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6/4/1971

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS

State of Oregon
Department of Environmental Quality

AGENDA

ENVIRONMENTAL QUALITY COMMISSION MEETING

June 4, 1971

Sunriver Lodge, Sunriver, Oregon

9:30 a.m.

A. Comments from the public

10:00 a.m.

B. Minutes of May 7, 1971 meeting

C. Project Plans for May 1971

D. Status Reports

(1) Prineville Area

(2) Brooks-Willamette Corp.

E. Brooks-Scanlon Control Program

11:00 a.m.

F. Public hearing regarding proposed adoption of amendments to OAR Chapter 340, Division 2, Subdivision 6, Field Burning

G. Receipt of Columbia-Willamette APA Variances Nos. 33 through 36.

H. Authorization of public hearing for considering adoption of special emission standards for veneer dryers.

I. Brown Brothers Lumber Co., Grants Pass, wigwam burner replacement.

J. City of Huntington sewage disposal

K. Columbia Slough industries

L. Central Oregon sewage disposal - status report

M. Tax Credit Applications

(1)	Organic Fertilizer Co. dba Lane Feedlots	T-126	$24,055.36
(2)	" " " " " "	T-127	$13,526.62
(3)	Frank Rood, Jr.	T-183	$ 7,970.99
(4)	Teledyne Wah Chang Albany	T-162	$ 1,194.00
(5)	" " " "	T-163	$ 4,100.00
(6)	Freightliner Corp.	T-193	$ 4,831.00
(7)	" "	T-194	$ 1,824.00
(8)	U. S. Plywood-Champion Papers	T-210	$23,412.75
(9)	Robert Oja	T-190	$ 2,631.41
(10)	American Can Co.	T-213	$175,400.00
(11)	Roseburg Paving Co.	T-223	$ 5,965.00
(12)	McGraw Edison Co.	T-202	$ 5,420.00
(13)	Freightliner Corp.	T-191	$107,544.00
(14)	" "	T-192	$26,520.00
(15)	" "	T-195	$ 4,132.00
(16)	Teledyne Wah Chang Albany	T-165	$43,601.00

HMP

MINUTES OF THE TWENTY-FOURTH MEETING

of the

Oregon Environmental Quality Commission

June 4, 1971

The twenty-fourth regular meeting of the Oregon Environmental Quality Commission was called to order by the Chairman at 9:30 a.m., Friday, June 4, 1971, in the Sunriver Lodge at Sunriver, Oregon. Members present were B.A. McPhillips, Chairman, Arnold M. Cogan, Edward C. Harms, Jr., George A. McMath and Storrs S. Waterman.

Participating staff members were Kenneth H. Spies, Director; E.J. Weathersbee, Deputy Director; John Osburn and Arnold B. Silver, Legal Counsel; Harold M. Patterson, Air Quality Control Division Director; Harold L. Sawyer, Chief Engineer; James R. Sheetz, C. Kent Ashbaker and Harold W. Merryman, District Engineers; Roger C. Sherwood, Supervising Engineer; R. Bruce Snyder, Meteorologist; and Harold H. Burkitt, T.M. Phillips and F. Glen Odell, Associate Engineers.

COMMENTS FROM THE PUBLIC

The Chairman asked if anyone present wished to make any comments or submit a statement regarding subjects not listed on the agenda but relating to environmental quality. No one offered to speak.

MINUTES OF PREVIOUS MEETING

It was MOVED by Mr. McMath, seconded by Mr. Cogan and carried that the minutes of the twenty-third regular meeting of the Commission held on May 7, 1971 in the Public Service Building, 920 S.W. 6th Avenue, Portland, Oregon be approved as prepared by the director.

PROJECT PLANS FOR MAY 1971

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the actions taken by the staff during the month of May 1971 regarding the following 15 municipal sewerage, 2 industrial waste, 1 solid waste, and 27 air quality control projects be approved:

Water Pollution Control

Date	Location	Project	Action
Municipal Projects (15)			
5/3/71	Canby	Sewage Treatment plant final plans and Change Order #1	Approved
5/4/71	Willamina	Plywood Mill service line	Prov. app.
5/11/71	East Salem S & D	Santana Village Phase 2	Prov. app.
5/11/71	Multnomah County	Dunthorpe-Riverdale Unit #3	Prov. app.
5/11/71	Odell San. Dist.	Orchard View Subdivision	Prov. app.
5/13/71	Trojan	Revised sewage treatment	Approved
5/14/71	Bear Creek Valley Sanitary Authority	Sewer extension	Prov. app.
5/14/71	Bear Creek Valley Sanitary Authority	West Medford trunk prel.	Prov. app.
5/17/71	Union	Sewage collection and treatment report	Comments submitted
5/24/71	Springfield	SP #74 and SP #72	Prov. app.
5/24/71	Gilliam County	Comprehensive water and sewer plan	Comments submitted
5/24/71	Union County	Boise Cascade domestic treatment lagoon	Prov. app.
5/25/71	Warm Springs	West Hills Subdivision	Prov. app.
5/25/71	North Bend	Plant expansion	Prov. app.
5/26/71	Coquille	Dean Minard Area	Prov. app.
Industrial Waste Projects (2)			
5/3/71	White City	Reichhold Chemicals, secondary treatment	Prov. app.
5/5/71	Coos Bay	Coos Bay Packing Co.	Cond. app.
Solid Waste Projects (1)			
5/12/71	Lake County	City of Lakeview sanitary landfill	Prov. app.
Air Quality Control			
5/6/71	Douglas County	Hub Lumber Co. Plans and specifications for WWB modification	Cond. app.
5/6/71	Josephine County	Morris Lumber Co. Proposal to phase out WWWB by July 31, 1971	Approved
5/6/71	Josephine County	Tru-Fir Lumber Co. Proposal to phase out WWWB by January 1, 1972	Approved
5/6/71	Coos County	Leep Logging Co. Proposal to phase out WWWB by August 1, 1971	Approved

Air Quality Control - continued

Date	Location	Project	Action
5/10/71	Josephine County	Murphy Creek Lumber Co. Plans and specifications for WWWB modification	Cond. app.
5/12/71	Wasco County	Tygh Valley Lumber Co. Proposal to phase out WWWB by September 1, 1971	Approved
5/12/71	Josephine County	Rough and Ready Lumber Co. WWWB Operational procedure	Cond. app.
5/12/71	Jackson County	Cheney Forest Products Plans for WWWB modification	Add. inf. requested
5/12/71	Jackson County	Ed Fountain Lumber Co. WWWB Operational procedure	Cond. app.
5/13/71	Douglas County	Roseburg Shingle Co. Plans and specifications for modification of two (2) WWWB	Approval for one WWWB Approval denied for one WWWB
5/17/71	Douglas County	Nordic Veneer Plans for WWWB modification	Add. inf. Requested
5/17/71	Jackson County	Double Dee Lumber Co. Proposal to phase out WWWB by June 15, 1971	Approved
5/17/71	Coos County	Perry Bros. Veneer Proposal to phase out WWWB by August 1, 1971	Approved
5/19/71	Douglas County	Little River Box Company Plans and Specifications for WWWB modification	Cond. app.
		The Robt. Dollar Co. Request to extend plan submission for WWWB until July 1, 1971	Approved
5/19/71	Deschutes County	Ponderosa Moulding Co. Proposal to phase out WWWB by May 1, 1971	Approved
5/19/71	Jackson County	Eugene F. Burrill Lumber Co. Proposal to phase out WWWB by October 1, 1971	Approved
5/20/71	Jefferson County	Madras Sash and Door Co. Plans and specifications for dust collection system	Cond. app.
5/20/71	Douglas County	D.R. Johnson Lumber Co. Proposal to phase out WWWB after July 1, 1972	Denied
5/21/71	Douglas County	Schmidt Lumber Co. Proposal to phase out WWWB by January 1, 1972	Approved
5/24/71	Klamath County	Boise-Cascade Corp. Beaver Marsh. Plans to modify WWWB	Prel. app.
5/24/71	Linn County	Western Kraft Corporation Plans and specifications for non-condensible collection and treatment (incineration)	Cond. app.

Air Quality Control - continued

Date	Location	Project	Action
5/25/71	Columbia County	Boise-Cascade Corporation Proposal for reducing TRS from two (2) recovery furnaces to meet immediate limits and to arrive at method for ultimate limits	Cond. app.
5/26/71	Klamath County	Madras Veneer Division of Nordic Plywood, Inc. Plans for WWWB modification	Prel. app.
5/26/71	Josephine County	J.H. Baxter & Co. Plans and specifications for WWWB modification	Cond. app.
5/26/71	Curry County	South Coast Lumber Co. Request to extend plan submission for WWWB until July 15, 1971	Approved
5/28/71	Douglas County	Hanna Nickel Smelting Co. Plans to eliminate flare on ore heater and shorten stack heights to 84 feet from 96 feet on ore heater and electric furnace for pilot plant project	Cond. app.

In connection with the city of Lakeview sanitary landfill project Mr. Cogan asked if a public policy regarding such developments had not been established at the May 7 meeting of the Commission when the application of Washington County to use the Porter Yett quarry site for such a purpose had been denied. In the discussion which followed it was pointed out that the action taken regarding the Porter Yett quarry site was based on the specific conditions pertaining to that site and did not therefore represent a general policy regarding all sanitary landfills.

TAX CREDIT APPLICATIONS

Mr. Sawyer presented the staff's evaluation and recommendations regarding the 17 tax credit applications covered by the following motion:

It was MOVED by Mr. Waterman, seconded by Mr. McMath and carried that pollution control tax credit certificates be issued to the companies pursuant to the 16 applications and in the amounts listed below and further that action on application T-188 submitted by Pacific Carbide and Alloys Company be deferred until the company's proposed facilities for handling the scrubber waste water are completed and demonstrated to be adequate:

	Applicant	Appl. No.	Amount	% Allocated
(1)	Organic Fertilizer Co. (Lane Co.)	T-126	$24,055.36	80% or more
(2)	Organic Fertilizer Co. (Lane Co.)	T-127	13,526.62	40 - 60%
(3)	Frank Rood, Jr., North Bend	T-183	7,970.99	80% or more
(4)	Teledyne Wah Chang Albany	T-162	1,194.00	(1967 Act)
(5)	Teledyne Wah Chang Albany	T-163	4,100.00	(1967 Act)
(6)	Freightliner Corp., Portland	T-193	4,831.00	60 - 80%
(7)	Freightliner Corp., Portland	T-194	1,824.00	80% or more
(8)	U.S. Plywood - Champion Papers, Roseburg	T-210	23,412.75	(1967 Act)
(9)	Robert Oja, Portland	T-190	2,631.41	80% or more
(10)	American Can Co., Halsey	T-213	175,400.00	80% or more
(11)	Roseburg Paving Co.	T-223	5,965.00	80% or more
(12)	McGraw Edison Co., Corvallis	T-202	5,420.00	100%
(13)	Freightliner Corp., Portland	T-191	107,544.00	40 - 60%
(14)	Freightliner Corp., Portland	T-192	26,520.00	60 - 80%
(15)	Freightliner Corp., Portland	T-195	4,132.00	60 - 80%
(16)	Teledyne Wah Chang Albany	T-165	43,601.00	100%

In response to a question by Mr. Waterman it was reported by a representative of the Freightliner Corporation who was present that the oil collected by the facility referred to in Application No. T-194 is reclaimed and reused.

CITY OF HUNTINGTON SEWAGE DISPOSAL

Mr. Sheetz presented a staff memorandum report dated May 27, 1971 which outlined the need for chlorination of the sewage effluent and pointed out that the city of Huntington had failed to comply with the time schedule set forth in its waste discharge permit for installing such facilities. He recommended that the staff be authorized to schedule a public hearing for the July 1971 EQC meeting to show cause why an order should not be entered requiring the city of Huntington to install facilities adequate to provide a chlorine residual of 1.0 mg/l after 60 minutes of contact time at average design flow.

Mr. Ronald M. Blakley, Consulting Engineer, was present to represent the city. He admitted the city had failed to meet its time schedule for completion of the chlorination project but claimed that the reason for the delay was the fact that the council wanted to combine it with a water supply project. He said the chlorination project would cost an estimated $15,000 and that if the city had to vote bonds for such a small amount the legal fees and other related costs would be unreasonably high. For that reason they wanted to hold only one

bond election for both the water and sewerage projects. He reported further that he had still not completed the final plans for the water project and therefore no bond election had yet been held or scheduled by the city. He mentioned that the city has a population of only 600 and that it is decreasing.

After considerable discussion it was MOVED by Mr. Cogan, seconded by Mr. Harms and carried that the staff recommendation that a public hearing in this matter be held at the July meeting of the Commission be approved. In seconding the motion Mr. Harms commented that at this point in time it is difficult to see what the solution to this problem is, that from the standpoint of the proportion of cost to the size of the $15,000 bond issue the economic and sensible solution would be to incorporate it with the larger water bond issue but that the city must get going in the matter and be able to show progress or otherwise discard the idea of combining it with the water bond issue.

STATUS REPORTS

(1) Prineville Area: Mr. Phillips presented a staff report dated May 28, 1971 which summarized the status of air pollution problems in the Prineville area caused by wigwam waste burners. He said that it now appears that all of the wigwam waste burners in this area will be phased out of operation by August 1, 1971. He stated further that some hog fuel boilers have had visible emission problems and that the staff will continue to evaluate them and where necessary work out reasonable and timely compliance schedules.

(2) Brooks-Willamette Corp., Bend: Mr. Phillips also presented a staff report covering the progress being made by the Brooks-Willamette Corp. for reducing the emissions of particulate matter to the atmosphere from its particle board plant located at Bend. An inspection of the plant had been made by the Commission and staff members on Thursday, June 3, 1971.

BROOKS SCANLON, INC., CONTROL PROGRAM

Mr. Burkitt presented a staff report dated June 1, 1971 regarding the proposal of the Brooks-Scanlon Corporation to solve the air pollution problem caused by operation of power boilers at its sawmill in Bend. This plant

had also been inspected on June 3 by the Commission and staff members. Mr. Burkitt stated that the company's proposal was considered by the staff to be marginal, that it would take 11 months to implement, and that therefore the staff recommends that Brooks-Scanlon, Inc., be instructed (1) to develop a program for complete phase out of the six old hog fuel boilers unless proper flyash control equipment is installed and (2) to undertake a program for more assured and permanent control of emissions, namely, additional boiler capacity. He estimated that another 90 days might be required by the company to present a new proposal. No estimate could be given of the time required to install additional boiler capacity.

Mr. Michael P. Hollern, President, then presented a written statement before the Commission. He said that while they believe their proposal as previously presented to DEQ will solve the problem they respect the judgment of the DEQ and therefore request permission to study the matter further and present an alternative proposal to the Commission in September 1971.

Mrs. Irene L. Foxton who resides in the area adjacent to the mill complained bitterly about the excessive fallout of particulate matter on her property. She claimed it is not only a nuisance but also a health hazard and that the air pollution has made it impossible for her and her husband to sell their home. She demanded that something be done immediately to abate the pollution.

Mr. Ivan Helm, another resident of the area, supported the complaints registered by Mrs. Foxton.

Mr. Leo Hopper, Production Manager for the company, estimated they could have the modulating valves installed in the dry kilns by September 15, 1971. He said they hoped this would help reduce the wide variation in demand upon the power boilers and thereby make it easier to maintain effective control over stack emissions.

It was suggested that a reduction in mill production would be a possible alternative solution to the emission problem. Mr. Hollern was unable to estimate what reduction in mill operation would be needed but he thought an analysis of the economic impact of such an alternative solution could be obtained before the next EQC meeting. He pointed out the company has a total of 450 employees working two shifts per day.

In response to a question by Mr. McMath, Mr. Burkitt stated that the Brooks-Willamette particle board plant which is part of the area's air pollution problem is moving as fast as it can to provide adequate controls and is, in fact, ahead of the time schedule set forth in the state's regulations.

It was MOVED by Mr. Cogan, seconded by Mr. McMath and Mr. Waterman and carried that the staff's recommendations be approved, that Brooks-Scanlon present at the July EQC meeting an analysis of the economic impact of reducing mill operation as an alternative solution to the problem, and that a new proposal for assured and permanent control emissions be submitted before the September meeting of the Commission. Mr. Cogan also asked that the DEQ publicize this action so that the local residents will know what steps are being taken to abate the pollution.

PUBLIC HEARING REGARDING FIELD BURNING REGULATIONS

Proper notice having been given as required by state law and administrative rules, the public hearing in the matter regarding proposed adoption of amendments to OAR Chapter 340, Division 2, Subdivision 6, Field Burning was called to order by the Chairman at 11:30 a.m. on June 4, 1971 in the Sunriver Lodge, Sunriver, Oregon. All members of the Commission were present.

Mr. R. Bruce Snyder, Meteorologist, reviewed the proposed amendments and presented a staff report in the matter dated June 2, 1971. He also presented copies of letters of comment which had been received from (1) C. Walter Stickney, State Fire Marshal, Salem, dated May 21, 1971, (2) Roy A. Bowers and Sons, Seed Growers, Harrisburg, dated May 25, 1971, (3) Mrs. Ralph Holzapfel, Women for Agriculture, Tangent, dated May 30, 1971, (4) Ernest L. Evanson, Fire Warden for Clackamas County Fire Zone 2, Oregon City, dated June 2, 1971, (5) W Bar T Company, Inc., Estacada, undated but received June 2, 1971, (6) Joseph A. DeWilde, Fire Chief for Estacada Rural Fire District, dated June 2, 1971, (7) Gerber Seed Co., Estacada, dated June 2, 1971, (8) William Perry et al, Seed Growers, Estacada, not dated but received June 2, 1971, (9) Edward I. Seagraves, Seed Grower, Oregon City, dated June 1, 1971, (10) Mr. and Mrs. James R. Tedrow, Seed Growers, Estacada, undated but received June 2, 1971, and (11) Williams Warehouse, Halsey, dated

May 28, 1971. Mr. Snyder stated that changes should be made to Section II, Subsection 3, pertaining to "Permits" in order to take care of the requirements of the State Fire Marshal as set forth in his letter of May 21, 1971, and also the requirements set forth in Chapter 434, Oregon Laws 1971 regarding open burning of cereal grains under certain conditions.

After the presentation by Mr. Snyder the hearing was recessed at 12:10 p.m. and reconvened at 1:30 p.m.

Mr. Bill Rose was present to represent the Oregon Seed Council. He said the growers have demonstrated theirs is a reliable industry, they realize the problems confronting them, they are working to solve the problems, they hope to do a better job this year, they share the goal of cessation of burning, they will cooperate fully, but they do not want to be put out of business and therefore they are greatly concerned about the deadline established by the Legislature. He mentioned the 50¢ per acre fee that the growers will be paying - 35¢ for demonstration and 15¢ for the smoke management program. With the income from the former they hope to build 3 mobile incinerators for demonstration purposes. He stressed the need for better and more rapid communications and promised that the industry will work to end field burning and in the meantime to minimize the effects.

He suggested no specific changes to the proposed amendments.

Mr. Channing W. Cathcart of the Cascade Foothills Perennial Grass Growers Committee requested that the following changes or modifications be made: (1) Increase the quotas shown in Table I for the foothills areas, (2) include a position statement to allow DEQ to increase quotas on days with good atmospheric conditions and (3) increase (double or triple) quotas when straw is removed prior to burning of field.

Jim Moore, Fire Marshal from Albany, also appeared and made general comments regarding the program.

Both Mr. Moore and Mr. Rose urged that the Commission take action at this meeting on the proposed amendments so the growers and fire districts could start immediately to make plans for managing this year's operations. The Chairman had previously announced that usually action is deferred until the following meeting so that the record can be kept open for additonal comment and time can be allowed for full consideration of all testimony.

It was MOVED by Mr. Cogan, seconded by Mr. Waterman and carried that the revised schedule and regulations for field burning in the Willamette Valley be adopted as proposed by the staff with the necessary amendments as discussed by Mr. Snyder to Section II, Subsection 3 regarding "Permits."

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

COLUMBIA WILLAMETTE APA VARIANCES NOS. 33 through 36

Mr. Odell reviewed the variances Nos. 33 through 36 which had been granted by the Columbia-Willamette Air Pollution Authority and filed with DEQ. He said it appeared that these 4 variances had been properly granted and therefore he recommended that they be accepted and filed by EQC.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the staff recommendation in this matter be adopted and the variances be accepted and filed.

CENTRAL OREGON SEWAGE DISPOSAL - STATUS REPORTS

Mr. Ashbaker presented a staff report dated June 4, 1971 pertaining to the problems of sewage disposal in the Central Oregon region and specifically to the status of compliance with regulations pertaining to "Construction and Use of Waste Disposal Wells" which had been adopted by the Sanitary Authority on May 13, 1969. He reported that the cities had been unable to obtain federal grants for financial assistance in constructing sewage collection systems because the counties had failed to create the required Council of Governments for the region. He said that Jefferson and Crook Counties have opposed the formation of a COG.

Mr. Hal Puddy, Bend City Manager, was present and discussed the problems which that city has experienced in trying to finance its project.

After considerable discussion it was MOVED by Mr. Harms, seconded by Mr. Cogan and carried that the Commission urge the appropriate federal agencies to give serious and favorable consideration to the cities' applications for demonstration grants because the results will be of area-wide benefit in building other systems.

It was MOVED further by Mr. Harms, seconded by Mr. McMath and carried that a letter be authorized over the signature of the Chairman urging the

counties and cities to get together and form the necessary Council of Governments so that adequate progress can be made in solving the region's sewage disposal problems.

AUTHORIZATION OF HEARING FOR VENEER DRYER REGULATIONS

Mr. Odell presented a staff report dated June 1 requesting authorization to schedule a public hearing regarding the proposed adoption of special emission standards for veneer dryers.

It was MOVED by Mr. McMath, seconded by Mr. Waterman and carried that a public hearing for such a purpose if considered necessary by the staff be scheduled for December, 1971.

BROWN BROTHERS LUMBER CO., Grants Pass

Mr. Phillips reviewed the staff report dated May 28, 1971 regarding the request of the Brown Brothers Lumber Company of Grants Pass to replace an existing wigwam waste burner with a new modified burner.

Mr. Norman Webb, General Manager, was present to represent the company.

It was MOVED by Mr. Waterman, seconded by Mr. McMath and carried that the recommendation of the staff be approved and the company be permitted to replace its existing wigwam waste burner with an approved new and modified burner.

COLUMBIA SLOUGH INDUSTRIES

Mr. Roger Sherwood reviewed a staff report dated June 4 regarding the status of waste disposal for the industries located along Columbia Slough in Multnomah County. He reported that all organic wastes had been eliminated from the slough and that all industries with the possible exception of one were in compliance with their waste discharge permits. Because of the high water in the slough he said it was not possible at this time to determine whether or not seepage from the Herbert Malarkey Paper Company settling ponds was in violation of that company's waste discharge permit.

Mr. Sherwood reported further that the staff had denied requests of H.B. Fuller and Company and Union Carbide for extensions of time beyond the June 1, 1971 deadline for completion of their projects. Mr. Cliff Dernbach was present to represent Union Carbide. After a brief discussion of the conditions pertaining to the latter company's situation it was decided that no further extension should be allowed.

Mr. Terry G. DeSylvia, Attorney, was present to represent the Malarkey Paper Company and its request for an extension of time until August 15, 1971. He reported the following chronology of events:

(1) November 8, 1968 - Company was notified that wastes had to be removed from slough.

(2) January 1969 - Preliminary plans were prepared.

(3) May 1969 - Proposal submitted to DEQ.

(4) September 4, 1969 - Provisional approval granted by DEQ.

(5) Early 1970 - Company learned that flow of wastes could be reduced from 410 gpm to 50 gpm by recycling.

(6) November 11, 1970 - Status report filed by company.

(7) November 30, 1970 - DEQ questioned company's plans.

(8) January 13, 1971 - DEQ staff letter requested that connection be made to city sewers.

(9) Company checked with city and found it would have to annex.

(10) April 7, 1971 - Annexation to city completed.

(11) May 17, 1971 - City agreed to accept wastes.

(12) June 4, 1971 - City permit issued; company has agreement with UPRR for right-of-way and contract for construction has been awarded with completion expected in 50 days.

In view of the above record it was MOVED by Mr. Harms, seconded by Mr. McMath and carried that an extension be granted to the Herbert Malarkey Paper Company for a period of 50 days or until connection to the city sewer is completed, whichever comes first, and with the stipulation that this extension be only for seepage and not any direct discharge to the slough. Mr. Cogan voted against the motion.

The next meeting of the Commission was scheduled for Friday, July 23, 1971.

Copies of all staff reports and other documents referred to in these minutes have been made a part of the Department's permanent files.

There being no further business the meeting adjourned at 3:10 p.m.

Respectfully submitted,

Kenneth H. Spies

Kenneth H. Spies
Director

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CONTROL DIVISION

REGULATIONS FOR AGRICULTURAL OPEN BURNING
Adopted June 4, 1971

Sections 26-005 through 26-140 of OAR Chapter 340, Division 2, Subdivision 6 are repealed, and the following is adopted in lieu thereof.

I. DEFINITIONS: As used in this general order, regulation and schedule, unless otherwise required by context:

1. Burning seasons:

   a) "Summer Burning Season" means the four month period from July 1 through October 31.

   b) "Winter Burning Season" means the eight month period from November 1 through June 30.

2. "Department" means the Department of Environmental Quality.

3. "Marginal Conditions" means conditions defined in ORS 449.840 (1) under which permits for agricultural open burning may be issued in accordance with this regulation and schedule.

4. "Northerly Winds" means winds coming from directions in the north half of the compass, at the surface and aloft.

5. "Priority Areas" means the following areas of the Willamette Valley:

   a) Areas in or within 3 miles of the city limits of incorporated cities having populations of 10,000 or greater.

   b) Areas within 1 mile of airports serving regularly scheduled airline flights.

   c) Areas in Lane County south of the line formed by U. S. Highway 126 and Oregon Highway 126.

   d) Areas in or within 3 miles of the city limits of the City of Lebanon.

   e) Areas on the west side of and within $\frac{1}{4}$ mile of these highways; U. S. Interstate 5, 99, 99E and 99W. Areas on the south side of and within $\frac{1}{4}$ mile of U. S. Highway 20 between Albany and Lebanon, Oregon Highway 34 between

Lebanon and Corvallis, and Oregon Highway 228 from its junction south of Brownsville to its rail crossing at the community of Tulsa.

6. "Prohibition Conditions" means atmospheric conditions under which all agricultural open burning is prohibited (except where an auxiliary fuel is used such that combustion is nearly complete, or a mobile field incinerator approved by the Department is used).

7. "Southerly Winds" means winds coming from directions in the south half of the compass, at the surface and aloft.

8. "Willamette Valley" means the areas of Benton, Clackamas, Lane, Linn, Marion, Polk, Washington and Yamhill Counties lying between the crest of the Coast Range and the crest of the Cascade Mountains, and includes the following:

   a) "South Valley", the areas of jurisdiction of all fire permit issuing agents or agencies in the Willamette Valley portions of the Counties of Benton, Lane or Linn.

   b) "North Valley", the areas of jurisdiction of all other fire permit issuing agents or agencies in the Willamette Valley.

II. GENERAL PROVISIONS:

The following provisions apply during both the summer and winter burning seasons in the Willamette Valley unless otherwise specifically noted.

1. Priority for Burning. On any marginal day, priorities for agricultural open burning shall follow those set forth in ORS 449.840 which give perennial grass seed fields used for grass seed production first priority, annual grass seed fields used for grass seed production second priority, grain fields third priority and all other burning fourth priority.

2. Permits. (a) No permit shall be issued for burning with equipment using liquified petroleum gas unless such equipment complies in full with the applicable laws, rules and regulations of the Office of the State Fire Marshal.

   (b) As provided in Chapter 434, Oregon Laws, 1971, permits for open field burning of cereal grain crops shall only be issued under ORS 476.380 and 478.960 if the person seeking the permit submits to the issuing authority a signed statement under oath or affirmation that the acreage to be burned will be planted to fall legumes or perennial grasses.

   (c) No permit-issuing agency or other person authorized to grant agricultural open burning permits pursuant to ORS 478.960 and 476.380 shall give oral permission to conduct burning and all permits shall be issued in writing, on a day-to-day basis and shall be issued in accordance with the limits of extent, time and type of burning set forth in these regulations.

(d) Any person granted a permit for agricultural open burning shall maintain a copy of said permit at the burning site during the burning operation, for inspection by appropriate authorities.

(e) The staff of the Department of Environmental Quality may authorize burning on an experimental basis, and may also, on a fire district by fire district basis, issue limitations more restrictive than those contained in these regulations when in their judgment it is necessary to attain air quality.

(f) At all times proper and accurate records of permit transactions and copies of all permits granted shall be maintained by each permit-issuing agency or person authorized to grant permits, for inspection by the proper authority. No permit transaction shall be deemed completed until confirmation of actual date, time, and amount of burning conducted under said permit is furnished to the permit issuing agents. No person shall be granted additional permits until confirmation of outstanding permits is received. Such confirmation shall be on a day-to-day basis.

(g) Permit agencies or persons authorized to grant permits shall submit to the Department of Environmental Quality, on forms provided, weekly summaries of field burning permit data, during the period July 1 - October 15.

(h) All debris, cutting and prunings shall be dry, cleanly stacked and free of dirt and green material prior to being burned, to insure as nearly complete combustion as possible.

(i) No substance or material which normally emits dense smoke or obnoxious odors may be used for auxiliary fuel in the igniting of debris, cutting or prunings.

(j) Use of mobile field incinerators approved by the Department shall require a burning permit, and permit agencies or agents shall keep up-to-date records of all acreages burned by such incinerators. Acres burned on any day by mobile field incinerators approved by the Department shall not be applied to open field burning acreage quotas, and such incinerators may be operated under either marginal or prohibition conditions.

III. SUMMER BURNING SEASON REGULATIONS:

1) Classification of Atmospheric Conditions. All days will be classified as marginal or prohibition days under the following criteria:

a) Marginal Class N conditions: Forecast northerly winds and maximum mixing depth greater than 3500 feet.

b) Marginal Class S conditions: Forecast southerly winds.

c) Prohibition conditions: Forecast northerly winds and maximum mixing depth 3500 feet or less.

2) Quotas. (a) Except as provided in this subsection, the total acreage of permits for open field burning shall not exceed the amount authorized by the Department for each marginal day. Daily authorizations of acreages shall be issued in terms of basic quotas or priority area quotas as listed in Table I,attached as Exhibit A and incorporated by reference into this regulation and schedule, and defined as follows:

(1) The basic quota represents the number of acres to be allowed throughout a permit jurisdiction, including fields located in priority areas, on a marginal day on which general burning is allowed in that jurisdiction.

(2) The priority area quota represents the number of acres allowed within the priority areas of a permit jurisdiction on a marginal day when only priority area burning is allowed in that jurisdiction.

(b) All Willamette Valley permit agencies or agents not specifically named in Table I shall have a basic quota and priority area quota of 50 acres.

(c) In no instance shall the total acreage of permits issued by any permit issuing agency or agent exceed that allowed by the Department for the marginal day, except as provided for 50 acre quotas as follows: When the established daily acreage quota is 50 acres or less, a permit may be issued to include all the acreage in one field providing that field does not exceed 100 acres and provided further that no other permit is issued for that day. For those districts with a 50 acre quota, permits for more than 50 acres shall not be issued on 2 consecutive days.

(d) The staff of the Department of Environmental Quality may designate additional areas as Priority Areas, and may adjust the basic acreage quotas or priority area quotas of any permit jurisdiction, where conditions in their judgment warrant such action.

3) Burning Hours. Burning may begin at 9:30 a. m. PDT, and all fires must be out by one hour after sunset. Burning hours may be reduced by the fire chief or his deputy when necessary to protect from danger by fire.

4) Extent and Type of Burning. a) Prohibition. Under prohibition conditions no permits for agricultural open burning shall be issued and no burning shall be conducted, except where an auxiliary liquid or gaseous fuel is used such that combustion is essentially complete, or a mobile field incinerator approved by the Department is used.

b) Marginal Class N Conditions. Unless specifically authorized by the Department, on days classified as Marginal Class N burning shall be limited to the following:

(1) North Valley: one basic quota may be issued in accordance with Table I.

(2) South Valley: one priority area quota for priority area burning may be issued in accordance with Table I.

(c) Marginal Class S Conditions. Unless specifically authorized by the Department on days classified as Marginal Class S conditions, burning shall be limited to the following:

(1) North Valley: One basic quota may be issued in accordance with Table I in the following permit jurisdictions: Aumsville, Drakes Crossing, Marion County District 1, Silverton, Stayton, Sublimity, and the Marion County portion of the Clackamas-Marion Forest Protection District. One priority area quota may be issued in accordance with Table I for priority area burning in all other North Valley jurisdictions.

(2) South Valley: One basic quota may be issued in accordance with Table I.

(d) Special Restrictions on Priority Area Burning. No field may be burned on the upwind side of any city, airport, or highway within a priority area.

TABLE I

FIELD BURNING ACREAGE QUOTAS

NORTH VALLEY AREAS

County	Basic Quota (Acres)	Priority Area Quota (Acres)
Clackamas		
Estacada	100	0
Monitor	100	0
All other permit issuing agencies	50	50
Marion:		
Aumsville	75	0
Marion #1 (Fourcorners, Brooks, Keizer)	75	50
Jefferson	175	50
St. Paul	100	50
Silverton	275	0
Stayton	150	0
Sublimity	250	0
Woodburn	100	50
All other permit issuing agencies	50	50
Polk:		
Southeast Polk	225	50
Southwest Polk	200	50
Washington:		
All permit issuing agencies	50	50
Yamhill:		
McMinnville	75	50
All other permit issuing agencies	50	50

SOUTH VALLEY AREAS

County	Basic Quota (Acres)	Priority Area Quota (Acres)
Benton:		
County jurisdiction	400	50
State Forestry jurisdiction	125	0
Corvallis	275	50
Monroe	275	50
Philomath	150	0
North Albany) included in Albany quota		
Palestine)		
All other permit issuing agencies	50	50
Lane:		
Alvadore	125	0
Coburg	100	50
Creswell	75	50
Irving	200	100
Junction City	250	50
Unprotected	110	50
All other permit issuing agencies	50	50
Linn:		
Albany	650	125
Brownsville	775	50
Halsey-Shedd	2150	150
Harrisburg	1475	100
Lebanon	950	50
Scio	150	0
Tangent	1050	50
All other permit issuing agencies	50	50

IV. WINTER BURNING SEASON REGULATIONS:

CLASSIFICATION OF ATMOSPHERIC CONDITIONS:

(1) Atmospheric conditions resulting in computed air pollution index values in the high range, values of 90 or greater, shall constitute prohibition conditions.

(2) Atmospheric conditions resulting in computed air pollution index values in the low and moderate ranges, values less than 90, shall constitute marginal conditions.

EXTENT AND TYPE OF BURNING:

(1) Burning Hours. Burning hours for all types of burning shall be from 9:00 a. m. until 4:00 p. m., but may be reduced when deemed necessary by the fire chief or his deputy. Burning hours for stumps may be increased if found necessary to do so by the permit issuing agency. All materials for burning shall be prepared and the operation conducted, subject to local fire protection regulations, to insure that it will be completed during the allotted time.

(2) Certain Burning Allowed Under Prohibition Conditions. Under prohibition conditions no permits for agricultural open burning may be issued and no burning may be conducted, except where an auxiliary liquid or gaseous fuel is used such that combustion is essentially complete, or a mobile field incinerator approved by the Department is used.

(3) Priority for Burning on Marginal Days. Permits for agricultural open burning may be issued on each marginal day in each permit jurisdiction in the Willamette Valley, following the priorities set forth in ORS 449. 840 which give perennial grass seed fields used for grass seed production first priority, annual grass seed fields used for grass seed production second priority, grain fields third priority and all other burning fourth priority.

PROJECT PLANS

During the month of May 1971, the following project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

Date	Location	Project	Action
Municipal Projects (15)			
5-3-71	Canby	Sewage treatment plant final plans and Change Order #1	Approved
5-4-71	Willamina	Plywood mill service line	Prov. approval
5-11-71	East Salem S & D	Santana Village Phase 2	Prov. approval
5-11-71	Multnomah County	Dunthorpe-Riverdale Unit #3	Prov. approval
5-11-71	Odell San. Dist.	Orchard View Subdivision	Prov. approval
5-13-71	Trojan	Revised sewage treatment	Approved
5-14-71	Bear Creek Valley Sanitary Authority	Sewer extension	Prov. approval
5-14-71	Bear Creek Valley Sanitary Authority	West Medford trunk prel.	Prov. approval
5-17-71	Union	Sewage collection and treatment report	Comments submitted
5-24-71	Springfield	SP #74 and SP #72	Prov. approval
5-24-71	Gilliam County	Comprehensive water and sewer plan	Comments submitted
5-24-71	Union County	Boise Cascade domestic treatment lagoon	Prov. approval
5-25-71	Warm Springs	West Hills Subdivision	Prov. approval
5-25-71	North Bend	Plant expansion	Prov. approval
5-26-71	Coquille	Dean Minard Area	Prov. approval

PROJECT PLANS (Cont.)

