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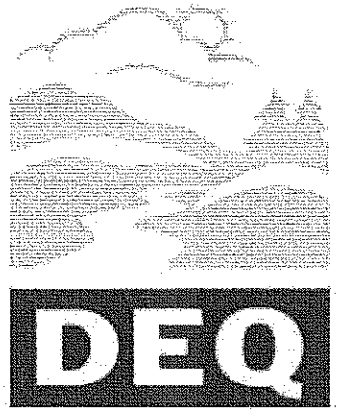
6/26/1970

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of Environmental Quality

AGENDA

Environmental Quality Commission Meeting

10:00 a.m. June 26, 1970

Council Chambers, Portland City Hall, Portland, Oregon

A. Minutes of May 22, 1970, meeting

B. Project plans for May, 1970

C. Allocation of state grant funds to regional authorities

D. Mid-Willamette Valley Air Pollution Authority - Amended Rules

E. Proposed regulations for primary aluminum plants

F. Proposed emission standards for industrial processes

G. Construction grants for sewage treatment works

H. Coast Packing Company, Ontario - Waste Discharge Permit

I. Tax Credit applications

1.	Publishers Paper Co., Oregon City	T-40	($4,035,703)
2.	Amalgamated Sugar Co., Nyssa	T-116	($25,750)
3.	Blue Lake Packers, Inc., Salem	T-118	($15,269.00)
4.	Boise Cascade Corp., McMinnville	T-114	($27,842.74)
5.	W. J. Voit Rubber Corp., Portland	T-125	($17,334.68)
6.	K. F. Jacobsen & Co., Inc., Portland	T-128	(29,510)
7.	Crown Zellerbach Corp., West Linn	T-130	($1,665)
8.	Western Kraft Corp., Albany	T-138	($41,746.77)
9.	Reynolds Metals Co., Troutdale	T-139	($151,881.06)
10.	Ash Grove Cement Co., Portland	T-142	($9,724.37)

MINUTES OF THIRTEENTH MEETING

of the

Oregon Environmental Quality Commission

June 26, 1970

The thirteenth regular meeting of the Oregon Environmental Quality Commission was called to order by the Chairman at 10:00 a.m., Friday, June 26, 1970, in the Council Chambers, City Hall, Portland, Oregon. Members present were B.A. McPhillips, Chairman, Edward C. Harms, Jr., George A. McMath, Herman P. Meierjurgen and Storrs S. Waterman.

Participating staff members were Kenneth H. Spies, Director; E.J. Weathersbee, Deputy Director; Arnold B. Silver, Legal Counsel; Harold M. Patterson, Air Quality Control Division Director; Harold L. Sawyer and A. Dale Nunamaker, Supervising Engineers; James R. Sheetz, District Engineer, and F.G. Odell, C.A. Ayer, F.A. Skirvin and R.C. Sherwood, Associate Engineers.

MINUTES OF MAY 22, 1970 MEETING

It was MOVED by Mr. Meierjurgen, seconded by Mr. McMath and carried that the minutes of the twelfth regular meeting of the Commission held in Portland on May 22, 1970 be approved as prepared by the Director.

PROJECT PLANS

It was MOVED by Mr. Meierjurgen, seconded by Mr. Harms and carried that the actions taken by the staff during the month of May 1970 on the following 32 water pollution control and 2 air quality control projects be approved:

Water Pollution Control

Municipal Projects (30)

Date	Location	Project	Action
5-1-70	Ashland	Sanitary sewers	Prov. app.
5-4-70	East Salem S&D #1	Eastland Park No. 2	Prov. app.
5-4-70	Lakeview Sub. S.D.	Sanitary sewers	Prov. app.
5-11-70	St. Helens	STP Addenda #8 & 9	Approved
5-11-70	Salem	Glen Creek Trunk Add. #2	Prov. app.
5-11-70	Oregon City	LID #31, Add. #1	Prov. app.
5-11-70	Lincoln City	Add. #1 Dawson Development Add. #2 Phase 2 of sanitary sewer project	Prov. app.
5-11-70	Sherwood	School sewer	Prov. app.
5-11-70	Gresham	Stonegate san. sewer	Prov. app.

Date	Location	Project	Action
5-11-70	Salem	Savage Road sewer	Prov. app.
5-11-70	Cannon Beach	Lagoon expansion & sewers	Prov. app.
5-12-70	Hood River	Indian Creek sewer, Phase 1	Prov. app.
5-12-70	La Grande	Change Orders #1 & 2	Approved
5-13-70	Portland	N.W. St. Helens Road	Prov. app.
5-13-70	Portland	Maplewood #5 san. sewer	Prov. app.
5-13-70	Portland	S.E. 63rd Avenue	Prov. app.
5-14-70	Ashland	Black Oak Terrace	Prov. app.
5-15-70	Gold Beach	Prel. report for secondary	Comm. sub.
5-15-70	Dundee	Change Orders A-3, 4, 5, & 6	Approved
5-15-70	Portland	53 change orders to contract for primary treatment expansion	App.
5-18-70	Jackson County	Irrigation of sewage effluent at Hyatt Lake Rec. Center	Prov. app.
5-19-70	Wasco County	Celilo Indian Village non-overflow lagoon	Comm. to FWQA
5-20-70	Elkton	Sewerage report	App. with comm.
5-21-70	Veneta	System and lagoon	Prov. app.
5-21-70	Salem	Battle Creek-Commercial St. area	Prov. app.
5-22-70	Umatilla	Prel. engineering report on secondary facilities	Prov. app.
5-27-70	Harrisburg	Simpson Park, First Addition	Prov. app.
5-27-70	East Salem S&D #1	Sleepy Hollow	Prov. app.
5-28-70	Oregon City	Woodfield Park	Prov. app.
5-29-70	North Powder	Sewerage system and lagoon	Prov. app.
Industrial Projects (2)			
5-15-70	Portland Canning Co., Sherwood	Pretreatment plans	Approved
5-15-70	Coast Packing Co., Ontario	Revised plans and letter of intent	Approved

Air Quality Control

Date	Location	Project	Action
5-11-70	Ontario	Coast Packing Co. Rendering odor control	Cond. app.
5-29-70	Nyssa	Amalgamated Sugar Co. Modifying collector on boiler	Cond. app.

COAST PACKING CO., Ontario

Mr. Sherwood presented the staff report regarding this matter, a copy of which has been made a part of the Department's permanent files. He stated that the Coast Packing Co. had been requested by letter dated May 13, 1970

to give assurance in writing by not later than June 15, 1970 that the necessary waste control facilities would be installed without further delay and in accordance with a definite time schedule for the company's slaughterhouse and rendering plant located near Ontario. He said that at the time of the meeting no such assurance had yet been received from the company.

Mr. Sherwood therefore recommended that a waste discharge permit for said company be denied in accordance with established administrative procedures. The company had previously applied for renewal of its present permit.

Mr. Ayer reported that complaints have been received from adjacent residents about odors emanating from the existing waste disposal facilities. Mr. Sheetz reported that solid wastes from the plant have been disposed of on agricultural lands apparently with no complaints.

Mr. George Ward, Consulting Engineer, was present to represent the company. He explained the improvements to the waste disposal system as proposed by him and also by another consulting engineering firm, Chronic and Associates of Boise, Idaho. He argued that the company should not be required to cover the anaerobic lagoon until and unless experience proved it necessary. He estimated it would cost $56,000 to cover the present lagoon but he thought it might be possible to reduce its size. He indicated the other air quality controls could be completed in about 60 days and the water pollution controls in about 90 days. He requested a 6 months trial period to determine if a cover on the anaerobic lagoon would be necessary.

After considerable discussion and questioning by the Commission members, it was MOVED by Mr. Harms, seconded by Mr. McMath and Mr. Meierjurgen and carried that a waste discharge permit for Coast Packing Company of Ontario be allowed with the conditions agreed to by the engineer, Mr. George Ward, and with the installation to be completed in 90 days and the need for a cover on the anaerobic pond to be reviewed after 6 months of operation.

AMALGAMATED SUGAR COMPANY TAX CREDIT APPLICATION

Mr. Robert D. West was present to represent the Amalgamated Sugar Company. Mr. Sawyer reviewed the staff's evaluation of the company's tax credit application No. T-116.

It was MOVED by Mr. Waterman, seconded by Mr. Meierjurgen and carried that as recommended by the staff a tax credit certificate in the amount of $25,750 be issued to the Amalgamated Sugar Company of Nyssa pursuant to application No. T-116 covering the installation of waste treatment and disposal facilities 80% or more allocated to pollution control.

ALLOCATION OF STATE GRANT FUNDS TO REGIONAL AUTHORITIES

Mr. Patterson reviewed the staff's memorandum of June 5 regarding the requests of the three regional air pollution authorities for state funds to assist them in financing their programs during fiscal year 1971. He pointed out that the requests total some $18,391.34 in excess of the funds appropriated by the 1969 legislature for this purpose. He therefore submitted several alternative methods for allocating the available funds to the regions. He also reported that there was a discrepancy in the figures for one of the districts and so suggested that action be deferred until this could be corrected.

Mr. Waterman expressed his concern about the loss of federal funds to the regions if their requests for state grants could not be fully met. He said he thought this contribution was too important to lose.

It was MOVED by Mr. Waterman, seconded by Mr. Meierjurgen and carried that action in this matter be deferred until the next meeting of the Commission.

MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY - AMENDED RULES

Mr. Patterson reported that the staff had reviewed the Mid-Willamette Valley Air Pollution Authority's new and amended air quality standards which had been adopted by the region on May 19, 1970 and that they had been found to be in compliance with state requirements. He therefore recommended that they be approved by the Commission.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the ambient air standards adopted by the MWVAPA on May 19, 1970 be approved.

PUBLISHERS PAPER COMPANY TAX CREDIT APPLICATION

Mr. Peter Schnell was present to represent the company. Mr. Sawyer reviewed the staff's evaluation of the Publishers Paper Company's tax credit application No. T-40 for facilities installed at its Oregon City mill for the purpose of abating pollution in the Willamette River.

It was MOVED by Mr. Meierjurgen, seconded by Mr. Waterman and carried that as recommended by the staff a tax credit certificate in the amount of $4,035,703 be issued to Publishers Paper Company of Oregon City pursuant to application No. T-40.

Mr. Meierjurgen commended the company most highly for its efforts in abating its share of the pollution in the Willamette River. He stated that this project represents a signal step in restoring the quality of the Willamette.

PROPOSED REGULATIONS FOR PRIMARY ALUMINUM PLANTS

Mr. Skirvin reviewed a staff memorandum dated June 10, 1970 regarding proposed regulations for primary aluminum plants which had been the subject of a public hearing on February 26, 1970.

He submitted a revised amended draft dated June 24, 1970 of the proposed regulations and recommended that it be approved by the Commission. It establishes visible emission standards and requires the use of highest and best practicable treatment and control in every case. It also requires detailed monitoring, reporting and conducting of special studies within specified time schedules.

Mr. Robert Kerr, attorney for the Wasco County Fruit and Produce League, was present and expressed agreement with the requirement for highest and best practicable treatment and control. After learning that it would be the intent of the Commission to adopt specific emission standards for fluorides and particulates as soon as necessary data and information become available, he said his clients would have no serious objection to the proposed regulations.

Representatives of the aluminum mills were also present at the meeting but had no comments to make.

It was MOVED by Mr. McMath, seconded by Mr. Waterman and carried that the proposed regulations for primary aluminum plants as amended and revised be adopted.

A copy of the regulations as adopted is attached to and made a part of these minutes.

PROPOSED EMISSION STANDARDS FOR INDUSTRIAL PROCESSES

Mr. Odell presented a comprehensive discussion of the staff's proposed emission standards for industrial processes which had been the subject of a public hearing held on May 22, 1970. He previously had prepared a memorandum report dated June 12, 1970 regarding this matter and on June 16 had transmitted to the Commission members an amended proposal. He recommended that the amended proposal be adopted and further that specific source classes such as primary aluminum, nickel, silicon and Portland cement plants which could not comply be exempt from the process unit emission limitation and instead be required to meet the process weight standard applied on a process equipment basis.

The Chairman said he is concerned about the objections raised by industry and more particularly by other regulatory agencies regarding the proposed standards.

Mr. Waterman said he also has misgivings about the emissions limitation curve because there is such a large break in it.

Mr. Harms commended Mr. Odell for his fine presentation which he said helped greatly to clarify his understanding of the intent and purpose of the standard. He said, however, that this is an extremely important matter and therefore it demands thorough consideration before receiving final action.

It was MOVED by Mr. Waterman, seconded by Mr. Harms and carried that action on adopting the proposed standards be deferred for 60 days.

Mr. Waterman said that on July 2 another meeting of the regional coordinating committee would be held and that the proposed standards could be given further consideration by that group at that time.

The meeting was recessed at 12:00 noon and reconvened at 1:25 p.m.

OREGON SEED COUNCIL'S REQUEST FOR RE-HEARING

Mr. John Horton of Albany, Attorney for the Oregon Seed Council, was present and although not on the agenda requested the opportunity to appear before the Commission. He had previously filed with the Commission a petition requesting that the field burning schedule adopted on May 22, 1970 be amended to permit the burning of cereal grain fields. That petition was denied by an order of the Commission dated June 25, 1970.

He therefore appeared and presented another petition for reconsideration of the May 22, 1970 field burning schedule. He asked that a hearing on the matter of cereal grain field burning be held within the next 10 days. He claimed that the seed growers will be spending an estimated $7,000,000 for purchase of mobile incinerators and some $1,000,000 for their operation. He claimed further that there are about 10,000 acres of grain fields that should be burned this year for preparation and conversion to legume crops and that if not permitted to be burned the cost of clearing them would be an additional $250,000 ($25 per acre).

Mr. Horton contended that the Commission had exceeded its authority in prohibiting grain field burning under the schedule adopted May 22. After considerable discussion concerning this point Mr. Silver said that in his opinion the Commission had followed proper legal procedures and had not exceeded its authority.

Mr. Harms said he did not think any new testimony would be presented and therefore he did not see any reason for holding another hearing.

It was then MOVED by Mr. Harms, seconded by Mr. McMath and carried that the petition submitted by Mr. Horton for a rehearing be denied.

CONSTRUCTION GRANTS FOR SEWAGE TREATMENT WORKS

Mr. Nunamaker presented a priority list of 60 sewage treatment works projects for which applications had been received by the Department for federal and/or state grants for fiscal year 1971.

He reported that the 60 projects had a total estimated construction cost of approximately $77,000,000, of which some $71,000,000 would be eligible for grants. On a basis of 30 to 33% grants, depending on whether or not the project could meet HUD planning requirements, the total grant requests amounted to slightly more than $25,000,000.

The first applicant on the list is the Bear Creek Valley Sanitary Authority which received a partial grant from the 1970 FY funds but is still eligible for an additional $2,000,000. The second applicant is St. Helens with a priority point total of 70 and a request for $818,000. The last applicant on the list is Portland with a priority point total of only 23 and a request for $358,300 for an outfall sewer project.

The Director pointed out that at the present time it is still not known how much federal money, if any, will be available to the state of Oregon for sewage treatment works grants during FY 1971. He reported that the Administration has nothing in its budget for this purpose for '71 but that the U.S. House of Representatives has already approved an appropriation of $1 billion dollars and the U.S. Senate may try to increase this to $1-1/4 billion dollars which is the full amount authorized by the Federal Clean Water Act. He said there is therefore a good chance that Oregon's allotment for 1971 may be about the same as this year or about $8.1 million.

It was the consensus of the Commission members that everything possible should be done to implement to its maximum the state grant and loan program which had been approved by the voters at the May primary election when they passed ballot measure No. 4. This would include a 50% federal - 25% state grant if at all possible.

A copy of the priority list submitted by Mr. Nunamaker has been made a part of the Department's permanent files.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the priority list as submitted be approved with the understanding that all applicants' eligibility for the maximum amount of both state and federal grants under the constitutional amendment recently passed will be preserved when it is established.

TAX CREDIT APPLICATIONS

Messrs. Sawyer, Skirvin and Ayer presented the staff evaluations of the tax credit applications covered by the following motions.

It was MOVED by Mr. Meierjurgen, seconded by Mr. Harms and carried that a tax credit certificate in the amount of $15,269.80 be issued as recommended by the staff to Blue Lake Packers, Inc. of Salem pursuant to application No. T-118.

It was MOVED by Mr. Meierjurgen, seconded by Mr. Waterman and carried that a tax credit certificate in the amount of $27,842.74 be issued as recommended by the staff to the Boise Cascade Corporation, McMinnville, pursuant to application No. T-114.

It was MOVED by Mr. Waterman, seconded by Mr. Meierjurgen and carried that a tax credit certificate in the amount of $17,334.69 be issued as recommended by the staff to the W.J. Voit Rubber Co., Portland, pursuant to application No. T-125.

It was MOVED by Mr. Waterman, seconded by Mr. Meierjurgen and carried that a tax credit certificate in the amount of $151,881.06 be issued as recommended by the staff to the Reynolds Metals Co., Troutdale, pursuant to application No. T-139. Mr. William Campbell was present to represent the company.

It was MOVED by Mr. Meierjurgen, seconded by Mr. Harms and carried that a tax credit certificate in the amount of $29,510 be issued as recommended by the staff to K.F. Jacobsen and Co., Portland, pursuant to application No. T-128.

It was MOVED by Mr. Harms, seconded by Mr. Waterman and carried that a tax credit certificate in the amount of $1,665 be issued as recommended by the staff to Crown Zellerbach Corp., West Linn, pursuant to application No. T-130.

It was MOVED by Mr. Meierjurgen, seconded by Mr. Waterman and carried that a tax credit certificate in the amount of $41,746.77 be issued as recommended by the staff to Western Kraft Corp., Albany, pursuant to application T-138.

It was MOVED by Mr. Waterman, seconded by Mr. Meierjurgen and carried that a tax credit certificate in the amount of $9,724.37 be issued as recommended by the staff to Ash Grove Cement Co., Portland, pursuant to application No. T-142.

There being no further business the meeting adjourned at 2:15 p.m.

Respectfully submitted,

Kenneth H. Spies

Kenneth H. Spies
Director

ADOPTED June 26, 1970

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

PROPOSED REGULATION

for

PRIMARY ALUMINUM PLANTS

(As Amended)

I. Statement of Purpose In furtherance of the public policy of the state as set forth in ORS 449.765, it is hereby declared to be the purpose of the Commission in adopting the following regulations to:

A. Require, in accordance with a specific program and time table for each operating primary aluminum plant the highest and best practicable collection, treatment and control of atmospheric pollutants emitted from primary aluminum plants through the utilization of technically feasible equipment, devices and procedures necessary to attain and maintain desired air quality.

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

C. Encourage and assist the aluminum industry to conduct a research and technological development program designed to reduce emissions, in accordance with a definite program, including specified objectives and time schedules.

D. Establish standards which based upon presently available technology, are reasonably attainable with the intent of revising the standards as needed when new information and better technology are developed.

II. Definitions

A. 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.

B. Ambient Air - The air that surrounds the earth, excluding the general volume of gases contained within any building or structure.

C. 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.

D. Anode Plant - Means all operations directly associated with the preparation of anode carbon except the anode baking operation.

E. Commission - Means Environmental Quality Commission.

F. Cured Forage - Means hay, straw, ensilage that is consumed or is intended to be consumed by livestock.

G. Department - Means Department of Environmental Quality.

H. Emission - Means a release into the outdoor atmosphere of air contaminants.

I. Emission Standard - Means the limitation on the release of a contaminant or multiple contaminants to the ambient air.

J. Fluorides - Means matter containing fluoride ion.

K. Forage - Means grasses, pasture and other vegetation that is consumed or is intended to be consumed by livestock.

L. Particulate Matter - Means a small, discrete mass of solid or liquid matter, but not including uncombined water.

M. 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).

N. 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.

O. Regularly Scheduled Monitoring - Means sampling and analyses in compliance with a program and schedule approved pursuant to Section V.

P. 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.

III. Emission Standard

A. Visible emissions from all sources shall not exceed twenty (20) per cent opacity (Ringelmann 1).

B. 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 Commission not later than one hundred and eighty (180) 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 January 1, 1975.

IV. Highest and Best Practicable Treatment and Control Requirement

Notwithstanding the specific emission limits set forth in Section III of these regulations, in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control currently available shall in every case be provided.

V. Monitoring

A. Each primary aluminum plant shall submit, within sixty (60) days after an effective date of this regulation, a detailed monitoring program. The proposed program shall be subject to revision and approval by the Commission. 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.

B. Necessary sampling and analysis equipment shall be ordered or otherwise provided for within thirty (30) days after the monitoring program has been approved in writing by the Commission. The equipment shall be placed in effective operation in accordance with the approved program within ninety (90) days after delivery.

VI. Reporting

A. Unless otherwise authorized in writing by the Commission, data shall be reported by each primary aluminum plant within thirty (30) days

of the end of each calendar month for each source and station included in the approved monitoring program as follows:

1. Ambient air: Twelve-hour concentrations of gaseous fluoride in ambient air expressed in micrograms per cubic meter of air.
2. Forage: Concentrations of fluoride in forage expressed in ppm of fluoride on a dried weight basis.
3. 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.
4. Gaseous emissions: Results of all sampling conducted during the month for gaseous fluorides. All results shall be expressed as hydrogen fluoride in micrograms per cubic meter on a volume basis and pounds per day of hydrogen fluoride.
5. Other emission and ambient air data as specified in the approved monitoring program.
6. Changes in collection efficiency of any portion of the collection or control system that resulted from equipment or process changes.

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

C. Prior to construction, installation or establishment of a primary aluminum plant, a notice of construction shall be submitted to the Commission. Addition to, or enlargement or replacement of, a primary aluminum plant or any major alteration therein shall be construed as construction, installation or establishment.

VII. Special Studies

A. Special studies, covering the areas in subparagraphs 1, 2, and 3 of this subsection shall be conducted at each primary aluminum plant.

1. 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 non-fluoride particulate.

2. 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.
3. Emissions of sulfur dioxide, hydrocarbons, carbon monoxide, chlorine and chlorides, oxides of nitrogen, ozone, water vapor, and fluorides from all sources.

B. Each primary aluminum plant shall submit a program for conducting the aforesaid special studies to the Commission for approval within sixty (60) days after the effective date of this regulation.

C. The results of the special studies shall be submitted to the Commission not later than eighteen (18) months after approval of the special studies program.

VIII. Revision of Emission Standards

A. A public hearing may be called on or before ninety (90) days after submission of the results of the special studies to evaluate the special studies, current technology and adequacy of these regulations and to make revisions to the regulations as necessary.

B. The Commission may, after public hearing, establish more restrictive regulations 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 Commission, together with plans and specifications, in accordance with Section VI (C).

Table 3

PROJECT PLANS

During the month of May, 1970, the following project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

Date	Location	Project	Action
Municipal Projects (30)			
5-1-70	Ashland	Sanitary sewers	Prov. approval
5-4-70	East Salem S&D #1	Eastland Park No. 2	Prov. approval
5-4-70	Lakeview Sub. S.D.	Sanitary sewers	Prov. approval
5-11-70	St. Helens	STP Addenda #8 & 9	Approved
5-11-70	Salem	Glen Creek Trunk Add. #2	Prov. approval
5-11-70	Oregon City	LID #31, Add. #1	Prov. approval
5-11-70	Lincoln City	Add. #1 Dawson Development Add. #2 Phase 2 of sanitary sewer project	Prov. approval
5-11-70	Sherwood	School sewer	Prov. approval
5-11-70	Gresham	Stonegate san. sewer	Prov. approval
5-11-70	Salem	Savage Road sewer	Prov. approval
5-11-70	Cannon Beach	Lagoon expansion & sewers	Prov. approval
5-12-70	Hood River	Indian Creek sewer, Phase 1	Prov. approval
5-12-70	La Grande	Change Orders #1 & 2	Approved
5-13-70	Portland	N.W. St. Helens Road	Prov. approval
5-13-70	Portland	Maplewood #5 san. sewer	Prov. approval
5-13-70	Portland	S.E. 63rd Avenue	Prov. approval
5-14-70	Ashland	Black Oak Terrace	Prov. approval
5-15-70	Gold Beach	Prel. report for secondary	Comments submitted
5-15-70	Dundee	Change Orders A-3, 4, 5, & 6	Approved
5-15-70	Portland	53 change orders to contract for primary treatment expansion	Approved

Table 3 (Cont.)

Date	Location	Project	Action
5-18-70	Jackson County	Irrigation of sewage effluent at Hyatt Lake Rec. Center	Prov. approval
5-19-70	Wasco County	Celilo Indian Village non-overflow lagoon	Comments to FWQA
5-20-70	Elkton	Sewerage report	Approved with comments
5-21-70	Veneta	System and lagoon	Prov. approval
5-21-70	Salem	Battle Creek-Commercial St. area	Prov. approval
5-22-70	Umatilla	Prel. engineering report on secondary facilities	Prov. approval
5-27-70	Harrisburg	Simpson Park, First Addition	Prov. approval
5-27-70	East Salem S&D #1	Sleepy Hollow	Prov. approval
5-28-70	Oregon City	Woodfield Park	Prov. approval
5-29-70	North Powder	Sewerage system and lagoon	Prov. approval
Industrial Projects (2)			
5-15-70	Portland Canning Co., Sherwood	Pretreatment plans	Approved
5-15-70	Coast Packing Co., Ontario	Revised plans and letter of intent	Approved

PROJECT PLANS AND REPORTS

The following project plans or reports were received and processed by the Air Quality Control Division staff during the month of May 1970:

Date	Location	Project	Action
11	Ontario	Coast Packing Co. Rendering odor control	Conditional approval
29	Nyssa	Amalgamated Sugar Co. Modifying collector on boiler	Conditional approval

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 5 for June 26, 1970 Meeting

SUBJECT: ALLOCATION OF STATE FUNDS TO REGIONAL AIR POLLUTION CONTROL AUTHORITIES

Background:

State funds allocated to the Department of Environmental Quality for the biennium total $145,000. These funds were provided to match local funds on a basis of 50% of the local funds allocated to conduct each Regional Authority Control program.

Fiscal Year July 1, 1969 - June 30, 1970 Allocations:

At the July 24, 1969 meeting of the Commission a summary staff report on applications for State money totalling $64,977 was presented. At that time it was pointed out that the projected estimate of Regional requests for State monies for the biennium would exceed budgeted monies. Attached is a copy of the staff recommendation dated July 14 for the July 24, 1969 meeting.

Following a discussion it was moved and seconded and carried that State grants in the amount of $64,977 as requested by the three Regions be approved for this fiscal year with the admonition that State funds for the following year may not be sufficient to meet all of the requests. State funds were allocated as follows:

Columbia-Willamette Air Pollution Authority	$30,250
Lane Regional Air Pollution Authority	$25,239
Mid-Willamette Valley Air Pollution Authority	$11,488
Total	$64,977

This left a balance in State funds ($145,000 - $64,977) of $80,023.

Current Requests for June 1, 1970 - June 30, 1971:

Federal Clean Air Grant Applications and requests have been received by the Department for this coming fiscal year as follows:

	Total Budget	Local Funds	Federal Funds	State Funds	
CWAPA	$448,243.00	$98,913.00	$229,874.00	$49,456.00	
LRAPA	160,046.00	55,175.33	77,283.00	27,587.67	(Supplemental request not included)
MWVAPA	151,733.00	42,741.33	87,621.00	21,370.67	
	Total of requests for State funds			$98,414.34	

The current balance of State funds is $80,023 which results in a deficiency of $18,391.34 between the requested and available funds. This does not include a supplemental application by the Lane Regional Air Pollution Authority to the Federal Government for a program increase of $5,232 ($3,924 in Federal, $972 in Local, and $436 in State funds); however, at this time the Regional office has not acted on this request.

