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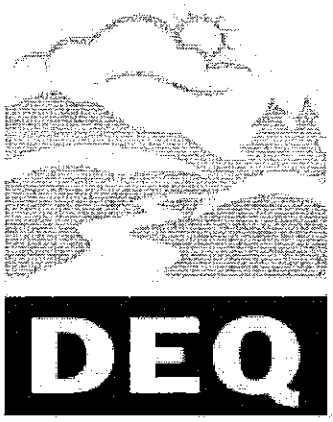
3/5/1971

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of Environmental Quality

AGENDA

Environmental Quality Commission Meeting

March 5, 1971

Second Floor Auditorium, Public Service Building

920 S.W. 6th Avenue, Portland, Oregon

10:00 a.m.

A. Minutes of previous meetings and hearings

1. January 7, 1971 public hearing re: Coos Bay outfall
2. February 5, 1971 meeting and public hearings regarding board products industries and state bond program regulations

B. Project plans for February 1971

C. Board Products Industries proposed regulations

D. CWAPA wigwam burner variances

E. Aluminum plants compliance schedule status report

F. Coos County wigwam burner status report

G. The Hervin Company waste discharge permit

H. Harry Steward placer mining waste discharge permit

I. Tax Credit Applications

1. T-180 Fred Messerle & Sons ($12,575.74)
2. T-189 Tillamook County Creamery Assn. ($172,442.26)
3. T-170 Willamette Industries (Duraflake) ($146,040.92)
4. T-187 National Metallurgical Co. ($504,241.41)
5. T-196 Harvey Aluminum ($4,155,077.94)

2:00 p.m.

J. Public Hearing regarding proposed amendments to Standards of Quality for Public Waters of Oregon and Disposal Therein of Sewage and Industrial Wastes

MINUTES OF THE TWENTY-FIRST MEETING

of the

Oregon Environmental Quality Commission

March 5, 1971

The twenty-first regular meeting of the Oregon Environmental Quality Commission was called to order by the Chairman at 10:00 a.m., Friday, March 5, 1971, in the Second Floor Auditorium of the Public Service Building, 920 S.W. 6th Avenue, Portland, Oregon. Members present were B.A. McPhillips, Chairman, George A. McMath, Arnold M. Cogan 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, Supervising Engineer; Leo L. Baton, District Engineer; F. Glen Odell, F.A. Skirvin, T.M. Phillips and H.H. Burkitt, Associate Engineers; and Richard P. Reiter, Associate District Engineer.

MINUTES OF PREVIOUS MEETINGS AND HEARINGS

It was MOVED by Mr. Waterman, seconded by Mr. Cogan and carried that the minutes of the public hearing held on January 7, 1971 regarding the proposed Coos Bay outfall sewer project be approved as prepared by the director.

It was MOVED by Mr. Cogan, seconded by Mr. Waterman and carried that the minutes of the regular meeting and the two public hearings regarding the board products industries and the state bond program regulations, all held on February 5, 1971, be approved as prepared by the director.

PROJECT PLANS FOR FEBRUARY 1971

It was MOVED by Mr. McMath, seconded by Mr. Waterman and carried that the actions taken by the staff during the month of February 1971 regarding the following 28 municipal sewerage, 10 industrial waste and 17 air quality control projects be approved:

Water Pollution Control

Date	Location	Project	Action
Municipal Projects (28)			
2/2/71	USA (Sunset)	Knollwood	Prov. app.
2/2/71	Albany	Pacific Blvd. and Southeast Interceptor	Prov. app.
2/3/71	Dundee	Maple St. sewer extension	Prov. app.
2/4/71	Gresham	Heiney area trunk	Prov. app.
2/5/71	Portland	N.E. Davis, Couch & 90th	Prov. app.
2/8/71	Medford	Change Order #13 through 21	Approved
2/8/71	Newberg	Change Order #2 (STP)	Approved
2/8/71	McMinnville	McDonald Lane & Orchard Ave.	Prov. app.
2/8/71	Eugene	Sleepy Hollow #179	Prov. app.
2/8/71	Eugene	Fairmont Blvd. #719	Prov. app.
2/8/71	Eugene	Madison and Jefferson Sts.	Prov. app.
2/8/71	Oak Lodge San. D.	Change Orders #2,3 & 4 (STP)	Approved
2/8/71	Salem	"D" Street, N.E.	Prov. app.
2/8/71	River Haven Mobile Estates	Contact tank revision	Approved
2/8/71	Portland	Harbor Patrol Base pump sta.	Prov. app.
2/8/71	Portland	S.W. 45th & Cameron Road	Prov. app.
2/18/71	Black Butte Ranch	System extension	Prov. app.
2/18/71	USA (Aloha)	Sewage treatment plant expansion	Prov. app.
2/19/71	Wallowa	Collection and treatment system	Prov. app.
2/19/71	Timberline Lodge	Preliminary report	Concurrence
2/22/71	Klamath Falls	Change Order #1 & 2 (STP)	Approved
2/22/71	Klamath Falls	Change Order #1 (interceptor)	Approved
2/22/71	Hillsboro	Change Order #11 & 12 (STP)	Approved
2/22/71	Hood River	Change Order #1 - 10 (interceptor)	Approved
2/22/71	St. Helens	Change Order #1 - 3 (outfall extension)	Approved
2/23/71	Albany	Addenda #2,3,4,5 and plans for trailer mounted generator	Approved
2/24/71	The Dalles	Change Order #1, 2 & 3 (Westside interceptor)	Approved
2/25/71	Hillsboro	S.E. 34th & Willow Sts.	Prov. app.
Industrial Waste Projects (10)			
2/1/71	Multnomah County	Pacific Meat Company-- pretreatment plan	Approved
2/4/71	Albany	Ohling Dairy manure system	Approved
2/4/71	Albany	Moisan Dairy manure system	Cond. app.
2/12/71	Multnomah County	Portland Rendering-- pretreatment plans	Approved
2/16/71	West Linn	Crown Zellerbach--final plans for secondary treatment	Approved

Industrial Waste Projects (10) cont.

Date	Location	Project	Action
2/16/71	Culp Creek	Bohemia Lumber Company--log pond diversion	Approved
2/17/71	Benton County	Georgia Pacific Camp Adair Plant--plywood glue waste recirculation system	Approved
2/17/71	Lane County	Georgia Pacific Yarnell Plant--plywood glue waste recirculation system	Approved
2/17/71	Eugene	Georgia Pacific Prairie Road Plant--plywood glue waste recirculation system	Approved
2/19/71	Salem	Boise Cascade Corp.--plans for secondary treatment	Approved

Solid Waste Projects (0)

No solid waste project plans were approved in February. One plan was reviewed.

Air Quality Control

Date	Location	Project	Action
2/2/71	Josephine County	Rough & Ready Lumber Co. Request for extended compliance dates	Denied
2/2/71	Jackson County	Cascade Wood Products WWB phase-out schedule	Approved
2/4/71	Josephine County	Brown Bros. Lumber Co. Request for 6 months delay	Denied
2/4/71	Josephine County	Morris Lumber Co. Request for indefinite delay	Denied
2/19/71	Umatilla County	Harris Pine Plan for WWB Phase-out	Approved
2/19/71	Josephine County	Rough & Ready Lumber Co. Request for delay of plans from engineer until May 31, 1971	Approved
2/22/71	Coos County	Elkside Lumber Co. Request for 18 months delay for plans to phase-out or modify WWB	Denied
2/22/71	Douglas County	Roseburg Lumber Co. WWB Phase-out schedule for burner at Dixonville	Approved
2/22/71	Coos County	Roseburg Lumber Co. WWB Phase-out schedule for small burner at Coquille	Approved
2/22/71	Coos County	Roseburg Lumber Co. WWB phase-out schedule for large burner at Coquille	Requested add. information

Air Quality Control - continued

Date	Location	Project	Action
2/22/71	Lincoln County	WOW Lumber Co. Request for additional time to phase-out WWB	Requested additional information
2/22/71	Coos County	Arego Cedar Products Co. WWB phase-out	Requested additional information
2/22/71	Jackson County	KOGAP Request of 90 days for regulation compliance on Lausmann WWB	Granted
2/25/71	Hood River	Hood River Dump Request for delay to initiate action to abate open burning	Recommendation for denial submitted
2/26/71	Union County	Boise Cascade Corp. Proposal to solve boiler emission problems at LaGrande by engaging CH_2M to conduct engineering study with plan submission by end of May 1971	Approved
2/26/71	Union County	Boise Cascade Corp. Proposal to solve boiler emission problems at Elgin by engaging CH_2M to conduct engineering study with plan submission by end of May 1971	Approved
2/26/71	Wallowa County	Boise Cascade Corp. Proposal to solve boiler emission problems at Joseph by engaging CH_2M to conduct engineering study with plan submission by end of May 1971	Approved

BOARD PRODUCTS INDUSTRIES REGULATIONS

Mr. Glen Odell presented a staff report dated February 26, 1971 which contained a complete and detailed reply to all of the comments and questions that had been introduced by the several industry representatives at the public hearing held on February 5, 1971. A copy of the staff report has been made a part of the department's permanent files in this matter.

In addition to the printed report he also mentioned a new plant under construction at Dillard, Oregon, which will have a bag house on each of

several cyclones. This new plant is expected to be in operation in August of this year.

The appendix to the staff report contains specific comments regarding the testimony previously submitted by John M. Hess of the American Plywood Association, Harry H. Bartels of U.S. Plywood Corp., Matthew Gould and V.J. Tretter, Jr. of Georgia Pacific Corp., Frank Trocino of Bohemia Lumber Company, Ralph Peinecke of Boise Cascade Corp., George Mohr of Forrest Industries, Oliver Morgan of Weyerhaeuser Corp., A.L. Robb of U.S. Gypsum Company and H.E. Sanderson of International Paper Company.

A letter signed by Elizabeth Wieting, Chairman, stated that the citizens' organization, Coalition for Clean Air, supports the adoption of the proposed regulations.

Another letter from the Regional Office of the Environmental Protection Agency of the federal government suggested that, in lieu of quantitative emission standards for particulate matter, no visible emissions be allowed from cyclones, dryers and related sources. Such a standard has been adopted in the state of Maryland. The Maryland code has a provision for granting variances without a hearing but reportedly no requests for variances have thus far been received by that state.

Mr. Patterson stated that hog fuel-fired boilers probably could not comply with such a standard.

Mr. Odell concluded his presentation by stating that after reviewing all of the testimony that had been submitted the staff recommends the adoption of the proposed regulations but with the addition to Subsection II (3) for Veneer and Plywood Manufacturing Operations, to Section III for Particleboard Manufacturing Operations, and to Section IV for Hardboard Manufacturing Operations of the following sentence:

"The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973."

The Chairman then entered into the record statements received on this date from the Associated Oregon Industries (submitted by Tom Donaca) and from Boise Cascade Timber and Building Materials (signed by Wallace N. Cory). He also read an excerpt from the February 1971 Sub-council Report on Wood

Products for the National Industrial Pollution Control Council which stated that pollution problems of the hardboard and particle board plants are "relatively small and can be handled satisfactorily with current technology."

Mr. McMath complimented the staff for its excellent report and then MOVED adoption of the proposed regulations with the amendment suggested by the staff. Mr. Waterman seconded the motion but MOVED that it be amended by replacing in the staff's proposed amendment the words "no later than July 1, 1971" by the words "no later than 6 months after adoption." The amended motion was passed unanimously.

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

CWAPA WIGWAM BURNER VARIANCES

Mr. Patterson referred to the staff memorandum of February 25, 1971 pertaining to the variances granted by the CWAPA on January 18, 1971 to the following ten companies allowing them extended use of their wigwam burners: (1) Avison Lumber Co., (2) Lynnwood Lumber Co., (3) Molalla Tie Co., (4) Publishers Paper Co., Molalla Division, (5) C.E. Miller DBA Cedarwood Timber Co., (6) Crown Zellerbach Corp., Estacada, (7) Milwaukie Plywood Corp., Estacada, (8) Beaver Lumber Co., (9) Harris Stud Mill and (10) Walter E. Koch Lumber Co. He also reported that on February 19, 1971 a similar variance had been granted by CWAPA to the Firwood Veneer Corp. of Sandy and also two open burning variances had been granted to Columbia County and to the Bureau of Parks of the city of Portland.

Mr. Patterson then submitted a proposed resolution for adoption by the EQC members which requested that any variances granted by a regional authority be based only on the strict grounds outlined in ORS 449.810, that the findings supporting these grounds always be set forth, and that any variance thus granted should not be renewed except for good cause.

Mrs. Elizabeth Wieting, representative of the Oregon Citizens for Clean Air and of the Oregon Environmental Council, appeared and urged the EQC to take strong measures to discourage the granting of such variances in the future.

There was then considerable discussion regarding the authority of the Commission in this matter. It was MOVED by Mr. Cogan that the staff and legal counsel take the essence of this discussion and going beyond the proposed resolution develop more stringent control over regional authorities in their granting of variances pertaining to wigwam burners and further that the staff report back to the Commission at the next meeting. Mr. Waterman seconded the motion with the suggestion that a letter be sent without delay to CWAPA and also to the other regions expressing the feeling of the Commission that perhaps variances have been and are being granted without adequate consideration. The motion was unanimously adopted.

BENJAMIN FRANKLIN FEDERAL SAVINGS AND LOAN PARKING STRUCTURE

Mr. Bill L. Williamson, President of the Northwest Environmental Defense Center, appeared and presented a petition for said organization asking the EQC to intervene and attempt to restrict further steps from being taken toward construction of the proposed parking structure in downtown Portland by the Benjamin Franklin Federal Savings and Loan Association. The petition noted that permission for such construction had recently been granted by the Portland City Council.

Mr. Williamson was advised that an investigation would be made by legal counsel of the Commission's authority in this matter. It was also pointed out that a representative of the department had testified before the Portland City Council in opposition to the parking structure.

ALUMINUM PLANTS CONSTRUCTION SCHEDULES

Mr. Skirvin presented the staff report dated March 1, 1971 covering the present status of the compliance schedules submitted by the Harvey Aluminum and Reynolds Metals Companies for their two primary aluminum plants located at The Dalles and Troutdale, respectively. These schedules had been submitted pursuant to the requirements of the regulations adopted by the EQC on June 26, 1970.

With regard to the Harvey Aluminum Company plant, Mr. Skirvin recommended that the EQC approve (1) the company's proposal to install electrostatic precipitators and the related time schedule subject to review and approval of engineering plans and equipment specifications for compliance with the visible emission standard, (2) the company's monitoring proposal as outlined in Mr. Byrne's letter of December 9, 1970, and (3) the special studies as outlined in Mr. Byrne's letter of December 9, 1970.

Mr. Joe Byrne was present to represent the company.

It was MOVED by Mr. Waterman, seconded by Mr. McMath and carried that the recommendations of the staff relating to Harvey Aluminum be approved.

The meeting was then recessed at 11:55 a.m. and reconvened at 1:35 p.m.

Mr. Skirvin continued his discussion of the schedules and proposals submitted by the Reynolds Metals Company. He stated that the company's proposed reporting of monitoring results is considered acceptable and he recommended approval by the EQC of (1) the company's proposed monitoring program and (2) the company's special studies proposal with approval of the latter being subject to the submission by the company of quarterly progress reports with the first report to be submitted no later than June 30, 1971. He stated further that the company had thus far been unable to submit a schedule for compliance with the visible emission standards.

Mr. Harold Zeh was present to represent the company. He said he could not give any definite dates for compliance because it depends on delivery of equipment and on other factors presently unknown. Both Mr. McMath and Mr. McPhillips expressed the opinion that a definite schedule should be submitted by the company, at least within the next 3 to 4 months. Mr. Zeh said he could give a tentative schedule but it would probably have to be revised.

It was MOVED by Mr. Cogan, seconded by Mr. McMath and carried that the staff's recommendations regarding the Reynolds Metals Company's schedule be accepted, that the company's proposals be given conditional approval with the understanding that they be re-evaluated after receipt of the first quarterly report, that quarterly reports be required of progress made in meeting the visible emission standard and that a comprehensive review be made by September 1972.

Mr. McPhillips said he thinks a public hearing should be held either in May at Bend or in June at Portland regarding adoption of fluoride standards for aluminum plants. It was decided to wait until the April meeting to set a date for such a hearing.

HARRY STEWARD PLACER MINING WASTE DISCHARGE PERMIT

Mr. Baton presented the staff report dated March 1, 1971 pointing out that the operation of the Harry Steward placer mine on Forest Creek had resulted in turbid conditions in violation of the special water quality standards for the Rogue River Basin. He pointed out, however, that the mining operations are expected to be completed for this season within the next two weeks.

Mr. Harry Steward was present to represent himself. When asked by Mr. Cogan if he could get an adequate plan developed and could install facilities that would meet the standards and when advised by Mr. McPhillips that the law will be enforced and the standards must be met, he replied that that will prevent all operations of placer mining in the Rogue Basin.

It was MOVED by Mr. Cogan, seconded by Mr. Waterman and carried that, pursuant to the staff's recommendations, (1) Mr. Steward be advised that a waste discharge permit will not be issued for next or subsequent operating seasons unless he can demonstrate by specific plans and operational procedures that he can maintain approved settling ponds and conduct his operations in a manner to meet turbidity standards in Forest Creek, and (2) the staff be authorized to institute injunctive action if Mr. Steward is again found to be operating in violation of his waste discharge permit conditions.

COOS COUNTY WIGWAM BURNER STATUS REPORT

Mr. T. M. Phillips presented the staff's report dated February 25, 1971, noting that there currently are 16 wigwam burners still in operation in Coos County. He said the staff is working toward phase-out or modification of each of the remaining burners.

Three companies (Arago Cedar Products at Myrtle Point, Menasha Corp. Doyle Veneer Division at Myrtle Point, and Roseburg Lumber Co. at Coquille) have submitted schedules for phase-out by August 1, 1971. The other companies are expected to submit schedules by May 1, 1971, for phase-out or modification of their burners.

Mr. Burkitt explained the May 1, 1971, deadline for submission of schedules.

Mr. McPhillips requested a further progress report at the May meeting of the Commission.

HERVIN COMPANY WASTE DISCHARGE PERMIT

Mr. Reiter presented the staff's memorandum report dated March 3, 1971, regarding the operations of the Hervin Company plant at Tualatin and the proposed conditions for renewal of the company's waste discharge permit. He stated that the company plans to cover and curb the loading area to prevent drainage of contaminated surface water into the river.

Mr. Jason Hervin, General Manager, and Mr. Ed Smith, Plant Manager, were present to represent the company.

Mr. C. E. Woods who had testified against the company at the February meeting was again present and alleged further violations including polluted storm water flow, excessive waste heat discharge and high chlorine content.

After considerable questioning by the Commission members of the company representatives, it was MOVED by Mr. Cogan, seconded by Mr. Waterman and carried that the proposed waste discharge permit conditions submitted by the staff for the Hervin Company plant at Tualatin be approved but with the added condition that temperature of the cooling water be recorded daily and that such data be made available to the department.

PUBLIC HEARING REGARDING PROPOSED AMENDMENTS TO WATER QUALITY STANDARDS

Proper notice having been given as required by statutes and administrative rules, a public hearing in the matter of proposed amendments to the Standards of Quality for Public Waters of Oregon and Disposal Therein of Sewage and Industrial Wastes was called to order by the chairman at 2:50 p.m. on Friday, March 5, 1971, in the Second Floor Auditorium of the Public Service Building, 920 S.W. 6th Avenue, Portland, Oregon. The members present were B. A. McPhillips, Chairman, George A. McMath, Arnold M. Cogan and Storrs S. Waterman.

Mr. Weathersbee reviewed briefly the proposed amendments and pointed out that their purpose is to better define the minimum acceptable treatment of industrial wastes.

Mr. Irving Jones, Pollution Bioanalyst, presented a statement for the Oregon Fish Commission supporting the proposed amendments.

The director reported that on March 1, 1971, a letter had been received from Mr. Matthew Gould of Georgia Pacific Corp. asking for a 30-day continuation of the hearing to allow more time for preparation of a statement for the record. The director recommended that the request be granted.

Mr. Donald J. Benson representing the Pacific Northwest Pulp and Paper Association was present and also requested a 30-day continuation for the same reason.

No one else present wished to be heard.

It was MOVED by Mr. Waterman, seconded by Mr. McMath and carried that the hearing be continued until the next meeting of the Commission to receive any additional testimony that might be forthcoming.

TAX CREDIT APPLICATIONS

Mr. Sawyer, Mr. Skirvin and Mr. Burkitt presented the staff's evaluation and recommendations regarding the tax credit applications covered by the following motions: (1) It was MOVED by Mr. Cogan, seconded by Mr. Waterman and carried that a pollution control facility tax credit certificate bearing the actual cost of $12,575.74 be issued to Fred Messerle & Sons, Coos Bay, with 80% or more allocated to pollution control for the facilities claimed in application No. T-180.

(2) It was MOVED by Mr. Waterman, seconded by Mr. Cogan and carried that a pollution control facility tax credit certificate bearing the actual cost of $172,442.26 be issued to the Tillamook County Creamery Association with 80% or more allocated to pollution control for the facilities claimed in application No. T-189.

(3) It was MOVED by Mr. Cogan, seconded by Mr. Waterman and carried that a pollution control facility tax credit certificate bearing the actual cost of $146,040.92 with 80% or more allocated to pollution control be issued to the Willamette Industries Inc. (Duraflake), Albany, for the facilities claimed in application No. T-170.

(4) It was MOVED by Mr. Waterman, seconded by Mr. Cogan and carried that a pollution control facility tax credit certificate bearing the actual cost of $504,244.41 be issued to the National Metallurgical Company, Springfield, for the facilities claimed in application No. T-187.

(5) It was MOVED by Mr. Waterman, seconded by Mr. Cogan and carried that a pollution control facility tax credit certificate bearing the actual cost of $4,155,077.94 be issued to the Harvey Aluminum Company, The Dalles, for the facilities claimed in application No. T-196.

RESOLUTION FOR SALE OF STATE BONDS

The director reported that the passage this month of House Joint Resolution 18 by the 1971 Legislative Assembly cleared the way for the opening of bids on April 6, 1971 for the sale of the first issue of $45,000,000 in bonds which are to be used for loans and grants to local governmental units to assist them in financing construction of sewage treatment works.

It was then MOVED by Mr. McMath, seconded by Mr. Cogan and unanimously carried that the following resolution be adopted:

RESOLUTION

BE IT RESOLVED by the Environmental Quality Commission, in session regularly assembled, that, of the bonds authorized by Article XI-H of the Constitution, of the State of Oregon and by Chapter 503, 1969 Oregon Laws, FORTY-FIVE MILLION DOLLARS ($45,000,000) par value, with the approval of the State Treasurer thereof shall be issued and sold April 6, 1971, for the purpose of carrying out the provisions of the said Article of the Constitution and of the said statutes; and

BE IT FURTHER RESOLVED that the principal of and the interest on all of the bonds issued pursuant to this resolution be paid upon the due dates thereof with the approval of the State Treasurer at the fiscal agency of the State of Oregon in the City and State of New York, and that the said bonds be known and designated as "OREGON POLLUTION CONTROL BONDS, SERIES 1971" and be numbered consecutively from one (1) to nine thousand (9,000) inclusive, in denominations of FIVE THOUSAND DOLLARS ($5,000 each; and

BE IT FURTHER RESOLVED that the said bonds be in coupon form, and bear interest payable semiannually upon May 1, and November 1 of each year during which they are outstanding; and

BE IT FURTHER RESOLVED that the said bonds be issued to bear date of May 1, 1971, and to mature serially in numerical order in principal installments of $450,000 on May 1, 1974; $1,350,000 on May 1, 1975; $1,800,000 on May 1, 1976; $2,250,000 on May 1, 1977; $2,250,000 on May 1, 1978; $2,250,000 on May 1, 1979; $2,250,000 on May 1, 1980; $2,700,000 on May 1, 1981; $2,700,000 on May 1, 1982; $2,700,000 on May 1, 1983; $2,700,000 on May 1, 1984; $2,700,000 on May 1, 1985; $2,700,000 on May 1, 1986; $2,700,000 on May 1, 1987; $3,150,000 on May 1, 1988; $3,150,000 on May 1, 1989; $3,600,000 on May 1, 1990; $3,600,000 on May 1, 1991; and

BE IT FURTHER RESOLVED that the Environmental Quality Commission also reserves the right to redeem said bonds for retirement or refunding on any interest payment date on or after May 1, 1985; and

BE IT FURTHER RESOLVED that, with the approval of the State Treasurer of the State of Oregon, the said bonds be sold at public sale pursuant to publication of notice thereof given not less than ten (10) days prior to proposed sale date, in one issue of the Daily Bond Buyer, a financial newspaper printed and published in the City and State of New York, and in one issue of the Daily Journal of Commerce, a daily newspaper of general circulation printed and published in the City of Portland, Multnomah County, Oregon; and

BE IT FURTHER RESOLVED that, as recommended and approved by the State Treasurer of the State of Oregon, the said bonds be sold at not less than par for each $100 par value, and accrued interest, if any, to the bidder offering to the state the lowest effective rate of interest upon the bonds not exceeding a net effective rate of seven percent (7%) per annum payable semiannually; that the difference between the highest and lowest coupon rates specified in any bid shall not exceed two percent (2%); and

BE IT FURTHER RESOLVED that the bonds bear interest at such rate or rates, in multiples of 1/4 of 1% or 1/10 of 1%, as shall be designated in the accepted bid for the bonds, and that each maturity of the bonds shall have only one interest rate, and that the bonds shall have but one coupon for the interest due on any interest-paying date; and

BE IT FURTHER RESOLVED that the said notice of sale specify that the Environmental Quality Commission will receive and open bids for the bonds offered for sale, at the time and place indicated in said public notice, but that the Environmental Quality Commission reserves the right to reject any and all bids for said bonds; and

BE IT FURTHER RESOLVED that, under the terms of the notice of sale of the bonds issued pursuant hereto, each bidder for the bonds be required to deposit with his bid a certified or cashier's check upon a solvent bank, in favor of the Environmental Quality Commission of the State of Oregon, in the sum of $225,000.00, the deposit not to draw interest but to be forfeited to the State of Oregon as liquidated damages in the event that the bidder, should his bid be accepted fail to complete his purchase of the bonds bid for, in accordance with the terms of the bid; and

BE IT FURTHER RESOLVED that in order to facilitate the ascertainment by the Environmental Quality Commission of the most favorable bid received for the said bonds, each bidder be requested to indicate in his bid the total interest cost upon the bonds to the State of Oregon, computed to the final maturity date of the bonds, provided his bid be accepted; and

BE IT FURTHER RESOLVED that in the public sale of the aforesaid bonds, the State of Oregon through the Environmental Quality Commission furnish to the purchaser thereof, without cost to him the written opinion of Shuler, Rankin, Myers, Walsh and Ragen, bond attorneys in the City of Portland, County of Multnomah, State of Oregon certifying to the legality and validity of the bonds sold, and that said opinion be printed upon each of the said bonds; and

BE IT FURTHER RESOLVED that, subject to such changes as may be necessary to conform to the interest rates offered by bidders, the bonds issued pursuant to this resolution be of uniform tenor, be direct general obligations of the State of Oregon, and be in substantially the following form prepared by the Attorney General of the State of Oregon;

Number	UNITED STATE OF AMERICA STATE OF OREGON OREGON POLLUTION CONTROL BONDS SERIES 1971	Number
$5,000		$5,000

KNOW ALL MEN BY THESE PRESENTS, that the State of Oregon acknowledges itself to owe and for value received hereby promises to pay to the bearer hereof the principal sum of

FIVE THOUSAND DOLLARS

($5,000) on the first day of May, 197__, with interest on said sum from the date hereof until paid, at the rate of PER CENT (%) per annum payable semiannually on the first day of May and on the first day of November in each year, as evidenced by, and upon the presentation and surrender of, the interest coupons hereto annexed, as they severally become due. Both the principal of and the interest upon this bond are payable at the fiscal agency of the State of Oregon in the City and State of New York, in any coin or currency which, at the time of payment, is legal tender for the payment of public and private debts within the United States of America.