Date	Location	Project	Action
Industrial Waste Projects (2)			
5-3-71	White City	Reichhold Chemicals, secondary treatment	Prov. approval
5-5-71	Coos Bay	Coos Bay Packing Co.	Conditional approval
Solid Waste Projects (1)			
5-12-71	Lake County	City of Lakeview sanitary landfill	Prov. approval P

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

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

Date	Location	Project	Action
6	Douglas County	Hub Lumber Co. Plans and specifications for WWWB modification	Conditional Approval
	Josephine County	Morris Lumber Co. Proposal to phase out WWWB by July 31, 1971	Approved
	Josephine County	Tru-Fir Lumber Co. Proposal to phase out WWWB by January 1, 1972	Approved
	Coos County	Leep Logging Company Proposal to phase out WWWB by August 1, 1971	Approved
10	Josephine County	Murphy Creek Lumber Co. Plans and specifications for WWWB modification	Conditional Approval
12	Wasco County	Tygh Valley Lumber Co. Proposal to phase out WWWB by September 1, 1971	Approved
	Josephine County	Rough & Ready Lumber Co. WWWB Operational procedure	Conditional Approval
	Jackson County	Cheney Forest Products Plans for WWWB modification	Additional Information Requested
		Ed Fountain Lumber Co. WWWB Operational procedure	Conditional Approval
13	Douglas County	Roseburg Shingle Co. Plans and specifications for modification of two (2) WWWB	Approval for one WWWB Approval Denied for one WWWB
17	Douglas County	Nordic Veneer Plans for WWWB modification	Additional Information Requested
	Jackson County	Double Dee Lumber Co. Proposal to phase out WWWB by June 15, 1971	Approved
	Coos County	Perry Bros. Veneer Proposal to phase out WWWB by August 1, 1971	Approved

PROJECT PLANS, REPORTS, PROPOSALS FOR AIR QUALITY CONTROL DIVISION FOR MAY, 1971 (Cont.)

Date	Location	Project	Action
19	Douglas County	Little River Box Company Plans and specifications for WWWB modification	Conditional Approval
		The Robt. Dollar Co. Request to extend plan submission for WWWB until July 1. 1971	Approved
	Deschutes County	Ponderosa Moulding Co. Proposal to phase out WWWB by May 1, 1971	Approved
	Jackson County	Eugene F. Burrill Lumber Co. Proposal to phase out WWWB by October 1, 1971	Approved
20	Jefferson County	Madras Sash and Door Co. Plans and specifications for dust collection system	Conditional Approval
	Douglas County	D. R. Johnson Lumber Co. Proposal to phase out WWWB after July 1, 1972	Denied
21	Douglas County	Schmidt Lumber Co. Proposal to phase out WWWB by January 1, 1972	Approved
24	Klamath County	Boise-Cascade Corp. Beaver Marsh. Plans to modify WWWB	Preliminary Approval
	Linn County	Western Kraft Corporation Plans and specifications for non-condensible collection and treatment (incineration)	Conditional Approval
25	Columbia County	Boise-Cascade Corporation Proposal for reducing TRS from two (2) recovery furnaces to meet immediate limits and to arrive at method for ultimate limits	Conditional Approval
26	Klamath County	Madras Veneer Division of Nordic Plywood, Inc. Plans for WWWB modification	Preliminary Approval

PROJECT PLANS, REPORTS, PROPOSALS FOR AIR QUALITY CONTROL DIVISION FOR MAY, 1971 (Cont.)

Date	Location	Project	Action
26	Josephine County	J. H. Baxter & Co. Plans and specifications for WWWB modification	Conditional Approval
	Curry County	South Coast Lumber Co. Request to extend plan submission for WWWB until July 15, 1971	Approved
28	Douglas County	Hanna Nickel Smelting Co. Plans to eliminate flare on ore heater and shorten stack heights to 84 feet from 96 feet on ore heater and electric furnace for pilot plant project	Conditional Approval

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 : May 28, 1971 for the June 4, 1971 Meeting

SUBJECT: PROGRESS REPORT ON AIR QUALITY IN PRINEVILLE

At the last Commission meeting held in Bend on October 24, 1969, the staff presented a report concerning the air pollution problems in Prineville. Subsequently, the staff, at the February 27, 1970 Commission meeting, presented a progress report of the efforts and endeavors of both staff and affected industries.

Therefore, it is again felt that a summary should be presented concerning the progress made relative to the abatement of air pollution in Prineville.

The timber related industries in Prineville have accomplished the following:

1. Coin Millwork: The use of the wigwam waste burner has been discontinued. All wastes which were formerly disposed of in the wigwam waste burner are now hogged and sent to the particleboard plant in Bend. Further, waste reduction has been accomplished by a finger jointing process to utilize short remnants into usable lengths of mouldings, a sample of which is before you.

2. Clear Pine Moulding: The burner is no longer in use. Clean-up has been burned, but they are now arranging for haul-away services (verbal notification only).

3. Consolidated Pine: The burner is no longer in use. Some emergency burning has been done, but this has almost been eliminated by haul-away.

4. Pine Products: The use of the wigwam waste burner has been discontinued.

5. Ochoco Lumber Company: Continued staff observations have indicated that this company has been operating their boilers in compliance with current emission standards.

6. Hudspeth Pine: (Letter attached) This mill has been making major changes in their operations so as to utilize the wood residues. A new hogged fuel boiler is being installed and is expected to be in operation by June 15, 1971. The east burner is being converted

to a fuel storage bin. The west burner will be phased out when the fuel bin conversion is completed. It is expected that the wigwam burners will be completely eliminated by August 1, 1971.

SUMMARY

It now appears that all of the wigwam waste burners in Prineville will be out of service by August 1, 1971. Some hog fuel boilers in the area have had visible emission problems. The staff will continue to evaluate these problems and arrive at reasonable and timely compliance schedules.

Attachment

HUDSPETH PINE INCORPORATED
P. O. BOX 339 • PRINEVILLE, OREGON 97754 • PHONE 447-5622

May 18, 1971

Department of Environmental Quality
1400 S. W. 5th Avenue
Portland, Oregon 97201

Attention: Mr. Phillips

Gentlemen:

As requested, we are sending this letter as a progress report on our installations.

The brick work is almost completed on the new boiler installation. We still plan to have this installation in operation and on line by June 15, 1971.

Carothers Sheet Metal Co. has completed their cyclone installations, but they are having a few problems with the augers in the surge bin. They are now putting several additions into this particular installation to remedy the problem.

The shavings bin installations are approximately two weeks from being complete and the conversion of the burner into a source of storage will begin sometime around May 25, to 26th, and should be completed sometime the latter part of June.

Everything has been moving along as scheduled thus far. If there is any further information I might give you, please contact me.

Very truly yours,

HUDSPETH PINE, INC.

Roger Hudspeth

Roger Hudspeth, Purchasing Agent

HUDSPETH PINE INCORPORATED
P. O. BOX 339 • PRINEVILLE, OREGON 97754 • PHONE 447-5622

April 14, 1971

Department of Environmental Quality
1400 S. W. 5th Avenue
Portland, Oregon 97201

Attention: Mr. Phillips

Gentlemen:

We have arrived at a tentative time schedule, as to when our installations should be completed.

We started the bricking of the new boiler April 12, 1971. It will take approximately six weeks to complete and have time to cure. We plan to have this installation in operation between June 1st. and 15th, 1971.

We have placed an order with Carothers Sheet Metal Co., in Eugene, for the new installation of cyclones which will be installed during the first part of May and we will then be able to deliver shavings to the west burner during the conversion of the east burner, into a fuel storage bin.

An order is being placed with Prow Machinery Co., in Grants Pass, Oregon who will be converting the east burner into storage and they also will be supplying the shaving bins for the sale of shavings. According to plans now, this installation should be completed by July 1, 1971. When the east burner has been converted to storage, we will then be able to stop burning in the west burner and both wigwam burners will be eliminated as for burning purposes. These installations should all be completed by August 1, 1971.

It is our hope that with good equipment delivery date, and proper functioning of equipment that we will be able to beat this August 1, 1971 date. If there is any further information I can give you, please contact me.

Yours very truly,

HUDSPETH PINE, INC.

Roger Hudspeth, Purchasing Agent

rs

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 : May 28, 1971 for June 4, 1971 Meeting

SUBJECT : PROGRESS REPORT ON AIR QUALITY AT BROOKS-WILLAMETTE CORPORATION IN BEND, DESCHUTES COUNTY

The staff desires to update the Commission regarding the problems relative to air quality at Brooks-Willamette Corporation and with the progress either underway or contemplated at this time regarding the abatement of air pollution. The primary problems are dust emissions from cyclones. The company produces particleboard and during this process creates a considerable amount of fine wood particles. These fine wood particles are conveyed by pneumatic conveyors. The separation of wood particles and air is accomplished by a cyclone which creates an air quality problem in the area.

The company is continuing on the plan as outlined in the report to the Commission on December 4, 1970. The referred to bag house installation has been completed. The additional sanderdust collection equipment is scheduled to be installed as outlined.

The staff will continue the program with Brooks-Willamette Corporation and will incorporate the new board products regulations in their current program.

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 : November 27, 1970 for December 4, 1970 Meeting

SUBJECT: STATUS REPORT ON AIR QUALITY IN BEND, DESCHUTES COUNTY

The Staff desires to acquaint the Commission with the problems relative to air quality in the Bend area and the programs instituted at this time regarding the abatement of air pollution from those sources.

Attached is a letter from Representative Al Ullman, and a petition with a cover letter from Mr. Jesse H. Smith, Sr., a resident of Bend, and one of those most affected by these sources.

The companies referred to in the petition are Brooks-Willamette Corporation and Brooks-Scanlon, Inc. The following is a brief description of the programs and schedules that the staff and companies have developed:

I. Brooks-Willamette Corporation

This company manufactures approximately 8.5 million square feet of particleboard on a 3/4" basis per month. On October 26, 1970, the company forwarded to the staff a copy of the study of emissions completed by their consultant, CH_2M. The company is currently in the first phase of a schedule which will bring emissions from all sources into compliance with the proposed board products regulations. These projects are:

1. The installation of a baghouse collector over the enlarged sanderdust storage bins, all of which is under construction at this time.

2. The installation of a multi-clone sanderdust collection system based on the completion of a simular program already in progress at the company facilities in Albany. This project to begin sometime in June or July of 1971.

The company will be furnishing the staff a complete comprehensive report on the engineering, delivery and installation schedules just as soon as this CH_2M emission study has been completely evaluated by the consultant and their own engineering staff.

II. Brooks-Scanlon, Inc.

Brooks-Scanlon, Inc. manufactures kiln dried dimensioned lumber. For the past few years the company has had a tremendous amount of trouble with the installation of two (2) used water tube boilers. The troubles ended in a lawsuit which was settled out of court in October of this year. During

this period of time the company relieved one consultant and engaged the services of another. Since the new consultant has been on the job the company has experimented with several types of hogged fuel, methods of feeding and introducing this fuel into the boilers, and controls for modulating the underfire and overfire air damper response.

The letter dated November 24, 1970, which is attached, outlines what the staff feels is a reasonable approach at this time. The staff also believes that the ultimate results regarding compliance with current visible emissions for Special Control Areas can be achieved when the new controls are installed on the dry kilns, as per the first paragraph on page 2 of this letter.

SUMMARY

The staff is of the opinion that these two companies are proceeding in an orderly fashion to bring their operations into compliance with current and proposed regulations. The staff will present further reports to the Environmental Quality Commission regarding this situation as the need arises. Our District Engineer, Mr. C. Kent Ashbaker, and company officials recently met with Mr. Smith in Bend to explain the situation.

Hold for May Meeting

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 : January 25, 1971, for the February 5, 1971 Meeting

SUBJECT: SUPPLEMENTARY STATUS REPORT ON AIR QUALITY IN BEND, DESCHUTES COUNTY, TO THE STATUS REPORT PREPARED FOR THE DECEMBER 4, 1970 ENVIRONMENTAL QUALITY COMMISSION MEETING

I. Brooks-Willamette Corporation:

No change as of this date to the original report.

II. Brooks-Scanlon, Inc.:

The company has completed the following objectives as set forth in their letter of November 24, 1970:

1. The smoke indicator units have been shielded from the heat and gas ducts.

2. These smoke indicators have been recalibrated by Bailey and new lenses and shields have been installed.

3. The Bailey Smoke Indicators have been adjusted to give a quicker response of overfire air.

4. C. K. Ashbaker, the District Engineer, is continuing to make smoke opacity readings and is working with the company to insure that these correlate with the smoke recorder charts.

5. The company will install by February 1, 1971, the modulating steam valve on one of the dry kilns. This valve should help to reduce the instantaneous steam demands for the dry kiln resulting in a more uniform boiler operation. If this is successful, the company proposes to use this type of valve on all of the dry kilns.

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 : November 27, 1970 for December 4, 1970 Meeting

SUBJECT: STATUS REPORT ON AIR QUALITY IN BEND, DESCHUTES COUNTY

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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 : November 27, 1970 for December 4, 1970 Meeting

SUBJECT: STATUS REPORT ON AIR QUALITY IN BEND, DESCHUTES COUNTY

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'AL ULLMAN
2D DISTRICT, OREGON

To: HMP

COMMITTEE ON
WAYS AND MEANS

Congress of the United States

House of Representatives

Washington, D.C. 20515

October 28, 1970

KHS

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 2 - 1970
OFFICE OF THE DIRECTOR

Mr. Kenneth H. Spies
Department of Environmental Quality
State of Oregon
968 Portland State Office Building
Portland, Oregon

Dear Mr. Spies:

Last year my constituent, Mr. Jesse Smith, Sr. of Bend, contacted me regarding the air pollution that had been caused by several mills in the area.

Although the problem appeared to have been resolved temporarily, the pollution has recurred repeatedly in the past several months. Since the mills in Bend must comply with State pollution regulations, I would appreciate your review of this situation and your suggestions on a possible solution. You may want to contact Mr. Smith directly, and his address is 174 East Franklin, Bend.

Thank you for your consideration of this matter.

Sincerely,

Al Ullman, M. C.

AU:bc

cc: Mr. Jesse Smith, Sr.

ALLPINE PARTICLEBOARD

BROOKS-WILLAMETTE CORPORATION
P.O. BOX 1245 ● BEND, OREGON 97701 ● (503) 382-6001

October 26, 1970

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
OCT 28 1970
AIR QUALITY CONTROL

Mr. Hal Burkitt
Air Quality Control
P.O. Box 231
Portland, Oregon 97207

Dear Mr. Burkitt:

Enclosed is a copy of CH_2M study of emission from Cyclones at the particleboard plant in Bend. At the bottom of page four there is a note refering to the improvement made to system #9 as a result of Carothers work. I wish it were all this simple but I am afraid it won't be. At least we have a starting point to improve from.

We have improved our water disposal to the extent that it is all going into dry holes before leaving our leased property. No more water is going over the hill toward the river.

We blew two tubes in the new boiler and had to run the old boiler at a higher rate to keep adequate steam in the plant. Mr. Gallaher from Corvallis is here now and we should have these tubes replaced and the #2 boiler running by Thursday of this week. Thursday we hope to clean #1 boiler and be back running both boilers at a lower rate by the end of the week.

Very truly yours,

BROOKS-WILLAMETTE CORP.

J. McK. Bosch

J. McK. Bosch
General Manager

JMB/kf
Enclosure
cc: Bill Swindells Jr.
Ken Ashbaker

To: HMP

174 East Franklin St.
Bend, Oregon 97701
November 17, 1970

Mr. Kenneth Spies
Department of Environmental Quality
968 Portland State Office Building
Portland, Oregon 97201

Dear Mr. Spies:

Re: Sawdust-Cinder Fallout
Bend, Oregon

This letter refers to Representative Al Ullman's letter of October 28, 1970 regarding the pollution fallout from local industry.

The Concerned Citizens of Bend have formulated a petition, a copy of which is attached, to request action by the Dept. of Environmental Quality. This petition with some 400 signatures at the present time is being circulated and will be forwarded to you when those concerned have had an opportunity to sign. Almost every business on Third Street (Hwy 97) through Bend is already represented on the petition.

We also at this time request that the pollution measuring device installed on the Court House in Bend be relocated, or an additional device installed, at a more adequate and revealing location such as Third and Franklin Streets. The Court House is located at the opposite side of Bend from the main source of pollution. The Franklin Street site would provide information on fallout affecting a majority of businesses and residential areas suffering from the fallout.

We will look forward to hearing from you and needless to say, we would welcome meeting with you here in Bend and acquainting you at first hand with the problem.

We feel that the time has come to take steps not only to eliminate the annoyance of fallout but to recognize the health factor involved.

Very truly yours,

Concerned Citizens of Bend

Jesse H. Smith Sr

Jesse H. Smith, Sr.

cc: Rep. Al Ullman
Sam Johnson
Gordon W. McKay

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 19 1970
OFFICE OF THE DIRECTOR

17

TO: Mr. Kenneth Spies
Department of Environmental Quality
968 Portland State Office Building
Portland, OR 97201

****

We, the undersigned citizens of the City of Bend, Deschutes County, Oregon, request you to take such action as is necessary to stop the pollution from existing and future fallout of sawdust and soot from the mills of Brooks Scanlon, Inc. and Brooks-Willamette Corporation adjacent to Bend, Oregon.

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BROOKS-SCANLON, INC.
P.O. BOX 1117 · BEND, OREGON 97701 · PHONE: (503) 382-2511

November 24, 1970

State of Oregon
Department of Environmental Quality
1400 S. W. 5th Avenue
Portland, Oregon 97201

Attention: Mr. H. H. Burkitt

Gentlemen:

We have reviewed our power house operation relative to the smoke emissions and have initiated the following plan of action. This plan has been reviewed with Walter O. Stevens who is our steam generating consulting engineer.

First, we feel it is necessary to improve the operation of the smoke indicators. We will achieve this as follows:

1. The smoke indicator units will be shielded from the heat from the gas ducts since Bailey has informed us that excessive heat causes erratic operation of these units. This will be complete by December 7, 1970.

2. We will calibrate the smoke indicators by purchasing grids from Bailey which have the same opacity as the Ringlemann scale. The boilers will be shut down and the cams adjusted so that meters in the operating room read the same as the grid Ringlemann reading through all ranges of the Ringlemann scale. We will do this by January 1, 1971.

3. We will adjust the smoke indicators sensitivity for quicker response of overfire air. This will be complete by January 8, 1971.

4. We propose to establish the reliability of the smoke charts with the State Environmental Authority by setting up between ourselves and Kent Ashbaker a program of observing and recording the smoke emissions from the power house in some manner that can be correlated directly to our smoke charts. We propose to do this by January 22, 1971.

We feel that one of the major problems relative to producing smoke in the power house is a highly swinging load that the dry kilns present on the steam flow demand. We plan to put modulating valves and new controls on one kiln. We will observe the steam flow to this kiln prior to and after the installation of this new equipment and from this test will be able to determine if we will be able to level out the steam demand on the boilers from the dry kiln. If we do achieve this, we will then initiate a program to install this equipment on all of our kilns. We are not sure of the delivery times for the equipment to set up a test kiln, but will try to get it in operation in the next two months.

We feel we must make some improvements in our fuel delivery and fuel mix to the boilers. We have no definite program at this time by which we can achieve this, but are continuing to explore possibilities in this area.

Sincerely,

Leo Hopper

Leo Hopper
Production Manager

LH/sh

cc: Kent Ashbaker
Charles Cassingham
Dick Gervais
W. O. Stevens

KHS To: KHS NMB

BEND, OREGON
NOVEMBER 30, 1970

MR. KENNETH SPIES
DEPARTMENT OF ENVIRONMENTAL QUALITY
968 PORTLAND STATE OFFICE BUILDING
PORTLAND, OREGON 97201

DEAR MR. SPIES:

INDUSTRY POLLUTION-FALLOUT, BEND, ORE.

MR. KENT ASHBAKER HAS INFORMED US THAT YOUR AGENDA FOR FRIDAY, DECEMBER 4, INCLUDES THE POLLUTION PROBLEM WE ARE CONCERNED WITH HERE IN BEND.

WITH WEATHER CONDITIONS SUCH AS THEY ARE, WE ARE NOT ABLE TO ATTEND THIS SESSION AND WISH TO FOLLOW OUR RECENT LETTER TO YOU WITH A COPY OF THE BULLETIN ARTICLE WRITTEN BY ASSISTANT EDITOR, BOB GASTON.

WE ARE PROCEEDING TO OBTAIN FROM THE DEPARTMENTOF HEALTH ANY COPIES OF TESTS AND/OR REPORTS RELATIVE TO THE HEALTH HAZARDS OF THOSE PEOPLE DIRECTLY WORKING IN THE INDUSTRIES INVOLVED. WE DO NOT AGREE WITH THE STATEMENT ATTRIBUTED TO MR. ASHBAKER IN THE BULLETIN ARTICLE AND WE QUOTE, "PARTICLEBOARD PLANTS, THEREFORE, GREATLY REDUCE SMOKE AND CINDER PARTICLES, BUT, AT THE SAME TIME, CREATE AN ANNOYING, BUT NOT UNHEALTHFUL, SOURCE OF SAWDUST AND SANDER DUST."

MR. ASHBAKER STATED TO US TODAY THAT OUR PROBLEM IS A RELATIVELY MINOR ONE FOR YOU, BUT WE WOULD LIKE TO SAY QUITE EMPHATICALLY THAT THAT IS NOT THE WAY WE VIEW THE SITUATION. WE REALIZE THAT CERTAIN STEPS MUST BE TAKEN TO SOLVE SUCH PROBLEMS, HOWEVER, WE DO NOT WANT TO LOOK FORWARD TO THE FIVE YEARS THAT HAS BEEN ALLOWED BROOKS-SCANLON TO PARTIALLY SOLVE THEIR CINDER PROBLEM.

WE WOULD REQUEST THAT WHEN THE PETITION WHICH IS NOW CIRCULATING HAS BEEN COMPLETED AND SUBMITTED TO YOUR DEPARTMENT, THAT A MEETING HERE IN BEND COULD BE ARRANGED TO ALLOW THE GREAT NUMBER OF PEOPLE WHO ARE CONCERNED TO BE PRESENT.

VERY TRULY YOURS,

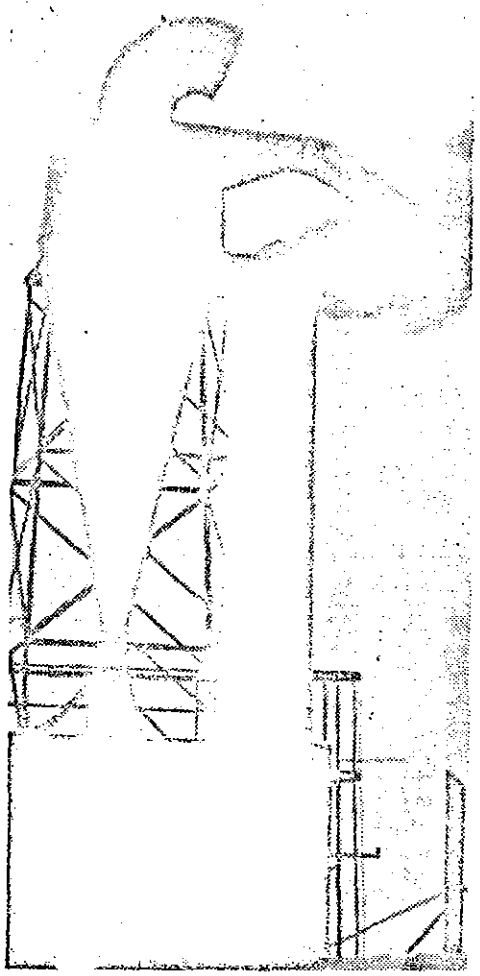
CONCERNED CITIZENS OF BEND

Jesse H. Smith Sr

JESSE H. SMITH, SR.
174 FRANKLIN STREET
BEND, OREGON 97701

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
DEC 1 - 1970
OFFICE OF THE DIRECTOR

In today's Bulletin
Tue Nov. 24 - 1970



Some Bend residents are unhappy about sawdust and soot fallout, but the offending companies are working to solve the problem. See staff writer Bob Gaston's full-page report on Page 9.

Residents fume over fallout

Sawdust, soot annoy many

By Bob Gaston
Bulletin Staff Writer

Sawdust fallout in Bend is keeping members of the John Huddleston family from entering their house through the front door — at the insistence of Mrs. Huddleston.

She wants her new $800 living room rug to stay looking new by keeping it free of sawdust, sander dust and soot that her family tracks in.

"I just told my husband and kids that I wasn't going to be cleaning our rug every day," she said.

She and her family live a 57 Sullivan Place, close to the Brooks-Willamette particleboard plant, source of the sawdust that sometimes coats her yard, house, car and children's swing set.

"My kids sometimes get all dirty playing on the swing set," she said. "And I can wash the car and then come out an hour later and there'll be soot and sawdust all over it."

Mrs. Huddleston said she noticed that the sawdust fallout increasing about four or five months ago. That's when Brooks-Willamette doubled its capacity.

Some mornings in the past few weeks she said the ground around her house was so thick with sawdust that she thought it had snowed.

Similar comments comparing the sawdust fallout to snow came from others interviewed by The Bulletin last week.

The fallout is causing the most anguish among residents and businessmen northeast of Brooks-Willamette and Brooks-Scanlon. Other areas apparently are unaffected.

Those interviewed agreed that the sawdust problem had become worse in the last few months, while the amount of soot and cinder fallout from Brooks-Scanlon's operation had tapered off. (An explanation of the Brooks-Scanlon's attempts to reduce soot and cinder fallout appears in another article on this page, as does an assessment of Brooks-Willamette's efforts to keep its sawdust out of the air.)

The fallout causes real day-to-day problems for some people in the path of it, like Ellen Heller, maid at the Rainbow Hotel on East Franklin Ave.

"Phooey! Don't talk sawdust to me. I get too mad," she says.

She's worked at the motel for seven years, but she and owners Mr. and Mrs. Earl Hoover say the volume of sawdust falling on them has definitely been greater in the last few months.

Mrs. Hoover, to prove her point, showed a room that had been cleaned the day before. The window sills were coated with a fine mixture of sawdust and black soot.

"The sawdust is like flour — it settles on everything," Mrs. Hoover said.

The flour-like substance that filters under windows and doors is sander dust from the particleboard plant. While the bulk of emissions from the particleboard plant is sawdust, the small sander dust particles seem to cause the most complaints, according to Brooks-Willamette plant manager John McKenna "Mac" Bosch.

Car dealers, who need to display a shiny, clean product, have been bothered by the sawdust fallout, too.

Floyd Holt of Murry and Holt Motors at Third and Franklin said that three weeks ago he hired an automatic car wash operator to wash all of his cars.

"And I'm not kidding you, the next day you could hardly see through the windshields," Holt said.

Holt said several Friday afternoons he's had all his cars washed. They are usually hosed down in the middle of the week, he adds.

His son, Jack, said a combination of soot and sawdust coats the cars.

"In a car with air conditioning, you can turn on the air conditioner and get a blast of soot and sawdust inside the car, too," he said. "It settles in the air vents."

The Holts agreed that the sawdust problem had been worse in the last few months, but better the last two weeks. Both said the amount of soot had tapered off.

Sales Manager Bob Wheeler at Bob Thomas Chevrolet-Cadillac said the sawdust fallout has definitely been worse the last few months. "Sometimes it's so thick that we'll track it into the dealership" he said.

Glen Leagjeld gets sawdust both at his business, his hearing aid center in the Bend Plaza, and his residence at 1264 E. Third St.

He says flour-like sawdust settles on the furnishings in the store.

"Our janitor says the sawdust and soot gets into the heating system, too," Leagjeld said.

The north side of his home is coated with a permanent layer of soot and cinders put there in the summer of 1969 while his house was being painted.

"The painter did the north side of the house late in the afternoon," Leagjeld said. "The next morning I went out and saw that entire side coated with cinders. I was just sick."

Ralph Foxton and his wife, Irene, 19 Terminal Place, have been among the most vocal of those complaining about the fallout.

Mrs. Foxton says she feels strongly that the sawdust and cinders are a health hazard.

"We like to sleep with our bedroom windows open, but we can't. We have them closed and sawdust and cinders still filter through," she said.

She said the window sills throughout her house should be cleaned daily because of the soot and sander dust.

Those contacted by The Bulletin were unanimous in being genuinely upset, for varying reasons, about the sawdust and soot fallout. But none indicated that he or she was aware of what the two mills, or regulatory agencies, like the Department of Envornmental Quality, were doing to curb the fallout.

Three interviewed said they didn't know where the fallout was coming from and others erroneously blamed Brooks-Scanlon for the sawdust emissions.

Equipment needs adjusting

Brooks-Scanlon close to eliminating cinders

R.E. "Dick" Gervais, operations manager for Brooks-Scanlon, readily admits that his company produces a portion of the cinders and soot that sometimes rain on parts of Bend.

But he anticipates that by next spring emissions from Brooks-Scanlon will be within limits set up by the State of Oregon. Gervais adds that he believes the company has an obligation to give townspeople a timetable for solving the problem.

"We feel the air pollution problem is behind us," he said. "Most of the time now we are within state standards and the state feels we can do the job with the equipment we have."

When the emissions are within the standards, the sawmill will emit only a very small portion of the particles that now escape, Gervais said.

The cinders come from wood waste that is burned in the company's power plant, which produces steam and electricity for the mill. It's the only burning done at the plant now.

The new power plant was put into operation in September of this year, after having been shut down for more than a year during a legal hassle between Brooks-Scanlon and the designers of the plant, Cornell, Howland, Hayes and Merryfield (CH2M), a Corvallis engineering firm.

Brooks-Scanlon had sued CH2M for more than $1.9 million in general and special damages, charging, among other things, that the power plant cost more than twice CH2M's original estimate. The two firms settled out of court shortly after the trial began Sept. 28.

After being used initially in January of 1968, the new power plant was shut down for repairs the following March.

Since then Brooks-Scanlon has done about $500,000 worth of modifications to make the plant operable, Gervais said.

He isn't predicting an end to the emission problems until spring because the company has yet to go through a winter with the new power plant. Winter weather may mean more, and different, power plant adjustments than summer, spring or fall require.

The sophisticated plant, which uses electric eyes and television cameras to watch the burning opeation and measure the volume of particles being emitted through the stacks, also re-cycles partially-burned materials to be burned again.

Some of the wood turns into tiny charcoal chips its first time through. The charcoal, Gervais says, "is our best fuel." It burns like bricquets, putting off plenty of heat.

The heat, in turn, produces steam that drives a turbine and a generator that produces electricity for the plant.

Gervais said Brooks-Scanlon produces its own electricity not so much to save money, but to eliminate the wood waste that is such a major problem for all sawmills.

The mill's old powerhouse, last modified in 1936, was used while the new one was shut down. It emitted more cinders than are presently escaping, and anti-sawdust and-scot petition signers contacted by The Bulletin said they had noticed a marked decrease in the amount of cinder fallout recently.

Gervais said Brooks-Scanlon decided to build the new power plant after the firm received a petition from townspeople about five years ago. The petition complained about cinder emissions.

A portion of the mill's planer shavings, some green sawdust and bark are burned in the power plant now.

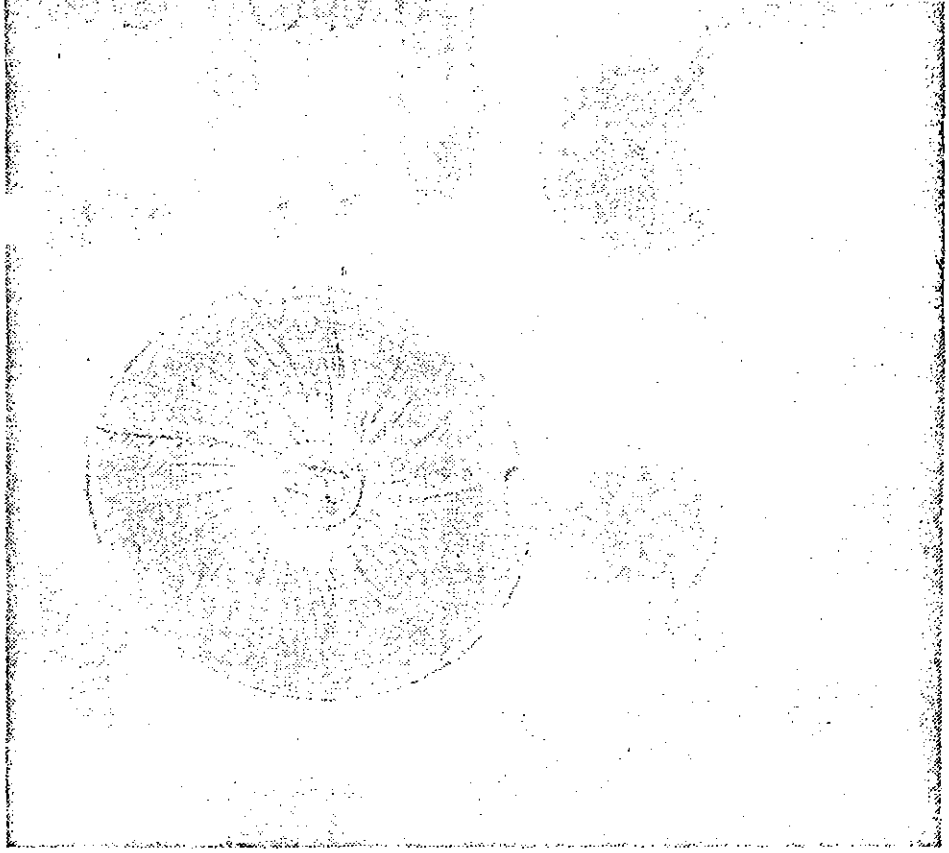
Gervais said the smallest particles are causing the fallout problem in the new plant. Oxygen is forced through the burners to help the wood waste burn completely, leaving no residue. But the light pieces now are blown up and out the two square "smoke stacks" without having a chance to burn completely. Gervais said the new stacks are really exhaust stacks, since they should be pumping out heat, not smoke.

"We're looking into the possibility of squeezing these light particles into pellets to burn them," Gervais said. A machine that pelletizes the particles for burning is in experimental stages.

Brooks-Scanlon tried the pellets last week, with a smoky results. But Gervais thinks purchasing machinery to turn the fine particles into pellets may be the answer, with adjustments in the power plant intruments.

"We've really taken two years longer than we should have to solve the problem," Gervais said, noting mechanical problems and rebuilding of the power plant as the main reasons for the delay.

"Brooks-Scanlon is a citizen of the Bend area, and we feel we have an interest in the total environment of the community," Gervais said.



Sophisticated electronic equipment in the Brooks-Scanlon power plant keeps track of particles being emitted through the two exhaust stacks, and records it on the chart shownhere. (Bulletin photo by Bob Gaston)

To its sawdust emission problems

Brooks-Willamette seeks solutions

Engineers hired by Brooks-Willamette recently determined the Bend particleboard plant is pumping about 425 pounds of wood particles into the air every hour.

The report has been submitted to the Portland office of the Department of Environmental Quality, which had requested it.

The particleboard plant is emitting sander dust — a very light flour-like substance that is a combination of wood and resin used to make the particleboard — and large quantities of bigger sawdust-like particles.

The light sander dust seems to be causing the most complaints among townspeople, according to John McKenna "Mac" Bosch, plant manager. It's more penetrating than the larger particles, slipping beneath doors and onto window sills.

The particles pour forth from cyclones, funnel-shaped pipes on top of the plant. Swirling air in the cyclones creates a vortex that transports wood shavings, which are combined with resins and chemicals, to huge presses to be compressed into particleboard. In the process the lighter particles fly out the top of the cyclones and into the air.

Bosch said there are also sawdust and sander dust emissions from the plant's dryers, which dry the raw material for the particleboard.

The entire particleboard industry is still experimenting with ways to curb its emission problems, which are by no means unique to the Bend plant.

It wasn't until this summer, when Brooks-Willamette doubled its plant capacity, that health officers and others, including Bill Ellis, chairman of PURE (Protect our Urban and Rural Environment), began getting many complaints about the sawdust fallout.

But Bosch said he had received some complaints from time to time long before the plant doubled its capacity.

Only last week Bosch met with PURE one night and the Bend Chamber of Commerce's Environmental Committee the next morning to explain the problem. He's well aware that people are concerned about the fallout.

He told both groups that the firm is taking measures now to capture part, but by no means all, of the fallout.

Brooks-Willamette will be spending about $50,000 to enlarge its sander dust bin, which collects sander dust, and install a small bag house to replace the sander dust bin cyclone. It should collect most of the sander dust now being emitted much like a vacuum cleaner picks up dust and dirt. The work, with good weather, should be done by March or April, Bosch said.

These measures, he noted, will halt the extremely high concentrations of fallout that have occurred from time to time during the last two months. But the plant has a total of 20 cyclones that emit particles, so the whole problem will not be solved by April.

Bosch told PURE and the chamber committee not to expect a wholesale clean-up until the end of 1971.

"By the end of next year we should be running with some kind of pollution control that will eliminate 80 to 90 per cent of what we're now kicking out," he said.

He noted that the Bend plant is awaiting experiments at a sister plant in Albany, Duraflake, which, like Brooks-Willamette, is managed by Willamette Industries. It is now experimenting with a water-wash system that rinses the small particles away instead of letting them escape into the air. Whether this will work or not won't be known for some time, Bosch said.

"A large sander dust bag house is proving 98 per cent effective in Albany," Bosch said, "but it's a tremendous fire

hazard. One spark can explode it."

He noted that the Bend plant has been averaging one fire every four shifts. The nature of particleboard makes fire inevitable, and Bosch isn't eager to have any more fire hazards tacked onto the plant.

