and blowing taps.} \end{aligned}$$

¹ Airotech's January 5, 1993 feasibility study contained a \$2,000,000.00 cost estimate. The increase to \$2,199,000.00 reflects the addition of the estimated cost to install make-up air equipment.

irotech, Inc.

January 5, 1993

American Alloys, Inc.
Box 218
New Haven, WV 25265-0218

ATTENTION: Robert E. Hice
Environmental & Safety Coordinator

SUBJECT: Fugitive Particulate Emission Control System
Project Cost Estimate
New Haven, WV Plant
American Alloys, Inc. P.O. #AA6579
AIROTECH, INC. Contract No. 1821

Dear Mr. Hice:

AIROTECH, INC. is pleased to submit its project cost estimate for the design, fabrication, supply and installation of one (1) air quality control system to ventilate fugitive particulate emissions from the SAF building at your New Haven, WV plant. Ventilation points include nine (9) 10' x 21' roof monitors and one (1) 4.5' x 118' roof monitor. The CSC report dated 5/26/92 was used as a guide in preparing this estimate.

Ventilation ductwork will gather the fugitive particulate from each monitor into a common 104" dia. duct which will run down the SAF building to a reverse pulse baghouse system located at grade. The baghouse inlet plenum flange is estimated to be 100 ft. from the SAF building wall (see attached drawings). Ductwork under 5 ft. dia. will be 11 GA CS construction. Ductwork 5 ft. dia. and over will be 3/16" CS construction. The baghouse system will consist of reverse pulse type cleaning modules with walk-in plenums for top access to filter bags. Each baghouse module includes electric operated outlet isolation dampers for "off-line" cleaning. Baghouse off-line cleaning will be controlled using a PLC. Two (2) 50% volume fans will be used as the primary air movers.

AIROTECH, INC.'S project estimate includes the design, fabrication, supply and installation an eight (8) module reverse pulse cleaning type-fabric filter system including interconnecting ductwork and fans sized for the following conditions:

A. DESIGN OPERATING CONDITIONS

Gas Volume, ACFM	270,000
Gas Temperature, °F	100
Particulate Type	SAF Fugitive Emission Fume

B. FABRIC FILTER GENERAL DESCRIPTION

No. of Modules	8
No. of Filter Bags per Module	585 (4,680 total)
Filter Bag Diameter	6"
Filter Bag Length	144"
SF Cloth Total	88,248
Air-to-cloth Ratio-Gross	3.0 to 1
Air-to-Cloth Ratio-Net	3.5 to 1 (Module Off-Line)
No. of Pulse Valves per Module	39
Module Model Number	6P-585-12-TA
Bag Access Arrangement	Top Via Walk-In Plenum
Compressed Air Requirement @ 90PSIG	40 SCFM

C. SCOPE OF WORK

1.0 MODULES AND AUXILIARIES

Design, fabricate, supply and install the following:

1.1 HOUSING

10 Gauge HRS plate, welded and stiffened for a pressure of +/-17" W.G. Equipment included:

- 3/16" plate HRS tubesheet seal welded into housing
- 1-1/2" diaphragm pulse valve assemblies
- 110 volt solenoids in a NEMA 4 enclosures
- 5" square compressed air headers including supports
- 20" x 48" quick-opening plenum access door
- 1-1/2" SCH. 40 manifold pipes
- One (1) 44" dia. gas outlet flange
- One (1) 44" dia. gas inlet flange
- 10 GA CS internal gas baffle
- One (1) 44" dia. inlet butterfly damper with manual chainwheel operator and limit switches
- One (1) 44" dia. outlet butterfly damper with electric operator (open-close operation) and limit switches



EQUIPMENT AND SERVICE FOR AIR POLLUTION CONTROL

1.2 HOPPER

One (1) trough dust collection hopper with 60 degree side slope constructed of 10GA HRS plate welded and stiffened for a pressure of +/-17" W.G. Equipment included:

- 18" x 24" bolted access panel
- 9" dia. screw conveyer including drive, motor and OSHA guard
- 10"x 10" rotary airlock mounted on the screw conveyor discharge flange including drive, sprocket and chain (driven by screw conveyor end shaft)

1.3 FIELD MATERIAL

Tubing and fittings for pulse valve/solenoid connections. 10 wire carbon steel bag support cages with integral 6" steel venturis.

1.4 FILTER BAGS

16 oz. per sq. yd. P84/ polyester composite felt, snap band top and disc bottom. Each bag is 6" diameter x 144" long. Maximum temperature = 275°F. Quantity = 4,680.

2.0 SUPPORT STEEL

Support structure designed to support modules with 10'-0" clearance under hopper discharge flanges. Steel designed with cross bracing for 70 MPH wind speed, 55 PCF dust density @ 50% full hopper, 25 PSF snow load and Seismic Zone 1.

3.0 ACCESS FACILITIES

3.1 One (1) common upper level walkway between modules to service plenum doors, solenoids, pulse valves and outlet dampers including galvanized grating, bar and rod handrail and supports.

3.2 Two (2) caged ladders from grade to upper walkway level.



EQUIPMENT AND SERVICE FOR AIR POLLUTION CONTROL

4.0 GAS DISTRIBUTION DUCTWORK

- 4.1 One (1) tapered inlet plenum designed to manifold eight (8) modules in a double width arrangement. Plenum is constructed of 10 GA HRS plate stiffened for +/-17" W.G. Plenum includes 44" dia. flanged gas inlet connection stubs. Plenum is supported from the module support steel.
- 4.2 One (1) tapered outlet plenum designed to manifold eight (8) modules in a double width arrangement. Plenum is constructed of 10 GA HRS plate stiffened for +/-17" W.G. Plenum includes 44" dia. flanged gas outlet connection stubs. Plenum is supported from the module housings.

5.0 VENTILATION DUCTWORK

- 5.1 11GA and 3/16" CS ductwork ventilating existing roof monitors to baghouse inlet plenum including elbows, transitions and support steel. Ductwork is stiffened for +/-17" W.G.
- 5.2 3/16" CS ductwork connecting baghouse outlet plenum to I.D. fan inlets including elbows, transitions and supports. Ductwork is stiffened for +/-17" W.G.
- 5.3 Fan outlet evases and stub stacks - 10 GA CS construction stiffened for +/-17" W.G.

6.0 AIR MOVING EQUIPMENT

Two (2) SWSI centrifugal I.D. fans including:

- Class III construction
- Flanged inlet and outlet
- Inspection access door-bolted
- Housing drain
- Shaft coupling
- Arrangement 8 (direct drive)
- OSHA guards
- 460/60/3, TEFC, motor (400 HP)
- Inlet louver isolation dampers-manual

Each fan is rated for the following conditions:

135,000 CFM 100°F 12" S.P.W.G. 875 RPM 345 BHP



EQUIPMENT AND SERVICE FOR AIR POLLUTION CONTROL

7.0 DUST HANDLING

- 7.1 Two (2) 12" gather screw conveyors including drives, motors, guards and supports.
- 7.2 One (1) 12" main gather screw conveyor including drive, motor, guard and supports.

8.0 ELECTRICAL

- 8.1 One (1) local baghouse control panel per module in NEMA 4 enclosure including:
 - 32 position solid state cleaning cycle timer
 - Magnehelic gauge
 - Nameplates
 - Power on-off switch with indicating light
- 8.2 One (1) main baghouse panel providing damper and "off-line" cleaning control including PLC, indicating lights, pushbuttons, etc, in NEMA 12 enclosure.
- 8.3 One (1) motor control center (MCC) for screw conveyor and I.D. fan motors including starters and main disconnect.

9.0 AIR COMPRESSOR

- 9.1 One (1) compressor including filters and dryer to deliver 100 SCFM of clean, dry compressed air for filter bag cleaning at 90 PSIG.

10.0 PAINTING

All external exposed surfaces (excluding galvanized grating) to receive enamel finish paint.



EQUIPMENT AND SERVICE FOR AIR POLLUTION CONTROL

11.0 FIELD INSTALLATION

Structural and mechanical erection of above equipment including:

- Adequate supervision
- Unloading of equipment at jobsite
- Cranes and hoists, as required
- Welders, torches, tools, supplies, etc.
- Supply and install twenty (20) concrete pads for mounting baghouse module support legs including anchor bolts
- Supply and install two (2) concrete pads for mounting I.D. fans including anchor bolts
- Supply and install eight (8) concrete pads for mounting ductwork support legs including anchor bolts
- Supply and install one (1) concrete pad for mounting air compressor including anchor bolts
- Supply and install low voltage wiring between baghouse control panels and solenoid valves, motors and motor control center, baghouse PLC and module outlet dampers and baghouse PLC and local module solid state timers
- Air piping from new compressor outlet to module air headers

12.0 MISCELLANEOUS

- 12.1 Supply material and field labor to seal openings in SAF building, as required.
- 12.2 Engineering evaluation of the SAF building's structural support system to determine if the existing structure will support the additional roof mounted ductwork.

PURCHASER'S RESPONSIBILITIES

1. Source of clean, dry compressed air @ 90 PSIG (back-up for filter bag cleaning).
2. Electric power including 110 volt, single phase, 60 HZ and 460 volt, 3 PH, 60 HZ.
3. Storage and laydown area.
4. Access to the work site.



EQUIPMENT AND SERVICE FOR AIR POLLUTION CONTROL

5. Parking, toilet and washroom facilities for use by-erection contractor's field personnel.
6. Control room for mounting MCC and main baghouse control panel.
7. Dust disposal beginning at main gather screw conveyor discharge point.
8. All required taxes, licenses, permits, etc.

D. PROJECT COST ESTIMATE

Design, fabricate, supply and install one (1) fugitive particulate emission control system as described herein. Estimated price:

Eight (8) baghouse modules	\$ 679,000
Supports/access/plenums	\$ 140,500
Inlet ductwork/supports	\$ 266,800
Outlet ductwork/supports	\$ 46,300
I.D.fans/evases/stacks	\$ 119,600
Dust handling conveyors	\$ 64,200
Electrical controls	\$ 49,200
Freight to jobsite	\$ 130,000
Mechanical and structural erection	\$ 234,000
Low voltage wiring	\$ 32,500
Foundations	\$ 53,300
Air piping/compressor	\$ 15,600
Seal SAF building	\$ 39,000
SAF building structural analysis	\$ 13,000
Crane rental	\$ 78,000
Erection supervision	\$ 39,000
Total Project Cost	\$ 2,000,000

NOTE: Above price is based upon the use of non-union labor for field work.

OPTIONAL VFD

Supply variable frequency drives (VFD) for the two (2) I.D. fans in lieu of motor starters: Add \$ 80,000.00.



EQUIPMENT AND SERVICE FOR AIR POLLUTION CONTROL

E. OPERATING COST

The estimated annual operating cost of the fugitive emission control system is as follows:

1.) Screw conveyor motors.....	\$ 7,000.00
2.) I.D. fan motors.....	\$ 451,000.00
3.) Air compressor motor.....	\$ 7,000.00
	\$ 465,000.00/year

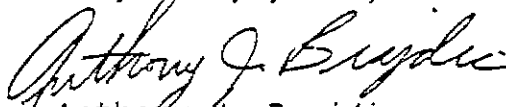
NOTE: Items 1 and 2 operate 100% of the time. Item 3 operates 50% of the time. Total hours per year=8,760. Electricity cost at \$0.10/ KW-HR.

VFD OPTION

Supplying the two (2) I.D. fans with variable frequency drives will reduce fan operating operating cost by \$110,000 per year. This assumes that the I.D. fans can operate at half-speed, 50% of the time.

We appreciate your interest in the equipment and services supplied by AIROTECH, INC. for air pollution control systems. We look forward to working with American Alloys on this project. Please contact the undersigned with further questions on this estimate.

Very truly yours,



Anthony J. Brajdic
Engineering and Service Manager

dcB

Attachments

cc: Motor Coils (P. Adams)

The logo for Airotech, Inc. features a stylized, bold letter 'A' that is partially filled with a diagonal line. To the right of the 'A' is the company name 'irotech, Inc.' in a sans-serif font.

EQUIPMENT AND SERVICE FOR AIR POLLUTION CONTROL



RMT, Inc.
744 Heartland Trail
P.O. Box 8923
Madison, WI 53708-8923
Phone: 608-831-4444
FAX: 608-831-3334

June 30, 1993

Mr. Bob Hice
American Alloys, Inc.
Route 33, East
New Haven, WV 25265

Dear Bob:

Based upon our discussions last Friday with you, Scott Dismukes, and Elkem Metals, we have modified our air quality analysis of the emissions of particulate matter (PM) from blowing taphole, poling and oxygen lancing of the taphole events at your facility (RMT letter, May 11, 1993). The single change in the new analysis is the assumption of a new exit velocity for emissions exiting the roof exhausts during these events. The change was made based upon the exhaust flow rate measurements made by Elkem metals for similar processes at their facility. As you know, the exhaust flow rate used in our previous analysis was based on a buoyancy equation and on assumed temperature differentials between the inside and outside plant air. Elkem Metals has measured the velocity of emissions, which are exhausted from the roof monitors at their facility. Since the processes at Elkem Metals are similar to those at American Alloys in terms of the amount of gases released, the duration of emissions, the temperature, etc., it seems more appropriate to use their measured exhaust exit velocity of 3.39 meters per second in place of the previously used theoretical information. The SCREEN (and VALLEY) models were re-executed using the new exit velocity. There were no other changes in the analysis from that documented in our May 11, 1993, letter to you.

As in the May 11, 1993, analysis, both the downwash (SCREEN model) and complex terrain (VALLEY model) algorithms were used. The revised screening dispersion modeling analyses show a maximum predicted 24-hour PM impact of $14.1 \mu\text{g}/\text{m}^3$ (please see attachments). The highest impact was due to the building downwash effect. This impact is lower than the maximum impact ($24 \mu\text{g}/\text{m}^3$) identified in the May 11, 1993, analysis.

Bob, if you have any questions concerning this analysis, please call me or Dave Fox.

Sincerely,

A handwritten signature in dark ink, appearing to read "Martin J. Stromberger".

Martin J. Stromberger, P.E.
Manager, Industrial Hygiene and
Air Pollution Engineering

jld

Attachments

2706.02 0000.MSA:hice

COMPUTATION SHEET



SHEET

OF

4

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX: (608) 831-3334

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
American Alloys	By: DTF Date: 4/14/93	By: MJS Date: 7/14/93	2708.02

6/28/93

/MJS

6/28/93

Modeling Parameters

Average hourly emissions = 7.25 (0.9144/s) ✓

Assume one stack with equivalent stack diameter

of 8 actual stacks = 45.1' = 13.76m ✓

(facility utilizes (8) 20' x 10' natural draft exhaust stacks)

Exit Velocity = 3.39 m/s (This value was measured for similar processes at the Eiken facility)

Exhaust Temp = 322°K (120°F) ✓

Stack Height = 34m ✓

Bldg Height = 28.9m

Bldg Width x length = 70.1m x 250m

Based upon facility drawing and USGS map:

- Property line is at 200m distance (closest)
- Terrain approximately 180' (54.9m) above stack base (building base) exists at a distance of 500 meters from the stacks

Run SCREEN model using downwash algorithm and using complex terrain algorithm using above parameters.

Model Results

Downwash Algorithm

max. predicted 1-hr impact 35.3 $\mu\text{g}/\text{m}^3$ ✓

convert to 24-hr impact using a conversion factor of 0.40 (USEPA's SCREEN manual)

14.1 $\mu\text{g}/\text{m}^3$ ✓

Complex Terrain Algorithm

max. predicted 24-hr concentration = 8.00 $\mu\text{g}/\text{m}^3$ Note: The ambient air quality standard for particulate matter is 150 $\mu\text{g}/\text{m}^3$

10:29:51

2/4

* SCREEN-1.1 MODEL RUN ***
 * VERSION DATED 88300 ***

AMERICAN ALLOYS

SAMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .9140
 STACK HEIGHT (M) = 34.00
 STK INSIDE DIAM (M) = 13.76
 STK EXIT VELOCITY (M/S) = 3.39
 STK GAS EXIT TEMP (K) = 322.00
 AMBIENT AIR TEMP (K) = 293.00
 RECEPTOR HEIGHT (M) = .00
 IOPT (1=URB,2=RUR) = 2
 BUILDING HEIGHT (M) = 28.90
 MIN HORIZ BLDG DIM (M) = 70.10
 MAX HORIZ BLDG DIM (M) = 250.00

WY. FLUX = 141.71 M**4/S**3; MOM. FLUX = 494.98 M**4/S**2.

* FULL METEOROLOGY ***

 * SCREEN AUTOMATED DISTANCES ***

* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
200.	35.28	6	4.0	7.8	5000.0	42.8	7.7	22.6	SS
300.	23.49	6	4.0	7.8	5000.0	50.5	11.2	28.2	SS
400.	10.79	6	4.0	7.8	5000.0	58.6	14.6	28.6	SS
500.	7.650	4	10.0	12.0	3200.0	46.7	36.1	34.0	SS
600.	5.806	4	10.0	12.0	3200.0	50.8	42.7	35.9	SS
700.	5.254	6	4.0	7.8	5000.0	63.4	24.5	29.7	SS
800.	4.856	6	4.0	7.8	5000.0	63.4	27.6	30.1	SS

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 200. M:

200.	35.28	6	4.0	7.8	5000.0	42.8	7.7	22.6	SS
------	-------	---	-----	-----	--------	------	-----	------	----

WASH= MEANS NO CALC MADE (CONC = 0.0)
 WASH=NO MEANS NO BUILDING DOWNWASH USED
 WASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 WASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 WASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

** CAVITY CALCULATION - 1 ***

CONC (UG/M**3) = 43.56
 CRIT WS @10M (M/S) = 3.03
 CRIT WS @ HS (M/S) = 3.87
 DILUTION WS (M/S) = 1.94
 CAVITY HT (M) = 30.87
 CAVITY LENGTH (M) = 138.33
 ALONGWIND DIM (M) = 70.10

*** CAVITY CALCULATION - 2 ***

CONC (UG/M**3) = 148.1
 CRIT WS @10M (M/S) = 3.18
 CRIT WS @ HS (M/S) = 4.06
 DILUTION WS (M/S) = 2.03
 CAVITY HT (M) = 28.90
 CAVITY LENGTH (M) = 76.37
 ALONGWIND DIM (M) = 250.00

*** SUMMARY OF SCREEN MODEL RESULTS ***

LOCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
AMPLE TERRAIN	35.28	200.	0.
BLDING CAVITY-1	43.56	138.	-- (DIST = CAVITY LENGTH)
BLDING CAVITY-2	148.1	76.	-- (DIST = CAVITY LENGTH)

REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

10:32:11

4/4

SCREEN-1.1 MODEL RUN ***
 VERSION DATED 88300 ***

RICAN ALLOYS COMPLEX TERRAIN

PLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .9140
 STACK HT (M) = 34.00
 STACK DIAMETER (M) = 13.76
 STACK VELOCITY (M/S) = 3.39
 STACK GAS TEMP (K) = 322.00
 AMBIENT AIR TEMP (K) = 293.00
 RECEPTOR HEIGHT (M) = .00
 IOPT (1=URB,2=RUR) = 2

Y. FLUX = 141.71 M**4/S**3; MOM. FLUX = 494.98 M**4/S**2.

AL STABLE PLUME HEIGHT (M) = 124.8

TANCE TO FINAL RISE (M) = 151.3

RRR T (M)	DIST (M)	*VALLEY 24-HR CALCS*			**SIMPLE TERRAIN 24-HR CALCS**				
		MAX 24-HR CONC (UG/M**3)	CONC (UG/M**3)	PLUME HT ABOVE STK BASE (M)	CONC (UG/M**3)	PLUME HT ABOVE STK HGT (M)	SC	U10M USTK (M/S)	
5.	500.	8.006	.6270	124.8	8.006	8.0	4	15.0	18.0
5.	600.	6.022	.5612	124.8	6.022	35.3	6	4.0	7.8
5.	700.	5.821	.5178	124.8	5.821	35.3	6	4.0	7.8
5.	800.	5.595	.4833	124.8	5.595	35.3	6	4.0	7.8
5.	1000.	5.183	.4383	124.8	5.183	35.3	6	4.0	7.8

 *** SUMMARY OF SCREEN MODEL RESULTS ***

LCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
PLEX TERRAIN	8.006	500.	55. (24-HR CONC)

 REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **



RMT, Inc.
744 Heartland Trail
P.O. Box 8923
Madison, WI 53708-8923
Phone: 608-831-4444
FAX: 608-831-3334

May 11, 1993

Mr. Bob Hice
American Alloys, Inc.
Route 33, East
New Haven, WV 25265

Dear Bob:

Attached to this letter is our analysis of the predicted worst-case ambient air impacts resulting from the following operations at your facility: blowing tapholes, poling, and oxygen lancing of the taphole. Our analysis can be divided into two sections as follows:

Emission Estimation

Attachment 1 contains RMT's estimates of the emissions resulting from the above process sources. Most of the emission factors were extrapolated from available data for similar processes or developed based on engineering calculations. When documented emission factors were not readily available, RMT relied on firsthand observations from our site visit and best professional judgement. Table 1 summarizes RMT's estimated emissions from the process operations evaluated. In general, the Table 1 emission estimates were developed using assumptions that would result in conservatively high emission rates. For example, where an event duration was specified as a range, RMT used the upper end of the range. A detailed discussion of the emission estimates and their bases is present in Attachment 1.

