

TRANSMITTAL OF RULES ADOPTED

WASHINGTON STATE AIR  
FROM: POLLUTION CONTROL BOARD  
(Name of Agency)

TO: CODE REVISER  
LEGISLATIVE BLDG (Southwest Corner, Ground Floor)  
Olympia 98501

The enclosed Permanent rules  , being order No. 12  
Emergency rules   
relating to (Name of rules or description of subject matter)

Primary aluminum plants. These rules and regulations create chapter 18-52 WAC and establish the air quality standard for primary aluminum plants, the air quality objective, and the method of measuring and reporting.

(ALTERNATIVE A. Use only for adoption of permanent rules)

pursuant to Notice No. 2606 ① filed with the code reviser on 3-26-70 ② were regularly adopted as permanent rules of this agency at Spokane, Washington on 4-17-70 and are herewith filed in the office of the code reviser pursuant to chapter 34.04 RCW. The effective date of such rules shall be \_\_\_\_\_ ③

(ALTERNATIVE B. Use only for adoption of emergency rules)

pursuant to its finding that the immediate adoption of these rules is necessary for the preservation of the public health, safety, or general welfare and that observance of the requirements of notice and opportunity to present views on the proposed action would be contrary to the public interest, were regularly adopted as emergency rules of this agency at \_\_\_\_\_ on \_\_\_\_\_ and are herewith filed in the office of the code reviser pursuant to chapter 34.04 RCW.

Dated this 17th day of April 1970.

STATE OF WASHINGTON  
**FILED**  
MAY 18 1970  
CODE REVISER'S OFFICE  
KET # 2878 FILE #/

WASHINGTON STATE AIR POLLUTION CONTROL BOARD  
(AGENCY)  
Wallace Lane  
By Wallace Lane, M. D.  
Chairman  
Title

- ① NOTICE NUMBER AS APPEARS ON THE COPY OF NOTICE RETURNED TO YOU BY REVISER'S OFFICE (IF PROCEEDINGS WERE CONTINUED, USE NO. OF LAST NOTICE)
- ② STAMPED DATE AS APPEARS ON THE COPY OF NOTICE RETURNED TO YOU BY REVISER'S OFFICE (IF PROCEEDINGS WERE CONTINUED, USE DATE OF LAST NOTICE)
- ③ UNLESS A LATER DATE IS SPECIFIED IN THIS ORDER OR IS PRESCRIBED IN ANOTHER STATUTE, RULES ARE EFFECTIVE 30 DAYS AFTER FILING: RCW 34.04.040. LEAVE THIS SPACE BLANK EXCEPT IN SUCH SPECIAL CASES.

STATE OF WASHINGTON

STATE AIR POLLUTION CONTROL BOARD

PURSUANT to the authority vested in it by RCW 70.94.395 (Sec. 39, Chapter 168, Laws of 1969, 1st ex.s.), and pursuant to chapter 34.04 RCW; and

WHEREAS, the State Air Pollution Control Board has found, after public hearing, upon due notice, that emissions from primary aluminum plants should be regulated on a state-wide basis in the public interest and for the protection of the welfare of the citizens of this state:

NOW THEREFORE, THE STATE AIR POLLUTION CONTROL BOARD HEREBY ADOPTS as permanent rules and regulations chapter 18-52 WAC establishing rules and regulations assuming state jurisdiction over emissions from primary aluminum plants. This chapter specifically sets emission standards, adopts compliance schedules, monitoring and reporting standards, provides for notices of construction and submission of plans, and provides for special studies.

THIS order, after being first recorded in the order register of this agency, shall be forwarded to the Code Reviser for filing pursuant to chapter 34.04 RCW and chapter 1-12 WAC.

DONE in the City of Spokane, County of Spokane, State of Washington, this 17th day of April, 1970.

WASHINGTON STATE AIR POLLUTION CONTROL BOARD

Wallace Lane M.D.  
Wallace Lane, M.D., Chairman

Donald W. Moos  
Donald W. Moos

August T. Rossano, Jr.  
August T. Rossano

*Gordon Tongue*

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Gordon Tongue

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John C. Ranger

*Harvey S. Poll*

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Harvey S. Poll

*Frank Roberts*

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Frank Roberts

*Glen A. Yake*

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Glen A. Yake

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John W. Judy

Findings of the

WASHINGTON STATE AIR POLLUTION CONTROL BOARD

WHEREAS RCW 70.94.395 (sec. 39, Chapter 168, Laws of 1969, 1st ex. s.) authorizes the Washington State Air Pollution Control Board to assume state-wide jurisdiction over emissions from a particular type or class of air contaminant source; and

WHEREAS, the Washington State Air Pollution Control Board, upon due notice, has held a public hearing pursuant to RCW 70.94.395 (sec. 39, Chapter 168, Laws of 1969, 1st ex.s.); and


WHEREAS, the State Air Pollution Control Board has heard testimony concerning the assumption of state-wide jurisdiction over emissions from primary aluminum plants; and

WHEREAS, the State Air Pollution Control Board is prepared to adopt and enforce rules and regulations for the control of emissions of primary aluminum plants:

THE STATE AIR POLLUTION CONTROL BOARD Now finds that the regulation of primary aluminum plants on a state-wide basis is in the public interest and necessary for the protection of the welfare of the citizens of this state;

NOW THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED That the Washington State Air Pollution Control Board assume state-wide jurisdiction over all primary aluminum plants within the state of Washington by adopting and enforcing rules and regulations to control the emissions from such primary aluminum plants.