Brooks-Willamette isn't emitting as many particles now as it was about six weeks ago because the firm took some immediate measures to control it and repaired machinery breakdowns that were contributing to the pollution.

"We went after our biggest sawdust producer right after we got the engineering survey," Bosch said. Adjustments were made on a large cyclone that was emitting 176 pounds of particles per hour.

Bosch told PURE that after the adjustments, engineers measured an output of only 33 pounds per hour, but he added that engineers must have tested "on a good day" to get the 33-pound reading.

Extemely heavy sawdust fallout observed by nearby residents and Third Street businessmen some mornings within the past six weeks were caused by Brooks-Willamette employes who didn't understand the operation of the sander dust bin, Bosch said.

While one of the firm's two boilers was down for repairs, the sander dust bin would fill up abnormally fast during peak sanding periods. Employes would then haul the collected sander dust to the city dump. Most of that excess would normally be burned, creating steam to operate plant machinery.

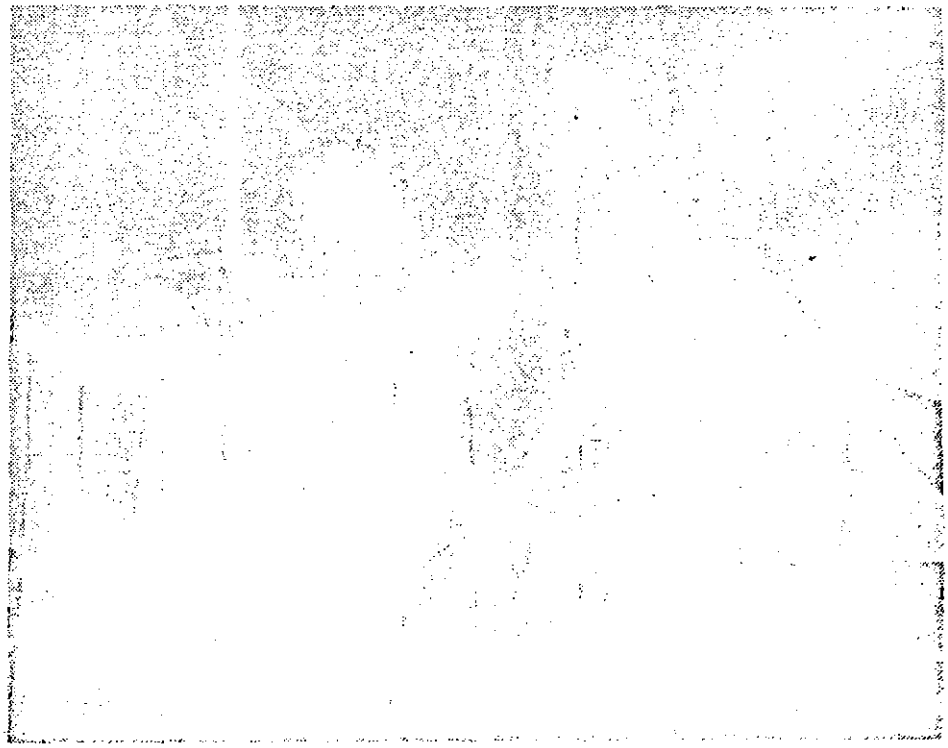
Employes unfamiliar with the sander dust bin would, after emptying it, inadvertently send sander dust straight out one of the cyclones by failing to re-open the sander dust bin so it could collect particles.

This almost always happened during night shifts, Bosch said, because no one could see the sander dust pouring into the air.

But with the second boiler working again to burn more of the sander dust, emissions should not again reach the heights they did about six weeks ago, Bosch said.

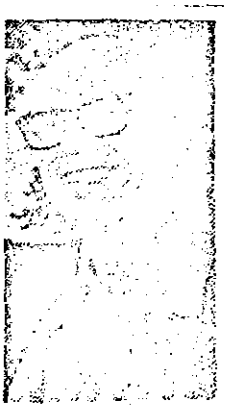
Ellis told Bosch, however, that they'd like to keep in touch with him.

Bosch drew laughter by replying, "The best way to keep in touch is to keep complaining."



Funnel-shaped cyclones on top of Brooks-Willamette's particleboard plant emit wood particles. The stacks emit mostly steam, which is not considered a pollutant.

'We call about once a week'



Ashbaker

Kent Ashbaker, Bend district engineer for the Department of Environmental Quality, has been keeping close track of Brooks-Scanlon's smoke problems, but he says Brooks-Willamette's , sawdust emissions seem to be much more of a long-range problem.

The Brooks-Scanlon smoke problems, Ashbaker says, "have to get solved within a matter of weeks, not years."

Ashbaker took smoke readings on Brooks-Scanlon's powerhouse stacks Thursday morning and found both to be close to, but still in violation of, DEQ air emission standards.

Ashbaker can merely observe smoke and determine if it's violating standards. He gauges the smoke, by observing its density and color, against a Ringlemann scale, which grades smoke on a 1 to 5 basis, with 5 being the blackest, and most particle-laden, smoke.

Under DEQ regulations, emissions from a wood-fueled fires can't read more than 2 on Ringlemann.

Ashbaker's observations Thursday, which were taken every 15 seconds for 20 minutes, showed smoke from the east stack to average 2.4 on the scale, while the west stack averaged 2.75.

"So Brooks-Scanlon is not quite in compliance," Ashbaker said, "But the readings show the power plant is capable of meeting standards if it could be adjusted properly." He noted that the east stack has always been better than the west stack, even though both are burning the same material.

He said the Brooks-Scanlon problem is not worth taking drastic measures on, such as closing the plant down. He notes that the law states DEQ engineers must work with a company on pollution problems as long as the company is willing to co-operate. Brooks-Scanlon, he said, has been very co-operative.

"We'll keep bugging them and riding them until the problem is solved," Ashbaker added. "We call about once a week and ask them how they're doing."

He noted that complaints to his office about Brooks-Scanlon's cinders dropped off once the company shut down its old three-stack power plant in September and began using its new one after modifying it to the tune of $500,000.

But while complaints about Brooks-Scanlon have dropped off, those about Brooks-Willamette discharge of sawdust into the air have increased.

"Brooks-Willamette is really laying it out," Ashbaker said in commenting on the sander dust emissions.

Ashbaker hasn't taken any tests at Brooks-Willamette, but he said it's obvious the particleboard plant is violating standards with its sawdust and sander dust emissions.

The plant also emits puffs of black smoke about every 15 seconds. Ashbaker says he doesn't know if the smoke violates standards or not, since it's mixed with steam and hard to gauge.

"For some people the sander dust is a real nuisance," Ashbaker admits. But he says that Brooks-Willamette has "not been dragging its feet at all" in working to solve the problem.

The DEQ recently got an engineering report on emissions from the firm. The report, Ashbaker said, was in when the DEQ wanted it. It's now in the main office in Portland.

He said one citizen adamantly suggested that the particleboard plant be shut down until the problem is eliminated. But Ashbaker says, "I think that's a little drastic unless it's creating a health hazard."

Ashbaker commented that he thought emissions from automobiles were more of a health hazard than anything Brooks-Willamette is putting into the air.

The Brooks-Willamette probem won't be solved quickly or easily, Ashbaker indicates. The firm is experimenting with different devices to clear the air and the Bend plant has equipment on order to catch a portion of the fallout now.

He said he plans to ask the DEQ's Portland office to look at new attempts to solve particleboard plant fallout that are being tried throughout the nation.

The Brooks-Willamette problem is one shared by particleboard plants everywhere. A relatively new innovation, the particleboard industry takes wood shavings and sawdust — which sawmills once burned as scrap — and turns them into a useful and popular building product. Brooks-Willamette's Bend operation uses scrap from Brooks-Scanlon and mills in Redmond and Prineville — scrap once burned in wigwam burners still in use in the two smaller towns.

Particleboard plants, therefore, greatly reduce smoke and cinder particles, but, at the same time, create an annoying, but not unhealthful, source of sawdust and sander dust.

Ashbaker said Brooks-Willamette may not be looking at enough alternatives to its problem, since it is relying heavily on experiments with new anti-pollution machinery at a sister plant, Durafiake, in Albany. That's one reason he thinks the DEQ should look for more particleboard experiments throughout the nation.

Petition protests air pollution

More than 500 persons, many of them owners, managers and employes of Third Street businesses, have signed a petition protesting sawdust and soot fallout from Brooks-Willamette's particle board plant and Brooks-Scanlon's sawmill.

The petition is addressed to Kenneth Spies, director of the Department of Environmental Quality. His office is in Portland. It asks him to do what he can to eliminate the air pollution.

Jess H. Smith Sr., 174 E. Franklin Ave., initiated the petition. He has three others helping him gather signatures in business and residential areas north and east of the two mills.

Smith, who is retired, has for many years complained about cinder fallout near his home.

Now, however, he's more concerned about the sawdust fallout, saying, "The big black cinders have pretty well stopped."

Smith gleefully claims signatures from more than 90 per cent of the Third Street business between Horn's Texaco station at 1500 S. Third St. and the Revere Street intersection.

Ralph Foxton, 19 Terminal Place, has been helping Smith collect petition signatures. He claims he's got 400, all from residents in his area.

"It's gratifying to know that people care about the problem" Foxton said. "I've only struck one that wouldn't sign."

Kent Ashbaker, district engineer for the DEQ, said Spies, if he gets the petition, will present it to the Environmental Quality Commission, a group of laymen that governs the operation of the DEQ.

Ashbaker said he doesn't know what effect the 500 or more signatures might have on the commission.

But he did say that the petition would "mean more if 100 people are there to present it."

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 : June 1, 1971 for the June 4, 1971 Meeting

SUBJECT: BROOKS-SCANLON, INC., CONTROL PROGRAM

The problems relative to air pollution at Brooks-Scanlon are boiler emissions, both visible and particulate. These visible and flyash emissions create air quality problems in the area.

The company has completed the work as outlined in their letter of November 24, 1970, and described in the staff report on February 5, 1971. With the continued operation of the new and old boilers, the problems of boiler capacity limitations have been more completely determined. Attached is a report from the company's consulting engineer, Mr. W. O. Stevens, that reviews the history of the boilers and the related problems. The company has, in addition to this detailed engineering work, had the stacks from the two (2) new boilers sampled by Metallurgical Engineers, Inc. The results from this sampling program are also attached.

From this data, the company has developed a proposal to further modify the existing new boilers. This is a program to add natural gas burners to the new boilers in order to increase the steam generating capacity so as to carry the plant. This is a well thought out proposal, which may result in the plant obtaining compliance with current emission standards, though, as admitted by the company, is a marginal solution to the problem. Copies of each of the aforementioned are included in this report.

A detailed review of the proposal and supporting data, as well as discussions with the company personnel reveal the following deficiencies:

1. The proposal includes the continued use of the old hog fuel boilers with their present uncontrolled flyash emissions as standby equipment. It is impossible to determine at this time the amount of time this equipment will actually be operated, but, anytime the old boilers are operated, flyash emissions will exceed emission standards.

2. The proposal calls for base loading the new boilers with wood residues to 50,000 pounds of steam generation each, and supplementing an additional 25,000 to 30,000 pounds of steam generation with natural gas. It is the opinion of the staff that this distribution of fuel load will be difficult to maintain and the inherent problems of upset conditions at high steam load, 75-80,000 pounds per boiler, will cause emissions to exceed current emission standards a significant portion of the time. An example of the fuel feed distribution problems is the extreme variation in density, moisture, and size characteristics of mixed hog fuel.

3. The elapsed time for implementation of this plan for modifying the new boilers as discussed in #2 above is eleven (11) months. The risk factor for an admittedly marginal solution, that is only designed to barely get into compliance, indicates a more assured solution should be undertaken.

4. The program of installing modulating valves appears to have a beneficial effect on the peak demand requirements of the boilers, that is, to level out steam flows, and will undoubtedly improve visible emissions. At the same time, however, this also appears to increase the total steam flow to the dryers, which will increase the total steam loading and tend to increase the particulate loading.

RECOMMENDATIONS

It is the recommendation of the staff that Brooks-Scanlon, Inc., be instructed to develop a program for complete phase out of the old hog fuel boilers unless proper flyash control equipment is installed. It is further recommended that the company be instructed to undertake a program for more assured and permanent control of emissions, namely, additional boiler capacity.

(new boilers

Attachments

Partial Reduction

BROOKS SCANLON, INC.
BOILER INSTALLATION

OLD POWER HOUSE

B&W Stirling
1924

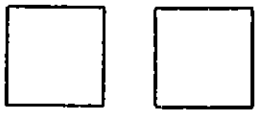
B&W Stirling
1924

Puget Sound Machinery Depot
1940

160 psig
DUTCH OVEN BURNING

NEW POWER HOUSE

B & W Stirling
1968-9



600psig
92,500#/h each SUSPENSION BURNING

May 21, 1971

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

Dear Mr. Burkitt:

In reply to your letter of March 17, 1971, we are now prepared to propose modifications to the new power house which, when complete, will allow us to meet the requirements of sections 21-015 and 21-020 of OAR, chapter 340.

Our proposal is to base load the boilers at approximately 50,000 lbs. of steam per hour per boiler on hog fuel and generate the balance of the steam needed with gas burners firing over the wood. We also propose to level off the steam flow to the kilns and reduce the peak demands with modulating kiln controls.

We do intend to retain the old boilers as standby for use during emergencies and scheduled maintenance periods. As such, we anticipate operating these boilers infrequently and for short periods and do not propose any modification of them.

Included as supporting evidence of the feasibility of this program are the following documents:

1. W. O. Stevens' memorandum "Brooks-Scanlon Power Plant as it Relates to Air Pollution", dated April 23, 1971.

2. Duane Gatherer's memorandum "Results of Sawmill Residue Study", dated May 12, 1971.

3. Contract for Natural Gas Service.

4. Air Quality Survey - Grain Loading Determination, dated May 19, 1971, by Metallurgical Engineers, Inc.

5. Copies of flow charts on kiln #8 before and after installing the modulating control.

6. Timetable.

Sincerely,

Leo Hopper
Production Manager

LH/sh
Enc.

cc: Conley Brooks
R. L. Foote
M.P. Hollern
D. Martin
W. O. Stevens
State (3)

MEMORANDUM

RE: BROOKS-SCANLON POWER PLANT
AS IT RELATES TO AIR POLLUTION

OLD POWER PLANT OPERATION

At the time the new power plant was built, there were installed in the old plant four Babcock & Wilcox Stirling Type boilers set in batteries of two, and two Puget Sound Machinery Depot boilers also set in battery. The Babcock & Wilcox boilers were installed in 1924, while the Puget Sound Machinery Depot boilers were built in 1940. The boilers were designed for 160 psig pressure. In addition to furnishing the steam requirements for operating the sawmill and heating the lumber kilns, they produce the mill's electric power requirements in condensing turbine-generators.

The new power plant did not essentially change the mill's output or performance. The then existing low pressure boilers still had considerable useful life. They were not, however, suitable for burning the available waste wood without creating an air pollution nuisance. The new boilers were necessary to abate the air pollution caused by the low pressure units.

The additional power requirements of the necessary air pollution equipment necessitated modifying the mode and method of power generation, which required a new and different type of generating equipment. The new power plant was built to house the new equipment. The fact that the original power plant is in operable condition is evidenced by its recent ability to produce the mill's requirements for steam and power.

The Tepee refuse burner, which was used to dispose of the wet low grade waste, is no longer in service and the material consumed in the burner must now be burned in the high pressure power plant boilers.

FUEL CONSIDERATION

Modern manufacturing trends and increased utilization of waste wood results in a poorer grade of fuel to the boilers, with increased air pollution problems. Lower grade fuel requires the installation of a more exotic type of boiler, fuel handling, and combustion control equipment.

It can be shown in mills where the logs are deluged with water, as is the case of mills where the bark is removed in a hydraulic barker, the moisture content in the material removed which forms the bulk of the waste wood delivered to the boilers for fuel averages 65% to 67% moisture. The Brooks-Scanlon Mill at Bend cuts Ponderosa pine logs. These logs are subject to blue mold if stored in the normal ambient temperature at Bend for any length of time. To prevent the deterioration of the logs and the degradation of the lumber made from the logs, it is necessary to continuously spray the logs used by the mill with water from the river. Three hundred fifty horsepower is required to pump the water for spraying the logs, in order to reduce the temperature of the log surface below the temperature conducive to the growth of mold. The mill records show that the moisture content of green sawdust from the sawmill runs as high as 65%.

BOILER REQUIREMENTS FOR SATISFACTORY COMBUSTION

It is common knowledge that hot air is a prime requirement to successfully burn wet wood fuel.

The design, setting height, lack of heat recovery equipment to preheat the combustion air, and the absence of cinder collectors, preclude the use of the old boilers for burning fuel of the type and condition available without creating a serious air pollution nuisance.

The three prerequisites for good combustion are time, temperature and turbulence. Good combustion is a must if air pollution is to be held at a satisfactory level. In a boiler the combustible in the fuel must have long enough travel through the combustion chamber before entering the relatively cool convection surfaces, if it is to be completely burned. Every combustible substance has a fixed ignition temperature, at or above which it

will ignite and burn freely. Burning is merely the oxidation of a combustible substance. A thorough mixing is necessary for the oxygen in the air to contact the combustible components in the fuel. Proper mixing is normally the result of turbulent gas flow. For complete combustion, it is necessary to have a sufficient length of gas travel before reaching the boiler convection surfaces as very little combustion takes place beyond this point.

The new high pressure boilers have much larger combustion chambers with longer gas travel than the older low pressure units. They are equipped with air preheaters, superheaters, cinder collectors, overfire air, and more elaborate combustion control equipment. This additional equipment increases the resistance to air and gas flow through the boiler and increases the boiler auxiliary electric power requirements appreciably.

INCREASED POWER REQUIRED TO COMBAT AIR POLLUTION

To be in a competitive position with other mills, it is necessary that the additional power required by the Brooks-Scanlon Mill ~~for air pollution~~ be generated as by-product energy. This is done by installing 600 psig boilers which generate steam at 600 psig with relatively high superheat. The more elaborate steam and power generating equipment requires more complicated and extensive control equipment, which in turn requires more space than was available in the old boilerhouse. A new building was built to protect the power generating, feedwater equipment and controls from the weather. The boilers, together with the auxiliary equipment such as cinder collectors, forced and induced draft fans, air preheater and fuel handling equipment for the boilers, were installed in the open.

To do a satisfactory air pollution abatement job, forced, induced and overfire air is necessary; a cinder collector is also necessary to reduce the particulate matter from the stack to an acceptable limit. These fans were not required in the original boilerhouse equipment and increase the power requirements for the new plant 1040 horsepower.

To maintain the mill's competitive position in the industry, it is necessary that the additional power requirements be generated as by-product power, thereby reducing the cost of the power produced for the mill so that the average cost for the total power

requirements will not exceed previous power costs. By-product power requires that high pressure steam be passed through a steam turbine before supplying the process steam requirements for the mill. High pressure boilers in turn require high pressure feed pumps which increase the amount of power previously used in the low pressure feed pumps for the old boilers.

The mill's lumber output remains essentially the same as before. The generating steam pressure of the turbine-generator was set sufficiently high to develop the electrical power required by the original power plant, plus the additional power now required for air pollution equipment.

POWER PLANT DESIGN CONSIDERATIONS

It is only necessary to refer to a Mollier Chart to realize that as steam is expanded through a steam turbine-generator, the moisture content becomes greater as it approaches the low pressure end of the unit. For reasonable turbine blade life, it is necessary that the moisture content in the low pressure end of the steam turbine be a minimum. The hotter the steam is entering the turbine, the drier it will be in leaving the low pressure end, provided the heat converted to power is the same. In the case of the new plant, 725°F total temperature steam at the boiler superheater outlet was adopted. The superheater tubes in a boiler increase the resistance to gas flow and the power required for the induced draft fan. In the low pressure boilers, where air pollution was not a serious consideration, natural draft was sufficient. In general, where the moisture content in the wood fuel is 58% or more, preheated air is required to maintain proper combustion. The boiler must be designed for the wettest fuel produced, as at some time this fuel will reach the boilers in an unmixed condition and must be successfully burned. An air preheater also increases the resistance to flow in the air and combustion gas circuits, and increases the power required for the forced and induced draft fans.

By virtue of the species of logs cut in the Brooks-Scanlon Mill at Bend, Oregon, the process is unique as compared with most other mills due to the fact that moisture is added to the wood content for the purpose of combatting fungus growth. The addition of water to spray the logs increases the mill power requirements as well as increasing the difficulty in successfully burning the wet wood.

NEW HIGH PRESSURE POWER PLANT

The new power plant has two, 600 pound, 725°F, Babcock and Wilcox Stirling Type boilers designed to produce a maximum of 92,500 pounds per hour with 350°F feed. A 3,500 KW Westinghouse turbine-generator designed for 600 pounds steam at 825°F total temperature is installed. Unfortunately the boilers, turbine-generator and auxiliary equipment are second-hand and were not designed for the same operating conditions. The boilerhouse was built without exterior walls. The boiler feed pumps, combustion control equipment, and other auxiliaries were obtained from different sources and are not entirely compatible. The history of the early operation was a continuous series of disasters. The operators had a full-time job endeavoring to keep the plant on the line and did not have spare time to improve the operation. An inferior job was made of installing the boilers, and as a result in March 1969 the boilers were shut down to repair tube damage. A detailed inspection confirmed that nothing short of boiler rebuilding would insure a reasonable life. Auxiliary fuel handling, fuel distribution to and in the boiler, steam piping, and building enclosure were undertaken at a total cost of $620,000.

A minimum number of new components were purchased. The remaining equipment continued to cause problems. It is gratifying to note the improvement in operation in recent months. The boilers will operate over 70,000 pounds per hour. It has been found, however, that at this high rating a slight malfunction of equipment or plugging due to sticks in the fuel system will result in a pressure drop and production loss.

USE OF OLD BOILERS TO GENERATE STEAM

It has been found that if the new high pressure boiler output is curtailed to not over 60,000 pounds per hour per boiler, the plant operation is much more stable. At 60,000 pounds rating there is a deficiency in peak steam production and it is necessary to produce about 30,000 pounds per hour in the old low pressure boilers. It has been found that operating on this basis production schedules can be maintained and the operating problems are much less. This type of operation reduces the amount of smoke produced and also reduces the particulate matter emitted from the stacks.

It could be argued that it is possible, by adding cinder collectors and air preheaters to the old boilers, to burn the wet wood. Three factors must be considered before this approach can be justified: (1) It must be realized that any investment on the old boilers assumes the age of the boilers at the outset. (2) The configuration and setting height of the old boilers do not provide the prerequisites for good combustion. The installation of cinder collectors would reduce the amount of particulate matter leaving the stacks; they will not, however, collect particles of under one micron which make up smoke. (3) The elimination of the Tepee Burner and the utilization of waste wood for chips and particle board leaves a wood fraction of inferior quality for fuel and additional provisions must be made to burn this inferior wet fuel.

Producing low pressure steam defeats the basic concept of a by-product power plant, increases the fuel burned, pounds of steam produced, operating and maintenance costs and reduces plant production.

INHERENT PLANT OPERATING PROBLEMS

The Bailey bolometers have created problems in monitoring the stacks. Bailey Meter Service Personnel have been engaged in the maintenance and repair of this equipment ever since it was installed. It is hoped that the cause of the problem with the Bailey smoke indicators has been found and can now be corrected so the charts will show true Ringelmann density records.

There are a number of instances where the power plant heat balance can be improved which will result in more stable and satisfactory operation.

In order to produce the maximum kilowatts from the turbine-generator it is necessary to extract steam at 200 pounds pressure, instead of 150 pounds as required by the mill. This entailed installing a 200 to 150 PRV in the extraction line. A safety relief valve is installed downstream from the PRV. No protection was provided when the PRV was installed to protect the turbine casing at the extraction opening. A diaphragm operated valve is now installed which trips the turbine oil circuit should excessive pressure develop in the extraction line. If the 200 to 150 PRV had not been installed, the

safety relief valve would not be isolated from the turbine and there would be no interference or shutdown of turbine operation when the turbine extraction load suddenly drops.

A sudden buildup of pressure in the extraction line apparently is a result of sudden changes in kiln steam requirements. Modulating steam control valves are proposed for the lumber kilns which should prevent the wide fluctuations in kiln steam demand.

It has been suggested that provisions be made to burn natural gas in the high pressure boilers so that their total peak output will be 150,000 pounds per hour and their output on wood fuel can be limited to approximately 50,000 pounds per hour. By base loading the boilers or limiting their output on wood it should be much easier to maintain a satisfactory stack emission. The mill requires a total peak output of 150,000 pounds per hour. This load will cause a more severe operating condition for the furnace grates. With a constant rate of wood feed it should be easier to maintain a uniform height of fuel on the grates, which will help to prevent overheating the grates with the increased heat input to the boiler furnace.

PROGRAM TO FURTHER IMPROVE PLANT OPERATION

Brooks-Scanlon have spared neither time, effort nor expense in their endeavor to be good neighbors and abate air pollution, water pollution and reduce plant noise to a minimum. One of Weyerhaeuser Company's Senior Power Superintendents has been engaged to help train the power plant crew. One of the outstanding acoustical experts in the country has been commissioned to reduce the stack noise.

The State emission standard of 0.1 grains per standard cubic foot is difficult to attain in a wood burning power plant. If the Brooks-Scanlon Bend Power Plant falls short of this goal it will not be due to a lack of conscientious effort on their part.

(2)

Date: May 12, 1971

To: Leo Hopper

From: Duane Gatherer

Subject: Results of Sawmill Residue Study

1. Sawmill Residue Production (Based on 95MM, 25MM, & 20MM = 140MM log scale)

A. Bark

.28 BDT/MBF X 95,000 MBF	=	26,600
.30 BDT/MBF X 25,000 MBF	=	7,500
.14 BDT/MBF X 20,000 MBF	=	2,800
		36,900 BDT/Yr.

B. Sawdust

.30 BDT/MBF X 95,000 MBF	=	28,500
.22 BDT/MBF X 30,000 MBF	=	6,600
.15 BDT/MBF X 30,000 MBF	=	4,500
		39,600 BDT/Yr.

C. Shavings

500#/MBF X 155,000 MBF	=	38,750
Less dry trim ends		- 8,772
		29,978 BDT/Yr.

D. Dry Trim Ends

1.4 MBF surfaced lumber = 1.0 BDU

Trim ends = ave. 1/2" = 1/180 of a 15' board

155 MMBF X 1/180	=	861
861 MBF ÷ 1.4	=	615 BDU
615 BDU X 1.2	=	738 BDT

Trimbacks -

13 MMBF X 10%	=	1.30 MMBF
115 MMBF X 7%	=	8.05
9.35 MMBF ÷ 1.4	=	6,678 BDU
6,678 BDU X 1.2	=	8,014 BDT
8,014 BDT + 738 BDT	=	8,772 BDT/Yr.

E. Coarse Residues

475 BDT/Mo. X 12 Mo. 5,700 BDT/Yr.

Total Production 120,950 BDT/Yr.

2. From Ted Young's memo of 5/4/71, it is "recommended that we not consider alternatives to our sawmill residue utilization program that are dependent on supplies from other Central Oregon sources."

3. Steam Requirements

Steam production required to operate the plant, except for electricity in the small log mill, is 150,000 pounds per hour for 16 hours per day for 5 days a week. Average usage for 24 hours per day for 7 days a week is 130,000 pounds per hour.

New power house requires 1,380 BTU per pound of steam produced at 600 PSI and 750° less 312 BTU produced from the feedwater or 1,068 BTU per pound of steam.

Old power house requires 1,194 BTU per pound of steam produced at 150 PSI and 358° less 127 BTU produced from the feedwater or 1,064 BTU per pound of steam.

A. Present Hog Fuel Usage

New Power House		Old Power House
8,700	BTU/Lb. of wood	8,700
X 65%	Boiler efficiency	X 60%
5,655	BTU/Lb. of wood	5,220
100,000	Pounds of steam produced/M	30,000
876,000	M lbs/yr.	262,800
X 1,068	BTU/lb. of steam	X 1,064
935,568	MM BTU/yr.	279,619.2
÷ 5,655	BTU/lb. of wood	÷ 5,220
165,430	M lbs. of wood/yr.	53,567
÷ 2,000	lbs./ton	÷ 2,000
82,715	Tons/Yr. BDT	26,784
÷ 1.2	Conversions to BDU	÷ 1.2
68,930	BDU/Yr.	22,320
$ 3.00	Cost/BDU	$ 3.00
$206,790	Cost/Yr.	$66,960

Total Cost = $273,750

There are definite environmental problems associated with the operation using this fuel, due to smoke and cinders. Capital costs for cinder collection equipment would be approximately $100,000.

B. Bunker C Fuel Usage — Diesel Oil

(Firm commitment not available)		(Firm commitment available)
154,800	BTU/gallon	140,500
86%	Boiler efficiency	87%
133,128	BTU/gallon	132,235
130,000	lbs. of steam/hr.	130,000
1,138,800	M lbs. of steam/yr.	1,138,800
X 1,068	BTU/lb. of steam	X 1,068
1,216,238,400	M BTU/yr.	1,216,238,400
÷ 133,128	BTU/gal.	÷ 132,235
9,135,857	Gal/yr.	9,197,552
X $ .13	Cost/gal.	X $.124
$1,187,661	Cost/yr.	$1,140,496

Environmentally this fuel is not as desirable as natural gas, but should help overcome the present problems. Capital costs would be approximately $200,000.

C. Natural Gas Fuel Usage

107,500	BTU/Therm
82%	Boiler efficiency
88,150	BTU/Therm
1,216,238,400	M BTU/yr.
÷ 88,150	BTU/Therm
13,785,915	Therms/yr.
X $.053	Cost/Therm (this will increase 15% in 1/72)
$730,654	Cost/yr.

Environmental problems should be overcome by use of this fuel. Capital costs would be approximately $100,000.

D. Stoker Fuel Usage

With the amount of shavings and dry material already committed, there is enough material available to run one stoker fuel machine. This would amount to approximately 10% of the fuel required and would, therefore, not appreciably reduce the cost of fuel. The capital cost is approximately $65,000. With this fuel as a supplement to hog fuel, it is anticipated that wintertime operation and environmental problems would be reduced.

E. Combinations of Fuels

From the above figures, hog fuel in some combination with natural gas would be the most economical and cause the least amount of environmental problems.

4. Brooks-Scanlon Residues Available: (BDT)

A.

Item	Total Production	Saleable	Available Fuel
Bark	36,900	8,000	28,900
Sawdust	39,600	18,000	21,600
Shavings	29,978	21,600	8,378
Trim Ends	8,772	8,772	-0-
Coarse Residues	5,700	-0-	5,700
Total	120,950	56,372	64,578

B. Hog Fuel Only in Power House

Residue production	120,950
Power house usage	109,500
Available to B-W	11,450
Fuel cost	$273,750

C. Hog Fuel (100M/hr.) and Natural Gas (30M/hr.)

Residue production	120,950
Power house usage	82,715
Available	38,235
Committed to B-W	39,500
Shortage	(1,265)
Fuel cost (hog $206,790)	$375,542
(gas $168,752)	

D. Hog Fuel (88M) and Natural Gas (42M)

Residue production	120,950
Power house usage	72,578
Available	48,372
Committed to B-W	39,600
Saleable (dry chips or bark)	8,772
Fuel cost (hog $181,494)	$419,216
(gas $237,722)	

E. Hog Fuel (78M) and Natural Gas (52M)

Residue production	120,950
Power house usage	64,578
Available	56,372
Committed to B-W	39,600
Saleable (dry chips and bark)	16,772
Fuel cost (hog $161,445)	$453,568
(gas $292,123)	

5. Marketability and Capital Costs

A. Bark Sales

Bark can be sold to American Modoc on a contract basis for approximately $.50 per 3 cubic ft. bag, which amounts to $33.50 per unit. Capital costs for the complete operation would be approximately $200,000. Annual gross sales would be about $192,000.

Oregon Pacific Industries, Inc. have also shown an interest in purchasing sized bark for their bagging plant, but have yet to quote a price. Capital costs would be approximately $100,000 because we would not have to install a railroad spur or the bagging facility.

B. Sawdust Sales

There is no excess sawdust available for sale other than what is committed to B-W for $2.50 per BDU. No additional capital costs involved. Annual gross sales should be about $37,500.

C. Shavings Sales

There are no excess shavings available for sale other than what is committed to B-W for $2.50 per BDU. No additional capital costs involved. Annual gross sales should be about $45,000.

D. Dry Chips Sales

Dry chips can presently be mixed with our green chips and sold to Longview Fibre for $13.75 per BDU. Capital costs involved would be approximately $100,000. Annual gross sales would be about $100,500.

E. Other Products

Other products were not investigated, as there appears to be no additional surplus sawmill residues available.

6. Profitability

A. Present Hog Fuel Usage

Fuel cost	$273,750
4 men in old power house	+ 40,000
	313,750
less sales (shavings to B-W - $28,600 - 8,000)	- 20,600
	293,150
Wood cost (11,430 @ $2.50)	28,625
Capital costs $100,000 on 10 yrs.	+ 10,000
Total fuel cost	$331,775

6. Profitability (cont.)

B. Hog fuel (100M) and Natural Gas (30M)

Fuel cost	$375,542
Less sales (shavings & sawdust to B-W - $95,600 - 8,000)	- 87,600
	287,942
Wood cost (38,235 @ $2.50)	95.588
Capital cost $100,000 on 10 years	+ 10,000
Total fuel cost	$393,530

C. Hog Fuel (88M) and Natural Gas (42M)

Fuel cost	$419,216
less sales (shavings & sawdust to B-W - $99,000 - 8,000 Dry chips to Longview - $100,500 - 0)	-191,500
	227,716
Wood costs (48,342 @ $2.50)	120,930
Capital cost $200,000 on 10 years	+ 20,000
Total fuel cost	$368,646

D. Hog Fuel (88M) and Natural Gas (42M)

Fuel cost	$419,216
less sales (shavings & sawdust to B-W - $99,000 - 8,000 bark to American Modoc - $192,000 - $55,000)	-228,000
	191,216
Wood costs (48,372 @ $2.50)	120,930
Capital costs $300,000 on 10 years	+ 30,000
Total fuel cost	$342,146

E. Hog Fuel (78M) and Natural Gas (52M)

Fuel cost	$453,568
less sales (shavings & sawdust to B-W - $99,000 - 8,000 dry chips to Longvies - $100,500 - 0 bark to American Modoc - $192,000 - 55,000)	-328,500
	125,068
Wood costs (56,372 @ $2.50)	140,950
Capital cost $400,000 on 10 years	+ 40,000
Total fuel cost	$306,018

6. Profitability (cont.)

F. Assuming B-W Takes 1/2 of Their Commitment:

Hog fuel (102M) and Natural Gas (28M)

Residue production	120,950 BDT
Power house usage	84,428
Available	36,522
1/2 B-W commitment	19,750
Salable (dry chips and bark)	16,772
Fuel cost (hog $211,070) (gas $157,141)	$368,211
Less sales: (shavings to B-W $49,500 - 8,000 dry chips $100,500 - 0 bark $192,000 - 55,000)	-279,000
	89,211
Wood cost (36,522 @ $2.50)	91,305
Capital cost $400,000 on 10 years	+ 40,000
Total fuel cost	$220,516

G. Assuming B-W Takes 2/3 of Their Commitment:

Hog Fuel (104M) and Natural Gas (26M)

Residue production	120,950 BDT
Power house usage	85,778
Available	35,172
2/3 B-W Commitment	26,400
Salable dry chips	8,772
Fuel cost (hog $214,445) (gas $147,961)	362,406
Less sales: (shavings to B-W $66,000 - 8,000 dry chips $100,500 - 0)	158,500
	203,906
Wood cost (35,172 @ $2.50)	87,930
Capital cost $200,000 on 10 years	+ 20,000
Total fuel cost	$311,836

7. Of the above considerations, it is my opinion that item "G" is the most realistic and should be investigated in detail. Bark sales could be looked into in detail at a later date when there are more accurate figures available on power house natural gas usage, B-W's shavings and sawdust requirements, and actual sawmill production. I have suggested dry chip sales over bark sales in this initial stage for the following reasons:

1. Brooks-Scanlon can get into the dry chip business more readily than into bark sales.

2. Chip prices will increase faster than bark prices.

3. Bark is a more desirable fuel, than dry hogged wood.

4. No predetermined amount has to be specified to sell dry chips, whereas it is necessary in order to sell bark.

5. The capital expenditure for dry chips is approximately 1/2 that for bark.

6. No additional manpower is required for chip sales, where bark conversion will require additional manpower.

7. There are no environmental problems associated with dry chips, where there is a dust and storage problem associated with bark.

DG/sh

cc: Hank Brooks
Frank Cammack
Mike Hollern
Ted Young

(3)

CONTRACT
FOR NATURAL GAS SERVICE

THIS AGREEMENT, made and entered into this 29th day of May 1970, by and between CASCADE NATURAL GAS CORPORATION of Seattle, Wash., its successors and assigns, hereinafter referred to as the Seller, and

Brooks-Scanlon, Inc. of Bend, Oregon

successors, personal representatives or assigns, hereinafter referred to as the Buyer:

WITNESSETH:

WHEREAS, the Seller owns and operates a system for the distribution and sale of natural gas, and the Buyer desires to purchase natural gas from Seller for special purposes as hereinafter described:

NOW THEREFORE, for and in consideration of the mutual covenants, and agreements hereof and other good and valuable considerations, the Seller and Buyer have agreed and do hereby covenant and each agree with the other as follows, to-wit:

Seller agrees to sell and deliver to Buyer and Buyer agrees to purchase and receive from Seller its entire fuel requirements for following property and use:

Firm service for Buyer's plant located on Wilson Avenue, Bend, Oregon, for use in direct fired dry kiln and all other uses as may be required from time to time

subject to the terms and conditions herein stipulated including those on the back hereof, for the term of one (1) year and continuing thereafter from year to year until cancelled by either party hereto having given at least thirty (30) days written notice to the other of its intention to do so

said term to begin on the ______ day XX ______ XX natural gas becomes available to Buyer's plant located as set forth above.