The bonds of the issue of which this bond forms a part, maturing on and after May 1, 1986, may be redeemed at the option of the State of Oregon on and after May 1, 1985, at par and accrued interest, on any interest-paying day or days in regular numerical order or in the entire amount of the issue outstanding at call date, upon notice given by the Treasurer of the State of Oregon at least thirty (30) days prior to the redemption date specified therein, by publication thereof in one issue of a newspaper or financial journal of general circulation printed and published within the City and State of New York, and one issue of a newspaper of general circulation printed and published within the City of Salem, Oregon. From the date of redemption designated in any such notice, interest on the bonds so called for redemption shall cease.

This bond is issued by the State of Oregon in conformance to its Constitution and under any by virtue of and in all respects in full and strict compliance with its laws, and in particular Article XI-H of the Constitution and Chapter 503, 1969 Oregon Laws.

The faith and credit of the State of Oregon are hereby irrevocably pledged for the punctual payment of the interest upon and the principal of this bond respectively, as the same become due and payable as aforesaid.

IN TESTIMONY WHEREOF, the State of Oregon has caused this bond to be signed by the Governor and by the Secretary of State with their facsimile signatures, and by the State Treasurer, and sealed with the seal of the State of Oregon, and has caused the annexed interest coupons to be executed with the facsimile signatures of its said officers, all as of the first day of May, 1971.

_____
Governor

_____
Secretary of State

(SEAL)

_____
State Treasurer

FORM OF COUPON

On November 1, 1971

$_____

THE STATE OF OREGON

will pay the bearer the amount shown hereon at the fiscal agency of the State of Oregon in the City and State of New York, in any coin or currency which, at the time of payment is legal tender for the payment of public and private debts within the United States of America, for six month's interest then due on Oregon Pollution Control Bonds, Series 1971, No. _____

State Treasurer	Secretary of State	Governor

No. _____

FORM OF COUPON
(for coupons maturing after May 1, 1985)

November 1, 1985

No._____

unless the bond hereinafter designated shall have been called for previous redemption and due provision made for the payment thereof.

THE STATE OF OREGON

will pay the bearer the amount shown hereon at the fiscal agency of the State of Oregon in the City and State of New York, in any coin or currency

which, at the time of payment is legal tender for the payment of public and private debts within the United State of America, for six month's interest then due on Oregon Pollution Control Bonds, Series 1971, No. _____.

State Treasurer	Secretary of State	Governor

No. _____

BE IT FURTHER RESOLVED that the said FORTY-FIVE MILLION DOLLARS ($45,000,000) in bonds authorized be advertised for sale by the Environmental Quality Commission and that the notice of sale provided for herein shall be given so that bids for said bonds may be opened at a regular meeting of the Environmental Quality Commission to be held

_____
Chairman

_____
Member

_____
Member

_____
Member

_____
Member

ATTEST

_____
Director

PUBLIC RELATIONS

It was MOVED by Mr. Cogan, seconded by Mr. McMath and carried that a period of 30 minutes be reserved at the beginning of each meeting to afford members of the public an opportunity to be heard on matters that are not on the agenda but which have a relationship to environmental quality.

There being no further business the meeting was adjourned at 3:35 p.m.

Respectfully submitted,

Kenneth H. Spies
Director

REGULATIONS FOR
AIR CONTAMINANT EMISSIONS FROM BOARD PRODUCTS INDUSTRIES

ADOPTED AT THE MARCH 5, 1971 MEETING OF THE
ENVIRONMENTAL QUALITY COMMISSION

Amending (Adding to) Subdivision 5
Specific Industrial Standards, O.A.R. 340
Department of Environmental Quality
Air Quality Control Division

DEFINITIONS

1. "Department" means Department of Environmental Quality.
2. "Emission" means a release into the outdoor atmosphere of air contaminants.
3. "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.
4. "Operations" includes plant, mill or facility.
5. "Particleboard" means mat formed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.
6. "Person" means the same as ORS 449.760(1).
7. "Plywood" means a flat panel built generally of an odd number of thin sheets of veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.
8. "Tempering oven" means any facility used to bake hardboard following an oil treatment process.
9. "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness, formed by slicing or peeling from a log.

GENERAL PROVISIONS

1. These regulations establish minimum performance and emission standards for veneer, plywood, particleboard and hardboard manufacturing operations.
2. Emission limitations established herein are in addition to, and not in lieu of, general emission standards for visible emissions, fuel burning equipment, and refuse burning equipment.
3. Emission limitations established herein and stated in terms of pounds per 1000 square feet of production shall be computed on an hourly basis using the maximum 8 hour production capacity of the plant.

4. Upon adoption of these regulations, each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control, applying the highest and best practicable treatment and control currently available. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with these regulations.

VENEER AND PLYWOOD MANUFACTURING OPERATIONS

I. Veneer Dryers - Public Hearing for Emission Standard
By no later than July 1, 1971, the Director of the Department shall schedule a public hearing for the purpose of determining the feasibility of adopting an emission standard for particulate and gaseous emissions from veneer dryers, setting forth allowable emission levels and dates for compliance.

II. Other Emission Sources

1. No person shall cause to be emitted particulate matter from veneer and plywood mill sources, including but not limited to, sanding machines, saws, presses, barkers, hogs, chippers and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of plywood or veneer production on a 3/8 inch basis of finished product equivalent.

2. Excepted from subsection 1 are veneer dryers, fuel burning equipment and refuse burning equipment.

3. Compliance Schedule - No later than September 5, 1971, every person operating a plywood or veneer manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for compliance with this section. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

III. Open Burning - Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any veneer or plywood manufacturing mill and such acts are hereby prohibited.

PARTICLEBOARD MANUFACTURING OPERATIONS

I. Truck Dump and Storage Areas

1. Every person operating or intending to operate a particleboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent windblown particle emissions from these areas to be deposited upon property not under the ownership of said person.

2. The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval for said storage.

(a) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(b) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

3. Any person who proposes to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

II. Other Emission Sources

1. No person shall cause to be emitted particulate matter from particleboard plant sources including, but not limited to, hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines and materials handling systems, in excess of a total from all sources within the plant site of three (3.0) pounds per 1000 square feet of particleboard produced on a 3/4 inch basis of finished product equivalent.

2. Excepted from subsection 1 are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

III. Compliance Schedule - Not later than September 5, 1971, every person operating a particleboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections I and II of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

IV. Open Burning - Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any particleboard manufacturing plant and such acts are hereby prohibited.

HARDBOARD MANUFACTURING OPERATIONS

I. Truck Dump and Storage Areas

1. Every person operating or intending to operate a hardboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent windblown particle emissions from these areas to be deposited upon property not under the ownership of said person.

2. The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval.

(a) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(b) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

3. Alternative Means of Control - Any person who desires to control windblown particulate emissions from truck dump and storage areas other than

by enclosure shall first apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

II. Other Emission Sources

1. No person shall cause to be emitted particulate matter from hardboard plant sources including, but not limited to hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines, and materials handling systems, in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of hardboard produced on a 1/8 inch basis of finished product equivalent.

2. Excepted from subsection 1 are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

III. Emissions from Hardboard Tempering Ovens

1. No person shall operate any hardboard tempering oven unless all gases and vapors emitted from said oven are treated in a fume incinerator capable of raising the temperature of said gases and vapors to at least 1500° F for 0.3 seconds or longer.

2. Specific operating temperatures lower than 1500° F may be approved by the Department upon application, provided that information is supplied to show that operation of said temperatures provides sufficient treatment to prevent odors from being perceived on property not under the ownership of the person operating the hardboard plant.

3. In no case shall fume incinerators installed pursuant to this section be operated at temperatures less than 1000° F.

4. Any person who proposes to control emissions from hardboard tempering ovens by means other than fume incineration shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Chapter 340 OAR, and shall describe in detail the plan proposed to control odorous emissions and indicate on a plot plan the location of the nearest property not under ownership of the applicant.

IV. Compliance Schedule - No later than September 5, 1971, every person operating a hardboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections I, II, and III of this regulation. The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

V. Open Burning - Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any hardboard manufacturing plant and such acts are hereby prohibited.

PROJECT PLANS, REPORTS, PROPOSALS FOR AIR QUALITY CONTROL DIVISION FOR FEBRUARY 1971

The following project plans or reports were received and processed by the Air Quality Control Division for the month of February 1971:

Date	Location	Project	Action
2	Josephine County	Rough & Ready Lumber Co. Request for extended compliance dates	Denied
	Jackson County	Cascade Wood Products WWB phase-out schedule	Approved
4	Josephine County	Brown Bros. Lumber Co. Request for 6 months delay	Denied
	Josephine County	Morris Lumber Co. Request for indefinite delay	Denied
19	Umatilla County	Harris Pine Plan for WWB Phase-out	Approved
	Josephine County	Rough & Ready Lumber Co. Request for delay of plans from engineer until May 31, 1971	Approved
22	Coos County	Elkside Lumber Co. Request for 18 months delay for plans to phase-out or modify WWB	Denied
	Douglas County	Roseburg Lumber Co. WWB Phase-out schedule for burner at Dixonville	Approved
	Coos County	Roseburg Lumber Co. WWB phase-out schedule for small burner at Coquille	Approved
	Coos County	Roseburg Lumber Co. WWB phase-out schedule for large burner at Coquille	Requested additional information

PROJECT PLANS, REPORTS, PROPOSALS FOR AIR QUALITY CONTROL DIVISION FOR FEBRUARY 1971 (Continued)

Date	Location	Project	Action
22	Lincoln County	WOW Lumber Co. Request for additional time to phase-out WWB	Requested additional information
	Coos County	Arego Cedar Products Co. WWB phase-out	Requested additional information
	Jackson County	KOGAP Request of 90 days for regulation compliance on Lausmann WWB	Granted
25	Hood River	Hood River Dump Request for delay to initiate action to abate open burning	Recommendation for denial submitted
26	Union County	Boise Cascade Corp. Proposal to solve boiler emission problems at LaGrande by engaging CH_2M to conduct engineering study with plan submission by end of May 1971.	Approved
	Union County	Boise Cascade Corp. Proposal to solve boiler emission problems at Elgin by engaging CH_2M to conduct engineering study with plan submission by end of May 1971.	Approved
	Wallowa County	Boise Cascade Corp. Proposal to solve boiler emission problems at Joseph by engaging CH_2M to conduct engineering study with plan submission by end of May 1971.	Approved

TO : ENVIRONMENTAL QUALITY COMMISSION MEMBERS

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Arnold M. Cogan, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION STAFF

DATE : February 25, 1971 for meeting of March 5, 1971

SUBJECT: COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY'S FILED VARIANCES GRANTED TO TEN (10) TIMBER INDUSTRIES WITHIN THE REGION

The Columbia-Willamette Air Pollution Authority has submitted, in accordance with ORS 449.880 (3), variances #20 through #29 relative to timber industry sources having or operating wigwam waste burners not in compliance with adopted rules and standards. These are listed and discussed in the letter of transmittal dated January 28, 1971. Also attached are copies of each variance and a copy of the minutes of the Board of Directors Meeting relative to the variance granting procedure.

The staff has completed a review of the material submitted and concludes the variances were granted in a uniform manner. No judgment of individual company needs was reported to have been completed. The Department staff is of the opinion that no waste burner on a continuous annual basis (modified or unmodified) can be shown to comply with Columbia-Willamette Air Pollution Authority's particulate emission standard of 0.05 grains per cubic foot. The record does not show that the stringency of the standard has been brought to the attention of the Board or to the individual company. While the staff feels that in this urban and industrial part of the state, utilization of residues could be accomplished, the staff is not knowledgeable that one or more of these company's might have a stock-piling problem resulting in other possible problems if use of the burner is stopped.

Summary:

While the staff recommends phase-out of these waste burners, in the absence of some of the above information, and considering the limited actions that can be taken under ORS 449.880, it is recommended that the staff be directed to write the Columbia-Willamette Air Pollution Authority concerning the Commission policy or that a resolution be adopted incorporating Commission policies and a copy be forwarded to the Columbia-Willamette Air Pollution Authority.

RESOLUTION

WHEREAS, it has been the Environmental Quality Commission's policy to vigorously insist upon either the complete phase-out of wigwam waste burners, whenever possible, or at the very minimum to require that they be modified in accordance with the highest degree of modern technology available, to insure compliance with current air quality standards; and

WHEREAS, the Commission's policy has been that any variances from air quality standards, as provided for in ORS 449.810 should not be granted liberally, but only upon good cause being shown, and further only upon the limited grounds set forth in ORS 449.810; and

WHEREAS, the Environmental Quality Commission has continuously required that any variances submitted to it for review, should always be based upon the strict grounds provided for in ORS 449.810, and should always set forth the findings supporting those grounds; and in addition any variance granted should not be renewed beyond the period for which it was issued, unless for extreme good cause;

NOW, THEREFORE BE IT RESOLVED:

That the Environmental Quality Commission requests that any variances granted by a regional authority or recommended by the Department of Environmental Quality staff, should only be based upon the strict grounds provided for in ORS 449.810; should always set forth the findings supporting those grounds; and any variance granted should not be renewed beyond the period for which it was issued, unless for extreme good cause.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Arnold M. Cogan, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION STAFF

DATE : February 26, 1971 for March 5, 1971 Meeting

SUBJECT: PROPOSED REGULATIONS FOR BOARD PRODUCTS INDUSTRIES

STAFF RESPONSE TO INDUSTRY TESTIMONY

It is the conclusion of the staff that the testimony offered by ten representatives of the board products industry at the Public Hearing on February 5, 1971 offered few constructive suggestions or little useful information, and did not reflect the concerns of industry as voiced at meetings held prior to the date of the Hearing. The staff therefore is not proposing any changes in the regulation relative to industry's comments.

Copies of an earlier draft of the regulation were circulated to an industry committee in September 1970, and a meeting attended by 17 representatives of various companies was held in Portland on September 24. Most of the discussion, and subsequently received written comments, pertained to specific details of the regulations. A copy of the written comments from industry, as compiled and forwarded by Messrs. Donaca and Gould, is attached as Appendix C. It is apparent that the nature of the testimony at the Public Hearing represents a considerable departure from previous attitudes.

One argument common to much of the industry testimony was the claim that the emission standards were based on inadequate information relating emissions to ambient effects, with the implication being that most of the particulate matter is of such a size that it falls out on company property. One industry spokesman, for instance, cited data reportedly obtained from testing at a particleboard plant, stating that 80% of the total emission was 20 microns or larger in size, and that such particles would settle to earth from typical emission heights within 13 minutes. (For reference purposes, one micron is equivalent to about .00004 inch, and the dot over an "i" on this paper is about 400 microns in diameter.) While the staff does not necessarily endorse the technical validity of the argument - calculation of particle settling rates is a very complicated and uncertain matter- the data presented, with a few additional assumptions, can be used to calculate a theoretical rate of particle fallout for an area 1.2 miles in diameter - that is four times the applicable State standard. Such an analysis is presented in Appendix A (8).

Theory aside, however, there is no question but that particleboard plants do cause community nuisance problems, as evidenced by past and present problems in Albany, Medford and Bend

The staff repeats its belief that the data presented in the initial staff report is sufficient, valid, representative of the industry, and adequately demonstrates the feasibility and reasonableness of the standards. Actual sampling results obtained by a reliable consulting engineering firm at a number of Oregon plants, were evaluated and used in developing the emission standards.

The industry testimony consistently mentioned the technical difficulty and high cost of control to comply with emission standards as being excessive. The staff report discussed the availability of equipment at length, and included estimates of costs for typical installations. The equipment is available, and the cost is high; however, it seems significant that a number of control installations have been initiated or completed for plywood and particleboard plants. The following is a summary of control projects completed, underway, or scheduled in various jurisdictions:

Department of Environmental Quality:

Particleboard: One plant has completely enclosed truck dump and storage areas, one plant - partial; four plants have controlled or have scheduled control of sanderdust, using baghouses, wet scrubbers, or filter tube systems; one plant has indicated tentative plans to install a wet scrubber system on particle dryers.

Plywood: No controls installed or scheduled.

Hardboard: One tempering oven fume incinerator installed.

Columbia-Willamette Air Pollution Authority:

Columbia-Willamette Air Pollution Authority has schedules of compliance from two plywood mills to control sanderdust using filter tube or baghouse systems.

Mid-Willamette Valley Air Pollution Authority:

Mid-Willamette Valley Air Pollution Authority has been very active during the past year in securing schedules of compliance under its process weight regulation. Several innovative solutions have been developed by particleboard and plywood plants in the region, including replacement of air transfer systems by mechanical conveyors, and recycling of the exhaust from one cyclone to the inlet of another, thus reducing the number of emission points to be controlled. The following projects are completed, underway, or scheduled:

Particleboard: One of two plants is constructing a fully enclosed truck dump and storage area, the other is engineering for an enclosure; both have converted some cyclone systems to mechanical conveying or air recycling systems, both are using baghouses on sanderdust and certain other sources; one has installed a rotoclone scrubber on one of 7 dryer cyclones as a pilot installation; and both are committed to final compliance by July 1, 1973.

Plywood: Seven plants are scheduled to install baghouses on sanderdust systems by the end of 1971, including as many as 5 cyclones at one plant. These projects are expected to bring the plants into full compliance with the standards.

Hardboard: MWVAPA staff indicates that one plant using a dry process has present emissions in excess of 100 lb/hr and thus far has committed itself to controlling sanderdust (2 cyclones) by baghouse and some other milling area cyclones by recycling or mechanical conveying. Another plant using a wet process is considered to have no particulate emission problem.

Lane Regional Air Pollution Authority:

One of two Lane County particleboard plants has a fully enclosed truck dump and storage area. The other plant has installed a baghouse for sanderdust control. Three plywood mills have installed baghouses for sanderdust control.

Of all sources covered by the regulation, control of particleboard dryers is acknowledged to be the most technically challenging. However, the currently largest plant in the State has committed itself to solve the problem and comply with the standards of the Mid-Willamette Valley Air Pollution Authority by July 1, 1973. Such a date would be appropriate for other particleboard dryers. One plant, under DEQ jurisdiction, has tentatively proposed to control its dryer emissions at an earlier date by installation of a wet scrubber designed to handle both sanderdust and dryer emissions. The staff is convinced that under the pressure of regulatory requirements, industry will find acceptable and economically feasible means of controlling this emission to achieve the 90% reduction needed to comply with the proposed emission standard.

It seems reasonable that if controls were technically feasible for the above plants, they would be feasible for the remainder.

ADDITIONAL TESTIMONY:

Two letters bearing on the proposed regulation were received subsequent to the hearing and are attached in Appendix B. One, from the Regional Office of the Environmental Protection Agency, suggested that in lieu of quantitative emission standards for particulate matter, no visible emissions be allowed from cyclones, dryers, etc. The suggestion was primarily based on an effort to avoid the requirement for sampling a large number of cyclones to determine compliance.

The concept of "no visible emissions" is one which appeals to the staff, but is thought to be slightly premature for Oregon at this time. The State of Maryland adopted a general zero visible emission standard in 1970 and was the first agency to do so. Maryland's experience with the standard is expected to be closely watched for the next few years, and will undoubtedly begin to be emulated around the country if it proves practical and effective.

Applied to the board products industry, a no visible emission standard would probably require about the same degree of control as the proposed limitations, but several problems would need to be resolved. These include the problem of large particles contributing to a fallout problem, but not necessarily being part of a visible plume, and minor sources for which control would not be required under the present proposal, but which may have a light visible emission. Presumably, after a number of particleboard and plywood plants have complied with the mass emission limitations, the feasibility of adopting a no visible emission standard could be evaluated.

Another letter received since the Hearing was a complaint by a resident of Parkdale against the U. S. Plywood-Champion Papers plywood mill at Dee, citing the company's open burning, chip storage, and sawdust emissions as being a source of nuisance. The staff has not surveyed this particular plant, although Department files show evidence of concern regarding the open burning dating back to March, 1968.

RECOMMENDED CHANGES:

Post-hearing review of the regulation by Department Administration has indicated that for purposes of clarity of the Department's intentions, an outside date for compliance with emission standards would be desirable. Such a date will provide firm guidelines for industry and staff in negotiating compliance schedules required by the standard. A date of December 31, 1973 would be considered a reasonable time table. It is therefore recommended that the following sentence be added to Section II (3) of the Section on plywood and veneer, Section IV of the particleboard rules, and Section IV under hardboard:

> "The schedule shall provide for compliance with the applicable provisions at the earliest practicable date, but in no case shall final compliance be achieved by later than December 31, 1973.

The staff has concluded that existing Sections on "alternative means of control" (I (3) under particleboard and I (3) and IV (4) under hardboard) provide sufficient latitude for dealing with the case of remotely located plants or other special circumstances where full enclosure of truck dump and storage areas or treatment of hardboard tempering ovens may not be warranted. Therefore no changes are recommended relative to the problems of remote locations.

CONCLUSION:

The staff recommends adoption of the proposed regulation with the single change suggested above.

COALITION
FOR
CLEAN
AIR OREGON/WASHINGTON • 830 MEDICAL ARTS BUILDING • PORTLAND, OREGON 97205
PHONE (503) 224-5145

March 1, 1971

Mr. B. A. McPhillips, Chairman
Environmental Quality Commission
720 Portland State Office Building
P.O. Box 231
Portland, Oregon 97207

Dear Mr. McPhillips:

The consulting engineer for the Coalition for Clean Air, Mr. Carl Petterson, has reviewed your proposed regulation for the particle board industry. He has informed us that the degree of control you are asking is "well within the state of the art."

Therefore, the Coalition supports completely your proposed regulation. We realize that you have experienced particularly heavy opposition from the industries concerned, which is perhaps to be expected. Nonetheless, we urge that you adopt, at your March meeting, the regulation recommended by your staff.

Since the Northwest Environmental Defense Center, Oregon Citizens for Clean Air, and the Oregon Environmental Council are members of the Coalition, we speak for them. They will not be submitting separate testimony.

Sincerely yours,
Elizabeth Wieting
Elizabeth Wieting, Chairman

BOISE CASCADE TIMBER AND BUILDING MATERIALS
ENGINEERING AND CONSTRUCTION DEPARTMENT
P. O. Box 8328 • Boise, Idaho 83707
Telephone (208) 385-9478

March 4, 1971

Department of Environmental Quality
Air Quality Control Division
State Office Building
1400 S.W. 5th Avenue
Portland, Oregon 97201

Gentlemen:

SUBJECT: Proposed Regulations -- Air Contaminant Emissions from Board Products Industry

In accordance with the presentation made on February 5, 1971, by Boise Cascade Corporation to the Environmental Quality Commission, Boise Cascade is pleased to submit further information regarding particleboard particulate emissions.

Particleboard is a wood panel product utilizing wood shavings, wood chips, and sawdust bound together with synthetic resin under heat and pressure. Uses for particleboard include flooring for residential and commercial construction, furniture and cabinet manufacture with application as a lumber and plywood substitute. Most of the wood fiber material going into Oregon particleboard is waste from lumber and plywood plants that was previously disposed of by burning or discarded in other ways.

The particleboard manufacturing process requires 3,200 pounds of raw material to produce 1,000 square feet (M) of product. The process begins with unloading the raw material which is then refined, dried, and blended with resin and wax. The blend is then formed into a mat which is pressed into a panel. The panel is then trimmed to size and sanded to thickness. Pneumatic conveyance means are utilized throughout the processes.

Boise Cascade's modern La Grande particleboard plant now produces 70,000,000 square feet of particleboard annually (2,000 carloads) from material formerly wasted and is currently being expanded so that as of April 1971 annual production capability will be 170,000,000 square feet (4,800 carloads).

Particleboard emission information was developed based upon equipment installed at the La Grande plant and the raw material pneumatically transferred within this facility. Calculations reflect the installation of a Rader Pneumatics filter on the sander dust cyclone. First, a sieve analysis was made on the raw material entering each cyclone. Knowledge of the total amount of raw material in each pneumatic system was available from production data. Utilizing this data, along with empirical curves on cyclone emissions as established by cyclone suppliers, has resulted in the calculation of the figures shown below:

1.	Emission from non-dryer sources	24,180 lb/24 hrs.
2.	Emission from dryers	5,500 lb/24 hrs.
3.	Total emission (from ten major cyclones)[1]	29,680 lb/24 hrs.
4.	Production	460 M/24 hrs.[2]
5.	Raw material utilized	3,200 lb/M
6.	Emission rate from non-dryer sources[3]	53 lb/M
7.	Emission rate from dryers[3]	12 lb/M
8.	Total emission rate[3]	65 lb/M

Figures developed from actual test data at a midwestern particleboard plant tend to corroborate these calculations. The midwestern plant test results showed a total emission rate of 60 lb/M exclusive of boiler plant and minor source emissions. The dryer emissions at that plant amounted to about 50% of the total measured emission. Although this rate for dryer emission is significantly greater than Boise Cascade Corporation's La Grande plant computations, the correlation may be considered valid in view of testing difficulties and the imprecision of empirical curves.

Assuming that available particulate control equipment can substantially reduce emissions from non-dryer sources to virtually 100% removal, there still remains an uncontrolled 12 pound per thousand square feet of product emission from dryer sources. Control of dryer source particulate emissions that are mixed with water vapor has yet to be demonstrated with today's technology. We have been in contact with Chemical Construction Corporation, a Boise Cascade Subsidiary, regarding this problem. Utilization of baghouses or other filters on dryer sources raised serious questions as to the effectiveness and safety of the device. Not only do large quantities of water vapor hinder baghouse operation, but the threat of periodic fires in the dryer causes a severe explosion hazard which must first be solved.

[1]Minor miscellaneous materials handling systems are not included.
[2]3/4" basis.
[3]Daily emission divided by production

In summary, it would appear that Boise Cascade Corporation, under any circumstance, cannot presently reduce its particleboard emissions below the 12 to 15 pound threshold.

The above analysis reflects testing of in plant operations only. No determination as yet has been made concerning the effect of wood fiber particulate emissions on surrounding ambient air quality. Boise Cascade Corporation favors and supports continued research into this and other aspects of the problem of particulate emissions.

Should you have questions regarding the above test result data, please do not hesitate to call upon us.

Respectfully submitted,

Wallace N. Cory

Wallace N. Cory, P.E.
Environmental Engineer

WNC:pj

cc: Glen F. Odell
Thomas Donaca
H. M. Patterson

APPENDIX A

Staff Comments on Individual Testimony

1. John M. Hess, American Plywood Association

Mr. Hess's testimony related exclusively to the question of veneer dryers. The proposed regulation sets a maximum date of July 1, 1971 for the Department to formulate standards and schedule a hearing on veneer dryer emissions. Assuming results of the American Plywood Association funded study by Washington State University are made available to the control agencies by March 1, 1971 as promised, the agencies will have 4 months to evaluate the results and draft standards. The staff considers this sufficient time, although a delay of one or two months would not be unacceptable. No change is recommended.

