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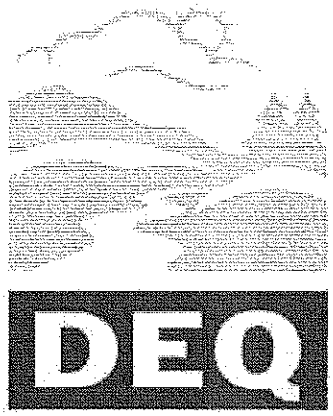
OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of Environmental Quality

AGENDA

Environmental Quality Commission Meeting

9:00 a.m., December 19, 1969

Room 36, State Office Building, 1400 S.W. 5th Ave., Portland, Oregon

PUBLIC HEARING

A. 9:00 a.m. Proposed Water Quality and Waste Treatment Standards for Tualatin River Basin

OTHER ITEMS

B. Minutes of November 20-21, 1969 meetings

C. Project plans for November 1969

D. Representatives of PURE, Inc., Bend

E. B.F. Cleat & Slat Co., Roseburg air pollution problem

F. City of Burns sewage disposal

G. Variances granted by Mid-Willamette Valley Air Pollution Authority

(a) Sweet Home Sanitary Service Co.
(b) Stayton Sanitary Service Co.

H. Columbia-Willamette Air Pollution Authority Air Purity Standards

I. Carbon Monoxide Ambient Air Standards

J. Motor Vehicle Visible Emissions Regulations

K. McKenzie and Santiam River Basins Water Quality and Waste Treatment Standards

L. Waste Discharge Permit Regulations

M. Waste Discharge Permits

(1) City of Springfield (renewal)
(2) City of The Dalles (renewal)
(3) Estacada Rock Products, Inc., Estacada
(4) Northwest Sand & Gravel, Inc., Milwaukie
(5) Quick Service Sand & Gravel, Inc., Clackamas
(6) River Island Sand & Gravel Co., Oregon City
(7) Rock Creek Sand & Gravel Co., Clackamas

N. Tax Credit Applications

(1) Georgia Pacific Corp., Toledo T-63
(2) May Dept. Stores Co. (Meier & Frank), Portland T-99

O. Authorization for public hearings

(1) Ambient Air Standards: Suspended Particulates
Particle Fallout
Fluorides

(2) Regulations: Aluminum Reduction Plants
Sulphite Pulp Mills
Registration, Sampling, Testing and Measurement

Project Plans

During the month of November 1969, the following 12 sets of project plans and engineering reports were reviewed and the action taken as indicated by the Water Quality Control Section.

Date	Location	Project	Action
11- 7-69	Multnomah County	Columbia River South Shore Report	Approved
11- 7-69	Clatsop County	Sunset Beach Sewerage Report	Approved
11-14-69	Springfield	Project S-97	Prov. app.
11-14-69	Springfield	Project S-99	Prov. app.
11-14-69	Lake Oswego	Maple Street sewer and pump station (LID #114)	Prov. app.
11-18-69	Gresham	N. W. Wonderview Court	Prov. app.
11-18-69	Portland	Rivergate Change Order Nos. 1-14	Prov. app.
11-19-69	Mt. Angel	Filter by-pass line	Prov. app.
11-20-69	Pendleton	Sewage treatment plant	Prov. app.
11-24-69	Newberg	Elliot Rd. to Spring-brook Rd.	Prov. app.
11-28-69	Jefferson	Change Order No. 1	Approved
11-28-69	Lake Oswego	Mt. Park Phase IV	Prov. app.

HMP

MINUTES OF SEVENTH MEETING

of the

Oregon Environmental Quality Commission

December 19, 1969

The seventh regular meeting of the Oregon Environmental Quality Commission was called to order by the Chairman at 9:05 a.m., Friday, December 19, 1969, in Room 36 of the State Office Building, 1400 S.W. 5th Avenue, Portland, Oregon. Members present were B.A. McPhillips, Chairman, Edward C. Harms, Jr., George A. McMath, Herman P. Meierjurgen and Storrs S. Waterman.

Participating staff members were Kenneth H. Spies, Director; E.J. Weathersbee, Deputy Director; Arnold B. Silver, Legal Counsel; Harold M. Patterson, Air Quality Control Division Director; J.A. Jensen, Municipal Sewerage Chief Engineer; Glen D. Carter, Water Quality Analyst; Harold L. Sawyer and E.R. Lynd, Supervising Engineers; Fred M. Bolton, District Engineer; F. Glen Odell, F.A. Skirvin, R.C. Householder and H.W. McKenzie, Associate Engineers, and R. Bruce Snyder, Meteorologist.

WATER QUALITY STANDARDS PUBLIC HEARING

Proper notice having been given as required by statute and copies of the proposed standards having been sent to the interested parties, a public hearing was held for the purpose of considering the adoption of special water quality and waste treatment standards for the Tualatin River Basin.

Mr. Carter of the Department of Environmental Quality presented a prepared statement for the staff which reviewed the proposed standards and the plan or program for implementing them. As a part of his statement he read from the proposed standards all of Table A (the list of beneficial uses to be protected), page 11, all of Section I - Special Water Quality Standards and all of Section II - Minimum Standards for Treatment and Control of Wastes, pages 12 to 16, inclusive, plus all of the Department's Proposed Program of Implementation, pages 22 to 24, inclusive. He pointed out that the latter includes Tables B and C, pages 25 to 34, inclusive.

Mr. Carter submitted the following amendments to the standards originally proposed:

(1) On page 12, section I A, line 2, delete the word "fecal" and insert the word "sewage."

(2) On page 13, section I D, at the beginning of line 1 insert "1." and at the end of that paragraph add another subsection as follows: "2. In all other basin areas, any measurable increases when stream temperatures are 68° F. or above, or more than 4° F. increase when stream temperatures are 64° F. or less."

(3) On page 15, section II A, add another subsection as follows: "6. More stringent waste treatment and control requirements including reductions in nitrogen and/or phosphorous levels may be imposed where special conditions may require."

At the conclusion of his statement Mr. Carter recommended that at the appropriate time Table A and Sections I and II of the proposed standards with the above amendments for the Tualatin River Basin be adopted by the Commission as administrative rules, and that the proposed Program of Implementation including Tables B and C be adopted as administrative policy.

The Honorable Eldon Hout, Chairman of the Washington County Board of Commissioners, testified that the county agrees with and supports the proposed standards and proposed amendments. He stated that compliance with them will cost a lot of money - more than was initially thought. He said the county needs to be assured that the standards will not be changed again in the near future and also that they will not be immediately enforced. He asked that there be considerable flexibility in their enforcement so that the interim program can proceed without too much difficulty. He claimed that continued growth in the basin is needed to help finance the master plan.

Mr. Hout reported that a special election will be held on February 3, 1970 for formation of a county service district which is the next step in implementing the master sewer plan for the basin.

Mr. James L. Blazier of Stevens, Thompson and Runyan, Inc., Consulting Engineers for the County of Washington, read a prepared statement in which he asked that there be some relaxation of the dilution requirements and also that there be some flexibility in the treatment standards in order to allow implementation of the master sewerage plan.

Mr. John Mosser, Chairman of a Citizen's Committee to promote approval of the proposed County Service District and implementation of the master sewer plan for the Tualatin Basin, said that he supports the proposed standards. He requested, however, that as soon as possible the Commission announce its policy for lifting the present ban on sewer connections after certain steps have been taken to implement the master plan and what the requirements will be during the interim until the plan is completed. He asked further that within the next 6 months a decision also be reached about the possible requirement for nutrient removal.

With regard to lifting the ban he suggested that after the following four steps have been taken, namely (1) formation of the unified sewerage agency, (2) approval of financing, (3) sale of bonds and (4) completion of a contract for low flow augmentation, sewer connections be permitted immediately to those plants which met standards during the summer of 1969 and that after the low flow period of 1970 sewer connections be permitted to all plants in the unified sewerage district. He said he believes construction in all areas could be permitted in the basin next summer as long as sewer connections are delayed until the low flow period is ended.

He said that by 1971 the first flow augmentation should be available, the Aloha and Metzger plants should be expanded, the Beaverton and Tigard plants should be modified, the new Hillsboro plant should be completed and diversions from the Fanno Creek plant should be made. He pointed out that this would represent all that could be accomplished until 1973.

The Chairman assured Mr. Mosser that the Commission would decide shortly on the policies which it will follow in this matter.

Mr. Frank A. Schumaker, Mayor of West Linn, read a joint statement for the cities of Lake Oswego and West Linn and the County of Clackamas. He claimed that they have plans to construct a dam on the lower Tualatin

and to create a reservoir for high recreational use. He questioned whether the proposed standards would be high enough to protect such a use and therefore asked that more time be allowed to evaluate them from that standpoint.

Mr. Paul Dennis, representing the Washington County Chapter of the Izaak Walton League of America, read a statement for that organization urging adoption of the standards as proposed and amended by the Department's staff.

Mr. Kenneth Gates read a prepared statement from the Portland Chapter of the Association of Northwest Steelheaders expressing concern about the possible increase of pollution of Oregon's water resources.

Mr. McPhillips pointed out to those in attendance at the hearing that in a talk 25 years ago he had warned the conservationists that they must get busy immediately if they hoped to protect their environment against pollution and that at long last his warning is finally being heeded.

Mr. Robert Arndorfer read a statement for the Portland Chapter of the Izaak Walton League of America. He recommended that nutrient removal be required, that a more positive plan be adopted for controlling pollution from agricultural, livestock feeding, logging and roadbuilding activities, and that effluent standards apply equally to municipalities and industries.

Mr. Henry Hagg represented the Tualatin Valley Irrigation District and stressed the importance of flow augmentation. He said he personally had worked for 35 years in an attempt to get the federal government to build the Scoggins Creek dam and reservoir. He said it now appears the people of the basin better do it themselves.

Mr. Larry Sprecher, Beaverton City Manager, said they need to know what the interim policy and requirements will be so that they can proceed with their plans. He asked that an indication be made at least by the next monthly meeting of the Commission.

Mr. Harold Shaper, speaking for the Washington County Soil and Water Conservation District, said they approve of the proposed standards as amended.

Mr. Ronald Hasselman, Assistant Water Analyst, read a joint statement for the State Game and Fish Commissions. He expressed concern about the amendment to the temperature standard and also about the adequacy of the waste treatment requirements for the hardboard mill located on Scoggins Creek below the site of the proposed Scoggins Creek dam and reservoir.

The Director then entered in the record of the hearing the following 7 letters which had been received by the Department: (1) from James L. Agee, Regional Director, FWPCA, approving and strongly supporting the adoption of the proposed standards, (2) from L.E. Newkirk, Vice President of the Lake Oswego Corporation, supporting adoption of the standards and formation of the proposed service district, (3) from F.B. Klaboe, Assistant State Highway Engineer, approving the proposed standards, (4) from J.W. Barney, Hillsboro City Manager, requesting at least 5 years for the city to comply fully with the waste treatment standards at the new plant which is currently under construction, (5) from Daniel O. Potter, Forest Grove City Manager, requesting special consideration be given to the specific circumstances under which the Forest Grove sewage treatment works are operated, (6) from H.S. Burdin of John W. Cunningham & Associates, Engineers, asking that further consideration be given before the proposed standards are adopted in order that implementation of the Master Plan will not be jeopardized, and (7) from Mrs. Rosalie Morrison urging the Commission to follow a policy of strict enforcement and not to give in to political pressures.

Copies of the above letters and the written statements presented by Glen Carter, James Blazier, John Mosser, Frank Schumaker, Paul Dennis, Kenneth Gates, Robert Arndorfer, Henry Hagg, Harold W. Shaper and Ronald Hasselman have been made a part of the Department's permanent files in this matter.

It was MOVED by Mr. Meierjurgen, seconded by Mr. Waterman and carried that the matter of adoption of the proposed standards with amendments for the Tualatin River Basin be tabled until the Department's staff has completed its evaluation of the testimony received at this hearing.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the staff be requested to recommend for early consideration by the Commission an implementation policy covering the points raised by Mr. Mosser for the interim period while the facilities required by the Master Plan are being constructed.

The public hearing was then recessed and the regular meeting of the Commission was immediately convened by the Chairman at 10:45 a.m.

MINUTES OF NOVEMBER 20-21, 1969 HEARINGS AND MEETINGS

It was MOVED by Mr. Meierjurgen, seconded by Mr. Harms and carried that the minutes of the public hearings and sixth regular meeting of the Commission held on November 20-21, 1969, be approved as prepared by the Director.

PROJECT PLANS FOR NOVEMBER 1969

It was MOVED by Mr. Waterman, seconded by Mr. McMath and carried that the actions taken by the staff during the month of November 1969 on the following 12 water pollution control projects be approved: (Note: No air quality control project plans were processed during the month.)

Water Pollution Control

Date	Location	Project	Action
11/7	Multnomah County	Columbia River South Shore Report	Approved
11/7	Clatsop County	Sunset Beach Sewerage Report	Approved
11/14	Springfield	Project S-97	Prov. app.
11/14	Springfield	Project S-99	Prov. app.
11/14	Lake Oswego	Maple Street sewer and pump stn. (LID #114)	Prov. app.
11/18	Gresham	N.W. Wonderview Court	Prov. app.
11/18	Portland	Rivergate Change Order Nos. 1-14	Prov. app.
11/19	Mt. Angel	Filter by-pass line	Prov. app.
11/20	Pendleton	Sewage treatment plant	Prov. app.
11/24	Newberg	Elliot Rd. to Springbrook Rd.	Prov. app
11/28	Jefferson	Change Order No. 1	Approved
11/28	Lake Oswego	Mt. Park Phase IV	Prov. app.

DESCHUTES RIVER BASIN STANDARDS

Mr. D.A. Walton, Jr., of Bend said he was present to represent the people of that area who had expressed concern about the water quality standards which were adopted by the Commission on November 21, 1969 for the Deschutes River Basin. The secretary of PURE had requested the opportunity for them to be represented at this meeting.

(Note: Since November 21, 1969, letters from the Oregon Environmental Council, the Jefferson County Commission and the Willamette River Greenway Association and another petition bearing 34 signatures had been received by the Department urging that no sewage and waste effluents be permitted to be discharged into the Deschutes River system.)

Mr. Walton thanked the Commission for the consideration which it had given in this matter and stated that he did not have much more to say in light of the recent discussions with the Governor. He said the people will do everything possible to cooperate and to help conduct studies of alternative methods for disposal of wastes on land.

The Chairman then read and MOVED adoption of the following proposed resolution: "It is hereby resolved that in addition to the requirements of the water quality and waste treatment standards for the Deschutes River Basin adopted by this Commission on November 21, 1969, no application for the discharge of any new sewage or waste effluent into the Deschutes River or any of its tributaries shall be considered by the Department of Environmental Quality until a comprehensive area-wide study of the basin's sewerage and waste treatment needs and possible alternative methods of disposal has been completed and a master plan which meets the approval of this Commission has been formally adopted by the respective county courts for implementation." The motion was seconded by Mr. Harms. Mr. Meierjurgen pointed out that the proposed resolution contained no timetable and suggested that the motion be amended to include a time limit of two years. The motion was so amended by the Chairman and Mr. Harms.