The price of gas for each month's deliveries shall be as follows:

In accordance with the terms and conditions of Seller's Firm Commercial, Institutional and Industrial Natural Gas Service Rate Schedule No. 311 as may be in effect from time to time in that tariff filed with the Oregon Public Utilities Commissioner. A copy of Schedule No. 311 currently in effect is attached hereto and made a part of this contract.

IN WITNESS WHEREOF, the parties hereto have subscribed their names, the day and year first above written.

CASCADE NATURAL GAS CORPORATION
SELLER

ATTEST: W. D. [signature] V.P.

By [signature] President / Sales Manager

WITNESSES:

Brooks-Scanlon, Inc.
BUYER

By [signature]
Title

METALLURGICAL ENGINEERS, INC

ENGINEERING AND APPLIED SCIENCES

2340 S.W. CANYON ROAD
P.O. BOX 1038
PORTLAND, OREGON 97207
503/228-9663

working with MATERIALS ECOLOGY INDUSTRIAL PRODUCTS AND PROCESSES

CLIENT NO.

TO: Brooks-Scanlon, Inc.
Attention: Mr. Leo H. Hopper,
Production Manager
P. O. Box 1111
Bend, Oregon 97701

REFERENCE NO. 611119

DATE: 5-19-71

SUBJECT: AIR QUALITY SURVEY - GRAIN LOADING DETERMINATION

Memorandum Report

from Daniel Sobala, P.E.
Project Engineer

1. SUMMARY:

We were retained to make an air quality survey with respect to the particulate emission from the two hog fuel fired boilers at the Bend, Oregon facility of Brooks-Scanlon, Inc. Surveys were made on May 10, 11 and 12, 1971 following the procedures outlined in the U.S. Public Health Service publication "SPECIFICATIONS FOR INCINERATOR TESTING AT FEDERAL FACILITIES" and Addendum thereto. These procedures were specified and viewed by the Oregon Department of Environmental Quality.

Our conclusions are:

1.1. Boiler No. 1 conforms to the 0.20 grain per standard cubic foot limit for steam flow rates below 52,000 pounds per hour.

1.2. Boiler No. 2 exceeds the 0.20 grain per standard cubic foot limit for all three steam rates tested.

The results are:

Test No.	Boiler No.	Grain Loading grain/scf	Steam Flow Rate lb / hr
1	1	0.185	51,000
2	1	0.232	54,000
3	1	0.151	49,000
4	1	0.132	46,000
5	2	0.566	49,000
6	2	0.380	57,500
7	2	0.209	47,000

DS:hg

cc: 3

SUBJECT: AIR QUALITY SURVEY - GRAIN LOADING DETERMINATION
REF. NO.: 611119

Facing Figure 1

Figure 1 GRAPHICAL INDICATION OF VALUES
on
page 3

The foregoing values are plotted in the facing graph. For the No. 1 boiler, a smooth curve could be drawn through the four test points, indicating consistency in the data. Values on this curve exceed the 0.20 grain/scf limitation at steam flow rates above 52,000 lb/hr.

The three points for the No. 2 boiler exceed the permitted value; two of them by an extremely large amount. Since the two boilers are essentially identical, the grain loading variation between them is, in our opinion, due to the manner of operation. This may be due to power plant instrument errors and/or an improper combustion balance.

A comprehensive report, covering all aspects of the tests, will be deferred until a retesting of boiler No. 2 is made.

If you desire, MEI will be pleased to assist you in making the necessary adjustments to this boiler.

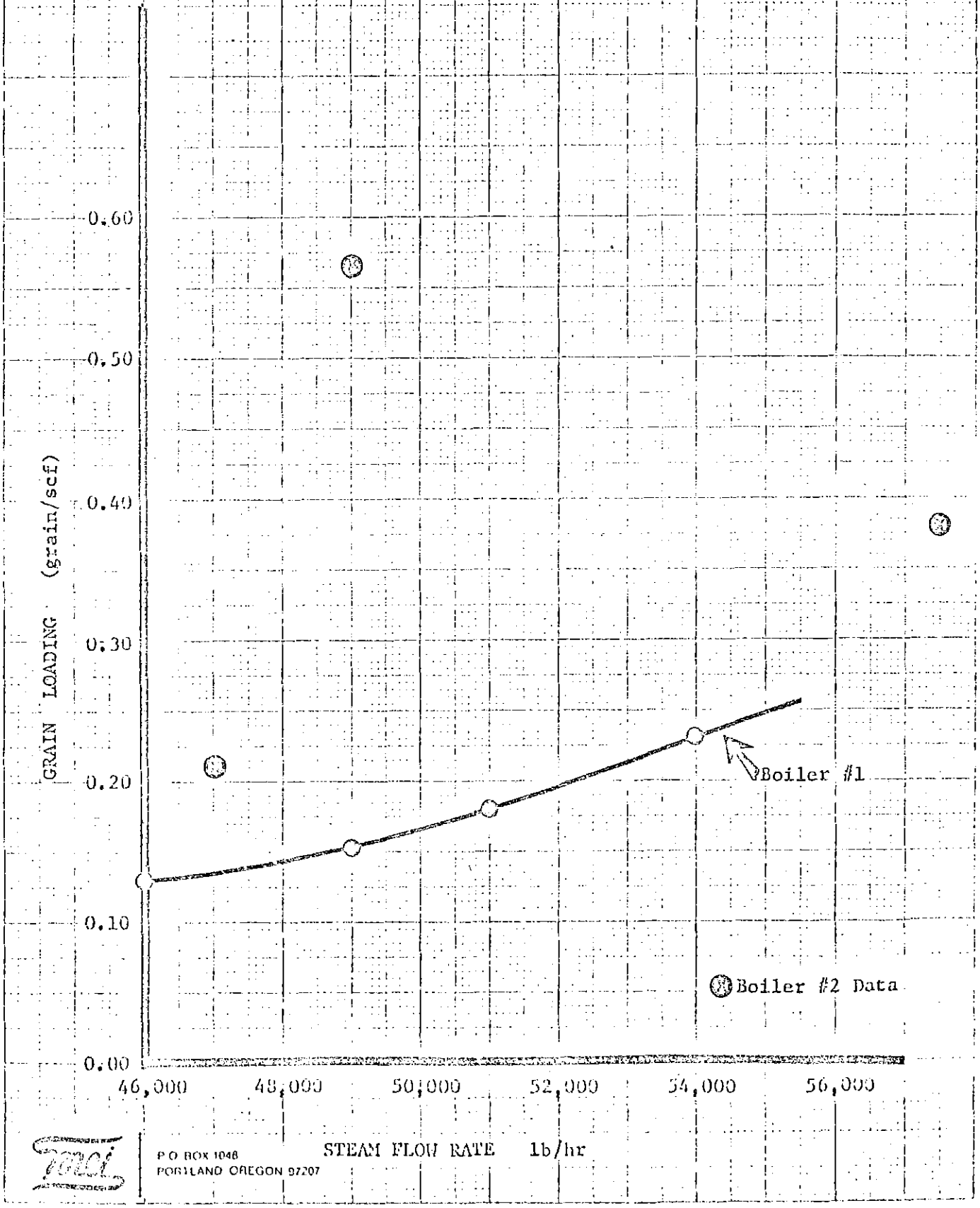
As requested by Mr. Leo Hopper, a copy of this data has been provided the State of Oregon Department of Environmental Quality.

P.O. BOX 1018
PORTLAND, OREGON 97207

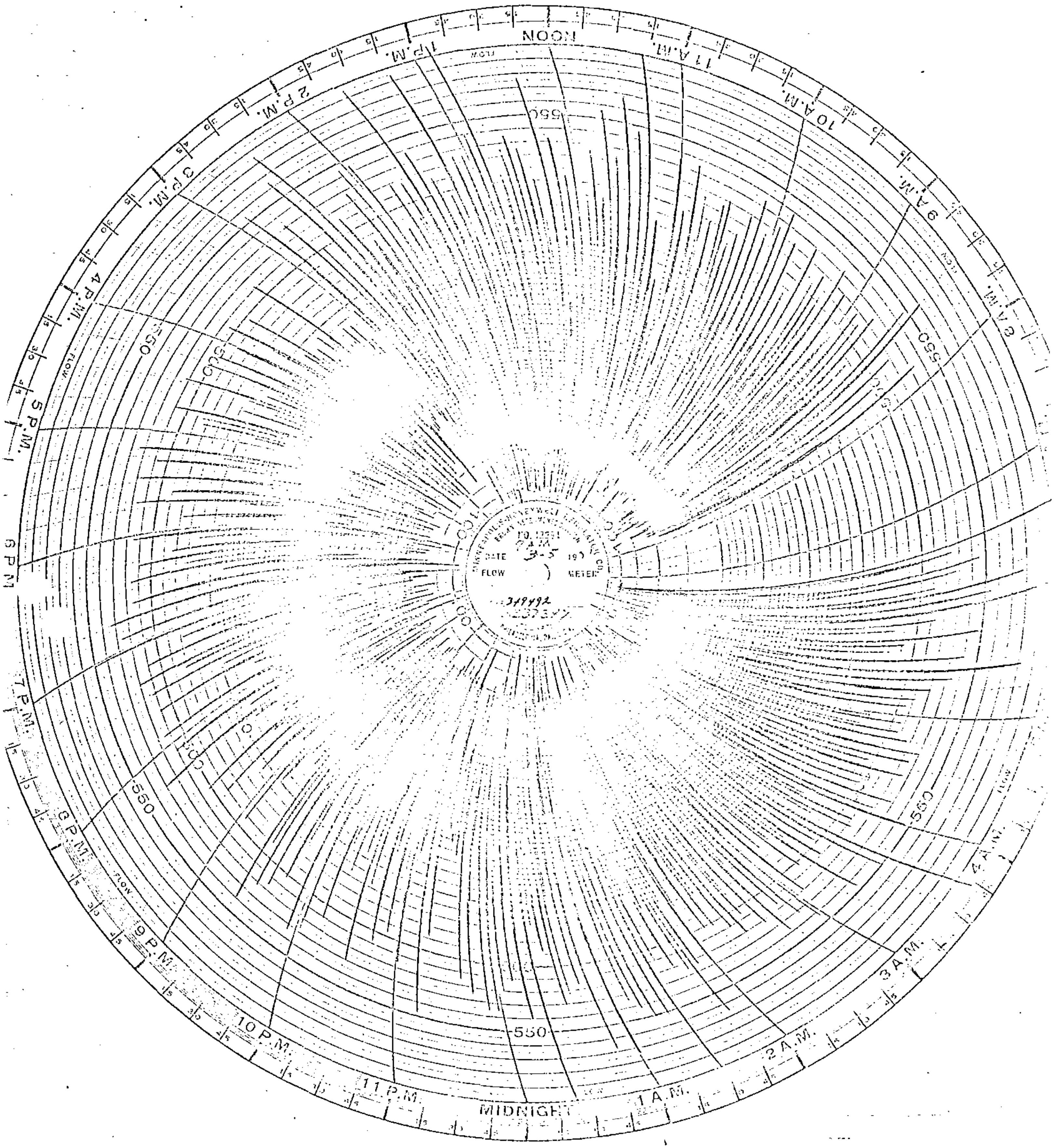
SUBJECT: AIR QUALITY SURVEY - GRAIN LOADING DETERMINATION

REF. NO.: 611119

FIGURE 1



P.O. BOX 1048
PORTLAND OREGON 97207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MIDNIGHT
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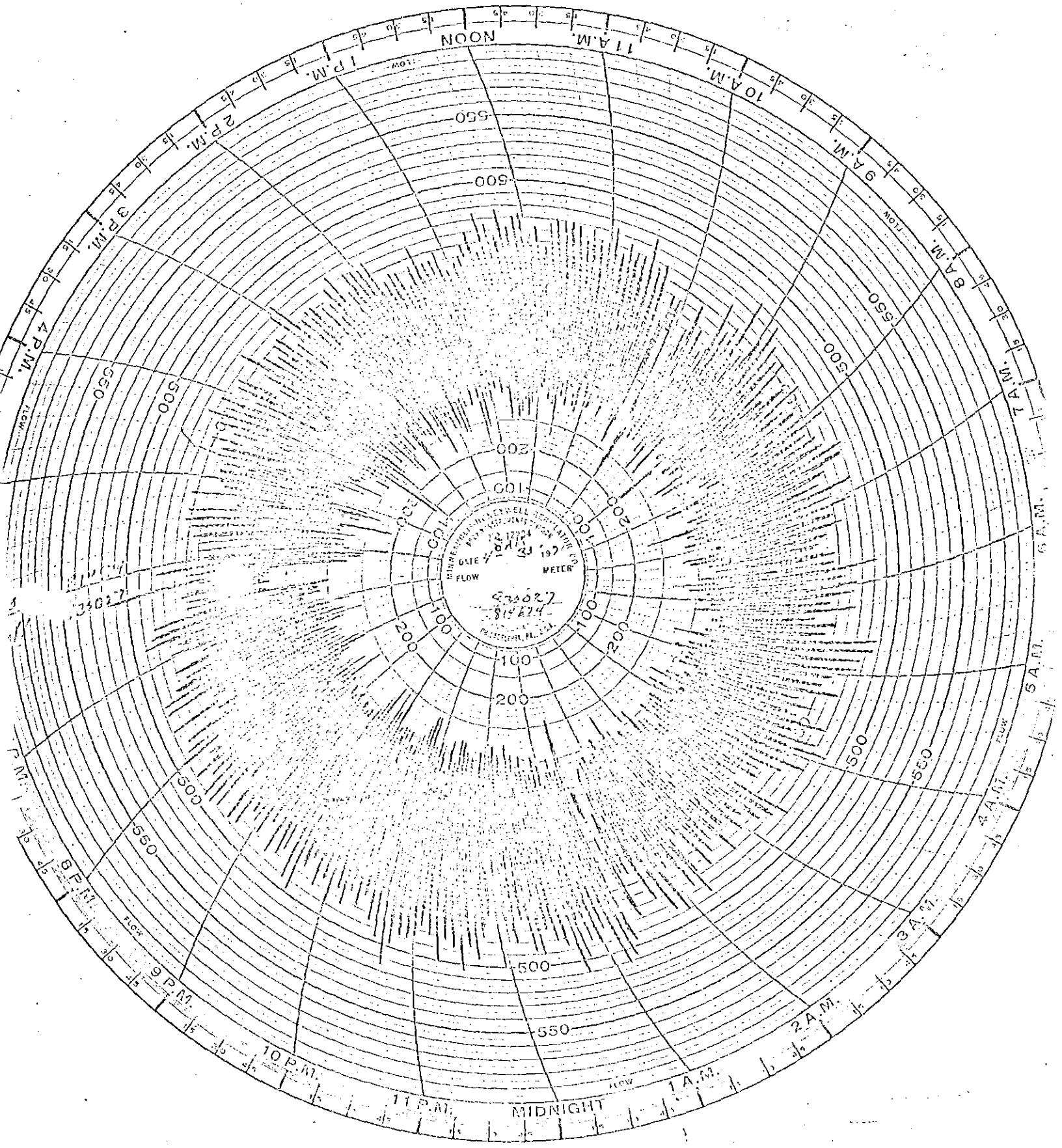
550
DATE 3-5 19
FLOW METER
7 A.M.
349492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200
500
550
FLOW
DATE
METER

Timetable for Power House and Dry Kiln Modification

1. Equipment on order - July 1, 1971
2. Estimated delivery of kiln equipment - September 15, 1971
3. Kiln equipment installed - October 15, 1971
4. Estimated delivery of power house equipment - February 1, 1972
5. Power house equipment installed - April 1, 1972
6. Shutdown old power house - April 15, 1972

BROOKS SCANLON, INC.
BOILER INSTALLATION

OLD POWER HOUSE

B&W Stirling
1924

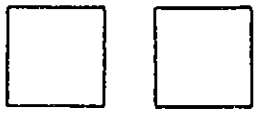
B&W Stirling
1924

Puget Sound Machinery Depot
1940

160 psig
DUTCH OVEN BURNING

NEW POWER HOUSE

B & W Stirling
1968-9



600psig
92,500#/h each SUSPENSION BURNING

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 : June 2, 1971 for Meeting of June 4, 1971

SUBJECT : REPORT ON PROPOSED 1971 FIELD BURNING REGULATIONS

As you know, the Department applied a different approach to the task of minimizing the effects of field burning on valley residents in 1970. That approach was based on what is popularly called "smoke management," which simply means burning under conditions which minimize the chances of smoke being dumped on sensitive areas such as cities, highways, airports, or high-use recreation areas. At your August, 1970 meeting in Eugene, the staff reported to you on the status of the program at that time, and in early April of this year a staff report on the 1970 field burning season was published and distributed. This memorandum presents the main conclusions and recommendations contained in the 1970 season report, and discusses how and why the proposed regulations for 1971 differ from those of 1970.

1970 Report Conclusions and Recommendations:

1. The 1970 Department of Environmental Quality approach to managing field burning smoke succeeded in reducing, but not eliminating, the adverse impact of field burning on the Eugene metropolitan area.

2. The decrease of smokiness in the Eugene area was accompanied by an increase in smokiness in the area from Lebanon to Salem, and east into the recreation areas of the Cascades.

3. Eugene air quality during August and September, whether from field burning alone or in combination with other local sources, was unacceptable in that state ambient air standards for suspended particulate matter were exceeded. Intrusions of field fire smoke in the Eugene area were attributed to one or both of two causes:

   a. Excessive and indiscriminant burning in South Valley priority areas.

   b. Burning in certain North Valley areas under high wind conditions.

4. On days of heavy burning the South Valley air safety for light planes was a concern in that area.

5. The generally poor air quality throughout the Valley during the period September 28-October 4 cannot be directly attributed to field burning.

6. The programs of the Oregon Seed Council aided the overall effort to minimize the effects of field burning on Valley residents. "Operation Skywatch" was the most important and useful aspect to the staff, followed by the registration and reporting programs.

Recommendations for 1971: The following short-term recommendations for the 1971 field burning season are primarily intended to reduce the impact of field burning on population centers throughout the Valley by modifications in the Environmental Quality Commission regulations or in day-to-day operation of the program. They are based on the assumption that the public policy of the state, as reflected by Acts of the Legislature, will continue to be that burning of annual and perennial grass seed fields is a permissible activity until alternate practices are developed. Unfortunately, the staff knows of no way to alleviate the impact of heavy South Valley burning on the recreation areas of the Cascades and on air safety for light planes.

The recommendations and justifications for them are as follows:

1. Retain 1970 acreage quotas for 1971. The Environmental Quality Commission regulation adopted in 1970 included acreage quotas, based on the expectation that wide-spread testing of mobile field incinerators would begin during 1971. The expectation did not materialize, and the incinerator development is about one year behind the schedule projected by the 1970 Department of Environmental Quality staff report.

2. Modify the field burning regulations to limit the daily amount of priority area burning that can be accomplished in each South Valley Fire District, so that the daily total for the South Valley cannot exceed 1000 acres. This change should minimize the chances of excessive smoke from South Valley priority areas reaching Eugene.

3. Adjust priority areas and conditions for priority area burning in the vicinity of Salem, Albany and Lebanon to minimize direct smoke problems in those areas.

4. Regulate Benton-Polk and Waldo-Silverton Hills burning to minimize smoke problems in Corvallis and Eugene, respectively, under strong north wind conditions.

5. Allow additional quotas in the Waldo-Silverton Hills area under southwest winds to facilitate completion of late-season bentgrass burning.

Thus, the smoke management approach worked, and worked reasonably well considering the nature and magnitude of the field burning source and the summer dispersion climate of the Willamette Valley. The proposed changes in the 1971 regulations are designed, then, to alleviate some of the problems encountered or weaknesses discovered during the 1970 season, rather than to effect major, basic changes in the approach used.

1971 Regulation Differences:

The proposed 1971 field burning regulations have the following substantive differences from the 1970 regulations:

1. Priority areas are revised and quotas are assigned to priority area burning in each permit jurisdiction.

2. Burning is extended one hour in the evening.

3. Field incinerators approved by the Department may be operated at any time, and acres burned by them do not apply to the open burning acreage quotas.

4. The bentgrass region in the Waldo-Silverton Hills area may burn on any marginal day.

5. Definite confirmation of action taken under each field burning permit is required.

Explanation of Differences:

1. The leeward sides of highways declared priority areas in 1970 have been removed, since burning can take place there under normally prevailing winds without endangering highway travel. Priority area quotas have been assigned primarily to assure that no more than 1000 acres of priority area burning is conducted in the South Valley on any Class N day, since past staff studies have indicated 1000-1500 acres as an upper limit for burning in the South Valley under northerly winds without creating some problem in the Eugene-Springfield urban area. The priority area quotas are based on a 20-burning-day period, i.e., twenty days of priority area burning should permit all the priority acreage in any district to be burned.

2. The evening burning cutoff was extended one hour simply to provide additional flexibility in timing burning. It must be emphasized though that the time limit refers to the time all fires must be out, not to the time past which no fires may be started.

3. The exemptions from daily regulation and acreage restrictions for field incinerators approved by the Department is intended to allow such incinerators maximum freedom of operation as they become available in the Valley and to permit evaulation of the air quality effects on their operation under a wide range of atmospheric conditions.

4. The allowance for burning under any marginal condition for certain specified Fire Districts in Marion County is to assure that maximum opportunity for burning the concentrations of bentgrass fields in those Districts. Bentgrasses are the last to be harvested, and between poor dispersion days with northerly winds and rainy days, few acceptable days for burning are available during the late summer when these fields are finally ready for burning. Thus, allowing burning in the Waldo-Silverton Hills bentgrass area on any marginal day should assure sufficient days on which to accomplish the bentgrass burning.

5. Confirmation of action taken under each field burning permit is being required in order to assure that the data taken by the fire permit agents is complete and accurate. This should minimize the questionability of these date, and provide maximum information both for operational use during the season and for research use after season's end.

OFFICE OF
STATE FIRE MARSHAL

668 CHURCH STREET, N.E. • SALEM, OREGON • 97310 • Phone 364-2171 Ext. 462

TOM McCALL
GOVERNOR

May 21, 1971

Mr. Kenneth H. Spies
Director
Department of Environmental Quality
Air Quality Control Division
State Office Building
1400 S.W. Fifth Avenue
Portland, Oregon 97201

Dear Mr. Spies:

After reviewing your notice of intent to adopt certain air quality regulations for agricultural burning, I can see no particular problem insofar as this office is concerned with the exception of Item 3, page 2, involving the approval of LP gas permits.

In this instance you should be aware that all LP gas equipment in the state may only be installed by installers licensed through this office; each installation must be under special permit by this office and all such installations are spot checked, as per enclosed statutes. Hence, if the manufacturer or builder of such equipment is complying with State law, all such equipment will be approved by this office in the normal course. On the other hand, if we were to make special inspections for each burning permit using LP gas fired equipment, it would take a great deal of manpower which we do not presently have and are not budgeted to provide. In addition, I rather doubt whether such special inspections would accomplish any particular purpose in relation to the completeness of fuel consumption

since our men have no special expertise in this area. It is, therefore, suggested that this paragraph be amended to require that all such equipment comply in full with the laws, rules, and regulations of this office governing LP gas burning equipment.

Very truly yours,

C. Walter Stickney
State Fire Marshal

CWS:mft

Enclosure

Women For Agriculture

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JUN 2 1971
AIR QUALITY CONTROL

May 30, 1971

D.E.Q.
1401 S.W. 5th
Portland Ore

Re - Field Burning

Dear Sirs.

The proposed reduction of # of acres to be burned in the Tangent, Albany rural fire district from 350 acres a day to 50 acres per day - in 1971. Is likely to cause smoke either on the highway or in Albany - & therefore be hazardous. Highway #34, 99 - & 5 are all in this district therefor we ask this be changed -

Sincerly -
Mrs Ralph Hodgdon

ROY A. BOWERS & SONS, INC.
Route 1, Box 139
Harrisburg, Oregon 97446

Harrisburg, Oregon
May 25 1971

Kenneth Spies
Director of DEQ.

Dear Mr Spies;

I am writing in regard to the 50 acre permit that has been designated for the Creswell area. I farm 1700 acres in that district, all the fields are 100 acres or more. There is no way to divide these fields as they are all perennial ryegrass.

At 50 acres a day it willtake 34 days to burn this. I know by expereince that by burning larger areas it creates less smoke as there isn't so much backfiring or putting out fires which all create smoldering, and a slow burning fire causes more smoke.

In other counties the fire chief allow an individual to pick up permits that wont be used on that given day and burn a large field, this is not permitted in Lane co, which makes it very difficult to get the acreage burned.

This area is South of Eugene as causes no problem with a north wind.

I would appreciate it very much if your group would reconsider this allotment.

Sincerely

Roy A. Bowers & Sons

FIELD BURNING
In The Willamette Valley
1970

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CONTROL DIVISION

April 8, 1971

CONTENTS

FIELD BURNING IN THE WILLAMETTE VALLEY - 1970

INTRODUCTION

The Department of Environmental Quality staff report of April 23, 1970, provided a full review of the nature, amount and effects of field burning, the control programs implemented by the Department of Environmental Quality, and the public response to the effects of field burning in the Valley in the years of 1968 and 1969. That report also presented a new approach to minimizing the detrimental effects of field burning, while also proposing a schedule for phasing-out the practice as it is presently conducted by July, 1973. This report serves to supplement the 1970 report, to bring up to date the Department of Environmental Quality material on field burning and to present the results of the first season of operation under the new program. In addition, certain changes in the present schedule and program are proposed.

1970 SEASON HISTORY AND OVERALL RESULTS

Regulation and Schedule. On April 23, 1970, at the State Capitol in Salem, the Environmental Quality Commission held a public hearing on a proposed regulation and schedule for open field burning. Testimony from the Department of Environmental Quality staff, interested citizens and civic groups, and grass seed industry representatives was taken under consideration by the Commission. Final action on the regulations was deferred until the May, 1970, meeting of the Commission.

The regulations differed somewhat from those of earlier years. The major change proposed was the use of southerly winds to carry the smoke from heavy burning in the South Valley (Benton, Lane and Linn Counties) across the Valley and into the Cascades, thus keeping the smoke away from the Eugene-Springfield area while having a minimal effect on Salem. Fields in the North Valley, where acreage is concentrated primarily in Marion County, were to be burned under normally prevailing northwesterly wind conditions.

The burning schedule proposed by the staff included the following provisions:

1. Heavy burning (up to 15,500 acres per day) to be conducted in Benton, Lane and Linn Counties under persistent southwest winds, with little or no burning in the North Valley.

2. Moderate burning (about 2,000 acres per day) to be conducted in the North Valley under Northwest winds, with little or no burning in Benton, Lane and Linn Counties.

3. Buffer zones, called priority areas, to be established around major airports, cities of 10,000 or more and major highways in which burning would be done under conditions conducive to keeping direct smoke out of the area of concern.

4. Burning permits to be issued in accordance with the priorities set up in the statutes --- perennial grasses, first; annual grasses, second; cereal grain, third; and other agricultural burning, fourth.

5. Quotas to be established for allowable daily burning acreage in each fire district, with the quota based on grass acreage in the Districts and the expected number of days of acceptable wind direction. Basic quotas were established as 4½% in the South Valley (Benton, Lane and Linn Counties), with two quotas to be released on acceptable days, and 3% per day in all other Valley Counties.

6. A scheduled reduction in the acreage quotas to be established for the 1970-1972 burning seasons, with 1972 being the last year during which open field burning would be allowed in the Willamette Valley. Reduction rates to be commensurate with the projected development of alternative practices, including the widespread usage of mobile field incinerators.

At the hearing, the Oregon Seed Council, a group which represents all segments of the grass seed industry, presented the following proposals:

1. Basic quotas should be based on 3% of actual registered acreage in North Valley Fire Districts and 4½% of the registered acreage in the South Valley Districts.

2. An emergency provisions should be included in case unusual weather or other unforeseen circumstances arise. This provision would allow unlimited burning on the best three days between August 20 and September 10.

3. Assuming 1 and 2 above could be done, the Seed Council proposed to provide the following services:

   a. Assist in establishing communications from Department of Environmental Quality-Fire Marshal-Fire District-Grower.

   b. Establish local committees in each Fire District to assist the Fire Chief in implementing the program.

   c. Register fields by class (perennial, annual, cereal) and map all priority areas that are to be burned.

   d. Maintain up-to-date records, showing fields that are burned and fields yet to be burned.

   e. Assist in setting up permit issuing agencies where there are no Fire Districts.

   f. Provide aircraft for observation purposes whenever needed.

   g. Publicize and explain the smoke management program to all growers to assure cooperation. Hold meetings in individual Fire Districts, utilizing newsletters, radio, telephone and personal contact.

At its May 22, 1970, meeting, the Commission adopted the schedule proposed by the staff, after inserting the following amendments:

1. No weekend burning allowed in priority areas.

2. Grain fields and other "agricultural burning" not allowed.

A copy of the regulation and schedule as adopted is contained Appendix A.

The Commission denied the Seed Council's request for an emergency provision for unlimited burning in the event of unusual weather or other unforeseen circumstances.

The Oregon Seed Council petitioned the Commission at its June 26 meeting for a re-hearing on the schedule, but the petition was denied. Shortly thereafter, the Seed Council and certain individual growers sought and subsequently received from the Marion County Circuit Court a permanent injunction against the Commission's prohibition of cereal grain and other agricultural burning in its field burning schedule. This meant that cereal grains and other burning (such as agricultural land clearing) would take third and fourth priorities, respectively, in the allocation of burning permits to fill acreage quotas.

Burning Accomplished. The schedule allowed all or almost all essential burning on time in the Valley in 1970, with the exception of the Waldo-Silverton Hills area, in which some problems were experienced with late season bentgrass burning. That the schedule allowed sufficient burning is substantiated by data presented in Table I, along with summaries of the 1968 Oregon State University data, and the 1969 data gathered for the Department by Oregon State University Air Resources Center for comparison. It is certain that about 250,000 acres of grass and grain were burned in the Willamette Valley in 1970, which would indicate a 30,000 acre increase over 1969.

Whether the apparent increase is due to better record keeping or more actual burning in 1970 is uncertain. There is a definite large increase in annual ryegrass acreage burned. The increase in grain acreage burned may be more apparent than real, since many feel that much grain was burned in 1969 under grass burning permits.

Summary of Complaints. Although numbers of complaints were down considerably from 1969, field burning remained the major source of complaints received by or referred to the Department of Environmental Quality in 1970.

Table II is a summary of the number of field burning complaints received in recent years by Lane Regional Air Pollution Authority, Mid-Willamette Valley Air Pollution Authority and the Department of Environmental Quality (including its Eugene District office).

Table I

FIELD BURNING ACREAGES REPORTED BY
OREGON STATE UNIVERSITY, AIR RESOURCES CENTER

	1968		1969*		1970	
	Grown	Burned	Grown	Burned	Grown	Burned
Perennial Grass	155,000	140,000	135,000	135,000*	Unknown	125,000
Annual Grass	90,000	90,000	101,000	81,000*	Unknown	112,000
Grain	300,000	85,000	121,000	9,000	Unknown	25,000
Total	545,000	315,000	356,000	225,000		252,000

Sources

1968 Data - "Agricultural Field Burning in the Willamette Valley", Air Resources Center, Oregon State University, Corvallis, January, 1970.

1969 Data - Survey conducted by Air Resources Center under contract to the Department of Environmental Quality, excerpt attached.

1970 Data - "Research Relating to Agricultural Field Burning - A Progress Report", Agricultural Experiment Station and Air Resources Center, Oregon State University, Corvallis, February, 1971.

*These figures represent corrected figures. The reported 1969 acreages were 146,000 for perennial and 64,000 for annual grass fields burned - it was conservatively assumed that 11,000 acres of annual was burned under perennial permits. In addition, 6,000 acres reported as "species unknown" were assigned to annual ryegrass.

Table II

FIELD BURNING COMPLAINTS TABULATED

Received by:	1968	1969	1970
Department of Environmental Quality	11	1645	306
Mid-Willamette Valley Air Pollution Authority	6	88	186
Lane Regional Air Pollution Authority	127	3409	1241
TOTAL	144	5142	1733

There was a dramatic increase in numbers of complaints between 1968 and 1969, and a marked decrease in the total number of complaints received in 1970, with the exception of the Mid-Willamette Valley area, which shows a doubling of complaints from 1969 to 1970. The largest relative increases in complaints were from Corvallis and Lebanon, with Salem also showing a relative increase in complaints. By far, the greatest number of complaints came from the Eugene-Springfield metropolitan area. Overall, the most frequent causes of the complaints were smoke and visibility reduction.

Summary of Visibility Restrictions. Smokiness and reduction of visibility, as mentioned above, are two major sources of complaints regarding field burning. Records of visibility reduction by smoke or haze only, as observed at Salem and Eugene airports by National Weather Service personnel, can provide information on the frequency and intensity of field burning smoke effects.

Table III presents data on summertime visibility restrictions by smoke in recent years at Salem and Eugene. The data show smoke becoming increasingly frequent through the course of summer at both Eugene and Salem.

Table IV presents more detailed data on visibility restrictions by smoke in the Valley during recent years. The August data show clearly that field burning under the new schedule had a negative impact during that month in Salem; Eugene, on the other hand, shows a marked improvement during the field burning period.

The data show that the intensity of the smoke during the smoky periods was reduced compared to past years, as indicated by the much lower frequency of visibilities of three miles or less and one mile or less. Salem is again an exception during the month of August.

What does not show in these Tables is the effect the program has on other parts of the Valley not having visibility reporting stations. Lebanon, Stayton, Sweet Home, the Sanitiam canyon area and the Cascade recreation areas all came under heavy smoke on south-burn days. State Forestry Department lookouts in eastern Linn County reported visibilities of ¼ mile due to smoke generated by

Table III

VISIBILITY DATA

	June			July			August			September			October		
	68	69	70	68	69	70	68	69	70	68	69	70	68	69	70
Eugene															
Smoky Days	4	1	2	3	5	3	4	11	7	17	9	6	16	15	10
Smoky Hours	5	2	3	10	12	8	15	40	14	170	51	35	67	39	47
Salem															
Smoky Days	1	2	0	3	6	4	5	10	10	15	8	6	11	13	10
Smoky Hours	2	9	0	10	8	8	11	16	53	92	66	50	53	85	65

Note: Smoky days are those days showing a restriction to visibility at the airport by smoke only, haze only, or smoke and haze on one or more hourly observations.

Smoky hours are those hourly observations showing restrictions to visibility by smoke only, haze only, or smoke and haze.

A weather element is listed as restricting visibility when it reduces prevailing visibility to six miles or less.