Requests have been made to the Department to request the Emergency Board to allocate the additional State funds for Regional program operation. Consultations with our Department fiscal officer have advised that since the allocation for Regional programs was not a separate appropriation, but rather included in the Department budget, that until it can be shown that the Department has a deficiency, the likelihood of approving an additional appropriation of $18,391.34 seems remote. It is too early to determine if the Department will have a surplus or deficiency in the total Department budget.

With the assumption that Department funds will become available or that the money will become available through the Emergency Board then the method of allocation of existing funds is not so important. If, however, funds do not become available it is significant and the method of appropriation may be significant in establishing a policy if similar deficiencies arise in the future.

The difficulty in establishing a formula arises from the fact that each of the programs is in a different stage of development, has different population densities, geography and uncontrolled sources. The Federal Government allocates money on a project basis as development, establishment, or improvement depending upon the stage of the program and application. Projected Federal grants are normally on a 3-year basis with funds granted annually upon application. Only new money is generally matched. Each Region has money budgeted which is not matched by the Federal Government and is entitled "program exclusive of project" or PEP.

Attached in the appendix to this report are statistics on staff, population, and areas of each Region. Five methods were used to calculate allocations, for example, details are in the appendix. No attempt was made to point out the deficiencies in each of these methods. Other methods could also be evaluated or used.

Recommendation:

It is recommended that monies be appropriated on the basis of a population priority basis. The allocation would be by Method 2 in the appendix and would be as follows:

CWAPA	$49,294
LRAPA	11,524
MWVAPA	19,205
Total	$80,023

ALLOCATION OF STATE FUNDS TO REGIONS

	Current	1970-71
Department of Environmental Quality (1)	20	20
Columbia-Willamette Air Quality Control (CWAPA)	24 (2)	27 (2)
Lane Regional Air Pollution Authority (LRAPA)	6 (3) (4)	10 (4)
Mid-Willamette Valley Air Pollution Authority (MWVAPA)	10 (4)	10 (4)
	60	67

(1) Does not include District Office Personnel or Assistance.

(2) Does not include 2 part time.

(3) Does not include 1 part time.

(4) Does not include Legal Counsel by contract.

DISTRIBUTION OF STAFFS

	Area, Square Miles		Population	
CWAPA	$\frac{27}{3712}$ sq. mi.	= 1/137 sq. mi.	$\frac{27}{897,000}$	= 1/33,200
MWVAPA	$\frac{10}{5562}$ sq. mi.	= 1/556 sq. mi.	$\frac{10}{340,320}$	= 1/34,900
LRAPA	$\frac{10}{4610}$ sq. mi.	= 1/460 sq. mi.	$\frac{10}{209,000}$	= 1/20,900

PER CAPITA COST OF PROGRAM

CWAPA	$\frac{\$448,245}{897,000}$	= $ .50/capita
MWVAPA	$\frac{\$151,733}{349,320}$	= $ .434/capita
LRAPA	$\frac{\$165,278}{209,000}$	= $ .79/capita

APPENDIX

METHODS OF CALCULATING THE ALLOCATION OF STATE FUNDS TO REGIONAL PROGRAMS

1. On the Basis of the Regional Estimate of Program Needs:

This method would provide money with a priority on the basis of the Regions' estimated needs made in 1968 which was the basic input to the appropriation.

		1968 Estimate of Needed State Money	Actual Current Requests	Estimated Deficit
CWAPA				
	1969-70	$35,000	$30,250*	
	1970-71	45,000	49,456	
	Total	$80,000	$79,706	None
LRAPA				
	1969-70	$16,073	$23,239*	
	1970-71	19,000	27,587	
	Total	$35,073	$50,826	$15,753
MWVAPA				
	1969-70	$11,500	$11,488*	
	1970-71	19,834	21,370	
	Total	$31,334	$32,858	$ 1,524
Total of Regional Requests		$146,407	$163,390	

*Previously Approved by Commission.

Recommendation:

On this basis, the recommendation for allocation to the Regions would be as follows:

		Appropriation
CWAPA		= $49,456
LRAPA	$35,073 - $23,239 = $11,834 - Correction	= 10,822
MWVAPA	$31,334 - $11,488 = $19,846 - Correction	= 19,745
	Total	$80,023

2. On the Basis of Population:

This method would provide money with a priority on the basis of population and would assume air quality problems and support should be largely related to population.

Region	Population	Percent Population of Region is to Population of all Regions
CWAPA	897,000	61.6%
LRAPA	209,000	14.4%
MWVAPA	349,320	24 %
Total	1,455,320	

Recommendation:

On the basis of population and available money for fiscal year 1970-71 of $80,023, the recommendation for allocation to the Regions would be as follows:

			Allocation	Deficit
CWAPA	(.616)(80,023)	=	$49,284.17	$ 162
LRAPA	(.144)(80,023)	=	11,523.31	16,064
MWVAPA	(.24)(80,023)	=	19,205.52	2,165
	Total		$80,023.00	

3. On the Basis of Priority Support to Program Exclusive of Project.

This method would provide money with a priority of support to the Regions of "program exclusive of project", for which no Federal matching funds are available. Remaining money available would be allocated by (a) population or (b) by percent of local money allocated Regional Air Pollution Authorities.

(a) The State money available, $80,023, would be appropriated to the to the Regional PEP in the amount of $46,733 and the remaining $33,250 distributed by population ratios.

Recommendation:

On this basis, the recommendation for allocation to Regions would be as follows:

Region	PEP (State Funds)		Population Distribution of Remaining		Allocation	Deficit
CWAPA	$16,137	plus	$20,482	=	$36,619	$12,837
LRAPA	19,001	plus	4,788	=	23,789	3,498
MWVAPA	11,635	plus	7,980	=	19,615	1,755
Total	$46,773		$33,250		$80,023	

(b) The State money for PEP would be allocated as in (a) above but the remaining money available would be on the basis of a priority of local money budgeted for Regional programs which totals $196,829, and individually is as follows:

CWAPA	$98,913 or 50.25%
LRAPA	55,175 or 28.03%
MWVAPA	42,829 or 21.72%

Recommendation:

On this basis, the recommendation for allocation to Regions would be as follows:

Region	PEP		Based on Local Fund Input	Allocation	Deficit
CWAPA	$16,137	plus	$16,709.13 + adjust.	$33,371	$16,085
LRAPA	19,001	plus	9,319.97	27,587	0
MWVAPA	11,635	plus	7,221.90	19,065	2,305
Total	$46,773		$33.250	$80,023	

4. On the Basis of Priority of Local Money Matchable by the Federal Government.

This method would provide money with a priority of support to the Regions on Federal project money for which matching Federal funds are available and to PEP on a local money contribution basis.

Recommendation:

On this basis, the recommendation for allocation to Regions would be as follows:

Region	50% of Local Project Money		Based on Local Fund Input	Allocation	Deficit
CWAPA	$33,319.00	plus	$14,261.96	$47,581.00	$ 1,875.00
LRAPA	8,587.00	plus	7,955.47	16,543.00	11,044.00
MWVAPA	9,735.00	plus	6,164.57	15,899.00	5,471.00
Total				$80,023	

5. On the Basis of Equal Distribution of the Deficit to the Regions:

Recommendation:

On the basis of equal distribution of the deficiency in funds available ($18,391.37), each Region would assume a deficit in the request of $6,130.45 and allocations would be as follows:

CWAPA	$43,326
LRAPA	21,457
MWVAPA	15,240

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman P. Meierjurgen, Member
Storrs Waterman, Member
E. C. Harms, Jr.
Geo. A. McMath, Member

FROM : AIR QUALITY CONTROL STAFF

DATE : July 14 for July 24, 1969 Meeting

SUBJECT: ALLOCATION OF STATE FUNDS TO REGIONAL AIR POLLUTION CONTROL AUTHORITIES

Applications for state funds from the Regions for the fiscal year 1969-70 have been received in the amount of $64,977.

The state funds allocated to the Department for the biennium total $145,000. These funds are provided to match state funds on a basis of 50% of the local funds to the conduct of regional control programs.

The original estimate of required funds was made March 20, 1968 after consulting with the Regions. The estimate of $145,000 was based upon a program being initiated in the Jackson-Josephine County area and the following regional estimates with some allowance for second year of the biennium increases.

	Total Program	State Funds
Columbia-Willamette Air Pollution Authority	$363,000	$30,250
Lane Regional Air Pollution Authority	86,535	16,073
Mid-Willamette Valley Air Pollution Authority	108,076	9,006
		$55,329

Federal Grant Applications have been submitted to and have been approved by the National Air Pollution Control Administration for each Region for the 1969-70 fiscal year. A summary of fund sources and budget for that period is as follows:

	State Funds	Federal Funds	Total Budget
Columbia-Willamette Air Pollution Authority	$30,250	$272,250	$363,000
Lane Regional Air Pollution Authority	23,239	77,283	147,000
Mid-Willamette Valley Air Pollution Authority	11,488	102,404	136,869
	$64,977	$451,937	$646,869

Current estimates of state funds required by the Regions for the next two years are as follows:

	By Year		Biennium
Mid-Willamette Valley Air Pollution Authority	1969-70	$11,488	
	1970-71	17,108	
			$ 28,596
Lane Regional Air Pollution Authority	1969-70	$23,239	
	1970-71	28,000	
			$ 51,239
Columbia-Willamette Air Pollution Authority	1969-70	$30,250	
	1970-71	52,937	
			$ 83,187
Estimated Biennium Total - All Regions			$163,022

SUMMARY:

The funds available for the biennium are now estimated to be exceeded by the requests for state funds by $18,022 for that same period. It should be emphasized that the 1970-71 requests are estimates of the respective Regions at the present time. The Mid-Willamette Valley Air Pollution Authority request appears reasonably definite because of a required change in base by the federal government. Columbia-Willamette Air Pollution Authority also reported their request was probably a minimum request.

Since there are no guidelines in the statute this information has been presented for discussion and staff guidance.

CONCLUSION:

1. The staff can be directed to make a further evaluation with established Commission policy, or

2. State funds can be allocated for the fiscal period July 1, 1969 to June 30, 1970 to the Regions at this time as follows:

Columbia-Willamette Air Pollution Authority	$30,250
Lane Regional Air Pollution Authority	23,239
Mid-Willamette Valley Air Pollution Authority	11,488
	$64,977

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 16, 1970 for the June 26, 1970 Meeting

SUBJECT: AMENDMENTS TO RULES OF THE MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

As required by ORS 449.855 (2), the Mid-Willamette Valley Air Pollution Authority has submitted to the Department of Environmental Quality for approval amendments to the quality and purity of air standards adopted by the Regional Authority.

A copy of the new rules and amendments adopted May 19, 1970 are attached.

The staff has reviewed the standards beginning on page 9 and finds the purity of air standards, Particulate Fallout Rate, Suspended Particulate Matter, and Carbon Monoxide are as restrictive as Environmental Quality Commission standards. The Department of Environmental Quality does not have standards for Sulfur Dioxide but the adopted standard is reasonably consistent with those under consideration by the staff.

RECOMMENDATION

It is recommended that the ambient air standards of the Mid-Willamette Valley Air Pollution Authority approved on May 19, 1970, be approved.

MICHAEL D. ROACH
Director

MID WILLAMETTE VALLEY
AIR POLLUTION AUTHORITY

2595 STATE STREET / SALEM, OREGON 97301 / TELEPHONE AC 503 / 581-1715

June 5, 1970

Mr. H. M. Patterson, Director
Air Quality Control Division
Department of Environmental Quality
P. O. Box 231
Portland, Oregon 97207

Dear Mr. Patterson:

The review by your office of the Authority's amended and new rules and regulations has been received. The specific points in your comments are reviewed in the order that they were raised.

1. In regard to the definition of "sampling stations," the Authority will rely on the general usage of the station locations as defined by the Department of Environmental Quality.

2. The use of the word "amendatory" has been reviewed with the Authority's attorney, and it is his desire that this word be retained in preference to your suggestion of the use of the word "corrective."

3. The typographic error in the word "authorized" on page 17 will be corrected.

Enclosed are fifteen copies of the new rules per your request. The Authority will immediately move ahead on codification and publication of the new rules based upon the Department of Environmental Quality's review.

Sincerely yours,

Michael D. Roach
Director

MDR:dl
Enclosures

MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

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(Adopted May 19, 1970)

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PROPOSED NEW RULES AND AMENDMENTS

OF

MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

Section 1. Rule 10-005 is repealed and in lieu thereof the following is adopted.

10-005 - POLICY

(1) In the interest of the public health and welfare of the people it is declared to be public policy of the Mid-Willamette Valley Air Pollution Authority to restore and maintain the quality of the air resources of the territory in a condition as free from air pollution as is practicable consistent with the overall public welfare of the territory. The program of this Authority for the control of air pollution shall be undertaken in a progressive manner, and each of its objectives shall be sought to be accomplished by cooperation and conciliation among all the parties concerned.

Section 2. Rule 10-015 - DEFINITIONS:

(1) "Agricultural operation" means the growing or harvesting of crops, the raising of fowls or animals, or bees, in a gainful manner, or the use of equipment incident thereto.

(1-a) "Air contaminant" means dust, fumes, mist, smoke, other particulate matter, vapor, gas, odorous substance, or any combination thereof.

(2) "Air pollution" means the presence in the outdoor atmosphere of one or more air contaminants, or any combination thereof, in sufficient quantities and of such characteristics and of a duration as are or are likely to be injurious to public welfare, to the health of human, plant or animal life or to property or which unduly interferes with enjoyment of life and property.

(3) "Atmosphere or ambient air" means the surrounding outside air.

(4) "Authority" means the Mid-Willamette Valley Air Pollution Authority.

(5) "Agency" means the Mid-Willamette Valley Air Pollution Authority.

(6) "Board" means the Board of Directors of the Mid-Willamette Valley Air Pollution Authority.

(7) "Control equipment" means any air cleaning device which prevents or controls the emission of any air contaminant.

(8) "Emission" means the release into the outdoor atmosphere of air contaminants.

(9) "Emission point" means the location, place in a horizontal plane and vertical elevation at which an emission enters the atmosphere.

(10) "Equipment" means any stationary or portable device or any part thereof capable of causing emission of any air contaminants into the atmosphere.

(11) "Excess air" means the quantity of air which exceeds the theoretical quantity of air required to complete combustion.

(12) "Fire permit issuing agency" means any city fire department, rural protection district, forest protection district, county court or board of county commissioners or their designated representatives, as applicable.

(13) "Fuel burning equipment" means equipment other than internal combustion engines and marine installations, the principal purpose of which is the production of hot air, hot water or steam.

(14) "Garbage" means putrescible animal or vegetable waste resulting from handling, preparation, cooking and serving of food.

(15) "Health Officers" means the duly appointed health officers or their authorized representatives of a political subdivision participating in the Mid-Willamette Valley Air Pollution Authority.

(16) "Incinerator" means a combustion device specifically designed for the destruction, by burning, of solid, semi-solid, liquid, or gaseous combustible waste and from which the solid residue contains little or no combustible material.

(17) "Installation" means the placement, assemblage or construction of equipment or control apparatus at the premise where the equipment or control apparatus will be used, includes all preparatory work at such premises.

(18) "Landclearing" means the removal of trees, brush, grass, or buildings in preparation for a land improvement or construction project.

(19) "Motor vehicle" means any self-propelled vehicle designed for transporting persons or property on a street or highway.

(20) "Multiple chamber incinerator" means any incinerator consisting of three or more refractory-lined combustion chambers in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned.

(21) "Odor" means that property of an air contaminant that affect the sense of smell.

(22) "Opacity" means the degree to which an emission reduces transmission of light and obscures the view of an object in the background.

(23) "Outdoor fire" means the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the atmosphere without passing through a stack, duct, vent, or chimney.

(24) "Particulate matter" means any matter, except uncombined water, which exists as a solid or liquid at standard conditions.

(25) "Particle fallout rate" means the weight of particulate matter which settles out of the air per unit area in a given length of time.

(26) "Person" or "Persons" means any individual, public or private corporation, political subdivision, agency, board, department, or bureau of the state, municipality, partnership, association, firm, trust, estate or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.

(27) "Refuse" means a mixture of rubbish and garbage.

(28) "Ringelmann Chart" means the Ringelmann Smoke Chart with instructions for use as published in May 1967 by the United States Bureau of Mines.

(29) "Rubbish" means a mixture of non-putrescible solid wastes, excluding ashes and consisting of both combustible and non-combustible wastes such as paper, cardboard, yard clippings, wood, glass, cans, bedding, household articles and similar materials.

(30) "Sanitary Authority" means the Department of Environmental Quality or Environmental Quality Commission of Oregon.

(31) "Smoke" means small gas-borne particles resulting from incomplete combustion, consisting predominately of carbon, ash, and other combustible material present in sufficient quantity to be observable or a suspension in a gas of solid particles in sufficient quantity to be observable.

(32) "Suspended particulate matter" means particulate matter which normally remains suspended in the atmosphere.

(33) "Standard conditions" in emission tests means a gas temperature of 60 degrees F. and a gas pressure of 14.7 pounds per square inch absolute.

(34) "Threshold level of olfactory detection" means the odor perceptible threshold for fifty (50) percent of the odor panel as determined by the dilution method described in the "American Society of Testing Materials," "Standard Method for Measurement of Odor in Atmospheres (Dilution Method)," Designation D 1391-57 or an equivalent method.

(35) "Wigwam waste burner" means a burner which consists of a single combustion chamber, has the general features of a truncated cone and is used for the incineration of waste.

RULES FOR REGISTRATION, REPORTS AND SUBMISSION OF PLANS

Section 3. Rule 12-005 is repealed and in lieu thereof, the following rule is enacted.

12-001 - REGISTRATION

(1) Upon request of the Authority, all air contaminant sources within the jurisdiction of the Authority shall register with the Authority.

(2) Registration shall be completed within 30 days following date of request.

(3) Registration shall be made by the owner, lessee of the source or agent on forms furnished by the Director. The owner, lessee of the source or agent, shall be responsible for the registration and the correctness of the information submitted.

(4) The Director may require from registrants any information relevant to air pollution such as but not limited to (a) name, address and nature of business; (b) air pollution control equipment being utilized; (c) location, size and height of air contaminant outlets; (d) process employed; (e) type and quantity of fuels used; (f) amount, nature and duration of air contaminant emission; (g) amounts and methods of refuse disposal; and (h) name of local person responsible for compliance with these Rules.

(5) Each registration shall be signed by the owner, lessee or agent to verify the registration information.

(6) Any air contaminant source that is subject to the requirement of registration shall maintain such registration in current status by re-registering with the Authority of any change made affecting the information on file.

Section 4. Rule 12-010 is repealed and in lieu thereof, the following is enacted:

12-006 - NOTICE OF CONSTRUCTION

(1) Except for those sources exempted in Table I of this section, no person shall construct, install, or establish new air pollution control equipment or new process equipment from the air contaminant sources referred to in subsection (3) of this section without first notifying the Director in writing.

(2) All persons, firms and corporations operating or maintaining industrial, institutional or commercial establishments shall notify the Director in writing and submit plans and specifications as provided in Section 12-007 of these Rules prior to installation, construction or establishment of fuel burning equipment rated at 400,000 BTU per hour or greater or incinerators.

(3) Classes of air contamination sources are those enumerated in the "Standard Industrial Classification Manual" published by the Executive Office of the President, Bureau of Budget, 1967, issued by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., the major group classification being as follows:

Agriculture Services
Mining and Quarrying of Nonmetallic Minerals Except Fuels
Manufacturing of:
- Food and Kindred Products
- Lumber and Wood Products Except Furniture
- Furniture and Fixtures
- Chemicals and Allied Products
- Petroleum Refining and Related Industries
- Rubber and Miscellaneous Plastic Products
- Electrical Machinery, Equipment, and Supplies
- Leather and Leather Products
- Stone, Clay, Glass and Concrete Products
- Primary Metals Industry Except Aluminum
- Fabricated Metal Products Except Ordinance Machinery and Transportation Equipment
- Machinery Except Electrical
- Transportation Equipment

(4) For the purposes of this section, any additions to, enlargements of, reductions to, or replacement of an existing air contamination source shall be regulated the same as construction, installation or establishment of a new contaminant source.

12-007 - SUBMISSION OF PLANS AND SPECIFICATIONS

(1) Within 30 days of receipt of construction notice, the Director may require, prior to construction, installation or establishment of the air contamination source or sources covered thereby, registration as required in Rule 12-001 and the submission of plans and specifications drawn in accordance with acceptable engineering practices. Such plans and specifications shall include the estimated quantities of input and output of air contaminants together with the estimated efficiency of the air pollution control equipment and shall be accompanied by a description of the process and a related flow chart. A plot plan, including the distance and the height of buildings within a reasonable distance from the place where the equipment is or will be installed also shall be submitted.

(2) Sufficient information shall be included to show that the proposed equipment or control apparatus will meet the emission standards as set forth in these Rules. The Director may request corrections and revisions to the plans and specifications, if any, to insure compliance with these Rules.

12-008 - NOTICE OF APPROVAL

(1) The Director shall, upon determining that the proposed construction is, in the opinion of the Authority, in accordance with the provisions of these Rules, promptly notify the person concerned that construction may proceed. A notice of approval to proceed with construction shall not relieve the owner of the obligation of complying with the emission standards of these Rules.

12-009 - ORDER PROHIBITING CONSTRUCTION

(1) If within 60 days of receipt of plans, specifications or any subsequently requested revisions or corrections to the plans and specifications or any other information required pursuant to this Section, the Authority determines that the proposed construction, installation or establishment is not in accordance with the provision of these Rules, it shall issue an order prohibiting the construction, installation or establishment of the air contamination source or sources. Failure of such order to issue within the time prescribed herein shall be considered a determination that the construction, installation or establishment may proceed, provided that it is in accordance with plans, specifications and any corrections or revisions thereto, or other information, if any, previously submitted; and further provided, it shall not relieve the owner of the obligation of complying with the emission standards of these Rules.

(2) Any person against whom the order is directed may, within 20 days from the date of mailing of the order, demand a hearing. The demand shall be in writing, shall state the grounds for hearing and shall be mailed to the Authority. The hearing shall be conducted pursuant to the provision of Rules 19-005 to 23-030.

12-010 - NOTICE OF COMPLETION

(1) Notice shall be provided in writing to the Authority of the completion, installation or establishment and the date when the operation will commence.

TABLE I

(Rule 12-006)

AIR CONTAMINANT SOURCES EXEMPT FROM NOTICE OF CONSTRUCTION

(1) Air conditioning or ventilating systems not designed to remove air contaminants generated by or released from equipment.

(2) Atmosphere generators used in connection with metal heat treating processes.

(3) Blast cleaning equipment which uses a suspension of abrasive in liquid.

(4) Foundry sand mold forming equipment, unheated.

(5) Fuel burning equipment which is used solely for a private dwelling serving four families or less.

(6) Insecticide spray equipment.

(7) Internal combustion engines, excluding gas turbine and jet engines.

(8) Laboratory equipment used exclusively for chemical or physical analyses.

(9) Laundry driers, extractors or tumblers used exclusively for the removal of water from fabric.

(10) Sewing equipment.

(11) Surface coating by use of an aqueous solution or a suspension.

(12) Steam cleaning equipment.

(13) Storage tanks, reservoirs or containers:

(a) Of a capacity of 6,000 gallons or less used for organic solvents, diluents or thinners;
(b) Of a capacity of 40,000 gallons or less used for liquid fuels including gasoline, lubricating oil, tallow, vegetable oil or wax emulsions.

(14) Vacuum cleaning systems used for housekeeping.

(15) Vacuum producing devices used in laboratory operations and vacuum producing devices which do not remove or convey air contaminants from or to another source.

(16) Vents used exclusively for:

(a) Sanitary or storm drainage systems; or
(b) Safety valves.

(17) Washing or drying equipment used for products fabricated from metal or glass, if no volatile organic material is used.

(18) Welding, brazing or soldering equipment.

(19) Asphalt laying equipment.

(20) Equipment used in agricultural operations.

(21) Barbecue equipment used in connection with any residence.

Section 5. Rule 12-020 is amended to read as follows:

12-020 - SOURCE EMISSION TESTS

(1) Whenever the Director has reason to believe an emission in excess of that allowed by these Rules is occurring or is likely to occur he may:

(A) Require any person responsible for emission of air contaminants to make or have made tests to determine the emission of air contaminants from any source.

(B) Specify testing methods to be used in accordance with good professional practice and he may observe the testing.

(C) Require that all tests shall be conducted by reputable, qualified personnel.

(D) Require that he be supplied with a copy of the test results in writing and signed by the person responsible for the test.

(E) Require installation of emission monitoring equipment and submission of monitoring records or make such other provisions so that operators of air contaminant sources may know the nature or appearance of emissions.

(2) The Director may conduct tests of emissions of air contaminants from any source, and may request the person responsible for the source to be tested to provide necessary holes and stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of emission of air contaminants.

(3) The Director shall, upon request, supply a copy of the test results to the person responsible for the source of air contaminant emission.

(4) All sampling methods used will be maintained in a file in the Director's office, which are available for review by interested persons during normal working hours.

Section 6. Rules 14-010 and 14-015 are repealed and in lieu thereof the following are enacted:

14-010 - PARTICULATE FALLOUT RATE

(1) Particulate fallout rate measured at primary air mass stations, primary ground level monitoring stations, or special stations shall not exceed:

(a) 10 grams of particulate matter per square meter per month (10g/sq. m/mo.) in an industrial area.

(b) 5 grams of particulate matter per square meter per month (5 g/sq. m/mo.) in an industrial area if visual observations show a presence of wood waste or soot and the volatile fraction of the sample exceeds 70 percent (70%)

(c) 5 grams of particulate matter per square meter per month (5 g/sq. m/mo.) in residential and commercial areas.

(d) 3½ grams of particulate matter per square meter per month (3½ g/sq. m/mo.) in residential and commercial areas if visual observations show the presence of wood waste or soot and the volatile fraction of the sample exceeds 70 percent (70%).

(e) 0.35 of a gram of calcium oxide per square meter per month (0.35 g/sq. m/mo.) in residential and commercial areas.

14-015 - SUSPENDED PARTICULATE MATTER

(1) The concentration of suspended particulate matter measured in the air at primary air mass stations shall not exceed:

(a) 60 micrograms per cubic meter of air (60 ug/m^3) for more than 50 percent of the samples collected in any one calendar year, based on not less than 85 samples with at least 7 samples per month.

(b) 100 micrograms per cubic meter of air (100 ug/m^3) for more than 15 percent of the samples collected any calendar month based on not less than 7 samples.

(c) 20 micrograms of calcium oxide per cubic meter of air (20 ug/m^3) in residential and commercial areas at any time.

Section 7. The following Rules are enacted, to be known as 14-025 and 14-030.

14-025 - SULFUR DIOXIDE

(1) Sulfur dioxide in the ambient air measured at primary air mass stations, primary ground level monitoring stations, or special stations shall not exceed the limitation shown in Table II of this Rule.