2. Harry H. Bartels, U. S. Plywood

Mr. Bartels raised a number of objections to the regulation, responded to as follows:

(a) Regulations are not consistent with Regional Authority standards. This issue was discussed at length in the staff presentation.

(b) Standards not "based on supportable facts developed by a thorough industry-wide analysis." It is difficult to know how much study and analysis would be necessary to satisfy industry; it is the staff's opinion that the data cited in the staff report and in this memorandum provide sufficient evidence of the ability of industry to comply.

(c) The section on hardboard tempering ovens "specifies that a particular piece of equipment be used." This is not true, as the regulation provides for alternate methods of control to be submitted.

(d) The deadline of July 1, 1971 for submission of compliance schedules is not reasonable. With the possible exception of particleboard rotary dryers, control methods for sources covered by the proposed regulation are straightforward and well known. Four months is a reasonable time to formulate control programs for these sources. Where particular problems do exist, it may reasonably be expected that an acceptable compliance schedule would include dates for study, analysis, engineering, and final control.

(e) The regulations are implied to be "frantically conceived." Emission standards applicable to the board products industry were first proposed by the DEQ in May 1970 in the form of a process weight standard. Subsequent to the EQC's decision to not adopt that regulation, the staff began drafting the present standards with a first draft submitted to the Regional Authorities for review in August 1970. A meeting with 17 representatives of industry, including Mr. Bartels, was held on September 24, 1970. Written industry comments were received and taken into account in formulating the final draft before the hearing was scheduled early in January. It is difficult for the staff to concede that a regulation developed over a 7 month period is "frantically conceived."

3. Matt Gould, Georgia Pacific Corporation

Mr. Gould's comments were of general nature and introductory to Mr. Tretter's statements. The adverse economic impact of the regulations was cited without any quantitative information offered. The staff report estimates of emission and control potentials were described as "inspired guesswork." In response, the staff would point out that the cost and emission estimates included in the staff report are based on the best available data.

4. V. J. Tretter, Jr.

Mr. Tretter's statement emphasized two basic assertions. The first was that the emission standards in the regulation have not been properly related to ambient air levels. This is a fair complaint, in that the staff report did not attempt to project specific improvements in air quality beyond an estimate of the overall reductions in particulate emissions, and stating that both suspended particulate and particle fallout would be affected. The sampling program needed to improve the estimates and establish a thorough knowledge of the relationship between ambient air quality and emissions from each board products industry source would require a great deal of time and expense, delaying control of the source by at least a year or more. In the opinion of the staff, there is ample justification for control in the absence of more sophisticated information, on the basis that emission rates are known, are large, and that adequate control technology exists at the present time.

Mr. Tretter's other major point, and one of the few constructive suggestions in all the industry testimony, is that an alternative to the proposed regulation exists in the form of enforcing ambient air standards on specific plants. This argument ignores the basic philosophy of air pollution control that has emerged in Oregon and across the country in recent years; i.e. that each source of pollution is to comply with quantitative emission standards, each requiring a high level of control, that in the aggregate assure that ambient air quality standards are met on a regional basis.

Ambient air sampling (primarily fallout) formed the basis for the old Sanitary Authority's early efforts to abate wigwam waste burners. An immense amount of staff time was taken up collecting and analyzing samples, and the program was not noted for its speedy resolution of large numbers of problems. The burner program is going much better since the policy of enforcing visible emission standards was instituted. The staff does not wish to repeat this particular learning experience with the board products industry.

5. Frank Trocino, Bohemia Lumber Company

Mr. Trocino's testimony related primarily to the difficulties of controlling his particular particleboard plant to comply with the proposed regulation. In the opinion of the staff, the statement contained technical inaccuracies, showed an unawareness of many non-revolutionary control techniques, and greatly overemphasized the control difficulties. The staff would note, however, that the particle dryer at the plant in question is a non-conventional fluidized bed dryer that may require a different, though not necessarily more difficult, control approach than the more common rotary dryer.

6. Ralph Peinecke, Boise Cascade Corporation

In a series of introductory comments Mr. Peinecke described the emission control program at the Boise Cascade particleboard plant in La Grande. This new plant is considered by the staff to be exemplary of most of the control features the regulation is designed to promote, including fully enclosed truck dump and storage areas ($250,000), enclosed belt conveyors, and a filter tube controlled sanderdust handling system ($45,000). The staff's initial evaluation of the plant is that it will be in compliance with the standards after control of the dryer cyclones.

Mr. Peinecke stated that Boise Cascade had done some "preliminary study and investigation" from which they have concluded that the particleboard standard is not feasible. When contacted by telephone to discuss the nature of the study, Mr. Peinecke stated that emissions for uncontrolled cyclones were estimated using the assumption that for 1000 ft^2 of particleboard, 3200 lb of material is handled in four cyclones, each of which loses 1/2% of the total material throughout, for a total emission of 64 lb/1000 ft^2. The staff considers this type of analysis unsatisfactory in that it assumes equal losses from sanderdust cyclones as from chip handling cyclones - a ridiculous assumption. The staff believes that the actual cyclone sampling data cited in the staff report is more representative of industry conditions. However, even with an emission rate of 64 lb/1000 ft^2, the required reduction of 95% should be readily achievable by use of air recycling and baghouses that commonly achieve collection efficiencies in excess of 99%.

7. George Mohr, Forest Industries

Mr. Mohr described the data used by the staff to arrive at the proposed emission limitations as "semi-scientific and incomplete," citing the lack of a uniform testing procedure as an indication that "the maximum limits were arrived at somewhat arbitrarily."

The emissions data included in the staff report is based on sampling results submitted by plywood and particleboard plants. Without exception the sampling was accomplished by the consulting engineering firm Cornell, Howland, Hayes and Merryfield (CH_2M) and utilized the same equipment and methodology at each plant. Although the staff has not conducted a detailed evaluation of the CH_2M methods, we are not aware of any major discrepancies in them. It is anticipated that the sampling procedures that will be used to determine compliance with the regulation will be compatible. Adoption of test methods concurrent with emission standards has not been done for other industries and is not recommended in the present case.

Mr. Mohr cites the difficulty of control, particularly of particle dryers. The staff recognizes dryers as the most difficult source, but is confident that a 90% reduction, which is postulated as a minimum acceptable control program, can be achieved using commercially available equipment. It is anticipated that compliance schedules submitted by July 1, 1971 will reflect the additional problems of analysis and engineering the control systems for dryers and will allow time for adequate analysis and engineering. For example, the Duraflake Corporation has committed itself to meet a regulatory deadline of the Mid-Willamette Valley Air Pollution Authority, to control its dryers by July 1, 1973. Such a date would be deemed adequate for control of dryers under DEQ jurisdiction.

8. Oliver Morgan, Weyerhaeuser Corporation

Mr. Morgan's statement, like Mr. Tretter's, argued in favor of delaying adoption of emission standards pending an evaluation of the effects of board products industry emissions on ambient air quality. Although the staff agrees that this would be an ideal approach, we believe that the sampling program and time delay required would not be warranted, and that the final conclusion as to control requirements would be unchanged -- i.e. that major sources including sanderdust, particle dryers, fine particle handling systems, and truck dump and storage areas would still require control. These are major sources of fine and coarse particulate matter that must be controlled in any area-wide program to meet ambient air standards.

Mr. Morgan cites some particle size and settling rate data in support of a contention that most of the particulate matter emitted from a particleboard plant falls out close to the plant and "would at worst constitute a nuisance in the immediate area, but have

little effect on the ambient air of the region." While the staff does not necessarily endorse the technical validity of this argument, it is nevertheless interesting to investigate the consequences of the claim in terms of calculated particle fallout rates.

It is stated that 15% of the total plant emissions are in the size range of 10-20 microns, and have a theoretical settling rate such that they will fall to earth in from 13 to 51 minutes. Assuming a typical annual average wind speed for a Willamette Valley location (Salem) of 7.0 mi/hr, the particles will travel from 800 to 3100 feet before falling out. It would not be unreasonable to suggest that a distance of 800 feet would be off the plant property of most particle board plants. Thus, under average conditions 15% of the total emission will fall out off the plant site in an area bounded by two concentric circles 800 ft. and 3100 ft. in diameter, an area of 0.25 square inches. Given a total emission of 180 lb/hr (one of the examples in the staff report), our hypothetical plant operating 3 shifts/day would generate 27 lb/hr or 650 lb/day or 19,500 lb/month of fallout that would fall in a .25 square mile area, resulting in an average particle fallout rate of 39 ton/sq. mile/month. The applicable state ambient air standard, for particle fallout with a high proportion of wood waste, is 14.3 ton/sq. mile/month for industrial areas and 10 ton/sq. mile/month for commercial and residential areas.

Thus a particleboard plant emitting according to the data submitted by Mr. Morgan would, according to the theory suggested by his testimony, cause the ambient air standard for suspended particulate to be exceeded by a wide margin. Emission reductions on the order of 75% would be required to achieve compliance.

Theory aside, however, there is no question but that particleboard plants do cause community nuisance problems, as evidenced by past and present problems in Albany, Medford, and Bend. The proposed standards are designed to provide uniform application of reasonable controls, to resolve such problems and prevent their occurrence throughout the state.

9. A. L. Robb, U.S. Gypsum Company

Mr. Robb's written statement contained two basic arguments pertaining to the hardboard provisions. First, it was suggested that the requirement for treatment of tempering oven emissions should be put in terms of "preventing the emission of odors detectable on property not under the control of the hardboard plant operator," leaving the means for attainment to the individual plants. Secondly, it was suggested that adoption of a particulate emission standard for hardboard plants is inadvisable at this time in view of the limited knowledge of emissions and the apparent fact that most hardboard plants are presently in compliance with the proposed limitations.

With regard to tempering ovens, the requirement for control without regard to ambient effects was based on the staff's evaluation of the tempering process and the experience with the Coos Bay plant. It is judged highly unlikely that any oil tempering process could fail to emit odorous hydrocarbons detectable off the plant site, and in fact no industry spokesman, either in informal meetings, or in written testimony, made claim to a tempering process that did not emit odors. The staff does, however, consider that the "alternative controls" section of the regulation offers sufficient latitude for plants that can demonstrate that odors are not perceived off plant property under the most adverse circumstances, to forego installation of actual controls.

As for U.S. Gypsum's particular economic problem with fume incineration, the staff has provided the company with information on equipment with a much lower capital cost but higher operating cost, which is expected to offer considerable economic advantage to the firm which does infrequent tempering.

The staff has no particular argument with U.S. Gypsum's comments on the particulate standards for hardboard production. As the staff report indicated, what little information is available indicated that the proposed standard of 1.0 lb/100 ft^2 production will not require controls on most existing plants. The Mid-Willamette Valley Air Pollution Authority, however, has reported a dry-process hardboard plant with emissions in excess of 100 lb/hr which must be reduced by about 75% to comply with MWVAPA standards. The staff's primary motivation for proposing the limitation was to provide a consistent objective standard for all sources within the board products industry, and 1.0 lb/1000 ft^2 was selected as being compatible with present Regional Authority process weight standards.

10. H. E. Sanderson, International Paper Company

Mr. Sanderson's written statement raised the same general question asked in earlier testimony regarding the sufficiency of information on which the standards are based. The staff response to this issue is given in the above discussions.

APPENDIX B.

John M. Hess; Vice President, Administration; American Plywood Association

Presentation to the Oregon Environmental Quality Commission - 10:00 a.m., February 5, 1971 - Auditorium, 2nd Floor, Public Service Building, Portland, Oregon

(3)

Gentlemen:

We would like to take this opportunity to report to this Commission on investigations being made on behalf of the plywood industry relative to emissions from veneer dryers. The regulation which we are considering today includes a date for scheduling a public hearing for the purpose of determining the feasibility of adopting an emission standard for particulate and gaseous emissions from veneer dryers.

The plywood industry in Oregon consists of 81 manufacturing plants, and in 1970 they accounted for 51% of the softwood plywood manufactured in the United States. Oregon alone produced more plywood than all the other states combined. Total production in Oregon in 1970 was 7.5 billion square feet (3/8" basis).

The plywood industry has been very much concerned with the nature of emissions from veneer dryers and their effect on the environment. This concern has been demonstrated by a substantial commitment in time and money by all elements of the softwood plywood industry.

A thorough study of the many variables affecting dryer emissions has been conducted for the industry by Washington State University. A final report on this work is due on February 28, 1971. Copies will be made available to all air pollution control agencies.

During the course of this work it has been the policy of the industry participants to seek full and open liaison with representatives of the air pollution control agencies. In the past year and one-half there have

been six meetings held jointly with representatives of control agencies. Their input to the study has been most valuable.

Industry principals are aware of the consequences on the environment of prolonged discharge of any type of waste materials. At the same time they are aware that priorities must be established so that available industry funds are channeled into problem areas having the most urgent needs.

The industry's objective is to proceed in an orderly, logical manner, armed with facts, and to arrive at realistic solutions - solutions which are justified by the problem.

From preliminary results, it appears that the hydrocarbon emissions from veneer dryers, while being dependent upon a number of factors, are less than originally anticipated - in the order of five to ten pounds per 10,000 square feet of plywood (3/8" basis). The actual quantities ranged from under 1 pound up to 11 pounds, depending on species, dryer operation, etc.

Opacity in some cases exceeds 40%, but the average for the 14 dryers in the study was only 23%. Some control is possible through operating adjustments. More research is needed to determine the extent of reduction in opacity through improved operation.

Currently available equipment proposed for control of dryer emissions is costly. The installed cost of the lowest priced equipment that's been suggested has been estimated to be at least $68,000 per dryer. This estimate is based on certain theoretical conditions and, in some situations, could be much lower than the actual installed cost. The effectiveness of this equipment has not been determined. The total cost to the Oregon plywood industry would be $14.5 million. Amortization of these initial costs,

together with operating costs, would add 3.5 million dollars annually to the cost of production of softwood plywood in Oregon.

An in-depth evaluation of the results of the study of dryer emissions is now underway. Analyses of these research findings in the context of total air quality and air quality standards are being pressed to early completion. In the meantime, until more definitive objectives are established, this work will be given precedence over the study of specific control devices.

There has been a considerable investment by government and industry in time and effort to define the problem of veneer dryer emissions. We urge that hearings on dryer emission standards be scheduled to permit a realistic timetable and full utilization of this research so that practical requirements can be established.

Testimony given at a public hearing to the Environmental Quality Commission, Department of Environmental Quality of the State of Oregon, February 5, 1971.

I am Harry H. Bartels, Technical Services Manager for the Oregon-Washington operations of U. S. Plywood, a Division of U. S. Plywood-Champion Papers Inc. U. S. Plywood has manufacturing complexes and product distribution warehouses scattered throughout the state.

In one respect it is difficult for us to argue against the adoption of the proposed regulations pertaining to air contaminent emissions from the wood products industry. The facts are that these particular regulations are less restrictive than those of at least one Regional Authority. This situation is not a good one, and we do not mean to imply that either set of regulations are necessary for the industry, at least on a crash basis or at this particular time.

We recognize that certain air quality problems exist at various places in the industry, but we are not necessarily in agreement with the proposed regulations in respect to the magnitude of these problems. We acknowledge our responsibility in solving all environmental problems which exist, and pledge that a solution will be found if it is at all possible within economic feasibility. We ask only that the approach to problems be based on supportable facts developed by a thorough industry-wide analysis of the problems. The industry sponsored veneer dryer emission study will, we feel, develop the facts that are necessary to assess this particular problem. These facts, incidently, appear to be related to similar problems from fiber rotary dryers, hot presses and lumber dry kilns. Rotary fiber dryers and hot presses, however, have problems peculiar to that equipment, but we simply don't know all of the facts of those particular problems necessary to the solution of those problems.

We object to any regulation which specifies that a particular piece of equipment be used. I refer to the mention of fume incineration control on hardboard tempering ovens. This type of equipment may well prove to be the ultimate solution to this emission problem; however, if it does I am certain that U. S. Plywood will be forced to discontinue tempering at our hardboard manufacturing plant at Dee, Oregon.

We recognize that a discussion of compliance schedules with the authorities is necessary and an understanding in writing is desirable, but we do not feel that the submission of detailed plans and specifications are necessary or desirable. The authorities should be active in the area of communication designed to be helpful in solving our problems for the least possible cost. Beyond that the authorities should be interested only in the end results of the effectiveness of any control mechanism.

Since all of us are faced with problems other than air quality at our plant sites we respectfully submit that an over-all atmosphere of reasonableness prevail in allowing industry to solve their problems. We do not feel that a deadline of July 1, 1971 for the submission of compliance schedules is reasonable. We propose, rather, that the necessary discussions and written agreements enjoy a six month compliance period from the date of the adoption of any regulation. Economic conditions have forced many firms to delay needed replacement or modernization of production facilities, and our engineering staffs are operating at minimum levels. We need reasonableness in respect to time limits in approaching and solving all recognized environmental problems.

When I consider - and I shudder when I do - the individual people problems of

litter, drainage of sewage into water supplies, and the emission problems from a multitude of nice, warm evening wood fires at home; I wonder why so much pressure of rules and regulations and deadlines should be directed at industry.

Gentlemen, we question whether any frantically conceived regulations or compliance schedules imposed on industry alone will solve our environmental problems any sooner or better than would a reasonable approach. We simply cannot afford the inflationary expenditures of control equipment today which may become antiquated tomorrow.

Thank you, gentlemen, for the priviledge of being heard.

STATEMENT BY GEORGIA-PACIFIC CORPORATION

(4)

BEFORE THE OREGON ENVIRONMENTAL QUALITY COMMISSION

FEBRUARY 5, 1971

By V. J. Tretter Jr.

-OPENING REMARKS-

Air is a resource just as water, petroleum, and timber are resources. To maintain and improve the quality of the air resource, we must practice airshed management to derive maximum benefit. Maximum benefit must be arrived at by detailed analysis of the following parameters:

1. The concentration of the contaminant that is to be controlled and its physical and chemical properties.

2. The potential toxic properties, residence time in the atmosphere and synergistic effects.

3. Degree of reduction of the contaminant needed and the potential benefit to society from the reduction.

4. The control technology available and the cost of the needed reduction.

Analysis of the various factors mentioned is very complex since many variables affect dispersion of a contaminant in the ambient air. When all the parameters are evaluated, a rational decision based on the cost of emission control versus the benefit to society can be made.

Determining the necessary degree of reduction of the particles in the ambient air and assigning a value for the benefit to society of the reduction is also highly complex. When a potential health hazard or a significant economic loss is involved, an evaluation can be made fairly

readily. In the case of aesthetic problems, a value judgment must be applied as to the benefit to society based upon the best judgment of the agency establishing regulations. It is essential that the benefit to society bear some realistic relationship to the burden placed on our economic system which supplies the basic needs that are an integral part of our quality of life--our environment.

In the case of the proposed wood products standards, the proposed regulations are to control emissions of wood fiber and to set a date for adoption of emission standards for veneer dryer off gases.

You have received (or will receive) testimony from the American Plywood Association regarding the preliminary findings from the Washington State study on veneer dryer emissions. Preliminary results of the testing indicate that only five to ten pounds of hydrocarbons per 10,000 square feet of 3/8-inch of veneer dried are emitted. Indications are that some existing dryers exceed existing opacity standards, although it may be possible by dryer adjustments to reduce the visible emissions to within Ringelmann requirements. After a detailed evaluation of the WSU report is made that will be available at the end of this month, it may be concluded that dryer emissions are so slight that no control standard is currently necessary.

The emissions of wood fiber particles from the board products industry is not presently well defined. We do not know what the particle size distribution of the fibers or how much of the fiber remains in the atmosphere. Neither do we know the amount of it that falls out within the perimeter of the plant. The staff have estimated the total amount

of wood fiber entering the atmosphere in Oregon. It is our considered opinion that these results may not hold up if a detailed sampling program of the emissions sources were conducted to confirm their rough estimate.

It is accepted that there have been occasional complaints regarding fallout of wood particles on residential property surrounding plywood plants, although it is not known whether the fallout was due to inadequate collection efficiency of cyclones or was due to a plugged cyclone or poor maintenance practices. The improvement on ambient air quality to be gained by adding additional control equipment has also not been demonstrated by the staff. No data has been submitted from ambient air sampling stations which defines the quantity of wood particles collected versus the presence of other particulate materials. Because the particle size distribution of the material emitted is not known, it is not possible to determine with any degree of certainty how much the fallout and suspended particulate in a given area will be reduced. Since all the emissions from the board products industry is near gound level, an ambient air sampling program should provide data for accurate prediction of any improvement of the proposed standards on ambient air quality.

Because of the lack of correlation between the proposed reduction in emissions and their cost ratio, it is unwise to establish emission standards as proposed at this time. Without more valid data, premature adoption of these standards may result in no significant improvement in ambient air quality, thus the investment in installing unnecessary equipment will be misplaced application of resources in a time of economic adversity.

There are two basic approaches which can be taken for setting meaningful standards. The best approach would be to enforce existing ambient air quality standards and to require plants to show that fallout and suspended particulate concentration immediately outside their perimeters does not exceed the ambient air quality standards. This is feasible with a ground level emission, since the worst conditions will prevail immediately adjacent to the plant. Specifically, this could be done by using an approach now being used by Texas and Arkansas. They are using a downwind sample to determine whether or not the plant is in compliance. This approach of enforcing ambient air standards would then require control where the plant was actually exceeding the ambient air quality. Plants that have adequate control will be permitted to continue to operate without installation of superfluous pollution control equipment.

An alternative approach would be to require plants to sample their emissions and report this data to the State in order that the emissions from the plants could then be correlated with the ambient air quality. We would also recommend that if this approach were taken, standards could be based on population density or air flow patterns. Where proper dispersion exists in remote areas, mills located in these areas would be required to install less sophisticated pollution control equipment than plants located in highly metropolitan areas. This concept is presently being used in New York State and fits in well with proposed zoning requirements that limit industrial locations to specific locations or zones.

-CLOSING REMARKS-

The Oregon Environmental Quality Commission and their Department of Environmental Quality is to be congratulated on the fine job that they have done in controlling pollution in the State of Oregon. Historically they have provided leadership to other states in the United States. Georgia-Pacific recognizes the need for strong pollution control laws and has supported adoption of these laws and their strict enforcement. We are convinced, however, that in the case of proposed board products standards that an unjustifiable burden will be placed on the wood products industry in Oregon. This industry is being placed in an ever increasingly poor competitive position with the southern states. These standards should be withdrawn for an in-depth re-evaluation of all of the factors that we have brought to your attention.

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

(Read by Mr. Peinecke)

February 5, 1971

Department of Environmental Quality
Air Quality Control Division
State of Oregon
State Office Building
1400 S.W. 5th Avenue
Portland, Oregon 97201

Re: Proposed Regulations - Air Contaminant Emissions from Board Products Industry

Gentlemen:

Boise Cascade Corporation respectfully requests that your Department and the Commission reconsider the requirement set out in Article IV 2 of the November 24, 1970 draft of the proposed regulations specifically pertaining to "Emissions of particulate matter from particleboard plant sources...."

Preliminary study and investigation by this Company indicates that present technology does not provide capable means for meeting the standard proposed that emissions from all sources within a particleboard plant not exceed "...3.0 pounds per 1,000 square feet of particleboard produced on a 3/4 inch basis of finished product equivalent."

In order that Commission may consider appropriate alternatives to the standard referred to above, this Company commits to continue its cooperation with the Commission. To this end, Boise Cascade Corporation will make available to your Department and the Commission pertinent data resulting from present study and investigation. This will be submitted to you, together with a recommendation as to the minimum standards that can be reasonably achieved as the result of implementing presently available technology

for reducing particleboard plant emissions.

Thank you for your consideration of this request.

Very truly yours,

Ralph Peinecke
Manager - Operations Development

No. 6 (Read by Mr. Mohr)

MY NAME IS GEORGE MOHR. I AM WESTERN DIVISION PARTICLEBOARD MANAGER AT FORREST INDUSTRIES LTD. WE HAVE PARTICLEBOARD PLANTS AT BROWNSVILLE, ROSEBURG, AND MEDFORD.

AS OREGON CITIZENS, WE AGREE THAT OUR ENVIRONMENT MUST NOT BE ALLOWED TO DETERIORATE. WE ALSO RECOGNIZE THAT EMISSION REGULATIONS MUST BE ADOPTED AND ENFORCED, IF PRESENT ENVIRONMENTAL CONDITIONS ARE TO BE IMPROVED.

AS INDUSTRIAL PRODUCERS, WE ARE CONCERNED ONLY THAT THE ADOPTED CONTROLS BE PHYSICALLY PRACTICAL AND THAT THE TIME SCHEDULE ESTABLISHED BE REASONABLE.

WE FIND IT DIFFICULT TO ACCEPT THE LIMITS PROPOSED IN THE DRAFT PRESENTED FOR YOUR CONSIDERATION BY THE STAFF. WE FEEL THAT THE DATA USED TO ARRIVE AT THESE LIMITS IS, AT BEST, DESCRIBED AS SEMI-SCIENTIFIC AND INCOMPLETE. OUR OWN ATTEMPTS AT EMISSION TESTING HAS PROVEN TO US THAT THERE IS NO UNIVERSALLY AGREED UPON TESTING APPARATUS PROFILE NOR IS THERE A STANDARD TEST PROCEDURE. WITH THESE SCIENTIFIC DEFICIENCIES EVIDENT, WE FIND IT DIFFICULT NOT TO ASSUME THAT THE MAXIMUM LIMITS WERE ARRIVED AT SOMEWHAT ARBITRARILY.

WE CONTEND THAT THE PROPOSED REGULATION IGNORES THE ADAPTABILITY PROBLEMS THAT MUST BE OVERCOME IN APPLYING EXISTING EMISSION CONTROL EQUIPMENT TO OUR INDUSTRIAL PROCESS. MODERN PARTICLEBOARD PRODUCTION IS A SOPHISTICATED PROCESS. TO REACH THE PROPOSED LIMIT OF 3.0 POUNDS OF EMISSION PER THOUSAND SQUARE FEET OF PRODUCTION, WOULD REQUIRE DESTROYING PROCEDURES THAT HAVE TAKEN 15 YEARS TO DEVELOP.

WE SUBMIT THAT WE DISAGREE WITH THE SCOPE OF SECTION 3, SUBSECTION II, SINCE IT INCLUDES THE DRYERS USED IN PARTICLEBOARD PRODUCTION. WE KNOW OF NO EXISTING EMISSION CONTROL MECHANISM THAT IS SUITABLE FOR USE ON THIS EQUIPMENT. WE WOULD FIND IT VERY DIFFICULT TO TELL YOU BY JULY 1, 1971, EXACTLY WHAT WE INTEND TO DO WITH THESE UNITS.