WASHINGTON STATE AIR POLLUTION CONTROL BOARD

  
Wallace Lane, M.D., Chairman

  
Donald W. Moos

*August T. Rossano, Jr.*

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August T. Rossano

*Gordon Tongue*

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Gordon Tongue

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John C. Ranger

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Glen A. Yake

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John W. Judy

Chapter 18-52

PRIMARY ALUMINUM PLANTS

NEW

WAC 18-52-010 STATEMENT OF PURPOSE. These rules are enacted under the provisions of the 1969 amendments to the Washington Clean Air Act (RCW 70.94.395) to:

(1) Assume state jurisdiction over emissions from primary aluminum reduction plants in order to provide for the systematic reduction and control of air pollution in the primary aluminum reduction industry; and

(2) Establish standards deemed to be technically feasible and reasonably attainable, and revise such standards as new information and better technology are developed and become available.

NEW

WAC 18-52-015 OBJECTIVES. In furtherance of the public policy of the state as set forth in chapter 70.94 RCW, it is hereby declared to be the policy and objective of the state board in adopting the following regulations to:

(1) Require, in accordance with a specific program and timetable for each operating plant, the highest and best practicable collection, treatment, and control of emissions from cells and other sources in primary aluminum reduction plants through the utilization of technically feasible equipment, devices and procedures.

(2) Require effective monitoring and reporting of emissions, ambient air levels of fluorides, fluoride content of forage and other pertinent data. The state board will use these data, in conjunction with observation of conditions in the surrounding areas, to develop and revise emission and ambient air standards and to determine compliance therewith.

(3) Encourage and assist the primary aluminum reduction industry to conduct a research and technological development program designed to progressively reduce primary aluminum reduction plant emissions, in accordance with a definite program, including specified objectives and time schedules.

NEW

WAC 18-52-020 DEFINITIONS. (1) All Sources--means sources including, but not limited to, the reduction process, alumina plant, anode plant, anode baking plant, cast house and collection, treatment and recovery systems.

(2) Ambient Air--means the surrounding outside air.

(3) Anode Baking Plant--means the heating and sintering of pressed anode blocks in oven-like devices, including the loading and unloading of the oven-like devices.

(4) Anode Plant--means all operations directly associated with the preparation of anode carbon except the anode baking operation.

(5) Cured Forage--means hay, straw, ensilage that is consumed or is intended to be consumed by livestock.

(6) Emission--means a release into the outdoor atmosphere of air contaminants.

(7) Emission Standard--means the limitation on the release of a contaminant or multiple contaminants into the ambient air.

(8) Fluorides--means matter containing fluoride ion.

(9) Forage--means grasses, pasture and other vegetation that is consumed or is intended to be consumed by livestock.

(10) Particulate Matter--means a small, discrete mass of solid or liquid matter, but not including uncombined water.

(11) Primary Aluminum Plant--means those plants which will or do operate for the purpose of or related to producing aluminum metal from aluminum oxide (alumina).

(12) Pot Line Primary Emission Control Systems--means the system which collects and removes contaminants prior to the emission point. If there is more than one such system, the primary system is that system which is most directly related to the aluminum reduction cell.

(13) Regularly Scheduled Monitoring--means sampling and analyses in compliance with a program and schedule approved pursuant to WAC 18-52-050.

(14) Standard Dry Cubic Foot of Gas--means that amount of the gas which would occupy a cube having dimensions of one foot on each side, if the gas were free of water vapor at a pressure of 14.7 P.S.I.A. and a temperature of 60°F.

(15) State Board (SAPCB)--means Washington state air pollution control board.

NEW

WAC 18-52-030 EMISSION STANDARDS. (1) The total emission of particulate matter to the atmosphere from the reduction process (pot-lines) shall be reduced to the lowest level consistent with the highest and best technology available to the primary aluminum industry, but in no case shall the emission of solid particulate exceed fifteen pounds per ton of aluminum produced on a daily basis.

(2) Visible emissions from all sources shall not have a density or equivalent opacity such as to obscure an observer's view, for more than three minutes in any hour, to a degree greater than does smoke designated as No. One or twenty per cent density on the Ringelmann Chart as published by the United States Bureau of Mines. This standard shall not apply when the presence of uncombined water is the only reason for failure of an emission to meet this requirement.

NEW

WAC 18-52-040 REVISION OF EMISSION STANDARDS. (1) A public hearing shall be called within ninety days after submission of the results of the special studies provided for under WAC 18-52-080 herein to evaluate the special studies, current technology and adequacy of these regulations, and to make revisions to the regulations, as necessary.