TABLE II

(RULE 14-025)

AMBIENT AIR STANDARDS FOR SULFUR DIOXIDE

SO_2 (PPM BY VOLUME)	AVERAGING PERIOD	FREQUENCY IN OCCURRENCE
0.75 p.p.m.	15 minutes	Once in any 8 consecutive h
0.40 p.p.m.	1 hour	Once in any 4 consecutive d
0.10 p.p.m.	24 hours	Once in any 30 consecutive
0.05 p.p.m.	30 days	Any 30 consecutive days

14-30 - CARBON MONOXIDE (page 10)

(1) Carbon monoxide in the ambient air measured at primary air mass stations or primary ground level monitoring stations shall not exceed an average concentration of twenty (20) p.p.m. by volume for any consecutive eight (8) hours.

Section 7.A. Amends 15-010, 15-020and provides for new Section 15-011.

15-010 - RESTRICTION ON EMISSION OF VISIBLE AIR CONTAMINANTS FOR EXISTING SOURCES

(1) No person maintaining, owning, or operating existing sources at the date of adoption of, except as provided in Section 15-011, these revised Rules shall discharge into the atmosphere from any single source of emission whatsoever any air contaminant 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 Ringelmann Chart, or

(b) of such an opacity as to abscure an observer's view to a degree equal to or greater than the smoke as dark or darker in shade as to that designated No. 1 on the Ringelmann Chart.

15-011 - EXCEPTION FOR EXISTING FUEL BURNING EQUIPMENT UTILIZING WOOD WASTE

No person maintaining, owning, or operating existing fuel burning equipment utilizing wood wastes at the date of adoption of these revised rules shall discharge into the atmosphere from any single source of emission whatsoever any air contaminant 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. 2 on the Ringelmann Chart, or

(b) of such an opacity as to obscure an observer's view to a degree equal to or greater than the smoke as dark or darkerin shade as to that designated No. 2 on the Ringelmann Chart.

15-020 - EXCEPTION DUE TO UNCOMBINED WATER

Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Section 15-010, 15-011, and 15-015 such Sections shall not apply.

Section 8. The following Rules are added to and made a part of Chapter III, Title 15, of the Rules and Regulations of the Mid-Willamette Valley Air Pollution Authority, to be known as Rules 15-050 to 15-070:

15-050 - DEFINITIONS - (Process Weight)

(1) As used in Rules 15-050 to 15-070 unless the context otherwise requires:

(a) "Process Unit" means all equipment and appurtenances within an economic unit which produces goods or services at a single physical location and is engaged in one, or predominantly one, type of economic activity for which a Standard Industrial Classification code is applicable.

(b) "Process Weight per Hour" is the total hourly rate at which process materials, including solid fuels, but excluding liquid and gaseous fuels, are introduced into a process unit.

(c) "Standard Industrial Classification" means the classification or codification of units by type of activity, as enumerated in the "Standard Industrial Classification Manual" published by the Executive Office of the President--Bureau of Budget, 1967, prepared by Office of Statistical Standards and issued by the Superintendant of Documents, U.S. Government printing office, Washington, D.C.

15-055 - EMISSION LIMITATIONS - (Process Weight)

Except as otherwise provided in these Rules, no person shall cause, suffer, allow or permit the emission of particulate matter in any one hou from any process unit in excesss of the amount shown in Table III of thes Rules for the process weight per hour allocated to such process unit.

15-060 - EXCEPTIONS - (Process Weight)

(1) Rule 15-050 to 15-070 does not apply to the burning of fuel fo the indirect heating and burning of refuse in which the products of combustion do not come into direct contact with process materials.

(2) Persons presently owning, maintaining and operating particleboard process units shall comply with Rule 15-050 to 15-070 on or before July 1, 1973. Upon adoption of these amendatory Rules, such person shall proceed with a progressive program of air pollution control, applying the highest and best practical methods of treatment and control currently available and shall, at the request of the Authority, submit periodic reports in such form and frequency as directed to demonstrate the progress that such units are making toward full compliance with Rule 15-050 to 15-070.

15-065 - SEPARATE PROCESS UNITS - (Process Weight)

Where a single physical location encompasses two or more distinct and separate economic activities for which different Standard Industrial Classification codes are applicable, such activities shall be treated as separate process units, provided it is determined that:

(a) Such activities are not ordinarily associated with one another at common physical locations;

(b) No one industry description in the Standard Industrial Classification includes such combined activities.

15-070 - GENERAL PROVISIONS - (Process Weight)

(1) Process weight per hour shall be based upon the process materials introduced into the process unit in one complete operation or cycle and the time required to complete that operation or cycle, excluding any time during which the process unit is idle.

(2) The process weight per hour referred to in Rules 15-050 to 15-070 shall be based upon the normal operation maximum capacity of the process unit and if such normal maximum capacity should be increased by process or equipment changes, the new normal maximum capacity shall be used as the process weight in determining the allowable emissions.

(3) Compliance with the specific emission standard in Rule 15-050 to 15-070 does not preclude required compliance with any other applicable emission standard, or ambient air standard.

TABLE III

(Rules 15-050 to 15-070)

PARTICULATE MATTER EMISSIONS STANDARDS FOR PROCESS UNITS

Process Lbs/Hr.	Emission Lbs/Hr.	Process Lbs/Hr.	Emission Lbs/Hr.	Process Lbs/Hr.	Emission Lbs/Hr.
50	0.24	2300	4.44	7500	8.39
100	0.46	2400	4.55	8000	8.71
150	0.66	2500	4.64	8500	9.03
200	0.85	2600	4.74	9000	9.36
250	1.03	2700	4.84	9500	9.67
300	1.20	2800	4.92	10000	10.00
350	1.35	2900	5.02	11000	10.63
400	1.50	3000	5.10	12000	11.28
450	1.63	3100	5.18	13000	11.89
500	1.77	3200	5.27	14000	12.50
550	1.89	3300	5.36	15000	13.13
600	2.01	3400	5.44	16000	13.74
650	2.12	3500	5.52	17000	14.36
700	2.24	3600	5.61	18000	14.97
750	2.34	3700	5.69	19000	15.58
800	2.43	3800	5.77	20000	16.19
850	2.53	3900	5.85	30000	22.22
900	2.62	4000	5.93	40000	28.30
950	2.72	4100	6.01	50000	34.30
1000	2.80	4200	6.08	60000	40.00
1100	2.97	4300	6.15	70000	41.30
1200	3.12	4400	6.22	80000	42.50
1300	3.26	4500	6.30	90000	43.60
1400	3.40	4600	6.37	100000	44.60
1500	3.54	4700	6.45	120000	46.30
1600	3.66	4800	6.52	140000	47.80
1700	3.79	4900	6.60	160000	49.00
1800	3.91	5000	6.67	200000	51.20
1900	4.03	5500	7.03	1000000	69.00
2000	4.14	6000	7.37	2000000	77.60
2100	4.24	6500	7.71	6000000	92.70
2200	4.34	7000	8.05		

Interpolation and extrapolation of the data for process unit weight rates in excess of 60,000 lb/hr shall be accomplished by the use of the equation:

$E = 55 P^{.11} - 40$, where E = rate of process unit emission in lb/hr and P = process weight in tons/hr.

Section 9. The following Rules are enacted to be known as 15-075 to 15-085:

15-075 - HOT-MIX ASPHALT PLANTS

(1) The maximum allowable emissions of particulate matter from hot-mix asphalt plants shall be determined from Table III except that the maximum allowable particulate emissions from processes greater than 60,000 pounds per hour shall be limited to 40 pounds per hour.

15-080 - RESTRICTION OF EMISSION OF LARGE-SIZE PARTICULATE MATTER

(1) No person shall cause or permit the emission of any particulate matter which is larger than 125 microns in size provided such particulate matter does or will deposit upon real property of another person.

15-085 - RESTRICTION OF EMISSION OF SULFUR DIOXIDE

(1) No person shall cause or permit emission of sulfur dioxide in excess of 1,000 parts per million by volume from any air contaminate emission source.

TITLE 16

PROHIBITED PRACTICES AND CONTROL OF SPECIAL CLASSES

Section 10. Rule 16-005 is repealed and in lieu thereof the following is enacted:

16-005 - OPEN BURNING RESTRICTIONS

(1) No person shall cause or permit any open outdoor fire or shall conduct a salvage operation by open burning except the following:

(a) Fires, on site, of rubbish from any structure used exclusively as a dwelling for not more than four families between the hours of 10 a.m. to 4 p.m.; provided that after July 1, 1971, such burning shall be prohibited if refuse collection service is available at the site on a regularly scheduled basis and at reasonable cost.

(b) Fires of tree trunks and limbs, brush, and other land clearing debris of comparable combustion characteristics provided the site of such burning is not:

(1) Within one mile of a designated interstate or state primary highway; or

(2) Within one mile of a commercial, municipal or private airport; or

(3) Within one quarter mile of a state secondary highway, limited to the restrictions of subsection (2) of this section; or

(4) Within one quarter mile of a residence, excepting a residence that may be located on the same property as the burning site.

(c) Fires, including outdoor fireplaces and barbecues, used for cooking of food and small fires for ceremonial recreational purposes.

(d) Agricultural burning under ORS Chapters 449, 476, and 478.

(e) Fires set or permitted by any public officer, board, council or commission for the purpose of fire prevention, elimination of a fire hazard, or training for fire control.

(2) The fires and open burning permitted by subsection (1) (b) of this section shall be subject to and conducted within time periods and in accordance with burning requirements designated the director, and burning of land clearing debris within one quarter mile of a state secondary highway shall be limited to the initial land clearing operation of the respective owner or occupier of the property being developed.

(3) No open outdoor fire permitted under 1 (a) and (b) of this section shall be allowed on any day when the Director advises fire-permit issuing agencies to not issue permits because such practices would have an adverse effect on air quality.

(4) Nothing in this section shall relieve a person responsible for such burning from the consequences of, or the damages, injuries, or claims requlting from such burning nor the requirement to obtain applicable fire permits from fire-permit granting agencies.

Section 11. Rules 16-010 and 16-105 are amended to read:

16-010 - MATERIALS EXCLUDED FROM ANY OPEN BURNING

No open outdoor fire allowed by this Rule shall contain garbage, asphalt, waste petroleum products, paint, rubber products, plastic, or any substance or material which normally emits dense smoke or obnoxious odors.

16-105 - EXISTING INCINERATORS, RESTRICTIONS

No person shall cause or permit the emission of particulate matter from the stack or chimney of any existing incinerator which is in excess of Section 15-015 and Section 15-025 of these Rules. (Except for any incinerator on residential premises used to burn refuse arising from the domestic activities on the same premises if the residence is not more than four families.)

Section 12. The following Rules are enacted, to be known as 16-130, 16-135, 16-140, and 16-145:

16-130 - RESTRICTIONS ON THE CONCEALMENT AND MASKING OF EMISSIONS

(1) No person shall willfully cause or permit the installation or use of any device or use of any means such as dilution, which without resulting in a reduction in the total amount of air contaminants emitted, conceals an emission of air contaminants which would otherwise violate these rules.

(2) No person shall cause or permit the installation or use of any device or use of any means designed to mask the emissions of an air contaminant, which air contaminant causes or is likely to cause detriment to health, safety or welfare of any person.

16-135 - RESTRICTION ON THE EMISSION OF WATER VAPOR

No person shall cause or permit emission of water vapor if the water vapor causes detriment to the health, safety or welfare of any person, or causes damages to property or business.

16-140 - ODOR CONTROL MEASURES

(1) Control apparatus and equipment shall be installed and operated to reduce to a minimum odor bearing gases or odor bearing particulate matter emitted into the atmosphere.

(2) Gas effluent from animal matter reduction or incineration shall be maintained at a temperature of 1200° F. for at least 0.3 seconds, or controlled in another manner determined by the Director to be equally or more effective.

(3) The Authority may require that building or equipment be closed and ventilated so that all air, gases, and particulate matter are effectively treated for removal or destruction of odorous matter.

16-145 - STORAGE AND HANDLING OF PETROLEUM PRODUCTS

(1) In volumes of greater than 40,000 gallons, gasoline or any volatile petroleum distillate or organic liquid having a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions shall be stored in pressure tanks or reservoirs or shall be stored in containers equipped with a floating roof or vapor recovery system or other vapor emission control device.

(2) Gasoline or petroleum distillate tank car or tank loading facilities handling 20,000 gallons per day or more shall be equipped with submersible filling devices or other vapor emission control systems.

(3) Gasoline tanks with a capacity of 500 gallons or more, installed after the adoption of these Rules, shall be equipped with submersible filling devices or other vapor emission control systems.

Section 13. Rule 21-010 relating to conduct of hearings is repealed and in lieu thereof the following is enacted:

21-010 - CONDUCT OF HEARINGS

All hearings pertaining to the adoption of Rules and Standards shall be conducted by the Board of Directors. Other public hearings shall be

held either by the Board and conducted by the chairman or by any member or members of the Board of Directors or by a hearing officer as the Board of Directors may designate.

Section 14. Rule 21-020 relating to powers of chairman is amended to read as follows:

21-020 - POWERS OF CHAIRMEN

(1) The Chairman or Vice Chairman of the Authority or a hearing officer shall have the following powers:

(a) To cause notice to be given of and hold hearings;

(b) To administer oaths and affirmations;

(c) To examine witnesses;

(d) To issue citations and subpoenas; (Subpoenas may be served by any person authorized by the Chairman.)

(e) To take or cause to be taken depositions as provided by law;

(f) To rule upon offers of proof and receive evidence, and prior to ruling may seek the advice of the Attorney for the Authority in attendance at the hearing or meeting;

(g) To regulate the course of the hearing, including:

(A) The power to eject any person who in any manner interferes with the orderly procedure of a hearing;

(B) May require parties to proceedings to submit in advance of hearing a written list of prospective witnesses and an estimate of time required to present his or its case.

(h) To hold conference, before or during the hearing for the settlement or simplification of issues, with the consent of the parties;

(i) To dispose of procedural requests or similar matters;

(j) To take any other action authoriized by these Rules.

Section 15. The following Rules are enacted pertaining to hearings officers to be known as Rules 22-055 and 22-060:

22-055 - SUMMARY, FINDINGS AND RECOMMENDATIONS OF HEARINGS OFFICER

In the event the hearing is conducted by less than a majority of the Board of Directors or by a hearings officer, a summary of the evidence with findings of fact and conclusions of law and recommendations for decision shall be prepared by the person or persons conducting the hearing and reviewed by the Board of Directors prior to making its order.

22-060 - SERVICE OF FINDINGS BY HEARINGS OFFICER

A copy of the findings of fact and conclusions of law and the proposed decision by the hearings officer shall be served upon each party adversely affected by the proposed decision. Within five days after such service a party adversely affected may submit written exceptions and the Board may provide opportunity for oral argument. The Board shall consider the findings of fact and conclusions of law, proposed decision, written exceptions and oral argument, if any, before making its decision.

Section 16. Rule 23-015 is amended to read as follows:

23-015 - DECISION

If a majority of the Board of Directors has conducted the hearing the Agency shall render its decision within sixty days after completion of the hearing. A copy of the decision shall be mailed to each party or his attorney of record. If the hearing is conducted by a hearings officer, or by a member or members constituting less than a majority of the Board, the final decision shall be made and entered by the Board within sixty days after conclusion of the hearing if no exceptions are filed, or within sixty days after final arguments or written exceptions to a proposed decision.

TO: MEMBERS OF THE ENVIROMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM: AIR QUALITY CONTROL DIVISION

DATE: June 10, 1970, for meeting of June 26, 1970

SUBJECT: PROPOSED REGULATIONS FOR PRIMARY ALUMINUM PLANTS

The subject proposed regulation, specific to aluminum production facilities, was a matter of public hearing on February 26, 1970. All testimony which was submitted both at and subsequent to the hearing have been previously forwarded to the Commissioners. The hearing officers' reports likewise have been previously furnished to you. This matter was also considered at the recent commission-staff work session.

The proposed regulation, which has been amended based on the discussion at the work session, is attached and recommended for adoption.

The following changes are cited for your reference:

I. Statement of Purpose

Section A -- The terms "highest and best practicable" and "necessary to attain and maintain" have been inserted.

II. Definitions

No changes were made.

III. Emission Standard

The proposed restriction of gaseous and particulate flourides to prevent exceeding ambient air and forage flouride standards has been deleted.

The proposed restriction of total solid particulates from the reduction process has also been deleted.

IV. Revision of Emission Standards

Section A -- In line 1, "on or before" was substituted for "within".

Section B -- In line 2, "regulations" was substituted for "emission limits".

V. Compliance

All dates pertaining to the deletions made in Section III were deleted.

VI. Monitoring

No changes were made.

VII. Reporting

No changes were made.

VIII. Special Studies

No changes were made.

IX. Other Air Quality Limitations

This section was deleted.

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

PROPOSED REGULATION

for

PRIMARY ALUMINUM PLANTS

(As Amended)

I. Statement of Purpose In furtherance of the public policy of the state as set forth in ORS 449.765, it is hereby declared to be the purpose of the Commission in adopting the following regulations to:

A. Require, in accordance with a specific program and time table for each operating primary aluminum plant the highest and best practicable collection, treatment and control of atmospheric pollutants emitted from primary aluminum plants through the utilization of technically feasible equipment, devices and procedures necessary to attain and maintain desired air quality.

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

C. Encourage and assist the aluminum industry to conduct a research and technological development program designed to reduce emissions, in accordance with a definite program, including specified objectives and time schedules.

D. Establish standards which based upon presently available technology, are reasonably attainable with the intent of revising the standards as needed when new information and better technology are developed.

II. Definitions

A. 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.

B. Ambient Air - The air that surrounds the earth, excluding the general volume of gases contained within any building or structure.

C. 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.

D. Anode Plant - Means all operations directly associated with the preparation of anode carbon except the anode baking operation.

E. Commission - Means Environmental Quality Commission.

F. Cured Forage - Means hay, straw, ensilage that is consumed or is intended to be consumed by livestock.

G. Department - Means Department of Environmental Quality.

H. Emission - Means a release into the outdoor atmosphere of air contaminants.

I. Emission Standard - Means the limitation on the release of a contaminant or multiple contaminants to the ambient air.

J. Fluorides - Means matter containing fluoride ion.

K. Forage - Means grasses, pasture and other vegetation that is consumed or is intended to be consumed by livestock.

L. Particulate Matter - Means a small, discrete mass of solid or liquid matter, but not including uncombined water.

M. 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).

N. 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.

O. Regularly Scheduled Monitoring - Means sampling and analyses in compliance with a program and schedule approved pursuant to Section IV.

P. 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.

III. Emission Standard

A. Visible emissions from all sources shall not exceed twenty (20) per cent opacity (Ringelmann 1).

IV. Revision of Emission Standards

A. A public hearing may be called on or before ninety (90) days after submission of the results of the special studies to evaluate the special studies, current technology and adequacy of these regulations and to make revisions to the regulations, as necessary.

B. The Commission may, after public hearing, establish more restrictive regulations 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 Commission, together with plans and specifications, in accordance with Section VII (C).

V. 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 Commission not later than one hundred and eighty (180) 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 January 1, 1975.

VI. Monitoring

A. Each primary aluminum plant shall submit, within sixty (60) days after an effective date of this regulation, a detailed monitoring program. The proposed program shall be subject to revision and approval by the Commission. 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.

B. Necessary sampling and analysis equipment shall be ordered or otherwise provided for within thirty (30) days after the monitoring program has been approved in writing by the Commission. The equipment shall be placed in effective operation in accordance with the approved program within ninety (90) days after delivery.

VII. Reporting

A. Unless otherwise authorized in writing by the Commission, data shall be reported by each primary aluminum plant within thirty (30) days of the end of each calendar month for each source and station included in the approved monitoring program as follows:

1. Ambient air: twelve-hour concentrations of gaseous gluoride in ambient air expressed in micrograms per cubic meter of air.
2. Forage: Concentrations of fluoride in forage expressed in ppm of fluoride on a dried weight basis.
3. 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 sub-section III (B) 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.
4. Gaseous Emissions: Results of all sampling conducted during the month for gaseous fluorides. All results shall be expressed as hydrogen fluoride in micrograms per cubic meter on a volume basis and pounds per day of hydrogen fluoride.
5. Other emission and ambient air data as specified in the approved monitoring program.
6. Changes in collection efficiency of any portion of the collection or control system that resulted from equipment or process changes.

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

C. Prior to construction, installation or establishment of a primary aluminum plant, a notice of construction shall be submitted to the Commission. Addition to, or enlargement or replacement of, a primary aluminum plant or any major alteration therein shall be construed as construction, installation or establishment.

VIII. Special Studies

A. Special studies, covering the areas in subparagraphs 1, 2, and 3 of this subsection shall be conducted at each primary aluminum plant.

1. 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 non-fluoride particulate.
2. 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.
3. Emissions of sulfur dioxide, hydrocarbons, carbon monoxide, chlorine and chlorides, oxides of nitrogen, ozone, water vapor, and fluorides from all sources.

B. Each primary aluminum plant shall submit a program for conducting the aforesaid special studies to the Commission for approval within sixty (60) days after the effective date of this regulation.

C. The results of the special studies shall be submitted to the Commission not later than eighteen (18) months after approval of the special studies program.

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

PROPOSED REGULATION

for

PRIMARY ALUMINUM PLANTS

(As Amended)

I. Statement of Purpose In furtherance of the public policy of the state as set forth in ORS 449.765, it is hereby declared to be the purpose of the Commission in adopting the following regulations to:

A. Require, in accordance with a specific program and time table for each operating primary aluminum plant the highest and best practicable collection, treatment and control of atmospheric pollutants emitted from primary aluminum plants through the utilization of technically feasible equipment, devices and procedures necessary to attain and maintain desired air quality.

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

C. Encourage and assist the aluminum industry to conduct a research and technological development program designed to reduce emissions, in accordance with a definite program, including specified objectives and time schedules.

D. Establish standards which based upon presently available technology, are reasonably attainable with the intent of revising the standards as needed when new information and better technology are developed.

II. Definitions

A. 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.

B. Ambient Air - The air that surrounds the earth, excluding the general volume of gases contained within any building or structure.

C. 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.

D. Anode Plant - Means all operations directly associated with the preparation of anode carbon except the anode baking operation.

E. Commission - Means Environmental Quality Commission.

F. Cured Forage - Means hay, straw, ensilage that is consumed or is intended to be consumed by livestock.

G. Department - Means Department of Environmental Quality.

H. Emission - Means a release into the outdoor atmosphere of air contaminants.

I. Emission Standard - Means the limitation on the release of a contaminant or multiple contaminants to the ambient air.

J. Fluorides - Means matter containing fluoride ion.

K. Forage - Means grasses, pasture and other vegetation that is consumed or is intended to be consumed by livestock.

L. Particulate Matter - Means a small, discrete mass of solid or liquid matter, but not including uncombined water.

M. 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).

N. 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.

O. Regularly Scheduled Monitoring - Means sampling and analyses in compliance with a program and schedule approved pursuant to Section IV.

P. 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.

III. Emission Standard

A. Visible emissions from all sources shall not exceed twenty (20) per cent opacity (Ringelmann 1).

B. 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 Commission not later than one hundred and eighty (180) 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 January 1, 1975.

IV. Highest and Best Practicable Treatment and Control Requirement

Notwithstanding the specific emission limits set forth in Section III of these regulations, in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control currently available shall in every case be provided.

V. Monitoring

A. Each primary aluminum plant shall submit, within sixty (60) days after an effective date of this regulation, a detailed monitoring program. The proposed program shall be subject to revision and approval by the Commission. 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.

B. Necessary sampling and analysis equipment shall be ordered or otherwise provided for within thirty (30) days after the monitoring program has been approved in writing by the Commission. The equipment shall be placed in effective operation in accordance with the approved program within ninety (90) days after delivery.

VI. Reporting

A. Unless otherwise authorized in writing by the Commission, data shall be reported by each primary aluminum plant within thirty (30) days

of the end of each calendar month for each source and station included in the approved monitoring program as follows:

1. Ambient air: Twelve-hour concentrations of gaseous fluoride in ambient air expressed in micrograms per cubic meter of air.
2. Forage: Concentrations of fluoride in forage expressed in ppm of fluoride on a dried weight basis.
3. 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.
4. Gaseous emissions: Results of all sampling conducted during the month for gaseous fluorides. All results shall be expressed as hydrogen fluoride in micrograms per cubic meter on a volume basis and pounds per day of hydrogen fluoride.
5. Other emission and ambient air data as specified in the approved monitoring program.
6. Changes in collection efficiency of any portion of the collection or control system that resulted from equipment or process changes.

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

C. Prior to construction, installation or establishment of a primary aluminum plant, a notice of construction shall be submitted to the Commission. Addition to, or enlargement or replacement of, a primary aluminum plant or any major alteration therein shall be construed as construction, installation or establishment.

VII. Special Studies

A. Special studies, covering the areas in subparagraphs 1, 2, and 3 of this subsection shall be conducted at each primary aluminum plant.

1. 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 non-fluoride particulate.

2. 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.
3. Emissions of sulfur dioxide, hydrocarbons, carbon monoxide, chlorine and chlorides, oxides of nitrogen, ozone, water vapor, and fluorides from all sources.

B. Each primary aluminum plant shall submit a program for conducting the aforesaid special studies to the Commission for approval within sixty (60) days after the effective date of this regulation.

C. The results of the special studies shall be submitted to the Commission not later than eighteen (18) months after approval of the special studies program.

VIII. Revision of Emission Standards

A. A public hearing may be called on or before ninety (90) days after submission of the results of the special studies to evaluate the special studies, current technology and adequacy of these regulations and to make revisions to the regulations as necessary.

B. The Commission may, after public hearing, establish more restrictive regulations 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 Commission, together with plans and specifications, in accordance with Section VI (C).

Lorne F. Hudson
4770 N Vanderbilt
Portland, Ore. 97203

Dep't of Environmental Quality
Air Quality Central Division
Portland, Ore.

Sirs:

I favor that the proposed standards of emission for aluminum reduction plants be accepted, if they are tougher than the current ones.

Sincerely
Lorne F. Hudson
Member, Oregon Citizens' for Clean Air

FHS

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 12, 1970 for June 26, 1970 Meeting

SUBJECT: EMISSION STANDARDS FOR INDUSTRIAL PROCESSES

INTRODUCTION

At the Public Hearing held on May 22, 1970, testimony regarding the proposed "process weight" emission standard was received from representatives of Harvey Aluminum Co., Associated Oregon Industries, Wah Chang Albany Corporation and the Mid-Willamette Valley Air Pollution Authority. During the following two weeks, letters were received from Reynolds Aluminum Co., National Metallurgical Corp., Hanna Nickel Smelting Co., Willamette Industries, Inc., Georgia-Pacific Corp., and the Lane Regional Air Pollution Authority. Copies of letters received, not previously sent to you, from Lane Regional Air Pollution Authority and Georgia-Pacific Corporation are attached.

Among the above, only the Mid-Willamette Valley Air Pollution Authority supported the proposed regulation, while Lane Regional Air Pollution Authority requested a 60 day delay in adoption, and all the industrial representatives opposed it on one or more of the following grounds:

1. The proposed application of the process weight table to a process unit or plant site basis is unprecedented. (AOI)

2. The emission limitations that would be established for primary metals plants under the proposed standard would be technically unachievable. (Reynolds, Harvey, Hanna, National Metallurgical)

3. The proposed standard would limit the size of industrial operations and foster proliferation of small, inefficient production units, resulting in less effective air quality control. (AOI, Wah Chang, Willamette Industries, Georgia-Pacific)

The present staff report will deal with these items in the order listed above.