WE URGE THE COMISSION TO INSIST THAT STANDARD TESTING EQUIPMENT AND STANDARD TESTING PROCEDURES BE ADOPTED FOR TESTING BOARD PRODUCT PLANT EMISSIONS. WE ALSO URGE THAT EMISSION LIMITS BE ADOPTED, BASED ON THESE STANDARD PROCEDURES, THAT MAY BE REACHED BY A PRODUCER USING REASONABLE EFFORTS TO COMPLY. WE FEEL THAT THE BENEFITS TO BE OBTAINED BY THESE CHANGES WILL BE FOUR-FOLD:

1. THE COMISSION OBJECTIVES OF IMPROVING AIR QUALITY WILL BE ATTAINED.
2. STAFF MEMBERS WILL FIND ENFORCEMENT AND VIOLATIONS EASIER TO DEFINE.
3. PARTICLEBOARD PRODUCERS WILL FIND IT POSSIBLE TO MEET THE REQUIREMENTS OF THE REGULATIONS.
4. WE WILL ALL BE ABLE TO DEFINE OUR POSITIONS IN COMMON SCIENTIFIC TERMS.

(7)

PROPOSED REGULATIONS FOR

AIR CONTAMINANT EMISSIONS FROM BOARD PRODUCTS INDUSTRIES

Name: Oliver P. Morgan

Title: Director of Environmental Resources
for Oregon and California

Representing the Weyerhaeuser Company
in the presentation of this statement
at the public hearing February 5, 1971

On March 27, 1970, the Environmental Quality Commission adopted ambient air standards for particulates as provided in federal legislation. These standards were in conformance with criteria published by the Department of Health, Education and Welfare. The Department also has published a document entitled "Guidelines for the Development of Air Quality Standards and Implementation Plans." The document being considered today is a part of the implementation plan for attaining the air quality standard adopted last year.

There are three connotations implicit in the HEW "Guidelines" which we believe should be weighed carefully by the Commission in its deliberation on the proposed regulations. These are:

1. Attainment of the ambient air quality standard is the goal for which we are striving.
2. Emission regulation is a means of attainment where an ambient problem exists.
3. Different areas may require different levels of emission control.

These concepts are basic to air quality management. Emission controls should be designed to provide compliance with air quality standards. The establishment of uniform statewide emission regulations subordinates the primary goal of air quality management to the implementation procedure.

These concepts are not only logical but also practical. They provide for systematic and planned air quality improvement on a priority basis. For example, a given individual source may be entirely acceptable in one area. The air quality would meet ambient standards, so more efficient control systems

would not be necessary. The same source could be totally unacceptable in another area where air quality did not meet standards. In this instance more efficient controls would be required. It would seem imprudent to require the same standard in each instance.

The wood products industry is not financially healthy today. Therefore, it is impossible to address the problems as rapidly as we would prefer. Consequently, each plant must stand on its own merits within the economic and environmental framework. We are actively involved in attempting to reduce other environmental or pollution problems that are also taxing our financial resources to react as rapidly as the demands are being made.

We have done enough testing to know that the proposed regulations present a real challenge to present technology. It would cost a half million dollars at one of our plant sites to control to the level of the proposed regulation.

Particle size determinations of the emissions at this plant show 80% of the mass to be 20 micron size or greater. At usual emission heights, this portion would remain in suspension no more than 13 minutes. Particle sizes of 10-20 microns were 15% of the total. These would settle out within 51 minutes as determined from tables of settling rate versus particle size. With over 80% of the material falling out in less than 15 minutes, this would at worst constitute a nuisance in the immediate area, but have little effect on the ambient air quality of the region. Nuisance conditions should be treated as required by local conditions.

We frankly admit that we have some relatively small problems in the particular areas identified in these proposed regulations that need attention. We are working on the problems and intend to do something about them with or without the

adoption of these standards. Our objection is to the implied requirement to tackle the same specific problem at all units in the same time span, without regard for specific needs. Such a rigid requirement can't help but result in the wasteful expenditure of resources (half a million dollars for one mill alone) and may even cause the premature closure of marginal facilities.

We recognize our need to know the emission levels from our mills. We fully recognize our responsibility to provide such information to the regulatory agencies when ambient air pollution exists. We both need this information to assess our contribution to ambient air pollution problems objectively. We will work with you to help identify unacceptable ambient conditions that need to be improved wherever we may represent a significant contribution. We are anxious to do our part to work with you or the communities to improve the total environment.

We respectfully request a delay in the adoption of these proposed standards until specific ambient problem areas are identified more thoroughly and a long range improvement program is developed for the specific geographical areas.

(8)

February 2, 1971

TO: ENVIRONMENTAL QUALITY COMMISSION
State of Oregon
720 State Office Building
1400 S. W. 5th Avenue
Portland, Oregon 97201

FROM: UNITED STATES GYPSUM COMPANY
pilot rock, Oregon 97868

SUBJECT: Proposed regulations pertaining to air contaminant emissions from hardboard production

INTRODUCTION

U. S. Gypsum Company (hereinafter called "Gypsum"), is in sympathy with the goal of establishing standards for emissions of air contaminants from the board products industries. Gypsum's only Oregon-based plant at Pilot Rock is in an area where air contamination is not presently a problem. Gypsum desires to see that it does not become a problem. With sixty plants in twenty-seven states Gypsum is concerned not only with state and local environment but with environmental quality on a national level as well. The following comments are offered in the spirit of cooperation to assist the Commission in achieving its goal in a manner acceptable to the public while giving consideration to the problems of the affected industries.

HARDBOARD TEMPERING OVEN EMISSIONS

One of Gypsum's concerns is the proposed Hardboard Manufacturing Operations Regulation III dealing with emissions from hardboard tempering ovens. This proposed regulation appears to adopt a particular method, i.e., fume incineration at certain designated temperatures, as the sole means of dealing with the problem. Gypsum submits that the Commission should establish a standard, i.e., preventing the emission of odors detectable on real property not under the control of the hardboard plant operator. The means by which this standard is achieved should be left to the affected industries.

It is submitted that proposed Regulations III 1, 2 and 3 are based upon the experience of only one Oregon plant (see December, 1970 Department of Environmental Quality, Air Control Division, explanation of Proposed Emission Standards, p. 8). Conditions at that plant and at other plants in Oregon may very considerably. For instance, Gypsum's Pilot Rock plant produces tempered hardboard only approximately eight hours out of every 168 hours the plant is in production. While an expenditure of $50,000 for installing a fume incinerator and the further cost of operating that incinerator may have been justified by the one Oregon plant referred to it may not be economically feasible for Gypsum to do so at Pilot Rock.

Additional study should result in other methods of control acceptable to the Commission. The Commission should establish standards, not methods by which conformity to such standards is achieved.

PARTICULATE EMISSIONS

Proposed Regulation II "Other Emission Sources" limits emissions of particulate matter from hardboard plant sources to one (1.0) pound per thousand square feet of hardboard produced on a 1/8 inch basis of finished product equivalent.

Gypsum considers the setting of that standard at this time inadvisable for the reason that the December, 1970, study of the Air Quality Control Division reveals that:

1) Little information is available concerning emissions from cyclones in hardboard manufacturing operations, and

2) It appears that most hardboard plants are presently in compliance with the proposed particulate emission limitation.

Gypsum suggests that further study be given this proposed regulation to determine:

1) If any hardboard manufacturers presently exceed the proposed limitation, and

2) If the proposed limitation is reasonable.

Gypsum submits as a general principle for the Commission's consideration that regulations should only be adopted to control

an activity which is offensive or harmful to the environment. If no existing hardboard manufacturer violates the standard proposed it follows that no environmental harm is occurring and that no regulation is necessary.

If the Commission does adopt a regulation on particulate emissions it should give consideration to the different manufacturing processes used in hardboard production. It should also define the sources within each of the different manufacturing processes which will be included in any measurement of particulate emissions.

As the Commission may know there are three different basic processes used in hardboard production they are:

1) Dry-felted process

2) Wet process

3) Wet-dry process

Gypsum's Pilot Rock Plant uses the "wet-dry process". It is the only plant in Oregon, and perhaps on the West Coast, using that process. Its production of hardboard is combined with the production of insulation or softboard. Gypsum is concerned that any regulation adopted by the Commission establishing a limitation or particulate emissions sufficiently define "Hardboard manufacturing" so that emissions, if any, from the softboard production not be included in the measurement of hardboard emissions. Obviously, a reasonable limitation of emissions from softboard manufacturing processes will be based upon different considerations and the one

pound per thousand measurement here under consideration might be unrealistic.

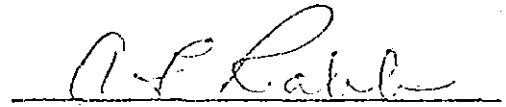
For this reason Gypsum urges the Commission to give further study to the subject of particulate emissions. In particular Gypsum suggests that the three basic procedures described above be delineated in any regulation adopted and that under the "wet-dry process" only emissions from the a) pre-dryer, b) press, c) bake-oven and d) humidifier, be measured.

CONCLUSION

Gypsum urges the Commission to adopt regulation setting standards for control of emissions rather than to adopt regulations setting procedures or processes to be adopted by the affected industries. Further, the Commission is urged to recognize the differences existing in the processes used to manufacture hardboard and to sufficiently define "hardboard manufacturing" so that emissions, if any, from softboard manufacturing are not included in any hardboard emissions limitation established by regulation.

Respectfully submitted,

UNITED STATES GYPSUM COMPANY

By 

A. L. Rabb
Works Manager
Pilot Rock Plant
Pilot Rock, Oregon 97868

(9)

STATEMENT REGARDING PROPOSED REGULATIONS TO THE OREGON ENVIRONMENTAL QUALITY COMMISSION, February 5, 1971

Quality of environment is important to all of us. Ambient air quality is the problem we are seeking to solve in these discussions and presentations today. Further the discussions narrow to the effect on air quality in the "board products" manufacturing segment of Oregon's industry.

Our problems need thorough and definitive identification before it is possible to attain solutions. Regulation standards should not be adopted without the necessary knowledge required to attain meaningful standards.

Standards or regulations must be mindful of possible harm to humans, animals and plant life. Consideration need be given to esthetic values and nuisance to others. Regulations must also consider the economic well being of Oregon, the ability to continue payrolls, to pay taxes, and continue to compete in the market-place with our products.

We can and will achieve our goals but it should be done on a planned cost to benefit basis. We must consider air quality, water quality, safety of our employees and others. However, all of this cannot be done on a crash basis, we need to weigh the problems and put first things first. Use of resource to accomplish our goals must be well planned.

Completion of the "veneer dryer emission" study will give us information which is required to evaluate the problem. We will have specific information on these emissions pertaining to quantities and kinds as they are emitted from various types of equipment and from different species of wood. The sample is large enough o be valid, yet analysis may indicate that other specific information is required.

General regulations leave much to be desired. All particulate, gasses (condensable & non-condensable) are not the same. Questions which need definition are:

1. Size of particle & composition of the emission by size?
2. What are fallout rates?
3. Is other than plant site affected?
4. What is the nature of the emission as pertains to health, nuisance, ambient air quality, etc.?
5. Is present control equipment in good repair and being properly operated?
6. Can present equipment be improved upon and to what degree?

In conclusion, regulations are needed if emissions are in fact harmful to ambient air quality. Regulations need be flexible to give full consideration to both location and nature of emission. Regulations should not be established which cause large expenditures of money with resultant small accomplishment. There is a definite need to establish priorities, which may vary from plant to plant, so that it is possible to work toward our objectives.

H. E. Sanderson

Division Manager, Plywood-Lumber
INTERNATIONAL PAPER COMPAN
Long-Bell Division

KHS~ TO: HMP

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
FEB 18 1971
OFFICE OF THE DIRECTOR

ENVIRONMENTAL PROTECTION AGENCY
Air Pollution Control Office
Region X
1321 Second Avenue
Seattle, Washington 98101

February 16, 1971

Re: Grant No. 70B-4002SI
Oregon State Department of
Environmental Quality

Mr. Kenneth H. Spies, Director
Oregon State Department of
Environmental Quality
1400 S.W. 5th Avenue
Portland, Oregon 97201

Dear Mr. Spies:

We have obtained a review of your "Proposed Regulations for Air Contaminant Emissions from Board Products Industries".

The proposed regulations were forwarded to the Technical Support Branch of the Division of Control Agency Development. Mr. James F. Durham, Chemical Engineer, performed the review.

In general, we encourage the use of mass emission rates that are based on production rate or a process feed rate as they eliminate circumvention by dilution and give a direct indication of the quantity of pollutants being emitted to the atmosphere. However, in certain instances the use of a mass emission limit becomes impractical and unnecessary. The cement plant for example has many small sources of nuisance dust emissions and modern, well controlled plants will have over fifty dust collectors. Well controlled cement plants have eliminated visible emissions by installing fabric filterhouses throughout the plant. To apply mass emission limits to each source would create an awkward enforcement problem and an unnecessarily large source sampling program.

The "Board Products Industries" are in much the same situation as the cement industry in that many small sources of particulate emissions exist within the manufacturing complex. The technology exists to control all sources of particulate emissions in the "Board Products Industries" to "no visible emission" with possibly the exception of veneer driers and hardboard tempering ovens. As the gas volumes and mass emissions are not large compared to other major industrial processes "no visible emissions" should be more than adequate to maintain air quality.

We recommend that the sections "Other Emission Sources" on pages 2, 3 and 5 of the "Proposed Regulations for Air Contaminant Emissions from Board Products Industries" be revised to read that "no visible emissions" shall be emitted from the sources indicated. "No visible emissions" will be much easier to enforce, will be completely adequate to preserve environmental appearance and air quality, and will eliminate the need for source sampling.

I am pleased to have been of assistance to you.

Sincerely yours,

Joseph M. Rauscher

Joseph M. Rauscher
Program Advisor

GERALD S. McCARTHY
ROUTE 1, BOX 835
PARKDALE, OREGON 97047

February 8, 1971

The Environmental Quality Control Office
1400 S. W. 5th Avenue
Portland, Oregon 97205

Gentlemen:

We live south of Parkdale, Oregon and drive from Hood River to Parkdale, past the U.S. Plywood-Champion Paper mill at Dee.

For a large corporation to conduct the things that it does at this operation and get away with it, is a crime. The continued burning of waste for literally hundreds of yards along the east fork of Hood River and open fires - much of it actually getting dumped into the river, is ridiculous.

The storage of chips and the condition of the buildings generally are an eye sore and I'm certain with the fine sawdust that is collected everywhere, it must be an extreme fire hazard.

We know they have taken some steps to aerate their settling pond but I am under the impression that there are many times when the aeration is superficial and that the waste is quickly dumped into the east fork.

I think for the public relations director of U. S. Plywood to get up as he did the other day and assert that they were being forced to do things that nobody else had to do was ridiculous. This situation should be corrected and I think they should be required to do it as they have gotten by with it for years as did Edward HInes prior to U.S. Plywood's purchasing the operation.

Very truly yours,

Gerald S. McCarthy

APPENDIX C

BOARD PRODUCTS REGULATION MEETING

September 24, 1970

Attendance:

H. M. Patterson	Department of Environmental Quality, Portland
F. Glen Odell	Department of Environmental Quality, Portland
Tom Donaca	Associated Oregon Industries, Portland
Oliver Morgan	Weyerhaeuser Co., Springfield
Harold Williams	Boise Cascade
Wallace Cory	Boise Cascade, Boise
Robert M. Vincent	Boise Cascade, Medford
Bill Affolter	Willamette Industries, Inc. - (Duraflake)
Max Ross	Willamette Industries, Inc. - Albany
Mike Drake	U. S. Plywood
Harry Bartels	U. S. Plywood - Champion Papers, Inc.
Daniel H. Brown	American Plywood Assn. - Tacoma, Washington
Eugene R. Knolsey	Coe Mfg. Co., Portland
George Mohr	Forrest Industries, Ltd.
Matthew Gould	Georgia-Pacific, Portland
Vince Tretter	Georgia Pacific, Portland
Ward Armstrong	Associated Oregon Industries, Portland
David C. Nicholson	Weyerhaeuser Co.
Carl Erb	American Plywood Association, Tacoma

IVAN CONGLETON, EXECUTIVE VICE PRESIDENT

AOI

ASSOCIATED OREGON INDUSTRIES

2187 S.W. MAIN STREET • PORTLAND, OREGON 97205 • 227-5636

November 10, 1970

Mr. Glen Odell
Department of Environmental Quality
State Office Building
Portland, Oregon 97201

Re: Proposed Regulations Air Contaminant Emissions From Board Products Industries - Draft #3a of October 16, 1970

Dear Glen:

Enclosed are industry comments on the proposed regulations. We hope that we can discuss these further with you before you draft your report for submission to the Commission.

Sincerely,

Thomas C. Donaca
Counsel

Matt Gould

TCD/bn
Enclosure

INDUSTRY RECOMMENDATIONS REGARDING PROPOSED REGULATIONS ON
AIR CONTAMINANT EMISSIONS FROM BOARD PRODUCTS INDUSTRIES
DRAFT #3a - OCTOBER 16, 1970

The following comments deal only with the article and subsection on which there is a specific comment.

I. Definitions:

2. "Hardboard" means a flat panel made from wood [particles] that [have] has been reduced to basic wood fibers and bonded by adhesive properties under pressure.

COMMENT: It was pointed out that hardboard is not made from particles but from fibers and we have, therefore, modified the definition accordingly.

II. General:

3. Emission limitations established herein and stated in terms of pounds per 1000 square feet of production shall be computed on an hourly basis using the [normal] maximum hourly production capacity of the plant[.] averaged over an 8 hour period.

COMMENT: Apparently there is no universally accepted computation method used to arrive at plant capacity. We feel that using theoretical figures could be unfair to the public and using a monthly or annual average could be unfair to the operators, particularly those who do not operate around the clock on a seven day week. We believe the above amendment, which we believe is obtainable, will give you the most reliable figure.

4. Upon adoption of these regulations, each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control, applying the then currently available highest and best practicable treatment and control [currently available]. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with these regulations.

COMMENT: The change appears insignificant and may have no effect on actual application. However, the change would, we believe, limit the application of the highest and best practicable treatment and control to that available at the time of instituting the compliance schedule and thereby eliminate the possibility of the operator being faced with further changes during the compliance period or thereafter insofar as meeting these standards are concerned. Obviously a change in the standard would probably create a new situation.

III. Veneer and Plywood Manufacturing Operations:

2. Other Sources

a. Requirement

Emissions of particulate matter from veneer and plywood mill sources, including, but not limited to, sanding machines, saws, presses, barkers, hogs, chippers and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities, but excepting veneer dryers, fuel burning, and refuse burning equipment, shall not exceed a total from all sources within the plant site of one (1.0) pound per 1000 square feet of plywood or veneer production when only touch sanding is used, and two (2.0) pounds per 1000 square feet of plywood or veneer plant production when full sanding is used on a 3/8 inch basis of finished product equivalent. Where a combination of touch sanding and full sanding is used the pounds per hour of emissions shall be determined based on the percentage of each type of sanding normally used.

COMMENT: As was indicated in our original meeting, it was felt that the figures which were originally submitted with regard to plywood sander dust production were based on touch sanding in which only a small amount of surface is removed. The proposed amendment, therefore, attempts to make an allowance where the panels are fully sanded which will generate considerably greater quantity of sander dust. It further makes a provision for an alternate pounds per 1000 square feet of production where both methods are utilized. Although we have no figures on sander dust produced from a full sanded operation, calculation can be made to demonstrate that there is a greater weight loss than from touch sanding. Under the circumstances the proposed amendment would appear to be a rational starting point.

IV. Particleboard Manufacturing Operations:

1. Truck Dump and Storage Areas

a. All truck dump and storage areas holding raw materials to be used in a particleboard manufacturing operation shall be enclosed or otherwise controlled such that windblown particulate emissions from these areas will not occur[.] outside the plant property at levels exceeding established maximums.

COMMENT: The industry feels that the terminology adopted is too restrictive. They recognize the responsibility of confining windblown particulates to their own property but their understanding of the language is that any loss of windblown particulates would not meet the proposed standard. The particleboard industry does have the acute problem that if they are to fill their function as a major user of waste from other wood products plants then they must be able to absorb the surges from these plants. In many instances this will require that stock-piles be built in the summertime for utilization during the winter. The proposed amendment would provide somewhat more latitude and still provide a reasonable standard which you could monitor for violation.

b. Temporary storage of raw materials outside regularly used areas is prohibited without prior notification of the Department of Environmental Quality. Temporary storage areas shall be operated in such a manner that wind-blown particulate emissions will not occur[.] outside of plant property at levels exceeding established maximums.

COMMENT: Same as 1.a.

2. Other Sources

Emissions of particulate matter from particleboard plant sources including, but not limited to, hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines, and materials handling systems, but excepting truck dump and storage areas, fuel burning equipment, and refuse burning equipment, shall not exceed a total from all sources within the plant site of [3.0] 4.0 pounds per 1000 square feet of particleboard produced on a 3/4 inch basis of finished product equivalent.

COMMENT: It has been strongly suggested that the 3 pound limitation is overly restrictive. It has been pointed out that it requires about 3200 pounds of wood for each 1000 square feet of particleboard. Each pneumatic conveying system utilized in the manufacturing process may be expected to lose 1% to the atmosphere (99% efficient). Thus, for each cyclone involved, approximately 32 pounds of emissions per 1000 square feet of production may be anticipated. If three cyclones were involved and each filtered at a cost from $30,000 to $60,000 you would have about 1 pound of emissions and other miscellaneous sources such as dryers, classifiers and other materials handling by themselves could be greater than the proposed three pound standard. Based on this information, it would seem justified that a very slight increase be allowed in this standard.

V. Hardboard Manufacturing Operations:

2. Emissions from Hardboard Tempering Ovens

Emissions of odorous gases and vapors from hardboard tempering ovens shall be controlled by incineration at temperatures [of 1200°] in excess of 1000° F for 0.3 seconds, or by other equivalent means.

COMMENT: Industry experience indicates that 1000° F is sufficient to eliminate the odor and visible fumes from hardboard tempering ovens. Since responsibility is on the operator to eliminate odors in any event the proposed modification would seem reasonable.

Industry comments were received from Forrest Industries, Inc., Willamette Industries, Inc., Boise-Cascade Corporation, Georgia-Pacific Corporation and American Plywood Association.

C

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
E. C. Harms, Jr., Member
George A. McMath, Member
Arnold M. Cogan, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : December 28, 1970 for Discussion at January 7, 1971 Meeting in Coos Bay

SUBJECT: PROPOSED REGULATION FOR BOARD PRODUCTS INDUSTRIES

The attached proposed regulation and staff report have been prepared for distribution immediately following the January 7 meeting in Coos Bay. As authorized by the Commission at its last meeting, the public hearing will be announced for the February 5, 1971 meeting.

It is hoped that an informal discussion of the regulation can be held in Coos Bay in order that the staff will be able to make any changes deemed advisable prior to distribution or to the public hearing.

Attachment

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

DECEMBER, 1970 FOR PRESENTATION AT FEBRUARY 5, 1970 PUBLIC HEARING

STAFF REPORT

PROPOSED EMISSION STANDARDS FOR THE BOARD PRODUCTS INDUSTRY

INTRODUCTION

The board products industry is a major Oregon industry and a significant contributor to air pollution in most areas of the State. The following table shows the distribution of the various types of plants among the State's air pollution control agencies:

JURISDICTION	NUMBER OF PLANTS OF EACH TYPE			
	PLYWOOD	PARTICLEBOARD	HARDBOARD	TOTAL
Columbia-Willamette APA	4	0	1	5
Mid-Willamette Valley APA	21	2	2	25
Lane Regional APA	26	2	0	28
Dept. of Environmental Quality	39	5	4	48
TOTAL	90	9	7	106

Manufacturers of plywood, particleboard, and hardboard operate a large number of wigwam waste burners, wood waste-fired boilers, veneer and particle dryers, and materials handling cyclones. These sources are primarily characterized by their emissions of particulate matter, considered by the Department of Environmental Quality to be an air contaminant of major state-wide concern.

Particulate matter emissions from wigwam waste burners and power boilers in the board products and other industries are being brought under control in counties under the Department of Environmental Quality jurisdiction by enforcement of visible emission and grain loading standards adopted by the Environmental Quality Commission on May 22, 1970.

The proposed regulations consist of performance and emission standards for the remaining emission sources in veneer, plywood, particleboard, and hardboard manufacturing operations. ~~As proposed, the regulation is applicable only in areas of the State outside the jurisdiction of Regional Air Pollution Authorities.~~

On a state-wide basis, the sources to which the proposed regulation is applicable are responsible for approximately 15,000 tons/year of particulate matter emitted to the atmosphere which is about 14% of the total particulate emissions. (See Table III, page 12).

The board products industry is a relatively more significant source of particulate matter in areas under the Department of Environmental Quality jurisdiction than in the Willamette Valley area under Regional Air Pollution Authority

jurisdictions. Sources covered by the proposed regulation account for approximately 7700 tons/year, or some 18% of the total particulate emissions in those areas under State jurisdiction. The relative contribution is, of course, much greater in those counties with the largest board products industries; in Jackson County, for instance, approximately 500 tons/year of particulate matter emitted from cyclones and dryers in plywood and particleboard plants account for as much as 38% of total annual particulate emissions.

Most of the particulate matter emitted by the board products industry is in the form of finely divided wood particles--sanderdust, sawdust, and other wood fibers--that either fall to earth as particle fallout or remain suspended in the atmosphere for some time and contribute to visibility reduction and other problems associated with suspended particulate matter. Inadequate data on particle sizes make it impossible to accurately estimate the distribution of the total particulate matter emissions from the sources between fallout and suspended particulates.

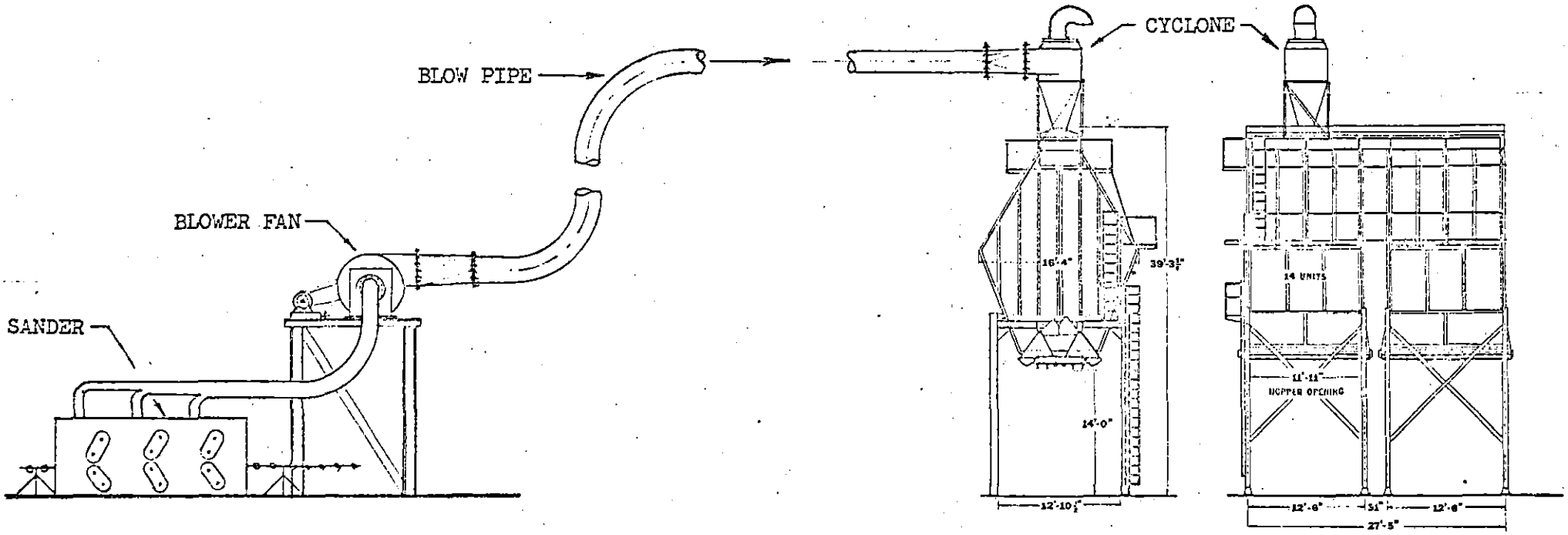
In addition to particulate emissions from dryers and cyclones, the board products industry is a source of several nuisance problems, including windblown particles from raw material storage piles, occasional open burning of small amounts of residue, and emissions of highly irritating hydrocarbon gases and vapors from hardboard tempering ovens. These problems are also dealt with in the proposed regulation.