Deschutes County Commissioner Dorothy Smead was present and expressed concern that they might not be able to complete the study in two years. She was advised that the county better get busy and do the job as quickly as possible.

The amended motion was then passed unanimously.

TAX CREDIT APPLICATION - GEORGIA PACIFIC CORPORATION

Dr. Edward Taylor was present to represent the Georgia Pacific Corporation in the matter of its application T-63 for a tax credit in connection with the construction of primary treatment facilities for liquid wastes discharged into the Yaquina River from its Toledo pulp mill. The report covering the staff's evaluation and recommendation had previously been sent by Mr. Sawyer to the Commission members for consideration.

It was MOVED by Mr. Harms, seconded by Mr. Waterman and carried that a tax credit certificate as recommended by the staff be approved for the Georgia Pacific Corporation pursuant to application No. T-63 for water pollution control facilities installed at a cost of $349,110.70.

VARIANCES GRANTED BY MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

Mr. Snyder reviewed briefly the two variances granted on November 18, 1969 by the Mid-Willamette Valley Air Pollution Authority to the Sweet Home Sanitation Service Company and the Stayton Sanitary Service Company permitting them to continue open burning until May 18, 1970. He said the staff recommends that the MWVAPA be directed to deny any application for renewal of these variances.

Mr. Harms stated that in his opinion open burning in these areas is completely inexcusable, particularly in view of the air pollution problem which exists in the valley not only in the summer but also late fall.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that MWVAPA be directed to deny any application for renewal of the variances granted to the Sweet Home Sanitation Service Company and Stayton Sanitary Service Company.

Mr. Silver said he would prepare appropriate orders.

CARBON MONOXIDE AMBIENT AIR STANDARDS

The public hearing in the matter of adoption of proposed carbon monoxide ambient air standards was continued from November 20, 1969. Since the original hearing on November 20 the staff had reviewed all of the testimony given on that date and had prepared a memorandum dated December 17, 1969 which contained a suggested implementation program. Copies of the staff memorandum had been sent to the Commission members prior to this meeting.

Several young mothers carrying placards were present to register their objection to the proposed standards. Mrs. Joe H. Rand read a prepared statement in their behalf. A copy of it has been made a part of the Department's files. She proposed that the proposed standard be changed from 20 ppm/8 consecutive hours to 15 ppm/8 hours and that by January 1973 it be further reduced to 10 ppm. She proposed further that the emission level of cars allowed in designated areas such as downtown Portland be strictly regulated and also that the horsepower of automobiles also be limited as a means of reducing emissions.

Mr. Patterson discussed the significance of the proposed standards and Mr. Householder discussed the availability of emission control systems for automobiles.

After considerable discussion it was MOVED by Mr. Waterman and seconded by Mr. Harms that the ambient air standards for carbon monoxide as proposed by the staff be adopted as administrative rules, and that the proposed policy and guideline program contained in the December 17 staff memorandum be adopted as administrative policy.

It was then MOVED by Mr. McMath, seconded by Mr. Harms and carried that the above motion be amended as follows: If it is determined that a health hazard does exist, the regions be directed to implement traffic control programs which they deem advisable and practicable for elimination of the hazard in any given area.

The amended motion was then passed unanimously.

MOTOR VEHICLE VISIBLE EMISSIONS REGULATIONS

Mr. Householder had recently prepared for the information of the Commission members a memorandum regarding the current control of automobile emissions nationwide and in the state of California and the availability of evaporation control systems. He said that additional time would be needed to review data which had just been received from the Engine Manufacturing Association with regard to the problem of compliance with the proposed standards for diesel engines and therefore he suggested that action be deferred on the proposed visible emissions regulations until the next Commission meeting.

The Chairman said that maybe there is a need for more enabling legislation and that the staff and Commission members should probably give more consideration to the matter before taking any final action.

Mr. Waterman said he thought the Commission should act as soon as possible. Mr. Harms said he was ready to act now.

It was MOVED by Mr. McMath, seconded by Mr. Meierjurgen and carried that action on the proposed visible emission standards be deferred until the staff has undertaken further study and until legislative representatives have been contacted regarding possible consideration of additional state laws for enforcement. Mr. Harms voted against the motion.

McKENZIE AND SANTIAM RIVER BASINS STANDARDS

The public hearing in the matter of adoption of proposed water quality and waste treatment standards for the McKenzie and Santiam River Basins was continued from the November 21, 1969 meeting. The Director reported that as directed by the Commission the staff had given further consideration to the testimony given at the previous hearing by the Oregon Fish and Game Commissions and had also surveyed the McKenzie River to determine possible future development of that basin. He said that as a result the staff recommends that the standards as proposed at the November 21, 1969 hearing session be adopted without any revisions except that for the McKenzie they be supplemented by a resolution similar to the one adopted at this meeting for the Deschutes Basin.

It was MOVED by Mr. Harms, seconded by Mr. Meierjurgen and carried that the proposed standards be amended as follows: (1) Revise subsection II.A.1.a. to read "For discharge to public waters of the McKenzie River Basin upstream from Hayden Bridge, river mile 14.8, monthly average effluent concentrations not to exceed 5 milligrams per liter of 5-day 20° C. Biochemical Oxygen Demand (BOD) and 5 milligrams per liter of suspended solids (SS)." (2) Add a new subsection II.A.1.b. which reads "For discharge to public waters of the McKenzie River Basin from its confluence with the Willamette River upstream to Hayden Bridge, river mile 14.8, monthly average effluent concentrations not to exceed 10 milligrams per liter of 5-day 20° C. Biochemical Oxygen Demand (BOD) and 10 milligrams per liter of suspended solids (SS)." (3) Existing subsections II.A.1.b., II.A.1.c. and II.A.1.d. be redesignated as II.A.1.c, II.A.1.d. and II.A.1.e. respectively.

Mr. A.G. Heizenrader of the Oregon Concrete and Aggregate Producers Association was present and objected, as he had at the November 21 session, to the requirement set forth in item No. 3 of the Implementation Program pertaining to sand and gravel removal operations.

It was MOVED by Mr. Harms, seconded by Mr. Waterman and carried that the water quality and waste treatment standards including Table A and Sections I and II, as amended, be adopted by the Commission for the McKenzie and Santiam River Basins as administrative rules and that the Implementation Program including Tables B-2, C-1 and C-2 be adopted by the Commission as administrative policy.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the following resolution be adopted: "It is hereby resolved that for one year and in addition to the requirements of the water quality and waste treatment standards for the McKenzie River Basin adopted by this Commission on December 19, 1969, no application for discharge of any new sewage or waste effluent into the McKenzie River or any of its tributaries shall be considered by the Department of Environmental Quality until a comprehensive area-wide study of the basin's sewerage and waste treatment needs and possible alternative methods of disposal has been completed and a master plan which meets the approval of this Commission has been formally adopted by the Lane County Commission for implementation."

The meeting was recessed at 12:15 p.m. and reconvened at 1:45 p.m.

During the noon recess the Commission members and staff discussed preliminarily possible interim policies for sewer connections in the Tualatin River Basin pending completion of the master sewer plan.

B.F. CLEAT & SLAT COMPANY, Roseburg

Mr. McKenzie reviewed a staff memorandum dated December 10, 1969 regarding the problem of air pollution caused by open burning of wood wastes at the B.F. Cleat and Slat Company plant located in the Melrose Addition near Roseburg. He recommended that the company not be permitted to construct and operate a wigwam burner and that it be required to employ suitable waste disposal measures so as to preclude open burning.

Mr. Meierjurgen asked how many people were affected by this pollution problem and Mr. Jack Osborne, Douglas County Sanitarian, who was present replied that some 400 to 500 persons resided in the Melrose area. Mr. Osborne delivered to the Department an unsigned letter of complaint dated December 18, 1969 from the residents of the Melrose-Elgarose area of Douglas County.

Mrs. Frances Bridges was present to represent the company. She claimed they could not afford to dispose of the small quantity of wastes in any manner other than by open burning. She said they were considering the installation of a dutch oven incinerator at an estimated cost of about $500. Mr. McKenzie said he had no knowledge of such a proposal and did not know if it would be satisfactory or not.

The Chairman asked about the possibility of hauling the material to the county dump for disposal. Mr. Osborne said the county could not permit that because if they accepted the waste from one company they would have to accept it from all the others and they do not have room enough for that.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the staff recommendation be approved, namely, that the company not be permitted to construct and operate a wigwam burner at this site and that it be required to employ within 60 days suitable measures to preclude open burning of the wood wastes at any refuse dump site including the company's own property in accordance with Oregon Administrative Rules, Sections 22-011 to 22-016.

CITY OF BURNS

Mr. Jensen reported that pursuant to the action taken by the Commission at the November 21, 1969 meeting the city of Burns had been instructed by letter dated November 26, 1969 to be represented and to present at this meeting a suitable time table for completion of its required sewage disposal improvement project.

Mr. Gilbert Groff, consulting engineer, was present and said he had been authorized to represent and to speak for the Burns city council.

Mr. Harms pointed out the city had almost willfully violated a past order of the Commission to install chlorination facilities.

Mr. Groff said the city is now able to have the plans for the required improvement prepared by March 1, 1970 and to have the project completed by July 1, 1970. He said they had had trouble in getting additional land for the chlorine contact lagoon but now have the land and can finance the project without having to submit a bond issue to the people.

It was concluded by the Commission members that the above timetable was probably as good as could be expected and therefore the staff was instructed to develop provisions on that basis for renewal of the city's waste discharge permit. Mr. Sawyer pointed out that the city has applied for a renewed permit. Mr. Harms said the city must be held to this timetable.

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY RULES

Mr. Odell reported that the new ambient air standards adopted by the Columbia-Willamette Air Pollution Authority on November 21, 1969 had been reviewed and found to be in conformance with state requirements and therefore are acceptable. Copies of them had been furnished to each Commission member.

Mr. Waterman stressed the importance of adopting standards that are compatible with the state and other regions and in this case with the state of Washington.

It was MOVED by Mr. Harms, seconded by Mr. McMath and carried that the new rules adopted by the CWAPA be approved.

WASTE DISCHARGE PERMIT REGULATIONS

A public hearing having been held on December 2, 1969 by hearings officer, Sherman Washburn, and his report together with his findings and conclusions having been reviewed by the Commission members and appropriate amendments based on evidence presented at the hearing having been made by the staff and submitted to the Commission by Mr. Sawyer, it was MOVED by Mr. Waterman, seconded by Mr. Harms and Mr. Meierjurgen and carried that the proposed Regulations Pertaining to Waste Discharge Permits as amended be adopted as administrative rules.

A copy of the amended regulations has been made a part of the Department's permanent files.

regulations governing aluminum reduction plants, sulfite pulp mills, and the registration, sampling, testing and management of air emission sources.

It was MOVED by Mr. Harms, seconded by Mr. Meierjurgen and carried that the authorization as requested be granted.

OTHER MATTERS

Mr. Harms suggested that the staff consider or study the need to direct the shut down of certain operations or emissions during periods of excessive suspended particulates in the atmosphere and to determine if such conditions are serious enough to consider a shut down and, if they are, determine if we can prepare a schedule or method of controlling them. He said he would hate to see the London Fog raincoat replaced by a Eugene-Springfield fog raincoat.

In response to a question by Mr. McMath, Mr. Sawyer and Mr. Silver both indicated that under the tax credit law certain lease costs can be considered legally eligible.

There being no further business the meeting adjourned at 2:50 p.m.

Respectfully submitted,

Kenneth H. Spies

Kenneth H. Spies
Director

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL STAFF

DATE : December 10, 1969 (For presentation at December 19 Meeting)

SUBJECT: B. F. CLEAT and SLAT COMPANY, ROSEBURG

SUMMARY

B. F. Cleat and Slat Company operates a small remanufacturing plant in the Melrose area, approximately 9 miles west of Roseburg. The plant employs approximately 6 people, and the principal product is cleats for wirebound boxes. These are strips approximately ¾" x ¾" x 16" long with a 45° bevel cut at each end, cut from scrap and trim obtained from outside sources. Residues from this process consist principally of reject lumber scrap, reject cleats, bevel end cuts and sawdust.

Previously located at 2450 Stephens Street in Roseburg, the plant was moved to a newly constructed building in the Melrose area in June of 1969. At the old address, the wood residues were burned in a 16 foot diameter wigwam burner. Due in part to numerous objections and a petition bearing 56 signatures, we have discouraged the company's plan to apply for approval to reconstruct the old wigwam burner at the new plant site, but rather to sell the residues as chips and sawdust. No plans and specifications on a proposed wigwam burner installation have been submitted.

Mr. and Mrs. Eugene Bridges, who operate the plant, have found a market for the sawdust, but claim not to have been able to afford a suitable chipper to utilize the remaining residues. The practice has been to sell the coarse residues as firewood, and to open burn the remainder, consisting of approximately 3 units per day of reject cleats. Initially, this remainder was deposited in piles on the plant site where it was periodically ignited. More recently, it has been burned continuously at the point where it falls from the end of the refuse conveyor. Complaints of nuisance conditions due to smoke from open burning have continued.

We have provided information to the company as to sources of reasonably priced new and used small chippers, one of which might be available on a leasing arrangement.

On November 24, in view of the availability of two acceptable alternatives (transport to a public dump, or chipping for sale), we requested that the practice of open burning be discontinued.

A solution to the problem hinges on the allegedly limited financial capability of B. F. Cleat and Slat Company. In accordance with the expressed policy of the Commission in such matters, the staff has therefore brought the matter before the Commission for decision. Mr. and Mrs. Bridges have asked to be heard on the subject.

CONCLUSIONS

Any acceptable solution to this problem will require some financial investment, and a repaired, correctly modified wigwam burner is not necessarily the least expensive choice.

A market for chips is available and would provide some return on the investment in a chipper.

RECOMMENDATIONS

The staff recommends that the Commission instruct, in advance, that approval to construct and operate a wigwam burner at this site be denied, and that the Company be required to employ suitable measures to preclude open burning of their wood residues at any refuse dump site, including that on their own property, in accordance with Oregon Administrative Rules, Sections 22-011 and 22-016.

FILE ABSTRACT

The following is a chronological outline of the principal communications and staff surveys pertaining to the problem:

May 5, 1969, Mr. James K. Gray, M.D., Douglas County Health Officer, addressed a letter to the Department calling our attention to a "cleat mill" being constructed in the Melrose area west of Roseburg and expressing concern that, if allowed, a wigwam burner at this location would be a constant source of complaints.

May 6, 1969, we addressed a letter to Mr. Eugene Bridges of B. F. Cleat and Slat Company, advising him of the regulations pertaining to the construction and operation of wigwam waste burners and their requirement that plans and specifications must be approved prior to construction. It was pointed out that approval might not be granted and that residents had already expressed concern regarding operation of a wigwam burner in the Melrose area.