Unprecedented Nature of the Regulation

The initial staff report presented at the Hearing indicated that to our knowledge no other jurisdiction has proposed to apply the process weight table on a plant site or process unit basis. It is also true that the proposed regulation requires a higher degree of treatment and control from the class of sources included in it than other standards.

Applicability to Primary Metals Industries

The initial staff report failed to include the detailed findings of the staff with regard to the primary metals industry and the proposed regulation, although the staff oral testimony did indicate that many aluminum and nickel smelting operations would probably be unable to achieve compliance. Letters have been received from five major primary metals manufacturing firms, suggesting that application of the regulation to their plants was technically infeasible. Estimates of process weights, present emissions, and expected future emissions based on control programs either underway or proposed, are given for the five plants as follows:

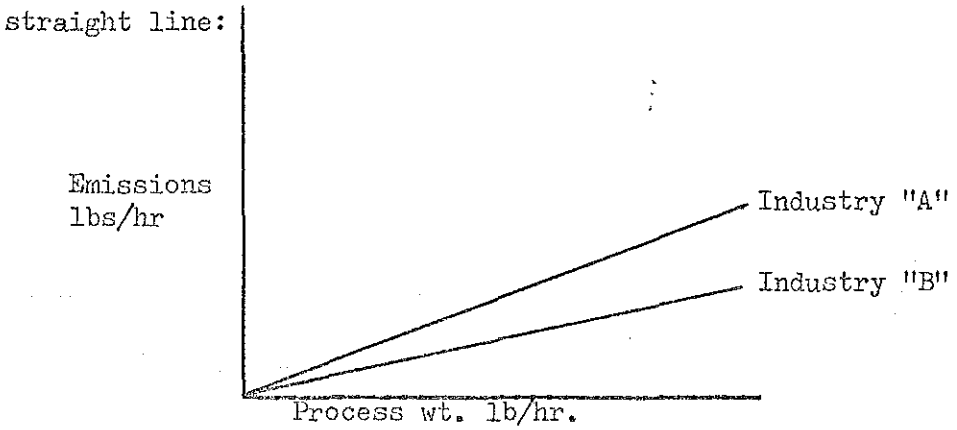
Plant	Estimated Process Weight lb/hr.	Allowable Emission per proposed regs	Estimated Present Emission lb/hr	Estimated Potential Future Emissions	
				Amount	Basis
Harvey Aluminum	62,000	40 lb/hr	250 lb/hr	150#/hr	per proposed 15 lb/T
Reynolds Aluminum	71,000	41	400	165	per proposed 15 lb/T
Hanna Nickel	492,000	60	3660	520	per Hanna proposal
National Metal. (silicon)	10,000	10	800	13	per pilot control test
Wah Chang (exotic metals)	9,000	9.4	30	15	controls being installed

It appears that while National Metallurgical and Wah Chang could approach compliance with the standard, the aluminum and nickel smelting industries would come far short of compliance.

Limitation on Size of Industry

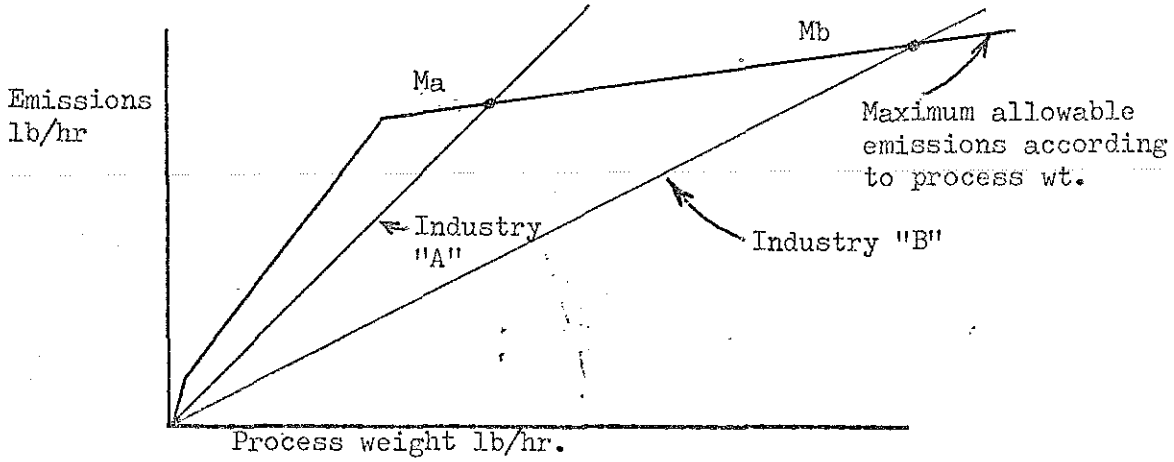
It can be proven theoretically that the process weight tables does in fact establish an upper limit on the size of any given industrial operation having significant emissions subject to the regulation. Each type of industry will have a different size limitation, depending on its emission characteristics and the nature of applicable control technology. The general nature of the problem can be demonstrated graphically.

For most processes there is a more or less direct relationship between the size of the process, or amount of material being processed, and the generation of air contaminant emissions. Therefore, one can theorize that within certain limits, particulate emissions from most industrial processes are proportional to process weight. This implies that a graph of emissions as a function of process weight for any given industry might result in a



It should be noted that Industry "A" and Industry "B" might represent either two different types of processes, or identical processes with different levels of particulate controls, in which case "B" would represent the higher level of control.

If one superimposes on the graph of characteristic industry emissions vs. process weight, a curve corresponding to the allowable emissions on the process weight table, then the intersection of the industry lines with the maximum allowable emission curve represents the largest plant size, for that given industry and level of control, that can be built to comply with the emission standard. These points are marked with symbols Ma and Mb in Figure 2.



Having determined that an upper limit on the size of an industry does exist, the next question to consider is whether such a limit is greater or less than the size of plants encountered in practice. If the limit so established is much greater than largest expected size of plant, then it is of no practical consequence and the process weight emission standard is technically feasible for that class of industry. Another important point, but somewhat aside from this part of the discussion, is that it may be desirable to limit emissions of particulate matter at a plant site if air quality is to be maintained at a high level.

Determination of industry characteristic emission lines for a broad variety of industries is difficult to accomplish with much certainty because of rather inadequate data. The best that can be done is to determine them on the basis of published emission factors or using specific examples. From Oregon industry, where available, Table I presents what data is available for a number of industries found in Oregon. These data are plotted in Figure 1, for process weights below 60,000 lb/hr, and in Figure 2 for process weights up to 200,000 lb/hr. Also shown in Figures 1 and 2 are symbols (O) indicating process weights corresponding to the size of an existing Oregon plant of the given industrial type.

Based on an examination of Figures 1 and 2, various industries can be classified according to whether compliance with the proposed process weight emission standard is: (a) not achievable for existing plants; (b) marginally achievable for existing plants but not for larger ones; and (c) achievable for plants significantly larger than many now operating in the state. Table II is a listing of industries in these categories, for those industries discussed thus far and several others for which reasonable estimates are available.

The conclusion that one might draw from Table II is that primary metals, in general, as well as large cement manufacturing plants, are probably either unable to comply with the regulation or would have significant limitations placed on their size. There is, of course, a distinct possibility that other industries will be found which also cannot comply. It should be kept in mind that the amount of data available for the analysis in this report is very limited.

TABLE I

EMISSIONS - PROCESS WEIGHT CHARACTERISTICS FOR SELECTED INDUSTRIAL TYPES

Industry	Level of Control	Estimated Characteristic Emission (lb/1000 lb process)	Basis of Estimate
Metallurgical Processes			
Steel-Arc furnace	baghouse	0.7	Emission factor
Iron Pelletizing plant	scrubber	0.42	Local plant estimate
Primary aluminum	wet scrubbers	4-5	Existing local plants
Silicon production	baghouse	1.29	Nat. Met. pilot plant test
Carbide plant	cyclones and scrubbers	1.24	Local plant
	baghouse	.53	Estimate from above
Casting - bronze	baghouse	0.3	Emission factor
Casting-grey iron	venturi scrubber	1.5	Emission factor
	baghouse	1.1	Emission factor
Cement Plant	baghouse and precipitator	0.42	Local plant
	all baghouse 99.5%	0.34	Estimate from above
Particleboard	present	1.7	Local plant
	maximum technology	0.4	Estimates
Composition asphalt roofing	well controlled	0.4	Local plant

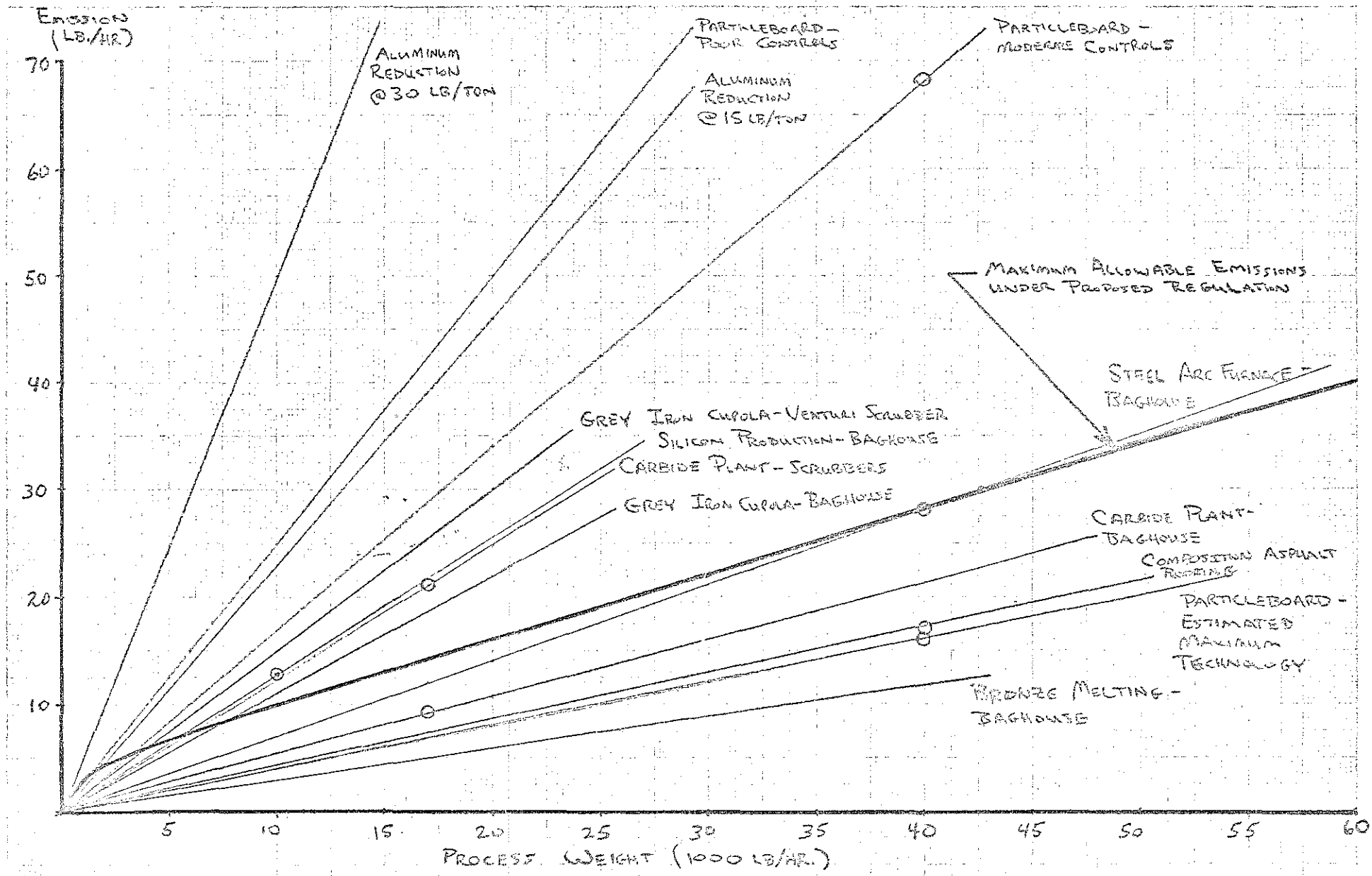


FIGURE 1 : CHARACTERISTIC EMISSIONS FOR SELECTED INDUSTRIES AS A FUNCTION OF PROCESS WEIGHT -- SYMBOL [O] INDICATES PROCESS WEIGHT OF EXISTING OREGON PLANT

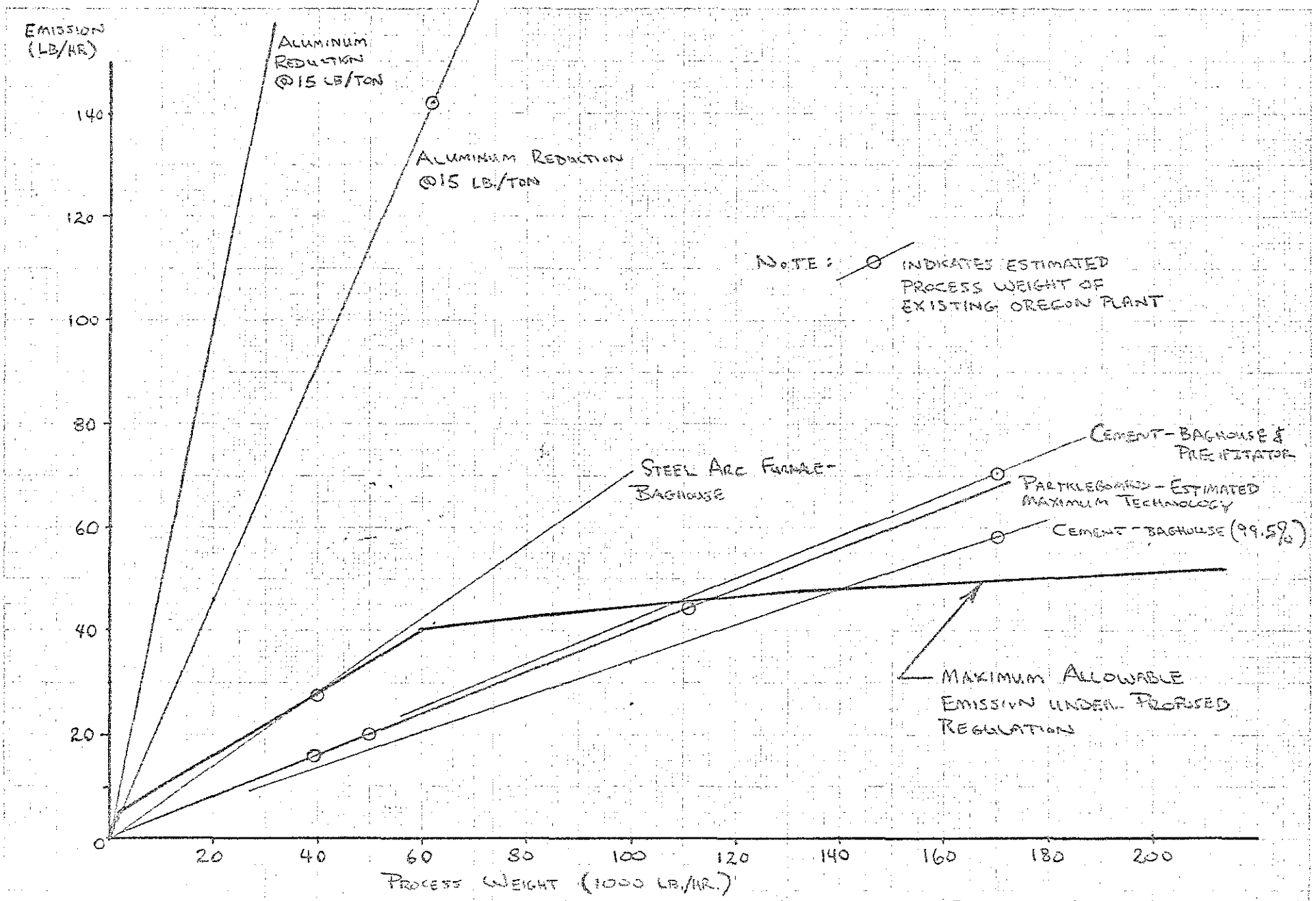


FIGURE 2: CHARACTERISTIC EMISSIONS FOR SELECTED INDUSTRIES AS A FUNCTION OF PROCESS WEIGHT

TABLE II

CLASSIFICATION OF INDUSTRIES ACCORDING TO ABILITY TO COMPLY WITH PROPOSED PROCESS WEIGHT STANDARD *

A. Compliance Probably Not Achievable for Existing Plants

Source	No. of Plants: Regional Jurisdiction	No. of Plants: State Jurisdiction
Aluminum Reduction	0	2
Nickel smelting	0	1
Silicon production	0	1
Wet-process cement (larger than 140,000 lb/hr process wt.)	1	0

B. Compliance Marginally Achievable for Existing Plants But Not For Larger Plants

	No. of Plants: Regional Jurisdiction	No. of Plants: State Jurisdiction
Steel production (arc furnace)	2	0
Particleboard (larger than 100,000 lb/hr process wt.)	1	0
Exotic metals - primary production	1	0

C. Compliance Achievable for Plants Significantly Larger Than Many In Existence

Particleboard (less than 100,000 lb/hr process weight)

Plywood

Carbide

Composition Asphalt Roofing

Brass and Bronze Melting

*Notes: This analysis is based on a limited number of plants and industries. The status of industries not specifically listed in categories A, B, or C has not been determined.

(Fold Line)

DEPARTMENT OF ENVIRONMENTAL QUALITY
PHOTOCOPY REQUEST

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From: _____ Rm. No.: _____

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Letterhead: ☐ DEQ ☐ EQC

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☐ 8½ x 11 ☐ 8½ x 14

Other _____

DEQ-26-12/76

Conclusions and Recommendations

It has been shown that industry's major objections to the proposed regulation are based on fact; i.e. the regulation is unprecedented, strict compliance is not achievable by certain primary metals industries, and it does or could place a maximum size limitation on industry. The size limitation, however, appears to be significant for relatively few classes of industry, including those primary metals operations for which compliance may be impossible.

Furthermore, the Commission may wish to consider whether a limitation on the ultimate size of air contaminating industrial operations may not in some cases be a desirable result of the regulation. Spreading sources out over a broader area will tend to prevent localized nuisance conditions due to fallout and dampen peak concentrations of suspended particulate near sources. Dispersal of sources with high level of control will have little, if any, effect on airshed particulate loading, however.

There does not appear to be any factual support for the contention of industry that the proposed regulation "will cause the proliferation of smaller plants to achieve compliance with the more tolerant process weights allowed for the smaller processes." (AOI) Such a claim could be made for any emission standard specifying higher levels of control for larger processes, as is the case for the great majority of emission standards for fuel burning, refuse burning, and process equipment throughout the country. The economic benefits inherent in building and operating logically integrated process units should more than make up for the additional cost of pollution control required by larger facilities. In any event, there will be no loss to air quality should industry elect to evade the more stringent limitation by splitting up process units, since each such unit would still be subject to the process unit emission limitation and the "highest and best treatment" provision, generally requiring a higher level of control than would the conventional process equipment formulation of the process weight standard.

In conclusion, the staff recommends adoption of the proposed standard with such amendments or policy directives as the Commission may adopt. The following alternative sources of action are offered for the Commission's consideration. It is the opinion of the staff that Alternative III is the most desirable of the three.

Alternative I: Grant variances to plants for which compliance is not achievable.

This was the original staff recommendation for handling the problem of plants unable to comply. As Table II indicates, variances would probably be needed for 5 plants at this time. Additional variance requests would undoubtedly be submitted for consideration by the Environmental Quality Commission and the Regions.

Alternative II: Exempt specific source classes from proposed regulation and promulgate specific standards for each one.

Presumably the same list of industries included in Alternative III would simply be exempted from the regulation by the following language:

On page 4, Subsection II(4) "Exclusions", ADD new subsection (c):

(c) Subsections (1), (2), and (3) do not apply to the following classes of industry:

Primary production of aluminum, nickel and silicon

Production of Portland cement

Alternative III: Exempt Specific Source Classes from the Process Unit Emission Limitation and require them to meet the Process Weight Standard applied on a Process Equipment Basis.

Sources to be exempted from the more stringent limitation under this alternative at this time would include those in Category A, Table II, while additional industries with which major problems arise later on could be included by amendment.

This alternative has the advantage of requiring all sources to meet a specific emission standard. In some cases the process equipment standard may provide an acceptable level of control. For other cases, the process equipment limitation would not be adequate and invocation of the "highest and best treatment" clause would be needed to assure that adequate controls are installed and maintained.

Suggested Language:

On page 3, Subsection II(4) "Exclusions", ADD new subsection (c):

(c) Subsections 1(b) and 2 notwithstanding, all new and existing process units in the following classes of industry shall comply with the emission limitations set forth in Subsection 1(a):

Primary production of aluminum, nickel, and silicon

Manufacture of Portland cement

LANE REGIONAL AIR POLLUTION AUTHORITY

ROUTE 1, BOX 739 EUGENE, OREGON 97402

PHONE (503) 689-3221

June 5, 1970

B. A. McPhillips, Chairman
Environmental Quality Commission
1400 S. W. Fifth Avenue
Portland, Oregon 97021

Re: Process Weight Regulations

Dear Sir:

On May 25, 1970 this office received from the Department of Environmental Quality a copy of the proposed process weight regulations brought before the Environmental Quality Commission at their May 22, 1970 meeting for consideration.

Since this Authority did not have an opportunity to review the regulations in time to submit comments at that meeting we wish to respectfully submit the following for your review.

1. We feel the proposed regulation could have been presented on a time schedule more compatable with the implementation of the revised Regional regulations.

2. The Regional authorities have had several meetings with representatives from industry in respect to process weight regulations in general and seriously questions the feasibility of many organizations to meet the regulations as proposed on a SIC plant site basis.

3. The regulations as written will have a tendency to prohibit plant expansion or modification, even to meet existing air pollution regulations, since such modification would necessitate a change from process equipment regulations to SIC process unit regulations. We don't believe it was the intent of the Department of Environmental Quality to discriminate against the major or larger production units, however, the regulation as written would do just that.

4. The Lane Regional Air Pollution Authority strongly recommends that the proposed regulations be tabled until the Department of Environmental Quality and the Regional authorities have an opportunity to meet in workshop sessions to eliminate many problems existing in the proposed regulations. These problems include clarification of certain definitions, re-writing of Section II 2(b) in its entirety to make the regulation understandable without an information sheet, and other revisions to Sections II 3, II 4, and II 5.

The Lane Regional Air Pollution Authority agrees in all respects with the Department of Environmental Quality that regulations along these lines are greatly needed and desired at all possible expediency. However, adopting the proposed set of regulations may provide sufficient misunderstanding between the control agencies, the general public, and industry to negate any positive effects the regulations may provide. An additional 60 days of study and review among all control agencies involved would undoubtedly result in a much finer set of regulations for the State and the Regional Authorities to enforce.

We wish to commend the Environmental Quality Commission for the progressive attitude it has taken in regards to more stringent air pollution regulations, but we sincerely hope additional time and study will be given to the process weight regulations prior to their adoption.

Sincerely,

Verner J. Adkison, Director
Lane Regional Air Pollution Authority

VJA/mw

cc: Edward C. Harms, Jr.
George A. McMath
Herman P. Meierjurgen
Storrs S. Waterman
H. M. Patterson

GEORGIA-PACIFIC CORPORATION
COMMONWEALTH BUILDING • PORTLAND, OREGON 97204

June 3, 1970

Mr. Jack Weathersbee
Deputy Director
State of Oregon
Department of Environmental Quality
State Office Building
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Dear Jack:

Matt Gould has asked me to send you the enclosed graphs comparing Humboldt County, California, emission standards with the proposed DEQ standards that you discussed with him via telephone. I am also enclosing a copy of Arkansas's emission standards.

The Arkansas standards base allowable emission rates on potential emission rates, thereby specifying the efficiency of collection equipment used on a process. This is a much more straightforward method of developing a general emission standard than the process weight or the process unit approach. This type of approach will eliminate the inherent problems that you will encounter using the process unit concept.

If you have any questions, please give me a call.

Very truly yours,

Vincent J. Tretter, Jr.
Environmental Engineer

VJT:cas

Enclosures

cc: Mr. M. Gould, Portland
Mr. H. M. Patterson, DEQ, Portland
Mr. K. H. Spies, DEQ, Portland

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 16, 1970 for June 26, 1970 Meeting

SUBJECT: PROCESS WEIGHT STANDARD

The attached amended regulation is forwarded for your consideration. It is primarily an attempt to make the regulation more understandable than was the initial draft proposed at the public hearing. However, the amended copy does include the substantive changes suggested as Alternative III of the staff memorandum dated June 12, 1970, also included in this mailing.

For your comparison a copy of the originally proposed standard is also attached. It has been marked to indicate those portions for which major changes in language (but not content) have been made in the amended version.

AMENDED June 16, 1970

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

May 4, 1970

EMISSION STANDARDS FOR INDUSTRIAL PROCESSES

I. Definitions:

1. "Process equipment" means any equipment used in a manufacturing or materials handling process.
2. "Process unit" means the aggregate of all process equipment within an economic unit which produces goods or services at a single physical location and is engaged in one, or predominantly one, type of economic activity for which a Standard Industrial Classification code is applicable.
3. "Process weight per hour" means the total hourly rate at which process materials, including solid fuels but excluding liquid and gaseous fuels, are introduced into a process unit or process equipment.
4. "Standard Industrial Classification" means the type of classifying and assigning codes to economic units by type of activity, as enumerated in the "Standard Industrial Classification Manual" published by the Executive Office of the President--Bureau of Budget, 1967, issued by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.
5. "Existing process unit" means any process unit in existence prior to June 1, 1970.
6. "New process unit" means any process unit installed, constructed, or modified after June 1, 1970.
7. "Special control areas" means those areas of the State specifically described in the General Emission Standards for Particulate Matter, Section II(a) through II(d), as adopted on May 22, 1970 by the Environmental Quality Commission Order No. EQC 28, and duly filed with the Office of the Secretary of State.

II. INDUSTRIAL PROCESS EMISSION LIMITATIONS

1. Classification of Emission Limitations

For purposes of this regulation one of the following two classifications of emission limitations shall be deemed applicable to industrial processes:

a) The process weight emission limitation applied on a process equipment basis shall mean that:

No person shall cause, suffer, allow, or permit the emission of particulate matter into the atmosphere from any process equipment in excess of the amount prescribed for the process weight per hour allocated to such process equipment, according to Table I, marked Exhibit A and by reference incorporated specifically herein,

b) The process weight emission limitation applied on a process unit basis shall mean that:

No person shall cause, suffer, allow, or permit the emission of particulate matter into the atmosphere from any process unit in excess of the amount prescribed for the process weight per hour allocated to such process unit, according to Table I, marked Exhibit A and by reference incorporated specifically herein.