The following three sections of this report discuss each of the three types of plants and the effect of the proposed regulation on them, including estimates of required emission reductions, needed control equipment, and possible costs of control. The report concludes with a discussion of the differences between the proposed regulation and applicable Regional standards, and with an estimate of the overall effect of the regulation on total particulate emissions and ambient air quality.

VENEER AND PLYWOOD

Description of Sources

Aside from power boilers and wigwam burners, the only air contaminant sources of concern in a plant manufacturing green veneer are pneumatic materials handling systems used to transfer hogged wood wastes from one point to another in the plant. Each air transfer system consists of a pickup point, a length of ducting, a forced-draft fan, and a cyclone used to separate the material from the conveying air stream. The material characteristically drops from the bottom of the cyclone into a storage pile or bin, while the air is discharged from the cyclone tailpipe to the atmosphere, carrying with it any fine particles not collected by the centrifugal action of the cyclone. Figure I illustrates a typical pneumatic transfer system.



STORAGE BINS

FIGURE I

Material losses or emissions from cyclones vary with particle size and system design. For large particles, such as wood chips, shavings, and most hogged wastes, the losses may be negligible, only a fraction of a percent of the total weight of the material conveyed. For smaller sized particles such as sanderdust, losses may run from ½% to as much as 10% of the transferred material.

The wood residues being air conveyed in a green veneer plant are generally of a coarse nature so that emissions are quite low, and in fact, no ambient air quality problems have been identified with cyclone emissions from these plants.

Plants producing finished plywood, whether from green veneer or from logs, have more sources and substantially greater emissions. Veneer dryers emit considerable amounts of volatile and condensed hydrocarbon compounds that form a characteristic blue haze upon emissions to the atmosphere. Cyclone emissions become a significant problem as a result of the sanding process and the universal use of preventive systems to collect and transfer sanderdust from sanding machines to points of storage, utilization, or disposal. Additional residues which may be handled pneumatically are generated in panel trim operations.

Applicable Provisions of Proposed Regulation

Specific provisions of the proposed regulation applying to veneer and plywood operations are the following:

1. No emission standard is set for veneer dryers pending completion of a series of studies of emissions and control methods for this source by the American Plywood Association; rather, a maximum date of July 1, 1971, is set for holding a public hearing for adoption of a veneer dryer emission standard.

2. Emissions of particulate matter from all other plywood mill sources are limited to 1.0 pound per 1000 square feet of plywood produced (3/8" basis). Compliance schedules employing highest and best treatment and control are to be submitted by July 1, 1971.

3. Open burning is prohibited.

Emission Types, Quantities, and Required Reduction

Table I summarizes current measured or estimated emissions from four plywood mills located in the Mid-Willamette Valley. It shows present hourly emissions of from 17 to 97 lbs/hr., depending on plant size, equivalent to from 1.5 to 4.2 lbs/1000 $ft.^2$ of plywood production. It should be noted that both the high and low emissions on a lb/1000 $ft.^2$ basis are from small operations, showing the variability of the process. Typically, about 85% of the total is from cyclones handling sanderdust. Variables that determine emissions include the depth and amount of sanding, the type of sanding machine, and the design of the sanderdust handling system.

Depending upon the level of existing emissions, compliance with the proposed emission limitation of 1.0 lb/1000 $ft.^2$ will require the plywood mills listed in Table I to reduce present cyclone emissions from 33% to 76%. It is anticipated that the required reduction will be achieved by accomplishing a high level of control on sanderdust cyclones.

TABLE I

PLYWOOD MILL CYCLONE EMISSIONS

AND

HYPOTHETICAL CONTROL PROGRAM REQUIREMENTS

(Courtesy Mid-Willamette Valley Air Pollution Authority)

	Plant 1	Plant 2	Plant 3	Plant 4
Plant Production, million $ft^2/yr.$*	72	86	200	300
Plant Production, 1000 $ft^2/hr.$	9.2	11.0	25.6	38.6
Allowed Emission, lb/hr. (By proposed regulation)	9.2	11.0	25.6	38.6
Present Emission, lb/hr.				
Sanderdust	32.2	13.2	54.5	85.0
Other Cyclones	6.4	3.8	5.9	11.6
Total Emissions, lb/hr.	38.6	17.0	60.4	96.6
Total Emissions, lb/1000 $ft.^2$	4.2	1.5	2.4	2.5
Required Reduction in Present Emissions to Comply with Proposed Regulation	76%	33%	58%	60%
Results of Hypothetical Control Program Consisting of 90% Reduction in Sanderdust Emissions, No Control on Remaining Cyclones:				
Emissions, lb/hr.				
Sanderdust Cyclones	3.2	1.3	5.4	8.5
Other Cyclones	6.4	3.8	5.9	11.6
Total Emissions, lb/hr.	9.7	5.1	11.3	20.1
Total Emissions, lbs/1000 $ft.^2$	1.05	.46	.44	.52

* Note: 85% of the plants in Mid-Willamette Valley Air Pollution Authority's jurisdiction produce 130 million $ft^2/yr.$ or less.

Control Methods, Achievable Emissions, and Estimated Costs

To date three different control techniques have been applied to control sanderdust at wood products plants in Oregon:

1. Baghouse filtration systems, which are capable of collection efficiencies of 99% or greater: The cost of the sanderdust baghouse installed at the Duraflake particleboard plant at Albany, as reported in the tax credit application, was equivalent to $1.60 per cfm of air volume. Based on this figure, a typical plywood mill handling sanderdust with 30,000 cfm of air would spend about $50,000 to control sanderdust by this method.

2. Tube filtration systems, a relatively new and largely unproven, yet promising, control method: Collection efficiency is expected to be slightly lower than a baghouse, and no consistent cost data is available yet.

3. Wet scrubber systems such as the one recently installed at a particleboard plant in Medford: These systems, though no test data are available, are expected to achieve collection efficiencies on the order of 90-95% at an installed cost of under $1.00/cfm. However, until actual performance test data are available and potential problems related to the disposal of water-soaked sanderdust have been evaluated, the staff is reluctant to recommend wet scrubbing as an acceptable means of controlling sanderdust.

ie Typical sanderdust system Q = 30,000 cfm

In order to evaluate the technical feasibility of the proposed emission limitations, it is useful to consider a hypothetical control program which current technology makes fairly certain of achievement. It is the opinion of the staff that application of a high level of control technology should result in a reduction of sanderdust emissions of at least 90%. As Table I. shows, application of a 90% reduction to sanderdust cyclones in the four Mid-Willamette Valley Air Pollution Authority mills, while installing no controls on other cyclones, would result in emissions of from 0.4 to 1.0 lb/1000 ft.^{2}, or from 5 to 20 lbs/hr. The proposed emission standard of 1.0 lb/1000 ft.^{2} thus appears to be technically feasible for all sizes of plywood mills.

The hypothetical control program of achieving a 90% reduction in sanderdust emissions for the four plants listed in Table I is estimated to result in controlled emissions of from 5 to 20 lbs/hr., with the maximum allowable emission for the largest plant in the area (300 million sq. ft,/yr.) being less than 40 lbs/hr. To put these emission quantities in perspective, it may be useful to list the maximum hourly particulate emission rates allowed by the Department of Environmental Quality standards for other industrial sources:

Hot mix asphalt plants	40 lbs/hr.
Existing hogged fuel boiler or waste burner at 2 units/hr. fuel input (50% moisture)	20 lbs/hr. (approx.)
500 T/day kraft pulp recovery furnace (1975 standards)	83 lbs/hr.

It may be concluded that compliance with the emission standards will reduce the emissions from plywood mill cyclones to an amount equivalent to or less than the emissions from other major industrial sources. It should be pointed out, however, that plywood mills operating wigwam burners, hogged fuel boilers, and veneer dryers, in addition to process cyclones, may have aggregate allowable plant site emissions in the range of 50 to 100 lbs/hr.

PARTICLEBOARD

Description of Sources

Particleboard is manufactured from a variety of wood residues including chips, shavings, sawdust, and larger materials such as plywood trim and sawmill wastes. The green materials are received, stored, reduced in size if necessary, dried, classified, mixed and blended with synthetic resins, molded, and pressed into panels which are generally trimmed and sanded to yield a final finished product. In existing plants, virtually every one of the above steps requires use of one or more pneumatic materials handling systems employing cyclones. As many as 20 to 30 cyclones may be found in the larger plants.

Out of the total number of cyclones in a plant, however, in most cases from 6 to 8 individual units account for 80% to 95% of the total emissions. These cyclones are associated with particle dryers, grinders, fine particle handling systems, and sanding operations.

In addition to cyclones, raw materials unloading and storage areas have in the past been a source of windblown particles that in some areas have resulted in public complaint and the violation of particle fallout standards. The storage areas, some of which cover literally acres of ground, may contain several months' supply of coarse and fine materials, and under high wind conditions represent a major potential source of nuisance.

Applicable Provisions of Proposed Regulation

1. Truck dump and raw material storage areas are required to be enclosed or otherwise controlled to prevent the deposition of particulate matter off the plant site. This provision also applies to temporary storage areas, which cannot be established without prior approval of the Department of Environmental Quality and may not operate continually for more than six months. Compliance schedules are due July 1, 1971.

2. Particulate emissions from other particleboard plant sources are limited to 3.0 pounds per 1000 square feet of particleboard produced (¾" basis). Compliance schedules are due by July 1, 1971.

3. Open burning is prohibited.

Emission Types, Quantities, and Required Reductions

As has been stated, from 80% to 95% of the particulate emissions from particleboard plant cyclones are attributed to the following three major systems involving from 6 to 8 cyclones in all:

1. Particle dryers, usually rotary kilns in which green wood particles including material as fine as sawdust are dried by tumbling and mixing with hot gases, frequently generated by a sanderdust burner. The particles are generally separated from the gas stream in a conventional cyclone. Dryers may emit from 50 to 150 lbs/hr. of particulate matter.

2. Sanderdust systems, differing from those used in plywood production only in the greater volume of sanderdust generated (500-900 lbs/1000 ft^2, compared to 100 lbs/1000 ft^2 or less for plywood). Emissions are correspondingly greater, ranging from 15 to 100 lbs/hr.

3. Grinder and fine particle handling systems. These include cyclones handling fines generated in materials size reduction and classification systems.

Table II presents some emission test data on several actual plants. Generally, total plant cyclone emissions range from 100 to 300 lbs/hr., or from 9 to 25 lbs/1000 ft^2 of particleboard produced. The proposed emission limitation of 3.0 lbs/1000 ft^2 thus requires from 60 to 90% reduction in present total emissions.

Control Methods, Achievable Emissions, and Estimated Costs

Compliance with the particleboard plant emission limitation will probably be achieved by controlling only the major sources as listed above, using the same general control alternatives listed for control of plywood sanderdust. A hypothetical control program similar to that discussed above for plywood mills might consist of reducing emissions by 90% from the major cyclone sources, while leaving the remaining cyclones uncontrolled.

For the three plants considered, final total emissions after completion of such a hypothetical control program, involving from 6 to 8 cyclones at each plant, are estimated to range from 16 to 47 lbs/hr, or from 1.9 to 2.8 lbs/1000 sq. ft.

The volume of air required to be treated in controlling 6 to 8 cyclones is estimated to range from 150,000 to 250,000 cfm. If baghouse controls are installed at the above-mentioned cost of $1.60/cfm, the initial cost to bring particleboard plant cyclones into compliance with the proposed standard may run from $240,000 to $400,000 per plant.

In addition to controlling cyclone emissions, the proposed regulation requires that truck dump and raw materials storage areas be enclosed or otherwise controlled to prevent windblown fallout. Enclosures for truck dumps may be expected to be almost mandatory, and are preferred for all storage areas. It may be, however, that alternate means will be proposed for some plants. Such means might include plastic covers, or segregation of materials with fines being enclosed and coarse materials that pose no problem remaining outside. Each proposal will be evaluated on its merits, with the final burden being upon the plant owner to operate the facility in such a way that fallout does not occur.

TABLE II

TYPICAL PARTICLEBOARD PLANT EMISSIONS AND HYPOTHETICAL CONTROL PROGRAM REQUIREMENTS

	Plant 1 Willamette Valley	Plant 2 S. W. Oregon	Plant 3 Eastern Oregon
Plant production, ft^2/hr.	19,000	8,300	11,800
Allowed emission, lb/hr. (by proposed regulation)	57.0	25.0	35.4
Present emission, lb/hr.			
Sanderdust	2*	15.4	107
Dryers and dried materials handling	95	42.4	143
Milling area	50	--	19
Other	34.4	10.5	6
Total, lb/hr.	181	68.3	275
Total, lb/1000 ft^2	9.5	8.2	23.3
Required reduction in present emissions to comply with proposed regulations	68%	63%	87%

Results of hypothetical control program consisting of 90% reduction on emissions from major sources, no control on remaining cyclones	Plant 1 Emission	Plant 1 No. Cyclones Controlled	Plant 2 Emission	Plant 2 No. Cyclones Controlled	Plant 3 Emission	Plant 3 No. Cyclones Controlled
Sanderdust	2.0	0*	1.5	2	10.7	3
Dryers and dry materials handling	9.5	4	4.2	4	14.0	4
Milling area	5.0	3	--	--	1.9	1
Other	34.4	0	10.5	0	6.0	--
Total emissions, lb/hr.	50.9	7	16.2	6	32.6	8
Total emissions, lb/1000 ft^2	2.5		1.9		2.8	
Total air volume to be treated in above program, scfm	170,000		168,800		227,400	

*Baghouse system already installed on sanderdust system, emissions estimated to be nominal

Though costs may be expected to vary widely from plant to plant, the experience of one particleboard operation that has enclosed its truck dump and storage areas may be indicative of the range of costs to be expected. According to the firm's tax credit application, the cost of the facility including a 29,000 sq. ft. building, came to $148,000. Since the plant in question is one of the smaller ones surveyed this cost might be considered a minimum. Based on plant production capabilities, the cost of enclosures for other plants may be expected to run from $150,000 to $300,000 or higher. No information is available on costs of less expensive alternatives.

In summary, it is estimated that the total cost to bring presently uncontrolled particleboard plants into compliance with all provisions of the proposed regulation may range, depending upon a variety of factors, from $390,000 to $700,000 per plant. Lesser amounts will be required by plants that are already partially controlled, or which are able to comply with the standards by application of less expensive methods than those upon which the above estimates are based.

HARDBOARD

Description of Sources

Hardboard is a more dense product than particleboard, and may be produced by several basic processes. The "wet" process resembles a paper-making process in that wood chips are reduced to basic fibers by cooking at high pressure and temperature, materials are carried from one process to another in a water slurry, and the final product is formed on a modified Fourdrinier machine. The "dry" process, on the other hand, differs little from the particleboard process, except that the particles are dried to a lower moisture content before forming and pressing, and press temperatures and pressures are generally higher in order to produce a more dense product than particleboard. Variations on the two basic processes include a "semi-dry" or "dry" air felting process in which the particles are reduced to fibers by cooking and grinding, then separated from most of the cooking water prior to forming on a continuous felting machine.

Particulate emissions from raw materials handling and manufacturing operations prior to forming are generally greatest from the dry process, not only because particles remain dry and are air-conveyed about the plant, but also because finer raw materials such as sawdust and shavings are useable in the dry process. Aside from problems related to storage of wood chips, the basic wet process is essentially emission-free.

Special finishing processes may present greater air quality problems than basic hardboard manufacturing operations. Some hardboards are sanded, with attendant problems of collecting, conveying, and disposing of sanderdust. Another potentially more troublesome process is tempering, in which the board is coated with oil and baked for several hours to produce a tough, durable, moisture-resistant finish. The volatile hydrocarbons evaporated from the oil during baking include odorous and irritating components such as acrolein, and in at least one case have created a major community nuisance condition.

Applicable Provisions of Proposed Regulation

1. Truck dump and storage areas are required to be enclosed or otherwise controlled and operated to prevent windblown particle fallout.

2. Particulate emissions from other hardboard plant sources are limited to 1.0 lb/1000 sq. ft. of hardboard produced (1/8" basis). Compliance schedules are due by July 1, 1971.

3. Odorous emissions from hardboard tempering ovens must be controlled by means equivalent to incineration at 1000°F, although higher temperatures may be required for specific installations. All fume incineration facilities must be capable of operation at temperatures as high as 1500°F.

4. Open burning is prohibited.

Emission Types, Quantities, and Required Reductions

Relatively little information is available concerning emissions from cyclones in hardboard manufacturing operations. A survey of one plant using the dry process showed no major problems, and considerably less generation of sanderdust in the sanding process than either plywood or particleboard sanding operations. It is anticipated that most hardboard plants will not require controls on cyclones in order to comply with the proposed emission limitations of 1.0 lb/1000 sq. ft. (1/8" basis). Total allowable emissions may range from 10 to 25 lbs/hr, depending upon plant production capacity.

Emissions from bake ovens in plants using a tempering process may be the most serious air quality problems associated with hardboard plants. Source tests of one tempering oven showed an uncontrolled emission of 18 lbs/hr of organic hydrocarbon gases, including a concentration of acrolein of 89 parts per million (ppm) in a total gas volume of about 33,000 standard cubic feet per minute. Acrolein is objectionable at concentrations as low as 0.1 ppm, so that a reduction or dilution of at least 99.9% is necessary to eliminate odor from baking oven effluent.

Control Methods, Achievable Emissions, and Estimated Costs

As has been stated above, most hardboard plants are probably in compliance with the proposed particulate emission limitation of 1.0 lb/1000 ft^2, and hence will have no particulate controls to install as a result of the proposed regulation.

Based on the experience of one Oregon plant, the only acceptable means of control for tempering ovens is fume incineration. An attempt to control the odorous emissions by scrubbing resulted in a reduction of only 40% and did not alleviate the odor problem. A fume incinerator with primary heat recovery, operating at 1000°F to 1400°F, eliminated the problem. The unit was designed for steady operation at 1400°F, but subsequent operation at temperatures as low as 1000°F has shown that adequate treatment may be obtained at less than the design temperature. Experimentation will be needed at each installation to establish the minimum acceptable operating temperature.

Capital and operating costs of fume incinerators vary according to size, amount of heat recovery, and fuel type. The installation noted above was reported to have an installed cost of about $50,000.

DEVELOPMENT OF PROPOSED REGULATIONS - COMPARISON WITH REGIONAL STANDARDS

In developing the proposed regulation, the following criteria were established as objectives:

1. Performance and emission standards were to be adequate to solve air quality problems, require a high degree of controls, and be technically practicable.

2. Emission limitations were to be simple in concept, directly relatable to plant production, and uniform for all sizes of plants.

3. To the greatest extent possible, the standards were to be compatible with standards of the Regional Air Pollution Authorities.

To obtain background for the regulations, the Department of Environmental Quality staff members surveyed several typical examples of each type of plant, evaluating the problems and estimating emissions wherever possible. The Regional Authorities were requested to submit quantitative information and comments relative to the emission standards. As subsequent drafts of the regulations were prepared, meetings and consultations with representatives of industry and with the Regional Authorities were held. The first draft of the regulation was dated August 19, 1970; the version being presented at a public hearing is the fifth draft.

The adequacy, stringency, and practicability of the proposed regulations have been discussed in the foregoing sections of this report. The concluding section, regarding the potential for overall reductions in particulate emissions as a result of compliance with the emission standards, bears further on the adequacy of the standards. It is the judgment of the staff that the regulations are satisfactory in this respect.

The use of plant-site emission limitations based on lbs/1000 sq. ft. of production based on the most common product thickness (3/4", 3/8". or 1/8") for each board, assures the simplicity of emission standards. Plant production upon which maximum hourly emissions are based is defined by the maximum product capacity during an 8-hour shift. These provisions are considered to be equitable and capable of uniform interpretation by all parties concerned.

The question of compatibility between the proposed Department of Environmental Quality emission standards and those of the Regional Air Pollution Authorities is somewhat complicated by the inconsistency among Regional standards themselves. Each of the three Regions has a general "process weight" emission standard applicable to the board products industry, using the same table of allowable emissions but varying definitions of process weight. In summary, the Regional standards are:

Columbia-Willamette APA - Process weight based on materials input to each process within a plant, with a separate emission limitation computed for each individual piece of process equipment.

Mid-Willamette Valley APA - A single plant-site emission limitation based on the gross raw materials input to the plant.

Lane Regional APA - Process weight and emission limitations computed for groupings of process equipment, providing a standard somewhat in between the Columbia-Willamette Air Pollution Authority and the Mid-Willamette Valley Air Pollution Authority standards.

Among these standards, Mid-Willamette Valley Air Pollution Authority's is generally most stringent. Comparisons between the requirements of the Mid-Willamette Valley Air Pollution Authority and proposed Department of Environmental Quality standards for each of the board products industries are given in the following paragraphs.

Plywood

Comparison of the presently proposed Department of Environmental Quality standard with the Mid-Willamette Valley Air Pollution Authority regulation as applied to plywood mills is made somewhat complicated by two factors:

1. The Mid-Willamette Valley Air Pollution Authority's allowable emissions depends upon whether the process weight is based on veneer weight or log weight.

2. While the Department of Environmental Quality's proposed standard specifically exempts veneer dryers from the 1.0 lb/hr emission limitation, the Mid-Willamette Valley Air Pollution Authority's regulation would include within the allowable limit, the particulate matter emitted from the veneer dryer.

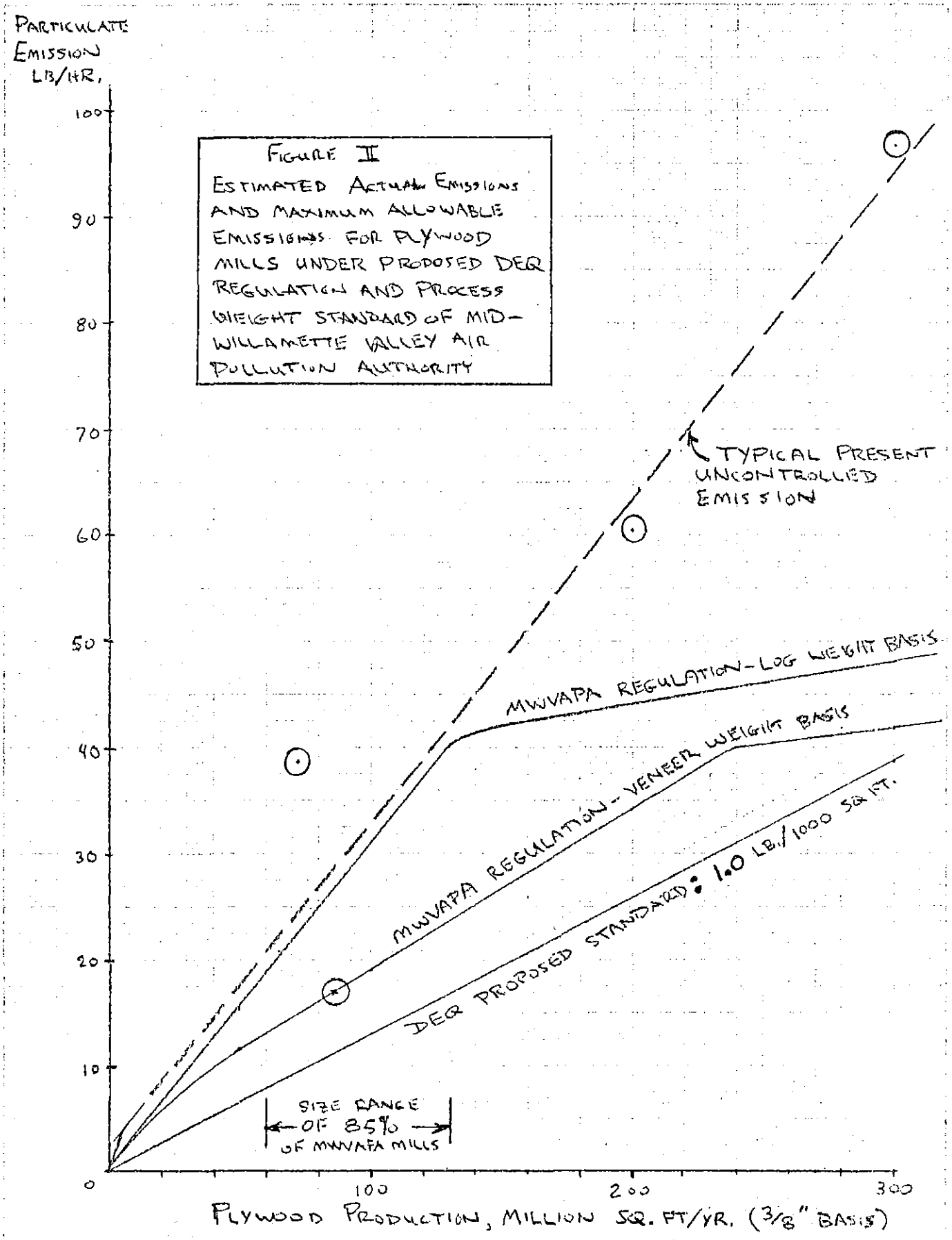
Figure II shows how the proposed Department of Environmental Quality standard compares with the Mid-Willamette Valley Air Pollution's regulation and with representative actual plywood mill cyclone emissions. It indicates that the proposed Department of Environmental standard is more stringent than the Regional standards. However, the Mid-Willamette Valley Air Pollution Authority has pointed out, when the Department of Environmental Quality does adopt a particulate emission standard for veneer dryers in mid-1971, the total allowed emission will more closely approach that of the Regions. In short, there appears to be no great discrepancy between the actual control requirements of the two regulations.

Particleboard

In comparing the proposed Department of Environmental Quality emission standard with Regional requirements, no really significant differences are noted. As Figure III shows, the proposed standard is slightly more stringent for smaller plants and slightly less stringent for larger particleboard plants. For the currently largest plant in the State, the proposed Department of Environmental Quality standard would allow about 12 lbs/hr. more, or about 25% greater emissions than the applicable Regional process weight standard. The question of whether 48 lbs/hr. or 60 lbs/hr. should be allowed seems almost academic in light of this plant's present emissions of around 200 lbs/hr., including the almost negligible emission from a baghouse-controlled sanderdust system.