May 19, 1969, a petition bearing 56 signatures was received, which requested that we not approve the construction and operation of a wigwam burner at the new plant site west of Melrose.

May 20, 1969, a letter was received from B. F. Cleat and Slat Company which in effect requested approval of the existing wigwam burner at the new plant location. The letter also requested our suggestions for improvements to the burner and stated that several inquiries had been made concerning a market for the wood wastes, without success.

May 27, 1969 we addressed a letter to B. F. Cleat and Slat advising them that in view of the many objections to the location of a wigwam burner in the Melrose area which we had received, we could not approve an application at staff level, and that an audience with the Sanitary Authority could be arranged if they wished.

June 12, 1969 we received a letter from William Jayne, Attorney for B. F. Cleat and Slat. Mr. Jayne advised that this was a small operation producing only a maximum of 2000 pounds of waste per hour, that it seldom runs steadily, that permits had been obtained from Douglas County and from the Forest Service to burn the materials in the open once a week. He expressed the opinion that burning in a wigwam burner should be more satisfactory to all parties than open burning. The opinion was also expressed that use of the wigwam burner would be temporary, as the plan was to purchase a chipper; but that financial problems precluded such purchase at that time. Copies of the written protests were requested.

June 13, 1969 we replied to Mr. Jayne's letter, explaining the difficulty and expense involved in endeavoring to construct and operate a wigwam burner in a manner which would comply with discharge standards, and that in view of the objections received, the final decision as to whether to allow a wigwam burner at the proposed location would have to be made by the Sanitary Authority. It was pointed out that to that date no plans or specifications had been received for review by the staff.

June 27, 1969 another letter was received from Mr. William Jayne, reiterating his earlier request for copies of the written protests, stating that he would need them "...before filing a request for a hearing".

July 24, Mr. Bridges of B. F. Cleat and Slat telephoned, advising that a customer had been found for the sawdust portion of their residues, thus reducing the total quantity by approximately 1/2. The remaining material, composed almost entirely of ¾" x ¾" sticks approximately 16" long, he stated would be piled until such time as he could get a hog or chipper.

September 23, a telephoned complaint was received from a resident of the area, alleging that B. F. Cleat and Slat was conducting open burning near their plant, creating nuisance conditions due to smoke. Mr. Bridges was advised of the complaint by letter, and of the regulatory provisions pertaining (Chapter 334, Section 22-011 and 22-016).

October 9 and 15, in staff surveys, it was determined that approximately two bins per day of small sticks and trim were being dumped on the company property near the plant and these were being burned periodically under a fire district permit, a given fire lasting 3 or 4 days. A used hog, purchased for $1500 was found not to produce chips of a quality acceptable to Roseburg Lumber Company's particleboard plant. We stated that we would investigate the alternatives to open burning and advise.

October 21, another complaint alleged that rainy weather had brought an increase in the smoke emissions from the open burning.

November 14, a staff survey disclosed that the residues were being burned continuously on the ground at the end of the waste conveyor, as this practice was judged to produce less smoke than that of periodically burning the rain-soaked piles. Fire permits were obtained for 5 day periods and renewed each week.

Mr. Bridges stated that it would be possible residues to a public dump, and that it would also be possiband sell them to Roseburg Lumber Company, but that the only sm so far tested that would produce quality chips would cost $ they considered to be more than they would be able to pay.

We then advised them that it is our policy to ers concerning financial capability to the Commission for a nd Mrs. Bridges indicated that it was their wish to be heard ission.

November 24 - a letter was addressed to B F. lat Company confirming the November 14 discussions an the the subject of B. F. Cleat and Slat Company as a source f ai had been placed on the December meeting agenda.

We also advised Mrs. Bridges of a source f in oncerning good used chippers at reasonable cost, one of hich vailable on a lease arrangement.

In view of the available alternative of h ulinic dump pending the development of chipping facilities, w req the practice of open burning be terminated immediately.

Mr. Bridges stated that it would be possible to haul the residues to a public dump, and that it would also be possible to chip and sell them to Roseburg Lumber Company, but that the only small chipper so far tested that would produce quality chips would cost $5500. This they considered to be more than they would be able to pay.

We then advised them that it is our policy to refer matters concerning financial capability to the Commission for a decision, and Mrs. Bridges indicated that it was their wish to be heard by the Commission.

November 24 - a letter was addressed to B. F. Cleat and Slat Company confirming the November 14 discussions and the fact that the subject of B. F. Cleat and Slat Company as a source of air pollution had been placed on the December meeting agenda.

We also advised Mrs. Bridges of a source of information concerning good used chippers at reasonable cost, one of which might be available on a lease arrangement.

In view of the available alternative of hauling to a public dump pending the development of chipping facilities, we requested that the practice of open burning be terminated immediately.

Lane Regional Air Pollution Authority

Route 1 Box 739 AC 503 689-3221

Eugene, Oregon 97402

December 11, 1969

Mr. H. W. McKenzie
Department of Environmental Quality
1400 S. W. Fifth Avenue
Portland, Oregon 97201

Dear Mr. McKinzie:

In answer to your telephone inquiry, an initial investment of $1,300.00 on a Fitchburg Chipper under a three-year lease from the Industrial Leasing Corporation of Eugene would be $46.15 per month. The question involved is the qualifications of the man as a client.

A good example of the qualifications would be the Yoncalla Veneer who has leased under the same corporation and a second example would be the Indianola Company of Lebannon under Mr. Willard Friesen.

The advantage derived would be the expense write-off for tax exemption purposes.

If I can be of further assistance please let me know.

Sincerely,

Verner J. Adkison, Director
Lane Regional Air Pollution Authority

VJA/mw

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OFFICE BUILDING • 1400 S.W. 5th AVENUE • PORTLAND, OREGON • 97201

November 24, 1969

Eugene Bridges
B. F. Cleat and Slat Co.
Route 3, Box 1321
Roseburg, Oregon 97470

Dear Mr. Bridges:

At the time of our November 14 visit at your plant, you advised that the materials then being burned in the open at the discharge of your conveyor could, a) be hauled to a public dump, or b) could be chipped and sold to Roseburg Lumber Co. You further advised that a small brush chipper had been demonstrated to produce good quality chips which would be acceptable to Roseburg Lumber Co., but that the price of $5500 exceeded that which you would be able to pay.

We then advised you that the policy of the Environmental Quality Department is to refer matters concerning financial feasibility to the Commission for decision, and that if you wished the matter would be placed on the agenda of the December meeting of the Commission so that you might there present your position. Mrs. Bridges requested that this be done, and we have accordingly entered the subject of B. F. Cleat and Slat Co. as a source of air pollution on the agenda of the December 19 meeting of the Commission, which will convene at 10:00 a.m. in Room 36, State Office Building, 1400 S. W. 5th Avenue. Portland. We will endeavor to ascertain the approximate time of day when you should be present and advise you at a later date.

I also suggested that you contact Mr. Verner Adkison, Director of the Lane Regional Air Pollution Authority for information concerning such used chippers as might be available at reasonable cost in the Eugene area. In conversations today with Mr. Adkison I was advised the he, in fact, does know of two chippers of appropriate size which should be available at reasonable cost, one of which may possibly be available on a lease arrangement. We suggest that you contact Mr. Adkison as early as possible, and that you may thus find an acceptable alternative to open burning in time to render an appearance before the Commission unnecessary.

In view of the fact that the alternative of hauling to a public dump is available to you pending the development of chipping facilities, we request that the practice of open burning be terminated immediately.

Please advise if we may be of further assistance toward the successful solution of your problem.

Very truly yours,

H. W. McKenzie
Associate Engineer in Charge
of Combustion Processes
Air Quality Control

HWMc:ms

cc: Leo L. Baton
Verner J. Adkison

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL STAFF

DATE : December 10, 1969 for the December 19, 1969 Meeting

SUBJECT: VARIANCES GRANTED BY MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

(1) Sweet Home Sanitation Service Company

(2) Stayton Sanitary Service Company

Under the provisions of ORS 449.880, the Region is required to file variances granted within 15 days after the variances are granted. The Department or Commission is required to review it, and if further action is determined to to be necessary the Region shall be directed to deny any application for renewal. Variances were granted by M-WVAPA to:

1. Sweet Home Sanitation Service Company: Holley Disposal Site, Linn Co.
2. Stayton Sanitary Service Company: Fern Ridge Disposal Site, Marion Co.

These operations consist of landfill disposal sites practicing open burning and subject to the rules of the Mid-Willamette Valley Air Pollution Authority, and have been in violation of the rules since their adoption on July 16, 1968 and subsequently, the companies requested a variance of one year from the rules and compliance schedule which had a termination date of November 15, 1969.

After receipt of the attached staff report, letter and testimony, the Mid-Willamette Valley Air Pollution Authority approved a variance through May 18, 1970, to these companies.

Attached are pertinent copies of the order and correspondence. The District Office and the Solid Waste Division have surveyed these sites.

RECOMMENDATION:

The staff recommends that the Mid-Willamette Valley Air Pollution Authority be directed to deny any application for renewal of the variances.

BEFORE THE MID-WILLAMETTE VALLEY

AIR POLLUTION AUTHORITY

In the Matter of the Application for Variance of SWEET HOME SANITATION SERVICE CO.	ORDER GRANTING VARIANCE

This matter came on regularly to be heard before the Board of Directors of the Mid-Willamette Valley Air Pollution Authority on the 18th day of November, 1969, upon the application of Lester Weld, owner and operator of the Sweet Home Sanitation Service Co., requesting a six-months extension for open burning of garbage, rubbish and refuse. The Board, having considered the written application and the recommendations of the staff of the Authority, finds that the conditions of ORS 449.810(1) have been met because of special circumstances which would render strict and immediate compliance with open burning regulations burdensome and impractical, and that the said variance should be granted for the period of time and upon the conditions hereinafter stated, Now Therefore, on motion having been duly made, seconded and passed, it was resolved by the Board as follows:

IT IS HEREBY ORDERED that the application for variance of Lester Weld of the Sweet Home Sanitation Service Co. from the restrictions in MWR 16-005 to 16-015 be and the same hereby is granted, commencing with date of this order to and including the 18 day of May, 1970.

IT IS FURTHER ORDERED that the said open burning shall be conducted pursuant to the methods prescribed by the "guidelines for open burning at disposal sites" as approved by the Board of Directors of the Mid-Willamette Valley Air Pollution Authority at its regular meeting of August 26, 1969, and that monthly progress reports shall be submitted to the Authority commencing December 15, 1969.

IT IS FURTHER ORDERED that a copy of this order shall be forthwith filed with the State Department of Environmental Quality pursuant to ORS 449.880.

DATED this 18 day of November, 1969.

Mid-Willamette Valley Air
Pollution Authority

BY: Melvin L. Hawkins
Vice-Chairman

ATTEST:

Michael D. Roach
Director

MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY
2585 State Street - Salem, Oregon 97301
Telephone 581-1715

MEMORANDUM

TO : Mid-Willamette Valley Air Pollution Authority Board of Directors

FROM : Vic Prodehl

DATE : November 13, 1969

SUBJECT: SWEET HOME SANITATION SERVICE COMPANY VARIANCE APPLICATION FOR BURNING AT THE HOLLEY DISPOSAL SITE.

The Mid-Willamette Valley Air Pollution Authority has received a request for a six-month extension to continue burning at the Holley disposal site beyond the termination date of November 15, 1969, as stated in the Schedule for Compliance Agreement.

The existing operation has been surveyed with Mr. Lester Weld, owner and operator of the Sweet Home Sanitation Company, and it appears there are two tasks to be accomplished: A long term program for proper disposal of residue, and the immediate task to eliminate open burning.

Briefly addressing ourselves to the former, which will by necessity eliminate burning, the alternatives of haul to the city of Lebanon landfill and the establishment of a new sanitary landfill site have been discussed with Mr. Weld. Data gathered from authorities in the solid waste disposal field has been compiled in a meaningful form in the economic cost comparison attached to this report. Please make reference to the projected annual cost of $26,000 for haul to Lebanon landfill versus the projected cost of $26,900 for conversion to a sanitary landfill operation. Mr. Weld has indicated two sites are under study to implement the latter plan. However, the Authority encourages Mr. Weld to not overlook the economic alternative of haul to Lebanon.

The Authority recognizes these are two of the more realistic alternatives to the existing burning operation.

The immediate problem before the Board of Directors is the existing open burning operation and the necessity to develop a realistic timetable to terminate this activity. On an interim basis, in addition to the possibility of landfill at the existing site, it is suggested that haul to the Lebanon landfill should be investigated. Mr. Chuck Spady, Lebanon Sanitation Company, who operates the city site, along

with Mr. Van R. Thorne, Lebanon City Clerk, see no reason why another commercial hauler could not dump at the Lebanon site. Lebanon City Council approval would be required for implementation of this plan.

It appears that Sweet Home Sanitation Company could have implemented a plan to eliminate burning by the scheduled date if the proper effort would have been initiated as a result of the meeting during May 1969.

In summary, it is believed that burning could realistically be terminated at the disposal site by implementing one of these alternatives until such time that a long-range plan could be implemented.

RECOMMENDATION

The Authority staff recommends that burning be terminated at the existing site on or before February 15, 1970. It is believed that this three-month period shall give sufficient time for Sweet Home Sanitation Service Company to implement an interim plan to cease burning and to begin preparation for the long-range plan.

MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY
2585 State Street - Salem, Oregon 97301
Telephone 581-1715

ECONOMIC COST COMPARISON FOR HOLLY DISPOSAL SITE

HAUL TO LEBANON LANDFILL: — ANNUAL COST

@ $ .45/mi for equipment amortizing and disposal fee--44 mi round trip (Holly geographical center of service area).

$$\left(\frac{\$\ .45}{\text{mi}}\right)\left(\frac{44\ \text{mi}}{\text{trip}}\right)\left(\frac{4\ \text{trips}}{\text{day}}\right)(5\ \text{day}) + \left(\frac{1\ \text{trip}}{\text{day}}\right)(1\ \text{day})\ \frac{52\ \text{wk}}{\text{yr}} = \$21{,}600$$

Labor		4,500
	Total	$26,100

CONVERSION TO SANITARY LANDFILL

15,000 for used dozer amortize 5 yrs @ 7% (19.81) (12) (15)	=	$ 3,600
$4,000 for const. road and trench--each year.	=	4,000
Equivalent one man fulltime to operate dozer and handle receipts.	=	10,000
Operational expense on dozer		

$$(\$1/\text{hr fuel})\left(\frac{2\ \text{hrs}}{\text{day}}\right)\left(\frac{6\ \text{days}}{\text{wk}}\right)(52\ \text{wk}) + \left(\frac{\$150/\text{mo}}{\text{maint}}\right)(12\ \text{mo}) = 2{,}400$$

HAUL DISTANCE TO SITE 20 MILES

$$\left(\frac{20}{44}\right)(\$21{,}600) - (21)(\$6.50)(52) + \left(\frac{20}{44}\right)(4{,}500)$$

$$\$\ 9{,}800 - 7{,}100 + \$2{,}200 = 4{,}900$$

Land cost--40-50 acres	=	2,000
	Total	$26,900

Roger W. Emmons
ATTORNEY AT LAW
362-1526
1174 COMMERCIAL ST. S.E.
SALEM, OREGON

November 17, 1969

Mid-Willamette Valley Air Pollution Authority
2585 State Street
Salem, Oregon 97301

Re: Lester Weld, Sweet Home Sanitation Service, Request for variance to extend open burning at the Holly Disposal Site, Sweet Home, Oregon.