2. Sources Required to Comply With the Process Weight Emission Limitation Applied on a Process Unit Basis

Except as specifically provided in Subsections (3) and (5) of this Section, the following sources or class of sources shall comply with the process weight emission limitation applied on a process unit basis:

a) All new process units.

b) Existing process units located within Special Control Areas, provided however that:

1. Such units already complying with the process weight emission limitation applied on a process equipment basis as of June 1, 1970, and which do not subsequently construct, install, or modify process equipment such that air contaminant emissions are significantly increased, or

2. Such units on an established comprehensive program of control accepted by the Department prior to June 1, 1970, and which do not subsequently modify process equipment such that air contaminant emissions are significantly increased, shall have

until January 1, 1975 to achieve compliance.

3. Sources Required to Comply With the Process Weight Emission Limitations Applied on a Process Equipment Basis.

Except as specifically provided in Subsection 5 of this Section, the following sources or class of sources shall comply with the process weight emission limitation applied on a process equipment basis:

a) Existing process units located outside Special Control Areas.

b) New and existing process units engaged in the primary production of aluminum, nickel, silicon, or hydraulic Portland cement.

4. Higher Treatment and Control

a) Generally - The limitations set forth in Subsections 1 and 2 of this section are the minimum emission requirements permitted for all process units and equipment within the State.

b) ORS 449.765 declares it to be the public policy of the State of Oregon to restore and maintain the quality of the air resources of the State in a condition as free from air pollution as is practicable, consistent, within the overall public welfare of the State. To carry out this policy, ORS 449.770 states that the purpose of the air pollution laws of Oregon is not only to control and abate existing air pollution but to prevent new air pollution. As a result of this policy declaration and purpose statement, the Department of Environmental Quality may require the application of the highest and best practicable treatment and control currently available for all new and existing process units.

5. Exclusions

a) This regulation applies to any operation, process, or activity except the burning of fuel for indirect heating and the burning of refuse in which the products of combustion do not come into direct contact with the process materials.

b) Subsections 1, 2, 3 and 4 do not apply to those industries or plants regulated and controlled by other specific regulations. (See Sections 26-005 to 26-030 and 27-005 to 27-045, Chapter 340 OAR.)

6. General Provisions

a) Where a single physical location encompasses two or more distinct and separate economic activities for which different Standard

Industrial Classification codes are applicable, such activities shall be treated as separate process units, provided it is determined that:

1) Such activities are not ordinarily associated with one another at common physical locations; and
2) No single industry description in the Standard Industrial Classification includes such combined activities.

b) The process weight per hour shall be based upon the process materials introduced into the process unit or process equipment in one complete operation or cycle and the time required to complete that operation or cycle, excluding any time during which the process unit or equipment is idle.

c) The process weight per hour referred to in this section shall be based upon the normal maximum operating capacity of the process unit or process equipment; and if such normal maximum capacity should be increased by process or equipment changes, the new normal maximum of capacity shall be used as the process weight in determining the allowable emissions.

TABLE I

Particulate Matter Emissions Standards for Process Units and Process Equipment

Process Lbs/Hr	Emission Lbs/Hr	Process Lbs/Hr	Emission Lbs/Hr	Process Lbs/Hr	Emission Lbs/Hr
50	0.24	2300	4.44	7500	8.39
100	0.46	2400	4.55	8000	8.71
150	0.66	2500	4.64	8500	9.03
200	0.85	2600	4.74	9000	9.36
250	1.03	2700	4.84	9500	9.67
300	1.20	2800	4.92	10000	10.00
350	1.35	2900	5.02	11000	10.63
400	1.50	3000	5.10	12000	11.28
450	1.63	3100	5.18	13000	11.89
500	1.77	3200	5.27	14000	12.50
550	1.89	3300	5.36	15000	13.13
600	2.01	3400	5.44	16000	13.74
650	2.12	3500	5.52	17000	14.36
700	2.24	3600	5.61	18000	14.97
750	2.34	3700	5.69	19000	15.58
800	2.43	3800	5.77	20000	16.19
850	2.53	3900	5.85	30000	22.22
900	2.62	4000	5.93	40000	28.30
950	2.72	4100	6.01	50000	34.30
1000	2.80	4200	6.08	60000	40.00
1100	2.97	4300	6.15	70000	41.30
1200	3.12	4400	6.22	80000	42.50
1300	3.26	4500	6.30	90000	43.60
1400	3.40	4600	6.37	100000	44.60
1500	3.54	4700	6.45	120000	46.30
1600	3.66	4800	6.52	140000	47.80
1700	3.79	4900	6.60	160000	49.00
1800	3.91	5000	6.67	200000	51.20
1900	4.03	5500	7.03	1000000	69.00
2000	4.14	6000	7.37	2000000	77.60
2100	4.24	6500	7.71	6000000	92.70
2200	4.34	7000	8.05		

Interpolation and extrapolation of the data for process unit weight rates in excess of 60,000 lb/hr shall be accomplished by the use of the equation:

$E = 55.0P^{0.11} - 40$, where E = rate of process unit emission in lb/hr and P = process weight in tons/hr.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr. Member
George A. McMath, Member

FROM : H. M. PATTERSON, DIRECTOR, AIR QUALITY CONTROL DIVISION

DATE : June 3, 1970

General Information:

The Public Hearing on May 22, 1970 on proposed Emission Standards for Industrial Processes has resulted in brief comments on the process weight as developed initially by the Los Angeles County Air Pollution Control District (LACAPCD). Some of the comments have been either incomplete or inaccurate (but are not believed to be intentionally presented that way).

The attached article by Louis C. McCabe is believed to be a reasonably accurate and complete summary of the history of the regulation and is provided for you for that reason. The Bay Area Air Pollution Control District later removed the 40 pounds per hour limitation and extended the process weight table and adopted a similar regulation.

Also attached is an article entitled "Administration of a Permit System" by Lunche, Lemke, and Versen which explains the operation of the LACAPCD permit system. While the permit system is not under consideration at this time, the article does help to complete the background information on the LACAPCD program.

The LACAPCD program is generally reported to be one of the most comprehensive and restrictive in the nation. It is not the intent here to discuss the merits of the LACAPCD program, but it is believed one can conclude that the emission limitations as applied by agencies under current technology may not result in highest and best practical treatment. Other general comments were submitted to you in a memorandum dated May 11, 1970, a copy of which is attached.

Other information attached is a contour map of the United States illustrating Forecast high Air Pollution Potential Days for the period, in the West, October 1, 1963 to October 31, 1969, as provided by the USDHEW.

The USDHEW has also recently provided a booklet summarizing 10 years of data on suspended particulates from National Air Sampling Network (NASN) stations. Oregon has participated in the NASN program since its inception. It is not accurate or practical to compare station to station without considerably more information, for example, the Portland NASN station is on top of the State Office Building and can hardly be representative of the City of Portland or the metropolitan area. Attached are pages 10, 11, 62 and 76 from the report "Characteristics of Particulate Patterns, 1957-1966, USDHEW, March 1970" for your information.

The staff is preparing a report on the proposed industrial process emission limitation regulation as requested by Mr. Harms on May 22, 1970.

HMP

Louis C. McCabe

Environmental Development, Inc.
Washington, D.C. 20011

Can one state's code solve

There is a growing pressure on state, county, and local air pollution agencies to establish control regulations to comply with criteria set by the Department of Health, Education, and Welfare (HEW) under the Air Quality Act of 1967. As a result, there is a tendency to take regulations adopted by other state, county, or local air pollution agencies verbatim, or even to make them more restrictive, without a critical determination as to whether the regulations being copied meet the local need or are necessary to achieve the air quality goals set by that jurisdiction. This trend is noticeable especially in the regulations promulgated for the control of dust and fumes. In one state and in several local air pollution districts, the Los Angeles County mass-rate tables have been adopted with little or no change, including the provision for a limit of the discharge of particulate matter to 40 pounds per hour from any single source. In some instances, little thought has been given to whether the regulations meet the needs of the area under consideration, or to inequities imposed upon industries operating in the area that may differ both in kind and scale from those for which the Los Angeles code was tailored 22 years ago.

The rapid industrial growth of Los Angeles during and after World War II was accompanied by a record influx of population, together with greatly increased production and fabrication of steel, nonferrous and light metals, industrial mineral processing, and high production and consumption of fuel oil, gasoline, natural gas, and chemicals. This increased production resulted in the release of hundreds of tons of metallurgical and mineral dusts, fumes, and gases into the atmosphere.

In 1947, Los Angeles County intrinsically was no worse than other industrial centers with respect to the generation of atmospheric contamination. With no metallurgical industries comparable to those of, say, Chicago and Pittsburgh, discharges of these contaminants to the atmosphere were less than in many other major cities. Meteorological and topographic characteristics of the area, however, resulted in poor dispersion and transport of the polluted air away from the Los Angeles Basin, and served to increase greatly the intensity and frequency of smog visitation. This combination of intense industrialization, increase in transportation, population influx, and climate and topography made mandatory control of air pollution necessary.

The Los Angeles County Air Pollution Control District (LACAPCD) was guided in its approach to the mass-rate tables by a 1947 article by Hemeon and Hatch. With regard to this particular part of Los Angeles' atmospheric pollution problem, they stated that: "Practical standards must give due weight to the factors of tradition in the community, its socioeconomic status, and history of the industries. For example, one would not expect the same standards for a city of heavy industry as for a New England town accustomed to the operation of light industry. In the absence of established facts from which to derive standards, it is perfectly proper to adopt values which represent simply a reasonable compromise between the ideal cleanliness of country air and the high degree of pollution to which some of our cities are now exposed.

"The development of meaningful standards for the community is only part of the problem. To be practically useful, these standards must be translated into the values which tell industry what to do. A plant which is discharging an irritating substance, for example, derives no benefit from the maximum allowable ground concentration fixed at some point across town. What is needed is a statement of the permissible mass-rate of discharge of the offending material from the plant stack. Thus, in order to apply the community standards, practically basic information is required on the performance characteristics of discharge stacks—concentration mass-rate of emission, etc., and the relation between them and resulting concentrations at ground level. Only by the development of such relations can the basic community requirements be translated into tangible engineering terms for use by industry. It is not sufficient, for example, to specify that a collector of certain fumes must have an efficiency of 90%, when the total rate of emission, heights of stack, and other circumstances would readily permit 75%; in another case, 95% efficiency may be totally inadequate and unfair to the community. If mass-rate of emission is a fundamental characteristic, and the maximum permissible rate is specified, then the plant has basic engineering information to use as a guide in designing its control equipment.

"The need for establishing these relations, so that industry can interpret community standards in terms of what it must do, has been adequately emphasized. Until it is done, confusion and improper interpretation of regulations governing atmospheric pollution control will continue and progress will be halted."

Development of regulations

The regulations discussed here are concerned only with solids which are

another state's problems?

Probably not, unless thoroughly understood and justified by specific goals

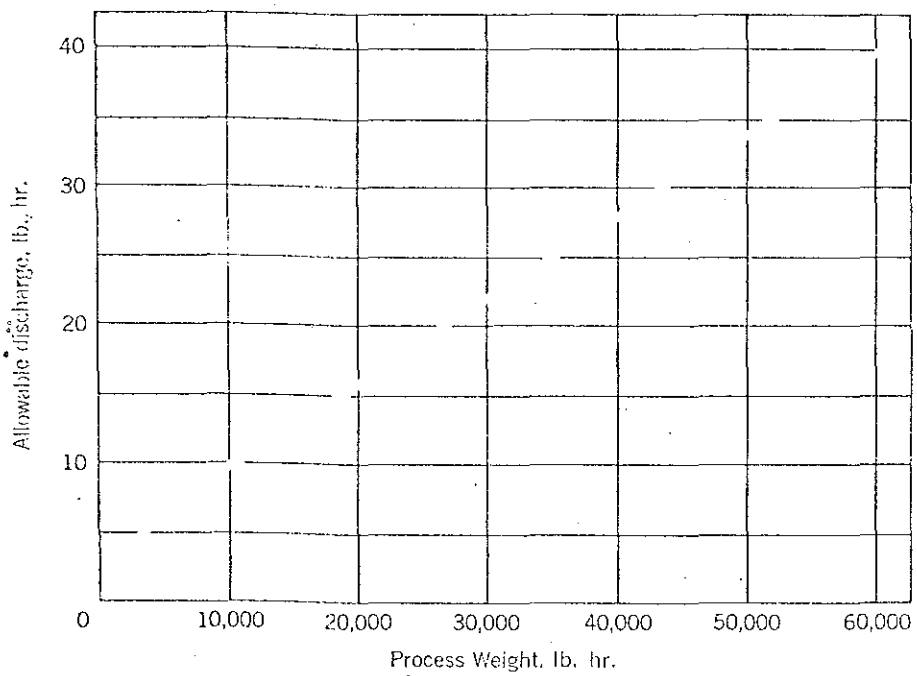
defined in the LACAPCD rules and regulations, which state:

• Dusts are minute solid particles released into the air by natural forces or by such mechanical processes as crushing, grinding, milling, drilling, demolishing, shoveling, conveying, covering, bagging, sweeping, etc.

• Condensed fumes are minute solid particles generated by the condensation of vapors from solid matter after volatilization from the molten state, or may be generated by sublimation, distillation, calcination, or chemical reaction, when these processes create airborne particles.

Following World War II, the Los Angeles County air pollution problem had become so severe that there arose the strongest public demand for relief that had been experienced anywhere up to that time. Eye irritation and decreased visibility were the most common evidence of Los Angeles type smog. Both of these complaints were believed to be caused by photochemical reactions in the atmosphere, and particulates were thought to be associated with these reactions. As a result, the Air Pollution Control Act of the State of California was passed by the state legislature in September 1947. It provides, among other things, that an air pollution control district may be set up by a County Board of Supervisors on their findings, after public hearings, that "the air within such county is so polluted with air contaminants as to be injurious to health, or an obstruction to the free use of property, or offensive to the sense of a considerable number of persons, so as to interfere with the comfortable enjoyment of life or property." Pursuant to this act, the LACAPCD was organized that year.

In 1948, the Los Angeles Chamber of Commerce, in cooperation with



In the Los Angeles mass-rate table which specifies maximum allowable dust and fume discharges, process weight is defined as total weight of raw materials entering a process, including solid fuels but excluding liquid and gaseous fuels and combustion air. In batch operations, total batch weight divided by cycle time decides process weight, in continuous processes, average feed rate is used

LACAPCD, employed Kaiser Engineers to sample emissions from characteristic metallurgical installations and other dust and fume producing units in the county. The engineering consultants provided the data to the air pollution control district and they were used by the district in the development of the mass-rate table for the control of dust and fumes. At that time, air quality criteria for atmospheric particulates and quantitative descriptions of ambient air quality goals were not available to the district. Consequently, LACAPCD, out of necessity, relied primarily on economic and technological feasibility in setting the standards.

Also at that time, there were no single sources in the county that would release more than 34 pounds per hour, if controls in the range of 80-90% efficiency were applied to them. The board envisaged this control range as both needed and realistically attainable. The mass-rate tables as developed for Los Angeles County in Rule 54, were designed to meet the needs of that county. Much of the difficulty arising from the adoption of these tables by other air pollution authorities is due to their failure to recognize the specific needs of their communities, either in terms of the source reductions required to meet air quality goals or the technological or economic feasibility of local industrial compliance. For example, in cement plants, the loss of material being processed through a single unit could exceed the Rule 54 limit of 40 pounds per hour, even

Los Angeles control equipment costs[a]

Source	Size of equipment	Cost of basic equipment	Type of control equipment	Cost of control equipment	% of cost of basic equipment
Airblown asphalt system	500 bbls./batch	$ 10,500	Afterburner	$ 3,000	28.57
Asphalt concrete batching plant	200,000 lbs./hr.	150,000	Scrubber	10,000	6.67
Asphalt tile production	5,000 lbs./hr.	150,000	Baghouse	5,000	3.34
Borax drying and classifying	10,000 lbs./hr.	1,000,000	Baghouse and scrubber	10,000	10.00
Carbon black plant	2,000 gals./day	5,000	Baghouse	5,000	100.00
Ceramic tile production	8,000 lbs./hr.	200,000	Scrubber	10,000	5.00
Chip dryer, aluminum	2,500 lbs./hr.	3,000	Afterburner	3,000	100.00
Chrome plating	4′ × 5′ × 5′	2,000	Scrubber	800	40.00
Concrete batching plant	900,000 lbs./hr.	125,000	Baghouse	10,000	8.00
Crucible furnace, Yellow brass	4 furnaces @ 850 lbs. each/heat	2,500 each	Baghouse	17,000	170.00
Cupola, grey iron	48″ ID 27″ ID	40,000 25,000	Baghouse & quench tank Baghouse & quench tank	67,000 32,000	167.50 128.00
Debonder	500 brake shoes/hr.	1,800	Afterburner	300	16.67
Electric arc furnace, steel	18 tons/heat	75,000	Baghouse	45,000	60.00
Electric induction furnace, brass	2,000 lbs./hr.	75,000	Baghouse	2,700	3.60
Enamel frit drying	1,500 lbs./hr.	25,000	Baghouse	3,000	12.04
Filterboard production	32,000 lbs./hr.	10,000	Electric precipitator	15,000	150.00
Flue-fed incinerator	Most sizes	4,000–7,000	Afterburner	2,500	62.50–35.7
Grit blasting machine	6 cu. ft.	9,300	Baghouse	1,700	16.28
Insulation production, including cupola, blow chamber, & curing oven	5,000 lbs./hr.	13,000	Baghouse, scrubber, & afterburner	30,000	230.76
Open hearth furnace, steel	60 tons/heat	200,000	Electric precipitator	150,000	75.00
Phosphate fertilizer production	2,000 lbs./hr.	10,000	Baghouse	5,000	50.00
Phthalic anhydride manufacturing plant	25 million lbs./yr.	1,200,000	Afterburner & baghouse	195,000	16.25
Pneumatic conveyors (minerals)	200-5,000 lbs./hr.	2,000	Cyclone & baghouse	2,000	100.00
Pot furnace, type metal	16,000 lbs.	9,000	Afterburner	3,000	33.34
Rock crushing & sizing	300,000 lbs./hr.	75,000	Scrubber	2,000	2.67
Sandblast room	8′ × 12′ × 8′	1,600	Baghouse	3,000	187.50
Sweat furnace, aluminum	3,000 lbs./hr.	3,500	Afterburner & baghouse	3,500	100.00
Wallboard production	60,000 lbs./hr.	1,500,000	Baghouse	100,000	6.67

[a] Costs at times of installation between 1948-1962

though the collection efficiency is 99%. Los Angeles County has no cement plants; a community in which such plants are located might find a 40 pound limit unenforceable.

In the development of the mass-rate table of Rule 54, allowable stack losses were calculated by applying collection efficiencies achievable with state of the art hardware to the uncontrolled emission rates characteristic of the industries in Los Angeles at the time the rule was developed. The district recognized that large industrial units constituted a greater point source, and generally had the economic and technological capability to provide a more effective collection device than smaller units. These considerations are reflected in the mass-rate table which, when applied to the industries for which it was developed, required average collection efficiencies ranging from approximately 80% for the smaller units to about 90% for the larger plants.

In discussions among the LACAPCD staff prior to the submission of Rule 54 to the Air Pollution Control Board for adoption, the question of limiting the particulates to 40 pounds per hour was raised. The staff responsible for drafting the mass-rate tables pointed out that, should need arise, the cutoff level could be changed by a simple recommendation to the board. This appeared to be a reasonable arrangement at the time. However, a question of interpretation arose when a four unit open hearth steel mill installed its first electrostatic precipitator.

Operation of a pilot plant, which was installed prior to the approval of the construction permit, showed that a single open hearth could operate

within the 40 pound per hour maximum discharge permitted under Rule 54, but, at some times during operations, the combined discharges from two or more open hearths would exceed the limit of effluent permitted from a single source. The cost of the installation would have been increased greatly if a separate precipitator were required for each open hearth unit.

To overcome this difficulty, the final permit recognized that the plant presented four sources of effluent release, rather than a single point source represented by the precipitator which was handling the discharges from a much greater process weight than the 60,000 pound per hour cutoff of Rule 54. This interpretation, permitting multiple sources to keep their identity when treated with a single collecting device, has been followed by the district since the problem first arose.

Control agencies copying Los Angeles Rule 54 can do a disservice to their own communities if they are not cognizant of the experience which has led the Los Angeles board to make such subsequent interpretations to render that rule more workable.

Typical costs of collection

A table accompanying this article presents the costs of some typical particulate control devices installed in Los Angeles County from 1948-62, selected from a list prepared by the air pollution control district in 1962. In 10 of 29 installations included in the table, the cost of the control equipment is equal to or greater than the basic equipment used to produce the product; in only seven of the installations are the costs of control equipment less than 10% of basic installations.

A 1966 LACAPCD report adds that, in nearly two decades, industry in Los Angeles County spent $127 million for the installation of new pollution control units, and $882 million for basic production equipment. While no descriptive figures are available, the expenditure of sums for maintenance and operation of the control units must be appreciable. The records of the district further show that the cost of control equipment averages 25% of the cost of the basic production equipment. These costs possibly are higher in the Los Angeles area than anywhere else in the world. The willingness of the Los Angeles electorate to bear these costs and the justification for this level of control result from the nature and severity of Los Angeles' air pollution problems. Neither the need for this degree of restriction on industry, nor the ability of industry to meet Los Angeles standards at comparable costs, can be assumed for other jurisdictions with other industrial patterns and different meteorology and topography.

In practice, the Los Angeles mass-rate approach has reduced greatly industrial contributions to that community's particulate loading, but it cannot be used indiscriminately on the air pollution problems faced by communities. Reason dictates, and the federal Air Quality Act of 1967 provides, that abatement programs should be designed to achieve ambient air qualities rationally selected on the basis of established criteria. Each problem must be evaluated and the best possible solution applied to meet the particular difficulties encountered. Standards must be established to meet the specific needs of the community, but they also must be formulated in terms with which the community can live.

Conclusion

Since publication of criteria for particulates by HEW, many inquiries have been received regarding the Los Angeles mass-rate formula and table. However, a review of the development and application of Rule 54, and the rationale followed in setting the permissible discharges under this rule leads me to these conclusions:

- In no instance is the adoption of regulations of one enforcement agency by another justified, unless such regulations are thoroughly understood and it is determined that they are applicable to the problem in question. The imposition of arbitrary emission restrictions upon uncategorized sources is not consistent with effective application of the criteria to air quality standard to emission regulation approach to air pollution problems.
- If particulate emission abatement is to be achieved by applying mass-rate source regulations, the proposed restrictions must be justified by, and adequate for, air quality goals selected by the community.
- If mass-rate restrictions are to be applied to individual sources or classes of sources, the assignment of allowable discharges must be based upon a firm knowledge of the nature and quantity of the emissions generated, and the economic and technological factors associated with their collection.

In addition, in many instances, the mass-rate regulation approach is too elaborate for a small organization which is not financed adequately. Checking the performance of a mass-rate regulated installation is expensive and time consuming, and, if trained personnel are not available, this type of regulation is unenforceable. Such alternative approaches to particulate control as the permit-to-operate system may be more effective and easier to administer. Each community should tailor its approach to its own needs and capabilities.

ADDITIONAL READING

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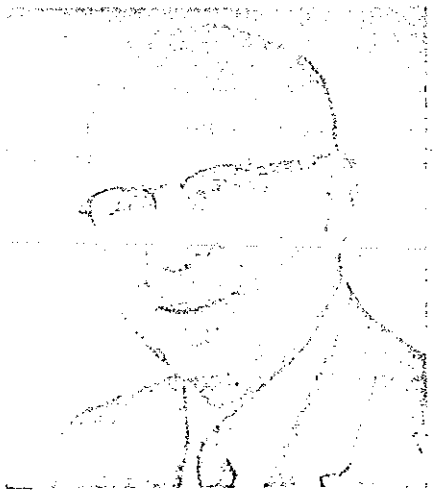


Louis C. McCabe *is president of Environmental Development, Inc., a position he has held since 1968. Previously, he was chairman of the board, Hazelton Laboratories, Inc. (1963-68), and president and director, Resources Research, Inc. (1955-68). He received his B.S., M.S., and Ph.D. from the University of Illinois. A contributor to numerous scientific publications and the* Encyclopedia Brittanica. *McCabe is a fellow of* AAAS *and Geological Society of America, and a member of* ACS *and the Air Pollution Control Association.*

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION STAFF

DATE : May 11, 1970 for May 22, 1970 Meeting

SUBJECT: PROPOSED EMISSION STANDARDS FOR INDUSTRIAL PROCESSES, FOR PUBLIC HEARING ON MAY 22, 1970

The attached proposed regulation represents another part of the updated particulate emission standards that the Staff deems necessary to achieve needed reductions in particulate emissions throughout the State. In concert with the visible emissions, fuel burning, and refuse burning emission standards considered at a Public Hearing on April 23, 1970, the Emission Standards for Industrial Processes will provide objective mass emission standards for the sources of 85% to 95% of non-seasonal particulate emissions in the State.

With adoption of these regulations, the only remaining major source left uncovered by specific Department of Environmental Quality regulations will be open burning of solid waste at refuse disposal sites. Staff of the Air Quality Control Division and the Solid Waste Program are preparing a revised open burning regulation for public hearing in the near future to replace the current limited standard.

The emission standards under consideration at the present time apply to all industrial particulate emission sources other than fuel and refuse burning equipment, and other than kraft pulp and hot mix asphalt plants now covered by specific regulations. Available emission inventory data for the Willamette Valley indicate that the proposed regulation will cover the source of approximately 39% of the annual particulate emissions, and about 24% of the particulate categorized as "fine" - of a size to contribute to atmospheric suspended particulate. Among the major industries subject to the regulation are plywood, particleboard, primary and secondary metals, and cement manufacture.

The attached Informational Report provides a description of the technical and administrative aspects of the proposed regulation. The regulation is similar in concept and uses the same process weight table as standards adopted or proposed by Regional Authorities, but in many circumstances the proposed Department of Environmental Quality standard becomes more stringent in application. As the Informational Report points out, this comes about as a result of applying the process weight table to an entire plant site (process unit), rather than to individual items of process equipment within the plant site.

In developing and evaluating the proposed regulation, the staff worked extensively with the Mid-Willamette Valley Air Pollution Authority, and has also consulted with the Joint Coordinating Subcommittee of the Regional

Authorities and the Environmental Quality Commission. It was primarily at this latter body's suggestion that the deadline of January 1, 1975 was set for full compliance by sources currently in compliance or proceeding on a schedule of compliance with any less stringent Regional standard.

It is hoped that the use of the term "less stringent" and "more stringent" as used herein is not misleading, for neither application of the process weight table is a permissive standard. The process weight standard applied on a process equipment basis has been used in Los Angeles since 1948, and is used today by a number of state and local agencies. The level of control it requires is substantial.

There are some problems with the conventional process weight standard, however, which the proposed DEQ regulation is intended to remedy. One problem is the ambiguity inherent in determining what constitutes a single item of process equipment, which in some instances logically should comprise more than one piece of hardware. The Informational Report deals briefly with this problem, and it appears that any one given agency could work out a consistent policy for applying the regulation. There is some doubt, however, that the four agencies controlling air pollution in Oregon could all arrive at exactly the same interpretation in every instance, making consistent application of the law impossible.

Another problem with the process weight standard applied on an equipment basis is that it can be met by many sources by application of somewhat less than maximum technology, and therefore frequently falls short of maximizing the reduction of emissions. Improvements in control technology since the 1950's when Los Angeles first began using the standard have made possible considerable improvements in the control of certain source types.