Air Dispersion Modeling Analysis

To determine the ambient impact of emissions from the oxygen lancing, poling, and blowing tapholes activities at American Alloys, RMT utilized the USEPA SCREEN dispersion model. This model was used to assess the impact of particulate matter emissions through the use of two separate algorithms, one using the building downwash algorithm of the model and the other using the complex terrain algorithm of the model. Building downwash is a significant factor influencing the fate of particulates emitted from the facility because the plume release points are only slightly above the roof line. Consideration of the impact of complex terrain is necessary because terrain with elevations well above the plume release heights is located within several hundred meters of American Alloys.

Emissions from the above activities at American Alloys are intermittent through the course of a day. The particulate matter and PM_{10} ambient air standards are based on 24-hour average concentrations. When using the downwash algorithm, the SCREEN model predicts concentrations that are 1-hour average impacts. The predicted concentrations for the complex terrain algorithm in the SCREEN model represent a 24-hour average impact. The complex terrain SCREEN algorithm is equivalent to that used in the USEPA VALLEY model. To estimate worst-case 24-hour ambient air impacts from the American Alloys process operations, the following procedures were used:

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Mr. Bob Hice
May 11, 1993
Page 2

- For estimation of the ambient impacts due to the building downwash effect, it was assumed that all three process operations take place in the same day and that all emissions exhaust from a common vent. The model was then used to predict a maximum (worst-case) 1-hour impact. The maximum predicted 24-hour impact was then estimated by applying a conversion factor of 0.4 to the maximum predicted 1-hour impact. This is the conversion factor recommended by the USEPA.
- The complex terrain algorithm of the model assumes continuous operation of the source over a 24-hour period and directly predicts a 24-hour average concentration. Again, all processes were assumed to operate on the same day and to exhaust through a common vent. The model was then used to predict directly the maximum (worst-case) 24-hour particulate matter impact.

It should be noted that the use of the SCREEN air dispersion model (for predictions of 24-hour impacts) provides an extremely conservative estimate of the impact of particulate matter emissions from a facility because by design the model will over-estimate an actual (worst-case) 24-hour impact caused by a facility. This is due to both the assumption of a single exhaust release point and the conversion factor (0.4) used.

PM₁₀ and particulate matter both have a National Ambient Air Quality Standard (NAAQS) of 150 $\mu\text{g}/\text{m}^3$ (24-hour average). The SCREEN modeling results are summarized in Attachment 2. The results in Attachment 2 show a maximum predicted impact of 24.01 $\mu\text{g}/\text{m}^3$, which is well below the NAAQS and as indicated earlier should be interpreted as an overprediction of the actual impact of these sources.

Bob, if you have any questions concerning this analysis, please call me.

Sincerely,



Martin J. Stromberger, P.E.
-- Manager, Industrial Hygiene
and Air Pollution Engineering

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TABLE 1 SUMMARY OF ESTIMATED EMISSIONS FROM PROCESS EVENTS AT AMERICAN ALLOYS, INC.					
Event	Event Duration (minutes)	Event Frequency (number per day)	Emissions per Event (pounds)	Emissions per Day (pounds)	Hourly Emissions (pounds per hour) ¹
Poling - Furnace #9	0.5 to 1	0.65	37	24	0.90
Blowing Tapholes - Furnace #2	2 to 4	0.25	37	9	0.35
- Furnace #5	2 to 4	0.25	37	9	0.35
- Furnace #7	2 to 4	0.25	37	9	0.35
- Furnace #9	2 to 4	3	37	111	4.16
Oxygen Lancing - Furnace #2	15 to 20	0.15	90	14	0.51
- Furnace #5	15 to 20	0.15	53	8	0.30
- Furnace #7	15 to 20	0.15	58	9	0.33
TOTALS:				193	7.25
NOTE: ¹ Based on a 24-hour average and including a 10-percent settling factor.					

ATTACHMENT A
ESTIMATED PROCESS PARTICULATE EMISSION RATES



COMPUTATION SHEET

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX (608) 831-3334

SHEET

1 OF 10

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
AMERICAN Alloys Inc.	By: C.G. Date: 3/3/93	By: M.S. Date: 2/1/93	270802

POLING

- BASED ON CURRENT PRODUCTION PRACTICES, POLING OCCURS AT FURNACE # 9, ONLY THE DURATION OF THE POLING ACTIVITY IS APPROXIMATELY 0.5 to 1 minute AND OCCURS APPROXIMATELY TWENTY TIMES PER MONTH (0.65 TIMES PER DAY).

- AN ESTIMATE OF POLING EMISSIONS CAN BE MADE USING THE FOLLOWING FORMULA:

$$W = 358.9 K Y_L d^2 \sqrt{\frac{h_w}{V}}$$

where: W = weight discharge of any fluid, pounds/hour
K = discharge coefficient
Y_L = expansion factor
d = i.d. of orifice, in.
h_w = differential pressure head, "w.g.
V = specific volume, ft³/lb

Assume: K = 0.6

Y_L = 1

T = 2000°C = 3632°F = 4092°R

d = 6" = 0.5 ft

h_w = 20-30" w.g.

CALCULATE V: 1000 pounds of top-hole gas contains the following

	ft ³ /lb.		Volume (ft ³)
611 lb. SIO	8.6	8.6 x 611 x (4092/520)	41,350 ✓
389 lb. CO	13.5	13.5 x 389 x (4092/520)	41,330 ✓
			82,680 ✓

$$V = \frac{82,680 \text{ ft}^3}{1000 \text{ lb}} = 82.68 \text{ ft}^3/\text{lb} \quad \checkmark$$

Source: "MANUAL for PROCESS ENGINEERING CALCULATIONS";
L. CLARK and R. L. DAVIDSON; p. 176



COMPUTATION SHEET

744 Heartland Trail P.O. Box 8523 Madison, WI 53708-8523 (608) 831-4444 FAX: (608) 831-3334

SHEET 2 OF 10

PROJECT/PROPOSAL NAME KAREZ CAN KIOS NC	PREPARED By: Lee Date: 2-93	CHECKED By: JGG Date: 4-14-93	PROJECT/PROPOSAL NO. 2709.02
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$$W = 3587 (0.6) (1) (6 + 8)^2 \sqrt{\frac{(20 + 20)}{82.68}}$$

$$W_{AVERAGE} = 6058 \text{ lbs/hr} \times 0.61 = 3701 \text{ lbs SiO}_2/\text{hr}$$

$$3701 \text{ lb SiO}_2/\text{hr} \times \frac{60 \text{ lb mole SiO}_2}{44 \text{ lb mole SiO}_2} = 5047 \text{ lbs SiO}_2/\text{hr}$$

(INSTANTANEOUS POLING EMISSION)

ESTIMATED EMISSIONS FROM POLING ARE AS FOLLOWS:
 $(5047 \text{ lb SiO}_2/\text{hr}) (1 \text{ hour}/60 \text{ min}) (1.0 \text{ min}/\text{poling}) = 84 \text{ lb SiO}_2/\text{poling}$

AS A CHECK, VERIFY VOLUME OF FURNACE:
 FURNACE SPECIFIC DIMENSIONS ARE AS FOLLOWS:

FURNACE	Shell Diameter	Shell Depth
#2	37'-0"	15'-0"
#5	31'-0"	14'-6"
#7	31'-0"	14'-6"
#9	22'-10"	13'-8"
AVERAGES:	30'-5 1/2"	14'-5"

NOTE: Shell diameter is an outer diameter. ASSUME A 3' THICKNESS FOR THE REFRACTORY (i.e. $r = R = 24'-5 1/2"$). ALSO ASSUME THAT WHEN THE FURNACE IS TAPPED, THE GAS IS UNDER A PRESSURE OF 20" - 30" W.G.

$$\text{Gas Volume} = \pi \left(\frac{24.46'}{2} \right)^2 \times \text{DEPTH} \times (25' - 407.62')$$

407.62' (100')

LEAVE THE DEPTH OF TRAPPED GASES = 1/2 SHELL DEPTH = 7.21'

$$\text{Gas Volume} = 3576 \text{ ft}^3$$



COMPUTATION SHEET

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SHEET 3 OF 10

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
2708.02	By: [Signature] Date: 7-14-93	By: JBG Date: 7-14-93	2708.02

$$\left(\frac{3596 \text{ lb}}{2 \text{ sec}} \right) \left(\frac{0.6 \text{ ft}^3}{\text{sec}} \right) = -3.5 \text{ lb/sec} \quad \checkmark$$

$$43.5 \text{ lb/sec} \times 0.6 \frac{\text{ft}^3}{\text{sec}} = 26.1 \text{ lb S.O}_2/\text{event} \quad \checkmark$$

$$26.1 \text{ lb S.O}_2/\text{event} \times \frac{60 \text{ sec}}{1 \text{ min}} = 36.2 \text{ lb S.O}_2/\text{event} \quad \checkmark$$

$$\frac{36.2 \text{ lb S.O}_2}{\text{event}} \times \frac{\text{event}}{10 \text{ min}} = 3.62 \text{ lb S.O}_2/\text{min} \quad \checkmark$$

(INSTANTANEOUS EMISSION)

The difference in these emission rates (3.62 lb S.O₂/event versus 36.2 lb S.O₂/event) may be explained by the fact that the 20 to 30" w.c. pressure behind the trapped gases would very quickly dissipate as soon as poling begins. If we assume that the 30" w.c. pressure dissipates in 10 seconds, the average pressure over the 1 minute event is 5" w.c. $\checkmark$

$$W_c = 358.9 (0.6)(1) (6 \text{ to } 8)^2 \sqrt{\frac{S}{82.68}}$$

$$W_c = 2648 \text{ lbs/hr} \times 0.64 = 1618 \text{ lb S.O}_2/\text{hr} \quad \checkmark$$

$$1618 \text{ lb S.O}_2/\text{hr} \times \frac{60 \text{ min}}{1 \text{ hr}} = 2206 \text{ lb S.O}_2/\text{min} \quad \checkmark$$

(INSTANTANEOUS POLING EMISSION)

$$(2206 \text{ lb S.O}_2/\text{min}) (1 \text{ min}/60 \text{ min}) (10 \text{ min}/\text{poling}) = 36.8 \text{ lb S.O}_2/\text{poling} \quad \checkmark$$

ASSUME A WORST CASE POLING EMISSION OF 37 lb S.O₂/poling $\checkmark$



COMPUTATION SHEET

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SHEET

4 OF 10

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
AMERICAN ALLOYS, INC	By: LEC Date: 2/3/83	By: J. S. Date: 4/2/84	2708.02

4/8/83 11:15 AM

BLOWING TAPHOLES

- BASED ON CURRENT PRODUCTION PRACTICES, BLOWING TAPHOLES WITH ANY SIGNIFICANT EMISSIONS OCCUR APPROXIMATELY ONCE EVERY FOUR DAYS AT 2.5×10^7 AND THREE TIMES PER DAY AT 9×10^7 . THE DURATION OF THESE OCCURRENCES ARE APPROXIMATELY 2-4 MINUTES. HOWEVER, THIS IS CONSIDERED CONSECUTIVE SINCE THE FREQUENCY & DURATION OF BLOWING TAPHOLES VARIES GREATLY.
- BLOWING TAPHOLE EMISSIONS WILL BE ASSUMED TO BE EQUIVALENT TO BLOWING 1.37×10^7 (BLOW)
- TOTAL OF 3.75 TIMES PER DAY ✓

** "ENGINEERING AND COST STUDY OF THE FERRALLOY INDUSTRY", J.O. DEALY AND D.M. KILLIN; U.S. EPA - OAQPS; 450/2-74-008; MAY 1974



COMPUTATION SHEET

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SHEET

5 OF 10

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
AMERICAN Alloys, Inc	By: LCO Date: 3/31/83	By: JJS Date: 3/2/83	2708.02

LCO 3/8/83

OXYGEN LANCING

- BASED ON CURRENT PRODUCTION PRACTICES, OXYGEN LANCING OF THE TAPHOLE OCCURS APPROXIMATELY ONCE EVERY WEEK AT #2, #5, & #7 FOR A TOTAL OF 0.45 TIMES PER DAY. THE DURATION OF THIS EVENT IS APPROXIMATELY 15 - 20 MINUTES.

$$(1 \text{ PER WEEK/FURNACE} / 7 \text{ DAYS PER WEEK}) (3 \text{ FURNACES}) = 0.45 \text{ PER DAY}$$

- FROM THE FOLLOWING DOCUMENT, PEAK PARTICULATE EMISSIONS FROM ELECTRIC ARC FURNACES OCCUR DURING OXYGEN LANCING AND BACKCHARGING. THESE EMISSIONS ARE TWO TO THREE TIMES HIGHER THAN AVERAGE:

"ELECTRIC ARC FURNACES IN FERROUS FOUNDRIES - BACKGROUND INFORMATION FOR PROPOSED STANDARDS"; DRAFT; EPA 450/3-80/020a; EPA-CAQPS; MAY 1980

- THE AVERAGE FURNACE EMISSION FACTOR IS 12.7 lb/TON ESTIMATED EMISSIONS PER OXYGEN LANCE ARE AS FOLLOWS:

$$\text{FURNACE \#2: } (170 \text{ TON FES/DAY}) (12.7 \text{ lb PART/TON FES}) \left(\frac{\text{DAY}}{7 \text{ DAYS}} \right) \left(\frac{20 \text{ MIN}}{\text{LANCE}} \right) (3) \\ = 90 \text{ lb PARTICULATE/LANCE } \checkmark$$

$$\text{FURNACE \#5: } (100 \text{ TON FES/DAY}) (12.7 \text{ lb PART/TON FES}) \left(\frac{\text{DAY}}{7 \text{ DAYS}} \right) \left(\frac{20 \text{ MIN}}{\text{LANCE}} \right) (3) \\ = 53 \text{ lb PARTICULATE/LANCE } \checkmark$$

$$\text{FURNACE \#7: } (110 \text{ TON FES/DAY}) (12.7 \text{ lb PARTICULATE/TON FES}) \left(\frac{\text{DAY}}{7 \text{ DAYS}} \right) \left(\frac{20 \text{ MIN}}{\text{LANCE}} \right) (3) \\ = 58 \text{ lb PARTICULATE/LANCE } \checkmark$$



COMPUTATION SHEET

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SHEET 6 OF 10

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
American Alloys, Inc.	By: LCU Date: 1-18-92	By: JBG Date: 4-14-93	2708 02

- REVIEW THE POSSIBILITY OF USING A SETTLING FACTOR IN THE ESTIMATED EMISSIONS FROM THE AMERICAN ALLOYS, INC. FACILITY.

- FROM AP-42, SIZE SPECIFIC EMISSION FACTORS FOR SUBMERGED ARC FURNACES ARE AS FOLLOWS:

	PARTICLE SIZE (µM)	CUMULATIVE MASS%
50% FES. (no control)	0.63 ✓	4.5 ✓
	1.00 ✓	50 ✓
	1.25 ✓	53 ✓
	2.50 ✓	57 ✓
	6.00 ✓	61 ✓
	10.00 ✓	63 ✓
	15.00 ✓	66 ✓
	20.00 ✓	69 ✓
	d ✓	100 ✓

Si. METAL (no control)

0.63 ✓	53 ✓
1.00 ✓	67 ✓
1.25 ✓	70 ✓
2.50 ✓	75 ✓
6.00 ✓	80 ✓
10.00 ✓	86 ✓
15.00 ✓	91 ✓
20.00 ✓	95 ✓
d ✓	100 ✓

Si. Mn (no control)

0.5 ✓	28 ✓
1.0 ✓	44 ✓
2.0 ✓	60 ✓
2.5 ✓	65 ✓
4.0 ✓	76 ✓
6.0 ✓	85 ✓
10.0 ✓	96 ✓
d ✓	100 ✓



COMPUTATION SHEET

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SHEET

7 OF 10

PROJECT/PROPOSAL NAME AMERICAN Alloys Inc	PREPARED By: [signature] Date: 7/2/93	CHECKED By: BG Date: 7/14/93	PROJECT/PROPOSAL NO. Z708.02
--	--	---------------------------------	---------------------------------

- Also, FROM AP-42, SIZE SPECIFIC EMISSION FACTORS FOR GRAY IRON FOUNDRIES ARE AS FOLLOWS:

	PARTICLE SIZE, μ m	Cumulative Mass %
POURING, COOLING (UNCONTROLLED)	0.5 ✓	d ✓
	1.0 ✓	19.0 ✓
	2.0 ✓	20.0 ✓
	2.5 ✓	24.0 ✓
	5.0 ✓	34.0 ✓
	10.0 ✓	49.0 ✓
	15.0 ✓	72.0 ✓
	d ✓	100.0 ✓

SHAKEOUT (UNCONTROLLED)	0.5 ✓	23.0 ✓
	1.0 ✓	37.0 ✓
	2.0 ✓	41.0 ✓
	2.5 ✓	42.0 ✓
	5.0 ✓	44.0 ✓
	10.0 ✓	70.0 ✓
	15.0 ✓	99.9 ✓
	d ✓	100.0

- BASED ON THE FOLLOWING SOURCE, A SETTLING FACTOR OF 60% TO POURING, 90% TO COOLING, AND 90% TO SHAKEOUT:

AN INVENTORY OF IRON FOUNDRY EMISSIONS;
B. S. GUTOW; MODERN CASTING, JANUARY 1972,
PP. 46 - 48.