Variance Request. Application is made pursuant to Mid-Willamette Valley Air Pollution Authority regulations Sections 13-005 to 13-025 for a variance to continue open burning of garbage and putrescibles at the Holly Disposal Site, Sweet Home, Oregon, on land leased and operated by Lester Weld, Sweet Home Sanitation Service.

Compliance Schedule. This request for a variance is made in addition to, and not in lieu of and shall not be considered a waiver of Item 4a, Schedule of Compliance for the Holly Disposal Site which provides that the burning of garbage shall be terminated November 15, 1969, and the termination of burning of bulky combustibles shall be made by June 1, 1970. The cited item provides that:

> "4a) It is understood and agreed that compliance by the time specified in this schedule shall be subject to obtaining the approval of federal, state or local governmental agencies or public bodies having jurisdiction by law or by contract for the location of a different disposal site, disposal by an alternate method on or off the disposal site or of refusal to accept certain wastes or solid wastes into the disposal site."

Time Period. Open burning of garbage and combustibles to be extended for a period of 12 months.

Condition. Reports shall be made on a schedule to be determined by the Authority, but not less than every 60 days, reporting progress toward an alternative method of disposal, alternative disposal site or other method of terminating all open burning.

Reasons:

(1) The variance is justified to protect the public health, safety and welfare; by special circumstances which render compliance unreasonable, burdensome and impractical due to special physical conditions and other causes; and, by the absence of any other alternative, facility or method of handling of solid wastes at this time.

(2) Continued garbage service, including disposal, is absolutely essential to the residents of Sweet Home and the surrounding area. Minimal air pollution created by open burning reduction of garbage and refuse at the disposal site is minor compared to the health, fire and other hazards which would be created by open storage of such materials at the disposal site.

(3) An objective of the state-wide solid waste plan developed by the Solid Waste Section of the State Board of Health is to provide public access to disposal sites at such places as Sweet Home and the objective of immediate cessation of open burning, while important, is less important than cessation of promiscuous dumping of solid wastes in the Sweet Home area through lack of a publicly accessible disposal site.

Reasons: (Specific)

(1) No alternative method of disposal is available at the present operational portion of the site. Land owner approval through the District Court would be required prior to any change of location on the site. Approval of change in operational area on the site would be required from the Department of Environmental Quality and Solid Waste Section of the State Board of Health.

(2) Attempts to obtain approval for use of adjacent property has not been approved by the District Court which supervises the guardianship over said property. Again, approval of Department of Environmental Quality and Solid Waste Section of the State Board of Health would be required before moving the operation.

(3) Other possible disposal sites have been proposed to the Department of Environmental Quality and the Solid Waste Section of the State Board of Health but have not been approved. Additional time would be required to secure aproval of such site as well as opening such site and preparing it for operation.

(4) The franchise held by the operator of this site requires that a disposal site be maintained for the City of Sweet Home. Enclosure of the existing site without provision of a new site would be a violation of that franchise.

(5) Hauling the garbage, rubbish, refuse and solid waste from the Sweet Home area to the nearest approved disposal site, Lebanon, is not economically feasible. Another packer truck together with driver would be required just to cover the time required to haul to Lebanon. The existing Lebanon franchise with the private operator of the city owned site provides that no other commercial operator shall use the site. A change in the Lebanon franchise, possibly together with a change of the Lebanon ordinance, would be required.

(6) The applicant has vigorously pursued investigation of reasonable alternatives involving conversion of the existing site, moving the operation on the existing site, obtaining adjacent or additional land, trucking to other disposal sites, purchase of additional equipment necessary for changed operation, obtaining approvals of governmental agencies involved, alternate disposal sites and other possibilities for termination of open burning reduction at the disposal site. These have extended over a period of more than six months since the original compliance schedule was discussed by the applicant, the attorney for the applicant, the Mid-Willamette Valley Air Pollution Authority staff and later the Mid-Willamette Valley Air Pollution Authority itself.

Respectfully submitted on behalf of applicant,

By Roger W. Emmons
Roger W. Emmons, Counsel

RWE/lrt

BEFORE THE MID-WILLAMETTE VALLEY
AIR POLLUTION AUTHORITY

In the Matter of the Application for Variance of STAYTON SANITARY SERVICE CO.	)	ORDER GRANTING VARIANCE

This matter came on regularly to be heard before the Board of Directors of the Mid-Willamette Valley Air Pollution Authority on the 18th day of November, 1969, upon the application of Utah Crowson of the Stayton Sanitary Service Co. requesting a 12-months extension for open burning of barbage, rubbish and refuse. The Board, having considered the written application and the recommendations of the staff of the Authority, finds that the conditions of ORS 449.810(1) have been met because of special circumstances which would render strict and immediate compliance with open burning regulations burdensome and impractical, and that the said variance should be granted for the period of time and upon the conditions hereinafter stated; Now Therefore, on motion having been duly made, seconded and passed, it was resolved by the Board as follows:

IT IS HEREBY ORDERED that the application for variance of Utah Crowson of the Stayton Sanitary Service Co. from the restrictions in MWR 16-005 to 16-015 be and the same hereby is granted, commencing with date of this order to and including the 18 day of May, 1970.

IT IS FURTHER ORDERED that the said open burning shall be conducted pursuant to the methods prescribed by the "guidelines for open burning" at disposal sites as approved by the Board of Directors of the Mid-Willamette Valley Air Pollution Authority at its regular meeting of August 26, 1969, and that monthly progress reports shall be submitted to the Authority commencing December 15, 1969.

IT IS FURTHER ORDERED that a copy of this order shall be forthwith filed with the State Department of Environmental Quality pursuant to ORS 449.880.

DATED this 18 day of November, 1969.

Mid-Willamette Valley Air
Pollution Authority

By: Milton L. Hawkins
Vice-Chairman

Attest:

Michael W. Roach
Director

MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY

2585 State Street - Salem, Oregon 97301
Telephone 581-1715

MEMORANDUM

TO : Mid-Willamette Valley Air Pollution Authority Board of Directors

FROM : Vic Prodehl

DATE : November 13, 1969

SUBJECT: VARIANCE APPLICATION FOR THE CONTINUATION OF OPEN BURNING BY STAYTON SANITARY SERVICE COMPANY AT THE FERN RIDGE DISPOSAL SITE.

The Mid-Willamette Valley Air Pollution Authority has received a request for a twelve-month extension to continue burning at the Fern Ridge disposal site beyond the termination date of November 15, 1969, as stated in the Schedule for Compliance Agreement.

The existing operation has been surveyed with Mr. Utah Crowson, owner and operator of the Stayton Sanitary Service Company, and it appears there are two tasks to be accomplished: A long term program for proper disposal of residue and the immediate task to eliminate open burning.

Briefly addressing ourselves to the former, which will by necessity eliminate burning, the alternatives of haul to the MacLeay landfill and the establishment of a new sanitary landfill site have been discussed with Mr. Crowson. As a result of interest generated, an economic cost comparison has been prepared as attached to this report. Please make reference to the projected annual cost for haul to MacLeay landfill of $16,500 versus conversion to a sanitary landfill that will cost $22,800. Interest has been shown by Mr. Crowson to convert the upper portion of his thirty-five acre site to a sanitary landfill. However, the Authority encourages Mr. Crowson to not overlook the economic alternative of haul to MacLeay. The Authority recognizes these are two of the more realistic alternatives to the existing burning operation.

The immediate problem before the Board of Directors is the existing burning operation and the necessity to develop a realistic timetable to terminate this activity. On an interim basis, existing trench with the existing dozer (or a rented dozer should the existing dozer prove unsatisfactory) would allow landfill operations at the existing site with minimal effort and expense. Another alternative would be haul to MacLeay landfill.

It appears that Stayton Sanitary Service Company could have implemented a plan to eliminate burning by the scheduled date if the proper effort would have been initiated as a result of the meeting during May 1969.

In summary, it is believed that burning could realistically be terminated at the disposal site by implementing one of these alternatives until such time that a long-range plan could be implemented.

RECOMMENDATION

The Authority staff recommends that burning be terminated at the existing site on or before February 15, 1970. It is believed that this three-month period shall give sufficient time for Stayton Sanitary Service Company to implement an interim plan to cease burning and to begin preparation for the long-range plan.

MID-WILLAMETTE VALLEY AIR POLLUTION AUTHORITY
2585 State Street, Salem, Oregon 97301
Telephone 581-1715

ECONOMIC COST COMPARISON FOR FERN RIDGE DISPOSAL SITE

HAUL TO MACLEAY LANDFILL — ANNUAL COST

$100/wk transportation plus $6.50/load disposal fee

$(\$100/wk) + (\frac{27\ loads}{wk})(\frac{\$6.50}{load})\frac{52\ wk}{yr}$ = $14,300

Labor = 2,400

Total $16,700

Check--$ .45/mi for equipment, amortizing, and disposal fee.

$(\frac{\$\ .45}{mi})(\frac{22\ mi}{trip})(\frac{5\ trips}{day})(5\ day) + (\frac{2\ trip}{day})(1\ day)\frac{52\ wk}{yr}$ = $13,900

Labor = 2,400

Total $16,300

CONVERSION TO SANITARY LANDFILL

$15,000 for used dozer amortize 5 yrs @ 7%
(19.81) (12) (15) = $ 3,500
$4,000 for const. road and trench = 4,000
Equivalent one man fulltime to operate dozer and handle receipts = 10,000
Operational expense on dozer:

$(\$1/hr\ fuel)(2\ hrs/day)(6\ days/wk)(52\ wk) + (\frac{\$150/mo}{(maint)})(12\ mo)$ = 2,400

HAUL TO EXISTING SITE (8 mi)

$[(\$100)(52) + (\$2,400)](\frac{8}{22})$ = 2,700

Total $22,800

MARION COUNTY HEALTH DEPARTMENT

Founded in 1925

2455 FRANZEN STREET N.E. • SALEM, OREGON 97301 • TELEPHONE 364-8427

November 12, 1969

Victor Prodehl
Chief, Field Services
Mid-Willamette Valley Air Pollution Authority
2587 State Street
Salem, Oregon

Re: Stayton Disposal site - Fernridge

Dear Mr. Prodehl:

Thank you for your recent letter regarding Mr. Crowsons application for a variance. This matter was thoroughly discussed at the last meeting of the Marion County Solid Waste Disposal Committee. It was decided to support Mr. Crowsons request. The time period of the variance to be determined by your authority.

I certainly do agree, and I'm sure others do also, that burning is not an acceptable solution to the Solid Waste Disposal problem.

In this instance I trust that Mr. Crowson will be permitted a non-renewable variance that will provide him with ample time to convert his disposal site to a non-burning land fill.

Due to the many problems presented when efforts are made to establish a disposal site (two years is estimated) it behooves us to make every effort to convert existing disposal sites to landfills, rather than attempt to establish new areas.

We sincerely trust that your authoritys action will assist in providing the population in this part of the county with a uninterrupted solid waste disposal area.

Sincerely,

Peter J. Batten, M.D., Health Officer

C. S. Sherman

C. S. Sherman, R.S., Director
Environmental Sanitation Division

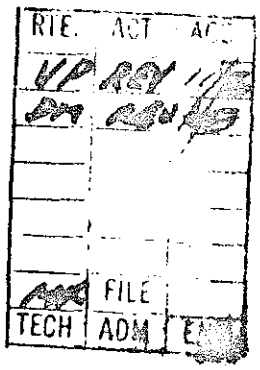
CSS:mr

WALTER H. BELL
NEAL H. BELL

Bell & Bell
ATTORNEYS-AT-LAW
STAYTON, OREGON

PHONE 769 2147

November 3, 1969



Mid-Willamette Valley Air
Pollution Authority
2585 State Street
Salem, Oregon 97301

Re: Utah Crowson, Stayton Sanitary Service, Request for Variance and Extension of Open Burning

Gentlemen:

This letter is written to you pursuant to MWVAPA regulations 13-005 to 13-025 as a request for a variance from the requirement to discontinue open burning at the Stayton disposal site (Fern Ridge Disposal) by Utah Crowson of Stayton Sanitary Service, and also we are asking for a 12-month extension for open burning of garbage, rubbish and refuse for the following reasons:

General

The public health, safety and welfare must be protected and there are circumstances which make the compliance impractical and unreasonable, and no other alternative or method of handling is yet available.

It is absolutely necessary that the residents of the Stayton area continue to receive garbage service, including disposal. The small amount of air pollution created by open burning at the disposal site is minor compared to the public health and other hazards created by open storage of such materials at the site.

Specific

The present Fern Ridge site is only adequate to provide for open burning of garbage, rubbish, etc., and a change in location on the site and a complete change in operations would be necessary to convert to a landfill operation, for which state and county approval is needed for the conversion.

A request for state approval has been filed. A preliminary on-site inspection was conducted by Bruce Bailey, Solid Waste Section, State Board of Health; Rich Reiter, District Engineer, Department of Environmental Quality; and Ernie

Schmidt, Solid Waste Disposal Supervisor, Department of Environmental Quality. Requests for additional information were filed by the Solid Waste Section of the State Board of Health and that a great deal of time will be required for an answer.

Unless quick approval is obtained of the site, inclement weather conditions may prevent the site from being converted to a landfill until spring.

The site is a non-conforming use of property under the Marion County Zoning Ordinance and determination will have to be made whether change of location on the existing site is an enlargement of a non-conforming use which would be prohibited by that ordinance.

Alternatives have been investigated, specifically of trucking the refuse to the McClay County site or operation of a regional site and no practical plan has yet been provided by any of the state or county authorities.

We have met with county and state officials together with other operators to determine the feasibility of regional sites, trucking to other sites, change of operation on the existing site, combination of operators to invest in necessary disposal site equipment to operate several sites, county ownership or operation and other alternatives.

The cost for conversion of the existing site will include purchase of a new or used D-8 cat, contracting for digging a trench for the garbage operation, diversion of surface or ground waters and engineering studies. Further cost details will be given to you at a later time should you so desire.

Time is needed for conversion of the site. Completion of engineering studies, obtaining county and state approvals, purchase of equipment and contracting operations, clearing the existing site and opening the relocated site cannot be completed by November 15, 1969. That is the date specified by your agency for termination of all open burning of garbage on this and other sites.

Based on the above we are requesting that a variance be granted to allow open burning for a period not to exceed 12 months.