The Staff has examined a number of industries with respect to the proposed standard, and concluded that application of the process weight table on a process unit basis is technically feasible and in most cases has the effect of requiring the application of highest and best treatment, which usually means installation of bag filters or electrostatic precipitators of 99% to 99.5% efficiency. Included in the survey of industries were primary and secondary metals plants, cement, and particleboard plants. For some of the plants currently in compliance with the conventional process weight standard, relatively simple additions to improvements to existing equipment would be required to upgrade the system, while others would presumably have to scrap existing equipment and start from scratch.

One source for which it appears the proposed standard is not technically feasible at the present time is the kraft pulp industry. The 1975 standard for particulate emissions from kraft pulp mills total to 5.5 lb/ton for the aggregate of recovery furnace, lime kiln, and smelt tank. For a 500 ton a day mill this results in an allowable emission of 115 lb/hr. Allowable emissions if computed according to the process weight table applied on a

process unit basis would be about 45 lb/hr. Since early results from the kraft mill sampling program indicate that achievement of the 5.5 lb/ton presents somewhat of a challenge under current technology, decreasing the allowable emissions to somewhat less than half that amount does not appear feasible at this time. For that reason kraft mills, as well as hot mix asphalt plants (which are currently operating under a generally more stringent regulation) are specifically exempted from the proposed standard.

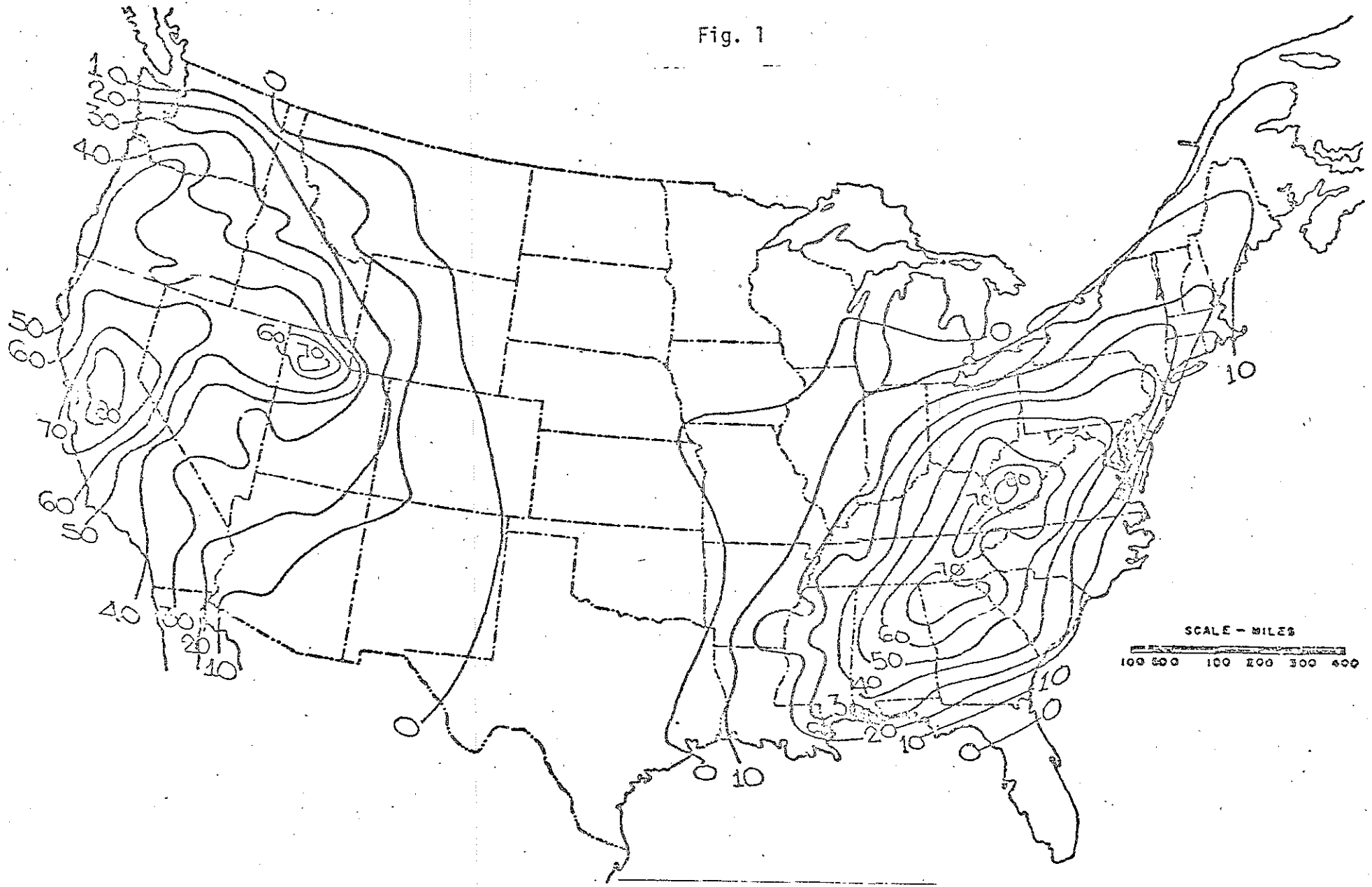
The Staff recognizes that there may be other instances in which full compliance with the proposed standard either is technically not feasible or is economically impractical. No such case has as yet been clearly identified, but the possibility cannot be ruled out. The expectation is that any company that believes the standard to be impractical for its specific case will apply to the Commission for a variance, as provided for in the law. The staff would recommend granting such a variance only if it determines that highest and best practicable treatment is being applied. While recognizing that public acceptance of variances from pollution standards is in short supply these days, the Staff feels strongly that a stringent general standard, with provisions for variances, adopted now, is highly preferable to a less stringent standard adopted now and updated later. Consideration of every possible difficulty and inequity, or the development of specific standards for individual industries, would create an unacceptable delay in providing needed abatement tools and clear guidance to industry regarding the level of emission control that will be required in the future.

FORECAST HIGH R POLLUTION POTENTIAL DAYS

33 EPISODES WEST
1 OCT. 1963-31 OCT 1969

74 EPISODES EAST
1 AUG. 1960-31 OCT 1969

Fig. 1



administration of a permit system

Robert G. Lunche
Director of Engineering
Los Angeles County APCD

Eric E. Lemke
Principal Engineer
Los Angeles County APCD

Julien A. Versen
Air Pollution Engineer
Los Angeles County APCD

In June 1947, the California Legislature enacted into law a bill which authorized counties experiencing air pollution to activate air pollution control districts. The law provided a district with the privilege and necessary powers for administering a two-step permit system requiring first, an authorization to construct prior to installation and secondly, a permit for operation. By October 1947, the Los Angeles County Air Pollution Control District was activated and rules and procedures were adopted to ensure a satisfactory operation of its air pollution control program. These rules established: types of equipment for which permits are required; standards for granting applications; probibitions for emissions, equipment and fuels; and procedures for appealing District decisions or petitioning for variances before the Hearing Board.

Administration of the permit system is in the hands of professionally trained engineers. They are responsible for evaluating applications for permits, making calculations necessary for determining probability of equipment compliance with air pollution laws, and making the decisions on the approval or denial of permits. Consistency of treatment for all applicants is sought and has resulted in standardized application forms, permit information forms, instruction forms, and processing techniques. Rather than require a separate application and permit for each individual equipment item, a concept of "permit units" is employed which involves grouping equipment items operating as a functional unit into one application and one permit.

Administration of a permit system has been beneficial to Los Angeles County. The permit system has proved to be one of the most effective tools in reducing air pollution from stationary pollution sources. It not only prevents operation of equipment which emit air contaminants in excess of that allowed by law, but prevents the installation or construction of such equipment. This latter facet also conserves money for the applicant because he does not have to make expenditures for equipment until a fair certainty exists that a permit to operate can be obtained. Thus, the applicant is able to make needed changes on a drawing rather than more expensive changes to the physical plant. Dependence on unreliable voluntary cooperation is replaced by a more certain system which places the same requirements on all applicants.

Following the initial appearances of photochemical smog in Los Angeles during World War II and its subsequent increase in severity, an aroused public demanded abatement action. The response was a bill drafted by the County Counsel of Los Angeles and submitted to the California Legislature. Despite strong opposition by certain segments of industry, the bill was enacted into law in June 1947. The purpose of the bill was to enable any California county suffering from air pollution to establish an air pollution control district with the responsibility for cleaning the air in that county. The first California air pollution control district was activated by and for Los Angeles County in October 1947.

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State Law

An important feature of the new State Law was the provision for administering a permit system. This provision allows a district to require permits prior to building, altering, replacing, selling, renting, or using, with some exceptions, of all contaminant emitting equipment. The State Law also delegated to a district the right to:

1. Require plans to show that the building will be done, and approved equipment will be used, so as to eliminate or reduce contaminant emissions;
2. Require the furnishing of such information, analyses, plans or specifications as will disclose the nature, extent, quantity or degree of contaminants discharged;
3. Suspend permits where requested information is not furnished;
4. Request the revocation of permits by the Hearing Board;
5. Require fees for the issuance of permits; and
6. Enact rules and perform acts needed to reduce air pollution and properly administer the district and the permit system.

To facilitate a district in putting a permit system on a firm, enforceable basis, the State Law declared it a misdemeanor to fail to furnish requested information for a permit, to submit a false statement in connection with a permit, to build or operate without first obtaining a permit, to build or operate with a suspended or revoked permit, or to build or operate contrary to the provisions of a permit.

District Rules

The Los Angeles County Air Pollution Control District opted for a permit system as one of the cornerstones of its air pollution control program. Rules and procedures appropriate to that option, and in harmony with the State Law, were adopted by the District and have produced a permit system that is workable and effective in reducing air pollution. These rules and procedures have been modified over the years as found necessary through working experience.

Presently, these rules prescribe that an *Authority to Construct* be obtained *prior* to construction, alteration, or replacement of any equipment capable of emitting or controlling air contaminants. Also a *Permit to Operate* must be obtained *prior* to operation or use on a full-time or permanent basis of any equipment capable of emitting or controlling air contaminants. The procedure employed with a Permit to Operate allows the equipment to be placed in operation for "debugging" and demonstration purposes before the decision to grant or deny the Permit to Operate is made. Once granted, an Authority to Construct or Permit to Operate is not transferable from one location to another, from one person to another, or to other equipment.

Not all equipment emitting air contaminants falls within the purview of the permit system. Another rule describes equipment exempted from the permit system by the State Law, notably vehicles, or exempted by the District because the nature or amount of pollution from such equipment does not justify its inclusion under the permit system. However, this equipment must be operated in compliance with emission standards.

To facilitate the aim of consistent treatment, applicants for Authorities to Construct and Permits to Operate must file applications with the necessary information as prescribed by the District. Since plans to construct or operate may be changed or discarded, Authorities to Construct expire after two years and applications are canceled. In the case of an application for a Permit to Operate existing equipment, as occurs during change of ownership, the application is canceled after two years. The applicant may reapply for the Authority to Construct or Permit to Operate when plans to proceed are revived.

In certain installations, sampling and testing of the effluent must be conducted. One of the adopted rules requires that sampling and testing facilities be provided and maintained as specified in the Authority to Construct or Permit to Operate. When equipment is not shown to be capable of complying with the State Law or District Rules, or when the equipment has not been constructed in accordance with the approved Authority to Construct, the standards for granting applications require that the applications be denied. Instead of denying an application, the District may specify conditions with an Authority to Construct or with a Permit to Operate which will bring the equipment into compliance with air pollution laws. These conditions may be revised upon reapplication and demonstration of complying operation under the revised conditions. When an Authority to Construct or Permit to Operate has been denied, a new application for the same equipment cannot be filed until the reasons given for denial have been corrected. Failure to supply requested information can be used as a basis for denial action.

A series of rules, known as "prohibitions," provide emission or performance standards, specify equipment or fuels for various operations, and prohibit certain operations. Included are: (1) rules limiting and defining permissible darkness and opacity for a visible emission plume; (2) rules limiting discharge of particulates, dusts and fumes, sulfur compounds, combustion contaminants and organic material from solvent usage; (3) rules specifying acceptable controls for petroleum products storage tanks, oil-effluent water separators, gasoline loading into tank trucks, tank cars and service station tanks, and rendering cookers; (4) rules specifying sulfur contents of fuels, degree of unsaturation of motor gasoline and photochemical reactivity status of organic solvents; and (5) rules prohibiting public nuisances, open fires, and single chamber incinerators.

Permit System

Operation of the permit system has contributed significantly to the effectiveness of the District's air pollution control program and the advancement of the "state of the art" of the control of dusts, fumes, smoke, gases, and other air contaminants from stationary sources. Before the permit system could make this contribution, however, the framework of State laws and District rules had to be implemented by various administrative policies and procedures. These policies and procedures ranged from interpretations of the laws and instructions for their application, to mechanics of work flow, forms to be used, methods of processing permit applications, wording of permits and equipment to be included on one permit. The need for consistency and uniformity of treatment for all applicants has always been recognized but actual achievement of this goal did not come overnight.

Reinstatement of the fee system in 1957 focused attention

particularly on the practice of issuing permits and separating equipment into individual permit applications. Thus was born the "permit unit" concept, which was reviewed for legality by the County Counsel's office and accepted by industry because it brought consistency to the issuance of permits for similar equipment at different locations. Underng the acceptance of the permit unit concept by the industrial community is the fact that they know that each applicant must submit the same data and information, follow the same procedures, use the same forms, and comply with the same rules and ordinances.

Permit Unit Concept

The basic principle for establishing the boundaries of a permit unit is to include in a permit unit all equipment items which operate together as a functional unit. Amplification of this principle for various situations has been made in a brochure entitled "Administration of the Permit System." This brochure also outlines procedures to be followed in making applications, gives examples of various equipment groupings which comprise permit units, includes an index for equating different equipment groupings to the given examples, and includes instructions and instruction forms for frequently encountered permit units.

In Los Angeles County, "basic" emitting equipment and the "air pollution control" equipment are considered separate permit units under the permit system. Thus, there is no necessity to reprocess the basic equipment each time the control equipment is altered or modified.

Air Pollution Control Equipment

Air pollution control equipment is grouped in permit units by the same principle applied to basic equipment. For example, emissions from a gray iron cupola are passed in series through an afterburner to burn combustibles, a spray chamber to cool the hot gases, and a cloth filter to remove the aerosol emissions. There is no need to issue separate permits for the afterburner, the spray chamber, and the cloth filter when all these units must be operated in unison to control the cupola. Therefore, one permit unit includes the collection and exhaust system as well as the after burner, water cooler, and baghouse.

Independent Equipment

The basis for forming a permit unit of one equipment item is the ability of that equipment item to constitute a separate emission source or to operate independently from other equipment within a plant. Examples of independent equipment which can be separate permit units are: boilers, metal melting furnaces, galvanizing kettles, cookers, and paint spray booths.

Series Equipment

Real problems of maintaining consistency arise with processes employing a complex of equipment, operated in unison, between the point of feed to the process and the final storage. One need only examine the following typical flow sheet of a rendering plant to visualize the various groupings of permits which would be possible and the problems which would be encountered.

Rendering Flow Sheet

Remaining consistent from one company to the next is paramount in importance and examples used in the brochure help in reaching that objective. The fundamental principle which applies in the above case is to group such equipment so as to encompass all the equipment employed from the point of initial charging or feed to the point or points where the material proceeds to a separate process or storage (i.e., classifying to storage, cooking to grinding, etc.).

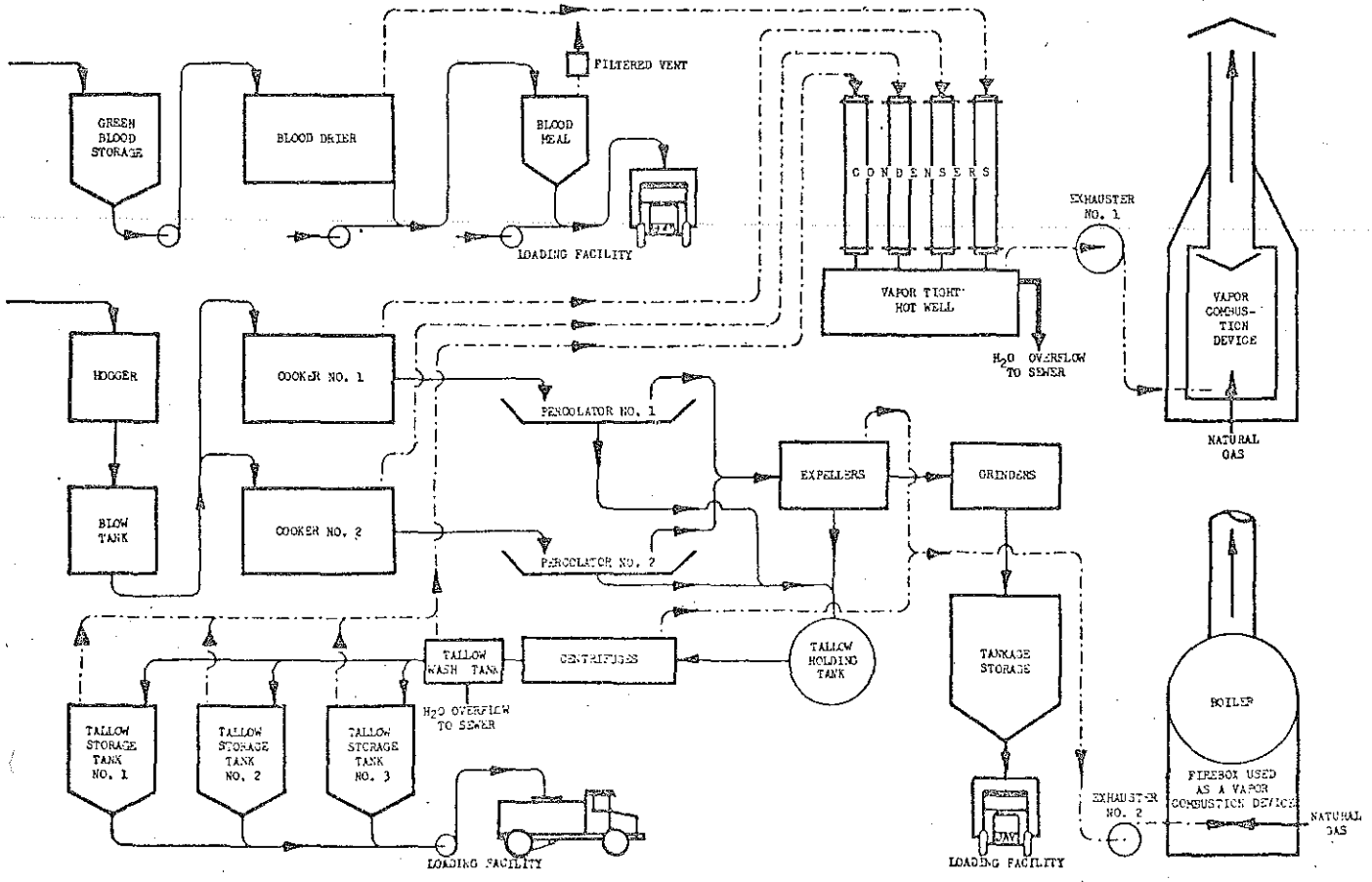

Figure 1. Typical flow sheet of a rendering plant.

Table I. Inventory of air contaminants from stationary sources under the permit system in Los Angeles County, January 1968.

Contaminant	Total Potential, Tons/Day	Currently Being Emitted, Tons/Day	Prevented by Controls, Tons/Day	Per Cent Control Achieved	Major Remaining Stationary Sources
Hydrocarbons and other organic gases	2100	760	1340	63.8	Petroleum industry and organic solvent usage
Aerosols	530	55	475	89.6	Fuel combustion
Nitrogen oxides	455	330	125	27.5	Fuel combustion
Carbon monoxide	2130	80	2050	96.2	Petroleum industry
Sulfur dioxide	1845	275	1570	85.0	Chemical industry, fuel combustion, petroleum industry
Total	7060	1500	5560	78.7	

Obviously, an alternative of issuing one permit per company could have been adopted, that is, a "door-to-door" permit. This, however, would introduce the possibility that considerable numbers of complying equipment in a plant could be denied just because other equipment in the plant were in violation of air pollution laws. It's also equally obvious that two companies would receive different treatment in the event that one employed three process lines while the other employed but one or two. Therefore, the permit unit concept for operating groupings is that of a "common denominator."

Parallel Equipment

Normally, business enterprises add more productive equipment as demand for their product grows. Therefore, whether a company installs several furnaces or spray booths, etc., immediately upon entering business or adds additional units year-by-year, such "parallel" equipment is treated as separate permit units.

Storage Equipment

Grouping storage equipment into permit units is perhaps the most intricate permit unit concept, but, in general, storage equipment is grouped with the source of material it stores. Liquid storage is a major exception where each storage tank is considered a separate permit unit. There are other exceptions which, although not as significant, are laid down in detail in the brochure on "Administration of the Permit System."

Permit Unit Examples

The various principles used in the grouping of equipment into permit units have been adapted to approximately 50 groupings of the type of equipment more frequently encountered and of more significant air pollution potential. These examples illustrating the permit unit concept indicate the number of permit units involved, the general equipment included, and the basis for fee assessments.

Specialized Instruction Forms

The type of information required by the engineers to properly evaluate the air pollution potential or air pollution control potential of equipment is detailed in specialized instruction forms which are given to every firm or person who must obtain permits. The District has prepared these specialized instruction forms to apprise permit applicants as to the type of information that will be demanded of them or any other applicant applying for similar equipment. These instruction forms cover various categories of equipment and each form is detailed as to the information which must be submitted concerning process description, operating schedules, fuels and burners used, and flow diagrams. Each form also describes how equipment catalogs may be substituted for drawings. Copies of application forms and several instruction forms are attached as examples of the types of information required.

Mechanics of Work Flow

A Permit Application Receiving Unit has been especially established to assist persons required to submit permit applications and receives all incoming plans, drawings, etc. Here, applications are screened to determine if they are acceptable, or if they are possibly exempt under our exemption rule. Also, assistance is given to potential applicants in preparing their application forms, describing permit unit boundaries and even in providing permit fee estimates.

Now, with the advent of the electronic data processing system, the data presented with each application must be organized into a standardized pattern. The information on the application form is entered into the EDP system routinely so that many different factors may later be retrieved, such as: air contaminant measurements, costs to the community, costs to various industries, types of remedial equipment employed, and all the combinations of this information which will serve as tools to provide intelligent direction of the future air pollution control effort.

Each application is assigned a number chronologically upon receipt. This number is entered on a 3″ x 5″ card with the applicant's name, address, permit unit (equipment) description, processing status, processing engineer, dates, etc. These 3″ x 5″ cards are filed alphabetically by company name and can be used for quick answers to simple inquiries about the application or its status. Complete information, of course, is contained within each application due to the policy of thorough documentation.

Personnel Requirements and Duties

The preceding policies are indeed important for administering a permit system that is effective for reducing air pollution but capable, dedicated personnel are equally important. The District has found it essential to employ professionally trained, graduate chemical and mechanical engineers who can apply the rules and procedures along with good engineering principles. Thus, since each application for an Authority to Construct and Permit to Operate is reveiwed by an engineer, there can be confidence in the evaluation as to whether the equipment involved will or does comply with all applicable air pollution laws.

The evaluation is accomplished by a review of all the plans and specifications for the equipment, and the process chemistry, process flow, and operation details. The engineer calculates or estimates the types and quantities of contaminants generated, emitted, and collected by control devices. The contaminant collection system is checked to insure that it is designed and sized properly to collect and transfer the contaminants to a control device. A calculation of the control device efficiency also is a part of the evaluation. Physical inspection of equipment operation and sampling and analysis of emissions play an important part in the engineer's evaluation.

Based upon his evaluation, an engineer will recommend either approval or denial of the Authority to Construct or Permit to Operate. If the engineer's recommendation passes review of his supervisor without changes, the applicant receives either the Permit to Operate or a letter of denial. In most cases the letter is given after a conference with the applicant, at which the District's action is discussed and explained.

To expedite the processing of applications for Authorities to Construct and Permits to Operate, the Engineering Division has seven application processing units (each specializing in a different variety of equipment), two source testing units, an engineering projects unit, and an application receiving unit for assisting applicants in the filing of applications. Los Angeles County, of course, has a large industrial base so the number of technical persons required to staff the program is necessarily larger than would be the case in smaller communities. Counterparts to our organization in smaller industrial base communities could certainly be scaled down and consolidated to meet the needs of their problem. Consistency in processing applications for specific equipment is maintained by the specialization of the processing units. Exchanges of personnel between processing units widens consistency in processing applications for all equipment. Each unit consists of a senior engineer, intermediate engineer and 4 to 6 air pollution engineers so that the exchange of 1 or 2 men at a time is not harmful. The exchange program also creates a ready reserve of flexible, versatile engineers for each unit.

Advantages of Permit System

The permit system as administered under the rules of the Los Angeles County Air Pollution Control District is an example of preventive control of air pollution. As such it has a number of important advantages not only to the citizens of Los Angeles County but also to industry as well.

If the individual proposes to conduct activities likely to create air pollution, he must first obtain a permit, which is granted only after it is established that all required safeguards are present. *After a permit is issued, it remains in effect only as long as its conditions are observed.*

The citizens of Los Angeles County benefit because a permit to operate is issued only when the emissions from the equipment involved have been controlled to the standards established by law. Further, an *Authority to Construct* must be obtained *prior* to construction, alteration, or replacement of any equipment capable of emitting or controlling air contaminants. This safeguard prevents the installation of equipment which will not comply with air pollution laws and avoids the need for long, drawn-out legal procedures to bring existing, violating equipment into compliance.

The permit system enables the District to fulfill its obligations on the basis of information received from processing applications, to inventory the amount of pollution in the air, the sources of air pollution, the reduction that various programs have achieved, and the effect that new programs will have.

The permit system, coupled with a fee system, quite properly shifts a portion of the cost of the air pollution control program onto the operators of the equipment emitting the air contaminants, rather than making the general county taxpayer bear the entire burden.

Advantages to Industry

Requiring approval by the Air Pollution Control District *prior to construction* has saved many companies the expense of installing and subsequently replacing inadequate control equipment. The District engineers are experts in the field of air pollution and their experience has qualified them to recognize errors or deficiencies in the design of control equipment. By requiring a pre-construction application for a permit, our engineers can make recommendations which enable the applicant to complete needed changes in the planning and blueprint stages rather than to make higher-priced physical changes at a later date. District experience has shown that poorly designed or improperly operated air pollution control equipment not only does not achieve the degree of control required, but, may actually increase air pollution problems. The permit system has proved to be the most effective means to avoid such costly mistakes.

Operating under the permit system, industry has complete freedom of choice in the selection of basic equipment. The selection of control equipment, however, is limited to such equipment as has a reasonable chance of successfully eliminating, or reducing to acceptable levels, the air contaminants it is intended to control.

Some critics of the permit system claim that it stifles initiative and the development of new processes. Nothing is further from the truth. In staying at least one pace ahead of the problem, the permit system of the District has produced a great many air pollution control "firsts" [1] during the past twenty years. Far from discouraging inventiveness, the records show that necessity to meet the standards guaranteed by the permit system has fostered ingenuity within fundamentally sound engineering principles.