NOTE: A GENERAL "RULE-OF-THUMB" USED IN THE GUTOW ARTICLE IS THAT PARTICLES GREATER THAN 50 μ m WILL SETTLE OUT. ✓



COMPUTATION SHEET

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8 OF 10

PROJECT / PROPOSAL NAME <i>American Alloys, Inc</i>	PREPARED		CHECKED		PROJECT / PROPOSAL NO. <i>2708.02</i>
	By: <i>MJS</i>	Date: <i>4/7/93</i>	By: <i>LCW</i>	Date: <i>4/8/93</i>	

Assume:

- Settling particle is SiO_2 ✓
- Specific gravity = 2.3 density = 144 lb/ft^3 ✓
 $= 2.3 \text{ gm/cm}^3$ ✓
- Upward velocity of plume = $50 \text{ ft/min} = 25 \text{ cm/s}$ ✓
- T - Temp = $120^\circ\text{F} = 49^\circ\text{C}$ ✓

$$\left(\frac{Re}{Co}\right)^{1/3} = \left[\frac{3(P_p)^2}{4(g)(P_p - P_f)\mu} \right]^{1/3} u_s$$

μ = viscosity of air @ $49^\circ\text{C} = 1.94 \times 10^{-4}$ poises (gm/cm-s) ✓

P_p = density of particle = 2.3 gm/cm^3 ✓

P_f = density of air @ $49^\circ\text{C} = 1.1 \times 10^{-3} \text{ gm/cm}^3$ ✓

g = acceleration constant = 980 cm/sec^2 ✓

u_s = velocity of air = 25 cm/s ✓

$$\begin{aligned} \left(\frac{Re}{Co}\right)^{1/3} &= \left[\frac{3(1.1 \times 10^{-3} \text{ gm/cm}^3)^2}{4(980 \text{ cm/sec}^2)(2.3 \text{ gm/cm}^3)(1.94 \times 10^{-4} \text{ poise})} \right]^{1/3} (25 \text{ cm/s}) \\ &= 0.32 \checkmark \end{aligned}$$

PROJECT/PROPOSAL NAME

American Alloy 5, INC

PREPARED

By: MJS

Date: 4/2/93

CHECKED

By: LEO

Date: 4/8/93

PROJECT/PROPOSAL NO.

2708.02

From Figure 8, page 140 of "Air Pollution Control Engineering", 1980, William Licht

$$Ga^{1/3} = 2.5 \checkmark$$

Therefore, the particle diameter which will settle in this air stream can be calculated as:

$$d_p = \left[\frac{3(\mu)^2}{4(g)(\rho_p)(\rho_g)} \right]^{1/3} (Ga^{1/3})$$

$$d_p = \left[\frac{3(1.94 \times 10^{-4} \text{ poise})^2}{4(980 \text{ cm/sec}^2)(2.35 \text{ g/cm}^3)(1.1 \times 10^{-3} \text{ g/cm}^3)} \right]^{1/3} (2.5)$$

$$= 0.0056 \text{ cm} \checkmark$$

$$= 56 \text{ microns} \checkmark$$



COMPUTATION SHEET

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SHEET 10 OF 10

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
American Alloys	By: MJS Date: 2/8/93	By: JBG Date: 2-14-93	2708.02

The substantial settling Factors cited by Gutow do not correlate well to the particle size data in AP-42. Gutow assumed that particles in excess of 50 microns in size will settle out, while the AP-42 particle size data indicates that almost all the particles are less than 50 microns in size. This discrepancy may be accounted for by two possible explanations, 1) the Gutow settling Factors are excessive, or, 2) the AP-42 particle size data represents the particle size of the particles collected and does not account for those particles which settle out prior to capture.

The upper-bound particle size of the ferroalloy furnace emissions is similar to that in AP-42 for iron foundries and the particle densities are likely similar. However, the buoyancy of the ferroalloy emissions is much greater than those of iron foundries.

Based on the above information a settling factor of 10% will be used for the American Alloys emissions to account for particles > 50 microns which are not captured in ventilation systems.

ATTACHMENT B
DISPERSION MODELING RESULTS



COMPUTATION SHEET

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SHEET

1

OF

6

PROJECT / PROPOSAL NAME

American Alloy

PREPARED

By:

DZF

Date:

4/14/93

CHECKED

By:

MLG

Date:

7/14/93

PROJECT / PROPOSAL NO.

2708.02

Modeling Parameters

Average hourly emissions = 7.25 (0.9144/s) ✓

Assume one stack with equivalent stack diameter
of 8 actual stacks = 45.1' = 13.76m ✓

Exit Velocity for 500,000 cfm @ 45.1' equivalent diameter
= 1.59 m/s ✓

Exhaust Temp = 322°K. (120°F) ✓

Stack Height = 34m ✓

Bldg Height = 28.9 m

Bldg Width x Length = 70.1 m x 250 m

Based upon facility drawing and USGS map:

- Property line is at 200m distance (closest)
- Terrain approximately 180' (54.9m) above
stack base (building base) exists at a distance
of 500 meters from the stacks

Run SCREEN model using downwash algorithm and
using complex terrain algorithm using above
parameters.

Model Results

Downwash Algorithm

max predicted 1-hr impact 58.1 $\mu\text{g}/\text{m}^3$

convert to 24-hr impact using a conversion factor
of 0.40 (USEPA's SCREEN manual)

23.3 $\mu\text{g}/\text{m}^3$ ✓

Complex Terrain Algorithm

max predicted 24-hr concentration = 24.01

Note: The ambient air quality standard for particulate matter is 150 $\mu\text{g}/\text{m}^3$



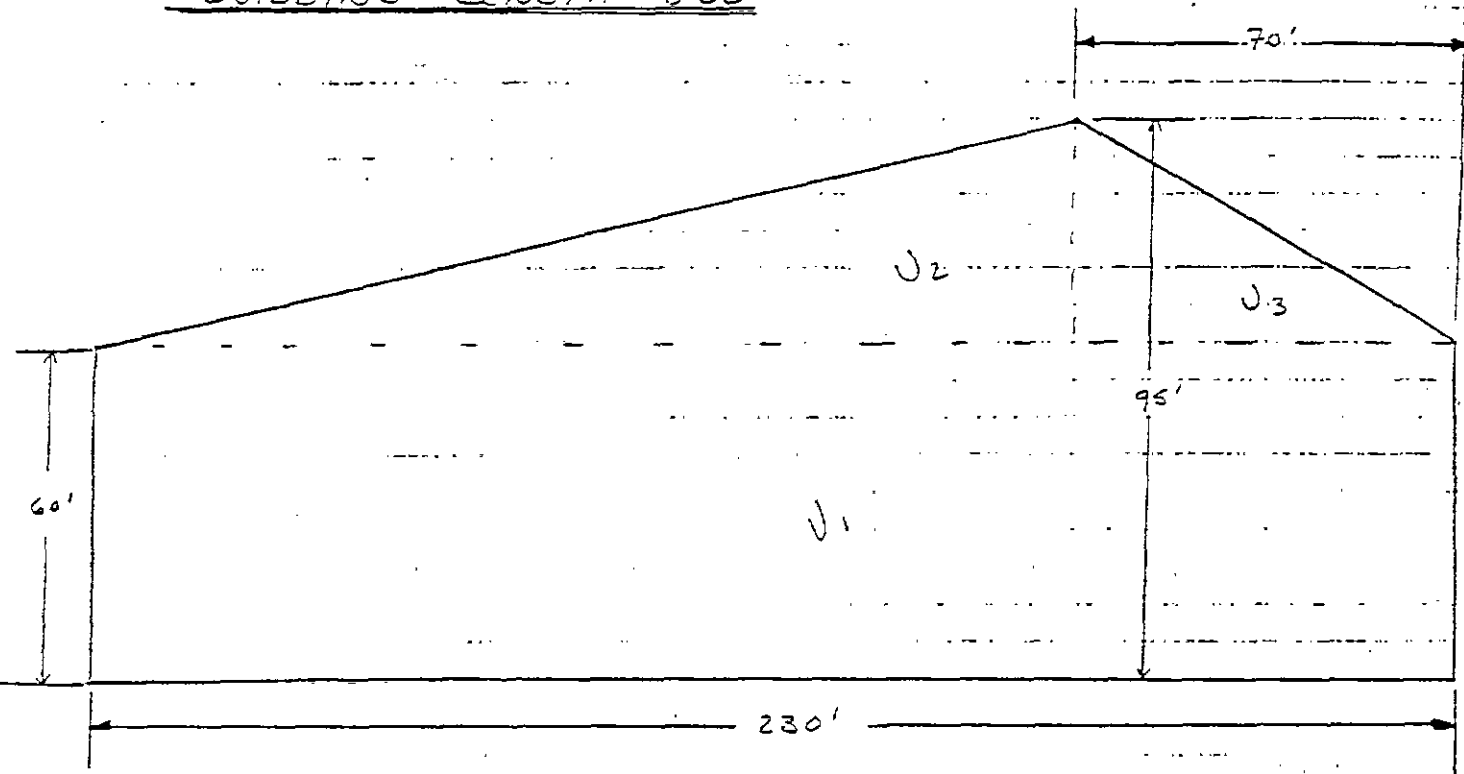
COMPUTATION SHEET

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SHEET 2 OF 6

PROJECT/PROPOSAL NAME	PREPARED	CHECKED	PROJECT/PROPOSAL NO.
AMERICAN RILLOYS, INC	By: LEO Date: 2/21/83	By: DJF Date: 3/31/83	2708.0A

BUILDING LENGTH - 820'



$$V_T = V_1 + V_2 + V_3$$

$$V_1 = \frac{230' \times 60' \times 820'}{2} = 11,316,000 \text{ ft}^3$$

$$V_2 = \frac{160' \times 35' \times 820'}{2} = 2,296,000 \text{ ft}^3$$

$$V_3 = \frac{20' \times 35' \times 820'}{2} = 1,004,000 \text{ ft}^3$$

$$V_T = 14,616,000 \text{ ft}^3 \checkmark$$

ASSUMING 2 AIR-CHANGES PER HOUR, $Q = 487,200 \text{ ft}^3/\text{MIN} \checkmark$

NOTE: THE BUILDING DOES HAVE SEVERAL PROTRUSIONS/ADDITIONS WHICH VARY FROM THE ABOVE CROSS-SECTION. HOWEVER, THE ABOVE APPROXIMATION IS FAIRLY REPRESENTATIVE OF THE STRUCTURE.



COMPUTATION SHEET

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PROJECT/PROPOSAL NAME		PREPARED	CHECKED	PROJECT/PROPOSAL NO.
AMERICAN ALLOYS INC		By: LGO Date: 4/1/93	By: DJF Date: 4/1/93	2708.02

There are (8) 20' x 10', NATURAL DRAFT EXHAUST STACKS ALONG THE RIDGE OF THE BUILDING.

$$\therefore \text{EXHAUST AREA} = 1600 \text{ ft}^2 (148.64 \text{ m}^2)$$

$$\text{EQUIVALENT DIAMETER} = 45.1 \text{ ft} = 13.76 \text{ m}$$

VERIFY FLOW RATE:

FLOW RATE*

$$Q_N = 432 A_N \sqrt{L_N \Delta T_{avg}}$$

Q_N = flow rate, m^3/h

A_N = AREA of opening, m^2

L_N = DISTANCE FROM CENTER LINE OF OPENING TO NEUTRAL ZONE

ΔT_{avg} = temp. difference between opening and NEUTRAL ZONE

ASSUME: $L_N = 60' (18.29 \text{ m})$

$\Delta T_{avg} = 50^\circ \text{F} (10^\circ \text{C})$

$$Q_N = 432 \times 148.64 \text{ m}^2 \sqrt{18.29 \times 10^\circ \text{C}}$$

$$= 868,413 \text{ m}^3/\text{h} \times \frac{1}{60 \text{ min}} \times \left(\frac{\text{ft}}{0.3048 \text{ m}} \right)^3$$

$$= 511,128 \text{ ft}^3/\text{min}$$

USE 500,000 cfm

$$500,000 \frac{\text{ft}^3}{\text{min}} (= 1.59 \text{ m}^3/\text{s} @ 45' \text{ diameter})$$

* SOURCE: "ADVANCED DESIGN OF VENTILATION SYSTEMS FOR CONTAMINANT CONTROL", H. D. GOODFELLOW; 1985; p. 227.

04-14-93

09:44:18

416

*** SCREEN-1.1 MODEL RUN ***
 *** VERSION DATED 88300 ***

AMERICAN ALLOYS - DOWNWASH

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .9140
 STACK HEIGHT (M) = 34.00
 STK INSIDE DIAM (M) = 13.76
 STK EXIT VELOCITY (M/S) = 1.59
 STK GAS EXIT TEMP (K) = 322.00
 AMBIENT AIR TEMP (K) = 293.00
 RECEPTOR HEIGHT (M) = .00
 IOPT (1=URB,2=RUR) = 2
 BUILDING HEIGHT (M) = 28.90
 MIN HORIZ BLDG DIM (M) = 70.10
 MAX HORIZ BLDG DIM (M) = 250.00

BUOY. FLUX = 66.47 M**4/S**3; MOM. FLUX = 108.89 M**4/S**2.

*** FULL METEOROLOGY ***

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
200.	58.10	6	4.0	7.8	5000.0	38.0	7.7	24.3	SS
300.	41.34	6	4.0	7.8	5000.0	42.2	11.2	30.3	SS
400.	25.43	6	4.0	7.8	5000.0	47.1	14.6	30.7	SS
500.	18.43	6	3.0	5.9	5000.0	54.3	18.0	30.5	SS
600.	15.99	6	3.0	5.9	5000.0	54.3	21.2	30.8	SS
700.	14.22	6	3.0	5.9	5000.0	54.3	24.5	31.2	SS
800.	12.87	6	3.0	5.9	5000.0	54.3	27.6	31.5	SS

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 200. M:

200.	58.10	6	4.0	7.8	5000.0	38.0	7.7	24.3	SS
------	-------	---	-----	-----	--------	------	-----	------	----

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** CAVITY CALCULATION - 1 ***

CONC (UG/M**3) = 84.34
 CRIT WS @10M (M/S) = 1.42
 CRIT WS @ HS (M/S) = 1.82
 DILUTION WS (M/S) = 1.00
 CAVITY HT (M) = 30.87
 CAVITY LENGTH (M) = 138.33
 ALONGWIND DIM (M) = 70.10

*** CAVITY CALCULATION - 2 ***

CONC (UG/M**3) = 300.8
 CRIT WS @10M (M/S) = 1.50
 CRIT WS @ HS (M/S) = 1.91
 DILUTION WS (M/S) = 1.00
 CAVITY HT (M) = 28.90
 CAVITY LENGTH (M) = 76.37
 ALONGWIND DIM (M) = 250.00

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	58.10	200.	0.
BUILDING CAVITY-1	84.34	138.	-- (DIST = CAVITY LENGTH)
BUILDING CAVITY-2	300.8	76.	-- (DIST = CAVITY LENGTH)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

04-14-93
09:46:25

*** SCREEN-1.1 MODEL RUN ***
*** VERSION DATED 88300 ***

6/6

SCREEN COMPLEX TERRAIN

COMPLEX TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .9140
STACK HT (M) = 34.00
STACK DIAMETER (M) = 13.76
STACK VELOCITY (M/S) = 1.59
STACK GAS TEMP (K) = 322.00
AMBIENT AIR TEMP (K) = 293.00
RECEPTOR HEIGHT (M) = .00
IOPT (1=URB,2=RUR) = 2

BUOY. FLUX = 66.47 M**4/S**3; MOM. FLUX = 108.89 M**4/S**2.

FINAL STABLE PLUME HEIGHT (M) = 83.8
DISTANCE TO FINAL RISE (M) = 151.3

VALLEY 24-HR CALCS					**SIMPLE TERRAIN 24-HR CALCS**				
TERR HT (M)	DIST (M)	MAX 24-HR CONC (UG/M**3)	CONC (UG/M**3)	PLUME HT ABOVE STK BASE (M)	CONC (UG/M**3)	PLUME HT ABOVE STK HGT (M)	SC	U10M (M/S)	USTK (M/S)
55.	500.	24.01	7.250	83.8	24.01	16.3	6	4.0	7.8
55.	550.	22.69	6.636	83.8	22.69	16.3	6	4.0	7.8
55.	600.	21.47	6.123	83.8	21.47	16.3	6	4.0	7.8
55.	700.	19.29	5.313	83.8	19.29	16.3	6	4.0	7.8

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
COMPLEX TERRAIN	24.01	500.	55. (24-HR CONC)

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

maintain, and continuously operate monitoring devices as follows:

(1) A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within $\pm 3^\circ$ Fahrenheit.

(2) For affected facilities that use venturi scrubber emission control equipment:

(i) A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 1 inch water gage.

(ii) A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 5 percent of design water supply pressure. The pressure sensor or tap must be located close to the water discharge point. The Administrator may be consulted for approval of alternative locations.

(b) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under § 60.13(b).

[41 FR 2234, Jan. 15, 1976, as amended at 54 FR 6671, Feb. 14, 1989]

§ 60.254 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particular matter standards in § 60.252 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.

(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

[54 FR 6671, Feb. 14, 1989]

Subpart Z—Standards of Performance for Ferroalloy Production Facilities

SOURCE: 41 FR 18501, May 4, 1976, unless otherwise noted.

§ 60.260 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: Electric submerged arc furnaces which produce silicon metal, ferrosilicon, calcium silicon, silicomanganese zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, ferromanganese silicon, or calcium carbide; and dust-handling equipment.

(b) Any facility under paragraph (a) of this section that commences construction or modification after October 21, 1974, is subject to the requirements of this subpart.

[42 FR 37938, July 25, 1977]

§ 60.261 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Electric submerged arc furnace* means any furnace wherein electrical energy is converted to heat energy by transmission of current between electrodes partially submerged in the furnace charge.

(b) *Furnace charge* means any material introduced into the electric submerged arc furnace, and may consist of, but is not limited to, ores, slag, carbonaceous material, and limestone.

(c) *Product change* means any change in the composition of the furnace charge that would cause the electric submerged arc furnace to become subject to a different mass standard applicable under this subpart.

(d) *Slag* means the more or less completely fused and vitrified matter separated during the reduction of a metal from its ore.