Very truly yours,

BELL & BELL

Walter H. Bell

WHB:P

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : December 16, 1969 for Meeting of December 19, 1969

SUBJECT: RULES OF COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY

As required by ORS 449.855 (2), the Columbia-Willamette Air Pollution Authority has submitted to the Department of Environmental Quality for approval, all quality and purity of air standards adopted by the Regional Authority. A copy of Rule 8, Ambient Air Standards, is in the notebooks. Public hearings on rules and regulations of the Authority were held on October 24 and November 21, 1969, and the rules were adopted by the Columbia-Willamette Air Pollution Authority on November 21, 1969.

The staff has reviewed Rule 8 and finds the ambient air standards for suspended particulate (Section 8.2 (1)) and particle fallout (Section 8.2 (2)) as restrictive, or more restrictive, than present Department of Environmental Quality standards. They are consistent with recommendations of the Oregon-Washington Air Quality Committee, although the suspended particulate standards do not reflect revisions recommended by the Committee on November 14, 1969. Implementing the revisions will require changing Section 8.2 (1)(a) from 70 ug/m^3 to 60 ug/m^3. Revision of the Columbia-Willamette Air Pollution Authority suspended particulate ambient air standard at a later date is not considered to pose any major problem.

The Department of Environmental Quality does not have standards comparable to the Columbia-Willamette Air Pollution Authority ambient air standards for sulfur dioxide (Section 8.3) or odors (8.4).

CONCLUSION:

It is the conclusion of the staff that the ambient air standards contained in Rule 8 are acceptable.

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

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RULES

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

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RULE 1

Policy and Definitions

Section 1.1 Policy

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

Section 1.2 Validity

(1) If any provision of these Rules shall be held void or unconstitutional by judicial or other determination, all other parts of these Rules which are not expressly held to be void or unconstitutional shall continue in full force and effect.

(2) These Rules are not intended to permit any practice which is a violation of any statute, ordinance, order or regulation of this Authority or any other governmental unit; and no provisions contained in these Rules is intended to impair or abrogate any civil remedy or process, whether legal or equitable, which might otherwise be available to any person.

(3) These Rules are not intended to apply to the air quality requirements for the workroom atmosphere necessary to protect an employee's health from contaminants emitted by his employer, nor are they concerned with the occupational health factors in an employer-employee relationship.

Section 1.3 Definitions

When used in these Rules:

(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) "Air Contaminant" means a dust, fume, gas, mist, odor, smoke, vapor, pollen, soot, carbon, acid or particulate matter or any combination thereof.

(3) "Air Contamination Source" means any source at, from, or by reason of which there is emitted into the atmosphere any air contaminant.

(4) "Air Pollution" means the presence in the outdoor atmosphere of one or more air contaminants or any combination thereof in sufficient quantities and of such characteristics and of a duration as are or are likely to be injurious to the public welfare, to the health of human, plant or animal life or to property, or which unreasonably interfere with enjoyment of life and property throughout the territory or throughout such area of the territory as shall be affected thereby.

(5) "Air Pollution Control Equipment" means any method, process or equipment which removes, reduces or renders less noxious air contaminants discharged into the atmosphere.

(6) "Ambient Air" means the surrounding outside air.

(7) "Authority" means the Columbia-Willamette Air Pollution Authority.

(8) "Board" means the Board of Directors of the Columbia-Willamette Air Pollution Authority.

(9) "Domestic Rubbish" means rubbish generated by a private dwelling housing four families or less.

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

(11) "Existing Source" means any air contaminant source in existence prior to the date of adoption of these Rules.

(12) "Fire Permit Issuing Agency" means any city fire department, rural fire protection district, forest protection district, county court or board of county commissioners or their designated representative, as applicable.

(13) "Fuel Burning Equipment" means equipment, other than internal combustion engines and marine installations, the principal purpose of which is to produce heat or power by indirect heat transfer.

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

(15) "Health Officer" means the duly appointed health officer, or his authorized representative, of a political subdivision participating in the Columbia-Willamette Air Pollution Authority.

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

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

(18) "New Source" means any air contaminant source installed, constructed or modified after the date of adoption of these Rules.

(19) "Odor" means that property of a substance which allows its detection by the sense of smell.

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

(21) "Open Outdoor Fire" means a fire where any material is burned in the open.

(22) "Particulate Fallout Rate" means the weight of particulate matter which settles out of the air per unit area in a given length of time.

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

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

(25) "p.p.m." (parts per million) means parts of an air contaminant per million parts of air by volume.

(26) "Primary Air Mass Station" (PAMS) means a station designed to measure contamination in an air mass, to represent a relatively broad area.

(27) "Primary Ground Level Monitoring Station" (PGLMS) means a station designed to provide information on contaminant concentrations near the ground and provide data valid for the immediate area only.

(28) "Process Equipment" means any equipment, used in a manufacturing or material handling process, which will or will be likely to emit an air contaminant into the atmosphere.

(29) "Process Weight" means total weight of the materials, including solid fuels but not including liquid and gaseous fuels and combustion air, introduced into any specific process which process may cause any emission into the atmosphere.

(30) "Program Director" means the Program Director of the Columbia-Willamette Air Pollution Authority, or his deputy acting in his capacity as such deputy or any staff member acting under order of the Program Director.

(31) "p.s.i.a." (pounds per square inch absolute) means intensity of pressure referred to vacuum as zero.

(32) "Refuse Burning Equipment" means a device designed to reduce the volume of solid, liquid or gaseous refuse by combustion.

(33) "Refuse" means unwanted matter.

(34) "Ringelmann Chart" means the Ringelmann Smoke Chart as published in May 1967 by the U. S. Bureau of Mines.

(35) "Rubbish" means non-putrescible wastes consisting of both combustible and non-combustible wastes, such as but not limited to ashes, paper, cardboard, yard clippings, wood, glass, cans, bedding, household articles and similar materials.

(36) "Special Control Area" means a special area within the territory of the Authority established to control specific practices or to maintain specific standards. (See Table 1 and Figure 1)

(a) "Special Control Area A" means

(i) Any area in or within three (3) miles of the boundary of any city of more than 1,000 population but less than 45,000 population.

(ii) Any area between two or more adjacent special control areas, where the distance between the control area boundaries is three miles or less.

(b) "Special Control Area B" means any area in or within six (6) miles of the boundary of any city of 45,000 or more population.

(c) Whenever two or more cities have a common boundary, the total population of these cities will determine the Special Control Area classification and the municipal boundaries of each of the cities shall be used to determine the limits of the control area.

(d) Any area included within the boundaries of a Special Control area A and a Special Control Area B shall be deemed to be in Special Control Area B.

(e) Whenever the boundary of a Special Control Area passes within the boundaries of a city, the entire area of the city shall be deemed to be in the Special Control Area. If the Special Control Area boundary within a city is between a Special Control Area B and a Special Control Area A, the entire city shall be deemed to be in Special Control Area B.

(f) The annual population estimate issued by the Center for Population Research and Census, Portland State University, shall establish which municipalities will be used for determination of Special Control Areas.

(37) "Special Station" means any station that does not meet the criteria or purpose of a primary air mass station or a primary ground level monitoring station.

(38) "Standard Conditions" means a temperature of 60^{o} Fahrenheit and a pressure of 14.7 pounds per square inch absolute.

(39) "Standard Cubic Foot" (SCF) means that amount of a gas which would occupy a cube having dimensions of one foot on each side, if the gas were free of water vapor at standard conditions.

(40) "Suspended Particulate Matter" means particulate matter which normally remains suspended in the atmosphere.

(41) "Territory" means all areas within the boundaries of Clackamas, Multnomah and Columbia Counties.

(42) "Uncombined Water" means water which is not chemically bound to a substance.

(43) "Wigwam Waste Burner" means a burner which consists of a single combustion chamber, has the general features of a truncated cone and is used for combustion of wood wastes.

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

TABLE 1

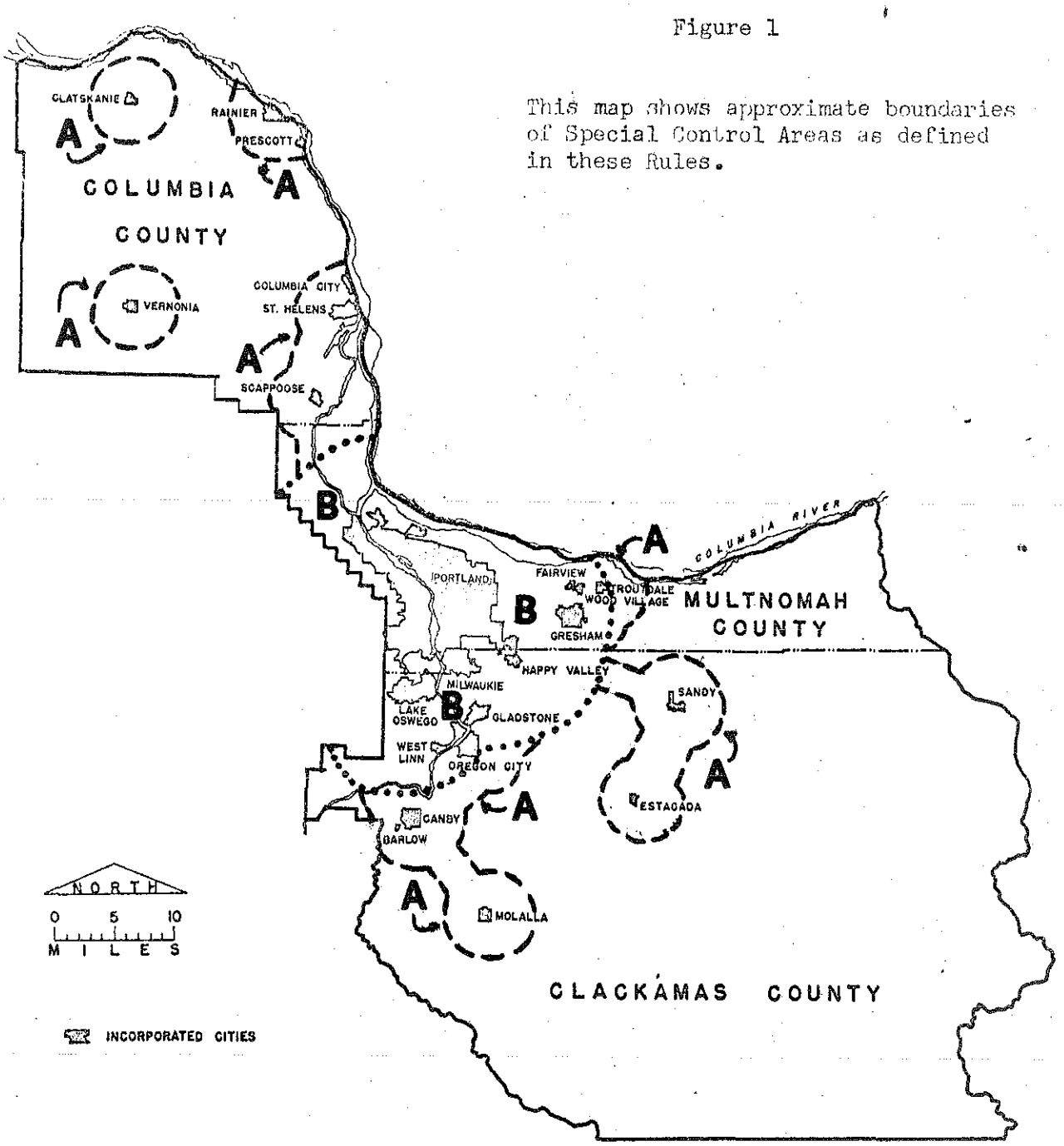
Population Figures for Determination of Special Control Areas

	Control Area A		Control Area B	
Clackamas County	Canby	3,480		
	Estacada	1,160		
	Gladstone)			
	Oregon City)	20,750		
	West Linn)		Oswego)	
	Molalla	1,700	Happy Valley)	
	Sandy	1,420	Milwaukie)	
			)	409,030
Multnomah County	Troutdale)		Portland)	
	Wood Village)		Maywood Park)	
	Fairview)	10,133		
	Gresham)			
Columbia County	Clatskanie	1,187		
	Rainier	1,350		
	St. Helens	5,750		
	Scappoose	1,600		
	Vernonia	1,580		

Population figures are from Population Estimates of Counties and Incorporated Cities of Oregon, July 1, 1968, prepared by Center for Population Research and Census, Portland State University.

Figure 1

This map shows approximate boundaries of Special Control Areas as defined in these Rules.



SPECIAL CONTROL AREAS

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

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RULE 2

Administration

Section 2.1 Duties and Powers of the Board of Directors

(1) The Authority and powers of the Columbia-Willamette Air Pollution Authority are exercised by the Board of Directors.

(2) The Board, except as specifically restricted by Oregon Revised Statutes, may exercise the functions vested in the Environmental Quality Commission and may take such reasonable action as may be necessary to prevent or abate air pollution.

(3) The Board, except as specifically otherwise retained by the Environmental Quality Commission, shall have the exclusive jurisdiction in the territory of the Columbia-Willamette Air Pollution Authority to:

(a) Formulate, adopt, promulgate, amend and repeal general rules and regulations which control, reduce or prevent air pollution in such areas as shall or may be affected by air pollution, to include general provisions applicable for controlling air contaminants in accordance with the policy and purpose of the Columbia-Willamette Air Pollution Authority.

(b) Hold public hearings, conduct investigations, subpena witnesses to appear, administer oaths and affirmations, take depositions and receive such pertinent and relevant proof as it may deem necessary or proper in order that it may effectively discharge its duties, powers and responsibilities to prevent and abate air pollution.

(c) Make findings of fact and determinations.

(d) Issue orders to require compliance with these Rules.

(e) Institute actions for such penalties as are provided by law with respect to a violation of any provisions of any rules or regulation or any order which it may issue.

(f) Institute or cause to be instituted in a court of competent jurisdiction, proceedings to compel compliance with any order or condition of any order which it may promulgate.

(g) Institute or cause to be instituted a suit for injunction to prevent any further or continued violation or order of the Authority, and to compel compliance, if measures to prevent or correct air pollution or emission of air contaminants are not taken in accordance with an order of the Authority.

(h) Do any and all other acts and things not inconsistent with any provisions of the Oregon Revised Statutes which it may deem necessary or proper for the effective enforcement of its Rules.

(4) The Board shall appoint a Program Director competent in the field of air pollution prevention and control.

(5) The Board shall appoint an Advisory Committee.

Section 2.2 Functions of the Program Director

(1) The Program Director shall be the chief deputy of the Board of Directors under these Rules and shall:

(a) Enforce the provisions of these Rules and all orders, ordinances and resolutions of this Authority.

(b) Seek compliance with these Rules by cooperation and conciliation among all the parties concerned.

(c) Make any reasonable investigation or study which is necessary for the purpose of enforcing these Rules.

(d) Undertake a community education program.

(e) Sign, execute and serve official complaints, citations, and notices on behalf of the Board.

(2) The Program Director may:

(a) Employ persons including specialists and consultants, and purchase materials and supplies necessary to carry out the purpose of the Rules.

(b) Recommend to the Board the adoption of such Rules and procedures as are necessary or desirable.