There is a more recent and highly important use of the permit system and its concept of consistent permit unit boundaries. The confirmation of equipment cost through which the industrial community seeks to gain the tax credit or tax relief provided by federal and state legislation for air pollution control installations can be achieved rapidly through the permit records.

The engineer's evaluations and recommendations are made solely upon the engineering merits of an installation. As such they are not involved with any equities, or advantages, or disadvantages to the residents of the District resulting from

requiring compliance or resulting from granting a variance. The State law and the District's rules, however, provide the applicant an opportunity to appeal the District's denial or conditional approval of an authority to construct, permit to operate or permit to sell or rent. A Hearing Board, completely separate from the District, composed of two lawyers and one engineer is provided whose function is to hear evidence from both the petitioner and the District. After considering the evidence and the equities, the Hearing Board renders its decision. It grants some variances to operate in violation of District rules for limited periods of time. This is only done when the petitioner proves to the Hearing Board's satisfaction that he is making diligent efforts to bring the operation into compliance with all District rules. No variance can be granted to continue a nuisance.

Emission Surveys

As mentioned earlier, the permit system provides a ready inventory source of equipment and air contaminants. The latest inventory of all types of air contaminants from stationary sources in Los Angeles County shows that we are preventing 5560 tons per day of air contaminants from entering the atmosphere. This means we have achieved control of slightly over 78 per cent of all emissions from stationary sources *by use of the permit system* (See Table I). By comparison, the control of moving sources in Los Angeles County, *without a permit system*, prevents only 1,680 tons per day of air contaminants from entering the atmosphere. Thus, the program for the control of moving sources achieves less than 12 per cent control of all emissions from such moving sources.

Conclusions

Through the administration of the permit system in Los Angeles County, control measures have been applied to such diverse sources and operations as coffee roasters, petroleum refineries, rock crushers, and hot asphalt plants. From the smelting of metals to the painting of manufactured goods, all stationary industrial operations have been brought within the scope of the permit system of the air pollution control program.

The following statistics, illustrating the considerable experience of the District with the administration of a permit system, lend weight to the conclusion that a permit system is workable, feasible and effective in reducing air pollution. The total number of permits issued by the Air Pollution Control District of Los Angeles County since February 1, 1948 is 103,724.* This includes permits issued for new equipment, altered equipment, change of location, and transfer of ownership. The number of permits issued for new basic equipment units now amounts to 71, 229.* and these basic equipment units are valued at $1,157,261,300.* The number of permits issued for new control equipment units now amounts to 14,794* and these control equipment units are valued at $141,964,900.* During this same period of time 5,815* permits were denied to both basic and control equipment units.

The following features of the administration of the permit system in Los Angeles County are worthy of emphasis:

1. The permit system prevents the installation, alteration, replacement, or operation of equipment which may emit air contaminants in excess of that allowed by law or of equipment which may not eliminate, reduce, or control the issuance of air contaminants to the standards prescribed by law. The permit system accomplishes this by the applica tion of engineering science and does not involve policemen, prosecutors, or courts.
2. The permit system incorporates a list of equipment which is exempt from making application for permit. Experience has shown this equipment to contribute little to air pollution.
3. The permit system, with its pre-construction review of applications by expert air pollution engineers, saves the applicant money by preventing the installation of equipment which cannot be operated if it does not comply with air pollution control laws.
4. The permit system, by means of the Hearing Board, provides an inexpensive legal procedure for appeals and for requests for variances.
5. The permit system, with its provision for fees, shifts some of the burden of an air pollution control district onto those directly responsible for creating the air pollution.
6. The permit system has not stopped the expansion of industry in Los Angeles County.
7. The administration of the permit system for the past twenty years has provided the technical know-how to control most air pollution emissions. In fact, much of the hardware required to control air contaminants can now be bought ready-made off the shelf.

In conclusion, with the permit system, dependence on voluntary efforts by air polluters to reduce their pollution is eliminated. A voluntary control effort is rarely satisfactory in terms of control effectiveness or time required to achieve control. In fact, it has been said that man has only approximately 30 years to establish whether he can remain on this planet or not and voluntary efforts are not likely to meet that schedule.

Experience has shown that public statements by management proclaiming their policy of controlling pollution from their plants and complying with local air pollution laws are not always put into practice by lower echelons of the company. These lower echelons are concerned with showing a good profit and loss record and are willing to sacrifice or postpone air pollution control expenditures for that purpose. More than once these lower echelons have made attempts to disguise the facts about an air pollution problem because of the money situation. Recently, plant personnel, less pure than the advertised product of their large corporation, were found stuffing rags into a condenser to pass a permit inspection. If this can happen at a corporation which maintains its own permanent air pollution staff and actively participates in the Air Pollution Control Association, even at this meeting, the need for a thorough review as provided by a permit system becomes evident.

Reference

1. Lunche, R. G., Lemke, E. E., Weimer, R. L., and Verssen, J. A., "Air Pollution Engineering in Los Angeles County," L.A. Co. Air Pollution Control Dist. (July 1966).

* Through February 29, 1968.

Table 1. CE ...R-CITY URBAN CHARACTERISTICS OF SUSPENDED PARTICLES

Site	1957-1961 Geom. mean, µg/m³	1957-1961 Geom. std. dev., µg/m³	1962-1966 Geom. mean, µg/m³	1962-1966 Geom. std. dev., µg/m³	Long-term trend	Change in geometric standard deviation	Seasonal pattern[a]
Birmingham, Ala.	125.6	1.85	124.5	1.68	No change	Down[b]	Urban
Anchorage, Alaska	83.4	2.27	65.9	2.31	Down[b]	No change	Nonurban
Phoenix, Ariz.	206.5	1.58	165.7	1.73	Down[c]	No change	Urban
Little Rock, Ark.	74.1	1.63	87.0	1.74	Up[b]	Up[c]	None
Los Angeles, Calif.	164.2	1.56	124.5	1.60	Down[c]	No change	Urban
San Diego, Calif.	85.4	1.54	76.3	1.53	Down[b]	No change	Urban
San Francisco, Calif.	65.3	1.69	60.0	1.60	No change	No change	Urban
Denver, Colo.	137.4	1.64	125.1	1.54	No change	No change	Urban
Hartford, Conn.	88.8	1.59	95.6	1.58	No change	No change	Possible urban
New Haven, Conn.	84.8	1.47	91.9	1.52	No change	No change	Unusual
Wilmington, Del.	175.3	1.64	131.1	1.41	Down[c]	Down[c]	Urban
Washington, D. C.	106.8	1.56	87.2	1.45	Down[c]	Down[b]	None
Tampa, Fla.	85.9	1.39	84.1	1.44	No change	No change	None
Atlanta, Ga.	99.4	1.56	93.4	1.49	No change	No change	None
Honolulu, Hawaii	48.8	1.50	38.7	1.37	Down[c]	No change	Urban
Boise, Ida.	104.7	1.53	80.3	1.53	Down[c]	No change	Urban
Chicago, Ill.	179.4	1.39	130.4	1.47	Down[c]	Up[b]	None
East Chicago, Ind.	176.7	1.70	183.7	1.51	No change	Down[b]	None
Indianapolis, Ind.	157.1	1.35	148.8	1.41	No change	No change	None
Des Moines, Iowa	150.2	1.56	116.8	1.58	Down[c]	No change	Unusual
Wichita, Kan.	86.3	1.59	88.8	1.56	No change	No change	None
New Orleans, La.	88.4	1.37	85.2	1.44	No change	Up[b]	None
Portland, Me.	86.3	1.55	70.7	1.57	Down[c]	No change	None
Baltimore, Md.	131.5	1.51	130.3	1.49	No change	No change	Urban
Boston, Mass.	131.3	1.45	125.3	1.46	No change	No change	Urban
Detroit, Mich.	134.1	1.51	135.3	1.63	No change	Up[b]	None
Minneapolis, Minn.	94.4	1.75	74.8	1.50	Down[c]	Down[c]	None
Jackson, Miss.	71.7	1.60	69.1	1.46	No change	Down[b]	None
Kansas City, Mo.	140.7	1.50	129.3	1.48	No change	No change	Possible urban
St. Louis, Mo.	159.7	1.58	131.1	1.44	Down[c]	Down[c]	None
Helena, Mont.	54.7	2.04	48.7	1.73	No change	Down[c]	Unusual
Omaha, Nebr.	106.1	1.62	107.3	1.49	No change	Down[b]	Unusual
Newark, N. J.	97.2	1.63	103.3	1.54	No change	No change	None
Albuquerque, N. M.	183.5	1.71	114.6	1.70	Down[c]	No change	Possible urban
New York City, N. Y.	167.9	1.48	164.9	1.56	No change	No change	None
Charlotte, N. C.	114.4	1.59	101.3	1.62	Down[b]	No change	Urban
Bismarck, N. D.	80.0	1.77	78.7	1.94	No change	Up[b]	Unusual
Cincinnati, Ohio	124.6	1.45	129.2	1.50	No change	No change	Urban
Cleveland, Ohio	154.5	1.51	119.4	1.53	Down[c]	No change	None
Columbus, Ohio	129.0	1.51	108.1	1.48	Down[c]	No change	Unusual
Dayton, Ohio	113.0	1.49	117.2	1.64	No change	Up[b]	None
Youngstown, Ohio	137.7	1.56	136.1	1.56	No change	No change	Unusual
Portland, Ore.	75.5	1.77	85.7	1.93	No change	Up[b]	Unusual
Philadelphia, Pa.	162.3	1.52	155.5	1.41	No change	Down[b]	None
Pittsburgh, Pa.	160.3	1.73	150.6	1.55	No change	Down[c]	None
Providence, R. I.	100.1	1.54	106.9	1.48	No change	No change	None
Columbia, S. C.	106.8	1.41	73.2	1.50	Down[c]	No change	None
Sioux Falls, S. D.	81.3	1.75	64.6	1.64	Down[c]	Down[b]	None
Chattanooga, Tenn.	190.1	1.55	154.4	1.50	Down[c]	No change	None
Nashville, Tenn.	126.6	1.57	116.3	1.57	No change	No change	Possible urban
Dallas, Tex.	91.4	1.71	91.6	1.56	No change	Down[b]	Possible urban
Houston, Tex.	104.8	1.64	94.3	1.47	Down[b]	Down[c]	None
San Antonio, Tex.	105.9	1.71	72.0	1.52	Down[c]	Down[c]	Urban
Salt Lake City, Utah	105.5	1.64	108.3	1.63	No change	No change	Urban
Burlington, Vt.	50.6	1.53	56.8	1.61	Up[b]	No change	Nonurban
Norfolk, Va.	95.9	1.49	96.7	1.52	No change	No change	None
Seattle, Wash.	79.4	1.62	68.2	1.51	Down[c]	Down[b]	None
Charleston, W. Va.	171.2	2.20	169.0	2.07	No change	No change	Urban
Milwaukee, Wis.	139.4	1.49	120.0	1.63	Down[c]	Up[b]	None
Cheyenne, Wyo.	42.0	1.69	33.7	1.72	Down[c]	No change	Nonurban

[a]Definitions for seasonal patterns can be found in the text.
[b]Statistically significant; categories are explained in the text.
[c]Highly significant statistically; categories are explained in the text.

Table 2. NONURBAN CHARACTERISTICS OF SUSPENDED PARTICLF

Site	1957-1961 Geom. mean, µg/m³	1957-1961 Geom. std. dev., µg/m³	1962-1966 Geom. mean, µg/m³	1962-1966 Geom. std. dev., µg/m³	Long-term trend	Change in standard geometric deviation	Seasonal pattern[a]
Grand Canyon Pk., Ariz.	16.7	2.42	18.5	2.11	No change	Down[b]	Nonurban
Montezuma Co., Colo.	11.3	2.15	12.2	2.60	No change	Up[b]	Nonurban
Kent Co., Del.	58.1	1.44	56.3	1.54	No change	No change	Nonurban
Butte Co., Idaho	18.6	2.08	13.6	1.91	Down[c]	No change	Nonurban
Parke Co., Ind.	54.3	1.43	49.3	1.56	No change	Up[b]	None
Delaware Co., Iowa	36.1	2.02	36.3	1.72	No change	Down[c]	None
Acadia Nat'l Pk., Me.	24.1	1.83	22.3	1.83	No change	No change	Possible nonurban
Calvert Co., Md.	37.6	1.63	39.1	1.46	No change	Down[b]	Possible nonurban
Glacier National Pk., Mont.	11.0	2.63	13.7	2.50	Up[b]	No change	Nonurban
Thomas Co., Nebr.	22.3	1.89	19.4	2.04	No change	No change	Nonurban
White Pine Co., Nev.	10.9	2.61	10.0	2.59	No change	No change	Possible nonurban
Coos Co., N. H.	16.3	1.61	19.6	1.77	Up[b]	Up[b]	None
Cape Hatteras, N. C.	31.5	1.41	48.4	1.81	Up[c]	Up[c]	None
Ward Co., N. D.	20.0	2.22	31.8	2.19	Up[c]	No change	Nonurban
Cherokee Co., Okla.	38.0	1.64	45.4	1.63	Up[b]	No change	None
Clarion Co., Pa.	38.6	1.67	37.1	1.69	No change	No change	None
Washington Co., R. I.	30.2	2.07	37.4	1.99	Up[b]	No change	Nonurban
Richland Co., S. C.	31.0	1.61	32.9	1.56	No change	No change	None
Orange Co., Vt.	38.5	1.43	36.7	1.59	No change	Up[b]	Possible nonurban
Shenandoah Nat'l Pk., Va.	29.8	1.53	30.1	1.59	No change	No change	Nonurban

[a]Definitions for seasonal patterns can be found in the text.
[b]Statistically significant; categories are explained in the text.
[c]Highly significant statistically; categories are explained in the text.

At a number of sites, for example, Cape Hatteras, North Carolina, and San Antonio, Texas, both deviations and mean concentrations changed significantly from one 5-year period to the next. This suggests that the nature of sources has changed. A sustained change in the meteorology is improbable; meteorology in an area is considered to be a random factor and has been accounted for by the smoothing technique. The only factors that can be expected reasonably to change are the emissions and the distribution of sources. Such factors can be affected by installation of controls, opening or closing of plants, and changes in sampler location.

Certain combinations of characteristics at a few sites are puzzling. At Delaware County, Iowa, and at Helena, Montana, the mean changed little while the deviation changed significantly. At the present time, no explanation can be offered for these phenomena.

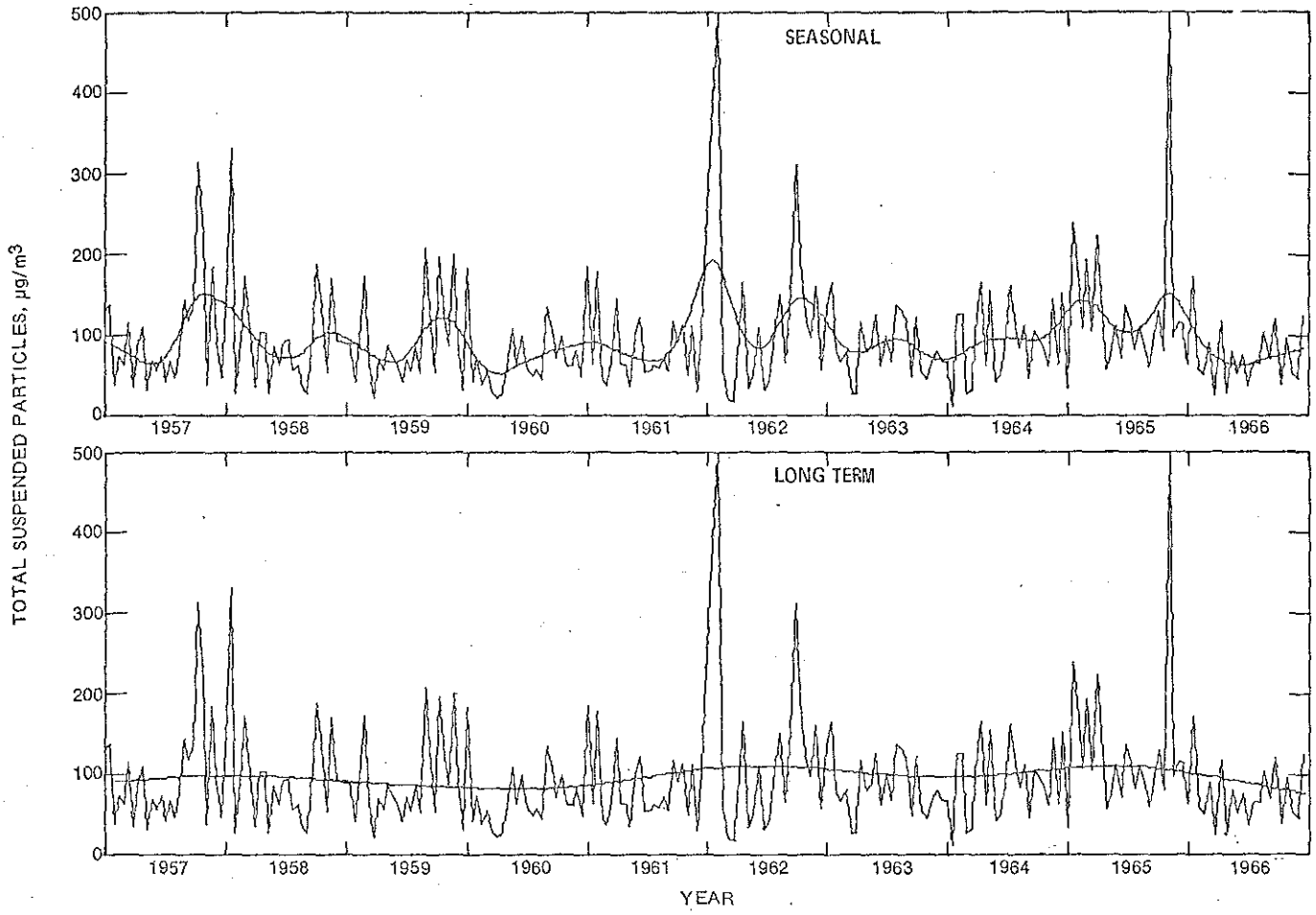

Figure 44. Portland, Oregon.

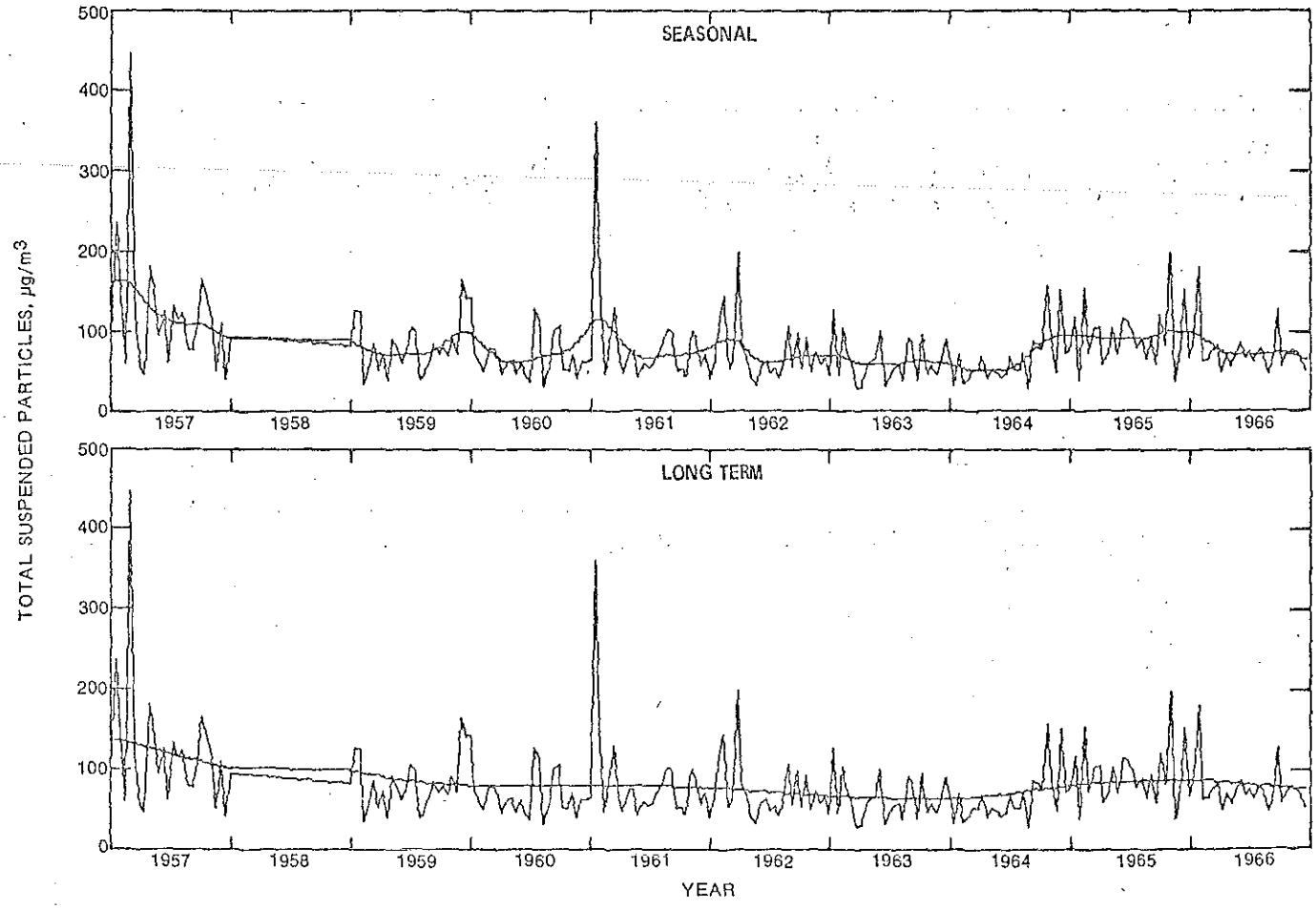

Figure 58. Seattle, Washington.

MEMORANDUM

To: Environmental Quality Commission Members

From: Water Pollution Control Staff

Date: June 26, 1970

Subject: Coast Packing Company, Ontario

Coast Packing Company owns and operates a slaughterhouse and rendering plant at a location approximately 1-1/2 miles due south of the business center of Ontario.

In May of 1966, an anaerobic-aerobic treatment system was installed at the plant site to handle the slaughterhouse processing wastes. During startup of these facilities in the summer of 1966 odor problems did develop in and around the system. This is not too unusual in the startup phase of an anaerobic system, and eventually a good surface blanket of solids developed. This greatly reduced the odors and helped maintain higher water temperatures which are necessary to generate an active anaerobic environment.

Odor problems continued, however, and were attributed to the two-cell aerobic pond. At present the loading to the stabilization type aerobic cells is too great for the capacity provided and the effluent remains in an anaerobic state and is unacceptable for discharge to the Snake River.

Since January 12, 1967, formal contacts have been made with Mr. Troutman and Mr. Plaza regarding retaining an engineer to study the system and provide additional treatment facilities and/or controls to eliminate nuisance odor conditions and reduce the waste loading to an acceptable level for discharge to the Snake River.

On March 28, 1969, Coast Packing Company was before the Oregon State Sanitary Authority for violation of its waste discharge permit. The initial permit required Coast Packing Company to submit a program for secondary treatment by December 1, 1968, to be implemented by May 1, 1969. At the March 28, 1969, meeting Mr. Troutman agreed to retain an engineer and start on a firm program to solve his waste discharges. Chronic & Associates of Boise, Idaho, were retained to design the water quality portion of the project.

On the basis of the above agreement a renewal waste discharge permit was granted and a new schedule was included as a provision of the permit. The new schedule called for plans for secondary treatment by August 1, 1969, to be implemented by October 1, 1969. A preliminary report was received on August 1, 1969, and authorization for final design was given by the Department of Environmental Quality.

Accurate representative design data was difficult to obtain from the sampling scheme set up on the plant site by Chronic & Associates. As a result final plans were not received until January 15, 1970. The plans were approved on January 29, 1970.

As a provision for approval of the final plans the air quality control staff requested that the anaerobic portion of the secondary treatment facility be covered to prevent odors.

On March 10, 1970, Mr. George Ward, Consulting Engineer, who was retained by Coast Packing to handle air pollution control facilities, and staff members attended a meeting in which it was stated that in the staff's opinion if an anaerobic pond was to be part of the final design it would have to be covered. Mr. Ward stated that he would try to coordinate a design change to build a completely aerobic system.

On May 7, 1970, Mr. Ward sent plans and a letter to the Department of Environmental Quality staff; also, Chronic and Associates sent a letter on the same day. In Mr. Ward's letter it was requested that the anaerobic lagoon cover not be included in the initial construction and field observations be made upon completion of construction to determine the need for the anaerobic lagoon cover. Also attached to Mr. Ward's May 7, 1970, letter were appropriate air pollution drawings covering control facilities for the rendering plant.

In Chronic & Associates letter of May 7, 1970, it was stated that Chronic & Associates is prepared to modify their water pollution control facility design to a completely aerobic system.

The air quality control plans were reviewed and provisional approval was granted.

On May 13, 1970, a letter was sent to Coast Packing Company clarifying the staff's position relative to the anaerobic pond. It was clearly stated that if an anaerobic pond is going to be constructed, it will have to be covered and in the absence of any other firm proposal, the staff's letter and plan review of January 29, 1970, still stands and our provisions for approval remain the same relative to the anaerobic pond.

Also in the staff letter of May 13, 1970, the staff viewed the changes proposed by Chronic & Associates as acceptable for construction of a completely aerobic secondary treatment facility.

It was requested that Coast Packing Company proceed as rapidly as possible toward final construction of air and water quality control facilities and August 31, 1970, would be the final completion date for construction of the secondary treatment facilities.

The staff also requested that it be given assurance in writing from Coast Packing by not later than June 15, 1970, that it is proceeding to install the necessary waste control facilities in accordance with a definitely proposed time schedule. To date no such written assurance has been received from the Company.

The staff would recommend that a waste discharge permit for Coast Packing Company be denied in accordance with established administrative procedures.

MEMORANDUM

To: Environmental Quality Commission

From: James R. Sheetz, Pendleton District Engineer

Subject: Coast Packing Company (Ontario Plant)
Denial of Renewal Permit Application

Date: June 26, 1970

On June 8, 1970, I performed a survey of the slaughterhouse and rendering plant to verify the present effects upon the air and water resources from this operation. Slaughterhouse wastes consist of paunch manure and entrails, blood, and kill floor washdown waste water. Paunch manure and entrails were stockpiled near the plant site for final disposal on land. Blood waste was included in washdown wastewater but is proposed to be processed at the rendering plant upon completion of construction of a blood drier. Kill floor washdown wastewater was being discharged to a single-cell anaerobic pond then directly to the Snake River at approximately river mile 374.0. A skimmer to remove grease and fat for processing at the rendering plant was partially installed but not placed into operation. Prior to June 8, 1970, effluent from the anaerobic pond was passed through two additional ponds which provided no effective treatment.

Rendering plant wastes consist of floor washdown water and process cooling and condensate wastewater. All rendering plant wastewater is discharged to the aforementioned anaerobic pond.

Odors were noted from the operation of the existing anaerobic pond without adequate control measures. A crust on the surface of the anaerobic pond was ineffective in controlling odors to an acceptable level.