Hardboard

As has been stated, there is actually little information upon which to base an emission standard or evaluate the proposed limitation. This proposed level of


PARTICULATE EMISSION LB/HR.
100
90
80
70
60
50
40
30
20
10
0
FIGURE II
ESTIMATED ACTUAL EMISSIONS AND MAXIMUM ALLOWABLE EMISSIONS FOR PLYWOOD MILLS UNDER PROPOSED DEQ REGULATION AND PROCESS WEIGHT STANDARD OF MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY
TYPICAL PRESENT UNCONTROLLED EMISSION
MWVAPA REGULATION - LOG WEIGHT BASIS
MWVAPA REGULATION - VENEER WEIGHT BASIS
DEQ PROPOSED STANDARD: 1.0 LB./1000 SQ. FT.
SIZE RANGE OF 85% OF MWVAPA MILLS
100
200
300
PLYWOOD PRODUCTION, MILLION SQ. FT/YR. (3/8" BASIS)

FEQ 12-23-70

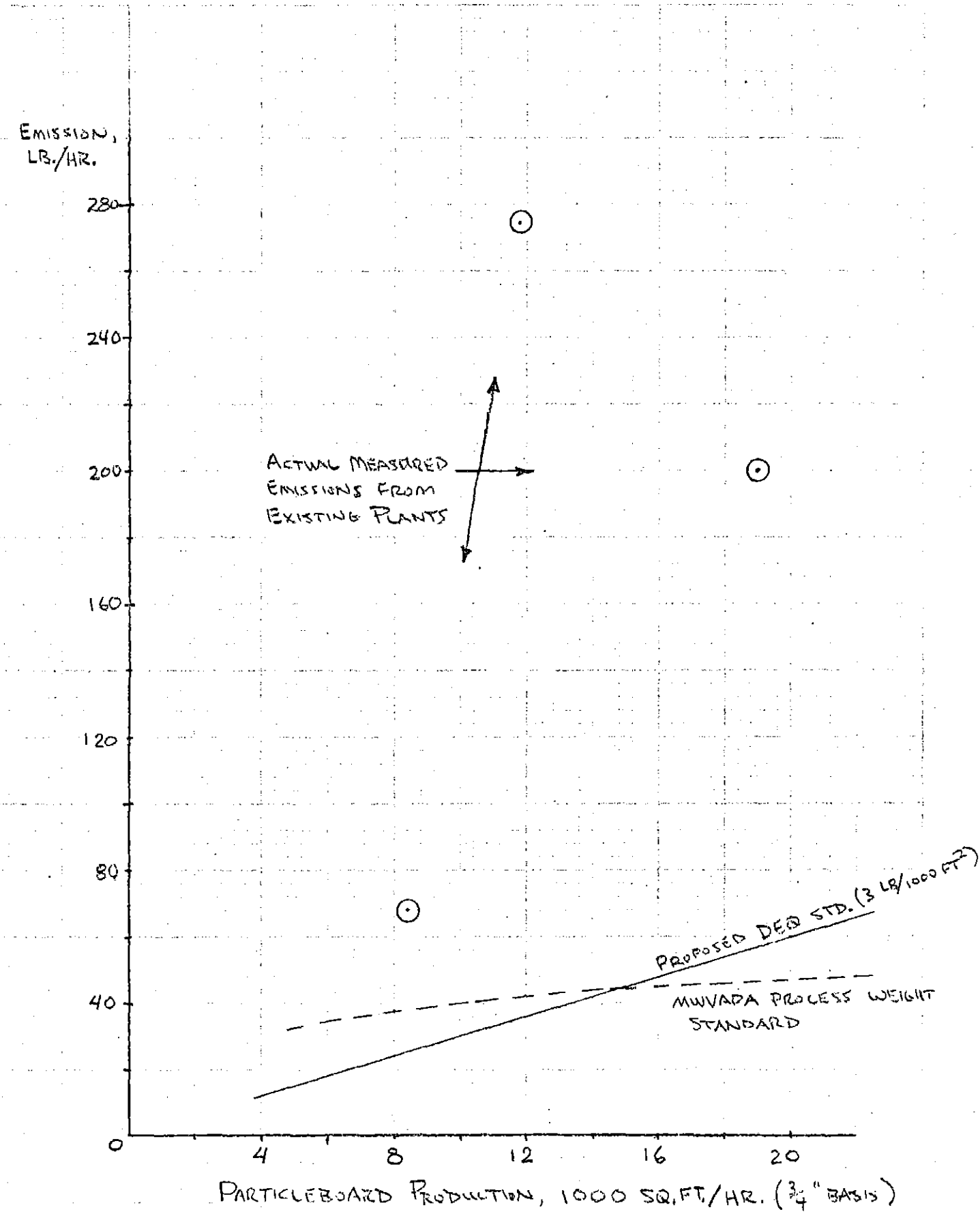


FIGURE III. PARTICULATE EMISSIONS AND MAXIMUM ALLOWABLE EMISSIONS FOR PARTICLEBOARD PLANTS UNDER PROPOSED D.E.Q. REGULATION AND PROCESS WEIGHT STANDARD OF THE MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY.

1.0 lb/1000 has been found to be essentially equivalent to that of the Regional process weight standards applied to hardboard plants, and this seems to be the best justification that can be made for this particular emission standard. Based upon current staff estimates previously discussed, total emissions from these plants will not exceed emissions from controlled plywood, veneer or particleboard plants.

ESTIMATED EFFECTS OF PROPOSED REGULATION ON TOTAL PARTICULATE EMISSION

It was stated in the introductory paragraphs that the proposed regulation is applicable to the control of emissions that presently constitute approximately 14% of the total particulate emissions in the State. Table III summarizes present emissions and those that may be expected after all plywood and particleboard plants have complied with the proposed emission limitations.

For the entire area under Department of Environmental Quality jurisdiction, it is estimated that the proposed standard may result in a reduction of total particulate emissions of 10% to 15%. For those counties with heavy concentrations of board products industries, considerably higher emission reductions should result in Jackson County, for instance, between 25% and 30% is estimated.

It should be re-emphasized at this point, however, that this anticipated reduction is divided between suspended particulate and particle fallout, so that in some cases neither of these ambient air quality parameters will show as large a decrease as the total particulate emission. In some areas, however, including the immediate vicinity of large plants, the anticipated improvements in air quality may be expected to be much greater than county-wide averages would estimate, and in fact, the reductions in particle fallout in such areas may approach the 60%-80% reduction in emissions from individual sources.

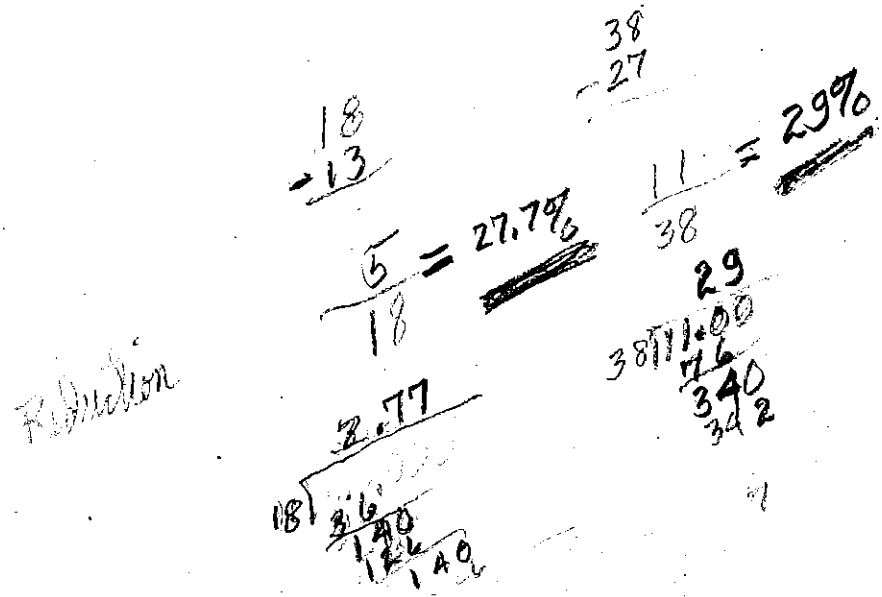
Although a lack of sufficient data makes quantification difficult, it seems clear that significant reductions will occur in both particle fallout and atmospheric suspended particulate concentrations as a result of enforcement of the proposed emission limitations. Further air quality improvements will result from the enclosure of truck dump and storage areas, cessation of what limited open burning still occurs, and the elimination of hardboard tempering oven odors.

TABLE III

ESTIMATED EFFECT OF PROPOSED BOARD PRODUCTS EMISSION STANDARDS ON TOTAL PARTICULATE EMISSIONS

ESTIMATED PRESENT EMISSIONS* From Sources Controlled by Proposed Regulation	Oregon	Willamette Valley	DEQ Jurisdiction	Jackson County
Particleboard, (1000 T/yr.)	4.8	2.1	2.7	.78
Plywood, (1000 T/yr.)	10.0	5.0	5.0	1.01
Total, Board Products, (1000 T/yr.)	14.8	7.1	7.7	1.8
Total, All Sources, (1000 T/yr.)	103	60	43	4.8
Board Products, % of Total	14%	12%	18%	38%
ESTIMATED EMISSIONS AFTER COMPLIANCE WITH PROPOSED STANDARD (1000 T/yr.)				
Particleboard, (1000 T/yr.)	2.0	1.0	1.0	0.2
Plywood, (1000 T/yr.)	1.9	0.8	1.1	0.3
Total, Board Products, (1000 T/yr.)	3.9	1.8	2.1	0.5
Reduction in Emissions, (1000 T/yr.)	11.1	5.3	5.6	1.3
Reduction as % of Total Emissions	11%	9%	13%	27%

*Note: These estimates are based on revised data from the Department of Environmental Quality report entitled "Rapid Survey of 1968 Air Contaminant Emissions", which included estimates for particleboard and plywood that were based on emission factors presently considered too high. Present estimates of representative emissions are 2.5 lbs/1000 ft^2 for plywood and 15 lbs/1000 ft^2 for typical particleboard plants.



DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

PROPOSED REGULATIONS FOR AIR CONTAMINANT EMISSIONS FROM BOARD PRODUCTS INDUSTRIES

DEFINITIONS

1. "Department" means Department of Environmental Quality.
2. "Emission" means a release into the outdoor atmosphere of air contaminants.
3. "Hardboard" means a flat panel made from wood that has been reduced to basic wood fibers and bonded by adhesive properties under pressure.
4. "Operations" includes plant, mill or facility.
5. "Particleboard" means mat formed flat panels consisting of wood particles bonded together with synthetic resin or other suitable binder.
6. "Person" means the same as ORS 449.760(1).
7. "Plywood" means a flat panel built generally of an odd number of thin sheets or veneers of wood in which the grain direction of each ply or layer is at right angles to the one adjacent to it.
8. "Tempering oven" means any facility used to bake hardboard following an oil treatment process.
9. "Veneer" means a single flat panel of wood not exceeding 1/4 inch in thickness, formed by slicing or peeling from a log.

GENERAL PROVISIONS

1. These regulations establish minimum performance and emission standards for veneer, plywood, particleboard and hardboard manufacturing operations.
2. Emission limitations established herein are in addition to, and not in lieu of, general emission standards for visible emissions, fuel burning equipment, and refuse burning equipment.

3. Emission limitations established herein and stated in terms of pounds per 1000 square feet of production shall be computed on an hourly basis using the maximum 8 hour production capacity of the plant.

4. Upon adoption of these regulations, each affected veneer, plywood, particleboard, and hardboard plant shall proceed with a progressive and timely program of air pollution control, applying the highest and best practicable treatment and control currently available. Each plant shall at the request of the Department submit periodic reports in such form and frequency as directed to demonstrate the progress being made toward full compliance with these regulations.

VENEER AND PLYWOOD MANUFACTURING OPERATIONS

I. Veneer Dryers - Public Hearing for Emission Standard
By no later than July 1, 1971, the Director of the Department shall schedule a public hearing for the purpose of determining the feasibility of adopting an emission standard for particulate and gaseous emissions from veneer dryers, setting forth allowable emission levels and dates for compliance.

II. Other Emission Sources

1. No person shall cause to be emitted particulate matter from veneer and plywood mill sources, including but not limited to, sanding machines, saws, presses, barkers, hogs, chippers and other material size reduction equipment, process or space ventilation systems, and truck loading and unloading facilities in excess of a total from all sources within the plant site of one (1.0) pound per 1000 square feet of plywood or veneer production on a 3/8 inch basis of finished product equivalent.

2. Excepted from subsection 1 are veneer dryers, fuel burning equipment and refuse burning equipment.

3. Compliance Schedule - No later than July 1, 1971, every person operating a plywood or veneer manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for compliance with this section. The schedule

III. Open Burning - Upon the effective date Jan 1 1974 of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any veneer or plywood manufacturing mill and such acts are hereby prohibited.

PARTICLEBOARD MANUFACTURING OPERATIONS

I. Truck Dump and Storage Areas

1. Every person operating or intending to operate a particleboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent windblown particle emissions from these areas to be deposited upon property not under the ownership of said person.

2. The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval for said storage.

(a) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(b) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

3. Any person who proposes to adequately control windblown particulate emissions from truck dump and storage areas other than by enclosure shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan the nearest location of property not under ownership of the applicant.

II. Other Emission Sources

1. No person shall cause to be emitted particulate matter from particleboard plant sources including, but not limited to, hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines and materials handling systems, in excess of a total from all sources within the plant site of three (3.0) pounds per 1000 square feet of particleboard produced on a 3/4 inch basis of finished product equivalent.

2. Excepted from subsection 1 are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

III. Compliance Schedule - Not later than July 1, 1971, every person operating

a particleboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections I and II of this regulation. The schedule

IV. Open Burning - Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any particleboard manufacturing plant and such acts are hereby prohibited.

HARDBOARD MANUFACTURING OPERATIONS

I. Truck Dump and Storage Areas

1. Every person operating or intending to operate a hardboard manufacturing plant shall cause all truck dump and storage areas holding or intended to hold raw materials to be enclosed to prevent windblown particle emissions from these areas to be deposited upon property not under the ownership of said person.

2. The temporary storage of raw materials outside the regularly used areas of the plant site is prohibited unless the person who desires to temporarily store such raw materials first notifies the Department of Environmental Quality and receives written approval for said storage

(a) When authorized by the Department of Environmental Quality, temporary storage areas shall be operated to prevent windblown particulate emissions from being deposited upon property not under the ownership of the person storing the raw materials.

(b) Any temporary storage areas authorized by the Department shall not be operated in excess of six (6) months from the date they are first authorized.

3. Alternative Means of Control - Any person who desires to control windblown particulate emissions from truck dump and storage areas other than by enclosure shall first apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-030, Ch. 340, OAR, and shall describe in detail the plan proposed to control windblown particulate emissions and indicate on a plot plan and the nearest location of property not under ownership of the applicant.

II. Other Emission Sources

1. No person shall cause to be emitted particulate matter from hardboard plant sources including, but not limited to hogs, chippers and other material size reduction equipment, process or space ventilation systems, particle dryers, classifiers, presses, sanding machines, and materials handling systems, in excess of a total from all sources within the plant site of one (1.0) pound per square feet of hardboard produced on a 1/8 inch basis of finished product equivalent.

2. Excepted from subsection 1 are truck dump and storage areas, fuel burning equipment and refuse burning equipment.

III. Emissions from Hardboard Tempering Ovens

1. No person shall operate any hardboard tempering oven unless all gases and vapors emitted from said oven are treated in a fume incinerator capable of raising the temperature of said gases and vapors to at least 1500° F for 0.3 seconds or longer.

2. Specific operating temperatures lower than 1500° F may be approved by the Department upon application, provided that information is supplied to show that operation at said temperatures provides sufficient treatment to prevent odors from being perceived on property not under the ownership of the person operating the hardboard plant.

3. In no case shall fume incinerators installed pursuant to this section be operated at temperatures less than 1000° F.

4. Any person who proposes to control emissions from hardboard tempering ovens by means other than fume incineration shall apply to the Department for authorization to utilize alternative controls. The application shall be submitted pursuant to Section 20-020 to 20-023, Chapter 340 OAR, and shall describe in detail the plan proposed to control odorous emissions and indicate on a plot plan the location of the nearest property not under ownership of the applicant.

IV. Compliance Schedule - No later than July 1, 1971, every person operating a hardboard manufacturing plant shall submit to the Department of Environmental Quality a proposed schedule for complying with Sections I, II, and III of this regulation. The Schedule

V. Open Burning - Upon the effective date of these regulations, no person shall cause or permit the open burning of wood residues or other refuse in conjunction with the operation of any hardboard manufacturing plant and such acts are hereby prohibited.

HMP

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Arnold M. Cogan, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : March 1, 1971 for March 5, 1971 Meeting

SUBJECT: PRIMARY ALUMINUM PLANT REGULATION COMPLIANCE SCHEDULES

This matter is being brought before the Environmental Quality Commission at this time to both update the Commission and for action by the Commission where appropriate. The Department of Environmental Quality regulation specific to Primary Aluminum Plants, OAR Ch. 340, Sections 25-255 through 25-290, which was adopted by the Environmental Quality Commission on June 26, 1970 sets forth certain requirements of the two aluminum plants operating in Oregon. The proposed programs for each plant and related staff comments and recommendations are presented in the following discussion.

Regulation Requirements:

The following paraphrases the regulation requirements which are being considered. The regulation is attached for your reference.

Emission Standard - This section limits visible emissions from all sources to no greater than 20% opacity (Ringelmann 1) on or before January 1, 1975. The companies are also required to submit a proposed schedule by February 6, 1971 for achieving compliance with this limitation.

Monitoring - This section requires each aluminum plant to conduct a program of regularly scheduled monitoring for (a) emissions of gaseous and particulates, (b) fluoride levels in forage and (c) fluoride levels in ambient air. The proposals to achieve the above were to be submitted on or before October 19, 1970 and subject to revision and approval by the Commission.

Reporting - This section requires regularly scheduled submission of the data obtained from the monitoring programs. The method or units by which some of this data is to be expressed is outlined in this section. Also required is the reporting of upset conditions and control efficiency changes due to process or equipment modification.

Special Studies - This section contains a comprehensive emission evaluation for the entire aluminum production operation. In brief these requirements are: (a) As complete a characterization of particulate emissions from all sources as possible, including size distribution and physical and chemical characteristics, (b) plume opacities from all sources including its relationship to emission rates, particulate characteristics and stack characteristics and (c) Emissions of SO_2, HC, CO, Cl_2, Cl^-, NOx, O_3, H_2O (vapor) and F^- from all sources.

The proposals to achieve the Special Studies programs were to be submitted by October 19, 1970 for review and approval.

I. HARVEY ALUMINUM (Incorporated), The Dalles

A. Emission Standard

1. Company Proposal - Harvey Aluminum has submitted a proposal for complying with the visible emission limitation of 20% or less opacity from all sources. This proposal amounts to installing electrostatic precipitators on the primary system either as replacements of or as additions to the present scrubber towers. The proposal states that engineering will be completed June, 1971, equipment will be ordered July 1971, installation and start-up July 1972 and compliance will be achieved by September 1972.

2. Staff Review - The staff reviewed the proposal and has concluded that properly designed and operated electrostatic precipitators would reduce the opacity of emissions from the present tower system to Ringelmann 1 or less. Since no other sources exceed 20% opacity, the reduction of tower emissions would achieve total compliance with the opacity limitation.

3. Staff Recommendation - The staff recommends approval of the proposal to install electrostatic precipitators and the related time schedule subject to review and approval of engineering plans and equipment specifications.

B. Monitoring

1. Company Proposal - Harvey Aluminum has submitted a proposal for complying with the monitoring requirements. The proposal, which was initially submitted on September 24, 1970, is outlined in the attached correspondence received by the Department on December 10, 1970. In summary, this proposal includes four ambient air sampling stations, some forage (hay) sampling and monthly sampling of both potroom emission control systems for gaseous and particulate fluorides and total particulates.

2. Staff Review - The staff has evaluated the proposal, based on the actual proposal and inspections of the plant, ambient air sampling sites, and cattle forage near the plant. Our conclusion is that the proposed program will yield adequate and representative data and is therefore acceptable.

3. Staff Recommendation - The staff recommends that the monitoring proposal as outlined in Mr. Byrne's letter of December 9, 1970 be approved.

C. Reporting

1. Company Proposal - The company has proposed in conference on February 3, 1971, to submit the first monitoring report on or before April 30, 1971 and continue such reports thereafter on a monthly basis. Each report will include all available

monitoring data obtained during the reporting period in the proper units. The company at the February 3, 1971 conference also proposed to report upsets on a monthly basis and any performance changes as they occur.

2. Staff Review - The staff has concluded that the proposed reporting of monitoring results, upsets, and performance changes is acceptable.

D. Special Studies

1. Company Proposal - The special studies proposal which was initially received September 24, 1970 is described in Mr. Bryne's December 9, 1970 letter. This proposal indicates that all of the applicable studies required in the special studies section (25-285) will be attempted. It is proposed that such testing efforts will begin in March 1971 and reports will be quarterly until the studies are completed in September 1972.

2. Staff Review - The staff considers the proposed scope, schedule and reporting of special studies efforts to be satisfactory. Our laboratory staff has fulfilled company requests for methods and procedures and will continue to cooperate where and when possible throughout these efforts.

3. Staff Recommendation - The staff recommends that the special studies proposal as outlined in Mr. Bryne's December 9, 1970 letter be approved.

II. REYNOLDS METALS COMPANY, Troutdale

A. Emission Standard

1. Company Proposal - Reynolds Metals Company presently is evaluating several possible solutions to reducing visible emissions from the various sources at the Troutdale Plant. In addition, other applicable efforts are being conducted by the company at several of its other plant sites. The company has informed the staff that none of these efforts are far enough along to promulgate the desired compliance schedules.

2. Staff Review - The staff is aware that the company is extending considerable effort on several pertinent projects. The company is expected to provide additional information prior to the March 5, 1971 Environmental Quality Commission meeting in addition to being present at the meeting.

3. Staff Recommendation - The staff does not have a recommendation at this time.

Reynolds Metals:
1. Quarterly Reports to DEQ, first report June 1, 1971
2. Compliance schedule status report before EQC on or before Sept. 1972

B. Monitoring

1. Company proposal - Reynolds Metals Company has submitted a proposal for complying with the monitoring requirements. The proposal, which was initially submitted on August 31, 1970 is itemized in the attached letter from Mr. H. Zeh dated February 22, 1971. In summary, this proposal includes five ambient air sampling stations, ten forage sampling stations, and monthly emission testing for gaseous and particulate fluorides and total particulates. In addition, five fallout stations, two suspended particulate stations and meteorological data are proposed. The company has indicated in conference that emission testing at the pot room roof scrubbers will begin in May, 1971.

2. Staff Review - The staff has reviewed the proposal and inspected the plant, as well as the ambient air sampling and forage sampling sites. It is our conclusion that the proposed monitoring program will give representative data desired and therefore can be accepted.

3. Staff Recommendation - The staff recommends that the monitoring program as outlined in Mr. Zeh's letters of February 22 and Feb. 26, 1971 be approved.

C. Reporting

1. Company Proposal - The company has proposed by letter dated February 22, 1971 to submit the first monitoring report during April 1971 and continue to do so on a monthly basis. Each report will include all available monitoring data obtained during the reporting period in the proper units. The company has and will continue to report upset conditions and performance changes which result in increased emissions.

2. Staff Review - The staff has concluded that the proposed reporting of monitoring results, upsets, and performance changes is acceptable.

D. Special Studies

1. Company Proposal - The special studies proposal, which was initially received on August 31, 1970 is presented in Mr. H. Zeh's letter dated February 22, 1971. The proposal indicates that all of the applicable studies required in the special studies section will be conducted. In fact, some early work has already been conducted.

2. Staff Review - The staff considers the proposed scope of the special studies to be satisfactory. Our laboratory staff has and will continue to afford its cooperation and assistance

wherever possible. The staff feels that quarterly reports on the special studies are a necessity.

3. Staff Recommendation - The staff recommends that the special studies proposal as outlined in Mr. H. Zeh's letter of February 22, 1971, be approved subject to the requirement that quarterly reports be submitted commencing no later than June 30, 1971.

Primary
Aluminum Plants

[ED. NOTE: Unless otherwise specified, sections 25-225 through 25-290 of this chapter of the Oregon Administrative Rules Compilation were adopted June 26, 1970 and filed with the Secretary of State July 14, 1970, as Administrative Order DEQ 19. The effective date of this order is August 10, 1970.]

25-255 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:

(1) 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.

(2) 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.

(3) 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.

(4) 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.

25-260 DEFINITIONS. (1) All Sources - Means sources including, but not limited to, the reduction process, alumina plant, anode plant, anode baking plant, cast house, and collection, treatment and recovery systems.

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

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

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

(5) Commission -Means Environmental Quality Commission.

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

(7) Department - Means Department of Environmental Quality.

(8) Emission Means a release into the outdoor atmosphere of air contaminants.

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

(10) Fluorides - Means matter containing fluoride ion.

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

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

(13) 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).

(14) 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.

(15) Regularly Scheduled Monitoring - Means sampling and analyses in compliance with a program and schedule approved pursuant to Section 25-275.

(16) 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.

25-265 EMISSION STANDARD. (1) Visible emissions from all sources shall not exceed twenty (20) per cent opacity (Ringelmann 1).

(2) 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.

25-270 HIGHEST AND BEST PRACTICABLE TREATMENT AND CONTROL REQUIREMENT. Notwithstanding the specific emission limits set forth in Section 25-265 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.

25-275 MONITORING. (1) 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.

(2) 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.

25-280 REPORTING. (1) 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:

(a) Ambient air: Twelve-hour concentrations of gaseous fluoride in ambient air expressed in micrograms per cubic meter of air.

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

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

(d) 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.

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

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

(2) Each primary aluminum plant shall furnish, upon request of the 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.

(3) 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 con-

struction, installation or establishment.

25-285 SPECIAL STUDIES. (1) Special studies, covering the areas in subparagraphs (a), (b)and (c) of this subsection shall be conducted at each primary aluminum plant.

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

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

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

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

(3) 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.

25-290 REVISION OF EMISSION STANDARDS. (1) 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.

(2) 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 25-280 (3).

HARVEY Aluminum
(Incorporated)
P. O. Box 711 The Dalles, Oregon 97058

Telephone: 296-6161

January 8, 1971

H. M. Patterson, Director
Air Quality Control Division
Department of Environmental Quality
1400 S. W. 5th Avenue
Portland, Oregon 97201

Dear Mr. Patterson:

As provided in Oregon Administrative Rules Ch. 340-25-266, the following is our schedule for reducing visible emissions to 20% opacity or Ringelmann I.

Electrostatic precipitators will be fitted to the primary system either replacing or in addition to the present scrubber towers. Engineering will be completed June 1971, equipment will be ordered July 1971, installation and start-up July 1972 and compliance will be reached by September 1972.

Sincerely,

Joseph L. Byrne

JLB/vk

HARVEY Aluminum
(Incorporated)
P. O. Box 711 The Dalles, Oregon 97058

Telephone: 296-6161

December 9, 1970

Mr. Fred Skirvin
Department of Environmental Quality
Oregon State Office Building
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Dear Fritz:

The enclosed proposal is the result of our recent correspondence and personal consultations with members of the D.E.Q. staff. I believe it adequately covers all the points that have been discussed and if there are no further questions, would hope to have this proposal approved as required under Chapter 340 Oregon Administrative Rules. Exhibit #1 is the location of the emission points from the potrooms, casting house and paste plant. Exhibit #2 shows the location of the ambient air sampling stations.