(e) *Tapping* means the removal of slag or product from the electric submerged arc furnace under normal operating conditions such as removal of metal under normal pressure and movement by gravity down the spout into the ladle.

(f) *Tapping period* means the time duration from initiation of the process of opening the tap hole until plugging of the tap hole is complete.

(g) *Furnace cycle* means the time period from completion of a furnace product tap to the completion of the next consecutive product tap.

(h) *Tapping station* means that general area where molten product or slag is removed from the electric submerged arc furnace.

(i) *Blowing tap* means any tap in which an evolution of gas forces or projects jets of flame or metal sparks beyond the ladle, runner, or collection hood.

(j) *Furnace power input* means the resistive electrical power consumption of an electric submerged arc furnace as measured in kilowatts.

(k) *Dust-handling equipment* means any equipment used to handle particulate matter collected by the air pollution control device (and located at or near such device) serving any electric submerged arc furnace subject to this subpart.

(l) *Control device* means the air pollution control equipment used to remove particulate matter generated by an electric submerged arc furnace from an effluent gas stream.

(m) *Capture system* means the equipment (including hoods, ducts, fans, dampers, etc.) used to capture or transport particulate matter generated by an affected electric submerged arc furnace to the control device.

(n) *Standard ferromanganese* means that alloy as defined by ASTM Designation A99-76 (incorporated by reference—see § 60.17).

(o) *Silicomanganese* means that alloy as defined by ASTM Designation A483-64 (Reapproved 1974) (incorporated by reference—see § 60.17).

(p) *Calcium carbide* means material containing 70 to 85 percent calcium carbide by weight.

(q) *High-carbon ferrochrome* means that alloy as defined by ASTM Designation A101-73 (incorporated by reference—see § 60.17) grades HC1 through HC6.

(r) *Charge chrome* means that alloy containing 52 to 70 percent by weight chromium, 5 to 8 percent by weight carbon, and 3 to 6 percent by weight silicon.

(s) *Silvery iron* means any ferrosilicon, as defined by ASTM Designation A100-69 (Reapproved 1974) (incorporated by reference—see § 60.17), which contains less than 30 percent silicon.

(t) *Ferrochrome silicon* means that alloy as defined by ASTM Designation A482-76 (incorporated by reference—see § 60.17).

(u) *Silicomanganese zirconium* means that alloy containing 60 to 65 percent by weight silicon, 1.5 to 2.5 percent by weight calcium, 5 to 7 percent by weight zirconium, 0.75 to 1.25 percent by weight aluminum, 5 to 7 percent by weight manganese, and 2 to 3 percent by weight barium.

(v) *Calcium silicon* means that alloy as defined by ASTM Designation A495-76 (incorporated by reference—see § 60.17).

(w) *Ferrosilicon* means that alloy as defined by ASTM Designation A100-69 (Reapproved 1974) (incorporated by reference—see § 60.17) grades A, B, C, D, and E, which contains 50 or more percent by weight silicon.

(x) *Silicon metal* means any silicon alloy containing more than 96 percent silicon by weight.

(y) *Ferromanganese silicon* means that alloy containing 63 to 66 percent by weight manganese, 28 to 32 percent by weight silicon, and a maximum of 0.08 percent by weight carbon.

[41 FR 18501, May 4, 1976; 41 FR 20659, May 20, 1976, as amended at 48 FR 3733, Jan. 27, 1983]

§ 60.262 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which:

(1) Exit from a control device and contain particulate matter in excess of

0.45 kg/MW-hr (0.99 lb/MW-hr) while silicon metal, ferrosilicon, calcium silicon, or silicomanganese zirconium is being produced.

(2) Exit from a control device and contain particulate matter in excess of 0.23 kg/MW-hr (0.51 lb/MW-hr) while highcarbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, calcium carbide, ferrochrome silicon, ferromanganese silicon, or silvery iron is being produced.

(3) Exit from a control device and exhibit 15 percent opacity or greater.

(4) Exit from an electric submerged arc furnace and escape the capture system and are visible without the aid of instruments. The requirements under this subparagraph apply only during periods when flow rates are being established under § 60.265(d).

(5) Escape the capture system at the tapping station and are visible without the aid of instruments for more than 40 percent of each tapping period. There are no limitations on visible emissions under this subparagraph when a blowing tap occurs. The requirements under this subparagraph apply only during periods when flow rates are being established under § 60.265(d).

(b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any dust-handling equipment any gases which exhibit 10 percent opacity or greater.

§ 60.263 Standard for carbon monoxide.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged in to the atmosphere from any electric submerged arc furnace any gases which contain, on a dry basis, 20 or greater volume percent of carbon monoxide. Combustion of such gases under conditions acceptable to the Administrator constitutes compliance with this section. Acceptable conditions include, but are not limited to, flaring of gases or use of gases as fuel for other processes.

§ 60.264 Emission monitoring.

(a) The owner or operator subject to the provisions of this subpart shall install, calibrate, maintain and operate a continuous monitoring system for measurement of the opacity of emissions discharged into the atmosphere from the control device(s).

(b) For the purpose of reports required under § 60.7(c), the owner or operator shall report as excess emissions all six-minute periods in which the average opacity is 15 percent or greater.

(c) The owner or operator subject to the provisions of this subpart shall submit a written report of any product change to the Administrator. Reports of product changes must be postmarked not later than 30 days after implementation of the product change.

§ 60.265 Monitoring of operations.

(a) The owner or operator of any electric submerged arc furnace subject to the provisions of this subpart shall maintain daily records of the following information:

(1) Product being produced.

(2) Description of constituents of furnace charge, including the quantity, by weight.

(3) Time and duration of each tapping period and the identification of material tapped (slag or product.)

(4) All furnace power input data obtained under paragraph (b) of this section.

(5) All flow rate data obtained under paragraph (c) of this section or all fan motor power consumption and pressure drop data obtained under paragraph (e) of this section.

(b) The owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device to measure and continuously record the furnace power input. The furnace power input may be measured at the output or input side of the transformer. The device must have an accuracy of ± 5 percent over its operating range.

(c) The owner or operator subject to the provisions of this subpart shall install, calibrate, and maintain a monitoring device that continuously meas-

an allowable rate of emissions into the atmosphere, or prescribing equipment specifications for control of air pollution emissions.

(g) *Compliance schedule* means a legally enforceable schedule specifying a date or dates by which a source or category of sources must comply with specific emission standards contained in a plan or with any increments of progress to achieve such compliance.

(h) *Increments of progress* means steps to achieve compliance which must be taken by an owner or operator of a designated facility, including:

(1) Submittal of a final control plan for the designated facility to the appropriate air pollution control agency;

(2) Awarding of contracts for emission control systems or for process modifications, or issuance of orders for the purchase of component parts to accomplish emission control or process modification;

(3) Initiation of on-site construction or installation of emission control equipment or process change;

(4) Completion of on-site construction or installation of emission control equipment or process change; and

(5) Final compliance.

(i) *Region* means an air quality control region designated under section 107 of the Act and described in part 81 of this chapter.

(j) *Local agency* means any local governmental agency.

§ 60.22 Publication of guideline documents, emission guidelines, and final compliance times.

(a) Concurrently upon or after proposal of standards of performance for the control of a designated pollutant from affected facilities, the Administrator will publish a draft guideline document containing information pertinent to control of the designated pollutant from designated facilities. Notice of the availability of the draft guideline document will be published in the FEDERAL REGISTER and public comments on its contents will be invited. After consideration of public comments and upon or after promulgation of standards of performance for control of a designated pollutant from affected facilities, a final guideline document will be published and notice of

its availability will be published in the FEDERAL REGISTER.

(b) Guideline documents published under this section will provide information for the development of State plans, such as:

(1) Information concerning known or suspected endangerment of public health or welfare caused, or contributed to, by the designated pollutant.

(2) A description of systems of emission reduction which, in the judgment of the Administrator, have been adequately demonstrated.

(3) Information on the degree of emission reduction which is achievable with each system, together with information on the costs and environmental effects of applying each system to designated facilities.

(4) Incremental periods of time normally expected to be necessary for the design, installation, and startup of identified control systems.

(5) An emission guideline that reflects the application of the best system of emission reduction (considering the cost of such reduction) that has been adequately demonstrated for designated facilities, and the time within which compliance with emission standards of equivalent stringency can be achieved. The Administrator will specify different emission guidelines or compliance times or both for different sizes, types, and classes of designated facilities when costs of control, physical limitations, geographical location, or similar factors make subcategorization appropriate.

(6) Such other available information as the Administrator determines may contribute to the formulation of State plans.

(c) Except as provided in paragraph (d)(1) of this section, the emission guidelines and compliance times referred to in paragraph (b)(5) of this section will be proposed for comment upon publication of the draft guideline document, and after consideration of comments will be promulgated in subpart C of this part with such modifications as may be appropriate.

(d)(1) If the Administrator determines that a designated pollutant may cause or contribute to endangerment of public welfare, but that adverse effects on public health have not been

demonstrated, he will include the determination in the draft guideline document and in the FEDERAL REGISTER notice of its availability. Except as provided in paragraph (d)(2) of this section, paragraph (c) of this section shall be inapplicable in such cases.

(2) If the Administrator determines at any time on the basis of new information that a prior determination under paragraph (d)(1) of this section is incorrect or no longer correct, he will publish notice of the determination in the FEDERAL REGISTER, revise the guideline document as necessary under paragraph (a) of this section, and propose and promulgate emission guidelines and compliance times under paragraph (c) of this section.

[40 FR 53346, Nov. 17, 1975, as amended at 54 FR 52189, Dec. 20, 1989]

§ 60.23 Adoption and submittal of State plans; public hearings.

(a)(1) Within nine months after notice of the availability of a final guideline document is published under § 60.22(a), each State shall adopt and submit to the Administrator, in accordance with § 60.4, a plan for the control of the designated pollutant to which the guideline document applies.

(2) Within nine months after notice of the availability of a final revised guideline document is published as provided in § 60.22(d)(2), each State shall adopt and submit to the Administrator any plan revision necessary to meet the requirements of this subpart.

(b) If no designated facility is located within a State, the State shall submit a letter of certification to that effect to the Administrator within the time specified in paragraph (a) of this section. Such certification shall exempt the State from the requirements of this subpart for that designated pollutant.

(c)(1) Except as provided in paragraphs (c)(2) and (c)(3) of this section, the State shall, prior to the adoption of any plan or revision thereof, conduct one or more public hearings within the State on such plan or plan revision.

(2) No hearing shall be required for any change to an increment of progress in an approved compliance schedule unless the change is likely to

cause the facility to be unable to comply with the final compliance date in the schedule.

(3) No hearing shall be required on an emission standard in effect prior to the effective date of this subpart if it was adopted after a public hearing and is at least as stringent as the corresponding emission guideline specified in the applicable guideline document published under § 60.22(a).

(d) Any hearing required by paragraph (c) of this section shall be held only after reasonable notice. Notice shall be given at least 30 days prior to the date of such hearing and shall include:

(1) Notification to the public by prominently advertising the date, time, and place of such hearing in each region affected;

(2) Availability, at the time of public announcement, of each proposed plan or revision thereof for public inspection in at least one location in each region to which it will apply;

(3) Notification to the Administrator;

(4) Notification to each local air pollution control agency in each region to which the plan or revision will apply; and

(5) In the case of an interstate region, notification to any other State included in the region.

(e) The State shall prepare and retain, for a minimum of 2 years, a record of each hearing for inspection by any interested party. The record shall contain, as a minimum, a list of witnesses together with the text of each presentation.

(f) The State shall submit with the plan or revision:

(1) Certification that each hearing required by paragraph (c) of this section was held in accordance with the notice required by paragraph (d) of this section; and

(2) A list of witnesses and their organizational affiliations, if any, appearing at the hearing and a brief written summary of each presentation or written submission.

(g) Upon written application by a State agency (through the appropriate Regional Office), the Administrator may approve State procedures designed to insure public participation in

the matters for which hearings are required and public notification of the opportunity to participate if, in the judgment of the Administrator, the procedures, although different from the requirements of this subpart, in fact provide for adequate notice to and participation of the public. The Administrator may impose such conditions on his approval as he deems necessary. Procedures approved under this section shall be deemed to satisfy the requirements of this subpart regarding procedures for public hearings.

§ 60.24 Emission standards and compliance schedules.

(a) Each plan shall include emission standards and compliance schedules.

(b)(1) Emission standards shall prescribe allowable rates of emissions except when it is clearly impracticable. Such cases will be identified in the guideline documents issued under § 60.22. Where emission standards prescribing equipment specifications are established, the plan shall, to the degree possible, set forth the emission reductions achievable by implementation of such specifications, and may permit compliance by the use of equipment determined by the State to be equivalent to that prescribed.

(2) Test methods and procedures for determining compliance with the emission standards shall be specified in the plan. Methods other than those specified in Appendix A to this part may be specified in the plan if shown to be equivalent or alternative methods as defined in § 60.2 (t) and (u).

(3) Emission standards shall apply to all designated facilities within the State. A plan may contain emission standards adopted by local jurisdictions provided that the standards are enforceable by the State.

(c) Except as provided in paragraph (f) of this section, where the Administrator has determined that a designated pollutant may cause or contribute to endangerment of public health, emission standards shall be no less stringent than the corresponding emission guideline(s) specified in subpart C of this part, and final compliance shall be required as expeditiously as practicable but no later than the

compliance times specified in subpart C of this part.

(d) Where the Administrator has determined that a designated pollutant may cause or contribute to endangerment of public welfare but that adverse effects on public health have not been demonstrated, States may balance the emission guidelines, compliance times, and other information provided in the applicable guideline document against other factors of public concern in establishing emission standards, compliance schedules, and variances. Appropriate consideration shall be given to the factors specified in § 60.22(b) and to information presented at the public hearing(s) conducted under § 60.23(c).

(e)(1) Any compliance schedule extending more than 12 months from the date required for submittal of the plan shall include legally enforceable increments of progress to achieve compliance for each designated facility or category of facilities. Increments of progress shall include, where practicable, each increment of progress specified in § 60.21(h) and shall include such additional increments of progress as may be necessary to permit close and effective supervision of progress toward final compliance.

(2) A plan may provide that compliance schedules for individual sources or categories of sources will be formulated after plan submittal. Any such schedule shall be the subject of a public hearing held according to § 60.23 and shall be submitted to the Administrator within 60 days after the date of adoption of the schedule but in no case later than the date prescribed for submittal of the first semiannual report required by § 60.25(e).

(f) On a case-by-case basis for particular designated facilities, or classes of facilities, States may provide for the application of less stringent emission standards or longer compliance schedules than those otherwise required by paragraph (c) of this section, provided that the State demonstrates with respect to each such facility (or class of facilities):

(1) Unreasonable cost of control resulting from plant age, location, or basic process design;

(2) Physical impossibility of installing necessary control equipment; or

(3) Other factors specific to the facility (or class of facilities) that make application of a less stringent standard or final compliance time significantly more reasonable.

(g) Nothing in this subpart shall be construed to preclude any State or political subdivision thereof from adopting or enforcing (1) emission standards more stringent than emission guidelines specified in subpart C of this part or in applicable guideline documents or (2) compliance schedules requiring final compliance at earlier times than those specified in subpart C or in applicable guideline documents.

§ 60.25 Emission inventories, source surveillance, reports.

(a) Each plan shall include an inventory of all designated facilities, including emission data for the designated pollutants and information related to emissions as specified in Appendix D to this part. Such data shall be summarized in the plan, and emission rates of designated pollutants from designated facilities shall be correlated with applicable emission standards. As used in this subpart, "correlated" means presented in such a manner as to show the relationship between measured or estimated amounts of emissions and the amounts of such emissions allowable under applicable emission standards.

(b) Each plan shall provide for monitoring the status of compliance with applicable emission standards. Each plan shall, as a minimum, provide for:

(1) Legally enforceable procedures for requiring owners or operators of designated facilities to maintain records and periodically report to the State information on the nature and amount of emissions from such facilities, and/or such other information as may be necessary to enable the State to determine whether such facilities are in compliance with applicable portions of the plan.

(2) Periodic inspection and, when applicable, testing of designated facilities.

(c) Each plan shall provide that information obtained by the State under paragraph (b) of this section shall be

correlated with applicable emission standards (see § 60.25(a)) and made available to the general public.

(d) The provisions referred to in paragraphs (b) and (c) of this section shall be specifically identified. Copies of such provisions shall be submitted with the plan unless:

(1) They have been approved as portions of a preceding plan submitted under this subpart or as portions of an implementation plan submitted under section 110 of the Act, and

(2) The State demonstrates:

(i) That the provisions are applicable to the designated pollutant(s) for which the plan is submitted, and

(ii) That the requirements of § 60.26 are met.

(e) The State shall submit reports on progress in plan enforcement to the Administrator on an annual (calendar year) basis, commencing with the first full report period after approval of a plan or after promulgation of a plan by the Administrator. Information required under this paragraph must be included in the annual report required by § 51.321 of this chapter.

(f) Each progress report shall include:

(1) Enforcement actions initiated against designated facilities during the reporting period, under any emission standard or compliance schedule of the plan.

(2) Identification of the achievement of any increment of progress required by the applicable plan during the reporting period.

(3) Identification of designated facilities that have ceased operation during the reporting period.

(4) Submission of emission inventory data as described in paragraph (a) of this section for designated facilities that were not in operation at the time of plan development but began operation during the reporting period.

(5) Submission of additional data as necessary to update the information submitted under paragraph (a) of this section or in previous progress reports.

(6) Submission of copies of technical reports on all performance testing on designated facilities conducted under paragraph (b)(2) of this section, complete with concurrently recorded process data.

SUPPLEMENTAL INFORMATION ON
STANDARDS OF PERFORMANCE FOR
FERROALLOY PRODUCTION FACILITIES

Environmental Protection Agency
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

March 1976

Table of Contents

	Page
I. Introduction	1
II. Mass Standards	3
A. Rationale for Proposed Standards	3
B. Comments on Achievability of Standards	7
1. Representativeness of Area Sampled	8
2. Anisokinetic Sampling	10
3. Flowrate Determinations	15
4. Manufacturers' Guarantees	19
5. Additional Emission Test Results	22
6. Effect of Quality of Charge Materials	32
C. Summary and Conclusions	35
III. Opacity Standard	38
IV. Alternative Test Procedures for Open Fabric Filter Collectors	47
V. Economic and Inflationary Impact	51
VI. Summary of Public Comments and EPA Responses	55
References	76
Appendix A - Summary of Emission Data Received in Response to Section 114 Letters	
Appendix B - Six Minute Average Opacity Values	

the use of fine ores was less common and, hence, the commenters argued that the standards do not consider the effect of fine ores on emissions.

In order to more fully consider the commenters' arguments on fine ores, EPA requested that they provide data or supplemental information on experiences with operation of furnaces using fine ores to substantiate their position. At the time of the request the commenters indicated that no data on emission rates as a function of ore quality were available but agreed to provide information on operating experience. The information they submitted did not show that the use of fine ores should necessarily affect the emission rate of the furnace and the achievability of the standard. In general, the material provided by the industry representatives only discussed the general problems associated with use of fine raw materials and did not discuss any of the common solutions to these problems. EPA was aware of these general problems of fine feed materials during the development of the proposed standards.