(c) Advise any fire permit granting agency having jurisdiction in the territory that meteorological conditions existing in a specific area are such that open burning under fire permits issued by it would have an adverse effect on air quality.

Section 2.3 Duties of the Advisory Committee

(1) The Advisory Committee is appointed by the Board of Directors to advise the Authority in matters pertaining to the air pollution control program of the Authority and particularly as to methods and procedures for the protection of public health and welfare and of property from the adverse effects of air pollution, and on matters relative to legislation.

(a) The Advisory Committee shall consist of at least seven members appointed for a term of one year with at least one representative from each of the following groups from within the territory of the Authority:

(I) Public Health Agencies
(II) Agriculture
(III) Industry
(IV) Community Planning
(V) General Public

(b) The representation on the Advisory Committee from public health agencies shall include the appointed Health Officer of each participating political subdivision.

(2) The Advisory Committee shall select a chairman and co-chairman and such other officers as it considers necessary, and shall meet as frequently as it or the Board of Directors considers necessary. Members shall serve without compensation.

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

RULE 3

General Provisions

Section 3.1 Inspection or Investigation by the Program Director

The Program Director may enter during operation hours, on to property, into premises or places within the territory for the purpose of investigating either an actual or suspected air contaminant source or to ascertain compliance or noncompliance with these Rules or any issued order.

Section 3.2 Interfering with or Obstructing Authority Personnel

No person shall willfully interfere with or obstruct the actions of Authority personnel in the performance of any lawful duty.

Section 3.3 Confidential Information

Upon written notice to the Authority, any information relating to secret process, devices or methods of manufacturing or production obtained in the course of inspection or investigation shall be kept confidential.

Section 3.4 Display of Order or Other Notice

The Authority may require any order or other notice to be displayed on the premises designated. No person shall mutilate, alter or remove such order or notice unless authorized to do so by the Authority.

Section 3.5 Sealing to Prohibit Use

The Program Director may affix a seal, stating use is prohibited, to any air contaminant source when requested or permitted by the owner or operator.

Section 3.6 Upset Conditions - Report of Breakdown

Emissions in violation of these Rules as a direct result of upset conditions or breakdown of any operating equipment or related air

pollution control equipment shall not be deemed to be in violation of these Rules, provided all the following requirements are met:

(1) Such occurrence shall have been reported to the office of the Program Director within four hours of the occurrence.

(2) In cases where maintenance is required and no reasonable alternative is available to prevent emissions from violating these Rules, the Authority shall be notified prior to the date and time that such maintenance will be required.

(3) The person responsible for such emission shall, with all practicable speed, initiate and complete appropriate action to correct the conditions causing such emissions to exceed the limits of these Rules and to reduce the frequency of occurrence of such conditions; and shall upon request of the Program Director submit in writing a full report of such occurrence, including a statement of all known causes and the nature of the actions to be taken pursuant to the requirements of this subsection.

Section 3.7 Source Emission Tests

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

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

(b) Specify or approve testing methods to be used and observe the testing.

(c) Require that all tests shall be conducted by qualified personnel.

(d) Require that a copy of the test results be provided in writing and signed by the person responsible for the tests.

(e) Require installation of emission monitoring equipment or make such other provisions so that operators of air contamination sources may know the nature or appearance of emissions.

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

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

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

Section 3.8 Emergency Procedures

The Authority, without necessity of prior administrative procedure or hearing and the entry of an order or at any time during such administrative proceedings, if such proceedings have been commenced, may institute a suit for injunction in its own name to abate or restrain threatened or existing pollution of the air of the territory whenever such pollution or threatened pollution materially contributes to an emergency which requires immediate action to protect the public health, safety or welfare.

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
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RULE 4

Registration

Section 4.1 Registration

Except as exempted by this Rule, all air contaminant sources within the jurisdiction of the Authority shall register with the Authority when so requested.

Section 4.2 Registration Requirements

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

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

(3) The Program Director may require from registrants any information relevant to air pollution such as but not limited to, (a) name, address and nature of business; (b) location, size and height of air contaminant outlets; (c) process employed; (d) fuels used; (e) amount, nature and duration of air contaminant emission; and (f) name of local person responsible for compliance with these Rules.

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

Section 4.3 Re-registration

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

Section 4.4 Exemption from Registration

Air contaminant sources exempt from the registration requirements, but not necessarily exempt from control requirements, are listed in Table 2.

TABLE 2

Air Contaminant Sources Exempt from Registration

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

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

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

(4) Foundry sand mold forming equipment, unheated.

(5) Fuel burning equipment, other than smoke house generators, which:

(a) is used solely for a private dwelling serving four families or less, or

(b) has a BTU input of not more than 400,000 BTU per hour,

(6) Fumigation vaults.

(7) Insecticide spray equipment.

(8) Internal combustion engines, including gas turbine and jet engines.

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

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

(11) Routing, turning, carving, cutting and drilling equipment used for metal, wood, plastics, rubber, leather or ceramics.

(12) Sewing equipment.

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

(14) Steam cleaning equipment.

(15) Storage tanks, reservoirs or containers:

(a) Of a capacity of 6,000 gallons or less used for organic solvents, diluents or thinners;

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

(16) Vacuum cleaning systems used for housekeeping.

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

(18) Vents used exclusively for:

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

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

(20) Water cooling towers and cooling ponds, except for barometric condensers.

(21) Welding, brazing or soldering equipment.

(22) Asphalt laying equipment

(23) Equipment used in agricultural operations

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
1010 NE Couch Street, Portland, Oregon 97322

RULE 5

Notice of Construction and Procedure for Approval

Section 5.1 Notice of Construction

(1) Except for those sources listed in Table 2, Section 4.4, of these Rules, no person shall construct, install or establish a new air contamination source of any class or classes listed in subsection (2) of this Section without first notifying the Program Director in writing.

(2) Classes of Air Contamination Sources

(a) Air pollution control equipment
(b) Fuel burning equipment
(c) Refuse burning equipment
(d) Process equipment

(3) For the purpose of this Section, addition to or enlargement or replacement of an air contamination source, or any major alteration or modification that significantly affects the emissions of air contaminants shall be considered as construction or installation or establishment of a new air contaminant source.

Section 5.2 Submission of Plans and Specifications

Within 30 days of receipt of construction notice, the Program Director may require, as a condition precedent to construction, installation or establishment of the air contamination source or sources covered thereby, registration as required in Rule 4 and the submission of plans and specifications drawn in accordance with acceptable engineering practices. Such plans and specifications shall include the estimated quantities of input and output of air contaminants together with the estimated efficiency of the air pollution control equipment and shall be accompanied by a description of the process and a related flow chart. A plot plan, including the distance and height of buildings within a reasonable distance from the place where the equipment is or will be installed also shall be submitted.

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

Section 5.3 Notice of Approval

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

Section 5.4 Order Prohibiting Construction

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

(2) Any person against whom the order is directed may, within 20 days from the date of mailing of the order, demand a hearing. The demand shall be in writing, shall state the grounds for hearing and shall be mailed to the Authority. The hearing shall be conducted pursuant to the provisions of Rule 10.

Section 5.5 Notice of Completion

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

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RULE 6

Prohibited Practices

Section 6.1 General Prohibition of Air Contaminant Release

Notwithstanding emission standards of Rule 7, no person shall cause or permit any emission from any air contamination source whatsoever which causes or is likely to cause injury, detriment or nuisance to the public or which has a natural tendency to cause injury or damage to business or property.

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 Control Areas

(a) Domestic Rubbish

No person shall cause or permit to be ignited, or maintain, any open outdoor fire containing domestic rubbish within Special Control Areas A and B after 30 June 1970.

(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 Control Areas A and B.

(c) Land Clearing Operations

No person shall cause or permit to be ignited, or maintain, any open outdoor fire as part of any land clearing operation within Special Control Area B, or within Special Control Area A after 1 January 1970.

(4) 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.

(2) Refuse Burning Hours

(a) No person shall cause, permit or maintain the operation of refuse burning equipment at any time other than one-half hour before sunrise to one-half hour after sunset, except with prior approval of the Authority.

(b) Approval of the Authority for the operation of such equipment may be granted upon the submission of a written request stating:

(i) name and address of the applicant

(ii) location of the refuse burning equipment

(iii) description of refuse burning equipment and its control apparatus

(iv) type and quantity of refuse

(v) good cause for issuance of such approval

(vi) hours during which the applicant seeks to operate the equipment

(vii) time duration for which the approval is sought

(3) Construction of wigwam waste burners or similar devices is prohibited without prior approval of the Authority.

Section 6.4 Ships

All ships while in that portion of the Willamette River and Columbia River contained in the territory shall minimize emissions from soot blowing and further, shall be subject to the emission standards of ~~Rule 7.~~ Sections 7.20, 7.4 and 7.5.

Section 6.5 Concealment and Masking of Emissions

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

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

Section 6.6 Water Vapor

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

Section 6.7 Prevention of Particulate Matter from Being Released into the Atmosphere

(1) No person shall cause or permit particulate matter to be handled, transported or stored without taking precautions necessary to prevent particulate matter from being released into the atmosphere.

(2) No person shall cause or permit a building or its appurtenances or a road to be constructed, altered, repaired or demolished without taking precautions necessary to prevent particulate matter from being released into the atmosphere.

Section 6.8 Odor Control Measures

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

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

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

Section 6.9 Storage and Handling of Petroleum Products

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

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

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

Section 6.10 Private Lots and Roadways

No person shall cause or permit particulate matter from being released into the atmosphere from open areas within a private lot or private roadway located in Special Control Areas A and B, if such release creates a nuisance.

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

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RULE 7

Emission Standards

Section 7.1 General

Compliance with a specific emission standard in this Rule does not preclude required compliance with any other applicable emission standard.

Section 7.2 Visible Air Contaminant Standards

(1) Existing Sources

No person maintaining, owning or operating existing sources shall discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:

(a) As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, or

(b) Equal to or greater than 40% opacity.

(2) New Sources

No person owning, operating or maintaining new sources of emissions shall discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:

(a) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, or

(b) Equal to or greater than 20% opacity.

(3) Exceptions to Section 7.2 (1) and 7.2 (2)

Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Sections 7.2 (1) and 7.2 (2), such sections shall not apply.

Section 7.3 Particulate Matter Weight Standards

(1) Process Equipment

The maximum allowable emission of particulate matter for any process equipment shall be a function of process weight and shall be determined

from Table 3. Existing sources shall be in compliance with this emission standard not later than 30 December 1971.

(2) Hot Mix Asphalt Plants

The maximum allowable emissions of particulate matter from hot mix asphalt plants shall be determined from Table 3 except that the maximum allowable particulate emissions from processes greater than 60,000 pounds per hour shall be limited to 40 pounds per hour.

(3) Fuel Burning Equipment

The maximum allowable emission of particulate matter from any fuel burning equipment shall be a function of maximum heat input and shall be determined from Figure 2, except from existing fuel burning equipment utilizing wood residue, it shall be 0.2 grain, and from new fuel burning equipment utilizing wood residue, it shall be 0.1 grain, for each standard cubic foot of exhaust gas, adjusted to 50 percent excess air or calculated to 12 percent carbon-dioxide.

(4) Refuse Burning Equipment

The maximum allowable emission of particulate matter from any refuse burning equipment shall be a function of the maximum heat input from the refuse only and shall be determined from Figure 3.

(5) All Air Contaminant Sources

Notwithstanding emission limits of Section 7.3(1), (2), (3) and (4), particulate emission from any existing source shall not exceed 0.2 grain per standard cubic foot (SCF) or 0.1 grain per standard cubic foot for any new source.

Section 7.4 Particulate Matter Size Standard

No person shall cause or permit the emission of any particulate matter which is larger than 250 microns in size provided such particulate matter does or will deposit upon the real property of another person.

Section 7.5 Sulfur Dioxide Emission Standard

No person shall cause or permit emission of sulfur dioxide in excess of 1000 ppm from any air contamination source.

COLUMBIA-WILLAMETTE AIR POLLUTION AUTHORITY
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TABLE 3

Particulate Matter Emission Standards for Process Equipment

Process Lbs/Hr	Emission Lbs/Hr	Process Lbs/Hr	Emission Lbs/Hr	Process Lbs/Hr	Emission Lbs/Hr
50	0.24	2300	4.44	7500	8.39
100	0.46	2400	4.55	8000	8.71
150	0.66	2500	4.64	8500	9.03
200	0.85	2600	4.74	9000	9.36
250	1.03	2700	4.84	9500	9.67
300	1.20	2800	4.92	10000	10.00
350	1.35	2900	5.02	11000	10.63
400	1.50	3000	5.10	12000	11.28
450	1.63	3100	5.18	13000	11.89
500	1.77	3200	5.27	14000	12.50
550	1.85	3300	5.36	15000	13.13
600	2.01	3400	5.44	16000	13.74
650	2.12	3500	5.52	17000	14.36
700	2.24	3600	5.61	18000	14.97
750	2.34	3700	5.69	19000	15.58
800	2.43	3800	5.77	20000	16.19
850	2.53	3900	5.85	30000	22.22
900	2.62	4000	5.93	40000	28.30
950	2.72	4100	6.01	50000	34.30
1000	2.80	4200	6.08	60000	40.00
1100	2.97	4300	6.15	70000	41.30
1200	3.12	4400	6.22	80000	42.50
1300	3.26	4500	6.30	90000	43.60
1400	3.40	4600	6.37	100000	44.60
1500	3.54	4700	6.45	120000	46.30
1600	3.66	4800	6.52	140000	47.80
1700	3.79	4900	6.60	160000	49.00
1800	3.91	5000	6.67	200000	51.20
1900	4.03	5500	7.03	1000000	69.00
2000	4.14	6000	7.37	2000000	77.60
2100	4.24	6500	7.71	6000000	92.70
2200	4.34	7000	8.05	***	

*** Determination of emission standards above a process weight of 6,000,000 pounds per hour shall be made by the equation $E = (55.0 \times P^{0.11}) - 40$, where P = process weight in tons per hour and E = emission rate in pounds per hour.