Sincerely,

Joseph L. Byrne

JLB/vk
enc.

PROPOSAL FOR MONITORING, REPORTING AND SPECIAL STUDIES PROGRAMS UNDER CHAPTER 340 OREGON ADMINISTRATIVE RULES SECTIONS 25-255 through 25-285

EMISSION SOURCES

Potrooms - Primary.

System terminates in twenty scrubber towers, each tower handles effluent from 15 cells, a total of approximately 6000 s.c.f.m. per tower. Past work has shown each tower to be similar and comparable in output. ✓

Potrooms - Secondary.

Gases escaping into the potroom are treated by a scrubbing system which exhausts by means of four fans per half building, a total of 40 fans. Each fan is rated at 300,000 c.f.m., giving a rated capacity of 1,200,000 c.f.m. per unit.

Paste Plant.

This contains three bag houses, only one of which is of any importance.

This major outlet operates about 90 hours per week at 2,700 c.f.m. The other two operate for 70 hours at 2,000 c.f.m. and 8 hours at 800 c.f.m., respectively. They are also fairly inaccessable.

There is also a stack handling mixer fumes which are water scrubbed. This operates for about 80 hours per week at 2,500 c.f.m. The effluent is a moisture laden gas containing approximately .007 gr/ft^3 - .015 gr/ft^3 of total particulate.

Casting Department.

Six gas-fired casting furnaces are used. Emissions are intermittent and variable. No work has been done on these stacks to date.

In accordance with Oregon Administrative Rules, Chapter 340, 25-275 and 25-280, the following measurements are proposed:

(a) Any one scrubber tower of the potroom primary system will be sampled every month for total particulate, gaseous and particulate fluoride. As one scrubber tower serves 15 reduction cells and under normal operations any group of cells are equivalent to any other group of cells, it is felt that one tower is representative of the plant at any given time. (Sampling time - 8 hours - past experience indicates this should provide a representative sample as any four-hour period will include all phases of operations.)

(b) Two fans of any one roof scrubber will be sampled every month for total particulate, gaseous and particulate fluorides. (Sampling time - 8 hours) This represents 5% of the exhaust from the room air scrubber.

Special Studies.

In accordance with 25-285 (Special Studies), the following measurements will be attempted:

	Particulate	Opacity	SO_2	Hc	CO	Cl_2	Cl^-	NO_x	O_3	H_2O	F
Potroom Control System	X	X	X	X	X			X	X	X	X
Potroom Roof Scrubber	X	X	X	X	X			X	X	X	X
Metal Casting	X	X			X	X	X	X	X		
Paste Plant	X	X		X							

Study will commence March 1971 and reports will be made quarterly until completed in September 1972.

TEST PROCEDURES

Scrubber Tower.

(a) Velocity determination:

This is measured at the intake to the tower with pitot tube and draft gauge. A ten-point traverse is performed on both axes. (Western Precip. Bulletin WP-50).

(b) Sampling:

Tower exhaust is sampled in the middle of the visible plume at the top of the tower. Gas velocity at this point is low, approximately 250 ft/min. This low velocity coupled with the small particle size, 98% less than 2 microns, makes isokinetic sampling unnecessary. Sample taken over 4-hour period to cover range of operating condition. The sample will be collected by a heated probe or filter holder and filtered through 12.5 cm. Whatman No. 1 papers. The gaseous portion will be collected in Greenberg Smith impingers containing 5% NaOH. A sketch of the usual apparatus is enclosed. Samples are analyzed by Willard and Winter distillation followed by thorium nitrate titration.

Potroom Air Scrubbers.

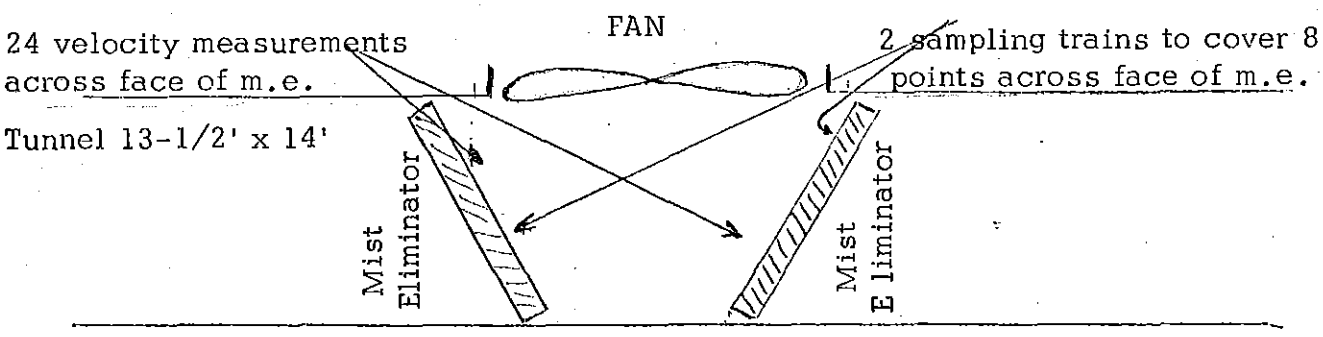
(a) Velocity determination:

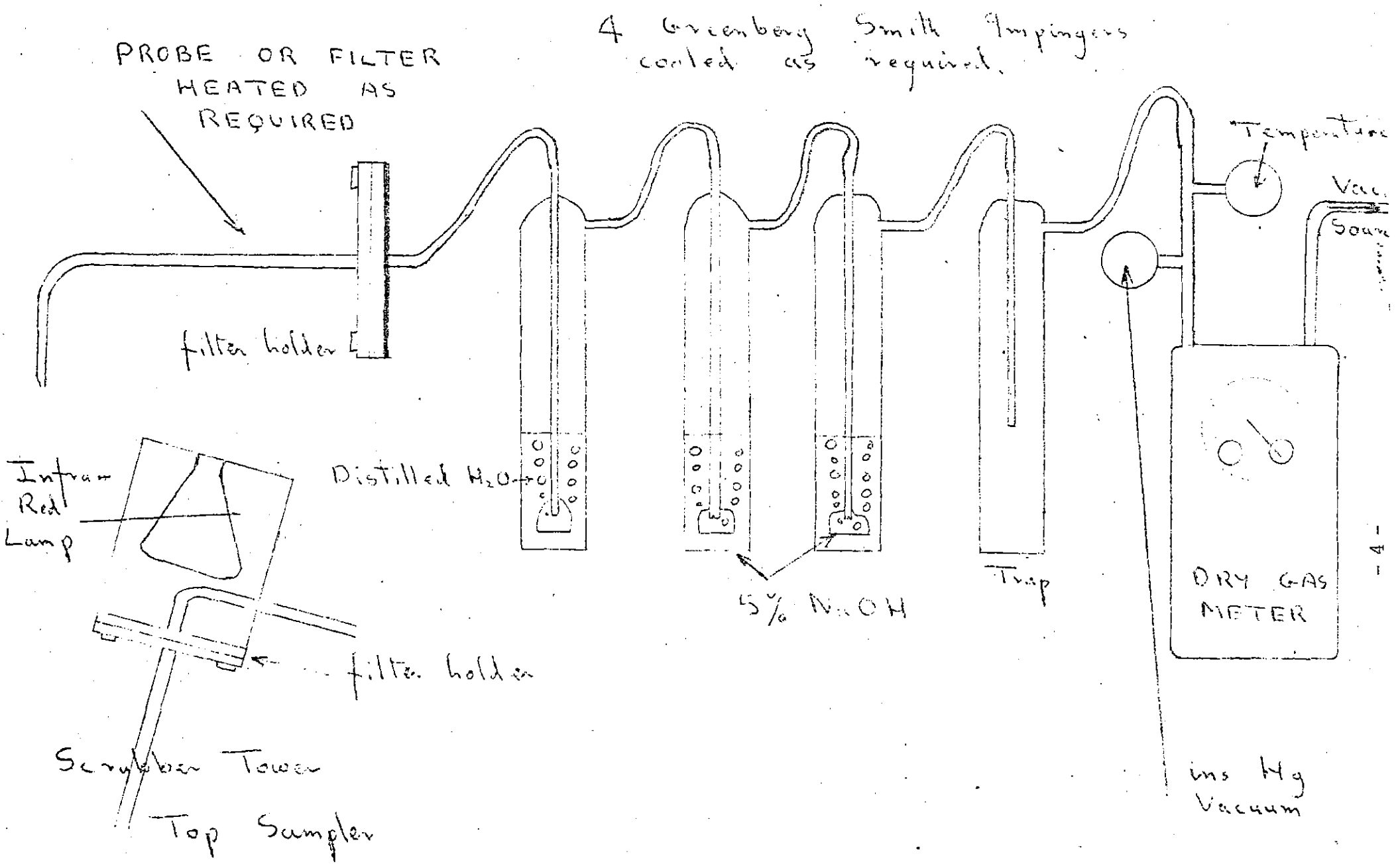
This is measured at the 48 points shown in the sketch with a Taylor rotating vane anemometer.

(b) Sampling:

Two sampling trains are used per fan and are moved to new positions every hour for the duration of a four-hour test.

Sample train arrangement and analysis methods are similar to those for scrubber tower sampling.





Sampling Apparatus

Special Studies.

Procedures supplied by D.E.Q. will be used.

OUT-PLANT MEASUREMENTS

Ambient Air Sampling.

Present sampling network consists of four bicarbonate tube stations sampling for twelve-hour periods on a continuous basis April through October. One station located in the predominant wind direction will be operated all year. (See attached map - Exhibit #2 - for location of sampling stations.) Start April 1971.

Forage.

There are few cattle in the plant area. The forage available is limited to cheat grass which provides spring pasture for the itinerant animals which do winter over in the area. These spring pastures are of limited carrying capacity and a representative sample is almost impossible to obtain. There are, however, two hay fields; one about 1/2 a mile north of the plant and on company property, and the other about three miles east of the plant in the state of Washington. It is proposed that the hay harvested from these fields be sampled. We have had a long standing offer to sample and analyze hay and/or forage for anyone in the area. We have had no takers since about 1962.

It is also proposed that Harvey Aluminum will operate suspended particulate and fall-out stations at the direction of D.E.Q. Harvey has on hand two high volume samplers for suspended particulate sampling which would be used in this program; dust fall jars to be supplied by D.E.Q.and jars and filters to be analyzed by D.E.Q.; stations operated by Harvey.

Harvey operates a wind station at the plant site. This data will be made available to D.E.Q.

REYNOLDS METALS COMPANY

TROUTDALE, OREGON 97060 PHONE: 503 665-9171

February 22, 1971

Mr. Harold M. Patterson, Chief
Air Quality Control
Environmental Quality Control Commission
1400 S. W. 5th Ave.
Portland, Oregon 97201

Dear Harold:

The following recommendations are made for the routine monitoring of the Troutdale Aluminum Reduction Plant of Reynolds Metals Company:

TROUTDALE MONITORING PROGRAM

1.0 Ambient Air

Five ambient air stations have been set up at the following distances from the center of the Plant:

1.1 1.5 miles West

1.2 1.0 mile Southwest

1.3 0.6 mile South

1.4 1.2 miles Southeast

1.5 0.7 mile East.

These stations would be monitored on a daily basis from March 15 through October 15, taking continuous 12-hour samples. This would cover a 30-week program and result in 420 ambient air analyses at each of the five air stations for a total of 2,100 determinations. These results will show the gaseous fluoride content of the ambient air as determined from sodium carbonate coated tubes by a specific ion electrode.

Reporting will be on a monthly basis and as soon as practicable after the completion of each calendar month. Results will be expressed in micrograms per cubic meter.

2.0 Vegetation

Monthly vegetation analyses would be made on the periphery of Plant property at ten (10) sampling locations previously agreed upon by both the Department of Environmental Quality and Reynolds Metals Company.

Reporting will be on a monthly basis and as soon as practicable after the completion of each calendar month. Results will be expressed as parts per million fluoride ion on a dry weight basis.

It would be the policy of Reynolds Metals Company not to sell any hay cut on its property, nor to lease any grazing rights to others at this time. If this policy should change in the future, the Department of Environmental Quality will be so notified.

3.0 Particle Fall-out

A particle fall-out station will be located at each of the five ambient air stations.

Reporting will be on a monthly basis and as soon as practicable after the completion of each calendar month. Results will be expressed in grams per square meter on a 30-day month. This test is determined by procedures set forth in A.S.T.M. D-1739-70.

4.0 Suspended Particulate Matter

Two high volume samplers will be used, with one generally downwind, based upon past meteorological data. Initially the samplers will remain fixed for the monthly sampling period. Sampling will be done on days shown on the High Volume Sampling Schedule furnished by the Department of Environmental Quality.

Initially we will use 102 mm. filters, but will convert to your recommendations of 8 x 10 filters as soon as we can obtain them.

Reporting will be on a monthly basis and as soon as practicable after the completion of each calendar month. Results will be expressed in milligrams per cubic meter.

This testing program will commence in March, 1971 with reporting in April, 1971.

5.0 Meteorological Data

This data will show wind direction and average velocity for sixteen (16) compass points plus calm periods.

Reporting will be on a monthly basis and as soon as practicable after the completion of each calendar month.

6.0 Emission Testing

One scrubbing tower in each operating pot line will be sampled on a monthly basis for total particulates, fluoride particulates and fluoride gases.

Reporting will be on a monthly basis and as soon as practicable after the completion of each calendar month. Results will be expressed in milligrams per cubic foot and milligrams per cubic meter. Emission rates will be calculated in pounds per day.

This testing program will commence in March, 1971 with reporting in April, 1971.

Sincerely yours,

Harold W. Zeh

H. W. Zeh, Chief Chemist
REYNOLDS METALS COMPANY
Troutdale, Oregon 97060

HWZ:c
cc: W. E. Campbell, J. L. Doyle and F. A. Yerke, Jr.

REYNOLDS METALS COMPANY

TROUTDALE, OREGON 97060 PHONE: 503 665-9171

February 22, 1971

Mr. Harold M. Patterson, Chief
Air Quality Control
Environmental Quality Control Commission
1400 S. W. 5th Ave.
Portland, Oregon 97201

Dear Harold:

In the Special Studies Monitoring Program we propose to do the following:

SPECIAL STUDIES MONITORING PROGRAM

1.0 Pot Rooms

1.01 Particle Size Distribution and Composition - Into Cyclones

1.02 Particle Size Distribution and Composition - From Towers

1.03 Particle Size Distribution and Composition - Into Roof Scrubbers

1.04 Particle Size Distribution and Composition - From Roof Scrubbers

1.05 Total Particulates, Gaseous and Particulate Fluorides - Into Cyclones

1.06 Total Particulates, Gaseous and Particulate Fluorides - From Towers

1.07 Total Particulates, Gaseous and Particulate Fluorides - Into Roof Scrubbers

1.08 Total Particulates, Gaseous and Particulate Fluorides - From Roof Scrubbers

1.09 Oxides of Sulfur - From Towers and Roof Scrubbers

1.10 Oxides of Nitrogen - From Towers and Roof Scrubbers

1.11 Carbon Monoxide - From Towers and Roof Scrubbers

1.12 Carbon Dioxide - From Towers and Roof Scrubbers

1.13 Water Vapor - From Towers and Roof Scrubbers

1.14 Ozone - From Towers and Roof Scrubbers

1.15 Opacity - From Towers and Roof Scrubbers

1.0 Pot Rooms (continued)

Data has been obtained and initially discussed with the Department of Environmental Quality in the following categories: 1.01, 1.05 and 1.06. Other categories to be studied will get under way in the near future.

2.0 Carbon Plant Stack

2.01 Particle Size Distribution and Composition

2.02 Total Particulates - Soluble and Insoluble Fractions

2.03 Fluoride Composition - Gaseous vs. Particulate

2.04 Oxides of Sulfur

2.05 Oxides of Nitrogen

2.06 Carbon Monoxide

2.07 Carbon Dioxide

2.08 Water Vapor

2.09 Ozone

2.10 Opacity

Data has been obtained and initially discussed with the Department of Environmental Quality in the following categories: 2.01, 2.03, 2.04, 2.05 and 2.08. Other categories to be studied will get under way in the near future.

3.0 Cast House

3.01 Total Particulates and Composition

3.02 Free Chlorine

3.03 Carbon Monoxide

3.04 Carbon Dioxide

3.05 Oxides of Nitrogen

3.06 Water Vapor

3.07 Opacity

3.0 Cast House (continued)

Initial testing shows 95% removal of aluminum chloride particulates when fluxing operations occur. This scrubber went into operation in May, 1969 and this stack is in compliance with Ringelmann 1 except for breakdowns.

The above categories to be studied will be under way in the near future.

4.0 Rod Room

4.01 Total Particulates and Composition

4.02 Oxides of Sulfur

4.03 Oxides of Nitrogen

4.04 Carbon Monoxide

4.05 Carbon Dioxide

4.06 Opacity

The above categories to be studied will be under way in the near future.

5.0 Cryolite Recovery Plant

5.01 Total Particulates and Composition - Recovery Furnace

The above category to be studied will be under way in the near future.

The regular monitoring program and the Special Studies Monitoring Program involve 50% of the Chief Chemist's time and 100% of the time of 1 Senior Chemist, 1.5 Junior Chemists and 3.5 Senior Analysts. From June, 1970 to date we have made approximately 2,000 tests or determinations in the above two programs. The annual budget for this department is approximately $100,000 per year.

Sincerely yours,

Harold W. Zeh

H. W. Zeh, Chief Chemist
REYNOLDS METALS COMPANY
Troutdale, Oregon 97060

HWZ:c
cc: W. E. Campbell, J. L. Doyle and F. A. Yerke, Jr.

REYNOLDS METALS COMPANY

TROUTDALE, OREGON 97060 PHONE: 503 665-9171

January 15, 1971

Mr. Harold M. Patterson, Director
Air Quality Control Division
Department of Environmental Quality
1400 S. W. 5th Avenue
Portland, Oregon 97201

Dear Harold:

With reference to your letter of January 5, 1971 advising us of the final date for submitting plans for compliance on visible emissions, we wish to give you the status on the following situations:

1.0 Carbon Plant Stack

1.01 A pilot plant project studying the effect of an electrostatic precipitator on the Carbon Plant effluents has been under way at one of our other Plants. The results of these tests and studies will be made available to us upon their completion for our evaluation on this means of reducing visible emissions.

1.02 At the Troutdale Plant we have just completed the installation of a Ceilcote pilot plant scrubber for evaluation of this means of reducing visible emissions. The Ceilcote scrubber is a wet scrubber packed with Tellerettes. This study is just getting under way with the establishment of circulating solutions and it will be sometime before we have made an evaluation of this means of reducing the visible effluent.

1.03 We are also in the process of starting a pilot plant study on the use of after-burners to more fully burn these carbonaceous products into the end products of carbon dioxide and water. This is another possibility of reducing visible emissions.

At the moment we have no definite solution to the Carbon Plant visible emission problem, but are studying the feasibility of several types of remedial measures and consequently until we have decided on the means of reducing the emissions, it will not be possible to set forth any dates of engineering study, procurement of materials or possible completion of the project.

2.0 Electromelt Furnaces in the Rodding Room

A study is under way for a more effective hooding of the electromelt furnaces and the subsequent removal of the particulates. These particulates are primarily metallic particles and carbonaceous material from the burning of the electrodes. A partial solution to this problem may be had when we have the answer to the removal of the hydrocarbons in the Carbon Plant stack and since this study is barely underway, we cannot draw any conclusions from it at this time. Other means of removal are also being considered.

3.0 Electrostatic Precipitator in the Carbon Plant

In the past the electrostatic precipitator had a rapping period of approximately 10 seconds in each hour. This resulted in a visible black plume of approximately 20 - 30 seconds' duration before being dissipated in the atmosphere. A solution to this problem was the insertion of a multiclone ahead of the electrostatic precipitator. As a result of this, the cyclone removes approximately 75% - 85% of the material that previously went to the electrostatic precipitator. This material is re-introduced into the process without going through the electrostatic precipitator. By this means it is only necessary to rap the electrostatic precipitator once in 24 hours and this is reduced to one 15 second rap per day. We believe this problem of the black plume at this point has been eliminated.

Sincerely yours,

Harold W. Zeh

Harold W. Zeh, Chief Chemist
REYNOLDS METALS COMPANY
Troutdale, Oregon 97060

HWZ:c
cc: W. E. Campbell

REYNOLDS METALS COMPANY

TROUTDALE, OREGON 97060 PHONE: 503 665-9171

February 26, 1971

Mr. Harold M. Patterson, Chief
Air Quality Control
Department of Environmental Quality
1400 S. W. 5th Ave.
Portland, Oregon 97201

Dear Harold:

Your letter of November 25, 1970 discussed 8 topics, the first 6 of which had been answered. My letters of February 22, 1971 covered the regular monitoring program and the special studies monitoring program. Item 7 of your letter concerns the control systems at the Troutdale Plant and this letter will cover this subject.

1. Potrooms

The 5th and new potline is complete with orifice plate scrubbers and mist eliminators ahead of the stack discharge. This potline has not been started due to market conditions and consequently we have been unable to make any tests on its efficiency. Modifications have been made to Potline 1 and Potline 4, which include new fume control enclosures of the pot itself, which will take a greater portion of the effluents to the primary fume control system and a replacement of the old wood scrubbing towers by new scrubbers and an 80 foot steel stack. Tests on this equipment indicate further studies are required to make this system more efficient.

A Krebs-Elbair scrubber has been leased and we will test this unit upon installation. This unit should arrive within the next two weeks. It will be installed some 8 - 10 days later and testing will start immediately upon completion of installation.

We also plan to test a Research-Cottrell flooded disc moderate pressure drop scrubber a little later during 1971.

2. Carbon Plant

Several things are being studied to reduce the opacity of the Carbon Plant stack effluent. We have purchased and are currently

2.0 Carbon Plant (continued)

experimenting with induced air burners in an effort to get a more complete combustion and burn the carbonaceous material to carbon dioxide and water.

A Research-Cottrell electrostatic precipitator has been installed in one of our Arkansas Plants and is currently being evaluated. The results of these studies will be made available for our use.

We had installed a Ceilcote wet packed scrubber, which is currently being tested here at Troutdale. Upon the completion of the evaluation of these current studies, if they are successful in their intended accomplishment, a decision will be made and engineering and design would commence almost immediately. It is practically impossible to give a time schedule on installation and completion of these projects until we have determined a successful solution to the problem.

Reynolds Metals Company will evaluate the results of all their special studies and development work with the objective to determine what equipment will have the capability to comply with a Ringelmann 1 without creating other potential problems. Effort is being exerted to develop equipment so that this compliance can be accomplished by no later than January 1, 1975.

Sincerely yours,

H. W. Zeh, Chief Chemist
REYNOLDS METALS COMPANY
Troutdale, Oregon 97060

HWZ:c
cc: W. E. Campbell, J. L. Doyle and F. A. Yerke, Jr.

REYNOLDS METALS COMPANY

TROUTDALE, OREGON 97060 PHONE: 503 665-9171

February 26, 1971

Mr. Harold M. Patterson, Chief
Air Quality Control
Department of Environmental Quality
1400 S. W. 5th Ave.
Portland, Oregon 97201

Dear Harold:

Refer to my letter of February 22, 1971 discussing the Troutdale monitoring program, Section 6.0 Emission Testing. In this section we agreed to test one scrubbing tower in each operating potline once each month.

By telephone conversation of today with Fred Skirvin, he has requested what we intend to do on the roof scrubbers as far as emission testing is concerned and I have stated to him that we would start emission testing on the roof scrubbers in May, 1971 with reporting to follow in June, 1971. As with the courtyard towers, we will test one roof scrubber in each operating potline once each month. This is an addendum to my February 22nd letter.

Sincerely yours,

H. W. Zeh, Chief Chemist
REYNOLDS METALS COMPANY
Troutdale, Oregon 97060

HWZ:c
cc: W. E. Campbell, J. L. Doyle and F. A. Yerke, Jr.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Arnold M. Cogan, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : February 25, 1971 for March 5, 1971 Meeting

SUBJECT: STATUS REPORT - WIGWAM WASTE BURNERS IN COOS COUNTY

At the present time, there are 16 active wigwam waste burners in the county. All operators of wigwam burners have been contacted and the Department is working toward phase-out or modification schedules with each operator.

Specifically, the following is presented regarding the operation of each individual wigwam waste burner in Coos County:

Arago Cedar Products, Myrtle Point

Arago Cedar Products operate one wigwam waste burner in Myrtle Creek. The company has stated in correspondence to the Department that the burner will be phased out by August 1, 1971. This program was accepted. P

Al Pierce Lumber Company, Coos Bay

Burner phased-out during 1970. P

Acme Wood Products, Myrtle Point

This arrow manufacturing firm operates one wigwam waste burner. A schedule of modification or phase-out has been suggested, but no confirmation has yet been received from the company. A reply is expected prior to May 1, 1971. I

Cape Arago Lumber Company, Coos Bay

Burner phased out in 1970. P

Collier Division, Alder Mills, Inc., Myrtle Point

This company has one wigwam burner outside Myrtle Point. During recent observations the mill was shut down and personnel in the area report no operation for the past 10 months. Correspondence has been sent to the company, but no response has yet been received. A reply is expected prior to May 1, 1971. O

Coos Head Timber Company, Coos Bay

The company reported phase-out of the waste burner on June 30, 1970. P

Elkside Lumber Company, Lakeside (Bohemia Lumber Co.)