Table IV

SMOKINESS IN SALEM AND EUGENE

	SALEM			EUGENE		
	1968	1969	1970	1968	1969	1970
June						
Smoky Days	1	2	0	4	1	2
Smoky Hours						
Visibility 6 mi. or less	2	9	0	5	2	3
Visibility 3 mi. or less	0	1	0	0	0	0
July						
Smoky Days	3	6	4	3	5	3
Smoky Hours						
Visibility 6 mi. or less	10	8	8	10	12	8
Visibility 3 mi. or less	0	0	0	0	4	4
Visibility 1 mi. or less	0	0	0	0	0	1
August						
Smoky Days	5	10	10	4	11	7
Smoky Hours						
Visibility 6 mi. or less	11	16	53	15	40	14
Visibility 3 mi. or less	0	3	16	8	30	3
Visibility 1 mi. or less	0	0	0	0	10	0
September						
Smoky Days	15	8	6	17	9	6
Smoky Hours						
Visibility 6 mi. or less	92	66	50	170	51	35
Visibility 3 mi. or less	18	16	10	62	42	1
Visibility 1 mi. or less	0	0	0	6	4	0
October						
Smoky Days	11	13	10	16	15	10
Smoky Hours						
Visibility 6 mi. or less	53	85	65	67	39	47
Visibility 3 mi. or less	5	35	16	50	25	3
Visibility 1 mi. or less	0	0	0	8	3	0

Table V

SUMMARY - 1970 FIELD BURNING SEASON

DAY	CLASS AM	CLASS PM	ACRES BURNED North Valley	ACRES BURNED South Valley	EUGENE AIR QUALITY Airport Visibility Min.	Airport Visibility No.Hrs. ≤ 6 mi.	Airport Suspended Particulate (24-hours) ug/M³	Commerce Bldg. Suspnd.Part. (24-hours) ug/M³	City Hall Suspnd.Part. (24-hours) ug/M³	SALEM AIR QUALITY Visibility Min.	SALEM AIR QUALITY Visibility No.Hrs. ≤ 6 mi.	SALEM AIR QUALITY Suspended Particulate (24-hours) ug/M³
July												
15	N		876	448	15	0	57	123	104	20	0	
16	S	S	470	13021	10	0		55	33	20	0	44
17	N	P	1058	1116	5	2	50	87	106	5	1	
18	N		1067	185	12	0		67	78	10	0	65
19	N		320	116	12	0				20	0	32
20	N	N	1182	386	20	0				30	0	148
21	P	P			25	0	45		59	15	0	
22	N	N	1505	313	12	0	67	89	75	10	0	47
23	P	P			12	0	53	82	89	7	0	49
24	N		1951	837	12	0	45	63	60	20	0	40
25	S	S	15	16445	25	0		47		4	2	38
26	S	S		12295	25	0		30		15	0	25
27	S	P		5624	1	5		69	80	15	0	30
28	P	P	13	86	25	0	26	60	51	30	0	39
29	N	N	1958	1070	3	1	55	64	83	30	0	28
30	N	N	1657	992	12	0	57		68	8	0	51
31	N		1624	986	8	0	54			10	0	

Table V, cont'd

SUMMARY - 1970 FIELD BURNING SEASON

DAY	CLASS		ACRES BURNED		EUGENE AIR QUALITY					SALEM AIR QUALITY		
					Airport			Commerce Bldg.	City Hall			
	AM	PM	North Valley	South Valley	Visibility Min.	Visibility No.Hrs. ≤ 6 mi.	Suspended Particulate (24-hours) ug/M^3	Suspnd.Part. (24-hours) ug/M^3	Suspnd.Part. (24-hours) ug/M^3	Visibility Min.	Visibility No.Hrs. ≤ 6 mi.	Suspended Particulate (24-hours) ug/M^3
August												
1	N	N	871	176	20	0		28		8	0	46
2	N	N	498		20	0		50	69	15	0	37
3	N	N	1488	1573	12	0	60	66	54	7	0	50
4	S	S	177	17526	10	0	26	57	55	1½	8	65
5	P	P	50	9	7	0	32		88	2½	5	56
6	N	SS	1264	13510	25	0		77	45	15	0	
7	S	SP	134	14207	25	0	23	62		10	0	42
8	N		2039	1304	8	0				10	0	94
9	N		777	527	8	0		89	138	10	0	43
10	N	NP	1424	2071	2	1	91	128	51	10	0	90
11	N	NP	1443	1968	6	2	95		121	8	0	74
12	N	P	1562	1943	12	0			73	15	0	
13	N	P	1300	1884	7	0			138	7	0	
14	P				12	0				10	0	69
15	P		175		12	0				10	0	86
16	N	N	599									34
17	P	P							74			55
18	P	N	1746	70			74		160			59
19	N	P	2428	1434	3	1			110	6	4	76
20	N	N	1598				64		119	4	2	56
21	P	P	100		6	1	67		107	4	8	--
22	P	P	90							4	11	66
23	P	P		90								42
24	P	S	819	7621			22				1½	55
25	S	P	491	9266	2	3	62		96			82
26	P	P			5	2	93					60
27	P	P	234	1676			35			2	10	73
28	P	N	2291	598			45		83			62
29	P	P	60	60	5	3				1½	4	82

Table V, cont'd

SUMMARY - 1970 FIELD BURNING SEASON

DAY	CLASS		ACRES BURNED		EUGENE AIR QUALITY					SALEM AIR QUALITY		
					Airport			Commerce Bldg.	City Hall			
	AM	PM	North Valley	South Valley	Visibility Min.	Visibility No.Hrs. ≤ 6 mi.	Suspended Particulate (24-hours) ug/M^3	Suspnd.Part. (24-hours) ug/M^3	Suspnd.Part. (24-hours) ug/M^3	Visibility Min.	Visibility No.Hrs. ≤ 6 mi.	Suspended Particulate (24-hours) ug/M^3
August												
30	N	N	1677	186				72		6	3	79
31	S	P	115	6775			21					49
September												
1	P	P					37	71	61			51
2	N	N	2768	1294			52	36	58	5	1	65
3	S	S	114	1063			39		59			33
4	S	S		297					35			30
5	S	S						23				
6	S	S	90					15				27
7	P	P	187									14
8	N	N	1457	508					56			32
9	P	P					62		76			46
10	N	N	2990	446	6	1		136	173	4	1	71
11	P	N	1496				83		151			68
12	P	P	367									94
13	N	N	2115	65								65
14	S	S	944	13767			67	121	115			64
15	N	P	1954	471	4	9	177	111	125	3	16	126
16	P	P			4	9	87	65		5	7	
17	P	S	2187	4155			16	25	157			
18	S	S	224	1408			15	23	95			
19	S	S	65	1433				19				
20	P	P						56				
21	P	P	20				31	32	34			
22	P	P						52	66			24
23	N	N	928	71			26	97	47			50
24	N	N	1258	75	3	1		121	139			42
25	N	N	1074	115			91	112	117			84
26	P	P						**122**				**58**

Table V, cont'd

SUMMARY - 1970 FIELD BURNING SEASON

DAY	CLASS		ACRES BURNED		EUGENE AIR QUALITY					SALEM AIR QUALITY		
					Airport			Commerce Bldg.	City Hall			
	AM	PM	North Valley	South Valley	Visibility Min.	Visibility No.Hrs. ≤ 6 mi.	Suspended Particulate (24-hours) ug/M^3	Suspnd. Part. (24-hours) ug/M^3	Suspnd.Part. (24-hours) ug/M^3	Visibility Min.	Visibility No.Hrs. ≤ 6 mi.	Suspended Particulate (24-hours) ug/M^3
September												
27	P	P										79
28	P	P	55		6	1	110		210			124
29	P	P					105		164			126
30	P	P			4	12	115			1½	12	185
October												
1	P	P						197				

heavy burning in the South Valley. On August 31, Forestry requested that burning in the South Valley be prohibited so that its lookouts and aircraft spotters could detect sleeper fires ignited in the Cascades by the previous night's lightning storm. On August 5, the day after 17,000 acres were fired in the South Valley under southerly winds, smoke complaints came from as far away as Hood River.

Caution must be used in interpreting the data on visibility in regard to field burning, since not all seasons begin or end at the same time. Although mid-July to late September is the most typical season, wide variations due to weather conditions may occur. In 1968, for example, record rains prevented burning from really getting underway until late in August and extended the season through October. Normally, as in 1969 and 1970, field burning is substantially completed by October 1 and slash burning is the major seasonal source during that month. June is generally a month of very little seasonal open burning.

In late September and early October of 1970, the Valley experienced a week of severe visibility-reducing air pollution. Field burning had been prohibited for three days before the episode began, and remained prohibited throughout the episode. Since visibilities were high on the days of field burning prohibition just before the episode occurred, field burning should not be considered a contributor to smokiness during that episode.

Other Air Quality Measurements. In order to more closely monitor atmospheric particulate loading during the field burning season, the Department provided for daily high volume samples of suspended particulate to be taken at Salem (Mid-Willamette Valley Air Pollution Authority headquarters building) and Eugene (Eugene Airport, Commerce Building and City Hall). A combination of Regional and Department equipment and personnel was used to obtain the samples, which were analyzed in the Department's laboratory. The sampling results, along with visibility and acreage data, are presented in Table V.

Some facts must be kept in mind when examining and evaluating the data in Table V. First, the fraction of particles suspended in the air which accounts for the visible light-scattering effect (reduced visibility) may comprise a very small fraction of the total weight of all suspended particulates. Thus, as has been mentioned in previous Department reports, suspended particulate results may not necessarily correlate with visibility. Second, the suspended particulate sample is a 24-hour integrated average from midnight to midnight, and the period of field fire smokiness may comprise only a few hours of the total sample period.

The suspended particulate sampling results are summarized in Table IV and compared with the applicable state standard for the period during which field burning was conducted. The standard was not exceeded at the Eugene airport or Salem, but was violated at both Eugene downtown sites during August and September. With few exceptions, the days on which concentrations of 100 micrograms per cubic meter (not to be exceeded on more than 15% of the days in a month) were exceeded in Eugene were Class N days, on which general burning was permitted in the North Valley with only priority area burning allowed in the South.

Table VI

1970 FIELD BURNING SEASON SUSPENDED PARTICULATE RESULTS
COMPARED WITH STATE MONTHLY STANDARD*

	7-15 to 7-31	8-1 to 8-31	9-1 to 9-26
Eugene Airport			
Number Samples	10	15	13
Number > 100 ug/m^3	0	0	1
Percent > 100 ug/m^3	0	0	8%
Eugene Commerce			
Number Samples	12	9**	18
Number > 100 ug/m^3	1	1	6
Percent > 100 ug/m^3	8%	11%**	50%
Eugene City Hall			
Number Samples	12	17	17
Number > 100 ug/m^3	2	7	8
Percent > 100 ug/m^3	17%	41%	47%
Salem			
Number Samples	13	27	19
Number > 100 ug/m^3	1	0	1
Percent > 100 ug/m^3	8%	0	5%

**Commerce Building site not in operation during period when highest values measured at City Hall.

*The Oregon ambient air quality standard for suspended particulate matter specifies that a level of 100 micrograms per cubic meter (100 ug/m^3) shall not be exceeded on more than 15% of the samples taken during any one calendar month.

The difference in results between Eugene airport and downtown prompts the following observations:

1. The effects of field burning smoke are concluded to be more severe in the Eugene core area than at the airport. Aerial observations made during the season confirmed the channeling effect of the Coburg ridge resulting in funneling smoke from fires in the center and on the eastern side of the Valley down into the Eugene-Springfield area. Eugene airport observers often reported visibilities in the east or southeast quandrant were lower than the prevailing visibility.

2. It is therefore concluded that adverse air quality and visibility restrictions probably occurred in the downtown area on days when no such restriction was reported at the airport.

3. While there is no doubt that the non-seasonal sources in the Eugene core area contribute to the higher levels of suspended particulate matter, it is impossible to project what portion of the total for any given day could be attributed to field burning or to local sources.

ANALYSIS OF 1970 SEASON

Available Burning Days. In its first season of application the new schedule allowed sufficient time for accomplishing essentially all required burning in both the north and south portions of the Valley. Days with high pollution potential, high existing air pollution levels or rain accounted for the days during the season which were unavailable for burning. Table VII summarizes the days available for burning, and the number of basic acreage quotas authorized for burning on available days, during the 1970 field burning season.

Problems. There were, of course, problems which arose during the season. Those which affected the overall program operation or which will have an influence on next year's operation are discussed below.

1. North Valley Smoke Into Eugene

   The 1970 season results conclusively show that smoke from North Valley burning, with little or no South Valley burning, can be carried into the Eugene area in concentrations sufficient to significantly affect visibility. Aerial observations revealed that the primary cause of this effect was active burning in the North Valley, primarily in the area east of Salem, under conditions of brisk northerly winds aloft.

   A similar situation occurs at Corvallis when active burning is carried out in Polk County under the same conditions.

2. Priority Area Burning

   Burning in the "priority areas" set up around major cities, highways and

Table VII

BURNING DAYS AVAILABLE AND QUOTAS AUTHORIZED

	July 15-31		August		September		October 1-15		Totals	
	Days	Quotas	Days	Quotas	Days	Quotas	Days	Quotas	Days	Quotas
North Valley	9½	10	12	13	7	12	4	4	32½	39
South Valley	3½	7	6	9	3½	6	2	2	15	24

The quotas were designed such that 33 basic quotas in the North Valley and 22 basic quotas in the South Valley were required to accomplish 100% of the burning of perennial and annual grass seed fields.

airports in the Valley was a problem in the South Valley and resulted in complaints from the Eugene area. The Department of Environmental Quality April 23, 1970, report on field burning stated that 1) if burning in the South Valley under northerly winds exceeded 1500 acres, a visibility reduction at the Eugene airport was likely; and 2) no more than 500 acres of priority area burning in the South Valley was anticipated on any given day. As it turned out, more than 500 acres of such burning was done on more than half of all Class N days, with 1500 acres being exceeded on five occasions. On Class N days, South Valley priority area burning exceeded the total North Valley burning acreage (see Table IV). The excessive acreages burned under priority classification were simply the result of lack of discrimination and communication on the part of the grower - permit agent committees that were to manage this type of burning.

Some South Valley permit agents felt they had too much priority acreage, and consequently allowed priority burning only on the west side of north-south highways and the south side of east-west highways. This approach appears reasonable and will be used in revising priority areas in the South Valley for the 1971 season.

3. Unexpected Weather Changes

Any program designed to operate around weather and weather forecasts must expect the unexpected. The field burning program was no exception in 1970. There were cases of southerly winds not persisting long enough to fully flush the Valley, southerly winds which reversed themselves in mid-morning, and southerly winds at the surface and aloft in the morning, with the surface wind changing to northerly in mid-afternoon. Of these, the problem of southerly winds failing to persist long enough after burning has ended to fully flush the Valley is of the most concern.

4. Silverton Hills Area

The area east of Salem, including the Waldo-Silverton Hills area, is somewhat unique in that two main grass types, fine fescues and bentgrass, account for most of the acreage. The harvest times of these two grass types, and therefore their burning times, are at the opposite ends of the field burning season. The fescues are ready for burning in July, but the bentgrass is not ready for burning until September. The result is a rush of fescue burning in late July, and then only sporadic burning until September when there is another rush of bentgrass burning, along with fescue fields too closely interspersed with bent fields to have been burned earlier. The fescues were easily burned in 1970, but the bentgrass proved to be a problem, since by the time it was ready for active burning many days were Class S or prohibition, and rain had begun regrowth, which increased grower anxiety and compounded the problem. Quotas for burning in this area were released on Class S days to facilitate burnout.

5. Aircraft Hazard

During some of the days of heavy burning in the South Valley, the Eugene Weather Bureau advised light plane pilots to fly well to the west side of the Valley in order to maintain VFR flight conditions.

Evaluation of Seed Council Program. As discussed earlier, the Oregon Seed Council had proposed a program to provide certain services and equipment to aid in the operation of the smoke management plan. The Council carried out much of its proposed program, and the results of that program as viewed by the staff are presented herewith:

1. Field Registration

The Council proposed to register all fields and to map all fields in priority areas. The registration form had three copies: One for the grower, one for the Department of Environmental Quality and one for the Fire District. The Department of Environmental Quality and District copies were to be completed at the District as the fields were confirmed burned, and the Department copy sent in after the end of the season. The action in this regard, as observed by the staff, ranged from complete registration and mapping of every field in the District to spotty registration and no mapping of any kind.

In general, the registration program aided local Fire Districts in getting organized and provided back-up data in establishment of quotas for burning. An error by the Seed Council prevented most of the Department of Environmental Quality forms being completed, so registration was of no help in keeping track of daily acreage burned, and, at season's end, the final data had to be obtained from a variety of sources, such as the Fire District permit books and County Agent offices. However, some Department of Environmental Quality forms were received, primarily from Marion County.

2. Communications

The Council volunteered funds to pay overtime of State Fire Marshal's personnel, which they received for weekend duty, but there were no administrative channels available for input of the funds. Other activities the staff is cognizant of include provisions of a mobile radio-telephone unit for use in communications between the Skywatch aircraft and local permit agents.

3. Provision of Personnel for Local Permit Agencies

The Council helped fund full-time personnel during the field burning season for many permit agencies which heretofore had not been able to provide full-time permit issuing services. Council funds were involved in supporting these people, but the extent of this support is not known by the staff.

4. Provision of Information to Growers - Educational Efforts

The Council attempted to educate and inform growers through newsletters and meetings about the smoke management program and field burning schedule. At the same time, they solicited grower cooperation. The staff feels that through this program at least more growers had an idea of what was to take place and what was expected of them than before.

5. Operation Skywatch

The Council's aerial observation program, dubbed "Operation Skywatch", was very much a success. The Department of Environmental Quality staff meteorologist was along on the majority of flights. Observations from the air confirmed several suspected violations, allowed evaluation of the overall situation in the Valley in a matter of minutes, provided an excellent vantage point for photographic documentation of both good and bad conditions, and allowed rapid communication directly to local permit agents or the State Fire Marshal when changes in the plan for the day were determined advisable. Approximately 10 hours of flying were programmed at the beginning of the season, but almost 30 hours of skywatch operations were logged before the season's end.

DEVELOPMENT OF ALTERNATIVES TO FIELD BURNING

Mobile Field Incinerator. Last season saw field testing of the first mobile incinerator for grass fields. Many modifications were made to the unit during the test series, with the final device being totally different, and much simpler, than the original unit which was too bulky, too slow and too complicated. At present, plans call for field testing of the new machine throughout the 1971 season. The machine is pulled by a standard farm tractor and should be capable of sanitizing the field more uniformly than open field burning. Initial emission testing indicates that the incinerator shows promise of effectively solving the major air quality problems associated with open field burning. It has been reported that the field incinerator should be available in significant numbers by the 1974 burning season.

Straw Removal and Utilization. Beneficial utilization of the over one million tons of straw produced annually in the Vally appears to be a feasible long-term goal. Research in progress at Oregon State University is aimed at answering the questions of whether straw may be a feasible raw material, from an economic and technological standpoint, for use in the manufacture of such products as animal feed, pulp and paper, and hardboard. The problem receiving the most attention is that of making the straw available to industrial users in a compact, handleable, storable form. Economic studies of the various methods of removing, densifying and handling straw, relative to specific use applications, are also being conducted.

CONCLUSIONS AND RECOMMENDATIONS

Summary of Conclusions. Previous sections of this report support the following conclusions:

1. The 1970 Department of Environmental Quality approach to managing field burning smoke succeeded in reducing, but not eliminating, the adverse impact of field burning on the Eugene metropolitan area.

2. The decrease of smokiness in the Eugene area was accompanied by an increase in smokiness in the area from Lebanon to Salem, and east into the recreation areas of the Cascades.

3. Eugene air quality during August and September, whether from field burning alone or in combination with other local sources, was unacceptable in that state ambient air standards for suspended particulate matter were exceeded. Intrusions of field fire smoke in the Eugene area were attributed to one or both of two causes:

   a. Excessive and indiscriminant burning in South Valley priority areas.

   b. Burning in certain North Valley areas under high wind conditions.

4. On days of heavy burning the South Valley air safety for light planes was a concern in that area.

5. The generally poor air quality throughout the Valley during the period September 28 - October 4 cannot be directly attributed to field burning.

6. The programs of the Oregon Seed Council aided the overall effort to minimize the effects of field burning on Valley residents. "Operation Skywatch" was the most important and useful aspect to the staff, followed by the registration and reporting programs.

Recommendations for 1971. The following short-term recommendations for the 1971 field burning season are primarily intended to reduce the impact of field burning on population centers throughout the Valley by modifications in the Environmental Quality Commission regulation or in the day-to-day operation of the program. They are based on the assumption that the public policy of the state, as reflected by Acts of the Legislature, will continue to be that burning of annual and perennial grass seed fields is a permissible activity until alternate practices are developed. Unfortunately, the staff knows of no way to alleviate the impact of heavy South Valley burning on the recreation areas of the Cascades and on air safety for light planes.

The recommendations and justifications for them are as follows:

1. Retain 1970 acreage quotas for 1971. The Environmental Quality Commission regulation adopted in 1970 included acreage quotas for 1971 lower than 1970 quotas, based on the expectation that widespread testing of mobile field incinerators would begin during 1971. The expectation did not materialize, and the incinerator development is about one year behind the schedule projected by the 1970 Department of Environmental Quality staff report.

2. Modify the field burning regulations to limit the daily amount of priority area burning that can be accomplished in each South Valley Fire District, so that the daily total for the South Valley cannot exceed 1000 acres. This change should minimize the chances of excessive smoke from South Valley priority areas reaching Eugene.

3. Adjust priority areas and conditions for priority area burning in the vicinity of Salem, Albany and Lebanon to minimize direct smoke problems in those areas.

4. Regulate Benton-Polk and Waldo-Silverton Hills burning to minimize smoke problems in Corvallis and Eugene, respectively, under strong north wind conditions.

5. Allow additional quotas in the Waldo-Silverton Hills area under southwest winds to facilitate completion of late-season bentgrass burning.

Recommendation for Phasing-out Field Burning. The Department staff remains committed to the goal adopted in 1970 of phasing-out open field burning as it is presently practiced. It is recognized, however, that present state law almost certainly denies the Environmental Quality Commission the legal authority to phase-out or ban the practice. The following recommendations, therefore, are offered by the staff for consideration by the Legislature, the Commission and the General Public.

1. Based on research and development to date, the mobile incinerator being developed at Oregon State University offers a real and practicable alternative to open field burning and should be fully supported as a short-term interim solution to the problem. Additional research funds, economic incentives and other uses of the State's financial resources are suggested as means of support.

2. Straw removal and utilization should receive continuing support as the most desirable long-term solution.

3. Whether by specific Act of the Legislature or by regulation of the Environmental Quality Commission adopted pursuant to (presently lacking) adequate legal authority, open field burning should be

phased-out according to a timetable consistent with projected development of a mobile field incinerator. The following modification of the phase-out schedule adopted by the Environmental Quality Commission in 1970 is suggested as being reasonable:

Year	Burning Allowed and Corresponding Incinerator Development
1972	Annual and perennial grass seed field burned with nominal reduction in daily acreage quotas to account for large-scale testing of field incinerators throughout the Valley, especially for annual ryegrass in South Valley.
1973	Perennial grass seed fields only allowed, with further quota reductions to account for widespread usage of incinerators. Annual ryegrass either treated with incinerator or other alternative practice, thus reducing total residue tonnage subject to open burning by over 50%.
1974	All open field burning prohibited.

APPENDIX A

DEPARTMENT OF ENVIRONMENTAL QUALITY
Chapter 340
Subdivision 6
Agricultural Operations
FIELD BURNING

(ED. NOTE: Unless otherwise specified sections 26-005 through 26-030 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Environmental Quality Commission August 20, 1969, and filed with the Secretary of State August 26, 1969, as Administrative Order SA 46, effective August 20, 1969. Replaces SA 43, SA 44 and SA 45. Renumbered from section 28-005 through 28-035.)

26-005 BURNING PREREQUISITES. That all straw, strubble and residue shall be removed from a field prior to its being burned by the use of propane or liquid petroleum gas methods and a permit shall be obtained from the responsible permit-issuing agency prior to the utilization thereof which shall insure nearly complete combustion.

26-010 PERMITS. (1) That in all cases where a permit for propane or liquid petroleum gas burning is requested, the office of the State Fire Marshal, as a condition precedent to the issuance of such permit shall inspect and approve all burning equipment and fuel prior to its utilization and shall prohibit their use in the event combustion will not be nearly complete.

(2) That all permits issued subsequent to this order shall be in writing and during the burning operations shall be maintained at the burning site by the person granted said permit for inspection by appropriate authorities.

(3) No permit-issuing agency or other person authorized to grant permits shall give oral permission to burn fields and future permits shall only be issued in writing, upon a day-to-day basis and shall be issued only upon the schedule for burning adopted by the Department of Environmental Quality. At all times proper and accurate records of the transaction and copies of permits granted shall be maintained for inspection by the proper authority.

26-015 FIELD BURNING SCHEDULE. This schedule has been developed pursuant to 1969 Legislation for application in the Willamette Valley counties of Multnomah, Clackamas, Washington, Linn, Yamhill, Marion, Polk, Benton and Lane during the summer agriculture burning season, July through October. Other schedules will be developed for this and other areas as necessary.

At the Statute directs, certain types of atmospheric conditions have been classified "marginal" conditions. The specified type and extent of burning allowed has been established.

26-018 DEFINITION: As used in this schedule:

(1) "Northerly winds" means winds coming from directions in the northern half of the compass.

(2) "Southerly winds" means winds coming from directions in the southern half of the compass.

(3) "South Valley" means all fire permit issuing agencies in Benton, Linn or Lane Counties, with the exception of the Linn County portion of the Stayton Rural Fire Protection District.

(4) "North Valley" means all other fire permit issuing agencies in the Willamette Valley.

(5) "Priority Areas" means the following areas in the Willamette Valley:

(a) Areas in or within three miles of the city limits of incorporated cities of populations of 10,000 or greater.

(b) Areas within one mile of airports serving regularly scheduled airline flights.

(c) Areas within ¼ mile of U.S. Interstate Highway 5, U.S. Highway 99W, U.S. Highway 99E, U.S. Highway 99 and State Highway 34.

(d) Areas in Lane County south of the line formed by U.S. Highway 126 and State Highway 126.

Hist: Filed 6-9-70 at DEQ 13

26-020 SCHEDULE OF METEROLOGICAL CONDITIONS.

Class of Day	Meteorological Conditions
Prohibition:	Forecast of northerly winds and maximum mixing depth less than or equal to 3500 feet mean sea level (MSL).
Marginal-Class S:	Forecast southerly winds.
Marginal-Class N:	Forecast northerly winds and maximum mixing depth greater than 3500 MSL.

Hist: Amended 6-9-70 by DEQ 13

26-030 SCHEDULE OF EXTENT AND TYPE OF BURNING. (1) Burning Hours. Burning may begin at 9:30 a.m. PDT, and all fires must be out by sunset.

(2) Priority for Burning. On any marginal day, priorities for burning shall follow those set forth in ORS 449.840, Section 2, which give perennial grass

seed fields first priority and annual grass seed fields second priority. Grain fields and other burning shall not be permitted.

(3) Allowed Burning.

(a) Prohibition: Under prohibition conditions no burning shall be allowed except where a fuel such as propane is used such that combustion is essentially complete.

(b) Marginal Class S: North Valley: Burning in priority areas only.

South Valley: One or more basic quotas as authorized by the Department in accordance with Schedule "A" attached.

Priority Areas: Location, timing and amount of burning shall be determined by the local permit authority, provided that no field shall be burned on the upwind side of any city, highway or airport within priority areas. No weekend burning.

(c) Marginal Class N: North Valley: One or more basic quotas as authorized by the Department in accordance with Schedule "A".

South Valley: Burning in priority areas only.

Priority Areas: Location, timing and amount of burning shall be determined by the local permit authority, provided that no field shall be burned on the upwind side of any city, highway or airport within priority areas. No weekend burning.

(4) Further Provisions.

(a) Permits shall be issued on a day-to-day basis and each permittee shall have a current valid written permit for that day issued in accordance with this schedule.

(b) The staff of the Department of Environmental Quality may authorize burning in excess of that permitted by the schedule where conditions in their judgment warrant it, or, by express written permit, burning on an experimental basis, and may also, or a fire district by fire district basis, issue limitations more restrictive than those contained in the schedule, when in their judgment it is necessary to attain air quality.

(c) In no instance shall the total acreage of permits issued by each permit issuing agency exceed that of the schedule for the marginal day, except as provided for 50-acre quotas as follows: When the established daily acreage quota is 50 acres or less, a permit may be issued to include all the acreage in one field providing that field does not exceed 100 acres and provided further that no other permit is issued for that day. For those districts with a 50-acre quota, permits for more than 50 acres shall not be issued on two consecutive days.

(d) All Willamette Valley fire permit issuing agencies not specifically named in Schedule "A", shall follow a 50-acre daily limitation.

(e) The staff of the Department of Environmental Quality may designate additional areas as Priority Areas, and may adjust the basic acreage quotas of any permit jurisdiction, where conditions in their judgment warrant such action.

Hist: Amended 6-9-70 by DEQ 13

26-035 Repealed 6-9-70 by DEQ 13.

Schedule "A"

Schedule of Allowed Daily Burning Quotas

NORTH VALLEY

County and District	Basic Acreage Quotas for Specified Years			
	1970	1971	1972	1973
Clackamas				
Monitor	100	75	50	0
All Other Permit Issuing Agencies	50	50	50	0
Marion				
Aumsville	100	100	75	0
Marion #1 (Fourcorners, Brooks, Keizer)	100	75	50	0
Jefferson	100	100	75	0
St. Paul	100	75	50	0
Silverton	225	175	150	0
Stayton	200	150	125	0
Sublimity	200	150	125	0
Woodburn	75	75	50	0
All Other Permit Issuing Agencies	50	50	50	0
Polk				
Southeast Polk	225	175	150	0
Southwest Polk	100	100	75	0
Washington				
All Permit Issuing Agencies	50	50	50	0
Yamhill				
McMinnville	75	50	50	0
All Other Permit Issuing Agencies	50	50	50	0

SOUTH VALLEY

County and District	Basic Acreage Quotas for Specified Years			
	1970	1971	1972	1973
Benton				
County Jurisdiction	300	250	150	0
Corvallis	225	200	125	0
Monroe	275	250	150	0
Philomath	100	75	50	0
North Albany) Palestine) Included in Albany Quota				
All Other Permit Issuing Agencies	50	50	50	0
Lane				
Alvadore	175	150	100	0
Coburg	150	150	100	0
Creswell	100	75	50	0
Junction City	425	375	225	0
All Other Permit Issuing Agencies	50	50	50	0
Linn				
Albany	875	775	500	0
Brownsville	750	675	425	0
Halsey-Shedd	1250	1100	695	0
Harrisburg	1275	1150	725	0
Lebanon	950	850	525	0
Scio	225	200	125	0
Tangent	600	550	350	0
All Other Permit Issuing Agencies	50	50	50	0

State Fire Marshall Submitted Comments

NOTICE OF INTENDED ACTION

AND OF

PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Department of Environmental Quality intends to present to the Environmental Quality Commission, for adoption, certain amendments to OAR Chapter 340, Division 2, Subdivision 6, Field Burning. The proposed amendments establish new regulations for summer field burning in the Willamette Valley. In conjunction with the adoption of the new regulations, it is proposed that Sections 26-005 through 26-140 of OAR Chapter 340, Division 2, Subdivision 6, Field Burning, be repealed.

Copies of the proposed amendments may be obtained upon request from:

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

Telephone: 229-5630

Any person desiring to express written views or data on this matter may do so by forwarding them for receipt at the above stated address before 5:00 p.m., June 2, 1971, or may appear and be heard orally or submit any written data or views at a public hearing regarding the adoption of the proposed regulations to be held at Sunriver Lodge, Sunriver, Oregon on June 4, 1971 beginning at 11:00 a.m. PDT. The Presiding Officer at the Hearing will be Mr. B. A. McPhillips, Chairman, Environmental Quality Commission, or his authorized representative.

Dated this 12th day of May, 1971.

Kenneth H. Spies

Kenneth H. Spies, Director
Department of Environmental Quality

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 : May 4, 1971 for Meeting of May 7, 1971

SUBJECT: REQUEST FOR AUTHORIZATION TO SCHEDULE PUBLIC HEARING

Possible Legislative action on field burning notwithstanding, changes must be made in the present summer and winter burning regulations, primarily as a result of the OSU field incinerator programs lack of sufficient progress to justify holding to our presently-listed 1971 acreage quotas, and secondarily to rewrite those sections of the regulation affected by last summer's court decision. We will be recommending retaining our 1970 quota basis, increasing the quotas for Yamhill, Clackamas and Washington Counties and adjusting priority area designations. The revisions to the language amount to a general cleaning-up of the regulation. Should Senate Bill 38 pass the legislature, we will be proposing some additional provisions, primarily regarding field registration and data reporting.

We therefore request authorization to schedule a public hearing in early June to consider amendments to the existing field burning regulations, and we suggest that July 15 be set as a deadline for having the regulations adopted and filed with the Secretary of State.

It should be noted that the proposed regulations attached are a draft, and have not had the benefit of full review by our legal counsel.

DRAFT OF PROPOSED

REGULATIONS FOR AGRICULTURAL OPEN BURNING

Sections 26-005 through 26-140 of OAR Chapter 340, Division 2, Subdivision 6 are repealed, and the following is adopted in lieu thereof.

I. DEFINITIONS: As used in these regulations unless otherwise required by context:

1. Burning seasons:

   a) "Summer Burning Season" means the four month period from July 1 through October 31.

   b) "Winter Burning Season" means the eight month period from November 1 through June 30.

2. "Department" means the Department of Environmental Quality.

3. "Marginal Conditions" means conditions defined in ORS 449.840 (1) under which permits for agricultural open burning may be issued in accordance with these regulations.

4. "Northerly Winds" means winds coming from directions in the north half of the compass, at the surface and aloft.

5. "Priority Areas" means the following areas in the Willamette Valley:

   a) Areas in or within 3 miles of the city limits of incorporated cities having populations of 10,000 or greater.

   b) Areas within 1 mile of airports serving regularly scheduled airline flights.

   c) Areas in Lane County south of the line formed by U. S. Highway 126 and Oregon Highway 126.

   d) Areas in or within 3 miles of the city limits of the City of Lebanon.

   e) Areas on the west side of and within 1/4 mile of these highways; U. S. Interstate 5, 99, 99E and 99W. Areas on the south side of and within 1/4 mile of U. S. Highway 20 between Albany and Lebanon, Oregon Highway 34 between Lebanon and Corvallis, and Oregon Highway 228 from its junction south of Brownsville to its crossing at the community of Tulsa.

6. "Prohibition Conditions" means atmospheric conditions under which all agricultural open burning is prohibited (except where an auxiliary fuel is used such that combustion is nearly complete, or a mobile field incinerator approved by the Department is used).

5/3/71

7. "Southerly Winds" means winds coming from directions in the south half of the compass, at the surface and aloft.

8. Willamette Valley Areas:

   a) "Willamette Valley" means the areas of Benton, Clackamas, Lane, Linn, Marion, Polk, Washington and Yamhill Counties lying between the crest of the Coast Range and the crest of the Cascade Mountains.

   b) "South Valley" means the areas of jurisdiction of all fire permit issuing agents or agencies in the Willamette Valley portions of the Counties of Benton, Lane and Linn.

   c) "North Valley" means the areas of jurisdiction of all other fire permit issuing agents or agencies in the Willamette Valley.

II. GENERAL PROVISIONS:

1. The following provisions apply during both the summer and winter burning seasons in the Willamette Valley unless otherwise specifically noted.

2. Priority for Burning. On any marginal day, priorities for agricultural open burning shall follow those set forth in ORS 449.840 (2) which give perennial grass seed fields used for grass seed production first priority, annual grass seed fields used for grass seed production second priority, grain fields third priority and all other burning fourth priority.

3. Permits. (1) In all cases where a permit for burning with liquid or gaseous auxiliary fuel is requested the State Fire Marshal or his deputy, as a condition precedent to the issuance of such permit, shall inspect and approve all burning equipment prior to its utilization and shall prohibit its use in the event such inspection reveals that combustion of the auxiliary fuel will not be nearly complete.

   (2) All permits issued pursuant to ORS 478.960 and 476.380 shall be issued in writing, on a day-to-day basis, and during the burning operations, a copy shall be maintained at the burning site by the person granted said permit for inspection by appropriate authorities.

   (3) The staff of the Department of Environmental Quality may authorize burning on an experimental basis, and may also, on a fire district by fire district basis, issue limitations more restrictive than those contained in these regulations when in their judgment it is necessary to attain air quality.

   (4) No permit-issuing agency or other person authorized to grant agricultural open burning permits shall give oral permission to conduct burning and all permits shall be issued in writing, on a day-to-day basis and shall be issued in accordance with the limits of extent, time, and type of burning set forth in these regulations.

(5) At all times proper and accurate records of permit transactions and copies of all permits granted shall be maintained by each permit-issuing agency or person authorized to grant permits, for inspection by the proper authority. No permit transaction shall be deemed completed until confirmation of actual date, time, and amount of burning conducted under said permit, and no person shall be granted additional permits until confirmation of outstanding permits is received. Such confirmation shall be on a day-to-day basis.

(6) Permit agencies or persons authorized to grant permits shall submit to the Department of Environmental Quality, on forms provided, weekly summaries of field burning permit data, during the period July 1 - October 15.

(7) All debris, cutting and prunings shall be dry, cleanly stacked and free of dirt and green material prior to being burned, to insure as nearly complete combustion as possible.

(8) No substance or material which normally emits dense smoke or obnoxious odors may be used for auxiliary fuel in the igniting of debris, cutting or prunings.

(9) Use of mobile field incinerators approved by the Department shall require a permit, and permit agencies or agents shall keep up-to-date records of all acreages burned by such incinerators. Acres burned on any day by mobile field incinerators approved by the Department shall not be applied to open field burning acreage quotas, and such incinerators may be operated under either marginal or prohibition conditions.

III. SUMMER BURNING SEASON REGULATIONS:

1) Classification of Atmospheric Conditions. All days will be classified as marginal or prohibition days under the following criteria:

   a) Marginal Class N. conditions: Forecast northerly winds and maximum mixing depth greater than 3500 feet.

   b) Marginal Class S conditions: Forecast southerly winds.

   c) Prohibition conditions: Forecast northerly winds and maximum mixing depth 3500 feet or less.

2) Quotas. (a) Except as provided in this subsection, the total acreage of permits for open field burning shall not exceed the amount authorized by the Department for each marginal day. Daily authorizations of acreages shall be issued in terms of basic quotas or priority area quotas as listed in Table I and defined as follows:

(1) The basic quota represents the number of acres to be allowed throughout a permit jurisdiction, including fields located in priority areas, on a marginal day on which general burning is allowed in that jurisdiction.

(2) The priority area quota represents the number of acres allowed within the priority areas of a permit jurisdiction on a marginal day when only priority area burning is allowed in that jurisdiction.

(b) All Willamette Valley permit agencies or agents not specifically named in Table I shall have a basic quota and priority area quota of 50 acres.

(c) In no instance shall the total acreage of permits issued by any permit issuing agency or agent exceed that allowed by the Department for the marginal day, except as provided for 50 acre quotas as follows: When the established daily acreage quota is 50 acres or less, a permit may be issued to include all the acreage in one field providing that field does not exceed 100 acres and provided further that no other permit is issued for that day. For those districts with a 50 acre quota, permits for more than 50 acres shall not be issued on 2 consecutive days.