Commonly, charge materials are sized and blended before addition to a typical furnace. The charge materials, thus, generally include a portion of fine materials. Ideally, the materials are sized and blended to produce a porous charge which will promote uniform gas distribution through the mix and furnace operating stability. Very fine feed materials affect furnace operations due to the reduced porosity of the charge which results in bridging and non-uniform descent of charge materials. The fusion and crusting over of the charge promotes channelization of the gas flow. Collapse of a bridged

area results in jets of hot gases emanating from the reaction zone. These gas blows increase the particulate matter emissions from the furnace and resulting unstable furnace operations. The problem of gas blows from the furnace can be minimized by adequate stoking of the charge to allow uniform descent and uniform evolution of the gas formed in reduction of the ores. In EPA's opinion, the blowing problem associated with use of fine chrome and manganese ores is not as significant as the problems experienced in production of silicon metal. In both cases, stoking of the furnaces at sufficiently frequent intervals to maintain a uniform evolution of reaction gases and unbridged crust will reduce uncontrolled emissions from the furnace. The effect of use of fine ores as charge material on the furnace emission rate will vary with the frequency and adequacy of stoking.

In addition to stoking the furnace, there are other methods of using finer, or more friable, ores which do not result in unstable furnace operation and increased emissions. Finer ores can be pelletized or sintered to reduce the tendency to bridge, to increase charge porosity, and to minimize entrainment losses. At present, sintering and pelletizing of fine ores is not common practice, but it could become an important pretreatment process with changing economic and supply conditions. Another possible approach is to inject the fine ores into the furnace through hollow electrodes as is done on calcium carbide furnaces.

7. Paragraph (3)(i) requirement is not practical on a 100% of the time basis. Violent reactions which are a function of the alloy chemistry can cause puffing from the hood openings. The 100% control requirement will result in increased consumption of electricity. Z-5(D), Z-11(F), Z-16(D).

Response: Observed facilities, which are discussed in the above comment, showed that the furnace cover/hood standard is technically and economically feasible. The energy consumption from this requirement has been considered in the economic analysis and determined to have an insignificant impact. In addition, power consumed for capture and control of the furnace emissions can be reduced by use of hoods that can be positioned closer to the furnace than 6-8 feet or by use of sealed furnace. See also the response to comment 5.

8. Paragraph (3)(ii) should be modified to consider "blowing taps" which are not a malfunction, failure of the process equipment, or failure of the process to operate normally and thus not exempted from this standard by the provisions of §60.8(c) (38 FR 20564). EPA should observe a "blowing tap" before a standard on the tapping station is promulgated. Z-5(D), Z-7(E), Z-11(F), Z-15(D).

Response: Periods during which a "blowing tap" occurs have been exempted from compliance with the tapping station emission capture requirements.

9. Paragraph (3)(ii) requirements do not recognize that hood capture efficiency is affected by the following conditions: (1) a "blowing tap" which will usually persist throughout the entire tap period, (2) poling or lancing of the taphole which causes excessive emissions and may be necessary throughout the entire tapping period, and (3) removal of metal and slag from the spout which may require as much time as the tapping period. Emissions exiting from the building as a direct result of the above conditions will average 40 percent opacity. Paragraph (3)(ii) therefore should be rewritten to allow emissions from the building during tapping periods to average 40 percent opacity. Z-5(D), Z-7(E), Z-9(D).

Response: According to available data on roof monitor emissions, the suggested standard of 40 percent opacity on emissions from the building would permit very poor capture of furnace and tapping fumes. The existence of other emission sources and/or a mixture of old and new furnaces within the building would make enforcement of this standard difficult. Blowing taps are exempted from the requirements of proposed §60.262(a)(3)(ii) [60.262(a)(5)] because this is a process malfunction condition which is not wholly preventable. Periods in which the tapping hood is swung aside for poling/lancing or removal of metal or

slag from the spout are failures of the process to operate in a normal or usual manner. As malfunctions, these periods are not subject to the standards. All poling or lancing operations which can be conducted with the tapping hood in place are subject to the capture requirements. Emissions from normal polings or lancing of the tap hole were considered in the development of the standard.

10. Enforcement of the provisions of paragraph (3)(ii) will be difficult because the tapping stream is highly radiant thus making observation difficult. In addition, shop conditions can further complicate observation of the tap. Z-11(F)

Response: The tapping station requirement is supported by observations of one tap hood during two tapping periods. Enforcement of this provision will not be complicated by shop conditions. EPA engineers have observed and evaluated the collection efficiencies of tapping hoods at eight ferro-alloy facilities in the U. S. and Japan. In none of these facilities did shop conditions preclude evaluation of the capture efficiency of the hood. Neither is the radiance of the molten metal a factor in the assessment because the observer is looking at the tap hood above the molten metal, not the metal. Further evidence of the lack of a problem from the radiance of the metal is workers in the tapping area do not use dark glasses to improve vision or to protect eyesight.

11. Paragraph (3)(iii) should be amended to allow greater than 10% opacity for periods not in excess of one minute to account for unavoidable puffs. Z-6(D), Z-7(E), Z-9(D)

Response: The standard recommended by the commentator is not supported by the available opacity data. Observation of dust handling equipment in the steel and asphalt industries found no visible emissions are associated with the system. The 10 percent opacity standard on dust handling equipment is sufficiently greater than observed values so that a time exemption is not necessary.

12. The provisions of paragraphs (3)(i) and (ii) exceed EPA's statutory authority. The fact that some emissions may escape the building does not confer jurisdiction which otherwise does not exist to regulate emissions within that building. EPA can exercise its regulatory authority over these emissions when they escape into the air. Z-6(D), Z-7(E), Z-11(F), Z-13(C), Z-17(D)

FUGITIVE EMISSION CONTROL

OHIO EPA FEASIBILITY STUDY

"Reasonably Available Control Measures for Fugitive Dust Sources" (September 1980) (Ohio Environmental Protection Agency, Division of Air Pollution Control).

Hood and vent to mechanical collectors

Capital cost = \$30,000
Annual cost = \$6,000

$$C/B = \frac{\$6,000/\text{yr}}{.8 (180,000)} = \$0.04/\text{lb}$$

④

Furnace charging and melting (semi-enclosed type)

Emissions = (15.5 lbs/ton) (40,000 tpy) = 620,000 lbs/yr

Feed seal maintenance

No cost data

Back-up hoods with a fabric filter

Capital cost = \$61,000
Annual cost = \$18,000

$$C/B = \frac{\$18,000/\text{yr}}{.9 (620,000)} = \$0.03/\text{lb}$$

⑤

Furnace tapping

Emissions = (12 lbs/ton) (40,000 tpy) = 480,000 lbs/yr

Hoods and venting to new fabric filter

Capital cost = \$600,000
Annual cost = \$200,000

$$C/B = \frac{\$200,000/\text{yr}}{.9 (480,000)} = \$0.46/\text{lb}$$

Hood and duct into existing control device

No cost data

⑥

Casting, crushing and screening

Emissions (casting) = (2.4 lbs/ton) (40,000 tpy) = 96,000 lbs/yr

Emissions (crushing & screening) = (7.2 lbs/ton) (40,000 tpy)
= 288,000 lbs/yr

Hood and duct crushing operations to a fabric filter

Capital cost = \$130,000
Annual cost = \$47,000

$$C/B = \frac{\$47,000/\text{yr}}{.9 (288,000)} = \$0.18/\text{lb}$$

Building ventilation to control device

Capital cost = \$390,000
Annual cost = \$130,000

$$C/B = \frac{\$130,000}{.9 (288,000 + 96,000)} = \$0.38/\text{lb}$$

CONTENTS

	<u>Page</u>
Figures	iii
Tables	xi
1.0 Introduction	1-1
2.0 Reasonably Available Control Measures (RACM)	2-1
2.1 General Fugitive Dust Sources	2-3
2.1.1 Plant Roadways and Parking Areas	2-6
2.1.2 Aggregate Storage Piles	2-26
2.1.3 Material Handling	2-53
2.1.4 Mineral Extraction	2-65
2.2 Iron and Steel Mills	2-93
2.2.1 Coke Manufacturing	2-93
2.2.2 Iron Production	2-113
2.2.3 Steel Manufacture	2-134
2.3 Lime Plants	2-154
2.4 Power Plants	2-172
2.5 Grain Terminals	2-184
2.6 Country Grain Elevators	2-203
2.7 Iron Foundries	2-214
2.8 Steel Foundries	2-232
2.9 Glass Manufacturing Plants	2-242
2.10 Fiberglass Manufacturing	2-257
2.11 Secondary Aluminum Processing Plants	2-266
2.12 Fertilizer Mixing/Blending Plants	2-277
2.13 Cement Manufacturing and Blending Plants	2-289

CONTENTS (continued)

	<u>Page</u>
2.14 Ferroalloy Production	2-306
2.15 Metal Salvage Operations	2-320
2.16 Pulp and Paper Mills	2-329
2.17 Woodworking Operations	2-337
2.18 Aggregate Processing Plants	2-358
2.19 Coal Processing Plants	2-403
2.20 Brick and Related Clay Product Manufacturing Plants	2-445
2.21 Asphaltic Concrete Plants	2-459
2.22 Concrete Batching Plants	2-471
2.23 Sandblasting Operations	2-490
2.24 Petroleum Refineries	2-505
2.25 Agricultural Chemical Manufacturing Plants	2-513
2.26 Bulk Gasoline Terminals and Plants	2-524
2.27 Carbon Black Plants	2-532
2.28 Municipal Incineration	2-541
2.29 Salt Processing Operations	2-560
2.30 Galvanizing Plants	2-572
Appendix A: Cost Estimation Guidelines for RACM for Fugitive Dust	A-1
Appendix B: Listing of Chemical Dust Suppressants	B-1

2.14 FERROALLOY PRODUCTION

2.14.1 Process Description

Ferroalloy is a generic term for alloys containing iron and one or more other metals. Ferroalloys are used in steel production to introduce the nonferrous metals into the melt as alloying elements or deoxidants. The three basic types of ferroalloys are silicon-based including ferrosilicon and calciumsilicon, manganese-based including ferromanganese and silicomanganese, and chromium-based including ferrochromium and ferrosilicochrome. Other ferroalloys produced include ferrotitanium, ferrocolumbium, ferrotungsten and ferrovanadium.

While several processes are available to produce ferroalloys, electric smelting furnaces are used to produce over 75 percent of the total.¹ Thus, it is the process which will be described herein and is outlined in Figure 2.14-1. Other processes such as the electrolyte process and the vacuum process do not result in significant emissions of particulate matter.

As shown by the Figure, feed materials such as chrome ore, limestone, quartz (silica), coal, wood and scrap iron are typically unloaded from hopper cars and conveyed to outside storage piles. As needed, the materials are conveyed to a crusher, then screened and dried before being fed by conveyor and bucket elevator to feed storage bins. The materials are gravity discharged from the bins to a weigh feeder programmed for a specific blend of the feed materials. The weighed materials blend is

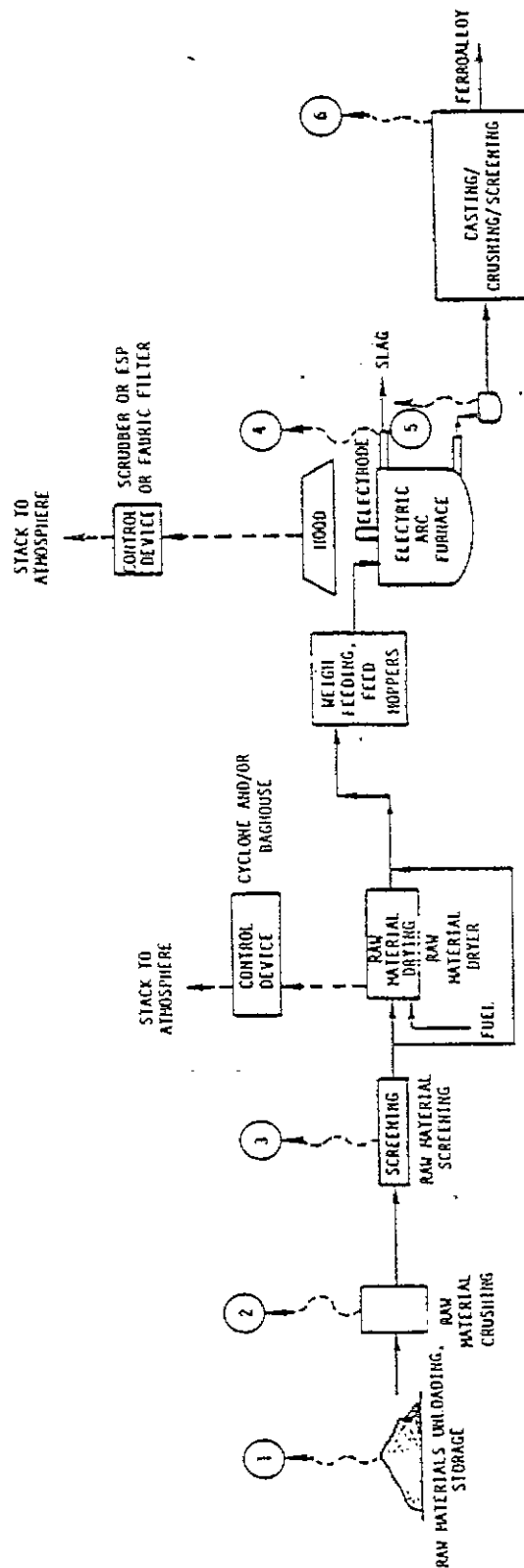
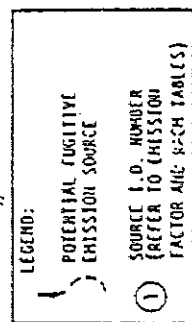


Figure 2.14-1. Simplified process flow diagram for ferroalloy production and associated fugitive particulate emission sources.

taken by bucket elevator and belt conveyor to charge hoppers from which it discharges by gravity into the smelting furnace.

In the electric submerged arc smelting furnace, carbon electrodes extend from the top of the furnace to near the bottom. A sketch of a typical furnace is shown in Figure 2.14-2.² Heat is generated by arcing of the electrodes to obtain temperatures of 4000 to 5000°F around the electrodes.³ Such a temperature permits carbon reduction of the metallic oxides present and melts the feed materials charged to the furnace. Various impurities are trapped in the slag which floats on the molten ferroalloy collecting at the bottom of the furnace. The average smelting furnace production capacity is about 120 tons per day or 40,000 tons per year of ferroalloys.⁴

The molten product is tapped from the bottom of the furnace into a receiving ladle and is taken to the cast house where it is poured into molds, cooled to a solid form, crushed, screened to desired sizes, and stored. Product is taken from storage for packaging and shipment.

Several sources of fugitive particulate emissions exist at a ferroalloy manufacturing plant. As shown in Figure 2.14-1, these sources include the following:

1. feed materials unloading and storage,
2. feed materials crushing,
3. feed materials screening,
4. charging and smelting in an electric arc furnace,

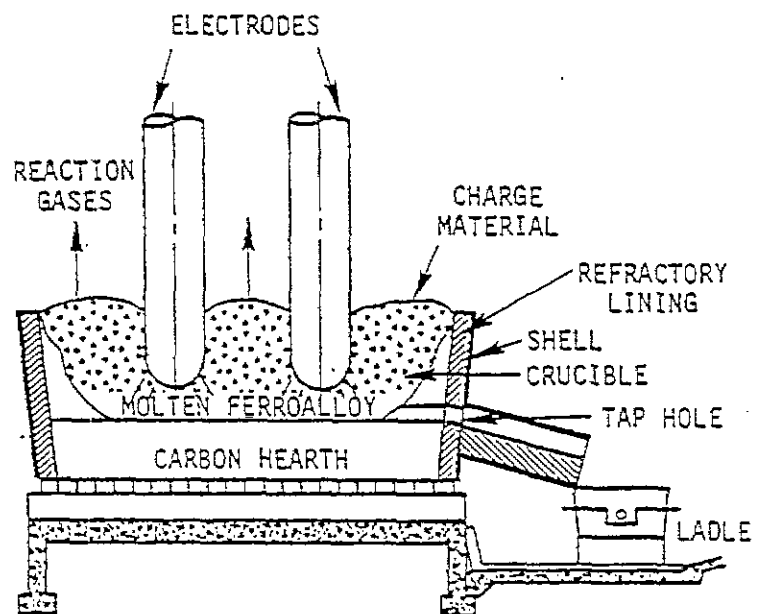


Figure 2.14-2. Submerged-arc furnace for ferroalloy production.²

5. furnace tapping, and
6. casting, crushing and screening.

Of these listed sources, the greatest source of fugitive particulate by far is the electric smelting furnace.

2.14.2 Fugitive Dust Emission Factors

The fugitive particulate emission factors for the various production steps are set forth in Table 2.14-1. The factors are based upon a study⁵ of the ferroalloy industry and are considered of fair reliability.

As can be noted from the table, the fugitive emissions factor for electric arc furnace operation and tapping are larger than for the other sources. The values cited are median values for a semi-enclosed type furnace at which leakage occurs around the electrodes. The factor for ferrosilicon production is higher than for ferromanganese alloy because of the higher furnace temperatures required for its production.

The factor cited for the cast house is comprised of emissions from the casting operation and the product crushing and screening operations. No data were available to obtain separate emission factors for these sources.

2.14.3 Particle Characterization

The properties of particulates emitted into the atmosphere from raw material handling are similar to those of the feed materials. Dusts generated range in particle size from 3 to 100

TABLE 2.14-1. FUGITIVE DUST EMISSION FACTORS FOR FERROALLOY PRODUCTION

Source	Emission factor	Reliability rating	Reference
1 Raw materials unloading and storage	2.8 lb/ton stored	D	5
2 Raw material crushing	4.0 lb/ton crushed	D	5
3 Raw material screening	4.5 lb/ton screened	D	5
4 Furnace charging and melting	5.0 ^a to 15.5 ^b lb/ton melted	C	5
5 Furnace tapping	12.0 lb/ton tapped	D	5
6 Casting, crushing and screening			
6a. Casting	2.4 lb/ton cast	D	5
6b. Crushing/grinding product	7.2 lb/ton crushed or ground	D	5

^a Use for FeMn alloy (semiencloused furnace).

^b Use for FeSi (50%) alloy (semiencloused furnace).

microns⁶ and have a bulk density of 35 to 100 pounds⁶ per cubic foot.

Particulates emanating from the electric arc smelting, tapping and casting operations tend to be very small in size and are reported⁷ to range in size from 0.1 to 1 micron in diameter. The particulate bulk density is low, 4 to 30 pounds⁷ per cubic foot. The chemical composition varies depending upon the particular alloy being produced. Silicon alloys produce a gray fume containing a high percentage of silicon dioxide. Ferrochrome silicon alloys generate silicon dioxide and chromium oxide emissions. Ferromanganese alloy production produces a brown fume consisting of silicon dioxide and manganese oxides. An additional component of the particulate in all cases is carbon which comes from the carbonaceous reducing agents in the feed materials. Other alloys would also result in metallic oxide emissions (i.e., vanadium oxides, titanium oxides, etc.).