The company operates one large wigwam burner near Lakeside. A schedule of modification or phase-out was suggested. The company has requested a delay until the summer of 1972 before doing any work on modifying the burner or until there is a hogged fuel market in the area. This request was denied. The company now has until May 1, 1971 to present a reasonable schedule of compliance. This burner is directly adjacent to a park. I

Georgia Pacific Corporation, Coquille

The company operates one wigwam burner each at Norway and at Powers. A schedule of modification or phase-out for each of the locations has been suggested and is currently being considered by the company. A reply is expected prior to May 1, 1971. I I

Leep Lumber Company, Myrtle Point

The company operates one wigwam waste burner in Myrtle Point. A schedule of phase-out or modification has been suggested, but no confirmation has yet been received from the company. A response is expected prior to May 1, 1971. I

Menasha Corporation, Doyle Veneer Division, Myrtle Point

The company has two burners at this location. The Doyle Veneer #1 burner is presently inactive. The Doyle Veneer #2 burner is in service. The company has stated in correspondence to the Department that the burner will be phased out by August 1, 1971. P

Perry Bros. Veneer Company, Bandon

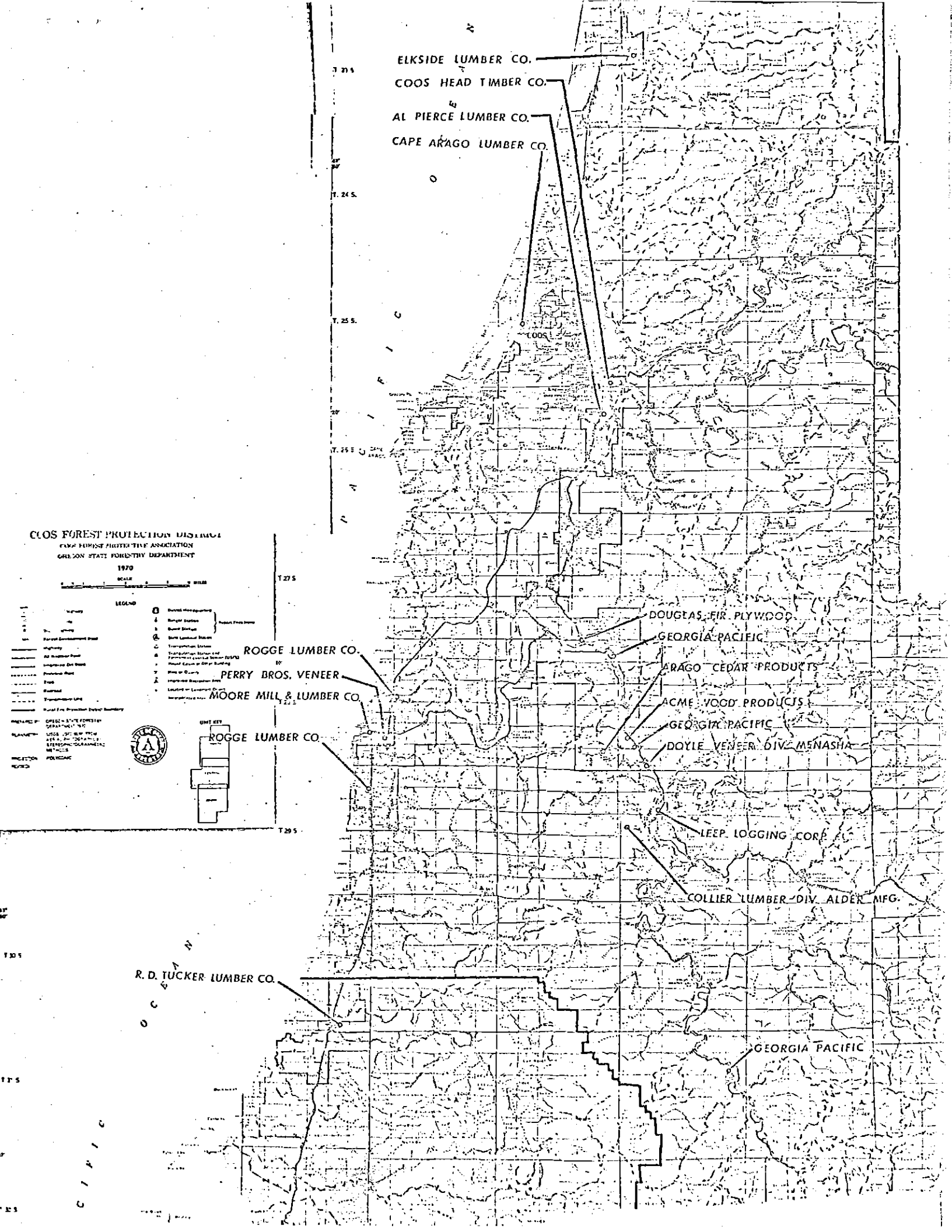
At the company site in Bandon, there are two wigwam burners. One at the veneer plant has collapsed. The other at the box plant is presently inactive. Correspondence has been sent to the company to confirm the burner status, but no reply has yet been received. It is expected that the company will respond prior to May 1, 1971. P I

Rogge Lumber Sales, Bandon

The company operates two wigwam burners in Bandon. A schedule of modification or phase-out has been suggested, but no confirmation has yet been received from the company. A reply is expected prior to May 1, 1971. I

Roseburg Lumber Company, Coquille (was Douglas Fir Plywood)

This company operates two burners in Coquille. A schedule of phase-out or modification was suggested. The company has requested a schedule calling for phase-out of one burner (south) by August 1, 1971 and the phase-out of the larger burner (north) in January, 1972. The phase-out schedule of the south burner was accepted. More information has been requested on the phase-out schedule for the north burner in that documentation for utilization of these residues should be furnished for Department evaluation. P P


ELKSIDE LUMBER CO.
COOS HEAD TIMBER CO.
AL PIERCE LUMBER CO.
CAPE ARAGO LUMBER CO.
COOS FOREST PROTECTION DISTRICT
COOS FOREST PROTECTIVE ASSOCIATION
OREGON STATE FORESTRY DEPARTMENT
1970
ROGGE LUMBER CO.
PERRY BROS. VENEER
MOORE MILL & LUMBER CO.
ROGGE LUMBER CO.
DOUGLAS FIR PLYWOOD
GEORGIA PACIFIC
ARAGO CEDAR PRODUCTS
ACME WOOD PRODUCTS
GEORGIA PACIFIC
DOYLE VENEER DIV. MENASHA
LEEP LOGGING CORP.
COLLIER LUMBER DIV. ALDER MFG.
R. D. TUCKER LUMBER CO.
GEORGIA PACIFIC
T. 24 S.
T. 25 S.
T 27 S
T 29 S

To: Environmental Quality Control Commission Members

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Arnold M. Cogan, Member
Edward C. Harms, Member
George A. McMath, Member

From: Air Quality Control Division

Date: February 26, 1971, for the March 5, 1971, Meeting

Subject: Willamette Industries, Inc. - Duraflake Division, Albany
Tax Credit Application No. T-170
Filed October 1, 1971

1. Applicant:

Willamette Industries, Incorporated
Albany Division (Duraflake)
1002 Executive Building
Portland, Oregon 97204

The applicant owns and operates a particle board manufacturing plant in Albany, Oregon (Linn County).

2. Description of Claimed Facilities:

The claimed facility consists of an entirely new materials handling system which includes two high-pressure pneumatic conveyor systems for the milling and flaking area, a new belt conveyor, two new vibratory screens, and all necessary labor and materials to complete the project. These facilities were installed in conjunction with an expansion project to replace inadequate facilities which produced pollution problems.

The applicant claims that the facility was installed between June 26 and October 22, 1969, and put into operation on October 22, 1969, with a useful life of 10 years.

Certification is claimed under the 1969 Act.

Facility Cost: The entire cost of the facility modification and expansion came to $437,741.00 of which $146,040.92 was claimed for elimination of pollution sources. OK

3. Staff Review:

The claimed portions of this project represent an updating in the type of equipment necessary for use in the handling, sizing and processing of the wood residues utilized in the manufacture of particle board. The type of equipment selected and used in the claimed facility represents the highest and best practicable control of dust emissions. The installation of this equipment has resulted in reducing the emissions from this portion of the production process by approximately 101 pounds per hour. The claimed facilities replace material handling equipment which caused dust emission problems.

3. Staff Review: (cont'd)

The new belt conveyor provides for increased material handling capacity. Replacement of two existing conveyors would have been necessary to achieve pollution control requirements. The company estimates that ⅓ of the cost of the belt conveyor can be properly attributed to increased capacity ($6,817.04 out of $20,451.11). Taking this into account, the company claims that 4.7% of the actual cost of the claimed facilities is allocated to increased capacity or 95.3% allocated to pollution control.

$$\left(\frac{6817.04}{146,040.92} \times 100 = 4.7\%\right)$$

4. Recommendations:

The staff recommends that a Pollution Control Facility Certificate be issued to Willamette Industries, Inc. for the facilities claimed in Application No. T-170 bearing an actual cost figure of $146,040.92 with 80% or more allocated to pollution control.

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

September 23, 1970

Exhibit D

Mr. A. R. Morgans, Financial Vice President
Willamette Industries, Inc.
1002 Executive Building
Portland, Oregon 97204

Dear Mr. Morgans:

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 for the modification of the cyclone system at the Albany plant to reduce air emissions (as detailed in Exhibit C of the application). In making our examination, we have relied upon such detail as being complete itemization of labor and materials devoted to the construction of the facility described. Our examination consisted of a detailed inspection of vendors' invoices and other documentation of disbursement. We have also traced the costs shown into the plant and equipment accounts of the Company.

In our opinion, the costs for the modification of the Albany plant cyclone system as described in Exhibit C of the application, amounting to $146,040.92, fairly presents the actual costs incurred by Willamette Industries, Inc., in the construction of the facility.

Very truly yours,

PEAT, MARWICK, MITCHELL & CO.

R. M. Alexander

R. M. Alexander, Partner

RMA:SW

COST BREAKDOWN OF PROJECT 23-365

ELIMINATION OF TWO CYCLONES AND MODIFICATION

TO CONTROL AIR POLLUTION

Carother Sheet Metal Company

Two pneumatic high pressure systems for milling and flaking building - per attached quotation Exh. C-1	$12,798.00
Fabricate belt and screw conveyors per attached quotation Exh. C-2	17,766.00
Other:	
Relocate fan and piping on green dryer relay system	2,334.46
Form and deliver steel troughing conveyor	1,389.93
Relocate pull through system due to revision in mill and flake building and relocate green dryer cyclone and piping	3,821.64
Remove certain cyclones on mill & flake building - relocate (3) cyclones; green dryer, plywood trim and high pressure system	3,734.99
Install negative air system for mill & flake & dryer building	5,594.40
Additional fabrication work; steel trusses, hopper, etc.	8,389.32
Total Carothers	$55,828.74

Exhibit C

Linn Pacific Mechanical Contractors	
Erection of new equipment and remove existing equipment per drawings and specifications - per attached purchase order - Exh. C-3	$16,207.00
Additional work	14,442.51
Total Linn Pacific	30,649.51
Link Belt	
Two totally enclosed single deck vibrating screens - per attached purchase order - Exh. C-4	12,444.34
Other	
J. W. Minder Chain and Gear Co. - fabrication per attached quotation Exh. C-5	4,718.00
Empire Rubber & Supply Co. - conveyor belting per attached quotation Exh. C-6	2,624.56
Misc. Electrical supplies and material	20,648.29
Purchased labor	12,176.47
Plant Payroll	6,951.01
	$146,040.92

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Arnold M. Cogan, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : February 26, 1971 for March 5, 1971 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-187.

This application was received on January 11, 1971. A summary of the contents and results of the staff review are given below.

1. Applicant: National Metallurgical Company
(A Division of Kawecki, Berylco Industries, Inc.)
1801 South "A" Street (P. O. Box 56)
Springfield, Oregon 97477

Mr. Frank A. Kosciolek, Manager
Phone: 503-746-7674

The applicant produces elemental silicon by subjecting a mixture of quartz, coke and hog-fuel to high temperatures.

2. The claimed facility is described to consist of a baghouse, fan and motor, ductwork (inside and outside), control house and dust conveyor and storage for treating the emissions from two (2) silicon producing arc furnaces. Installation was completed on November 1, 1970 and operation commenced on November 4, 1970.

3. The total cost of the claimed facility is $504,241.41. An accountant's certification of this figure is attached.

4. Staff Review:

Prior to the installation of the claimed facility, the arc furnace emissions were collected by hoods and passed through multiclones. This process removed the larger particles and released about 18,000 pounds of sub-micron material per day. The present emissions through the claimed control system are estimated to be 200 lb/day.

The staff findings indicate that the principal purpose for installing the claimed facility was to reduce atmospheric contamination and that 100% of the cost is allocable to pollution control.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost of $504,244.41 be issued for the facility claimed in Application No. T-187.

WILLIAM HAGGERTY, P.A.
ARCHIE RUFF, P.A.
EVERITT HILL, C.P.A.
BERNICE PLATTE, C.P.A.
EDWARD C. STACK, C.P.A.

TELEPHONE 746-4466

Haggerty, Ruff & Hill
PUBLIC ACCOUNTANTS

McKENZIE BUILDING
444 NORTH A STREET
SPRINGFIELD, OREGON
97477

January 5, 1971

Kawecki Berylco Industries, Inc.
National Metallurgical Division
1801 South A Street
Springfield, Oregon 97477

Gentlemen:

As independent public accountants selected to review the costs of a air pollution control system for arc furnaces in connection with your application for certification of pollution control facility to Oregon Department of Environment Quality dated January 7, 1971, we have examined the attached statements of costs shown as Exhibit C/D and identified on the company's records as appropriation request number 1791-C838. Our examination included tests of the accounting records, inquires, and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the attached Exhibit C/D consisting of two pages presents fairly the costs of the above named facility aggregating $504,241.41.

Very truly yours,

Haggerty, Ruff & Hill

KAWECKI BERYLCO INDUSTRIES, INC.
NATIONAL METALLURGICAL DIVISION
STATEMENT OF COSTS.
AIR POLLUTION CONTROL SYSTEM FOR ARC FURNACES
APPROPRIATION REQUEST NO. 1791-C838

EIGHTEEN MONTHS ENDED NOVEMBER 30, 1970

Vendor	Description	Amount
BAGHOUSE		
American Air Filter	Baghouse - Contract	$313,862.00
City of Springfield	Building Permits	199.50
City of Springfield	Building Permits	35.00
State of Oregon	Review of Plans	47.30
C. B. Wright	Certification of Plans	40.00
Clarke's Sheet Metal	Brass Door Latches	20.30
Eldon Shields	Footings/Foundations	7,300.00
Pittsburg Testing Lab	Soil Bearing Tests	1,384.25
McKenzie Industries	Forming lumber	3.04
Hamilton Electric	Electric Wiring	6,137.56
Steel Structures, Inc.	Painting - Air Piping	1,601.23
Frt. for items in Baghouse:		
Pacific Motor Trucking	Freight	127.37
REA Express	Freight	11.41
Oregon Transfer	Freight	158.28
P.I.E.	Freight	10.69
Frederiksen Engineering	Engineering	5,575.31
Boyertown Engineering	Engineering	624.14
Total		337,137.38
FAN & MOTOR		
Zurn Industries, Inc.	1-#20RT 190,000 CFM Fan	12,022.00
Steel Structures, Inc.	Entire work to couple fan/motor	415.65
Louis Allis Co.	600 H.P. electric motor	10,417.00
Tillman & Booth, Inc.	Size #7 starter	2,876.00
Hamilton Electric	Electric wiring	2,160.00
Gardner & Beedon	Heater strips motor protection	48.06
Eldon Shields	Foundations	1,198.75
Southern Pacific	Freight on fan	1,176.75
Frederiksen Engineering	Engineering	4,748.71
Total		35,062.92
DUCTWORK (INSIDE & OUT)		
Steel Structures	Contract plus extras	50,562.83
Springfield Steel	Hoods, side shields, offtake breeching	3,982.75
E. J. Bartells	Insulation - Hoods	539.50
Pacific Motor Trucking	Freight on insulation	17.02
American Warming & Ventilation	Three dampers	1,675.00
Namco	Labor - Three dampers	2,957.77
Frederkisen Engineering	Engineering	9,357.09
		69,091.96
CONTROL HOUSE		
Eldon Shields	Bldg. Slab	178.75
McCracken Bros.	Freight	63.96
Sabre Steel Building Co.	Pre-fab bldg.	1,205.04
Petty cash	Misc. steel - Bldg.	2.25
Richard B. Coady	Erection of bldg.	174.00
Larrie Shields	Erection of bldg.	174.00
Tillman Booth	Transformer - Bus - Duct - Fused switches	7,571.50
Hamilton Electric	Elect. wiring	6,748.75
Component Parts	Compressed air dryer	376.50
Consolidated Supply	Pipe & fittings	37.83
Myrmo & Sons	Pipe fittings - Air	7.98
Foxboro Co.	Pneumatic controls	2,468.24
McPheeter Elect.	Fabricate elbows for conduit	57.89
Jay F. Oldham	Crane service -place transformer	68.00
Gardner Beedon	Motor control center	1,274.20
Springfield Utility Board	12.5 KV primary svc.	2,035.43
Frederiksen Engineering	Engineering	3,515.65
Total		25,959.97

KAWECKI BERYLCO INDUSTRIES, INC.
NATIONAL METALLURGICAL DIVISION
STATEMENT OF COSTS
AIR POLLUTION CONTROL SYSTEM FOR ARC FURANCES
APPROPRIATION REQUEST NO. 1791-C838

EIGHTEEN MONTHS ENDED NOVEMBER 30, 1970

Vendor	Description	Amount
DUST CONVEYOR & STORAGE		
Steel Structures, Inc.	Fabricate & erection	22,938.00
Wildish Cascade Concrete	Concrete	25.00
Eldon Shields	Foundations	1,705.00
Vebra Screw, Inc.	Feeder	4,875.00
P.I.E.	Freight on feeder	468.48
Frederiksen Engineering	Engineering	4,701.26
Total		34,712.74
SITE PREPARATION		
Springfield Quarry	Grading & rock	1,107.44
Oregon Fence Co.	Fencing	1,169.00
Total		2,276.44
Total		$504,241.41

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

B. A. McPhillips, Chairman
Storrs S. Waterman, Member
Arnold M. Cogan, Member
E. C. Harms, Jr., Member
George A. McMath, Member

FROM : AIR QUALITY CONTROL DIVISION

DATE : March 1, 1971 for Meeting of March 5, 1971

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-196.

This application was received on February 25, 1971. A summary of the contents and results of the staff review are given below.

1. Applicant: Harvey Aluminum (Incorporated)
The Dalles Plant
19200 South Western Avenue
Torrance, California 90509
Mr. David S. Crystal, Assistant Treasurer
Phone (213) 775-2181

The company produces primary aluminum metal at The Dalles Plant by fused salt electrolysis of aluminum oxide in vertical stud Soderberg reduction cells.

2. The facility claimed in this application is described to be a tunnel-like forced air spray-type fume treatment system which replaces the roof monitor natural draft spray system. Installation of the facility was completed and full scale operation began in November 1970.

3. The total cost of the facility is $4,155,077.94. An accountant's certification of this figure is attached.

4. Staff Review:

The claimed facility removes gaseous and particulate air contaminants from the pot room ventilation exhaust. The new facility will operate the year around at greater removal efficiencies than those accomplished by the old system. The improved performance is achieved by a longer scrubbing path, increased water volume, and fully annual operation.

All of the collected materials are discharged to the Columbia River. The amounts of matter being put in the river do not exceed the limitations set forth in the Company's Waste Discharge Permit.

The staff findings indicate that the principal purpose for installing the facility was to reduce atmospheric emissions and that 100% of its cost is allocable to pollution control.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost of $4,155,077.94 be issued for the facility claimed in Application No. T-196.

EXHIBIT "D"

LYBRAND, ROSS BROS. & MONTGOMERY
CERTIFIED PUBLIC ACCOUNTANTS

COOPERS & LYBRAND
IN AREAS OF THE WORLD
OUTSIDE THE UNITED STATES

548 SOUTH SPRING STREET
LOS ANGELES 90013
626-6356

February 23, 1971

Harvey Aluminum (Incorporated)
19200 South Western Avenue
Torrance, California 90509

Dear Sirs:

In connection with your filing of the Application for Certification of Pollution Control Facility for Tax Relief Purposes, we have reviewed the costs associated with Harvey Aluminum (Incorporated)'s - The Dalles fume control facility.

In our opinion, the following schedule fairly reflects the total cost of The Dalles fume control facility at December 31, 1970.

Engineering Labor and Materials	$ 60,429.84
Construction Labor	1,983,010.85*
Construction Materials	2,111,637.25*
Total	$4,155,077.94

*Certain construction contracts did not distinguish between labor and materials. In these cases, the costs were allocated one-half to labor and one-half to materials.

Very truly yours,

Lybrand, Ross Bros. & Montgomery

JRT:el
WAS

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: HMP

Date: February 18, 1971

From: RCH

Subject: Statement on parking facility moratorium to Portland City Council meeting of February 11, 1971.

Pursuant to Portland City Commissioner Neil Goldschmidt's letter of February 8, to Mr. Spies, I prepared a statement and read it to City Council at its meeting on February 11.

RCH

NEIL GOLDSCHMIDT
COMMISSIONER

DEPARTMENT OF
PUBLIC SAFETY

314 City Hall

CITY OF PORTLAND
OREGON

February 8, 1971

Mr. Ken Spies
Director
Department of Environmental
Quality
1400 S. W. Fifth
Portland, Oregon

Dear Mr. Spies:

Before the City Council this Thursday, February 11th, is a policy question of whether or not to have a moratorium on downtown parking lots during the period of a comprehensive plan.

Many people have raised to me the question of whether the air pollution created by new parking lots and the concentration of automobiles in and around them ought to be a factor in determining this policy. Would it be possible to obtain by Thursday written testimony from your Department concerning the effect of new parking structures in downtown Portland on air quality standards.

If you see fit, I encourage you to also ask someone in your Department to come to the hearings on Thursday before the City Council to answer questions as well as to present any testimony. The hearings will be held at 2:00 p.m.

Cordially,

Neil Goldschmidt

NG/sp

The Department of Environmental Quality is of the opinion that a moratorium on downtown parking facilities should be enacted during the development period of the Comprehensive Guide Plan for Downtown Portland.

Several factors were important in the formation of this position by the Department. One such factor is Federal legislation in the form of "The Clean Air Act" as amended in 1970. The Implementation Plans provisions of the Act, Section 110, reads in part as follows:

> "(1) Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within nine months after the promulgation of a national primary ambient air quality standard... a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State."
>
> "(2) The Administrator shall approve such plan, or any portion thereof, if he determines that it was adopted after reasonable notice and hearing and that - "(A)(i) in the case of a plan implementing a national primary ambient air quality standard, it provides for the attainment of such primary standard as expeditiously as practicable but (subject to subsection (e) in no case later than three years from the date of approval of such plan...."(B) it includes emission limitations, schedules, and timetables for compliance with such limitations, and such other measures as may be necessary to insure attainment and maintenance of such primary or secondary standard, including, but not limited to, land-use and transportation controls;"

The Report of the Committee on Public Works, United States Senate which accompanied the Senate version of the 1970 amendments to the Clean Air Act, submitted by Senator Byrd of West Virginia, contained in the General Statement the following:

> "Implementation of standards will require other changes in public policy:
>
> Land use policies must be developed to prevent location of facilities which are not compatible with implementation of national standards.
>
> Transportation policies must be developed or improved to assure that the impact of pollution from existing moving sources is reduced to the

the minimum compatible with the needs of each region. Construction of urban highways and freeways may be required to take second place to rapid and mass transit and other public transportation systems. Central city use of motor vehicles may have to be restricted."

"If the Nation is to continue to depend on individual use motor vehicles such vehicles must meet high standards. The bill recognizes that a generation - or ten years' production - of motor vehicles will be required to meet the proposed standards. During that time, as much as seventy-five percent of the traffic may have to be restricted in certain large metropolitan areas if health standards are to be achieved within the time required by this bill."

This Senate Committee report also contains the following statement in the "Discussion of Intent" section:

"The Committee recognizes that during the next several years, the attainment of required ambient air quality in many of the metropolitan regions of this country will be impossible if the control of pollution from moving sources depends solely on emission controls. The Committee does not intend that these areas be exempt from meeting the standards. Some regions may have to establish new transportation programs and systems combined with traffic control regulations and restrictions in order to achieve ambient air quality standards for pollution agents associated with moving sources."

The stated policy and objective of the Environmental Quality Commission has been a second factor in developing the Department's position on the moratorium.

The Environmental Quality Commission at its' December 19, 1969 meeting adopted as administrative policy the position that the Department should publicly support the development of mass transit systems as a long range means of reducing motor vehicle concentrations in urban areas. Also adopted as an interim procedure for major areas relative to motor vehicle emissions was the following:

"If it is determined that a health hazard does exist, the Regions are directed to implement traffic control programs which they deem advisable and practical for the elimination of the hazard in any given area."

At the December 4, 1970 meeting of the Environmental Quality Commission, it was moved by Mr. Cogan and carried that the Environmental Quality Commission go on record as encouraging all bodies that undertake regional transportation planning to give full consideration to air pollution problems and air pollution concentrations and to make them a primary factor in their planning process. Mr. McPhillips, the Commission Chairman, also stated that the Environmental Quality Commission definitely encourage the development and use of mass transit.

In a letter to Tri-Met, dated December 10, 1969, Mr. McPhillips stated: "By developing a mass transportation system that will significantly reduce automobile traffic within the metropolitan area, a sizable reduction in atmospheric loading can be achieved." In a letter to Tri-Met dated December 1, 1970, Mr. Kenneth H. Spies, Director of the Department of Environmental Quality, stated: "The Department strongly supports the concept of rapidly proceeding to integrate and improve public transportation within the greater Portland metropolitan area. Many of the proposed concepts which offer the greatest potential for significantly reducing the deleterious effects upon the urban environment of emissions from the private automobile are contingent upon the development of a viable alternative to the private automobile within the core areas."

A third factor in the Department's decision to support a moratorium has been the issuance of the proposed national ambient air quality standards. Section 109 of the Clean Air Act, as amended December 31, 1970, directs the Administrator of the Environmental Protection Agency to publish, no later than January 31, 1971, proposed national primary and secondary ambient air quality standards for each pollutant for which air quality criteria were issued prior to enactment of the amendments. These proposed standards were published in the Federal Register of January 30, 1971, Volume 36, Number 21, and include proposed national primary and secondary standards for carbon monoxide. National primary ambient air quality standards define levels of air quality which the Administrator judges are necessary, with an adequate margin of safety, to protect the public health. National secondary ambient air quality standards define levels of air quality which the Administrator judges necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. The primary and secondary ambient air quality standards for carbon monoxide proposed by the Environmental Protection

Agency is: (a) 10 milligrams per cubic meter - maximum 8-hour concentration not to be exceeded more than once per year. (b) 15 milligrams per cubic meter - maximum 1-hour concentration not to be exceeded more than once per year.

The value of 10 milligrams per cubic meter of carbon monoxide is equivalent to about 8.7 parts per million (ppm) under reference conditions. The 15 milligrams per cubic meter is equivalent to about 13.1 ppm. The current ambient air quality standard in Oregon, as adopted by the Environmental Quality Commission, is 20 ppm - maximum average 8-hour concentration.

A review of the carbon monoxide data collected at the Department's continuous air monitoring program (CAMP) station at 718 W. Burnside shows numerous occasions during the past several years on which the proposed national standard was exceeded. During 1968 the measured levels of carbon monoxide at the CAMP station exceeded 10 milligrams per cubic meter - average 8-hour concentration, on 166 occasions. Seven of these on Sundays, 17 on Saturdays, and 142 during the weekdays. There were 566 occasions on which 15 milligrams per cubic meter was exceeded for a one hour period during 1968. Four occurred on Sundays, 32 on Saturdays, and 532 on weekdays.

During 1969, the CAMP station data shows 136 occasions on which 10 milligrams per cubic meter of carbon monoxide was exceeded. Two of these occurred on Sundays, 9 on Saturdays, and 125 during weekdays. A one hour level of 15 milligrams per cubic meter was exceeded 378 times during 1969. Five occurred on Sundays, 18 on Saturdays, and 355 on weekdays. The 1970 data through July shows that the proposed 8-hour standard was exceeded on 42 occasions and the proposed 1-hour standard on 133 occasions.

In view of the carbon monoxide emission reductions required in order to meet the proposed national ambient air quality standard, and since motor vehicles account for over 95% of the carbon monoxide emissions in the metropolitan area, the Department is of the opinion that only through traffic planning, regulation, and control or restriction, can the proposed national ambient air quality standard for carbon monoxide be complied with in the near future. The full sphere of transportation affecting the downtown area must be studied and planned for, not just the role of moving privately owned automobiles into and through the area. Since this total planning concept is

being undertaken with the Downtown Plan it does not appear reasonable from an air quality control viewpoint, to impose additional restraints upon the planning at this stage by allowing the construction of additional parking facilities during this interim period.