(d) The staff of the Department of Environmental Quality may designate additional areas as Priority Areas, and may adjust the basic acreage quotas or priority area quotas of any permit jurisdiction, where conditions in their judgment warrant such action.

TABLE I

FIELD BURNING ACREAGE QUOTAS

NORTH VALLEY AREAS

County	Basic Quota (Acres)	Priority Area Quota (Acres)
Clackamas		
Estacada	100	0
Monitor	100	0
All other permit issuing agencies	50	50
Marion:		
Aumsville	75	0
Marion #1 (Fourcorners, Brooks, Keizer)	75	50
Jefferson	175	50
St. Paul	100	50
Silverton	275	0
Stayton	150	0
Sublimity	250	0
Woodburn	100	50
All other permit issuing agencies	50	50

TABLE I (Continued)

County	Basic Quota (Acres)	Priority Area Quota (Acres)
Polk:		
Southeast Polk	225	50
Southwest Polk	200	50
Washington:		
All permit issuing agencies	50	50
Yamhill:		
McMinnville	75	50
All other permit issuing agencies	50	50
SOUTH VALLEY AREAS		
Benton:		
County jurisdiction	400	50
State Forestry jurisdiction	125	0
Corvallis	275	50
Monroe	275	50
Philomath	150	0
North Albany, Palestine) included in Albany quota		
All other permit issuing agencies	50	50
Lane:		
Alvadore	125	0
Coburg	100	50
Creswell	75	50
Irving	200	100
Junction City	250	50
Unprotected	110	50
All other permit issuing agencies	50	50
Linn:		
Albany	650	125
Brownsville	775	50
Halsey-Shedd	2150	150
Harrisburg	1475	100
Lebanon	950	50
Scio	150	0
Tangent	1050	50
All other permit issuing agencies	50	50

3) Burning Hours. Burning may begin at 9:30 a.m. PDT, and all fires must be out by one hour after sunset. Burning hours may be reduced by the fire chief or his deputy when necessary to protect from danger by fire.

4) Extent and Type of Burning. a) Prohibition. Under prohibition conditions no permits for agricultural open burning shall be issued and no burning shall be conducted, except where an auxiliary liquid or gaseous fuel is used such that combustion is essentially complete, or a mobile field incinerator approved by the Department is used.

b) Marginal Class N Conditions. Unless specifically authorized by the Department, on days classified as Marginal Class N burning shall be limited to the following:

(1) North Valley: one basic quota may be issued in accordance with Table I.

(2) South Valley: one priority area quota for priority area burning may be issued in accordance with Table I.

c) Marginal Class S Conditions. Unless specifically authorized by the Department on days classified as Marginal Class S conditions, burning shall be limited to the following:

(1) North Valley: One basic quota may be issued in accordance with Table I in the following permit jurisdictions: Aumsville, Drakes Crossing, Marion County District 1, Silverton, Stayton, Sublimity, and the Marion County portion of the Clackamas-Marion Forest Protection District. One priority area quota may be issued in accordance with Table I for priority area burning in all other North Valley jurisdictions.

(2) South Valley: One basic quota may be issued in accordance with Table I.

d) Special Restriction on Priority Area Burning. No field may be burned on the upwind side of any city, airport, or highway within a priority area.

IV. WINTER BURNING SEASON REGULATIONS:

CLASSIFICATION OF ATMOSPHERIC CONDITIONS:

(1) Atmospheric conditions resulting in computed air pollution index values in the high range, values of 90 or greater, shall constitute prohibition conditions.

(2) Atmospheric conditions resulting in computed air pollution index values in the low and moderate ranges, values less than 90, shall constitute marginal conditions.

EXTENT AND TYPE OF BURNING:

(1) Burning Hours. Burning hours for all types of burning shall be from 9:00 a.m. until 4:00 p.m., but may be reduced when deemed necessary by the fire chief or his deputy. Burning hours for stumps may be increased if found necessary to do so by the permit issuing agency. All materials for burning shall be prepared and the operation conducted, subject to local fire protection regulations, to insure that it will be completed during the allotted time.

(2) Under prohibition conditions no permits for agricultural open burning may be issued and no burning may be conducted, except where an auxiliary liquid or gaseous fuel is used such that combustion is essentially complete, or a mobile field incinerator approved by the Department is used.

(3) Permits for agricultural open burning may be issued on each marginal day in each permit jurisdiction in the Willamette Valley following the priorities set forth in ORS 449.840 (2).

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 : April 27, 1971 for Meeting of May 7, 1971

SUBJECT: COLUMBIA WILLAMETTE AIR POLLUTION AUTHORITY VARIANCES No. 33 through 36.

At its regular meeting of March 19, 1971, the Board of Directors of Columbia-Willamette Air Pollution Authority approved four variances to its rules. Staff evaluation and comment on the four variances is as follows:

Variance No. 33 - Variance for open burning of backyard rubbish:

Considerable public notice has been given to this variance. In general, it reflects the uncertainty in this area's solid waste disposal program, particularly as it relates to open burning of these kinds of materials.

Legislation (SB 277) that has passed the Senate and is presently before the House Environmental Affairs Committee may change the approach that Columbia-Willamette Air Pollution Authority and the other regions are taking to the regulation of residental open burning.

CWAPA reevaluate Open burning stds

At this time it is difficult to evaluate the appropriateness of the variance authorized by the Columbia-Willamette Board for a 45 day period ending May 31.

Variance No. 34 - Pleasant Valley Golf Course (Clackamas):

Pleasant Valley Golf course was given a variance for disposal of various land clearing debris, with the materials subject to burning being limited to that for which there is no alternative. The condition of the variance specified that the CWAPA staff and the staff of the Clackamas County solid waste division would jointly determine what materials would have to be burned. Subsequent discussions with the CWAPA staff indicates that probably very little of the material will be burned inasmuch as a commercial timber operator is being contracted with for the removal of the large trees and logs. In the opinion of the staff this variance is property conditioned and is probably sufficiently protective of air quality.

Variance No. 35 - Wasteco Corporation (Tualatin);

The variance given to Wasteco for operation of an experimental controlled atmosphere incinerator is justified on the basis that testing of this new equipment may result in eventual benefits to the overall air quality control program. The variance contains stringent provisions regarding operating hours and notification of operating periods and is considered acceptable by the staff.

Variance No. 36 - Land clearing debris (general variance from rules):

Variance No. 36 provides for a 6 months delay in expanding the area within which open burning of land clearing debris is prohibited. Under existing CWAPA rules, certain rural areas are to fall under a ban on land clearing debris burning beginning July 1, 1971. Due to a lag in the development of alternate methods, solid waste disposal problems related to disposal of this type of debris have arisen in rural areas. The 6 month period of the variance will allow the staff of CWAPA to evaluate the overall solid waste burning problem for land clearing debris, and either propose a rules change or enforce the rule as it now stands.

CONCLUSION:

Based on the information provided by Columbia Willamette Air Pollution Authority, it appears to the staff that these 4 variances are properly granted. It is recommended that the variances be accepted and filed.

To: HMP

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

31 March 1971

Environmental Quality Commission
1400 Southwest 5th Avenue
Portland, Oregon 97201

Attention: Mr. K. H. Spies, Director
Department of Environmental Quality

Gentlemen:

During its regular meeting, 19 March 1971, the Board of Directors considered a request from Barney Lucas and Pleasant Valley Golf Course for a variance to open burn certain brush, tree materials and debris therefrom.

After careful consideration of the facts and requirements of ORS 449.810, the Board granted the variance for the period between 1 September 1971 and 1 June 1972, subject to certain conditions.

Enclosed is a copy of the variance with findings and order.

Very truly yours,

Emory J. Crofoot
General Counsel

EJC:jl
Enclosures

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232

IN THE MATTER OF	)	VARIANCE
	)	No. 34
VARIANCE TO:	)	INCLUDING
	)	
BARNEY LUCAS and PLEASANT VALLEY GOLF COURSE	)	FINDINGS AND ORDER

FINDINGS

I

By letter of 20 January 1971 and by subsequent verbal statements by Barney Lucas of Pleasant Valley Golf Course it was represented to Columbia-Willamette Air Pollution Authority that several large fir trees on and near the said golf course were diseased and dying and because of this and for other reasons said trees must be felled.

II

By the letter of 28 January 1971 and by the subsequent verbal statements the said Barney Lucas petitioned for a Variance from the provisions of Rule 6, Columbia-Willamette Air Pollution Authority Rules to open burn three existing brush piles and the trees to be felled along with the debris therefrom.

III

An inspection of the Pleasant Valley Golf Course by staff members of this Agency accompanied by Clackamas County Solid Waste Division staff personnel and Barney Lucas verified the existing brush piles and the diseased fir trees which must be removed but that in all probability most of the brush, the trees to be felled and the debris therefrom could be disposed of by methods other than open burning.

IV

That a Variance should be granted for the open burning of any brush, tree materials or debris that cannot be disposed of by methods other than open burning.

ORDER

NOW THEREFORE it is hereby ordered that a VARIANCE be granted from Rule 6, Section 6.2, Columbia-Willamette Air Pollution Authority Rules to Barney Lucas, Pleasant Valley Golf Course situated on Tax Lot 1, Section 31, Township 1, South Range 3E W.M., Clackamas County to open burn certain brush, tree materials and debris therefrom on the above described property said open burning to be started and completed between 1 September 1971 and 1 June 1972 subject to the following conditions.

1. Material to be burned shall be restricted to that material for which there is no alternate means of disposal available as determined jointly by the Columbia-Willamette Air Pollution Authority staff and the Clackamas County Solid Waste Division staff.

2. The time of burning to conform to the requirements of this Authority and the requirements of the Happy Valley Rural Fire Protection District No. 65.

Entered at Portland, Oregon the 19th day of March 1971.

Chairman, Board of Directors

3a.

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

18 February 1971

MEMORANDUM

TO: Board of Directors

FROM: R. E. Hatchard, Program Director

SUBJECT: Variance Request - Pleasant Valley Golf Course
Route 1, Box 291, Clackamas

Gentlemen:

Attached is a request for a variance from Section 6.2 of the Columbia-Willamette Air Pollution Authority Rules pertaining to open burning. In addition, is a sketch by the staff of the site and a copy of our letter to Pleasant Valley Golf Course inviting Mr. Lucas or a representative to attend this Board meeting and, if desired, make a statement in support of the request.

Recommendation:

It is our staff recommendation the variance request be denied.

Reasons for Denial:

In accordance with variance considerations as outlined in Rule 9 and based upon our staff inspection of the property on 28 January 1971:

1. No special circumstance exists which would render compliance unreasonable, burdensome or impractical due to a special physical condition. There is access to the material for the equipment required.

2. The effect of the air pollution would not be minimal in comparison with the effect of the abatement. Our staff estimates there is approximately 64 cubic yards of material consisting of logs, branches and stumps presently ready for burning in addition to other material to be burned later. It has been our staff experience that such material will frequently burn and smolder for a number of days creating dense smoke.

3. Alternate methods are available. Attached is a copy of a letter from the Solid Waste Division of the Clackamas County Health Department stating that some of the material can be disposed of on site. In addition, there is a disposal site approximately 2-3 miles away where such material can be taken for disposal. Consequently, it is the staff opinion that some of the material could be disposed on site if desired, and/or removed to the nearby disposal site.

4. In considering the equities involved, open burning of commercial, industrial, governmental and landclearing debris has been prohibited in this area since 1 July 1969, and domestic or residential burning is presently prohibited in the same area.

Respectfully submitted,

R. E. Hatchard
Program Director

REH:sm
Attachments

Pleasant Valley Golf Course

ROUTE 1, BOX 291
CLACKAMAS, OREGON 97015
TELEPHONE: 658-3101

January 28, 1971

ROUTING	
To	Noted by
WH	WH
WS	
From:	
Action:	

Mr. Wayne Hansen, Director
Columbia-Willamette Air Pollution Authority
1010 N. E. Couch St.
Portland, Oregon 97232

Dear Mr. Hansen:

I am applying for a variance on burning on the Pleasant Valley Golf Course, Rt. 1, Box 291; Clackamas, Oregon. The legal description is Tax Lot 1 in Section 31, Township 1, South Range 3E W.M. bounded on North and West by John Hagen Road and on the East by Rock Creek Road, consisting of approximately 168 acres.

I have three piles of slash and one pile with large logs in it to burn. One pile is where a lagoon will go for our sewerage disposal plant and there is no way to get the slash out as it is land locked by a creek. Two of my piles have been pushed together for some time and are all ready to fire. The fourth pile with the large logs in it would be impossible to carry to any dump as they are too big for any available equipment to handle. Pictures of these four piles will supplied at the requested hearing.

I have two dead old growth firs in the middle of a park area that should be removed. These are 400 years old trees. No mill or chipping plant will take them. One of the two over-hangs my 18th green and the 10th fairway. This is a bee tree and we would not be able to take this tree down unless we felt that we could start burning it at the cold time of the year when the bees are dormant.

While we are Southeast of Portland and within six miles of the city limits we have never had a wind in five years that would take smoke from our place toward Portland.

We would like permission to get our piles ready to burn next fall and winter as it would be impossible to fall our trees and yard them out this winter while the ground is wet.

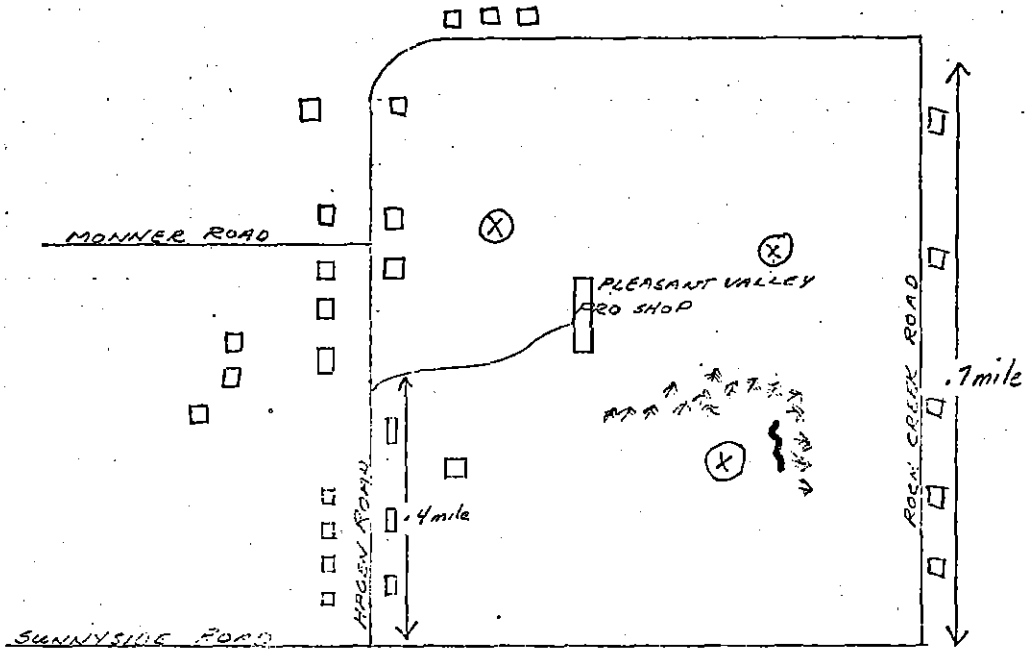
We would like this variance of your ordinance to be in effect until January 1, 1972.

Very truly yours,

Barney Lucas

RECEIVED
JAN 29 1971
COLUMBIA - WILLAMETTE
AIR POLLUTION AUTHORITY

PLEASANT VALLEY GOLF COURSE



□ = Private Residence

⊗ = Location of debris requested to burn

§ = On-site Disposal location approved by CLACO SOLID WASTE DEPT.

10 FEB 71
TB

9 February 1971

Pleasant Valley Golf Course
Route 1, Box 291
Clackamas, Oregon 97015

Attention: Mr. Barney Lucas

Gentlemen:

This is in response to your letter of 28 January 1971 requesting a variance from Section 6.2(3) of the Columbia-Willamette Air Pollution Authority Rules pertaining to open burning.

In accordance with your request, your variance request has been placed on the agenda for the next Board of Directors meeting, 19 February 1971, 9:30 a.m., Room 200, Portland City Hall Annex, 424 S.W. Main Street. You or your representative are invited to attend and if you wish, may make a statement in support of your variance request.

However, you should be aware our staff will submit a report concerning your request and based on our information at this time, we will recommend the variance request be denied.

If you wish to discuss this matter prior to the meeting, please contact Mr. Hatchard or myself, or if you wish to withdraw your request prior to the meeting, you may do so.

Very truly yours,

R. E. Hatchard
Program Director

Wayne Hanson
Control Director

WH:tbs

3a.

February 17, 1971

Mr. Barney Lucas
6785 S. W. Canyon Drive
Portland, Oregon

Dear Mr. Lucas:

I reviewed your request for a storage area on your golf course property near Rock Creek Road with Mr. Sells, of the Columbia-Willamette Air Pollution Authority. I also reviewed it with Mr. John Borden, Senior Sanitarian and Secretary of the Solid Waste Commission. We see no problem in piling your wind-blown limbs and trees in the area south and east of your machine shop.

The provisions of the Solid Waste Ordinance you are expected to meet are as follows:

(1) That you do not create a fire hazard.
(2) That you do not create a health hazard.
(3) That you do not create a public nuisance.
(4) That you maintain a fire trail around the area of storage.

If we can be of further assistance to you, please feel free to contact this office.

Sincerely yours,

CLACKAMAS COUNTY HEALTH DEPARTMENT

NEAL R. THOMPSON
Solid Waste Representative

NRT:ls
cc: Mr. Sells

To: HMP

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

31 March 1971

Environmental Quality Commission
1400 SW 5th Avenue
Portland, Oregon 97201

Attention: Mr. K. H. Spies, Director
Department of Environmental Quality

Gentlemen:

During its regular meeting 19 March 1971, the Board of Directors considered a request from Wasteco, Inc., Tualatin, for a variance from the emission standards of this Authority to operate and test experimental controlled atmosphere furnaces, through 19 March 1972.

After careful consideration of the facts and requirements of ORS 449.810, the Board granted the variance as requested, subject to certain conditions.

Enclosed is a copy of the variance with findings and order, and a copy of the staff report on this request.

Very truly yours,

Emory J. Crefoot
General Counsel

EJC:jl
Enclosures

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232

IN THE MATTER OF	)	VARIANCE	
	)		
VARIANCE TO:	)	INCLUDING	No. 35
	)		
WASTECO, INC.	)	FINDINGS AND ORDER	

FINDINGS

I

By letters dated 11 March 1971 and 16 March 1971, Wasteco, Inc. by Ernest J. O'Gieblyn has petitioned for variance from Rule 7, Emission Standards, Columbia-Willamette Air Pollution Authority Rules to test fire certain incineration units designed, invented and built by Wasteco, Inc.

II

It is represented by Wasteco, Inc. that in order to perfect such equipment it is necessary to test-fire the equipment under actual firing conditions for short periods of time.

III

In the process of experimental testing of these incineration units to determine maximum operating parameters and atmospheric emissions, it would be expected that emissions in excess of those allowed by this Authority's Rules may occur. A Variance should be granted to allow such excess emissions as part of their developmental testing program as the ultimate benefit from such practice and a significant way to contribute to an overall reduction in present solid waste and air pollution problems.

ORDER

NOW THEREFORE it is hereby ordered that a VARIANCE from the provisions of Rule 7, Emission Standards, Columbia-Willamette Air Pollution Authority Rules be granted to WASTECO, INC. to test-fire certain new or experimental incineration units for short periods of time on their property situated on 20675 S.W. 105th, Tualatin, Oregon subject to the following conditions:

1. The test units will be utilized only for types 1, 2, 3, and 4 waste; the operation shall be limited to daylight hours and this Agency shall be notified prior to any test utilizing type 4 waste.

2. The test unit shall be utilized for experimentation and shall not be at any time operated on a commercial basis.

3. Adequate precaution shall be taken to minimize smoke emissions at all times.

4. Any significant changes in the design or operation of this unit which would affect atmospheric emissions shall be submitted to this Authority for approval prior to installation.

5. The VARIANCE herein granted shall be in effect for a period of one year from the date hereof.

6. If at any time during the test-firing of any unit, a significant air pollution problem or a nuisance results, WASTECO, INC. will at the request of Columbia-Willamette Air Pollution Authority will install adequate control equipment or cease its operation.

Entered at Portland, Oregon the 19th day of March 1971.

Chairman, Board of Directors

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

15 March 1971

MEMORANDUM

TO: The Board of Directors

FROM: R. E. Hatchard, Program Director

SUBJECT: Variance Request - Wasteco, Inc.

Gentlemen:

Wasteco, Inc., a national manufacturer of pollution control equipment located in Tualatin, has requested a variance from the Columbia-Willamette Air Pollution Authority rules in order to operate and test experimental controlled atmosphere furnaces on their company property. These test operations will aid the company in developing new and better equipment for processing solid wastes. Such equipment promises to have less atmospheric emission than presently available equipment.

In the process of experimental testing of these furnaces to determine maximum operating parameters and atmospheric emissions, it would be expected that emissions in excess of those allowed by this Authority's rules may occur. Your staff recommends that a variance be granted from the Authority rules to Wasteco, Inc., to allow such excess emissions as part of their developmental testing program, as the ultimate benefit from such practice can significantly contribute to an overall reduction in present solid waste and air pollution problems.

To protect the public health and welfare in the immediate vicinity of the plant site from any unforeseen air pollution problems, it is further recommended that the variance be granted subject to the following conditions:

1. The test units will be utilized only for Types 1, 2, 3 and 4 waste; operation shall be limited to daylight hours and this agency shall be notified prior to any tests utilizing Type 4 waste;
2. The test unit shall be utilized for experimentation and shall not be at any time operated on a commercial basis;
3. Adequate precautions shall be taken to minimize smoke emissions at all times;

4. Any significant changes in design or operation of this unit which would affect atmospheric emissions shall be submitted to this Authority for approval prior to their installation;

5. The variance shall be in affect for a one-year period at which time renewal shall be required;

6. If at any time during operation of this unit a significant air pollution problem or nuisance results, Wasteco, Inc. will at the request of CWAPA, install adequate control equipment or cease its operation.

Respectfully submitted,

R. E. Hatchard

REH:jkj

35 T 36 To: HMP
HWD

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

1 April 1971

Department of Environmental Quality
1400 Southwest 5th Avenue
Portland, Oregon 97201

Attention: Mr. K. H. Spies, Director

Gentlemen:

You will please find enclosed copies of two variances pertaining to open burning granted by the Board of Directors at its regular meeting 19 March 1971. There is also enclosed a staff report relative to variance. Only one staff report is enclosed as it is applicable to both variances.

The variances and supporting material are submitted for your review in accordance with the provisions of ORS 449.880.

Very truly yours,

Emery J. Crofoot
General Counsel

EJC:jl
Enclosures

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232

IN THE MATTER OF	)	VARIANCE
	)	No. 33
VARIANCE TO:	)	INCLUDING
	)	
RESIDENTS OF CLACKAMAS, WASHINGTON AND MULTNOMAH COUNTIES	)	FINDINGS AND ORDER

FINDINGS

I

That by Rule 6, Columbia-Willamette Air Pollution Authority Rules previously adopted open burning of domestic rubbish is prohibited within certain restricted areas.

II

That it has bee represented to the Board of Directors at open meetings and by letters to Columbia-Willamette Air Pollution Authority that adequate means of disposing of wood, leaf and needle materials from trees, shrubs or plants growing on real property occupied as a residence other than by open burning have not yet been developed and large amounts of such material have accumulated in various areas creating fire and other hazards.

III

That methods of disposal of such material other than by burning will not be developed by solid waste disposal agencies in time to relieve the hazards prior to the 1971 fire season.

IV

In order to protect the public health, safety and welfare against possible injury and damage from fire and other hazards associated with the accumulation of wood, leaf and needle materials from trees, shrubs or plants growing on real property occupied as residents of Washington, Multnomah and Clackamas Counties should be allowed to dispose of the above mentioned material for a reasonable period of time by open burning.

ORDER

NOW THEREFORE it is hereby ordered that a VARIANCE be granted from Rule 6, Columbia-Willamette Air Pollution Authority Rules to the residents of Washington, Multnomah and Clackamas Counties to permit open burning of wood, leaf and needle materials from trees, shrubs or plants growing on real property occupied as a residence for the period beginning 15 April 1971 and ending 31 May 1971. All open burning hereby authorized shall be accomplished in strict compliance with any rule, regulation or ordinance of fire protection agencies.

Entered at Portland, Oregon the 19th day of March 1971.

Chairman, Board of Directors

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232

IN THE MATTER OF	)	VARIANCE
	)	No. 36
VARIANCE FOR	)	INCLUDING
	)	
BURNING LAND CLEARING DEBRIS	)	FINDINGS AND ORDER

FINDINGS

The Board of Directors finds:

I

That by Columbia-Willamette Air Pollution Authority Rules, Rule 6, Section 6.2 (3) (c) ii as amended by ordinance No. 3 passed by the Board of Directors 21 August 1970 open burning of land clearing debris will be prohibited throughout the territory of the region from and after 1 July 1971.

II

That disposal sites and methods of disposal of land clearing debris other than by open burning have not been developed except for the urban and surrounding areas.

III

That it appears that disposal sites and methods of disposal of land clearing debris other than by open burning for suburban and rural areas will be available by 1 January 1972 and that it would be unreasonable to require disposal of land clearing debris by methods other than by open burning prior to said date.

ORDER

NOW THEREFORE it is hereby ordered that a VARIANCE be granted from Rule 6, Section 6.2 (3) (c) ii Columbia-Willamette Air Pollution Authority Rules for the open burning of land clearing debris from and after 1 July 1971 to 31 December 1971 except that open burning of land clearing debris shall not be permitted in Special Control Areas A and B as defined by Rule 1, Section 1.3 (36) including Table 1 and Figure 1 (revised) established by Ordinance No. 2 passed by the Board of Directors 21 November 1969.

Entered at Portland, Oregon the 19th day of March 1971.

Chairman, Board of Directors

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

17 March 1971

MEMORANDUM

TO: The Board of Directors

FROM: R. E. Hatchard, Program Director

SUBJECT: Action Regarding the Open Burning Problem

Gentlemen:

In the staff report regarding open burning, dated 12 March 1971, the problems resulting from the application of CWAPA Rule 6.2 are reviewed.

It is recommended that the Board take the following actions to alleviate the current problems:

1. Adopt the variance from the provisions of Rule 6.2 to allow open burning of wood, needles or leaf materials from trees, shrubs or plants growing on the real property occupied by him as a resident for the period 15 April through 31 May 1971.

It is required by state statute that a written permit be obtained from the appropriate fire department before any fire is started.

2. Adopt a variance suspending the expansion of the land area in which the open burning of land clearing debris is prohibited after 1 July 1971. (In effect, this will hold the present boundaries and not allow the expansion provided for in Rules 6.2(3)(c)ii.

3. Announce the Board's expectation that the solid waste disposal programs serving communities in the region be improved in order that the disposal difficulties will be alleviated.

The Board will review the disposal situation in late summer of 1971 to determine the prevailing conditions.

4. The Board of Directors wish to thank the tens of thousands of citizens who successfully developed methods of satisfactorily disposing of debris from their residential properties. The Board urges them to continue these practices even though some of their unsuccessful neighbors have pleaded the cause for variance, which is temporarily granted.

Respectfully submitted,

R. E. Hatchard

REH:jl

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

12 March 1971

MEMORANDUM

TO: Board of Directors

FROM: R. E. Hatchard, Program Director

SUBJECT: Staff Report on Open Burning

Gentlemen:

As instructed by the Board of Directors at the 19 February 1971 Board meeting, the following is a staff report concerning the Authority's Rules pertaining to open burning. In preparation of the report, informal meetings were held with the staff of a number of fire districts and solid waste divisions concerning the effect any modifications of the existing open burning restrictions would have on their operations. Attached is reference material including a list of terms and definitions from the Authority Rules used in this report.

Rules - Background

In order to evaluate existing open burning restrictions, it is necessary to review briefly the development of our Authority Rules concerning this matter.

1. City of Portland, Air Quality Code 1964-66 (See Appendix A).

2. Columbia-Willamette Air Pollution Authority Rules (effective 1 July 1968 - 1 January 1970) (See Appendix B)

3. Columbia-Willamette Air Pollution Authority Rules (effective 1 January 1970 and amended effective 1 October 1970 - Rule 6) (See Appendix C).

i) Dense smoke type sources as previously listed, prohibited throughout the territory.

ii) Special restricted areas (map and definition attached - essentially the Rural Fire Protection Districts)

a. Commercial, governmental or industrial rubbish - open burning prohibited within Special Restricted Areas.

b. Land clearing operations - prohibited in Control Areas A and B as earlier defined, except in Washington County within Special Restricted Areas. Effective 1 July 1971 to be prohibited within Special Restricted Areas.

c. Domestic Rubbish - Prohibited in certain fire districts. At the request of Washington County, domestic open burning restrictions were delayed approximately one year until 1 January 1971 to allow the development of adequate solid waste sites. Domestic open burning was further restricted in additional Rural Fire Protection Districts effective 1 January 1971 and is to be prohibited within remaining Rural Fire Protection Districts 1 January 1972.

Exemptions

a. Agricultural operations as authorized and permitted by Oregon Revised Statutes, Chapters 476, 477, and 478.

b. Fire hazard elimination

c. Recreational fires - outdoor cooking

As outlined above, open burning has been prohibited in a step-wise manner and all open burning rules were adopted by the Board of Directors after Public Hearings and subsequently reviewed and approved by the Oregon Environmental Quality Commission.

Existing Problems

Although open burning may have been prohibited in a logical step-wise manner, the solutions to the solid waste problems created have not kept pace. The specific disposal problem experienced will vary with each individual affected depending on the type of material, location, convenience and costs of other methods of disposal. However, associated problems may be generalized as follows:

1. Refuse disposal sites - Although a number of new disposal sites have been developed within the past few years and there has been increasing attention directed toward solid waste disposal in certain areas of the region, especially in remote areas and in Washington County, availability of disposal sites and the type of material accepted is limited. The development of adequate transfer stations, recycle methods for utilization, installation of adequately designed incinerators have not been implemented.

Although periodic fires have existed in the past, at certain disposal sites creating air pollution problems, at the present time, there is no open burning conducted on a continuous basis at any refuse disposal site within the region.

2. Commercial, Governmental and Industrial Sources - Compliance can be attained by such sources with the installation of an adequately designed incineration device, implementation of a haulaway program with or without the utilization of compactors and balers. In many cases the recycle of the waste material has been

possible, such as in the case of grocery stores utilizing balers to recycle paper accumulated. Within the past year, it is estimated 250 inadequate incineration devices have been replaced or removed within the region in addition to open burning prohibited. Although in many cases compliance has been an economic burden and inconvenient, in general, cooperation with our agency by these sources has been good.

3. Land Clearing Operations - Some of the more difficult solid waste and air pollution problems are created by these operations. Much of the material to dispose is bulky and distances to disposal sites, especially in remote areas, may be located some distance away. The burning of such material creates dense smoke for a considerable length of time causing nuisance conditions and adverse air quality.

Considerable inequities are evident in air quality rules pertaining to open burning of this type. As previously outlined, such burning is prohibited within Special Control Areas for land improvement or construction projects (such as contractors, commercial, private individuals). However, agricultural operations are presently allowed to burn on certain days throughout the region and in the State of Oregon.

Fortunately with the support of the Board of Directors, compliance of the affected sources has been good. Examples are the major construction and urban renewal projects in downtown Portland, new and existing highway construction, new construction such as Mall 205 (Portland), Port of Portland, Rivergate Development and power line construction and maintenance. In general, compliance has been attained by hauling the material to available disposal sites accepting such material, burial on site or the utilization of chippers.

4. Domestic Open Burning - The prohibiting of domestic open burning has created a wide variety of solid waste problems ranging from a minimal increase in material to be disposed of with little inconvenience to difficult disposal problems for individuals owning large lots and acreages.

Compliance of the Authority's Rules thus far has been outstanding. Since the effective date, 1 July 1970, our staff has issued 94 verbal warnings, 38 first notices of violation to individuals concerning this rule, but in no case has there been repeated violations requiring legal action. Similar results have been noted by the Fire Protection Districts. Fire personnel have issued a number of warnings for burning without a permit but have not found it necessary to institute legal action for any repeated violations.

Compliance has been maintained by a variety of methods including adding additional refuse pickup, creating compost piles, haulaway by individuals and contractors, purchasing or renting of chippers, using community pickup and drop box service and disposing of material on site.

Since prohibiting domestic open burning does affect a large number of individuals and has created considerable public interest, many statements have been made concerning the problem it has created by adding additional loading of solid waste sites and littering along public roads. In discussing this matter with affected authorities, it appears there has been a modest increase in material at refuse sites within urban areas to a substantial increase in rural areas. The long term of littering has not been notably affected. Material along roadways generally consists of non-combustible materials such as bottles, cans, old furniture, etc. and not the material prohibited by the open burning rules such as leaves, tree trimmings, brush and stumps.

Air Quality Effect

The complexity of the air pollution problem and the relatively short period wide spread open burning has been prohibited and considering the variation in meteorological conditions, assessment of the air quality data is virtually impossible and unrealistic. It is estimated that the present open burning restrictions have prevented in excess of 15,000 tons/year of air contaminants from entering the atmosphere. Although this may represent a relatively small percentage of the total man-made contaminants entering, similar statements can be made concerning most source classes. Attached is an appropriate letter concerning this subject recently received by our Authority from the Asphalt Pavement Association of Oregon, requesting standards and compliance left at a stand still because extended time has been granted to others and "The Asphalt Industry contribution to the total air pollution problem is relatively small. I would estimate it at less than 5%". It must be recognized adverse or desirable air quality is determined by the multiplicity of sources.

Despite the effect on the total regional air quality, open burning can and does create localized nuisance conditions and smoke will trepass on the properties of others. Recognizing these factors, our Authority, in order to satisfy State and federal government requirements, developed the step-wise open burning restrictions as outlined in the Rules as it deemed necessary to achieve desirable air quality.

Staff Recommendations

It is the staff opinion, open burning must be eliminated to achieve desirable air quality and that continued open burning is not an acceptable solution to the solid waste problem. Although the staff recognized the inequities as provided by present state statutes concerning open burning by certain sources, it believes open burning rules as adopted by the Authority was done in a logical manner and has been implemented as equitably as possible. Considering the overall rules of the Authority as they pertain to other sources and their required compliance, the staff cannot justify any permanent modifications in the existing open burning rules. However, the staff does recognize the inadequacy of the present solid waste methods to

dispose of much of the material. Therefore, if the Board of Directors finds it necessary to temporarily alleviate the solid waste problem by open burning, the staff recommends the following action:

1. No change be made concerning allowing open burning at refuse disposal sites, commercial, government or industrial sources.

2. No change in existing boundary lines presently in effect for open burning for land clearing purposes. However, due to the lack of alternate methods available in rural areas, it is the staff recommendation that the boundry lines not be extended to include the rural fire protection districts as outlined in Rule 6, Section 6.2 (3)(c)(ii), to be effective 1 July 1971. Since the majority of land clearing is conducted by contractors and frequently on a bid basis, if the Board wishes to take action concerning this matter, a variance should be considered at this time so contractors can submit appropriate bids for future work.

3. Domestic Rubbish - If the Board of Directors finds it necessary to alleviate the immediate solid waste problem for this source class, a variance from Rule 6, Section 6.2(3)(a) may be granted under the following conditions:

1. Open burning may be conducted by any person to burn wood, needle or leaf materials from trees, shrubs or plants growing on the real property occupied by him, as a residence, for the period 15 April through 31 May 1971.

If such a variance is granted, it should be recognized as required by law, individuals are required to obtain a written burning permit from the appropriate fire district. Based upon past experience and recognizing alternate methods have been implemented by many individuals, it is estimated 40-50,000 fire permits would be issued.

Although the staff recognizes this is not a permanent solution to the solid waste problem, it is their opinion no further changes should be made at this time utilizing the variance procedure. If at a later date further changes are necessary, such action should be taken after public hearings and by appropriate rule changes. Since state legislature is presently in session and many bills pertaining to air pollution are being considered, upon passage, rule changes would be required by our Authority and this matter be considered at that time.

Respectfully submitted,

R. E. Hatchard

REH:whs

APPENDIX A

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232

City of Portland, Air Quality Control Code Excerpts

1. Section 13-1601 of the Air Quality Control Code prohibits all open burning, unless otherwise exempted. Exemptions include:

   a. Open fires for residential heating, occasional cooking of food in a fireplace or barbeque, or for recreational purposes.

   b. Open fires which are a part of agricultural operations.

   c. Open fires for disposal of waste material from the clearance and development of land for subdivisions or building preparations, provided approval is obtained from the Fire Marshal and the Health Officer.

   d. Open fires set or permitted by any officer of the City for weed abatement, for prevention or elimination of a fire hazard, or for fire-fighting or civil defense training purposes, provided a permit is first obtained from the Fire Marshal.

2. Sections 13-803 (f) authorizes the Health Officer to advise the Fire Marshal, as necessary, that air quality conditions existing in the City of Portland are such that open burning, under Fire Marshal permits, shall not be permitted.

3. Section 13-301 requires that the program for control of air quality shall be undertaken in a progressive manner, and each of its successive objectives shall be sought to be accomplished by a maximum of cooperation and conciliation among all the parties concerned.