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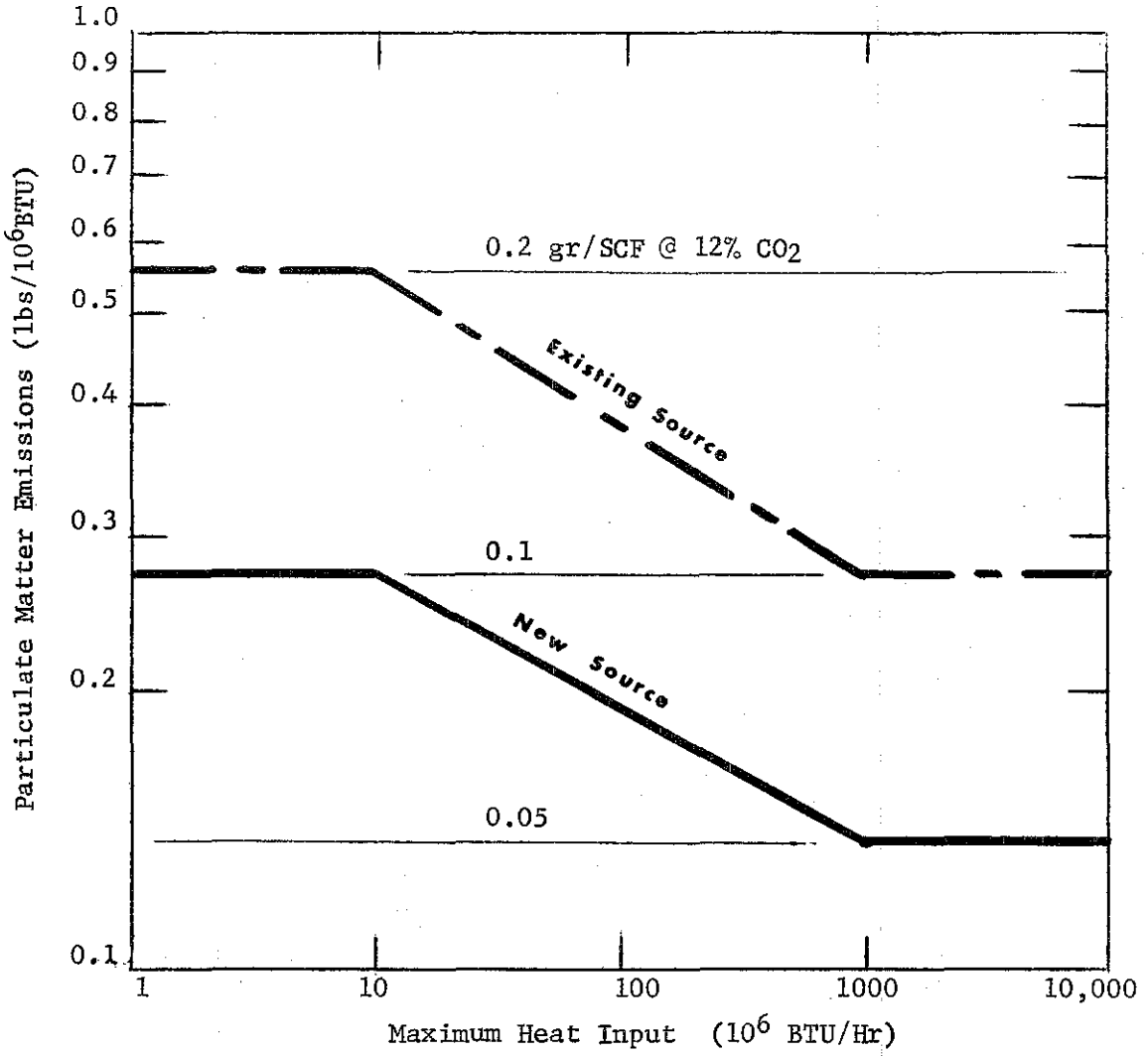

FIGURE 2

PARTICULATE MATTER EMISSION STANDARDS FOR FUEL BURNING EQUIPMENT

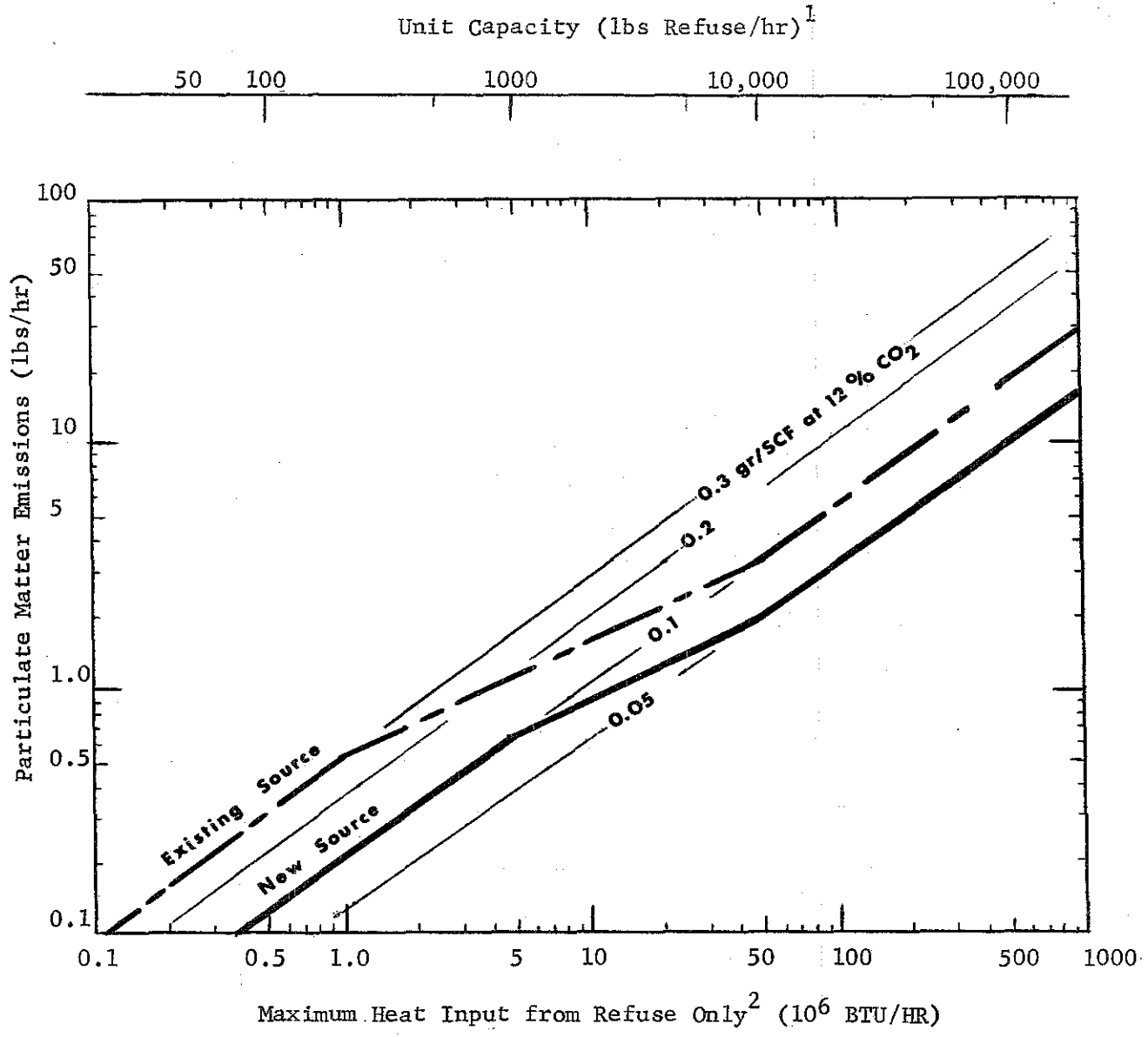

FIGURE 3 PARTICULATE MATTER EMISSION STANDARDS FOR REFUSE BURNING EQUIPMENT

[1] For refuse having heat content of 5000 BTU/lb as fired

[2] Excluding any auxiliary heat

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RULE 8

Ambient Air Standards

Section 8.1 General

No person shall cause or permit any emission, which emission by itself or when combined with other emissions that are present in the ambient air, is in excess of the standards enumerated in this section, except that the ambient air standards shall not be enforceable on the property surrounding the emission point if such property is contiguous and is in exclusive possession and control of the person responsible for the emission.

Section 8.2 Particulate Matter

(1) Suspended Particulate. The suspended particulate concentration measured at any Primary Air Mass Station shall not exceed:

(a) Seventy micrograms per cubic meter of air (70 ug/m^3) for more than 50% of the samples collected in any calendar year, based on not less than 85 samples with at least 7 samples per month.

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

(c) Twenty micrograms of calcium oxide per cubic meter of air (20 ug/m^3) at any Primary Air Mass Station, Primary Ground Level Monitoring Station or Special Station.

(2) Particulate Fallout. The Particulate Fallout rate measured at a Primary Air Mass Station or Primary Ground Level Monitoring Station shall not exceed:

(a) Ten grams per square meter per month (28 tons per square mile per month) in an industrial area.

(b) Five grams per square meter per month (14 tons per square mile per month) in an industrial area if visual observation shows the presence of wood waste and/or the volatile fraction of the sample exceeds seventy percent (70%).

(c) Five grams per square meter per month (14 tons per square mile per month) in residential and commercial areas.

(d) Three and one-half grams per square meter per month (10 tons per square mile per month) in residential and commercial areas if visual observation shows the presence of wood waste and/or the volatile fraction of the sample exceeds seventy percent (70%).

(e) Three hundred-fifty milligrams of calcium oxide per square meter per month (1.0 tons per square mile per month) at any PAMS, PGLMS or Special Station.

Section 8.3 Gases

Sulfur Dioxide. Sulfur dioxide **in** the ambient air measured at either a Primary Air Mass Station or a Primary Ground Level Monitoring Station shall not exceed the limitations shown in Table 4.

TABLE 4

Ambient Air Standards for Sulfur Dioxide

SO_2 Concentration	Averaging Period	Frequency of Occurrence
0.75 ppm	15 min	Once in any 8 consecutive hours
0.50 ppm	1 hour	Once in any 4 consecutive days
0.10 ppm	24 hours	Once in any 30 consecutive days
0.05 ppm	30 days	Any 30 consecutive days

Section 8.4 Odors

(1) No person shall cause or permit the emission of odorous matter in such manner as to contribute to a condition of air pollution, or exceed

(a) A scentometer No. 0 odor strength or equivalent dilution in residential and commercial areas.

(b) A scentometer No. 2 odor strength or equivalent dilution in all other land use areas.

Scentometer Readings

Scentometer No.	Concentration Range No. of Thresholds
0	≥ 1 to < 2
1	≥ 2 to < 8
2	≥ 8 to < 32
3	≥ 32 to < 128
4	≥ 128

(2) A violation of Section 8.4 shall have occurred when two measurements made within a period of one hour, separated by at least 15 minutes, off the property surrounding the air contaminant source exceeds the limitations of Subsection (1)

(3) When the source is a manufacturing process no violation of Subsection (1) shall have occurred provided that the highest and best practicable treatment and control currently available shall be provided in order to maintain the lowest possible emission of odorous gases.

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RULE 9

Variance Procedure

Section 9.1 Variances

(1) The Board of Directors, by order, may grant specific variance from the particular requirements or limitations of these Rules to specific persons or class of persons or such specific air contamination sources, upon such conditions as it may deem necessary to protect the public health and welfare, if it finds that compliance with the air quality standards of these Rules or any order issued pursuant thereto inappropriate because of conditions beyond the control of the persons granted such variance or because of special circumstances which would render compliance unreasonable, burdensome or impractical due to special physical conditions or cause, or because the effect of the air pollution is minimal in comparison with the effect of abatement or substantial reduction of the emission, or because no other alternative facility or method of handling is yet available. In determining whether or not a variance shall be granted, in all cases the equities involved and the advantages and disadvantages to the persons affected and the occupation or activity, shall be weighed by the Board of Directors.

(2) Any person requesting a variance shall make his request in writing and shall state in a concise manner the facts to show cause why such variance should be granted.

(3) Variances shall be for a period of time not to exceed twelve months, but may be renewed for a similar period of time by the Board of Directors upon reapplication.

(4) A variance granted may be revoked or modified by the Board of Directors after a public hearing held upon not less than 15 days notice. Such notice shall be served upon the holder of the variance and all persons who have filed with the Board of Directors a written request for such notification.

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RULE 10

Hearings and Contested Cases

Section 10.1 Method of Instituting Hearings

A hearing may be instituted by the Authority on its own motion or as follows:

(1) Petition by an interested person to secure a declaratory ruling by the Authority on the applicability to any person, property or state of facts of any rule or statute enforceable by it.

(2) Petition by any interested person for the promulgation, repeal or amendment of any Rule of the Authority.

Section 10.2 Petition Procedure

(1) Filing of the Petition

An original and 2 copies of the petition, either in typewritten or printed form, shall be filed with the Authority. A petition shall be deemed filed when received by the Authority. The Authority shall notify the petitioner of such filing.

(2) Contents of Petition

The petition shall be in writing, signed by or on behalf of, the petitioner, and shall contain a detailed statement of:

(a) Ultimate facts sufficient to show the situation is entitled to the relief requested;

(b) The specific relief requested;

(c) All propositions of law to be asserted by the petitioner; and

(d) The name and address of petitioner and of any other person or persons necessary to the proceeding;

(e) In cases of complaints or remonstrances involving alleged violation of public policy as expressed in Section 1.1 of these Rules,

the petition shall also contain a brief description of the alleged air pollution, and the persons, firm or corporation alleged to be contributing to the air pollution, and the nature of the injury resulting therefrom.

(3) Verification of the Petition

The petition shall be verified if required by the Authority.

(4) Service of the Petition, Notices, Order

(a) After the petition has been filed, the Authority shall cause an investigation to be made by the Program Director. If such investigation reveals probable cause for complaint, the Authority shall dispatch by registered or certified mail a true copy of the petition together with a copy of the applicable Rules of practice to all necessary parties as named in the petition. Such petition shall be deemed served on the date of mailing to the last known address of the person being served.

(b) All motions, notices, pleadings, orders and decisions shall be deemed served upon mailing by regular mail to the last known address of all necessary parties.

Section 10.3 Answers, Motions, Amendments and Withdrawals of Petitions

(1) Answers to petitions or other pleadings will not be required. Where no answer is filed with the Authority, all allegations of the petition will be deemed denied. If an answer or other pleadings are desired, they shall be served and filed in the same manner and form as provided in Section 10.1.

(2) The Authority, on its own motion or motion of any interested party, may require, within ten days of the filing or serving of the petition, that the allegations in the petition be made more definite and certain. Such motion shall point out the defects complained of and the details desired. If the motion is granted,

the petition shall also contain a brief description of the alleged air pollution, and the persons, firm or corporation alleged to be contributing to the air pollution, and the nature of the injury resulting therefrom.

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(2) The Authority, on its own motion or motion of any interested party, may require, within ten days of the filing or serving of the petition, that the allegations in the petition be made more definite and certain. Such motion shall point out the defects complained of and the details desired. If the motion is granted,

the petitioner shall be given fifteen days after notice to comply with the order. If this is not done, those allegations complained of shall be stricken.

(3) At any time more than ten days prior to hearing, the petitioner may amend his petition by serving a copy of the amended petition on all necessary parties and by filing an original and 2 copies with the Authority. After that time, amendment may be allowed at the discretion of the Authority.

(4) The petitioner may withdraw his petition at any time prior to hearing without prejudice. Thereafter, the petition may be withdrawn only upon approval of the Authority.

Section 10.4 Institution of Proceedings in Air Pollution Matters

(1) In case of failure by any person to correct air pollution or air contamination which has resulted in a violation of any rule or order of the Authority, the Authority may institute a hearing by written notice issued and served upon the person complained against.