Odors also were noted from the liberation of gases from the anaerobic pond effluent (and, prior to June 8, 1970, from the two supplementary ponds). An additional source of odors was noted from inadequate control of odorous gases from the rendering plant processes.

Discharge of inadequately treated waste water to the Snake River was causing in the vicinity of the outfall severe and excessive discoloration, foam, and sludge banks; excessive and unnecessary biochemical oxygen demand with associated deleterious effects; and excessive and unnecessary suspended solids with associated deleterious effects. In addition to these observed effects, the present discharge does not conform with established water quality standards on the Snake River.

Continued emission of odorous gases from the rendering plant and odors resulting from slaughterhouse wastewater may result in additional complaints from affected local residents and adversely affect air quality in the vicinity of the plant. In addition to actual adverse effects, the continued emission of rendering plant process gases without adequate control will not conform with existing rendering plant air quality regulations.

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Environmental Quality Commission Members

Date: June 17, 1970
For June 26 Meeting

From: Harold L. Sawyer

Subject: Tax Relief Application No. T-40
Completed June 11, 1970

1. Applicant

Publishers Paper Company
Oregon City Division
419 Main Street
Oregon City, Oregon 97405

The applicant owns and operates a pulp and paper mill at the above address in Clackamas County.

2. Description of Claimed Facility

Spent sulfite liquor concentration and incineration system consisting of evaporators, furnace and chemical recovery equipment, and necessary piping, tanks, electrical and support facilities, installed at a cost of $4,035,703. The facility was completed and placed in operation on December 11, 1969. The applicant requests certification under the 1967 act.

3. Staff Evaluation

The claimed facility is a portion of the overall system which will be necessary at this mill to meet the discharge limitation of the Company's Waste Discharge Permit. The pahses of the overall project are as follows:

1)	Change of pulping from calcium to magnesium base	Completed (Not claimed) Cost in excess of $ 1,000,000
2)	Convert pulp washing from existing blow pit type to counter-current vacuum washing system	Completed 10-21-68 Certified 7-25-69 at cost of $ 1,052,703
3)	Install concentration and incineration system	Operational 12-11-69 Cost $ 4,035,703
4)	Install secondary treatment for remaining wastes	Complete prior to July 1, 1972

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

To: Environmental Quality Commission Members Date:

From: Harold L. Sawyer

Subject: Tax Relief Application No. T-40
Completed June 11, 1970
Page 2

The Sanitary Authority, on May 23, 1968, made a preliminary determination that the claimed facility would be eligible for certification.

The claimed facility provides some economic return to the company in the form of recovered heat and chemicals. The information submitted by the applicant indicates the following economic return for the complete operating unit:

Cost of Facility:			
Washing system		$ 1,052,703	
Incineration		4,035,703	
Total			$ 5,088,406
Annual Value Recovered Materials		$ 969,466	
Annual Operating Costs			
Labor	$ 77,490		
Utilities	32,335		
Maintenance & supplies	150,160		
Property taxes & insurance	173,097		
Interest	215,758		
Depreciation	318,025		
Total		$ 966,865	
Profit Before Taxes			$ 2,601
Return on Original Investment, Before Taxes			0.05%

The staff concludes that this facility was installed for the principal purpose of pollution control.

4. Recommendation

The staff recommends that a Pollution Control Facility Certificate bearing the actual cost figure of $4,035,703 be issued under the 1967 act for the facilities claimed in Application No. T-40.

mb

EXHIBIT D

ERNST & ERNST
COMMONWEALTH BUILDING
PORTLAND, OREGON 97204

Publishers Paper Co.
Oregon City, Oregon

We have examined certain of the accounting records of Publishers Paper Co. as of December 31, 1969, for the purpose of determining the total cost of the Recovery System - Pollution Control Facilities at the Oregon City, Oregon, plant site of the Company, as reflected by Exhibit D - Application for Certification of Pollution Control Facility for Tax Relief Purposes. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying aforementioned Exhibit D presents fairly the aggregate cost ($4,035,703) of the Recovery System - Pollution Control Facilities at the Oregon City, Oregon, plant site of Publishers Paper Co.

Ernst & Ernst

Portland, Oregon
May 26, 1970

EXHIBIT D

Application For Certification of Pollution Control Facility
For Tax Relief Purposes

December 31, 1969

	Item	Amount
1.	Evaporators	$ 625,101
2.	Recovery furnace and boilers	1,534,712
3.	Foundation, tankage, and building	638,053
4.	Auxilliary equipment	884,142
5.	Engineering	353,695
		$4,035,703

Cost amounts represent accumulation of invoices and other accounting data on file.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Herman Meierjurgen, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 11, 1970 for June 26, 1970 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-114.

This application was initially received on January 13, 1970. Additional information was submitted on March 16, 1970. A summary of the contents and results of the staff review are given below.

1. Applicant:

Boise Cascade Corporation
Boise Cascade Mobile Homes - Rex Division
1801 Orchard Avenue
McMinnville, Oregon 97128
Mr. Jack Paul, Manager
Ph: 472-2105

The applicant produces mobile homes.

2. The facility claimed in this application is described to be a gas-fired incinerator with primary and secondary burning chambers. The unit is used to dispose of combustible wastes from the manufacturing process. Installation was completed on January 10, 1969 and operation commenced on January 15, 1969.

3. The total cost of the claimed facility is $27,842.74. An accountant's certification of this figure is attached.

4. Staff Review:

Prior to the installation of the claimed facility the company disposed of its combustible waste in an objectionable wigwam burner. Cessation of this practice was encouraged by Mid-Willamette Valley Air Pollution Authority and the claimed facility resulted.

The staff findings indicate that the principal purpose for installing the facility was to reduce atmospheric contamination.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost of $27,842.74 be issued for the facility claimed in application No. T-114.

Boise Cascade Corporation Exhibit "C"

Boise Cascade Mobile Homes - Rex Division
1801 Orchard Avenue
McMinnville, Oregon
"Incinerator"

1.	Dismantle existing burner Voucher No. 8523 Gerry Williams	$ 75.00
2.	Additional Electrical Service Voucher No. 10047 & 10471 City Water & Light	243.00
3.	Plumbing Service Voucher No. 10465 Sterett Plumbing	228.48
4.	Incinerator Foundation Voucher No. 9075 R. B. Johnson Co. Extra work order	3,332.90 236.64
5.	Erect Incinerator Voucher No. 9459 Pre-Fab Incineration " " 8364 " " 10254 " Extra work order "	10,000.00 5,625.00 4,625.00 2,176.72
6.	Electric Wiring Voucher No. 11042 Farnham Electric Co.	1,300.00
	Total Cost	$27,842.74

BOISE CASCADE GENERAL OFFICE
P. O. Box 200 • Boise, Idaho 83701
Telephone (208) 385-9000
Cable: BOCASCO

January 6, 1970

Oregon State Sanitary Authority
P. O. Box 231
Portland, Oregon 97207

Gentlemen:

The Internal Audit Department of Boise Cascade Corporation has examined the attached Statement of Actual Cost of Pollution Control Facility Project (Incinerator)--1969, McMinnville, Oregon. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the statement referred to above presents fairly the cost of $27,842.74 incurred by Boise Cascade Corporation in the construction of the Pollution Control Facility Project.

Very truly yours,

Rex L Dorman

Rex L. Dorman, Manager
Internal Audit Department

RLD/dr

BOISE CASCADE CORPORATION

STATEMENT OF ACTUAL COST

OF POLLUTION CONTROL FACILITY PROJECT

(INCINERATOR) — 1969

MC MINNVILLE, OREGON

Purchased materials, services, and labor, at cost	$27,842.74

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 15, 1970 for Meeting of June 26, 1970

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-125.

This application was received on April 1, 1970. A summary of the contents and results of the staff review are given below.

1. Applicant:

W. J. Voit Rubber Corporation
Tire Materials Division
2344 N. Columbia Blvd.
Portland, Oregon
Mr. Forrest Schmitt
General Manager
Ph: 285-3613

Mr. M. W. Johnson
Assistant Controller
P. O. Box 958
Santa Ana, California
Phone: 714 546-4220

The company manufactures rubber to be used in retreating tires.

2. The claimed facility is described to be a bag house filter for controlling carbon black dust emissions from the manufacturing process. Installation of the facility was completed and operation commenced in July 1969.

3. The total cost of the facility is $17,334.68. An accountant's certification of this figure is attached.

4. Staff Review:

The claimed facility collects about 160 pounds per day of carbon black for final disposal at the city dump.

The staff findings indicate that the principal purpose for installing the claimed facility was to reduce atmospheric contamination.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost of $17,334.68 be issued for the facility claimed in application No. T-125.

EXHIBIT C

W. J. VOIT RUBBER CORP.

PORTLAND DUST COLLECTOR

MATERIALS AND COST

(All costs included become a part of the permanent facility)

VENDOR	INVOICE REFERENCE	COST	DESCRIPTION
Pangborn	381417-BBB	$ 8,210.70)	1 #63 Dust Collector
Pangborn	CM 3422	109.77)	1 #400 Collector
United Airlines	9603344	61.07	Air Freight Blower from Pangborn
International Forwarding	507713	19.32	Freight from Pangborn
American Sheet Metal	1499	5,976.00	Labor & Material to install
American Sheet Metal	27520	1,990.50	Labor & Material to install
American Sheet Metal	4671	127.32	Labor & Material to install
American Sheet Metal	4672	265.87	Labor & Material to install
American Sheet Metal	3468	564.79	Labor & Material to install
Consolidated Freightways		36.98	Freight from Pangborn to American Sheet Metal
City of Portland		21.00	Electrical Permit
Emory Electric Company		126.90	Electrical
Emory Electric Company		44.00	Electrical
Total Cost		$17,334.68	

ARTHUR YOUNG & COMPANY

POST OFFICE BOX 1962
SANTA ANA, CALIFORNIA 92702

Board of Directors
W. J. Voit Rubber Corp.

We have examined the accompanying statement of dust collector costs of W. J. Voit Rubber Corp. and exhibit C to Application for Certification of Pollution Control Facility at March 25, 1970. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying statement of dust collector costs and exhibit C to Application for Certification of Pollution Control Facility of W. J. Voit Rubber Corp. present fairly the costs described therein, in the amount of $17,334.68 at March 25, 1970, in conformity with generally accepted accounting principles.

Arthur Young & Company

March 25, 1970

EXHIBIT "E"

W. J. VOIT RUBBER CORP.

STATEMENT OF DUST COLLECTOR COSTS

March 25, 1970

Total dust collector costs	$17,334.68

NOTE - Reference is made to Exhibit C to Application for Certification of Pollution Control Facility for breakdown of costs.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 15, 1970 for June 26, 1970 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY NO. T-128

1. Applicant:

K. F. Jacobsen & Co., Inc.
2611 S. E. Fourth Avenue
Portland, Oregon

The applicant owns and operates a hot-mix asphalt plant at 1208 N. River Street, Portland, Oregon.

2. The facility claimed in this application is a dust-control system for the hot-mix asphalt plant. The system includes scavenger ductwork for control of ancillary sources, increased induced-draft fan capacity, increased water supply materials, and, at the heart of the system, a venturi scrubber. The completed system was placed in operation in August, 1969.

3. The total cost of this facility is $29,510. An accountant's certification is attached.

4. Staff Review:

A letter from Columbia-Willamette Air Pollution Authority, dated May 11, 1970, stated that the Authority knew of no reason for denying this application. The sole reason for installing a venturi scrubber, as with any wet scrubber on a hot-mix plant, is for pollution control. Recovery of any product material in the scrubber water would be too expensive to be recoverable.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate", bearing the cost figure of $29,510 be issued for the facility claimed in Tax Application T-128.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS

STANDARD PLAZA
PORTLAND, OREGON 97204

April 1, 1970

K. F. Jacobsen & Co., Inc.,
2611 S. E. Fourth Avenue,
Portland, Oregon.

Dear Sirs:

In connection with our examination of your financial statements for the year ended December 31, 1969, on which we have rendered our opinion, dated March 31, 1970, we examined the accompanying schedule of Venturi Dust Control System costs. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying schedule presents fairly the costs of the Venturi Dust Control System installed by your Company in the year ended December 31, 1969.

Yours truly,

Haskins & Sells

K. F. JACOBSEN & CO., INC.

SCHEDULE OF VENTURI DUST CONTROL SYSTEM COSTS
YEAR ENDED DECEMBER 31, 1969

ENGINEERING		$ 1,000
MACHINERY AND EQUIPMENT:		
150 H.P. General Electric motor (rebuilt)	$ 682	
150 H.P. General Electric motor	2,702	
Fairbanks Morse pump	1,420	
Two steel blower fans	4,650	
Kenepactor - Venturi	5,419	14,873
INSTALLATION MATERIALS AND SUPPLIES:		
Asbestos gasket tape	64	
Cement	198	
Collector ducts	1,401	
Electrical wiring	2,236	
Overhead guy unit installation	150	
Pipe	56	
Rubber hoses and tubing	516	
Steel	576	
Miscellaneous hardware	31	5,228
INSTALLATION LABOR		8,409
TOTAL		$29,510

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman P. Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 11, 1970 for June 26, 1970 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY NO. T-130

1. Applicant:

Crown Zellerbach Corporation
West Linn Division
West Linn, Oregon 97068

The applicant owns and operates a pulp and paper mill at West Linn, Oregon.

2. The facility claimed in this application is a Bailey smoke meter for allowing the operator of the wood-fired power (steam) boiler to know the density of the smoke discharge and make corrections as necessary. The claimed facility was placed in operation on June 26, 1969.

3. The total cost of this facility is $1,665.00. An accountant's certification of this figure is attached.

4. Staff Review:

Bailey smoke meters are used for measuring smoke plume opacities in the stacks. The measurements are used as a guide for furnace operators, to inform them of conditions leading to excessive smoke. There may be some economic return in the sense that a low-opacity plume results from efficient combustion and hence good utilization of fuel, but the value of fuel "saved" would be extremely difficult to estimate, and its value minimal since the fuel in this case is primarily wood waste (hog fuel), with oil and natural gas as optional supplementary fuels. Therefore, it is concluded that this was installed only for pollution abatement.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the cost figure of $1,665 be issued for the facility claimed in Tax Application T-130, with 80%, or more, of the cost allocated to pollution control.

Exhibit C
(Cost Certification)

CROWN ZELLERBACH CORPORATION
WEST LINN DIVISION

We have examined the attached final actual cost summary of the smoke density meter installed by Crown Zellerbach's West Linn Division for the principal purpose of reducing air pollution. Our examination included such tests of construction accounting records and such other auditing procedures as we considered necessary in the circumstances.

Costs shown include direct material purchases, West Linn mill labor and other costs directly attributable to the facility.

In our opinion, the aforementioned final summary fairly presents the actual costs, aggregating $1,665, of the air pollution control facilities set forth therein at March 18, 1970.

Lybrand, Ross Bros. & Montgomery

Portland, Oregon
March 18, 1970

CROWN ZELLERBACH CORPORATION

WEST LINN DIVISION

APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITIES

FOR

TAX RELIEF PURPOSES

EXHIBIT C

List of land, materials, machinery and equipment incorporated into facility:

Engineering Estimate Item No.		Final Actual Cost
ITEM 1		
2201	Smoke Density Meter	1,032
2202	Freight	6
2300	Equipment Installation	331
2400	Wiring	212
	Overhead	84
	TOTAL	1,665

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 11, 1970 for June 26, 1970 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF CONTROL FACILITY NO. T-138

1. Applicant:

Western Kraft Corporation
Albany Mill Division
P. O. Box 339
Albany, Oregon 97321

The applicant owns and operates a kraft pulp and paper mill near Albany, Oregon.

2. The facility in this application consists of the fan, ductwork, and reclaiming sumps which collect and combine exhaust gases from the lime kiln and transport the gases to the main stack for discharge to the atmosphere. Construction was completed and the facility placed in operation in March, 1970.

3. The total cost of this facility is $41,746.77. An accountant's certification of this figure is attached.

4. Staff Review:

This facility is part of a project of combining several emission points at Western Kraft's plant into one stack. The goal was to have one plume which would be less visible and would rise higher than the former smaller plumes.

There is no significant reclamation of material. A sump in the duct is provided to collect condensed water vapor, and that is the only place material is withdrawn from this system.

5. Staff Recommendation:

It is recommended that a "Pollution Control Facility Certificate" bearing the cost figure of $41,746.77 be issued for the facility claimed in tax application T-138.

PEAT, MARWICK, MITCHELL & CO.
CERTIFIED PUBLIC ACCOUNTANTS
1010 STANDARD PLAZA
PORTLAND, OREGON 97204

April 30, 1970

Mr. C. W. Knodell
Western Kraft Corporation
1601 Standard Plaza
Portland, Oregon 97204

Dear Mr. Knodell:

In connection with your application to the Oregon State Sanitary Authority for certification of pollution control facilities for tax relief purposes, we have examined the costs (as detailed in the respective Exhibit C of the application) of the facility summarized below. It is our understanding that the detailed listing in Exhibit C was prepared by the Engineering Department of Western Kraft Corporation, and in making our examination we have relied upon such listing as being a complete itemization of labor and materials devoted to the construction of the facility described. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances which specifically included a detailed inspection of vendors' invoices and other documentation of disbursement and the tracing of costs shown into the plant and equipment accounts of the Company.

The following is a summary of the amount of capital expenditures detailed in Exhibit C to the application:

Machinery and equipment	$ 3,263.55
Materials	2,873.88
Time and materials	35,609.34
	$ 41,746.77

In our opinion, the foregoing summary fairly presents the actual costs incurred by Western Kraft Corporation in the construction of the facility listed above.

Yours very truly,

PEAT, MARWICK, MITCHELL & CO.

F. L. Bradley, Partner

RMA:OL

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 15, 1970 for June 26, 1970 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES, NO. T-139

1. Applicant:

Reynolds Metals Company
Sundial Road
Troutdale, Oregon 97060

Mr. William E. Campbell, Plant Manager
Phone: 665-9171

The company produces primary aluminum metal in pre-bake type reduction cells.

2. The claimed facility is described to be four systems of scrubbers, ducts, piping and spray nozzles which treat the collected reduction pot exhausts from pot room buildings 16 and 18. Installation was completed and operation commenced in January 1969.

3. The total cost of the claimed facility is $151,881.06. An accountant's certification of this figure is attached.

4. Staff Review:

The commission may recall that the Reynolds's expansion proposal, which was considered and approved by the Oregon State Sanitary Authority about a year ago, included a program of replacing the existing wooden court-yard scrubbers with an improved design metallic units. The facility claimed in this certification application represents the first 25% of the scrubber modernization program.

The claimed facility collects gaseous fluorides and particulate fluorides and non-fluorides. Although the fluoride values are reclaimed and about 50% reused, the information presented by the company indicates that the installation of the new scrubbers was not economically feasible.

The staff findings indicate that the principal purpose for installing the facility was to reduce atmospheric emissions.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost of $151,881.06 be issued for the facility claimed in application No. T-139.

ERNST & ERNST
140 BROADWAY
NEW YORK, N.Y. 10005

Reynolds Metals Company
Richmond, Virginia

We have examined certain of the accounting records of Reynolds Metals Company as of December 31, 1969, pertaining to the costs of four court yard scrubbers (Anti-Pollution Control project, work order TD-130) constructed at the Troutdale, Oregon plant. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Certain expenses (engineering, purchasing, accounting, etc.) of the Company have been allocated to the costs of the scrubbers. Such allocation aggregated $13,807.37.

In our opinion, the amount of $151,881.06 at December 31, 1969 presents fairly the aggregate costs of the four court yard scrubbers (Anti-Pollution Control project, work order TD-130) at the Troutdale, Oregon plant of Reynolds Metals Company.

Ernst & Ernst

New York, N. Y.
February 26, 1970

EXHIBIT D

EXHIBIT C

LIST OF INVESTMENT COSTS FOR
FOUR SCRUBBER SYSTEMS

1.	Cost of fabricating four steel scrubbers, ducts, and stacks	$67,415
2.	Mechanical Installation of steel scrubbers, ducts and stacks	$52,129
3.	Foundations for 4 scrubber systems	$10,668
4.	Piping from pumps to nozzles in scrubbing sections	$ 7,860
5.	Engineering and overhead cost for designing, purchasing and inspecting installation	$13,807
	Total	$151,880

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Herman Meierjurgen, Member
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : June 15, 1970 for Meeting of June 26, 1970

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY NO. T-142

1. Applicant:

Ash Grove Cement Company
13939 North Rivergate Boulevard
Portland, Oregon 97203

The applicant owns and operates a lime calciming plant at the above address.

2. The facility in this application is a dynamic wet scrubber in which water is sprayed into a fan rotor, thereby using turbulence to promote efficient wetting of dust particles. Also, the velocities at the outer diameter of the fan wheel provide a greater centrifugal force than is usually found in cyclonic type scrubbers.

Operation of this facility commenced on October 24, 1969.

3. The total cost of this facility is $9,724.37. Copies of invoices totalling this amount are attached.

4. Staff Review:

This type of scrubber is one of the more efficient of the class of scrubbers which use centrifugal force. Spraying water into the fan intake provides better mixing of water and dust particles than in simpler wet cyclones.

The facility in this application replaced a less efficient hydrater-tank vent spray. The dust it removes is evolved from a lime-hydrating operation, in which water is added to calcium oxide. The scrubber water is used to process water for that operation, rather than being discharged.

Because the scrubber is replacing a less efficient unit, rather than being the initial control on a source, the staff concludes that it was installed for pollution control.

5. Staff Recommendation:

It is recommended that a "Pollution Control Facility Certificate" be issued to Ash Grove Cement Co. for the facilities claimed in application T-142, such certificate to bear an actual cost figure of $9,724.37 with 80% or more allocated to pollution control.

248

SWAN S W WOOSTER
ENGINEERING INCORPORATED
CONSULTING ENGINEERS
1618 S. W. FIRST AVENUE
PORTLAND, OREGON 97201
PHONE (503) 228-8672

Ash Grove Cement Co.
13939 N. Rivergate Blvd.
Portland, Oregon

DATE 4 June 1969

JOB NO. 7131

INVOICE NO. 327

Stack Scrubber
Engineering Services for the period ended 31 May 1969

Senior Technician	1 hour @ 12.30	$ 12 30	$ 12 30
Expenses: Postage		4 76	
Prints		7 20	
			11 96
			$ 24 26

RECEIVED
JUN 16 1969

O.K.
R.E.W.

P. O. No. None Terms Net Amt.
F. O. B. Plant Disct.
E. B. to K. C. Fgt. Pd. Fgt.
Chg. Fgt. to
Goods Rcd. 6-16-69 Inv. Comp. PD Net
Chg. Ap.
Chg. Ore Sales Taxes Cr. I. & D.
Chg. PORT. STORES Pay Rgm

SWAN (S W) WOOSTER
ENGINEERING INCORPORATED
CONSULTING ENGINEERS
1618 S. W. FIRST AVENUE
PORTLAND, OREGON 97201
PHONE (503) 228-8672

9796

Ash Grove Cement Co.
13939 N. Rivergate Blvd.
Portland, Oregon

DATE 5 Sept. 1969

JOB NO. 7131.02

INVOICE NO. 411

Engineering Services for the period ended 30 Aug. 1969
Re: Stack Scrubber

Senior Engineer	7 hours @ 14.50	$ 101 50	
Senior Technician	7 hours @ 12.30	86 10	
	14		$ 187 60
Expenses: Travel		6 36	
Prints		6 15	
			12 51
			$ 200 11

RECEIVED SEP 29 1969

P. O. No. None Terms Net Amt.
F. O. B. Paid Disct.
E. B. to K. C. Fgt. Pd. Fgt.
Chg. Fgt. to
Goods Rcd. Comp. Inv. Comp. Net
Chg. Ap.
Chg. Ore. Sales Tax Cr. I. & D.
Chg. PORT. STORES Pay

O.K. R.E.W.

ORIGINAL

EXHIBIT "C"

PHONE 284-1101

INVOICE

P. O. BOX 12167
2054 N. VANCOUVER AVENUE
PORTLAND, OREGON 97212

Thompson
METAL FAB

ASH GROVE CEMENT COMPANY
1000 Tenmain Center
Kansas City, Missouri 64105

November 12, 1969
REQUISITION NO. KC364-C

INVOICE NO. 23494
Job No. 10867

TERMS: NET 30 DAYS.

Installation of Ducon Scrubber $9,500.00 *Includes mat'l and labor*

LOCATION *Portland*	DATE *11-19-69*	AMT.	
P.O. NO. *364-C*	TERMS *Net 30*	DISC.	
F.O.B. *Portland*		FRT.	
CHG.	SALES TAX		
CHG. *Int. Items*	AMT. *9500.00*	NET	
APPROVED		CHG. A.P.	
E.B. TO R.R.	FRT. T.C.	CR. P.D.	
CHG. FRT. TO		PAY	

Orig. approved by L.W. Jones

BLOWER SYSTEMS · CONVEYORS — SCREW — INDUSTRIAL WORK · STAINLESS STEEL

PURCHASE ORDER

THOMPSON METAL FAB 1986

2054 NORTH VANCOUVER AVENUE
PORTLAND, OREGON 97212

Date May-28-1969

To DUCON Co
% DON TOURANGEAU Co
ATTN- DON HAGERS

Deliver [X] Pick up [ ]

Please deliver and charge to our account the following:

Item	Quantity	ITEM	Price
1	1	DUCON TYPE VW4 MODEL 3 SIZE No 30 MODIFIED FOR VERTICAL UPDRAFT GAS INLET AND COUNTER CURRENT SLURRY DISCHARGE PER DUCON PROPOSAL # P8-669-1 PRICE 38000 FOB MINEOLA L.I. NY.	
2			
3			
4		DELIVERY 6 TO 8 WEEKS AFTER RECEIPT OF APPROVED DRAWINGS OR WAIVER.	

"A" PRINT APPROVAL CANNOT BE WAIVED AT THIS TIME BUT WOULD APPRECIATE ALL HASTE.

"B" IT IS UNDERSTOOD THIS MEETS ALL REQUIREMENTS OF ASH GROVE CEMENT Co & SWAN, WOOSTER ENGINEERING Co REQUIREMENTS AS SPECIFIED IN SPECIFICATIONS STACK SCRUBBER FILE No 7131-02

Job 10867

SHIP TO ASH GROVE CEMENT Co.

Dist. RIVERGATE
PORTLAND, ORE.

THOMPSON METAL FAB
By John H. Mills

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

1010 N.E. COUCH STREET PORTLAND, OREGON 97232 PHONE (503) 233-7176

16 June 1970

Department of Environmental Quality
1400 S.W. 5th Avenue
Portland, Oregon

Attention: C. A. Ayer, Associate Engineer

Gentlemen:

This is in response to your letter of 11 June 1970 requesting information concerning certification of a pollution control facility for tax relief purposes located at Ash Grove Cement Company, 13939 North Rivergate Boulevard, Portland, Oregon.

Engineering plans for the Ducon UW-4 scrubber were submitted to our agency and approved by our staff prior to installation and subsequent field checks indicate this equipment is operating within compliance of the Columbia-Willamette Air Pollution Authority Rules. Further, according to our records there is no information indicating that certification should be denied for reasons outlined in ORS 449.635, item (3) for this particular piece of control equipment.

If we can be of any further assistance to you, please do not hesitate to contact us.

Very truly yours,

R. E. Hatchard
Program Director

Wayne Hanson
Control Director

WH:sm