4. In accordance with the above AQC Code provisions and in cooperation with the Fire Marshal's office, restrictions on open burning have developed chronologically as follows:

   a. March 30, 1964

      Effective date of Air Quality Control Code

   b. May 29, 1964

      First discussion between Fire Marshal's Office and AQC Division with the following agreed:

1) Fire Alarm Telegraph office will continue daily determination on issuance of fire permits based upon forecast data received from the Weather Bureau and the advice from the Health Officer. When some doubt exists whether to restrict permits due to predicted temperature inversion, permits will not be issued. Acceptable weather condition requirements for safe burning will be progressively increased to reduce excessive quantities of air contaminants released from open burning.

2) No new Portable Domestic Incinerator permits will be issued. Existing permits will be revoked when a substantiated complaint is received by either the Fire Marshal's Office or the AQC Office.

c. July 1, 1964

Chief, Bureau of Fire, issued Memorandum 4 for distribution to Fire Bureau personnel. This memo announced that P.D.I. permits no longer were being issued, but that barrels could still be used by householders for burning trash under a "regular fire permit." This memo also reminded firemen they are not exempt from restrictions on open burning.

d. September 16, 1964

In memo to Inspectors, Fire Marshal announced fire permits for land clearing operations would no longer be issued when "Do not issue fire permits" order prevails. Exception noted relating to specific circumstances in Forest Park.

e. December 16, 1964

In conference, Fire Marshal and AQC Director agreed Sections 14-313, and 14-713, of the Fire Code should be amended to relieve the Bureau of Fire of those responsibilities now assigned to the Health Officer by the AQC Code and to reflect current requirements relating to open burning and incineration.

f. March 31, 1965

News release by Fire Marshal suggesting property developers and demolition contractors estimate wrecking and debris clearance costs both by burning on site and by hauling away in view of the increased number of days open burning is restricted due to fire hazard or air pollution conditions.

g. May 13, 1965

The Health Officer advised the Fire Marshal that meteorological conditions in the Portland area are such that open burning of demolition debris from freeway clearance projects results in adverse effects on air quality conditions, that further such burning shall not be permitted; and requested issuance of fire permits for this purpose be discontinued. The Health Officer further informed the Fire Marshal of his intent to advise similarly relative to burning of combustible debris from any demolition operation in the congested area of Portland, as soon as a determination has been made of appropriate boundaries for the congested area.

h. May 17, 1965

Fire Marshal announced discontinuance of fire permits as advised by Health Officer in letter of May 13.

i. May 26, 1965

The Health Officer advised the Fire Marshal that open burning of rubbish from demolition, industrial or commercial operations or highway construction operations (as well as freeway clearance projects) also shall not be permitted within the prescribed central congested district, and requests issuance of fire permits be discontinued for this purpose.

j. May 27, 1965

Fire Marshal announced discontinuance of fire permits as advised by Health Officer in letter of May 26.

k. June 3, 1965

Fire Chief issued Letter of Instruction (65-12) to Fire Bureau members on revised burning regulations. This memo included new requirement that householders who have P.D.I. permits can burn now only on days when householders' bonfire permits are issued.

l. July 1, 1965

Fire Marshal issued reminder to public that fire permits are no longer being issued for general open burning of rubbish from demolition, industrial or commercial operations or highway construction operations in designated sections of the City.

m. August 1, 1965

AQC issued Information Bulletin #8 summarizing current status of open burning restrictions.

n. October 27, 1965

The Health Officer advised the Fire Marshal that previous restrictions on open burning in the designated conjested section now should be applied within the entire city. He also advised that burning rubbish in any device, other than an incinerator that meets the AQC Code requirements, should be considered as open burning.

o. November 1, 1965

The Fire Marshal announced fire permits shall no longer be issued for open burning at any location within the City of rubbish from demolition, industrial or commercial operations, or highway construction operations, effective December 1, 1965. He also announced this restriction does not yet apply to open burning of household rubbish which may be burned in open fires or in barrels, but only when a daily permit has been obtained from the neighborhood fire station.

p. November 26, 1965

Sections 14-313 and 14-713 of the Fire Code amended by City Council as agreed in subparagraph e. above.

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
104 SW 5th Avenue, Portland, Oregon (97204)

Article 2-3 Open Outdoor Fires

Section 2-3.1 General Requirements

(a) No person shall ignite, cause to be ignited, permit to be ignited, or suffer, allow or maintain any open outdoor fire anywhere in the territory of the Columbia-Willamette Air Pollution Authority, unless specifically regulated or allowed by other sections of these rules, or they have obtained a variance pursuant to Section 2-4.3 of these rules.

(b) No open outdoor fire allowed by this rule anywhere in the territory shall contain garbage, asphalt, petroleum products, paints, rubber products, plastic or any substance or material which normally emits dense smoke or obnoxious odors.

(c) Open outdoor fires allowed by these rules are not exempted from fire or burning permit requirements, or other applicable requirements, restrictions or limitations of fire prevention and protection agencies, but are exempt from the requirements in Article 2-2.

(d) No open outdoor fire shall be allowed, when after consultation with the Health Officers, the Program Director determines such fires will have an adverse effect on air quality. This restriction may be applied to the entire territory or to one or more parts thereof.

(e) Open outdoor fires in violation of these rules shall be extinguished by the responsible persons upon notice by the Program Director or his representative.

Section 2-3.2 Agricultural Operations

No person shall ignite, cause to be ignited, permit to be ignited, or suffer, allow or maintain any open outdoor fire containing grass, grain, stubble or other agriculture related combustible material except as authorized and permitted by Oregon Revised Statutes, Chapters 476, 477, and 478. The initial clearing of land for agricultural use shall be considered an agricultural operation.

Section 2-3.3 Commercial or Industrial Rubbish

No person shall ignite, cause to be ignited, permit to be ignited, or suffer, allow or maintain any open outdoor fire containing rubbish from commercial or industrial sources in any Air Pollution Control Area.

Section 2-3.4 Domestic Rubbish

No person shall ignite, cause to be ignited, permit to be ignited, or suffer, allow or maintain any open outdoor fire containing domestic rubbish in any Air Pollution Control Area, except open burning on-site of rubbish from any structure used exclusively as a dwelling for not more than four families is allowed throughout the territory.

Section 2-3.5 Fire Hazards Elimination

An open outdoor fire ignited, caused to be ignited, or suffered, allowed or maintained by an officer of a fire permit issuing agency for the prevention or elimination of a fire hazard is allowed throughout the territory.

Section 2-3.6 Land Clearing Operations

No person shall ignite, cause to be ignited, permit to be ignited, or suffer, allow or maintain any open outdoor fire that exceeds five (5) cubic yards of fuel per acre in any 48 hour period as part of any land clearing operation in any Air Pollution Control Area, except such outdoor fires containing greater amounts of fuel may be allowed:

(a) In Air Pollution Control Area A until 1 January 1970;

(b) In Air Pollution Control Area B outside the boundary of the City of Portland until 1 July 1969.

Section 2-3.7 Metal Salvage

No person shall ignite, cause to be ignited, permit to be ignited, or suffer, allow or maintain any open outdoor fire of motor vehicle bodies, and associated parts, railway cars, insulated wire, electric motors and coils or any other materials in any Air Pollution Control Area, or in any other area where such burning constitutes a public nuisance.

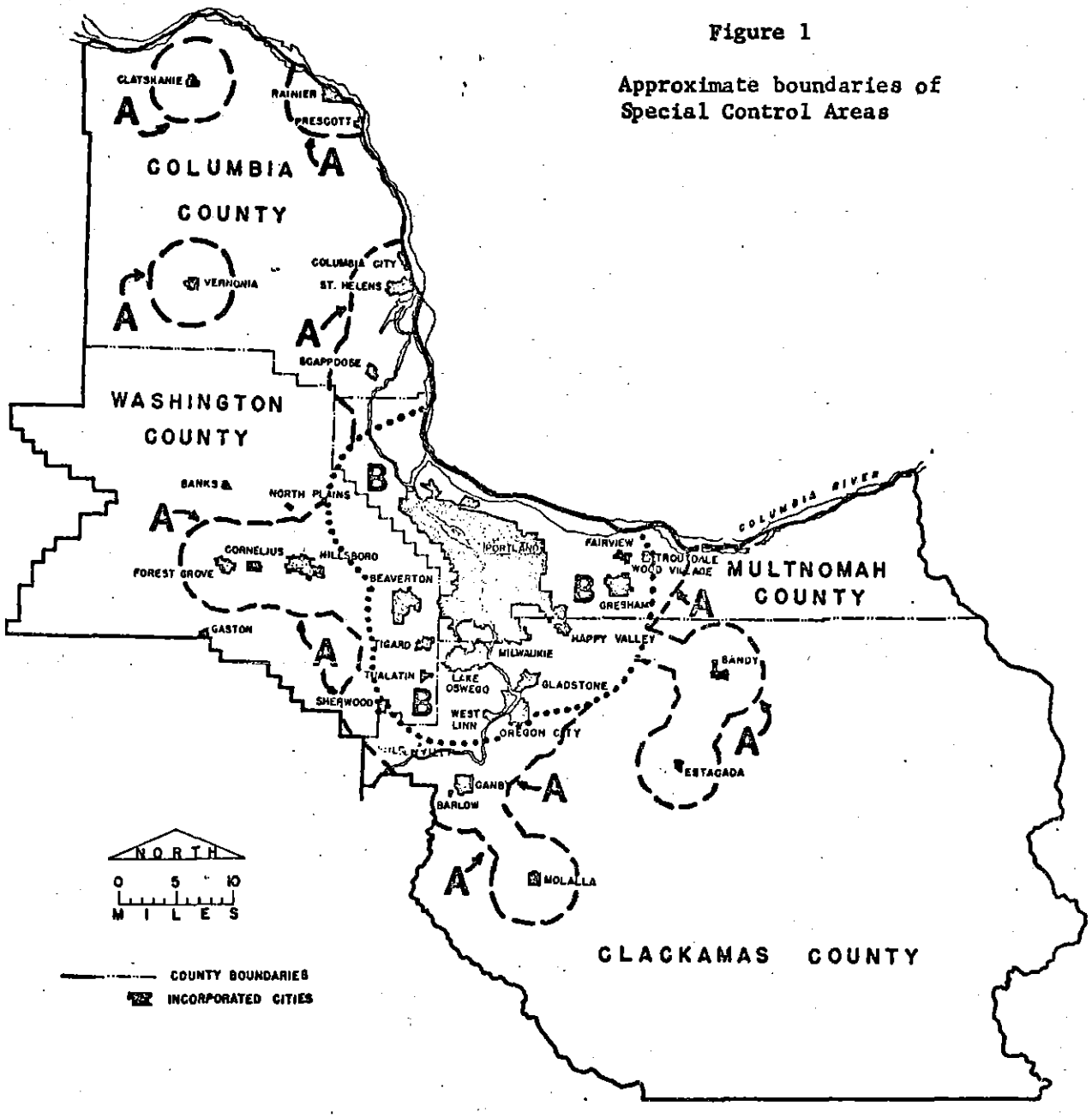
Section 2-3.8 Recreation Fires - Outdoor Cooking

(a) A bonfire or similar small fire for recreational purposes is allowed throughout the territory provided applicable requirements, restrictions or limitations of fire prevention and fire control agencies are met.

(b) A fire in an outdoor fireplace or barbecue for cooking of food for human consumption is exempt from all requirements of this rule.

Figure 1

Approximate boundaries of Special Control Areas



COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97232

Information Bulletin No. 2 (Revised) 1 October 1970

Prohibited Practices

A. Rule 6 of this Authority regulates air contaminant emission by prohibition of certain practices, as follows:

Section 6.2 Open Outdoor Fires

(1) General Provisions

(a) No person shall cause or permit to be ignited or maintain. any open outdoor fire within the territory which is specifically prohibited by these Rules.

(b) Open outdoor fires in violation of any of these Rules shall be extinguished by the person in attendance upon notice by the Program Director.

(2) Open Outdoor Fires Prohibited Within the Territory

(a) No open outdoor fire shall be allowed within the territory which contains garbage, asphalt, waste petroleum products, paint, paint coated metals, wire, rubber products, plastics or any substance which normally emits dense smoke, noxious odors or creates a public nuisance.

(b) No open outdoor fire shall be allowed within the territory on any day when the Program Director advises fire permit issuing agencies to not issue permits because such practices would have an adverse effect on air quality.

(3) Open Outdoor Fires Prohibited within Special Restricted Areas (Rev 1 Oct 70)

(a) Domestic Rubbish

No person shall cause or permit to be ignited, or maintain any open outdoor fire containing domestic rubbish within Special Restricted Areas, except such open outdoor fires are permitted within the following Rural Fire Protection Districts and incorporated cities within said Districts:

Until 1 January 1971;

(i) In Washington County, all Rural Fire Protection Districts

(ii) In Clackamas County:

1) Beavercreek Rural Fire Protection District
2) Boring Rural Fire Protection District
3) Canby Rural Fire Protection District
4) Clackamas County Zone 2 Fire Protection District
5) Sandy Rural Fire Protection District
6) Tualatin Rural Fire Protection District

Until 1 January 1972; in Clackamas County:

1) Clarkes Rural Fire Protection District
2) Estacada Rural Fire Protection District No. 69
3) Colton-Springwater Rural Fire Protection District
4) Molalla Rural Fire Protection District
5) Hoodland Rural Fire Protection District
6) Monitor Rural Fire Protection District
7) Scotts Mills Rural Fire Protection District
8) Aurora Rural Fire Protection District

(b) Commercial, Governmental or Industrial Rubbish

No person shall cause or permit to be ignited, or maintain, any open outdoor fire containing rubbish from commercial, governmental or industrial sources within Special Restricted Areas.

(c) Land Clearing Operations

(i) No person shall cause or permit to be ignited, or maintain any open outdoor fire as part of any land clearing operation.

(a) In Clackamas, Columbia and Multnomah Counties within Special Control Areas A and B as defined in the Columbia-Willamette Air Pollution Authority Rules passed by the Board of Directors 21 November 1969, effective 1 January 1970.

(b) In Washington County within Rural Fire Protection Districts including incorporated cities within or surrounded by said Districts.

(ii) Open outdoor fires as part of any land clearing operation are prohibited within all Special Restricted Areas effective 1 July 1971.

Open outdoor fires exempt from these Rules:

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

(b) Open outdoor fires used for recreational purposes or cooking of food for human consumption

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

Section 6.3 Refuse Burning Equipment

(1) No person shall cause, permit or maintain any emission from any refuse burning equipment which does not comply with the emission limitations of these Rules.

Information Bulletin No. 2
1 October 170

Applicable definitions

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

(2) "Domestic Rubbish" means rubbish generated by a private dwelling houseing four families or less.

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

(4) "Open Outdoor Fire" means the burning of any material outdoors in an open fire, a burn barrel or any similar device. (Rev 1 Oct 70)

(5) "Refuse" means unwanted matter.

(6) "Rubbish" means non-putrescible wastes consisting of both combustible and non-combustible wastes, such as but not limited to ashes, paper, cardboard, yeard clippings, wood, glass, cans, bedding, household articles and similar materials.

(7) "Special Restricted Area" means a special area within the territory of the Authority established to control specific practices or to maintain specific standards. (See Figure 1) (Rev 1 Oct 70)

(a) In Columbia, Clackamas and Washington Counties, Special Restricted Areas are all areas within Rural Fire Protection Districts, including the areas of incorporated cities within or surrounded by said Districts, but excluding the Timber and Tri-City Rural Fire Protection Districts. (Rev 1 Oct 70)

(b) In Multnomah County, the Special Restricted Area is all area west of the Sandy River. (Rev 1 Oct 70)

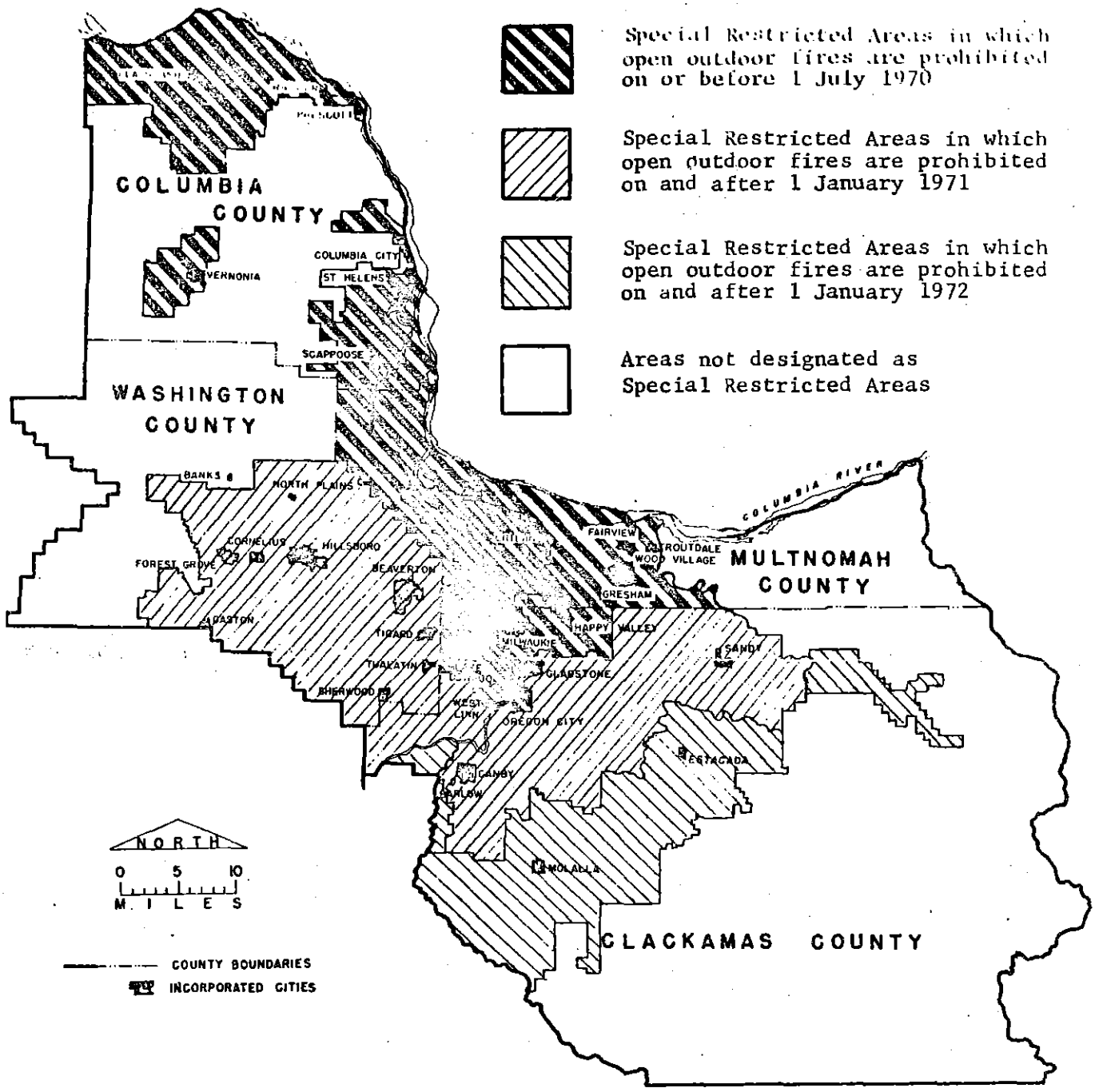


FIGURE 1

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION STAFF

DATE : June 1, 1971 for the June 4, 1971 Meeting

SUBJECT: AUTHORIZATION OF PUBLIC HEARING FOR VENEER DRYER EMISSION STANDARDS

The board products industries regulations adopted by the Commission on March 5, 1971 require that a public hearing be scheduled by July 1, 1971 "for the purpose of determining the feasibility of adopting an emission standard for particulate and gaseous emissions from veneer dryers".

In order to comply with this provision of the regulation, it is necessary that the staff be given authorization at this time. The staff requests that the hearing be set for the regular December meeting of the Commission.

At the time the board products standards were adopted, the staff was expecting imminent delivery of a report from the American Plywood Association (APA) on the results of a year-long study of veneer dryer emissions. The study was conducted by Washington State University (WSU) with planning input from the APA and control agencies in Oregon and Washington. Funding was provided 50% by the APA and 50% by the National Air Pollution Control Administration.

The report on the study was made available to the Department staff and other control agencies on May 13. A copy of the report conclusions is attached.

As a follow up to the work done in the initial study, the APA is currently engaged in an evaluation of several additional dryers, examining the effect of changing dryer operation conditions on air contaminant emissions. The Department staff has arranged with the APA to conduct independent emission tests alongside the WSU group during some tests at Eugene and Lebanon during June. This testing will provide the staff with information needed to fully evaluate the APA study results.

It is expected that regulation needs can be determined fairly rapidly once the Department of Environmental Quality test series is completed by the end of June. Consultations with the Regions, Washington agencies, and industry will be held during the summer and a regulation prepared as part of the state-wide Implementation Plan to be prepared for public hearing in December and presentation to the Environmental Protection Agency in January 1972.

Authorization for this schedule is therefore requested.

CONCLUSIONS

Eight dryers in Pacific Northwest mills and five dryers in southern mills were studied. Steam- and gas-heated longitudinal and jet dryers were studied drying ten different species types.

The nature of veneer dryer emissions varies between species types, heat source, and dryer type. A number of basic similarities exist, however. At stack temperatures the only particulate emission consists of wood particles in concentrations less than 0.002 gr/standard dry cubic feet of stack gas. Outside the stack, however, at cooler than stack temperature, hydrocarbons and water typically condense to form blue haze and/or a water plume or both. Plume opacities of the blue-haze emission ranged from 0% to 100% but averaged 20%. Other volatile hydrocarbons do not condense.

The average total hydrocarbon emission from all dryers tested was 5.7 lbs/10000 ft^2 of 3/8" plywood produced. The average condensable hydrocarbon emission was 3.6, same basis.

There were large differences in the operation of veneer dryers. These differences, coupled with the condition of the dryers, combined to give varying results for opacity readings of the stacks, water vapor emitted from the stack, and the total hydrocarbon emitted from the stack. If, for example, a stack was operated with its dampers open, the volume flow of gases out the stack was very high, plume opacity was very low, and the volatile and condensable concentration figures seemed generally to be at the lower values. If, however, the dryer was operated with the dampers closed, production was generally higher, air volume was lower, plume opacity was higher, volatile and condensable hydrocarbon concentrations were higher, and total hydrocarbons on a 10,000 ft^2 (of 3/8"

plywood) production basis were also lower. An important factor, therefore, in veneer dryer operation is the damper setting.

Routine GC analyses of the volatile hydrocarbons in the stack gas at the thirteen dryers studied showed that α pinene was the major monoterpene emitted except for ponderosa pine where Δ^3 carene was the major component. Alpha and β pinene are recognized to be potentially reactive hydrocarbons. Studies to determine the relative reactivities of α and β pinene, ethylene, isobutene, and 1-butene are in progress.

During the drying of Douglas fir, α pinene accounted for 75 to 90% of the monoterpene emission; for southernpine, 55 to 65%; and for ponderosa pine, 40 to 50%. The data also showed that the monoterpene composition of the stack gas was characteristic of the wood species being dried. However, the concentrations were not as characteristic as the composition. During the drying of Douglas fir, southern pine, and ponderosa pine, the concentrations were quite variable; whereas the concentrations measured during the drying of western hemlock, larch, and white fir were at the lower limits of sensitivity of the GC used.

The condensed hydrocarbon fraction has been preliminarily studied. A tentative identification of the bulk of the condensate as a mixture of abietic-pimaric acids has been made. The data also indicate the presence of sesquiterpenes, fatty acids, resin esters, and resin alcohols. Analyses to more precisely identify the components in the condensate would require an effort equal to a separate research project and as such is outside the scope of the present project.

1119 A St. | Tacoma, Washington 98401 | Area Code 206 | Broadway 2-2283

Bronson J. Lewis
Executive Vice President

AMERICAN PLYWOOD ASSOCIATION

May 19, 1971

Mr. B. A. McPhillips, Chairman
Environmental Quality Commission
c/o Department of Environmental Quality
Air Quality Control Division
1400 S.W. Fifth Avenue
Portland, Oregon 97201

Dear Mr. McPhillips:

Over the past two years the plywood industry has been studying emissions from veneer dryers. The purpose of a veneer dryer is to reduce the moisture content of wood to be used in plywood so that it can be properly glued. Some dryers emit a blue haze which has been the subject of our interest.

During the latter part of 1969, several meetings were held jointly with control authorities representing Oregon and Washington to determine the best course of action to sample and analyze these emissions. Subsequent to these meetings, a contract was let to Washington State University to do the sampling and analysis phase. That study, extending over a period of more than 14 months, has now been completed. Representatives of control authorities in Oregon, Washington, Idaho, Montana and Northern California and the plywood industry were invited to a meeting on May 13 to hear a report by representatives of Washington State University on this study. Nearly 90 persons attended the meeting, including 15 representatives of control authorities.

This work involved thirteen veneer dryers drying Douglas fir, white fir, larch, hemlock, Ponderosa pine, white pine, Southern pine and Engelmann spruce. On an average basis, the typical veneer dryer emits approximately 5.7 pounds of hydrocarbon per 10,000 feet of production (3/8" thickness). Relative to natural emissions from growing forests upon which the plywood mill is dependent for its operation, this is not significant. A further summary of some of the basic findings in the report is attached, along with a copy of the Washington State University report. Please let us know if we can provide further copies of this report for your use.

This material has also been received by Messrs. Patterson, Burkitt, Odell and Phillips, who attended the meeting on May 13. As they review the report we are sure that they will be giving you their assessment of the significance of these findings in terms of ambient air quality objectives. We are looking forward to continued liaison with control authorities as this data is considered relative to air quality regulations.

Very truly yours,

Bronson Lewis

cc: H. M. Patterson

TESTED DFPA QUALITY

Plywood Research Foundation
7011 South 19th
Tacoma, Washington 98466 / 206 - 272 - 2283

Emissions from Veneer Dryers

May 13, 1971

1. WSU Study - General

During the manufacture of plywood, the veneer passes through a dryer in which the moisture content is reduced from the range of 30-200% to about 3%. During this process, the steam driven off carries with it small quantities of volatiles present in the wood.

An investigation was made in 1970 by Washington State University of emissions from veneer dryers in the Pacific Northwest and in the South. A total of 13 dryers, representing various dryer types, and eight species were tested: Douglas fir, white fir, Engelmann spruce, Ponderosa pine, Western hemlock, Western larch, Western white pine and Southern pine.

2. Results

Emissions were found to consist of small quantities of solid particulate matter (generally under 0.002 grains per standard cubic foot) and hydrocarbons. There were basically two categories of hydrocarbons - hemiterpene hydrocarbons (volatile) and diterpenes (condensible). The quantity of hydrocarbons emitted varied, depending on species, dryer type and the way it was operated, and on other factors. The total emission of hydrocarbons from the dryer stacks averaged 5.7 lbs. per 10,000 square feet of veneer dried (3/8" basis). Of this total, 3.6 lbs. represented the condensible fraction. The other fraction (2.1 lbs.) was the volatile hydrocarbons.

a) Volatile Hydrocarbons

The volatile fraction hydrocarbons are similar to those released naturally from growing vegetation. An average plywood plant emits 2.7 lbs. of volatile hydrocarbons per hour of operation. The typical plywood plant requires 59,000 acres of commercial forest land to support a sustained yield operation. The vegetation on this land releases 636 lbs. per hour of volatile hydrocarbons. Thus, only 250 acres of vegetation produce as much volatile hydrocarbon as a typical plywood plant. Elimination of all volatile hydrocarbons from the dryer emission would result in a reduction of only 0.4% in the total emission of these types of hydrocarbons from these two sources.

The data on natural emissions are conservatively estimated, using average data, and would be greater because emissions from forested areas are higher than average. Total annual emission of terpene type hydrocarbons from vegetated areas in the United States is estimated as about 100 million tons.

b) Condensible Hydrocarbons

The condensible hydrocarbons are "non-reactive" in the context of photochemical smog reactions.

c) Opacity

The plumes from some stacks observed during the WSU study had opacities above 20% -- some as high as 80% or more. The applicability of veneer dryer plume opacity as an index of the deleterious effect of the emission on the environment is of questionable validity. It is recognized, however, that opacity is the most convenient measure of the "quality" of an emission and is a well-established index.

3. Toxicity

No information is available indicating that dryer emissions are harmful to humans, animals or plants. To the contrary, tests sponsored by the Canadian Forest Products Laboratory in Vancouver on condensate from the drying of Douglas fir veneer indicated a low order of toxicity.

4. Present Studies

Some reduction in opacity and possibly in total hydrocarbon is possible through changes in dryer operation. This aspect is now being studied by Washington State University under contract with the Plywood Research Foundation.

5. Comments

The quantity of reactive hydrocarbons emitted from veneer dryers is insignificant in terms of emission of the same hydrocarbons from the forests from which the raw materials for plywood are derived.

The sub-micron particles of condensed hydrocarbons which are responsible for the blue haze have no known harmful effects, nor are they reactive.

Based on available technical data, it seems clear that no special regulations governing emissions for veneer dryers are warranted.

INVESTIGATION OF EMISSIONS FROM PLYWOOD VENEER DRYERS

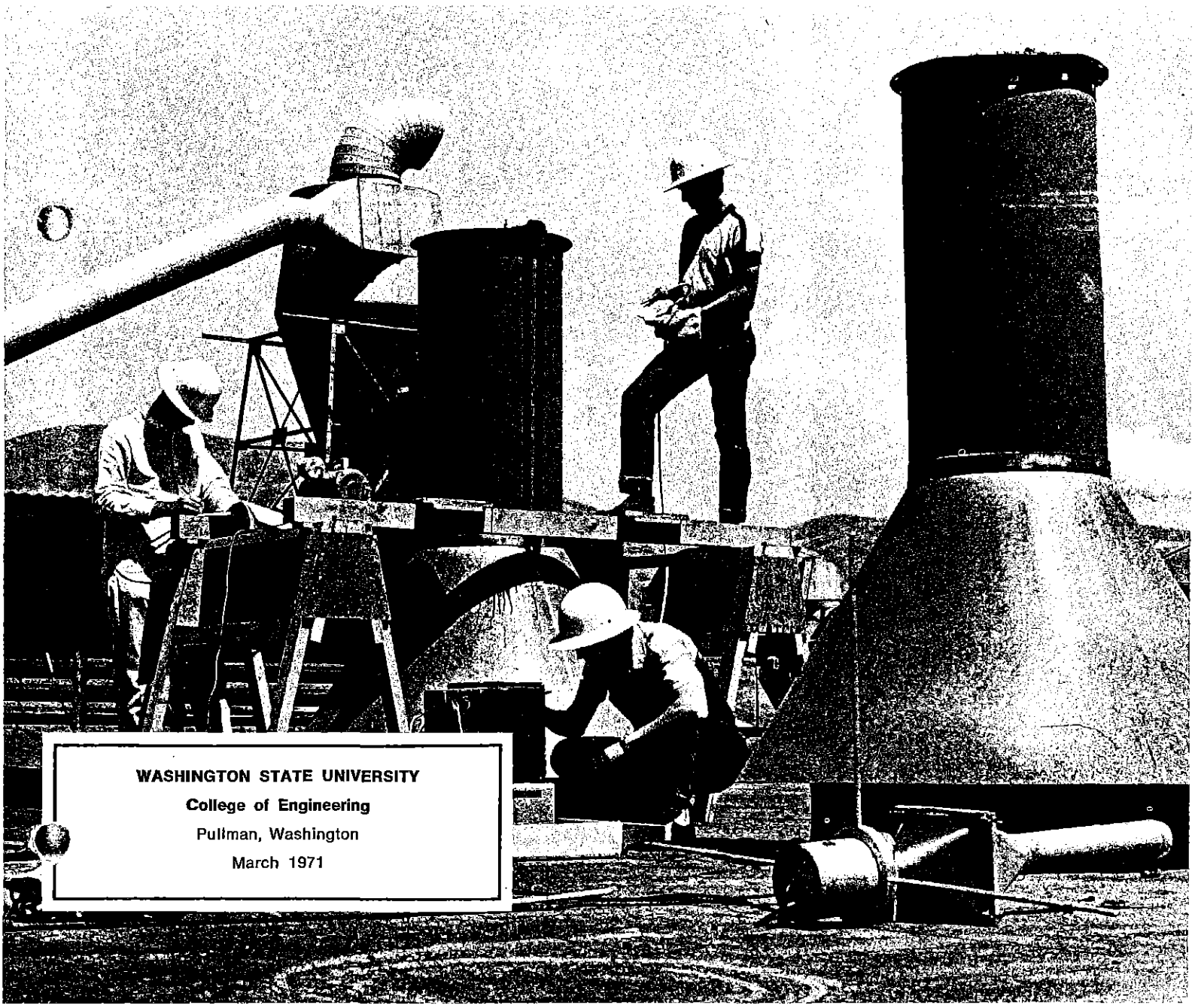
Final Report

Prepared for

PLYWOOD RESEARCH FOUNDATION
7011 South 19th
Tacoma, Washington 98466

with matching support under Contract No. CPA-70-138

ENVIRONMENTAL PROTECTION AGENCY
Air Pollution Control Office
Durham, North Carolina 27701



WASHINGTON STATE UNIVERSITY
College of Engineering
Pullman, Washington
March 1971

INVESTIGATION OF EMISSIONS FROM PLYWOOD VENEER DRYERS

FINAL REPORT

Prepared for

PLYWOOD RESEARCH FOUNDATION
7011 South 19th
Tacoma, Washington 98466

with matching support under Contract No. CPA-70-138

ENVIRONMENTAL PROTECTION AGENCY
Air Pollution Control Office
Durham, North Carolina 27701

Frederick L. Monroe
F. L. Monroe

R. A. Rasmussen
R. A. Rasmussen

W. Lee Bamesberger
W. L. Bamesberger

Donald F. Adams
D. F. Adams

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 : May 28, 1971 for the June 4, 1971 Meeting

SUBJECT : REPLACEMENT OF EXISTING WIGWAM BURNER - BROWN BROS. LUMBER COMPANY, GRANTS PASS, JOSEPHINE COUNTY

The staff has been conducting a program with the timber industry to control wigwam waste burner emissions. It is the policy of the staff to request phase-out whenever practical and when not feasible to require modification.

Brown Bros. Lumber Company has investigated total phase-out and has not been able to accomplish this. They have made significant progress to decrease the total volume of material to be burned.

The company has a burner that is not in a structural condition to support modification.

Consequently the company requests that they be allowed to replace the current unmodified burner with a new fully modified burner, with all of the improvements as developed by the Forest Research Laboratory at Oregon State University.

RECOMMENDATIONS

It is the recommendation of the staff that the company be allowed to replace their current, unmodified burner with a new modified burner subject to the following conditions:

1. The burner will be completely modified as indicated in the wigwam waste burner plan review criteria.

2. The company will submit to the Department for approval all plans and specifications prior to construction.

3. The company and the Department will hold a joint inspection of the burner after construction to confirm compliance with current emission standards.

DEPARTMENT OF
ENVIRONMENTAL QUALITY

STATE OFFICE BUILDING • 1400 S.W. 5th AVENUE • PORTLAND, OREGON • 97201

WIGWAM WASTE BURNER PLAN REVIEW CRITERIA

The following is a brief outline of the criteria to be applied by the Department in the review of plans and specifications covering the construction or modification of wigwam waste burners. It is the experience of the staff that the potential capability of a wigwam burner complying with Oregon Administrative Rules pertaining to air pollution can only be realized by correctly engineered design and installation in accordance with these criteria, together with correct and conscientiously applied operational and maintenance practices.

1. Repair to the burner shell to provide reasonably airtight integrity, particularly in the upper portions of the shell. Suitable means shall be incorporated to reduce leakage at the point of conveyor entry to a minimum.

2. A damper at the top of the burner to provide adjustable area, restriction to 100% closure.

3. Overfire air introduction by forced-air means, consisting of an arrangement of blowers and high velocity jets or nozzles of appropriate capacity discharging tangentially, with provision for convenient volume adjustment.

4. A forced underfire air distribution system to supply air to all portions of the base area of the fuel pile, of capacity appropriate to the burner size, with provisions for convenient volume adjustment. Individual air outlets must be of a design to provide maximum diffusion and to preclude plugging by ash or clinker.

5. Auxiliary burners, gas or oil fired, at least three in number, arranged to direct flame radially toward the fuel pile at ground level.

6. An automatic controlling-recording system to provide multi-step or modulating control of auxiliary burners and exit damper to maintain a burner exit gas temperature of 800 to 1200 degrees F. The temperature sensing element shall be of the chromel-alumel thermocouple type. From startup, control sequence shall provide the following:

   a) Auxiliary burner activation until exit temperature reaches $800^{\circ}F$.

   b) Automatic exit damper modulation or multi-step control within the range to $800^{\circ}F$. to $1200^{\circ}F$., depending upon fuel characteristics.

   Recorder may be circular seven day maximum, or strip chart - 30 day. Charts must be forwarded to the Department of Environmental Quality for their permanent records at the end of each month.

Subdivision 4

CONSTRUCTION AND USE OF WASTE DISPOSAL WELLS

[ED. NOTE: Unless otherwise specified sections 44-005 through 44-045 of this chapter of the Oregon Administrative Rules Compilation were adopted by the Sanitary Authority May 13, 1969, and filed with the Secretary of State May 15, 1969, as Administrative Order SA 41.]