The crushing and screening of the product alloy emits metallic particulates that range in size from 3 to 100 microns.⁸ The chemical composition of the dust is the same as that of the ferroalloy being produced.

The literature surveyed did not reveal any data concerning the toxicity of the particulate emitted. The gases evolved from a semi-enclosed arc furnace contain a large proportion of carbon monoxide.

2.14.4 Control Methods

The alternatives considered for the control of the various emission sources are presented in Table 2.14-2.

For the customary outside storage of feed materials, the use of wet dust suppression and wind breaks on the windward side of the piles is proposed.

For feed materials crushing and screening, emissions can be controlled by venting them through hoods to either mechanical collectors or fabric filters.

Fugitive emissions from a semi-enclosed smelting furnace can be controlled either by maintenance of the feed seal around the electrodes or by use of a back-up hood vented to a fabric filter or a combination of the two. These measures control only the fugitive emissions from around the electrodes. The point source gaseous effluent is routed to a control device such as a high pressure venturi scrubber or fabric filter which would exhaust via a stack to the atmosphere.

Emissions from tapping of the ferroalloy melt can be controlled by venting them via a hood installed above the tap and ductwork connected either to a separate fabric filter or to the existing main furnace effluent control device. However, in cases where a blowing tap occurs, control is infeasible due to the force with which the tap emissions are expelled.

The cast house fugitive emissions come from both ferroalloy casting operations and from product crushing and screening. Control of these emissions can be achieved either by the hooding

TABLE 2.14-2. A SUMMARY OF THE CONTROL ALTERNATIVES, EFFICIENCIES AND COSTS, AND THE RACH SELECTIONS FOR FUGITIVE DUST EMISSIONS FROM SOURCES AT FERROALLOY PRODUCTION PLANTS

Fugitive dust source	Control alternative	Control efficiency, %	Control costs, \$ (Jan. 1980)		Cost benefit, \$/lb	RACH selection
			Capital	Annual Operating		
① Raw materials unloading and storage	Wet suppression	50 ^a	11,000 ^b	7,000 ^c	0.13	Wet suppression and wind breaks
② Raw materials crushing	Wind breaks	40 ^d	35,000 ^e	7,000 ^f	0.16	Hood and vent to fabric filter
	Hood and vent to fabric filter	90 ^g	61,000 ^h	18,000 ⁱ	0.13	
③ Raw materials screening	Hood and vent to mechanical collectors	80 ^j	30,000 ^k	6,000 ^k	0.05	Hood and vent to fabric filters
	Hood and vent to fabric filter	90 ^g	61,000 ^h	18,000 ⁱ	0.11	
	Hood and vent to mechanical collectors	80 ^j	30,000 ^k	6,000 ^k	0.04	
④ Furnace charging (semi-enclosed type)	Feed seal maintenance	80 ^j	Unknown	Unknown	Unknown	Back-up hoods with a fabric filter and feed seal maintenance
	Back-up hoods with a fabric filter	90 ^g	61,000 ^h	18,000 ⁱ	0.03	
⑤ Furnace tapping	Hoods and venting to new fabric filter	90 ^g	600,000 ^m	200,000 ^m	0.46	Hood and duct into existing control device
	Hood and duct into existing control device	90 ^g	Unknown	Unknown	Unknown	
⑥ Casting, crushing and screening	Hood and duct crushing operations to a fabric filter	50 ⁿ	130,000 ^o	47,000 ^p	0.18	Hood and duct crushing and screening operations to a fabric filter (no control for casting)
	Building ventilation to fabric filter	90 ^q	390,000 ^r	130,000 ^s	0.38	

(continued)

TABLE 2.14-2 (continued)

- a Estimated per reference 9.
- b Estimated per reference 10 for one site of water spray application.
- c Estimated per reference 11 for one site of water spray application.
- d Estimated per reference 12.
- e Estimated per reference 13 for concrete block walls on windward side of storage piles.
- f Estimated for maintenance of wall and amortization of capital investment.
- g Combined efficiency of hood capture of 90% and fabric filter retention of 99.9%.
- h Per reference 14 for a fabric filter with an air flow of 10,000 scfm.
- i Per reference 15 for a fabric filter with 10,000 scfm air flow and 8400 hours per year operation. Air flow rate is considered typical for this application.
- j Efficiency estimated as combined efficiency of 90% for mechanical collector per reference 16 and of 90% for hood capture.
- k Estimate based upon data of reference 17 adjusted for ambient temperature operations.
- l Estimated efficiency.
- m Per reference 18.
- n Estimated efficiency of particulate collection compared to total emission generation in the cast house.
- o Per reference 14 for 20,000 scfm exhaust air rate.
- p Per reference 15 for 20,000 scfm exhaust air rate.
- q Estimated capture efficiency for total building ventilation.
- r Per reference 14 for 100,000 scfm estimated air flow rate.
- s Per reference 15 for 100,000 scfm estimated air flow rate.

and venting of the specific sites of emission to fabric filters or by exhaust of the building air to a single large capacity fabric filter installation.

2.14.5 Recommended Reasonably Available Control Measures (RACM)

The recommended RACM for each of the listed emission sources is shown in Table 2.14-2. Selection was based on considerations of ease of installation, the meeting of state regulations and industrial practice.

For raw materials unloading and storage on outside piles, wet dust suppression in combination with wind breaks is recommended since it is easily accomplished and is readily available. Refer to Section 2.1 which deals with the control of dusting from plant roads and storage piles.

The use of fabric filters for emissions control from feed materials crushing and screening is recommended on the basis of industrial practice.¹⁹ Such a control system can meet state emissions regulations concerning opacity and grain loading (0.030 gr/dscf). If it is practical at a given plant site, emissions from crushing and screening can be vented to a common dust collector to save the cost of two separate installations. The collected dust is easily recycled to the process stream, thus preventing loss of feed materials.

As noted in Table 2.14-2, the costs of maintaining the feed seals around the electrodes of a furnace are unknown. If it is assumed, however, that the incurred costs are nominal, then such

practice, in combination with the use of hoods and a fabric filter, is the preferred method of control.

Venting of emissions to the existing furnace control device is the recommended RACM for melt tapping. The costs are unknown ^{is} since they would be highly variable from one installation to another. Also, this option may not be possible at some plants because of capacity limitations of the furnace control device or equipment configuration problems. In these cases, a new control device is recommended due to the significance of tapping emissions.

The collection and capture of emissions from specific points of generation (i.e., crushers, grinders, screens) is the recommended RACM for the cast house operations. The method is advocated because it maintains a cleaner environment within the building and avoids retrofit difficulties associated with installation of a very large fabric filter. No control is recommended for casting. The only viable control option for casting emissions is building evacuation to a fabric filter. However, this measure does not appear to be cost effective due to the large air exhaust volumes and the size of the fabric filter required. Furthermore, casting at a typical Ohio ferroalloy production plant is generally performed at a number of locations and buildings. Since the cost-benefit value presented for building evacuation to a fabric filter represents control for one building only, control of additional buildings where casting is performed would not be cost effective.

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GNB restart of furnace is delayed

By EDWARD WORDEN

NEW YORK — GNB Inc. said yesterday it is delaying to Friday or Saturday the restart of a reverberatory furnace at its Vernon, Calif., secondary lead smelter and has had to purchase 800 tons of lead on the open market.

Unable to provide sufficient feed for the company's own production of lead-acid batteries, GNB has made lead purchases from both secondary and primary producers, according to Anthony Saldana, director of smelting operations.

The 100,000-ton-per-year Vernon smelter, one of just two secondary lead smelters on the West Coast, was to have been restarted Monday after being closed three weeks (AMM, May 22). A shutdown

A shutdown had been planned for brick relining, but damage to the floor was discovered, and the restart was delayed.

had been planned for brick relining, but damage to the floor was discovered and the restart was delayed.

The entire furnace floor is being replaced rather than just the damaged portion, Saldana said.

The company's blast furnace, which also had been taken down for repair, was fired

American Metal Market May 27, 1992

Ferrosilicon dumping, subsidy pleas filed

By PEGGY ABRAHAMSON

WASHINGTON — Imports of ferrosilicon from Argentina, Venezuela, China and three former Soviet republics are being dumped in the U.S. market, four U.S. producers alleged Friday in petitions filed with the government.

One petition also alleged that Fesilven, the state-owned Venezuelan producer exporting to the United States, is receiving "extensive" subsidies exceeding 184 percent in addition to dumping the metal at a margin of 24 percent less

than fair market value.

Argentine ferrosilicon is being dumped in the U.S. market at margins ranging between 21 percent and 113 percent, Chinese ferrosilicon is sold at a dumping margin of 138 percent and imports from the republics of Kazakhstan, Russia and Ukraine are being dumped at a 107-percent margin, the petitioners alleged.

By undercutting prices offered by U.S. producers, the overseas competitors in-

fairly traded imports, the foreign producers would further reduce their own prices, according to a statement issued Friday by the Ferroalloys Association.

"This downward spiral ... has inflicted severe and ongoing injury on the domestic industry," the petition alleged.

The four companies that filed charges are Aircor, Pittsburgh; American Alloys Inc., New Haven, W.Va.; Globe Metallurgical Inc., Selma, Ala.; and Silicon Metalltech (See FOUR, page 20)

Alcan eyes refrigeration deal in Siberia

By BOB REGAN

NEW YORK — Move over, Man-Who-Sells-Iceboxes-to-Eskimos.

Alcan Aluminium Ltd. has a man who is selling Siberians on refrigeration—and Russians on a way to keep more of their wandering aluminum at home.

It's all part of the plans of E. Ian Rugeroni, president of Alcan Enterprises, for boosting the value-added end of the Montreal-based ingot and mill products company's vast oper-

ating construction and installation services.

Haynes said in a recent interview that the plant will be a large one, situated at Kamensk-Uralsky near Sverdlovsk. The Algoods executive could provide no further details in front of further negotiations in Moscow but he said the Siberian enterprise was something of a milestone for Russia and other parts of the former Soviet Union in that it marked investment in an embryonic "white goods" indus-

try.

Alcan's Roll Bond technology, based on a technique developed by the former Olin Aluminum Corp. for channeling and joining aluminum sheet simultaneously, also is expected to find wider use in the automotive market in heat shield components as new car designs bring the catalytic converter closer to the passenger compartment.

Algoods is expected to make larger contributions to Alcan (See ALCAN, page 20)

Armco Steel sues firm for breach of contract

PITTSBURGH — Armco Steel Co. has filed a lawsuit against a subsidiary of Air Products & Chemicals Inc. alleging the company did not provide services according to a contract it had with the steel maker.

The suit, filed April 29 in Butler County Court in Hamil-

Union Drawn merger with B&L division off

Shareholder talks on proposed deal halt

By MIKE BEIRNE

CHICAGO — A proposal to merge Union Drawn Steel Co. Ltd. and Canadian Drawn Steel Co. Ltd. has been dropped after a cold-finished bar mill principal shareholder vetoed negotiations earlier this month. The deal, which would have given the U.S. company a 50% stake in Union Drawn and B&L

Armco units

Russia metal export fee reset

July 1 tariffs could curtail already declining exports

By JAMES G. REGAN

LONDON — The flow of metals from the former Soviet Union to the West, already seen falling from earlier levels, could be cut even further after new Russian export tariffs are imposed July 1.

The tariffs threaten to undermine Russia's cost-competitiveness, based on a need for hard currency, analysts said. But if the new schedule of duties, to be imposed via a complex exchange rate scheme, is implemented as planned, levies may actually fall below current levels, a Russian official maintained.

The duties cover a range of metals and other commodities and are designed to offset changes in currency regulations, Yuri Petrov, head of economics at the ministry of foreign economic relations, told wire services in Moscow.

According to London Metal Exchange ring dealer Rudolf

Wolff & Co. Ltd., the highest duty, 1,000 European currency units (\$1,300), was imposed on tin. The lowest is on ferrous scrap, which will carry a 16 Ecu (\$20.86) a ton tariff. Aluminum exports carry a 200 Ecu (\$378) a ton duty. The tariff on copper is 500 Ecu (\$652) a ton for refined metal and 10 Ecu (\$13) for copper-ore.

Imposition of tariffs on aluminum and refined copper are likely to have the most impact on western markets, however, according to analysts.

Last year, Russia shipped the bulk of the former Soviet Union's estimated 1 million tons of aluminum to the West, much of which went to LME warehouses, North American and Western European aluminum producers have pinned depressed market conditions in large part on Russian exports.

Before announcement of the tariffs, Russia's aluminum shipments to the West were seen falling to around 615,000 tons this year. "Now we could see aluminum exports fall even more this year," said Rudolf Wolff analyst William Adams.

Similarly, refined copper exports this year may fall far short of the estimated 250,000 tons shipped in 1991 by the former U.S.S.R., Adams added. Angus MacMillan, an analyst

ALLEGHENY LUDLUM

Allegheny Ludlum Corp. declared a quarterly dividend of 22 cents per common share payable July 1 to stockholders of record May 29.

DLA turns down 2 mercury bids

NEW YORK — The Defense Logistics Agency late Thursday rejected two bids it received at the monthly auction of secondary mercury.

The agency nixed a bid by Minor Metals Inc., Fort Lee, N.J., for the agency's 750-flask monthly allotment at \$102.22 a flask and a bid by D.F. Goldsmith Chemical & Metal Corp., Evanston, Ill., for 100 flasks at \$110 a flask.

Starck closing NY unit, merging import business

(Continued from page 1)

heads Starck's tantalum and columbium activities worldwide, will take over as president of the merged company. Erhard Burkert will take over the import business activities of H.C. Starck Inc.

Korinek has been president of Starck Inc. for 22 years and for the past five years has headed NRC, which operates the largest tantalum and columbium processing plant in the world.

Albrecht joined Starck in 1971 and was named head of tantalum and columbium metal production in 1977. He was appointed general manager of the company's tantalum and columbium group in 1989.

No reason for merging Starck and NRC was given, but the parent company, a major producer of ferroalloys and metal powders, recently

undertook an ongoing reorganization of operations, which included relocating the company's headquarters from Berlin to Goslar, near Hannover.

The company's name subsequently was changed from Hermann C. Starck Berlin GmbH & Co. KG.

In addition to Korinek's retirement, the reorganization coincides with the retirement of Starck chairman Karl Ludwig Frege at the end of the month (AMM June 18).

Executive board member Peter Kahler has been tapped to take over the position beginning July 1.

Frege departs after 37 years with the German metals producer, where he has served as chairman since 1989.

Kahler joined the company in 1988 and was appointed to the executive board the following year.

WEEKLY TIN PRICE AVERAGES

Friday, June 18, 1992
(cents/lb.)

AMM ex-stock
Kuala Lumpur (per 100)
16.33
313.40

LONDON METAL EXCHANGE

Settlement price (1) is the same as the final session cash price. Price includes premium per metric ton, except aluminum high grade, steel, iron and zinc special high grade in U.S. dollars per metric ton.

DLA sells 20T tin

NEW YORK — The Defense Logistics Agency sold 20 metric tons of tin Thursday to Aaron Ferer & Sons, Omaha, Neb., at \$3.03 a pound.

US imports of EC steel up 67%

(Continued from page 2)
other countries' shipments fell to 1,828,000 tons from 2,230,000 tons.

In its own exports, the domestic steel industry is not having the year it had in 1991, when through the first four months it shipped 1,887,548 tons. The exports are down almost 19 percent to 1,534,894 tons in the first third of this year. In April, these exports were 389,229 tons, up from March's level of 350,849 tons but down from last year's 594,890 tons.

Japanese deliveries dropped to 813,000 tons from 1,027,000 tons, and EC shipments fell to 1,632,000 tons from 1,663,000 tons. Similarly,

Bush to unveil new policy

AMERICAN METAL MARKET

THURSDAY, JULY 2, 1992

VOLUME 19 NUMBER 123

ITC to continue ferrosilicon probe

By VIRGINIA GANNON

WASHINGTON — The International Trade Commission ruled late Tuesday there was reasonable indication that imports of ferrosilicon from Venezuela, Argentina, the People's Republic of China and three former Soviet republics materially injure or threaten material injury to U.S. producers.

The commission voted 6-0 to continue anti-dumping investigations against Argentina, Kazakhstan and Venezuela and 5-1 on the case against China.

Also, the ITC voted 6-0 to continue a countervailing-duty investigation on ferrosilicon from Venezuela.

The vote on the anti-dumping cases against Russia and Ukraine was 3-3, but a tie vote is all that's needed to make a preliminary affirmative determination. Peter Watson, commission vice chairman, and commissioners Anne Brunsdale and Carol Crawford voted against the injury finding.

The affirmative determinations were necessary to move the cases forward at the Com-

merce Department. That agency will determine preliminary subsidy margins by Aug. 14 and preliminary dumping margins by Oct. 29.

John G. Oxaal, president of the Ferroalloys Association, which filed the case in May on behalf of five domestic producers, said he was "very pleased" with the vote. "We also think it's warranted by the facts. The imports have increased significantly, undercut prices and taken sales away from domestic producers," he said.

...to be... wire mill was purchased for but a company statement noted, the state of Pennsylvania will provide a \$1-million low-interest loan to complete the financing package.

The Johnstown wire mill has been operated by Bethlehem, Pa.-based Bethlehem Steel since 1923 when the corporation purchased Cambria Steel Co. The mill has been in existence since 1911.

Last January, Bethlehem Steel announced it was exiting the bar, rod and wire business, and in August a letter of intent was signed with TMB to sell the wire mill.

Bethlehem shut down the mill effective Dec. 12.

The wire mill employed about 250 people, including salaried and hourly workers, Garcia said. During negotiations (See TMB, page 16)

By BOB REGAN
NEW YORK — Cambodia's giant Bata Steel plant, which produces about 100,000 metric tons a year, is owned by Ratanak Kiri, a former prime minister of Cambodia. The plant was built by the French in the 1960s and is one of the largest in Southeast Asia. It is currently producing about 100,000 metric tons of steel a year. The plant is owned by Ratanak Kiri, a former prime minister of Cambodia. The plant was built by the French in the 1960s and is one of the largest in Southeast Asia. It is currently producing about 100,000 metric tons of steel a year.

Special to American Metal Market
RIO DE JANEIRO — Gerdau Group, Brazil's largest private steel producer, said it will invest \$40 million to expand and modernize U.S. Siderurgica da Bahia (USAB) 350,000-metric-ton-a-year capacity wire rod and rebar. It bought the firm from the government in 1989.

Gerdau said the expansion and modernization program to be completed by 1994, increase output by 35 percent, increase wire quality and decrease pig iron consumption.

Gerdau is using a combination of its own capital, for funding and a loan from zil's Banco Nacional de desenvolvimento Economico Social (BNDES), which is capital goods industries, to finance the modernization.