(2) The state board may, after public hearing, establish more restrictive emission limits for new primary aluminum plants or for plants that expand existing facilities. Data documenting projected emissions and changes in or effects upon air quality that would result from the construction or expansion must be submitted to the state board, together with plans and specifications, in accordance with WAC 18-52-070(3).

NEW

WAC 18-52-050 COMPLIANCE. Each primary aluminum plant shall proceed promptly with a program to comply with this regulation. A proposed schedule of compliance shall be submitted by each plant to the state board not later than one hundred and eighty days after the effective date of this regulation. After receipt of the proposed schedule, the state shall establish a schedule of compliance for each plant. Such schedule shall include the date by which full compliance must be achieved but, in no case, shall full compliance be later than July 1, 1972 for WAC 18-52-030(1), and January 1, 1975 for WAC 18-52-030(2) and (3).



NEW

WAC 18-52-060 MONITORING. (1) Each primary aluminum plant shall submit, within sixty days after the effective date of this regulation, a detailed monitoring program. The proposed program shall be subject to revision and approval by the state board. The program shall include regularly scheduled monitoring for emissions of gaseous and particulate fluorides and total particulates. A schedule for measurement of fluoride levels in forage and ambient air shall be submitted.

(2) Necessary sampling and analysis equipment shall be ordered or otherwise provided for within thirty days after the monitoring program has been approved in writing by the state board. The equipment shall be placed in effective operation in accordance with the approved program within ninety days after delivery.

NEW

WAC 18-52-070 REPORTING. (1) Unless otherwise authorized in writing by the state board, data shall be reported by each primary aluminum plant within thirty days of the end of each calendar month in the specified seasons for each source and station included in the approved monitoring program as follows:

(a) Ambient Air: Twelve-hour concentrations of gaseous fluoride in the ambient air expressed in parts per billion of hydrogen fluoride on a volume basis.

(b) Forage: Concentrations of fluoride in forage expressed in parts per million of fluoride on a dried weight basis.

(c) Particulate Emissions: Results of all emission sampling conducted during the month for particulates, expressed in grains per standard dry cubic foot, in pounds per day, and in pounds per ton of aluminum produced. The method of calculating pounds per ton shall be as specified in the approved monitoring programs. Particulate data shall be reported as total particulates and percentage of fluoride ion contained therein.

Compliance with WAC 18-52-030(2) shall be determined by measurements of emissions from the pot line primary control system plus measurements of emissions from the roof monitor and other points of emission to the atmosphere. Calculated emissions to the pot rooms from the reduction cells based on hooding efficiency determined for gaseous fluoride may be substituted for roof monitor emission measurements in determining compliance with the regulation.

(d) Gaseous Emissions: Results of all sampling conducted during the month for gaseous fluorides. All results shall be expressed as hydrogen fluoride in parts per million on a volume basis and pounds per day of hydrogen fluoride.

(e) Other emission and ambient air data as specified in the approved monitoring program.

(f) Changes in collection efficiency of any portion of the collection or control system that resulted from equipment or process changes.

(2) Each primary aluminum plant shall furnish, upon request of the state board, such other data as the state board may require to evaluate the plant's emission control program. Each primary aluminum plant shall immediately report abnormal plant operations which result in increased emissions of air contaminants.

(3) Prior to construction, installation or establishment of a primary aluminum plant, a notice of construction shall be submitted to the state board. Within thirty days of its receipt

of such notice, the state board may require the submission of plans, specifications and other information as it deems necessary, in order to determine whether the proposed construction, installation or establishment shall be in accordance with applicable regulations. If, within thirty days of the receipt of plans, specifications or other information required pursuant to this regulation, the state board determines that the proposed construction, installation or establishment will not be in accordance with applicable regulations, it shall issue an order for the prevention of construction, installation or establishment of the primary aluminum plant. Failure to issue such an order within the time prescribed herein shall be deemed a determination that the construction, installation or establishment may proceed, provided that it is in accordance with the plans, specifications and other information required to be submitted.

Addition to, or enlargement or replacement of, a primary aluminum plant or any major alteration therein shall be construed as construction, installation or establishment.

NEW

WAC 18-52-080 SPECIAL STUDIES. (1) Special studies, covering the areas in subsections (a), (b) and (c) of this section shall be conducted at each primary aluminum plant.

(a) Emissions of particulates from all sources within the plant, including size distribution and physical and chemical characteristics where feasible, and a separation of fluoride and nonfluoride particulate.

(b) Plume opacity from all sources within the plant, including its relationship to grain loading, particulate characteristics, particle emissions in pounds per ton of production and stack characteristics.

(c) Emissions of sulfur dioxide, hydrocarbons, carbon monoxide, chlorine and chlorides, oxides of nitrogen, ozone, water vapor, and fluorides from all sources.

(2) Each primary aluminum plant shall submit a program for conducting the aforesaid special studies to the state board for approval within sixty days after the effective date of this regulation.

(3) The results of the special studies shall be submitted to the state board not later than eighteen months after approval of the special studies program.