[NOTE: Effective July 1, 1969, the Sanitary Authority was replaced by the Department of Environmental Quality, consisting of a Department and of a Commission, known as the Environmental Quality Commission. Where Sanitary Authority is presently used in these regulations, it should be noted by readers of these rules that Department of Environmental Quality should be substituted unless the context or statutes clearly require the use of Environmental Quality Commission.]

44-005 DEFINITIONS - As use in these regulations unless the context requires otherwise:

(1) "Person" means the state, any individual, public or private corporation, political subdivision, governmental agency, municipality, industry, copartnership, association, firm, trust, estate or any other legal entity whatsoever.

(2) "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments or other places, together with such ground water infiltration and surface water as may be present. The admixture with sewage as above defined of industrial wastes or wastes shall also be considered "sewage" within the meaning of these regulations.

(3) "Wastes" means sewage, industrial wastes, agricultural wastes, and all other liquid, gaseous, solid, radioactive or other substances which will or may cause pollution or tend to cause pollution of any waters of the state.

(4) "Waste Disposal Well" means any natural or man-made hole, crevasse, fissure or opening in the ground which is used or is intended to be used for disposal of sewage, industrial, agricultural or other wastes; provided, however, as used in these regulations waste disposal wells do not include conventional seepage beds, tile fields, cesspools or landfills constructed and operated in accordance with State Board of Health rules and regulations or waste treatment or disposal ponds or lagoons constructed or operated under a permit issued by the State Sanitary Authority.

(5) "Approved Permit Issuing Agency" means a city, county, or other governmental entity which has been specifically designated by the State Sanitary Authority as the agency authorized to issue pursuant to these regulations permits for the construction, modification, maintenance or use of waste disposal wells within a designated geographical area.

44-010 POLICY. Whereas the discharge of untreated or inadequately treated sewage or wastes to waste disposal wells and particularly to waste disposal wells in the lava terrane of Central Oregon constitutes a threat of serious, detrimental and irreversible pollution of valuable ground water resources and a threat to public health, it is hereby declared to be the policy of the State Sanitary Authority to restrict, regulate or prohibit the further construction and use of waste disposal wells in Oregon and to phase out completely the use of waste disposal wells as a means of disposing of untreated or inadequately treated sewage or wastes as rapidly as possible in an orderly and planned manner.

44-015 CONSTRUCTION OR USE OF WASTE DISPOSAL WELLS PROHIBITED.

(1) After the effective date of these regulations, no person shall construct or place in operation any waste disposal well for the disposal of sewage without first obtaining a permit for said construction or operation of the waste disposal well from an approved permit issuing agency.

(2) After the effective date of these regulations, no person shall construct or place in operation any waste disposal well for the disposal of sewage from a system serving more than 25 families or 100

people or of wastes other than sewage without first obtaining a permit from the State Sanitary Authority.

(3) After January 1, 1975, no person shall maintain or use any waste disposal well for the disposal of sewage or wastes without a currently valid permit from an approved permit issuing agency or the State Sanitary Authority which specifically authorizes said maintenance or use.

It is the intent of this sub-section to phase out, by January 1, 1975, the use of waste disposal wells except for those which are scheduled to be replaced by sewers in accordance with an approved plan and time-schedule, and those which are operated under specific permit from the State Sanitary Authority pursuant to Section 44-045 of these regulations

44-020 ISSUANCE OF PERMITS WITHOUT SANITARY AUTHORITY APPROVAL PROHIBITED. After the effective date of these regulations, no person shall issue permits for the construction, modification, maintenance or use of waste disposal wells unless they are at the time of issuance designated by the State Sanitary Authority as the approved permit issuing agency for the area for which the permit is sought.

44-025 WASTE DISPOSAL WELL PERMIT AREAS. Permits for construction, modification, maintenance or use of waste disposal wells may be issued only in those designated geographical areas for which a city, county or district, legally authorized to provide sewerage services for the area, complies with the following conditions:

(1) Maintains on file with the Sanitary Authority a currently approved sewerage program including a plan and time schedule for providing collection, treatment and disposal of wastes.

(a) The time schedule must be designed to provide an approved sewerage system within the shortest time possible and unless it can be demonstrated to be non-feasible shall at least comply with the following:

(A) Qualified consulting engineer to be hired by not later than July 1, 1969.

(B) Preliminary engineering report including a detailed financing plan and construction schdule to be submitted to the Sanitary Authority by not later than January 1, 1971.

(C) Start construction of the sewerage system by not later than August 1, 1971, after obtaining approval from the Sanitary Authority of detailed plans and specifications.

(D) Complete construction of the approved sewerage system by not later than January 1, 1980.

(2) Submits to the State Sanitary Authority, during the month of January each year, annual reports which demonstrate that reasonable progress is being made in implementing the approved sewerage program.

44-030 WASTE DISPOSAL WELLS PROHIBITED WHERE BETTER TREATMENT OR PROTECTION IS AVAILABLE. Permits shall not be issued for construction, maintenance or use of waste disposal wells where any other treatment or disposal method which affords better protection of public health or water resources is reasonably available or possible.

44-035 PERMIT CONDITIONS. Permits for construction or use of waste disposal wells issued by an approved permit issuing agency shall include, in addition to other reasonable provisions, minimum conditions relating to their location, construction or use and a time limit for authorized use of said waste disposal wells, not to exceed a period of five years. Construction and orientation of building sewers shall be compatible with the approved area sewerage plan.

44-040 ABANDONMENT AND PLUGGING OF WASTE DISPOSAL WELLS. (1) A waste disposal well upon discontinuance of use or abandonment shall immediately be rendered completely inoperable by plugging and sealing the hole to prevent the well from being a channel allowing the vertical movement of water and a possible source of contamination of the ground water supply.

(2) All portions of the well which are surrounded by "solid wall" formation shall be plugged and filled with cement

grout or concrete.

(3) The top portion of the well must be effectively sealed with cement grout or concrete to a depth of at least 18 feet below the surface of the ground, or wherever this method of sealing is not practical, effective sealing must be accomplished in a manner approved in writing by the State Sanitary Authority or the authorized permit issuing agency if functioning.

44-045 CONSTRUCTION OR USE OF WASTE DISPOSAL WELLS PROHIBITED AFTER JANUARY 1, 1980. After January 1, 1980, it shall be unlawful for any person to construct, maintain or use waste disposal wells for disposal of sewage or wastes unless said wastes have been previously treated by methods approved by the Sanitary Authority and further such treated wastes shall be discharged to waste disposal wells only if specifically approved and authorized by the Sanitary Authority.

It is intended that this section will permit consideration for approval by the Sanitary Authority of waste disposal to deep injection wells, constructed and operated in accordance with a carefully engineered program, and for disposal to waste disposal wells of adequately treated and disinfected effluents from large, efficiently-operated, municipal or county sewage treatment plants where continuous and effective surveillance and control of waste treatment and discharge can be assured so as to fully safeguard water quality and the public health and welfare.

AQC

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 : May 27, 1971 for the June 4, 1971 Meeting

SUBJECT: Application for Certification of Pollution Control Facility for Tax Relief Purposes, No. T-190

1. Applicant: Robert E. Oja
723 N. W. 96th Street
Vancouver, Washington 98665

The applicant owns and operates the Ainsworth Food Center at 5949 N. E. 30th Avenue, Portland, Oregon.

2. Description of Facility

The facility is a "Herauf Hydraulic Downstroke Baler" for compressing boxes and loose cardboard into 500-pound bales. The bales are hauled away for recycling. The facility was placed in operation on October 1, 1969.

3. Cost of Facility

The total cost of the facility is $2,631.41. A copy of the relevant invoice is attached.

4. Staff Review

The baler replaces an incinerator for which the Columbia-Willamette Air Pollution Authority had requested corrections. In response, the owner installed this baler, discontinuing use of the incinerator.

Columbia-Willamette Air Pollution Authority has confirmed (by letter attached, of April 22, 1971) that they initiated action on this matter. The applicant claims that was indeed the reason for installing the baler, on grounds that "burning was more convenient and required no additional capital". Economic analysis indicates a return of 4.7%, not taking into account the cost of electric power chargeable to the unit. Therefore, the staff concludes that the unit was not instituted for economic return.

5. Staff Recommendations

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost figure of $2,631.41 with the percentage allocation to pollution control being "80% or more" be issued for the facility claimed in Tax Application T-190.

Attachments

ALLISON ELECTRIC CO.
CONTRACTING AND REPAIRING
6445 N. E. UNION AVE.
PORTLAND, OREGON 97211
289-8894

Invoice No. 7030 (Duplicate)

Date September 23, 1970

Work Order No. 1328

Your Order No.

Job Location 5949 N. E. 30th Avenue

To: Ainsworth Food Center
5949 N. E. 30th Avenue
Portland, Oregon

Material and labor to wire for 7½ HP motor as directed by Bill Fuller.

Material:	26.90
Labor: 3 hours @ 7.98	23.94
Mileage: 2 miles @ 8¢	.16
Permit:	3.00
	54.00
15% Overhead	8.10
	62.10
10% Profit	6.21
	68.31

Total Amount Due $68.31

Net 10th Prox.

8% Interest charged on Past Due accounts.

MEN-CAL CORPORATION

A SUBSIDIARY OF MENASHA CORPORATION

1003 E. FOURTH ST. • P. O. BOX 1467 • SANTA ANA, CALIF. 92702 • (714) 547-4168 • (213) 626-1231

No. 09687

SOLD TO

ROBERT OJA DBA AINSWORTH FOOD CENTER
NE 30TH & AINSWORTH

PORTLAND, OREGON

SHIPPED TO

SAME

Harry 252-9105

DATE	CAR NO. / TRUCK NO.	F.O.B.	TERMS	YOUR ORDER NO
SEPTEMBER 25, 1970	TRUCK NO. OURS	PORTLAND	2% RETURN MAIL 1% 10 DAYS	VERBAL

BALES	GRADE	D.R. NO.	WEIGHT	PRICE	AMOUNT
	HERAUF HYDRAULIC DOWNSTROKE BAILER		2%	$2650.00	$2650.00
					53.00
					2597.00
	* deduct freight chgs which should have been prepaid *			freight charges	33.00
					2563.00
	Dwain with me			10-1	

T-190
To HL Sawyer

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

22 April 1971

Department of Environmental Quality
Air Quality Control Division
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Attn: Mr. C. A. Ayer
Associate Engineer

Gentlemen:

In regard to your 9 April 1971 letter requesting certain information pertaining to the tax relief application filed by Ainsworth Food Center the following comments are offered.

This agency did require Ainsworth Food Center to bring emissions from their refuse incinerator into compliance with applicable rules by installing suitable equipment. Plans of the Herauf Baler were not reviewed by this agency and we also do not know whether other alternatives were considered to meet pollution control objectives. Installation of the baler and shut down of the refuse incinerator has resulted in this source attaining compliance with our rules.

Very truly yours,

John F. Kowalczyk

John F. Kowalczyk
Technical Director

JFK:dc

A(2)C

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : May 21, 1971

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES, No. T-213

1. Applicant: American Can Company
Halsey Mill
P. O. Box 215
Halsey, Oregon

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

2. Description of Claimed Facility:

The facility of this application is the portion of an electrostatic precipitator which represents extra capacity for pollution control over economic return. Operation commenced in September, 1969.

3. Cost:

The total cost of the claimed facility is $175,400.

4. Staff Review:

The company is claiming 36.5% of an electrostatic precipitator as a pollution control device. The reasoning is as follows (see attached table):

Up to 95% efficiency, the precipitator clearly is for economic return. The increment from 95 to 98% also is economic, having a return on investment of 31.5%. Above 98%, the return falls off drastically. Being only 7.0% from 98% efficiency to 98.5% efficiency, and becomes less with each additional increment. The costs were estimated on a basis of vendors' quotes for precipitators of various sizes, with the cost of a 99.5% precipitator being the cost of the one supplied to American Can.

The company, instead of claiming "less than 40%" of the entire precipitator for pollution control, is claiming the capacity in excess of economic return, the portion which raises the overall efficiency from 98% to 99.5%, as a pollution control facility, with the cost of capacity as 36.5% of the total, or $175,400. The staff agrees that this is a valid approach to the problem.

5. Recommendation:

It is recommended that a "Pollution Control Facility Certificate" bearing the actual cost figure of $175,400, with the percentage allocated to pollution control being more than 80%, be issued for the facility claimed in Tax Application No. T-213.

Attachment

INCREMENTAL ROI OF PRECIPITATOR OF INCREASING EFFICIENCY

UNIT EFFICIENCY	COST INSTALLED	MATERIAL SAVINGS	UTILITIES	LABOR	MAINTENANCE	NET SAVINGS	INCREMENTAL ROI
95%	$255,000	$564,000	$4,000	$9,000	$10,000		
Difference	48,000	17,100	100	1,000	1,000	$15,000	31.5%
98%	303,000	581,000	4,100	10,000	11,100		
Difference	35,000	2,960	100	200	200	2,460	7.0%
98.5%	338,000	584,000	4,200	10,200	11,300		
Difference	37,000	2,960	100	200	200	2,460	6.7%
99.0%	375,000	587,000	4,300	10,400	11,500		
Difference	103,400	2,960	100	200	200	2,460	2.4%
99.5%	478,400	590,000	4,400	10,600	11,700		

Thus is indicated an economical justification up to 98% but thereafter the net difference in installed cost between 98% and 99.5% is $175,400 with net savings of $7,380 or $\left(\frac{\$7,380}{175,400} \times 100\right)$ only a 4.2% net return on investment for that incremental efficiency increase.

It is apparent then that the design improvement from 98.0% up to the required 99.5% efficiency level should qualify the $175,400 installed cost difference for application as a pollution control facility cost.

AQD

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 : May 20, 1971 for Meeting of June 4, 1971

SUBJECT: Application for Certification of Pollution Control Facility No. T-223

1. Applicant: Roseburg Paving Co.
P. O. Box 1427
Roseburg, Oregon

The applicant owns and operates a portable asphalt plant usually located near Winchester, Oregon, but operated also in various locations in southwest Oregon.

2. Description:

The facility in this application is a Todd Model LS-75 wet scrubber for removing dust from hot mix asphalt plant stack effluent. Operation commenced in June, 1970.

3. Cost:

The total cost is $5965. An invoice for this amount is attached.

4. Staff Review:

The facility in this application is one of the more successful designs for controlling dust from asphalt plants. It was installed to enable the plant to comply with Department of Environmental Quality Hot Mix Asphalt Plant Emission Regulations, OAR 340, Sections 25-105 through 25-130.

5. Recommendations:

It is recommended that a "Pollution Control Facility Certificate" bearing the actual cost figure of $5965 with the percentage allocated to pollution control being more than 80% be issued.

[T]YRRE MACHINERY COMPANY

P. O. BOX 5070
PORTLAND, OREGON 97213
ATlantic 2-7761
5816 N. E. LOMBARD-PORTLAND HIGHWAY

INVOICE NO. 5709

SOLD TO
Roseburg Paving Co.
P. O. Box 1034
Roseburg, Oregon 97470

INVOICE DATE March 26, 1970

SHIPPED TO Same

OUR ORDER NO.	YOUR ORDER NO.	SALESMAN	TERMS	SHIPPED VIA	PPD. OR COLL.
4257	John L.			Rail	

QUANTITY	DESCRIPTION	PRICE	AMOUNT
1	LS 75 Todd Air Washer with stack, epoxy coated with stainless steel tube, pipes, and sprays.		$5,965.
1	Stack for above washer		

#1803
4-8-70
#219

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TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : May 25, 1971, for the June 4, 1971, Meeting

SUBJECT : APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES No. T-202

1. Applicant: McGraw-Edison Company
Fibre Products Division
2100 Northwestern Avenue
West Bend, Wisconsin 53095
Mr. D. G. Klein, Controller

The applicant manufactures pitch impregnated fibre tubes, fittings and accessories at its 1335 E. Crystal Lake Drive plant site in Corvallis, Oregon.

2. The facility claimed in this application is described to consist of an electric crane and a semi-automation of impregnation tank cover mechanisms.

The facility was completed and placed in operation on November 1, 1970.

3. The total cost of the facility is $5,420. The certification of this figure is attached.

4. Staff Review:

The claimed facility in essence amounts to a process change which minimizes the time that the lids are off the vacuum impregnation tanks. The installation was made at the request of and after review and approval by the Mid-Willamette Valley Air Pollution Authority. (See attached Mid-Willamette Valley Air Pollution Authority letter.)

The staff findings indicate that the principal purpose for installing the claimed 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 $5,420 be issued for the facility claimed in Application No. T-202.

Attachment

EXHIBIT D

This is to certify that the total cost of the Electric Crane Project at the McGraw-Edison plant in Corvallis, Oregon as indicated below and in exhibit C is a true and correct representation of the actual cost of the facility.

Signature: James F. Quatter
Internal Audit Manager
CPA Ill. #6345

ITEM	COST
Yale & Towne Electric Crane	$4719.00
Freight in on crane	139.00
Construction crane to erect facility	78.00
Electrical work	179.00
Internal labor	305.00
	$5420.00

MICHAEL D. ROACH
Director

MID WILLAMETTE VALLEY
AIR POLLUTION AUTHORITY

2585 STATE STREET / SALEM, OREGON 97301 / TELEPHONE AC 503 / 581-1715

T-202

April 6, 1971

Department of Environmental Quality
State Office Building
1400 S.W. 5th Ave.
Portland, Oregon 97201

Attn: Fredrick A. Skirvin, Assoc. Engineer

Gentlemen:

The questions outlined in your March 24, 1971 letter concerning the certificate of pollution control from McGraw-Edison Company, Corvallis, are answered as follows:

1. On April 15, 1969, Mr. Russell Doucet, West Coast Regional Manager for McGraw-Edison, appeared at a board meeting. At this time he agreed to sign compliance schedules designed to control his emissions. A Schedule of Compliance for controlling the vacuum stack emission was signed by Mr. Doucet and myself in November 1969.

2. The Authority originally suggested the process change that was made as the most effective and feasible method for controlling the vacuum vat emissions. McGraw-Edison outlined their plans to us and approval was given for construction.

3. Inspection of the process change on March 31, 1971 by W.R. Spurgeon indicated that it was constructed in accordance with previous proposals.

4. No other alternatives were considered practical for controlling this emission.

5. Time of uncontrolled emission has been reduced from approximately 140 minutes per eight hour shift to 40 minutes per shift or less. With additional operator practice, time should be reduced even further. This operation has achieved the time allowances previously agreed to.

On the surface, this process change indicates that a production time advantage has been gained. However, according to the

management of the McGraw-Edison plant, the controlling factor for production is the drying oven. Its present configuration does not allow the capacity to be increased to meet the increased capacity of the vacuum vat.

The Authority has no reason to request disapproval of the tax credit application for the inpregnating vacuum vat surface improvements.

Sincerely yours,

Michael D. Roach

Michael D. Roach
Director

MDR/st

cc:
Mr. Russell Doucet

AQC

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 : May 27, 1971 for the June 4, 1971 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-191

This application was received on January 29, 1971. A summary of the contents and results of the staff review are given below.

1. Applicant: Freightliner Corporation
Truck Manufacturing Plant
6936 N. Fathom Street
Portland, Oregon 97217

The applicant manufactures heavy duty trucks.

2. The facility claimed in this application is described to consist of seven spray booths and associated electrical controls, piping, duct-work, scrubbers, and pits for reservoirs which serve to remove paint overspray particles from exiting air streams. Since the claimed facility serves both production and pollution control needs, only a portion of the total cost (47.5%) is claimed to be eligible for certification. The facility was completed and operation commenced in December, 1969.

3. The total cost of the facility is $107,544.00. An accountant's certification of this figure is attached.

4. Staff Review:

The claimed facility is an integral part of the heavy duty truck assembly line serving as areas for the painting of cabs, chassis, wheels and other parts. These seven spray booths are equipped with wet scrubber systems which prevent the emission of paint over spray particles to the atmosphere.

The company has applied for at least 47.5% of the total cost because the facility does serve a production role. The 47.5% figure was arrived at by comparing the total cost of the installed systems ($107,544.00) to the cost of spray booths with dry scrubbers ($56,554.00). The difference ($50,990.00) is 47.5% of $107,544.00. The selection of the more expensive systems was based on higher paint particulate removal (99+ % vs. 80%).

The staff has checked with the Columbia Willamette Air Pollution Authority and found that the claimed facility is operated within the CWAPA regulations.

The staff findings indicate that 47.5% appears to be a valid portion of the claimed facility allocable to pollution control.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" showing an actual cost of $107,544.00 with 40% or more and less than 60% being allocable to pollution control be issued for the facility claimed in Application No. T-191.

ARTHUR ANDERSEN & CO.

MORGAN BUILDING
PORTLAND, OREGON 97205

To Freightliner Corporation:

We have examined the accompanying Statement of Invoice Costs of Seven Wet Type Paint Booths at Portland, Oregon. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying Statement of Invoice Costs of Seven Wet Type Paint Booths, showing costs of $63,483, presents fairly invoice costs incurred by Freightliner Corporation in such facility at Portland, Oregon.

Arthur Andersen & Co.

Portland, Oregon,
November 25, 1970.

FREIGHTLINER CORPORATION

PORTLAND, OREGON

STATEMENT OF INVOICE COSTS OF

SEVEN WET TYPE PAINT BOOTHS

Equipment	$49,250
Installation	12,181
Miscellaneous labor and material	2,052
	$63,483

FREIGHTLINER CORPORATION

PORTLAND, OREGON

STATEMENT OF EQUIPMENT AND INSTALLATION COSTS OF

SEVEN WET TYPE PAINT BOOTHS

Certified Invoice Costs:

Equipment	$ 49,250
Installation	12,181
Miscellaneous labor and material	2,052
	$ 63,483

Estimated Equipment & Installation Costs (Note 1):

Equipment	$ 9,583
Installation	29,965
Miscellaneous material	4,513
	$ 44,061
	$107,544

Note 1. The estimated costs were determined as follows:

	Estimated Costs		
	Equipment	Installation	Miscellaneous Material
Estimates obtained from consulting engineers	$3,700	$23,805	
Estimates provided by Company's engineering department			
Electrical and plumbing labor estimated at $8.81 and $7.03 per hour respectively	-	$ 6,160	-
Miscellaneous electrical and plumbing materials ($3,438) and duct work materials ($1.075)	-	-	$4,513
Depreciation remaining on transferred equipment	$5,883	-	-
	$9,583	$29,965	$4,513

It was necessary for the Company to estimate these costs since they were incurred as part of the construction of the whole factory.

A C

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 : May 27, 1971 for the June 4, 1971 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES No. T-192.

This application was received on January 29, 1971. A summary of the contents and results of the staff review are given below.

1. Applicant: Freightliner Corporation
Truck Manufacturing Plant
6936 N. Fathom Street
Portland, Oregon 97217

The applicant manufactures heavy duty trucks.

2. The facility claimed in this application is described to be a liquid propane gas standby facility for the purpose of sustaining plant operations during natural gas curtailment. The facility was completed and operation commenced in December 1969.

2. The total cost of the facility is claimed to be $26,520.00. An accountants certification of $21,266.00 is attached. The balance, $5254.00, is derived by estimating a cost allocation for the multi-use boiler. (See attached Exhibits C and D.)

4. Staff Review:

The company considered installing a Bunker "C" oil standby facility at an approximate cost of $7,500. The decision to install the propane facility at greater capital expenditure ($26,520.00 - $7,500.00 = $19,020.00) or 71.8% of $26,520.00) and at an estimated increased operating expense of $1,730.00 annually. The company makes its claim for certification on the basis that the decision to install the more costly facility was based on minimizing the emissions of atmospheric contaminants.

The staff findings indicate that the claimed cost figure is reasonable and that 71.8% of the total cost of the claimed facility is allocable to pollution control.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost figure of $26,520.00 with the percentage allocated to pollution control being "60% or more and less than 80%" be issued for the facility claimed in Application No. T-192.

ARTHUR ANDERSEN & CO.

MORGAN BUILDING
PORTLAND, OREGON 97205

To Freightliner Corporation:

We have examined the accompanying Statement of Invoice Costs of Propane Gas Standby Facility at Portland, Oregon. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying Statement of Invoice Costs of Propane Gas Standby Facility, showing costs of $21,266, presents fairly invoice costs incurred by Freightliner Corporation in such facility at Portland, Oregon.

Arthur Andersen & Co.

Portland, Oregon,
November 25, 1970.

FREIGHTLINER CORPORATION

PORTLAND, OREGON

STATEMENT OF INVOICE COSTS OF

PROPANE GAS STANDBY FACILITY

Propane tank, including installation	$ 6,850
Other equipment, labor and supplies	14,416
	$21,266

Liquid Petroleum (Propane) Gas Standby Facility:

Equipment:	Cost:
1 - Western Propane, 12,000 gal. storage tank, fork truck filling station, transport unloading station, permit, interconnecting piping and valves and installation of same	$ 6,850
1 - E. Sam Dick Co., Model 563 Vaporair 2#, 1 - Model C-12 Pump, 1 - Lot labor & materials to equip Vaporair unit for automatic changeover wiring	$14,416
1 - Rite Model #A-150 - Steam Boiler, N/G, Serial No. 13071	$ 1,646
1 - Familian Northwest Inc. 100 gal. Expansion Tank	$ 129
1 - Paco GRD 410BD5P-R15CT Condensate Return Unit	$ 537
Installation (electrical, mechanical) and misc. material	$ 2,942
TOTAL	$26,520

FREIGHTLINER CORPORATION

PORTLAND, OREGON

STATEMENT OF INVOICE COSTS OF

PROPANE GAS STANDBY FACILITY

Propane tank, including tank & pump installation, excluding concrete piers	$ 6,850
Other equipment, labor and supplies	14,416
Invoice Costs	$21,266
Estimated Cost - allocated portion of multi-use boiler cost (Note 1)	5,254
	$26,520

Note 1. The estimated cost was determined as follows:

Price for standby facility, standing alone, per bid obtained from outside contractor	$26,520
Less - actual costs set forth above	21,266
Estimated cost	$ 5,254

The bid price provided for a separate boiler for the standby facility. The company decided to provide this capacity from a single large boiler which is also used to provide heat for the plant office area.

AQC

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : May 27, 1971 for the June 4, 1971 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-195.

This application was received on January 29, 1971. A summary of the contents and results of the staff review are given below.

1. Applicant: Freightliner Corporation,
Truck Manufacturing Plant
6936 N. Fathom Street
Portland, Oregon 97217

The applicant manufactures heavy duty trucks.

2. The facility claimed in this application is described to consist of a mechanically agitated washing machine and a gas-fired batch oven for cleaning (grease removal) wheel hubs. The facility was completed and operation commenced in December 1969.

3. The total cost of the facility is $4,132.00. An accountant's certification of this figure is attached.

4. Staff Review:

The claimed facility was installed in the new truck assembly plant instead of moving the old degreasing system from the previous assembly plant. Use of the claimed facility eliminates an estimated perchlorethylene emission of 275 gal/month. The company has applied for that portion above moving expenses of the old system ($4,132.00 -$1,500,00 = $2,632.00, or 63.5% of $4,132.00).

The staff findings indicate that 63.5% of the total cost of the claimed facility is allocable to pollution control.

5. Staff Recommendation:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost figure of $4,120.00 with the percentage allocated to pollution control being "60% or more and less than 80% be issued for the facility claimed in Application No. T-195.

ARTHUR ANDERSEN & CO.

MORGAN BUILDING
PORTLAND, OREGON 97205

To Freightliner Corporation:

We have examined the accompanying Statement of Invoice Costs of Hub Cleaning and Heating System at Portland, Oregon. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying Statement of Invoice Costs of Hub Cleaning and Heating System, showing costs of $4,132, presents fairly invoice costs incurred by Freightliner Corporation in such facility at Portland, Oregon.

Arthur Andersen & Co.

Portland, Oregon,
November 25, 1970.

FREIGHTLINER CORPORATION

PORTLAND, OREGON

STATEMENT OF INVOICE COSTS OF

HUB CLEANING AND HEATING SYSTEM

Equipment	$3,735
Labor and supplies	397
	$4,132

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 : April 27, 1971 for the May 7, 1971 Meeting

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-165.

This application was initially received on August 3, 1970. Additional information was submitted on December 29, 1970 and April 16, 1971. A summary of the contents and results of the staff review are given below.

1. Applicant: Teledyne Wah Chang Albany
1600 Old Pacific Highway
P. O. Box 460
Albany, Oregon 97321

The applicant produces zirconium, hafnium, tantalum and niobium metals in pure and alloy forms.

2. The facility claimed in this application is described to be a high pressure drop venturi scrubber for treating the emissions from the feed make-up operation. The facility was completed on June 22, 1969 and operation commenced on July 1, 1969.

3. The total cost of the claimed facility is $43,601.00. An accountant's certification of this figure is attached.

4. Staff Review:

The claimed facility prevents the emission to the atmosphere of chloride materials generated in the feed make-up operation.

A field check by the Mid-Willamette Valley Air Pollution Authority revealed a portion of the claimed facility to be out of place. This condition has been corrected as explained in the attached letter from Mr. T. E. Nelson, Teledyne Wah Chang Albany.

The staff findings indicate that the principal purpose for installing the claimed facility was to reduce atmospheric contamination 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 $43,601.00 be issued for the facility claimed in Application No. T-165.

ARTHUR ANDERSEN & CO.

MORGAN BUILDING
PORTLAND, OREGON 97205

May 19, 1970

To Wah Chang Albany Corporation:

We have examined the accompanying Statement of Actual Costs of Chloride Fume Scrubber Venturi at Albany, Oregon. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying Statement of Actual Costs of Chloride Fume Scrubber Venturi, showing total costs of $43,601, presents fairly costs incurred by Wah Chang Albany Corporation in the purchase and installation of such venturi at Albany, Oregon.

Very truly yours,

Arthur Andersen & Co.

WAH CHANG ALBANY CORPORATION

ALBANY, OREGON

STATEMENT OF ACTUAL COSTS OF

CHLORIDE FUME SCRUBBER VENTURI

Purchased equipment, supplies and services	$37,598
Company labor and engineering	6,003
Total	$43,601

to HLS

TELEDYNE
WAH CHANG ALBANY
P.O. BOX 460
ALBANY, OREGON 97321
(503) 926-4211 TWX (510) 595-0973

April 15, 1971

Mr. Frederic A. Skirvin
Department of Environmental Quality
Post Office Box 231
Portland, Oregon 97207

Dear Mr. Skirvin:

This letter is in response to our conversations on Tax Credit Applications and a response to the Mid-Willamette Valley Air Pollution Authority letter to you dated March 2, 1971. The delay in responding was due in part to the time required to replace equipment so as to comply with Mr. Roach's requests.

Tax Credit Application T-166 Anhydrous Ammonia Collection & Scrubbing

The hafnium filtration area is now served by the ducting system contained in our original plans which were approved by MWVAPA in January, 1969, prior to construction. Since the scrubber and attendant fume collection system have been in operation they have not failed to meet design expectations. Therefore, we feel that approval of T-166 should be granted and any changes should be viewed as additions to an already efficiently functioning system.

Tax Credit Application T-165 Chloride Fume Scrubber - Venturi

Since the field check by M.D. Roach, all of the equipment claimed on this scrubber is at the scrubber site. However, only one fan is operated at a time with the other in standby status. Stack analyses have shown that the unit functions satisfactorily with only one fan. Therefore, we will continue to operate the scrubber in this manner so as to facilitate maintenance of the system, and to further ensure that the scrubber has a standby fan in good working order ready for use in case of a breakdown of the other unit.

Tax Credit Applications T-164, T-165, and T-166 contain a listing of all equipment for the three systems under review. However, should you require clarification of any information in this regard, we can abstract it from the complete materials list we have provided with our application.

Updated emission data are now being prepared for transmittal to MWVAPA. As soon as these data are available from the Laboratory, I will provide you with the most recent data we have on the subject areas.

We desire to proceed with the certification of the three above-mentioned Tax Credit Applications at your earliest convenience. If you have any questions concerning this matter, please contact me.

Sincerely yours,
TELEDYNE WAH CHANG ALBANY

Thomas E. Nelson

Thomas E. Nelson,
Manager, Pollution Control

TEN:dkm

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OFFICE BUILDING • 1400 S.W. 5th AVENUE • PORTLAND, OREGON • 97201

TOM McCALL
GOVERNOR
KENNETH H. SPIES
Director

ENVIRONMENTAL QUALITY COMMISSION
B. A. McPHILLIPS
Chairman, McMinnville
EDWARD C. HARMS, JR.
Springfield
STORRS S. WATERMAN
Portland
GEORGE A. McMATH
Portland
ARNOLD M. COGAN
Portland

May 27, 1971

Pacific Carbide & Alloys Company
Post Office Box 17008
Portland, Oregon 97217

Attention: Mr. T. J. Waters, Vice President

Gentlemen:

Re: Tax Relief Application No. T-188

The Department of Environmental Quality will recommend to the Environmental Quality Commission at its meeting on June 4, 1971 that action on your tax application be formally deferred until proposed facilities for handling the scrubber waste water are completed and demonstrated to be adequate.

The meeting will be held at the Sunriver Lodge south of Bend, beginning at 10:00 a.m.

Very truly yours,

Kenneth H. Spies

Kenneth H. Spies, Director
Department of Environmental Quality

HLS:mjb

AQC

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 : May 24, 1971 for Meeting of June 4, 1971

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES NO. T-188.

1. Applicant: Pacific Carbide & Alloys Company
9901 North Hurst Street
P. O. Box 17008
Portland, Oregon 97217

Mr. T. J. Waters,
Vice-President
Phone: 289-1186

The applicant produces calcium carbide in an arc furnace from the starting materials lime and coke.

2. The facility claimed in this application is described to consist of furnace hooding, ducting, venturi scrubber, a fan, discharge stack, water supply, drains, ~~electrical~~ motors and services, instrument, foundations and structures. The facility was completed October 1, 1970. Preliminary operation commenced April 27, 1970.

3. The total cost of the facility is $139,108.38. An accountant's certification of this figure is attached.

4. Staff Review:

Prior to the installation of the claimed facility, emissions from the calcium carbide furnace were passed through a spray chamber. The spray chamber which is still used when the claimed facility is inoperable, did not meet the requirements of the Columbia-Willamette Air Pollution Authority. The venturi scrubber system was installed at the request of and after review and approval by CWAPA. (See attached letter from CWAPA.)

According to tests made by the company, the facility meets the applicable CWAPA process weight and grain loading limitations. Although the system suffers from frequent upsets and breakdowns, it does serve to reduce atmospheric emissions. The installation of additional equipment is planned to improve the servicability of the control system.

The scrubber water is routed through a settling pond system and discharged into the Columbia Slough.

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

5. Staff Recommendation:

The staff recommends that a "Pollution Control Certificate" bearing the actual cost of $139,108.38 be issued for the facility claimed in Application No. T-188.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS

STANDARD PLAZA
PORTLAND, OREGON 97204

December 29, 1970

Pacific Carbide & Alloys Co.,
P. O. Box 17008,
Portland, Oregon 97217.

Attention: Mr. T. J. Waters

Dear Sirs:

In accordance with your request, we have examined the accompanying schedule of pollution control facility costs for the fifteen months ended December 31, 1970. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying schedule presents fairly the costs of the facilities described therein.

Yours truly,

Haskins & Sells

PACIFIC CARBIDE & ALLOYS CO.

SCHEDULE OF POLLUTION CONTROL FACILITY COSTS
FOR THE FIFTEEN MONTHS ENDED DECEMBER 31, 1970

1.	Foundations, Transformer House, Blacktop	$ 6,435.17
2.	Water, Sprays, Pumps, Sludge Line and Well, Air Line	14,831.01
3.	Electrical, Service, not including Motors	12,932.79
4.	Hood and Ducting, Duct Vent Fan, Platform	4,798.76
5.	Venturi and Separator, 400 H.P. Motor and Starter	75,096.53
6.	1-1320L25 Buffalo Centrifugal Fan	20,424.51
7.	Instruments, Metalurgical Studies, and Calibration	4,589.61
	TOTAL	$139,108.38

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COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

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

10 March 1971

Department of Environmental Quality
Air Quality Control Division
1400 S.W. Fifth Avenue
Portland, Oregon 97201

Attention: Mr. Fredrick A. Skirvin

Gentlemen:

This is in reference to your 17 February 1971 letter regarding the Oregon State tax relief application of Pacific Carbide and Alloys Company. In answer to your specific questions, this Agency did require installation of the pollution control facility inorder to bring this source into compliance with applicable rules. This Agency reviewed plans of the equipment prior to construction and the facility was constructed in accordance with approved plans. The company did consider various types of control equipment prior to making their final choice which was based on achieving compliance with applicable rules at a reasonable cost.

Recent visual observations of the stack emissions by our staff indicate that compliance is being achieved with opacity standards and recent stack tests by the Pacific Carbide and Alloys Company confirm compliance with process weight regulations. The control facility has however experienced considerable breakdown time resulting in excessive furnace emissions for periods on occassion inexcess of 24 hours. It is expected that this breakdown condition will be eliminated in the near future by installation of further equipment which will consist of a new fan and water separator which will be connected in parallel with the existing fan and stack to provide immediate change over from one to another when operating conditions warrant.

Should you require any further information on this matter, please do not hesitate to contact this Agency.

Very truly yours,

John F. Kowalczyk

John F. Kowalczyk
Technical Director

JFK:dc