Importers cry foul at silicon moves

Say aluminum-rich Chinese alloy is a legitimate, legal product

By CHRISTOPHER MUNFORD

NEW YORK — Importers of ferroalloys from China are protesting attempts by domestic producers to block shipments to the U.S. market of a silicon-aluminum alloy resembling silicon metal, saying such shipments are legal under current laws.

The U.S. Commerce Department, which was expected to have ruled by now on a petition that seeks to halt such

shipments, is meanwhile backlogged with other anti-dumping actions.

"We call this product a silicon-aluminum alloy; it is patented in China" and is in keeping with the terms of the Sino-American trade pact currently in effect, according to a U.S.-based trader who said he has shipped about 2,600 tons of the material into North America this year.

"I've been accused of circumventing the tariffs, but these shipments are absolutely legal. (The U.S.) Customs (Service) has looked at it and chemically checked it," the trader said.

He added that material shipped from China is generally sold at or very near current U.S. market prices.

Domestic producers "are trying to shut the border to every silicon unit from any (See IMPORTERS, page 16)

Coors com of can, pac

By BOB REGAN

NEW YORK — The steel and other former units of yesterday, establishing with sales of more than aluminum, ceramics, packaging businesses.

A spokesman for Goltz company's continuous casting mill in San Antonio commercial product to Coors (See BREWER, page 16)

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Jamaica's net from bauxite, alumina down

By BOB REGAN

NEW YORK — Jamaica's bauxite and alumina earnings were down in 1992 despite persistently high rates of aluminum production in the West and Russia's scramble for raw materials to maintain a hefty rate of aluminum exports.

Carlton Davis, executive chairman of the Jamaica Bauxite Institute (JBI), said recently that Jamaica's business with Russia and other points in the former Soviet Union vanished altogether in 1992 compared with about 425,000 metric tons last year and exports in previous years running as high as 800,000 tons. (See JAMAICA, page 16)

IN TODAY'S ISS

- Alloying & Precious Metals
- Classified Ads
- Editorial
- Nonferrous
- Scrap
- Secondary Industry Meetings

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Ferrosilicon dumped in US by 4 countries; Commerce clears 5th

By LAURA VIANI

WASHINGTON — The Department of Commerce late Wednesday said ferrosilicon from Kazakhstan, Russia, Ukraine and Venezuela has been found to be dumped at unfair value in the United States, and a separate investigation determined a potential dumping by the Soviet Union.

According to Commerce, preliminary determinations of dumping margins for ferrosilicon from Kazakhstan, Russia and Ukraine were 18 percent, 18 percent and 19 percent, respectively. The dumping margin for Venezuela was 19 percent.

Commerce is expected to make final determinations by March 3.

The investigations began in 1991 when a petition was filed on behalf of the U.S. industry by Alcoa, Alabama Silicon Inc., American Alloys Inc., Globe Metallurgical Inc., Silicon Metallurgical Inc., the United Autoworkers of America, the United Steelworkers union and the Oil, Chemical & Atomic Workers Union.

Imports of ferrosilicon from Venezuela in 1991 were valued at \$20 million. Import figures for Kazakhstan, Russia and Ukraine were not kept separately by the U.S. Customs Service, but 1991 imports from the former Soviet Union totaled \$10.5 million.

Bethlehem Deal with Conley for Steel

By PETER SCOLIERI

PITTSBURGH — Four months to the day after disclosing it had a buyer for its Steelton, Pa.-based trackwork operations, Bethlehem Steel Corp. late last week said it had terminated discussions with the potential owners.

The Bethlehem, Pa., steelmaker late Wednesday disclosed it had broken off talks with Conley Frog & Switch Co. Inc. on the sale of the unit. The announcement came four months after Bethlehem Steel had announced it had a tentative agreement for the sale of the operation, which is located adjacent to the steelmaker's Pennsylvania Steel Technologies Inc. subsidiary, the former Rail Products & Pipe division.

"As indicated previously, it is Bethlehem's intent to exit the trackwork business," the

Admiral will be complete custom require

steelmaker ment. "A 1 will be complete unfinished requirements time to div trackwork c

When the nounced, said it would to a uct require fied during od" (AMM.

The sale operations hem. Steel

Klockner gets interim funds

Said to be exploring more efficiency at Bremen works

By JAMES G. REGAN

LONDON — Klockner-Werke AG, the troubled German steel group, said it has secured interim financing to carry it through its planned debt restructuring. It also is understood to be exploring ways to make its main steel works in Bremen, Germany, more efficient, and remains in cooperation talks with Dutch metals group Koninklijke Ne-

derlandse Hoogovens & Staalfabrieken NV.

One of the proposals under consideration is to idle one of the two blast furnaces at Bremen and lay off about 1,000 of the 5,800 workers employed at the works.

Sources in Germany, though, stressed that any layoffs could involve lengthy talks with German steel unions.

Klockner-Werke, which filed

for a reorganization under insolvency rules Dec. 11 for its Klockner Stahl and Klockner Edelstahl divisions, is asking creditors to accept up to a 60-percent discount on debts totaling 2.7 billion deutsche marks (\$1.7 billion) (AMM, Dec. 14).

The move is equivalent to Chapter 11 of the U.S. federal bankruptcy code, was the first

China builds powder metal muscle

By CHRISTOPHER MUNFORD

NEW YORK — China will expand its capacity to produce iron metal powder by building two new plants by 1995, one of which will be constructed by Hoganas AB of Sweden.

Hoganas recently clinched a deal to build a facility to produce atomized iron powder in Shanghai.

The plant is scheduled for completion in 1994 and will produce at an annual rate of 44,000 tons, according to the

American Powder Metallurgy Institute.

China also plans to build a plant to produce sponge iron powder at Maanshan for completion no later than 1995. The operation is designed to produce approximately 11,000 tons of sponge powder a year.

Powder metallurgy is a fast-growing sector in China, with powder metal parts rapidly replacing machined parts in many manufacturing applications.

China already has a sponge iron plant in Wuhan that can produce 22,000 tons of material a year and a water-atomized iron powder plant in Anshan with an annual capacity estimated at 5,500 tons.

But the plants are insufficient to meet current demand in China, which also imports powder from Japan.

When new capacity comes on-line, Chinese officials have said they hope to sell powder

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By CHRI

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Mickey Kantor 'USTR' comes

IN TO

Ferrous scrap prices jump Rockwell to sup of coil

(Continued from page 1)

Market sources said much of the activity is broker-induced, with several buyers seeking to own material before the mills actually make a commitment.

No mill buyers were willing to comment on the reports that they had made any large-tonnage buys at this point. In a typical month, the steel mills that buy ferrous scrap are generally sounding out the market at this point trying to determine either through direct contact with processors or through brokers whether they should raise or lower prices and by how much.

This, one Midwest source said, is anything but a typical month for ferrous scrap buyers and sellers.

Several factors are said to be driving the early buying rush, if that is the case. First, because of the Christmas holiday, the auto industry's auction of its factory bundles closed a week earlier than usual. The prices in this month's go-round were up by almost \$16 a ton (AMM, Dec. 22), their biggest single-month leap in nearly five years.

Second, several mills are said to be low on ferrous scrap inventories and as a result might be "jumping the market," as one broker said, in order to assure supply and hopefully avoid even sharper increases if they wait until after many of their competitors have bought.

Another market source said the mills could be working to line up supply in the wake of

reports that the ferrous export market has strengthened.

What all this will mean to the ferrous market come the first week of January is not certain. One industry source said it could help to keep a lid on prices in the dealer market or at least keep the increase in that area below what some anticipate.

Another, who sees this as a broker-induced binge, said it might be a way to curry favor with some steel mills by being able to assure them of supply at a known price.

"All of these are what they call 'quiet deals,'" one scrap industry source said, "but there really is no such thing as a 'quiet deal' because the scrap business is also the world's biggest rumor business."

(Continued from p. 1)

Industry source Rockwell or another manufacturer, such as a Spring Components Inc. could make the economically this but they were not er those firms had to go through another process.

NASCO, a joint Japan's NHK Sp. and Associated S Group, produces in Bowling Green.

Recently, Rock products operated out of an arrangement whereby it would plastic exterior for the automats cars, and it did

Importers cry foul over silicon

(Continued from page 2)

overseas source," the trader said.

Tariffs imposed last year apply to silicon metal from China containing at least 98-percent silicon.

Recent Chinese shipments, however, sometimes contain relatively high amounts of aluminum, resulting in a material

not subject to the tariffs, domestic producers have charged.

U.S. producers want the government to broaden the definition of silicon metal subject to current anti-dumping penalties to include lower percentages of silicon.

But a Commerce Department staffer said yesterday that the agency currently is deluged with anti-dumping

cases, particularly regarding steel.

The department last week made a preliminary determination that tariffs be applied to shipments of ferrosilicon from various overseas suppliers.

The staffer said there is no way to predict at this time when a ruling on expanding the silicon metal tariffs might be forthcoming.

Jamaica from bauxite alumina

(Continued from p. 1)

JBI estimate 1992 bauxite exports million tons, down or about 100,000 previous year, where apparent some of the So loss but Davis said that prices for alumina softened. Davis said prospects for Jamaica and alumina "dismal," with a running nearly 1 er than year-ear. economic recovery slowly in key regions.

JBI estimated production at 2.5 off about 2.6 pe year, JBI attr alumina output problems at that were under ing procedures. Davis also no posed joint venture remains or of political character. European country. tive said Jamaica exploring o no decision can mid-1993.

Brewer completes spinoff of can unit

(Continued from page 2)

is still mainly in various stages of qualification. There's no denying we're late—about nine months late—but we are shipping commercial product," he said. Some of the Texas facility's can stock has gone to "the most demanding customer—Coors," he added.

Coors said 12,575,507 shares of the new company, ACX Technologies Inc., are going out to Coors stockholders of record Dec. 16 at the rate of one for each three Coors shares held. ACX stock was opened for trading on NASDAQ (National Association of Securities Dealers Automated Quotation System) beginning Dec. 21 and Coors will release pro-forma financial information on the spun-off units covering fiscal 1991 and the 40-week period ended last Oct. 4.

In its third-quarter report, Coors said Golden Aluminum had an operating loss of \$3.7 million vs. operating income of \$2.2 million in the year-earlier period, reflecting mainly continuing start-up costs at the San Antonio facility. Coors said these costs amounted to \$6.6 million in the third quarter alone.

TIN PRICES IN KUALA LUMPUR

Monthly and annual average prices, ex-smelter Kuala Lumpur Tin Market (Penang Straits prices prior to Sept. 28, 1984), ringgit per kilo; compiled from prices published in American Metal Market, Sept. 1985.

	Ringgit per kilo	Dollars per lb.
1987 average	16.84	3.0348
1988 average	18.46	3.1979
1989 average	23.09	3.8706
1990 average	16.45	2.7619
1991		
Jan.	15.03	2.5140
Feb.	14.87	2.5017
Mar.	14.88	2.4621
April	14.99	2.4714
May	15.34	2.5250
June	15.50	2.5308
July	15.45	2.5162
Aug.	15.30	2.4984
Sept.	15.02	2.4709
Oct.	14.87	2.4569
Nov.	14.71	2.4358
Dec.	14.68	2.4299
Average	15.05	2.4844

* 2.20462 pounds per kilo.
Note: Kuala Lumpur prices were suspended Oct. 24, 1985, and restarted February 1986.
Copyright American Metal Market/Metal Statistics.

American Alloys
Economic Impact on Mason County, West Virginia

Mason County Labor Force (November 1992) ¹	9,924
Mason County Labor Force (1986) ²	8,822
Unemployed as of November 1992 ¹	1,515 (15.3%)
Unemployed (1986) ²	1,562 (17.7%)
Number of Manufacturers in Mason County (1992) ³	12
Number of Manufacturers in Mason County (1982) ²	19
Number Employed by Manufacturers (1992) ³	642
Number Employed by Manufacturers (1984) ²	1,078
Number Employed by American Alloys ³	243
American Alloys Monthly Payroll ⁴	\$517,000
American Alloys Local Taxes ⁴	\$300,000
American Alloys State Taxes ⁴	\$380,000

Sources:

- 1 U.S. Department of Labor, Bureau of Labor Statistics, Local Unemployment Section.
- 2 Center for Economic Research, West Virginia University, County Data Profile, Mason County, West Virginia (1991).
- 3 West Virginia Manufacturers Register, 1992 Edition.
- 4 American Alloys, Inc.



*Copied to Hall, Karcy,
Dave W., + Paul R
8/10/93 SKM*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

WV DIV. OF ENVIR. PROTECT.
OFFICE OF AIR QUALITY

1993 AUG -5 A 10:49

Enforcement Confidential

AUG 02 1993

Dale Farley, Chief
West Virginia Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, West Virginia 25311

Dear Mr. Farley:

EPA understands that the West Virginia Office of Air Quality (WV OAQ) intends to seek SIP revisions relaxing the regulatory limits on emissions of air pollutants applicable to American Alloys, Inc., for its plant in New Haven, WV; Elkem Metals Company, Inc., for its plant in Alloy, WV; Wheeling Pittsburgh Steel Company, Inc., for its plant in Follansbee, WV, and Schuller, Inc., for its plant in Vienna, WV.

EPA also understands that the WV OAQ signed a consent agreement with American Alloys, Inc. on April 16, 1993 which allows that Company to exceed the WV OAQ's regulatory limits on particulate matter emissions while the proposed SIP relaxation affecting the Company is being considered. EPA further understands that the WV OAQ is considering signing similar consent agreements with some or all of the other Companies.

As you know, EPA may take enforcement action against any of these Companies for their ongoing SIP violations, notwithstanding the fact that WV intends to seek SIP relaxations applicable to them, and notwithstanding the fact that WV has signed or may sign agreements with them allowing them to exceed WV's regulatory limits while EPA considers SIP relaxations. Accordingly, EPA is reviewing these cases.

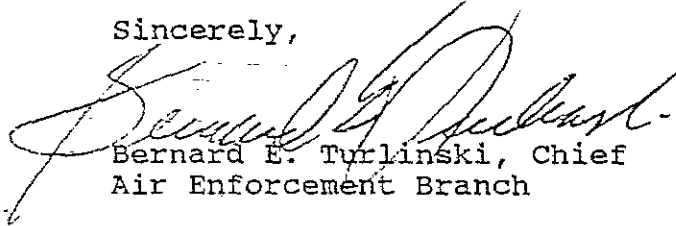
The State has informed us that it is seeking SIP relaxations for American Alloys, Inc., Elkem, Inc., and Schuller, Inc. based primarily on their assertions that they cannot meet current SIP requirements using any reasonably available control technology. EPA believes these claims should be thoroughly evaluated, and has contracted with Pacific Environmental Services, Inc. (PES) to have this task completed.

PES, Inc. will inspect all three Companies, will evaluate the emission sources of concern, and will determine what, if any, control technologies are available. If PES determines that control technologies are available, PES will evaluate their cost and cost effectiveness. Enclosed for your information is the technical portion of the "Mini" work plan which PES submitted for this task, which describes the work PES will do in more detail.

Mr. Richard W. Gerstle of PES will be doing much of the work on this project. Mr. Gerstle might be able to obtain a better understanding of the plants he inspects if a WV OAQ engineer already familiar with those plants could accompany him during his inspections. If the WV OAQ would be able to provide such assistance, please let us know. Also, Mr. Gerstle has said that he would like to visit the WV OAQ's office to review the WV OAQ's files on these plants. I hope that you find this acceptable. If not, please inform me as soon as possible.

If you have any comments or concerns regarding any of the items discussed above, please contact me at (215) 597-3989, or Mr. Ray Chalmers of my staff at (215) 597-9844.

Sincerely,



Bernard E. Turlinski, Chief
Air Enforcement Branch

Enclosure

"MINI" WORK PLAN

CONTRACTUAL ASSISTANCE TO CONDUCT AN ENGINEERING
EVALUATION AND INSPECTION OF POLING OPERATIONS,
OXYGEN LANCING OPERATIONS, AND BLOWING TAPHOLE OCCURRENCES AT
AMERICAN ALLOYS, INC., ELKEM METALS COMPANY; AND
AN ENGINEERING EVALUATION AND INSPECTION OF THE
FIBERGLASS OPERATIONS AT SCHULLER INTERNATIONAL, INC.

Contract No. 68D20058
Work Assignment No. I-28
K:\E228-000\WRKPLN.PRC

Submitted to:

U.S. Environmental Protection Agency
Region III
841 Chestnut Street
Philadelphia, Pennsylvania 19107

July 1993

Submitted by:

Pacific Environmental Services, Inc.
560 Herndon Parkway, Suite 200
Herndon, Virginia 22070-5225
(703) 471-8383

10:07 2513 388 3342 PES CINCINNATI

Directive Under: WORK ASSIGNMENT I-28: Conduct an engineering evaluation and inspection of poling operations, oxygen lancing operations, and blowing taphole occurrences at American Alloys, Inc., New Haven, WV, and Elkem Metals Company, Alloy, WV; and an engineering evaluation and inspection of the fiberglass operations at Schuller International, Inc., Parkersburg, WV.

PROJECT APPROACH

Pacific Environmental Services, Inc. (PES) will plan and conduct engineering evaluations and inspections of three West Virginia facilities, as outlined in the following tasks.

- Task 1. PES will obtain available background information on the design, maintenance, cost and operation of control equipment for ferroalloy production, especially for poling, oxygen lancing operations, and for taphole blowing occurrences. This information will be obtained from the system designers, air permits, equipment suppliers, plant personnel, and other facilities with similar operations. PES will also obtain Consent Orders and permit files from the State of West Virginia. Visits to well-controlled ferroalloy plants to obtain additional information are not planned at this time, but may become necessary.
- Task 2. PES personnel will visit the American Alloys, Inc. and the Elkem Metals Company ferroalloy plants and perform a detailed inspection of the poling, oxygen lancing of tapholes, and blowing tapholes. PES will visually determine the level of emissions which occur during these operations and will compare these to the levels permitted by applicable limits. PES will determine: the control methods available to reduce emissions from these operations; the emission reductions likely from application of available methods; and the cost and cost-effectiveness of these methods. PES will discuss operational and maintenance problems with plant staff and will review operating records, maintenance logs and schedules, process downtime, size of maintenance staff, equipment inspection schedules, and other related operational factors.
- Task 3. PES will also inspect other air emission sources at American Alloys, Inc. and Elkem Metals Company. PES will determine if there are any violating sources which have not already been addressed by the State via State compliance orders. If PES identifies any such sources, PES will recommend methods for bringing them into compliance, will estimate how much those methods would reduce emissions, and will estimate their cost and cost effectiveness. PES will also determine if the Companies are bringing the known violating sources

subject to State compliance agreements into compliance in accordance with all specified plans and schedules.

- Task 4. For each facility, PES will prepare a separate report focusing on poling, oxygen lancing of tapholes, and blowing taphole occurrences. These reports will summarize emissions from the specified operations, the control techniques available, and the costs and cost-effectiveness of employing control equipment. The reports will also offer recommendations for reducing emissions from identified sources.
- Task 5. PES will obtain available background information on the design, maintenance, cost, and operation of control equipment for fiberglass production. This information will be obtained from the system designers, air permits, equipment suppliers, plant personnel, and other facilities with similar operations. PES will obtain permit files from the State of West Virginia.
- Task 6. PES will conduct an inspection and engineering evaluation of Schuller International, Inc.'s fiberglass plant. PES will determine the plant's current level of emissions and will compare these to the levels permitted by applicable limits. PES will determine: control methods which are available to reduce emissions from these operations; emission reductions likely from application of the available methods; and the cost and cost-effectiveness of these methods. PES will discuss operational and maintenance problems with plant staff and will review operating records, maintenance logs and schedules, process downtime, size of maintenance staff, equipment inspection schedules, and other related operational factors.
- Task 7. PES will prepare a report summarizing: emissions from the fiberglass production; the control equipment available for reducing emissions; and the costs and cost-effectiveness of employing control equipment. This report will also provide recommendations for reducing emissions from these sources.

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KIM BROWN POLAND
DIRECT DIAL NO. (304) 347-8348

August 4, 1993

L. Newton Thomas, Chairman
W. Va. Air Pollution Control Commission
1558 Washington Street, East
Charleston, WV 25311

Re: Schuller International, Inc., Amendment to
Regulation 7

Dear Chairman Thomas:

In anticipation of the Commission's meeting on August 9, 1993, I have been asked by Schuller International, Inc., to clarify with you its position regarding the proposed amendments in section 4.15 of Reg. 7 now pending. Those amendments would establish an industry-specific performance standard for flame-attenuation fiberglass operations that reflects the limits of current technological capabilities for this system at levels which are also comparable (and even more stringent) than similar facilities in other states.

Because EPA is requesting area sources modeling to approve the change, time will be needed for the company to develop a model protocol that must be approved by both OAQ and EPA. This requires the gathering of a great deal of emissions and meteorological data to run such a model. This modeling request by EPA is over and above the rigorously conservative screening model which Schuller has already conducted and submitted to you and the OAQ which showed that the allowables being requested would assure compliance with the PM10 ambient standard. In fact, the OAQ's particulate monitor nearest the plant shows the area to be well in compliance with the PM10 standard. While the company is dismayed with this delay, it is committed to working with OAQ and EPA Region III to quickly resolve these issues.

The company will continue to work with the OAQ to resolve related enforcement issues associated with this standard-setting initiative. Schuller International and the 350 employees of its

ROBINSON & McELWEE

L. Newton Thomas, Chairman

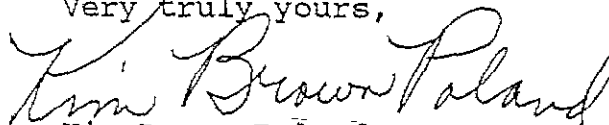
Page 2

August 4, 1993

Vienna Plant appreciate the Commission's consideration in this difficult situation.

We are mindful that Reg. 7 is also proposed for other amendments. Accordingly, so as not to delay the timely submission of those changes to the Legislature, the company requests that the Commission act to delete proposed section 4.15 at this time, without disapproving it. Once modeling issues have been resolved, the company will reinstitute its petition for rulemaking and for appropriate notice, comment and full discussion.

Very truly yours,



Kim Brown Poland
Counsel for Schuller
International, Inc.

KBP:vlr

cc: G. Dale Farley, Chief, OAO

JACKSON & KELLY

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WEST VIRGINIA
AIR POLLUTION
CONTROL COMMISSION

August 26, 1993

WRITER'S DIRECT DIAL NO.
340-1355

L. Newton Thomas, Jr., Chairman
West Virginia Air Pollution
Control Commission
914 Newton Road
Charleston, West Virginia 25314

Re: Consideration of Proposed Amendments
to 45 CSR 7

Dear Chairman Thomas:

It is Elkem Metals Company's understanding that at the last Commission meeting Mr. Farley, Chief of the Office of Air Quality, recommended to the Commission that they table or continue the Commission's consideration of Regulation 45 CSR 7, To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations. Unfortunately, Elkem Metals was not aware that Mr. Farley was going to make such a request and, therefore, was not in attendance at the subject Commission meeting.

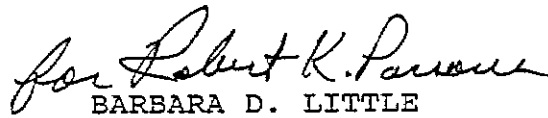
We respectfully ask that the Commission place 45 CSR 7 on the agenda of the next Commission meeting. We would further request that such meeting be held as expeditiously as possible, preferably the last of September or the first week in October. Such a schedule would allow the Commission to propose the regulation, as amended, to the Legislative Rulemaking Review Committee at their meeting scheduled for October 16 and 17.

As you are aware from the letter the Commission received and read during the public hearing on 45 CSR 7 from Secretary Ranson, the amendments to Regulation 7 will result in economic benefits, including more jobs, to the State of West Virginia and to its citizens. Elkem Metals is only asking for the amendments to conform Regulation 7 to the federal and other states' standards (as approved by EPA) for ferro-alloy manufacturing processes.

August 26, 1993
Page Two

We thank you in advance for approving our request.
Should you have any questions, please contact me.

Sincerely,


BARBARA D. LITTLE

BDL/tmb

cc: Jean Neely, Vice Chairman
WV Air Pollution Control Commission
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Shepherdstown, WV 25443

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WV Department of Agriculture
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(412) 355-2641

August 27, 1993

Britt Bernheim, Esq.
Secretary, West Virginia Air Pollution
Control Commission
1615 Washington Street, East
Charleston, WV 25311

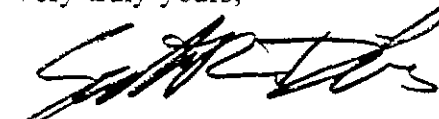
RE: Consideration of Proposed Amendments to 45 CSR 7/American Alloys

Dear Secretary Bernheim:

American Alloys respectfully requests the Commission place 45 CSR 7 on the agenda for the next scheduled Commission meeting. We further request that 45 CSR 7 be placed on that Commission meeting's agenda at the earliest opportunity. Once the Commission meeting has been scheduled and the agenda for that meeting has been finalized, we also request you provide us written notice of the meeting and a copy of the agenda.

Thank you for addressing this matter.

Very truly yours,



Scott R. Dismukes

SRD/bcs

cc: Walter Meck
Parker Adams
William Beard
Robert Hice
William L. Doepken
Leo A. Keevican, Jr.
James F. Bauerle

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WV DIV OF ENVIR. PROTECT.
OFFICE OF AIR QUALITY

Region III

841 Chestnut Building

1993 SEP 10 A 10: Philadelphia, Pennsylvania 19107

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SEP 10 1993

Mr. G. Dale Farley, Chief
West Virginia Dept. of Environmental Protection
Office of Air Quality
1558 Washington Street, East
Charleston, West Virginia 25311

Dear Mr. Farley: *Dale*

In response to your recent request, we have reviewed your Office's proposed revisions to 45 CSR 7 ("To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations") and 45 CSR 10 ("To Prevent and Control Air Pollution from the Emission of Sulfur Oxides") for incorporation into the West Virginia state implementation plan (SIP). These revisions would provide regulatory relief to several sources. EPA will not approve the revisions to 45 CSR 7 and CSR 10 as drafted. EPA will continue to enforce the current West Virginia SIP regulations. EPA's comments on the draft language follow.

Comment #1 -- Enforceability of Schuller's Plant-Wide Emissions Limit

Under the current SIP, each of Schuller's nine fiberglass production lines are subject to a weight-rate based emission limit for particulate matter. Each line is vented through a separate stack, and compliance with the regulation is demonstrated independently for each stack.

The proposed addition of section 4.15 to Regulation 7 would: (1) set a new plant-wide emission limit of 48.6 pounds per hour (relaxed from 27.5 pounds per hour, the sum of the existing individual limits); (2) within 60 days of the effective date of the regulation, require the owner/operator to notify the Chief of the Office of Air Quality (OAQ) of the specific limits for each stack (such that the sum does not exceed the plant-wide limit); (3) provide for the owner/operator to apply for changes to this configuration; and (4) exempt the source from the current mass emission limits.

The proposed addition of section 4.15 to Regulation 7 is not approvable as a SIP revision because a plant-wide emission limit, alone, is not acceptable. Emission limits for particulate matter must be provided for in the SIP on a unit-specific basis that are applicable at all times. The draft regulation does not meet this criterion and, therefore, is not approvable for incorporation into the West Virginia SIP. Only after specific limits are set for each stack, and modeling performed to demonstrate attainment, may a SIP revision be submitted and approved.

Comment #2 -- Director's Discretion in Approving Shut-Down
of Desulfurization Equipment

Draft revisions to Regulation 10 are intended to allow existing by-product coke facilities that "can demonstrate to the Chief [of the West Virginia Office of Air Quality] that there is no practical alternative to scheduled maintenance (including shut-down) of desulfurization equipment" to request the approval of a temporary emissions control plan during such shut-down periods (45 CSR 10 section 3.8(g)).

This language is unapprovable for incorporation into federal regulations because it violates the SIP requirements in that it provides for "Director's Discretion." The language of the regulation must provide for EPA approval as well as for the approval of the West Virginia OAQ.

Comment #3 -- Enforceability of Source's Prevention
of NAAQS Violations

Additions to Regulation 10 would also require that such mitigation plans "provide for a definitive reduction in sulphur dioxide emissions sufficient to prevent any violation of federal and state ambient air quality standards or applicable air quality increments for sulphur dioxide."

This provision is not approvable as written as a SIP revision because it is not specific in its requirements. As stated above, for an emission limit, or provision for an emission limit, to be approved into the SIP it must be provided for in the SIP in such a way as to be applicable on a unit-specific basis. The relation between sulfur dioxide emissions from one emission point and ambient concentrations cannot be determined in an objective, straightforward manner. Provisions requiring sources to simply maintain ambient air quality standards are not approvable as a SIP revision. Therefore, the OAQ must include "...expressed in unit-specific allowable emission rates..." after the word "emissions" and before the word "sufficient." Again, sources must have these alternative emission rates approved by EPA as well as the West Virginia OAQ.

Comment #4 -- Saving Other Applicable Provisions

The addition of section 3.8(g) to Regulation 10, as drafted, would have no effect on the existing provisions of that rule, such as 3.8(d). Consequently, while a source would be permitted to shut down its desulfurization equipment, it would not be allowed to violate the existing limit of 50 grains of hydrogen sulfide per 100 cubic feet of process gas. We understand that you need to revise the SIP to provide for specific operating conditions involving malfunctions and periods of scheduled maintenance. However, the revisions as drafted are not approvable and do not achieve the desired effects as we understand them.

Comment #5 -- Enforceability of visible emissions associated with certain operations of "Ferroalloy electric submerged arc furnace"

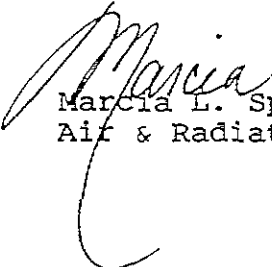
The proposed revisions to 45 CSR 7 call for elimination of the limits of smoke and/or particulate matter emission resulting from certain operations of submerged ferroalloy electric arc furnaces (EAFs). The operations specifically requested to be exempted from the regulations are: blowing taphole events, poling, and oxygen lancing operations. Among them, as proposed, only poling emissions would be subjected to the time limit of 5 minutes.

In the absence of specific information indicating type of furnaces (open, close-hooded, semi-sealed, or sealed); type, capacity, and efficiency of the existing air pollution control systems, as well as work and maintenance practices utilized, EPA, Region III, doesn't feel that proposed revision of the current SIP is warranted. Should some relaxation of SIP standards (based upon technical review of the information requested) be deemed necessary, some upper limit of emissions, in terms of opacity and duration, would still be required.

It should be noted, that highest EAF emissions occur during the charging, meltdown/oxidation, and tapping periods, and are usually most difficult to capture. Emissions are contained and directed to air pollution control devices by various systems, such as Total Furnace Enclosure (TFE) with associated air-curtain fans, fourth hole direct shell evacuation system with side draft hoods, primary and secondary canopy hoods, as well as a complete building evacuation system with a scavenging duct work at the building roof monitor. Again, with no specifics provided, it is not clear why an excessive generation of gas and fume occurring at the tap hole and lip during the initial phase of tap cannot be effectively captured by a separate hood with its own fan.

Thank you for the opportunity to provide comment at this time. If you have any questions or comments regarding this matter, please call me at (215) 597-9075 or Todd A. Ellsworth at (215) 597-2906, or your staff may call Thomas A. Casey at (215) 597-2746.

Sincerely,



Marcia L. Spink, Chief
Air & Radiation Programs Branch



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

MEMORANDUM

To: Dale Farley
Chief, Office of Air Quality

From: Paul Rader
Engineer

Date: August 5, 1993

Subject: Regulatory Relief Proposal
American Alloys
Region 3, Regulation 7

After discussion with regulatory personnel in other states and review of American Alloy's submittal of July 14, 1993, the following comments are offered in addition to my memo of June 5.

1. In discussing NSPS requirements for ferroalloy facilities the company cites the exclusion of blowing tap emissions as showing that such emissions are considered exempt from any NSPS requirements. However, the referenced section of Subpart Z concerns the performance test which establishes the volumetric flow necessary to effect capture of the furnace and tapping fume. A blowing tap, by definition, is not contained within the tapping hood and therefore is not judged during the performance test nor is poling or oxygen lancing as these are not part of the tapping cycle. The flowrate established during the performance test is used as the enforcement standard for collection efficiency rather than a visible emission standard. The performance standards promulgated under this rule are: (a) 15% opacity VE standard for emissions from control devices on furnaces, (b) 10% opacity VE standard for dust handling equipment associated with control devices and (c) requirement to operate hoods and collection systems at or above the volumetric flow rate established during the performance test. These specific standards are promulgated as more stringent than those for existing sources and are required for new sources. Standards not addressed under this rule would revert to existing standards. Although there is discussion of blowing taps, poling and oxygen lancing in the background documents for this rule these activities are not addressed in the rule either by a standard or by exemption (other than as noted above).

2. In regard to regulations in other states which the company claims are not as stringent as those in West Virginia after talking to enforcement personnel in the subject states it has been found that OH, NY, AL TN and WA have a VE standard of 20% opacity. OR and SC have a standard of less than 40%. With the exception of Ohio none of those states consider blowing taps, poling or oxygen lancing to be

unavoidable upsets and do consider them to be subject to the applicable VE limits.

State	VE Standard	Excursion
OH	20% as 3 min. ave.	N/A
NY	20% as 6 min. ave.	N/A
AL	20%	any - 5 min/hr
WA	20%	any - 3 min/hr
OR	<40% not control area <20% new source or control area	any - 3 min/hr
SC	40% old (<71) 20% new	any - 6 min/hr or 24 min/24 hr
IO	40%	n/a
WV	20%	<40% - 5 min/hr

With the exception of the facilities in Oregon and Iowa no regulators were willing to state the facilities readily met the VE standards. Note that only OH, AL and WV have more than one ferroalloy facility in the state. Oregon's one facility is within a control area.

MEMORANDUM

To: Dale Farley
Chief, Office of Air Quality

From: Paul Rader
Engineer

Date: September 29, 1993

Subject: Regulatory Relief Submittals by Elkem Metals and American Alloys

Since the last Commission Meeting the subject companies have revised the information submitted to support their request for relaxation of visible emission (VE) standards under Regulation 7 for poling, blowing taps and oxygen lancing. Some of this information was received as late as 3 pm yesterday.

Again as discussed in previous memos on this subject the four tests which the companies are to address are (1) demonstration that VE requirements under Regulation 7 are more stringent than those in other states where similar facilities operate, (2) demonstration that it is economically infeasible to control the emissions (3) estimate emission from the subject episodes and (4) demonstrate that the air quality impact from these episodes is insignificant.

Regulatory Comparison

Among the six states which the companies have identified as containing similar ferroalloys facilities, VE standards vary significantly. Each state has a basic VE standard of 20% opacity, however, Alabama, New York and Ohio use a six minute average and Washington, Oregon and West Virginia do not average. Only Ohio specifically exempts poling, oxygen lancing and blowing taps from VE requirements. Except for New York all of those states have some excursion limit. Alabama allows one six minute period per hour of up to 40% opacity, West Virginia allows up to 40% for an aggregate of five minutes per hour, Oregon and Washington have no limit for an aggregate of three minutes per hour.

Allowing averaging of opacity readings generally results in a less restrictive standard if the limits are the same and therefore Ohio and Alabama obviously have less restrictive standards. As for New York where no provision for excursions above 20% are provided whether such stand is more or less restrictive depends on the extent and duration of opacity variation for the source. The Oregon and Washington excursion provision would be less restrictive only for those sources with very short spikes of opacity above 40%.

Elkem has submitted results of visible emission tests conducted of poling operations at their facility. Results of those tests indicate the facility would be in violation of the VE standard in three of the six states, New York, Oregon and West Virginia and would be right at the time limit for excursion in Washington.

Emission Rate

As no one has produced results of measured emissions for these operations, the companies have estimated emissions based on a calculation of gas flow through and orifice. This calculation assumes that a poling event approximates the release of gas through an orifice (the taphole) propelled by the pressure built up within the furnace. Such an approach is not unreasonable from a theoretical stand point but does not include any molten metal also emitted. If it is assumed that the liquid metal forms large particles and falls out within the building such an estimate would be acceptable.

From this approach the American Alloys estimates emissions of 7.25 lb/hr averaged over 24 hours. Elkem Metals had earlier estimated emissions were within a range of 13.25 - 57.6 lb/hr. Yesterday afternoon Elkem submitted revised estimates of emissions based on a different orifice size and internal pressure resulting in an estimate of 1.76 lb/hr which is vastly different than that previously estimated. The company states this estimate reflects more up to date data, however, I haven't had time to give more than a very cursory review.

Air Quality Impacts

Results of modeling done by OAQ staff show maximum impacts of $3.20 \mu\text{g}/\text{m}^3$ 24 hour concentration and $0.16 \mu\text{g}/\text{m}^3$ annual concentration for American Alloys. For Elkem Metals the maximum impacts at the original estimated emission rate would range from 12.31 - $53.50 \mu\text{g}/\text{m}^3$ for 24 hour and 2.46 - $10.70 \mu\text{g}/\text{m}^3$ annual concentration. At the revised emission rate maximum impacts would be $1.63 \mu\text{g}/\text{m}^3$ for 24 hour and $0.327 \mu\text{g}/\text{m}^3$ annual concentration.

The level of ambient significance as defined by APCC regulations is $5.0 \mu\text{g}/\text{m}^3$ for 24 hour concentration and $1.0 \mu\text{g}/\text{m}^3$ annual concentration.

Economic Analysis

The companies have estimated the cost to control emission from these operations at \$36 million for a 3,000,000 ACFM control system for each facility resulting in control costs in excess of \$1 million/ton of emissions controlled. The basis for sizing the equipment is based on reasonable engineering judgement.