(2) The notice shall be in writing, signed by the Chairman and shall contain:

(a) A summary of the complaint made by or to the Authority; or in the alternative a copy of the complaint shall be attached to the notice.

(b) Specify the provisions of the statute, rule or order of which the respondent is said to be in violation.

(c) A statement of the manner in and the extent to which such person is said to violate the statute, rule or order.

(d) A direction that the person so complained against shall answer the charges of such notice or complaint at a time and place before the Authority not less than 15 days after date of notice.

(3) The respondent to such notice may file a written answer thereto and may appear in person with or without counsel.

(4) The notice shall be served as provided in these Rules, not less than fifteen days prior to the hearing before the Authority.

(5) If the person served with notice fails to appear, the Authority may take such action, issue and enter such specific order or make such specific determination as it shall deem appropriate under the circumstances.

Section 10.5 Notice of Hearing

When a hearing has been requested by filing a petition, or ordered by the Authority upon its own motion, the Authority shall give all interested parties not less than fifteen days notice of date and place where such hearing will be held and nature of such hearing. This time may be shortened or extended by stipulation of all parties or upon request to the Authority by any party, which requests may be granted or denied at the discretion of the Authority. The request shall be supported by affidavit setting out facts in support thereof and may be opposed by any other party in the same manner upon good cause shown. The request shall be served as is provided in these Rules.

Section 10.6 Subpenas

Subpenas requiring the attendance of witnesses or the production of documentary or tangible evidence at a hearing may be issued by the Authority upon request by any party to the proceeding, including the Authority itself, upon proper showing of general relevance of reasonable scope of the evidence sought.

Section 10.7 Intervention

Any person having an interest in the subject matter of any proceeding may petition for leave to intervene in such proceeding and may become a party thereto, if the Authority finds that such persons may be bound by the order to be entered in the proceeding or that such person has a property or financial interest which may not be adequately represented by existing parties; PROVIDED, that such intervention would not unduly broaden the issues or delay the proceedings. Except for good cause shown, no petition for leave to intervene will be entertained if filed less than ten days prior to hearing.

Section 10.8 Conduct of the Hearing

The hearing shall be before the Board of Directors and shall be conducted by the Chairman of the Authority, or in his absence, the Vice-Chairman, except that the Board may direct that the hearing shall be conducted by a Hearings Officer.

Section 10.9 Disqualification

Any member of the Board of Directors may withdraw from the proceeding whenever he deems himself disqualified because of personal bias.

Section 10.10 Powers of Chairman

The Chairman or Vice-Chairman of the Board of Directors or a dully authorized Hearings Officer, shall have the following powers:

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

(2) To administer oaths and affirmations;

(3) To examine witnesses;

(4) To issue subpenas; (Subpenas may be served by any person authorized by the Chairman)

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

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

(7) To regulate the course of a hearing, including:

(a) The ejection of any person who in any manner interferes with the orderly procedure of a hearing;

(b) The requirement for parties to proceedings to submit in advance of hearing a written list of prospective witnesses and an estimate of time required to present his or its case.

(8) To hold conferences, before or during the hearing, for the settlement or simplification of issues.

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

(10) To take any other action authorized by these Rules.

Section 10.11 Who May Appear at Hearings

(1) Any party may be represented by counsel.

(2) Any individual may appear for himself, and any member of a partnership which is a party to any proceeding may appear for such partnership upon adequate identification. A bona fide officer of a corporation or association by permission of the officer presiding at the hearing.

Section 10.12 Standard of Conduct at Hearings

Contemptuous conduct by any person appearing at a hearing shall be grounds for his exclusion by the presiding officer from the hearing.

Section 10.13 Hearings Reporter

The official record of the hearing shall be stenographically or mechanically recorded by a person assigned by the Authority capable of doing such reporting. The method used shall be at the discretion of the Board of Directors

Section 10.14 Transcript of Testimony

The Authority is not required to furnish copies of the transcript of the official record. Any party to a hearing may purchase a transcript from the reporter.

Section 10.15 Continuances and Postponements

Motion for continuance or postponement of any hearing may be granted by the Authority for good cause shown.

Section 10.16 Testimony

(1) The testimony of witnesses at a hearing shall be upon oath or affirmation administered by an officer of the Authority authorized

to administer oaths and shall be subject to cross-examination. Any member of the Authority, or its attorney, may interrogate witnesses at any stage of the proceedings, either on direct or cross-examination.

(2) Any witness may, in the discretion of the Authority, be examined separately and apart from all other witnesses except those who may be parties to the proceedings.

(3) The Authority may limit oral argument in its discretion.

Section 10.17 Oath or Affirmation

The oath or affirmation taken by a witness before he may testify shall be in the same form and manner as is provided by law.

Section 10.18 Right to Full and True Disclosure of the Facts

Every party shall have the right to present his case or defense by oral, documentary or other satisfactory evidence, to submit evidence in rebuttal, and to conduct such cross-examination as may be required for a full and complete disclosure of the facts.

Section 10.19 Burden of Proof

The petitioner shall have the burden of proof; provided, that where proceedings are initiated by the Authority on its own motion, the report of the Program Director as to the existence of air pollution, and the cause thereof, shall constitute prima facie evidence thereof, unless satisfactorily rebutted, and such report shall constitute a part of the official record of the proceedings.

Section 10.20 Admission and Exclusion of Evidence

The hearing shall be conducted as an administrative hearing. The person or persons conducting said hearing shall not be bound by formal rules or evidence and may exercise discretion in admitting any evidence of a probative value.

Section 10.21 Objections

If a party objects to the admission or rejection of any evidence or to the limitation of the scope of any examination or cross-examination, he shall state briefly the grounds of such objection, whereupon the chairman shall rule on the objection.

Section 10.22 Judicial Notice

After first advising all parties of its intention to do so, the Authority may take notice of judicially cognizable facts as is provided by law (ORS 41.410 to 41.480) and of general, technical or scientific facts within the specialized knowledge of the officers and staff of the Authority.

Section 10.23 Informal Disposition

Informal disposition may be made of any contested case by stipulation, agreed settlement, consent order or default; provided that an order adverse to a party may be issued upon default only upon prima facie case made on the record by the Authority. Such a decision shall not be reviewable before the Authority.

Section 10.24 Argument and Submittals

The Authority shall give the parties to the proceedings adequate opportunity for the presentation of arguments in support of motions, objections and exception to its proposed decision. Prior to a proposed decision, the parties shall be afforded a reasonable opportunity to submit for consideration proposed finds and conclusions and supporting reasons therefor.

Section 10.25 Record for Decision

The stenographic or mechanical record of the testimony and exhibits, together with all papers, requests and rulings filed in the proceedings, and the reports and records of the Program Director, shall constitute the exclusive record for decision.

Section 10.26 Decision

The Authority shall render its decision within sixty days after completion of the hearing. A copy of the decision shall be mailed to each party or to his attorney of record.

Section 10.27 Appeal

Appeals, if any, shall be processed in accordance with the provisions of ORS 449.895.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : December 17 for December 19, 1969 Meeting

SUBJECT: CARBON MONOXIDE AMBIENT AIR STANDARD

The staff has reviewed the testimony given at the public hearing on November 20, 1969, and recommends adoption of the Carbon Monoxide Ambient Air Standard as presented.

The criteria document which was distributed to interested persons discusses in considerable detail the problems relating to and effects of carbon monoxide and this report is still available. Because it is felt there was less emphasis on factors influencing uptake of carbon monoxide, the following points from the report should be mentioned.

The report recognizes that a relatively small concentration of carbon monoxide in inhaled air can tie up significant quantities of hemoglobin as carboxyhemoglobin; that the amount of carbon monoxide within the body is related to both its concentration in the air and length of time the individual is exposed; the biologic response time for carbon monoxide is quite different from response time for an odorous or irritant gas; and that the uptake and excretion of carbon monoxide is an exponential function at low concentrations.

The report points out that an equilibrium condition is established between the carbon monoxide in the air breathed and that in the blood; and that the process of absorption or excretion will be substantially complete in two to twelve hours. For example, the amount of carbon monoxide in cigarette smoke varies between 1% and 2.5% by volume. If the heavy smoker has a 7% carboxyhemoglobin concentration (20-30 cigarettes per day gives a range of 3-10% with an average of 5%) and is exposed to 25 ppm of carbon monoxide, he will actually excrete carbon monoxide. If exposed to 50 ppm, there will be no uptake, and if exposed to 100 ppm, the uptake will be quite slow. Parallel examples can be made for smokers or non-smokers alike entering or leaving higher level areas.

Implementation Program

It is the conclusion of the staff that an immediate short-term program to reduce emissions of carbon monoxide in urban areas is neither technically or economically feasible, nor warranted by the seriousness of the problem at the present time. No public health emergency is considered to exist at the present time. Independent estimates of Department staff and consultants in the Federal government have indicated that total carbon monoxide emissions in urban areas are currently decreasing at a rate of approximately 6% per year as a result of 1968 and 1970 Federal emission standards for motor vehicles.

Therefore, the following policy and guideline program is suggested:

A. The federal emission control program should be supported and relied upon as the most reasonable and practical approach to significantly reducing carbon monoxide emissions from motor vehicles. Close attention should be given to future studies on CO emissions from new and used vehicles in order to continually reassess the effectiveness of the program.

B. State and Regional Authorities should continue to monitor ambient air concentrations of carbon monoxide, with data reported to the DEQ as needed for continual surveillance of carbon monoxide in the environment.

C. The Department should continue to evaluate the feasibility and desirability of implementing a required periodic motor vehicle engine tune-up program as a means of minimizing emissions of all motor vehicle air contaminant emissions.

D. The Department should publicly support the development of rapid transit systems as a long range means of reducing motor vehicle concentrations in urban areas.

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
HERMAN P. MEIERJURGEN
Nehalem
STORRS S. WATERMAN
Portland
GEORGE A. McMATH
Portland

December 10, 1969

Tri-County Metropolitan Transportation
District of Oregon
Room 230, Morgan Park Building
729 S. W. Alder Street
Portland, Oregon 97205

Gentlemen:

The Environmental Quality Commission and the Department of Environmental Quality extend their support to the Tri-County Metropolitan Transportation District of Oregon and to the concept of integrating and improving public transportation within the greater metropolitan area. The Commission urges that a complete consolidation of the remaining bus systems serving the metropolitan area be undertaken as soon as possible so that your agency will be responsible for all bus operations within the area. By developing a mass transportation system that will significantly reduce automobile traffic within the metropolitan area, a sizeable reduction in atmospheric loading can be achieved.

The Department, however, is concerned that the beneficial impact upon airshed quality by a successful and well utilized transportation system may not be understood or appreciated by the public if buses used by the system smoke, are foul smelling and noisy. For this reason the Commission urges that thorough consideration be given to reducing the effects of smoke, odor and noise to the minimum technically possible. To do so, not only must equipment purchase specifications be carefully prepared to obtain lowest emission vehicles, but also stringent operation and maintenance programs to maintain lowest emissions must be developed and used.

The staff of the Department of Environmental Quality would be pleased to consult with your staff on this matter if you so desire.

Very truly yours,

B. A. McPhillips, Chairman
Environmental Quality Commission

BAM:RCH:ms

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL

PROPOSED AMBIENT AIR QUALITY STANDARD

FOR

CARBON MONOXIDE

I. Definitions

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

B. Primary Air Mass Station (PAMS) - A station designed to measure contamination in an air mass and represent a relatively broad area. The sampling site shall be representative of the general area concerned and not be contaminated by any special source. The probe inlet shall be a minimum of twenty feet and a maximum of 150 feet above ground level. Actual elevation should vary to prevent adverse exposure conditions caused by surrounding buildings and terrain. The probe inlet shall be placed approximately twenty feet above the roof top and meteorological measurement shall be made at approximately the same level as the probe inlet.

C. Primary Ground Level Monitoring Station (PGLMS) - A station designed to provide information on contaminant concentrations near the ground and provide data valid for the immediate area only. The probe inlet shall be ten to twenty feet above ground level with a desired optimum height of twelve feet. The sampling site shall be representative of the immediate area and not be contaminated by any unique source. The probe inlet shall not be less than two feet from any building or wall.

II. Air Quality Standard

Carbon monoxide in the ambient air measured at either a Primary Air Mass or a Primary Ground Level Monitoring Station shall not exceed an average concentration of twenty (20) parts per million by volume for any consecutive eight (8) hours.

September 22, 1969

III. Method of Measurement

For determining compliance with this regulation, carbon monoxide shall be measured by an infrared carbon monoxide analyzer. The analyzer shall have a full-scale range of one hundred (100) parts per million or less and be calibrated with known zero and span gases. Measurement shall be made according to the infrared method attached herewith as Exhibit "A" and reference incorporated herein. Other continuous and manual methods of measurement may be used after approval by the Department of Environmental Quality provided they can be shown to be comparable to the infrared technique in reproducibility, selectivity, sensitivity, and accuracy.

IV. Reporting of Data

Local and regional air pollution control agencies monitoring carbon monoxide shall notify the Department of Environmental Quality each time concentrations of carbon monoxide exceed the standard. Notification shall be made by telephone immediately after validation of the violation and also by mail on forms provided by the state agency. Data to be reported shall include.

a. Location of sampler.
b. Time span involved.
c. Concentrations recorded.
d. Type of sampler used.
e. Other relevant information requested by the state.

An annual report summarizing all occurrences of concentrations exceeding the standard shall be submitted to the state agency.

EXHIBIT "A" available upon request.

EXHIBIT "A"

CARBON MONOXIDE

METHOD OF DETERMINATION & REPORTING
FOR CONTINUOUS INFRARED ANALYSIS

General

The infrared absorption of a compound is a characteristic of the type and arrangement of the atoms making up its molecules.

Dual beam infrared analysis is accomplished in the following manner: Two helices of nichrome wire are heated to about 1200°F. at which temperature they emit infrared energy. This energy is passed through two parallel optical paths, one the reference path and the other the sample path, to the sensing element.

In the non-dispersive Luft infrared analyzers (LIRA)[1], the signal is generated in the following manner: An interruptor alternately blocks the sample and reference beams. The sensing element, a capacitance microphone, responds to the arithmetical difference in radiant energies between the two beams, and converts the optical signal to an electrical impulse which is then amplified to a level necessary for operation of a meter, recorder or other readout device.

Infrared analyzers are not sensitive to flow rates. However, they are sensitive to vibration and temperature changes. The long-path instruments have heaters included in the optical benches with thermostats to maintain a constant temperature for the sample stream as it passes through the analyzer.

Apparatus

To monitor atmospheric carbon monoxide with an automatic analyzer, the following equipment and materials are recommended:

1. One LIRA analyzer complete with pump, control devices, and readout unit (i.e. Strip chart recorder).
2. One two-liter Erlenmeyer flask.

3. One two-hole rubber stopper.
4. Two pieces of 8 mm glass tubing, one of sufficient length to reach within ½ inch of the bottom of the Erlenmeyer flask, the other to extend 1 inch beyond the bottom of the stopper into the flask.
5. Sufficient ¼ inch tygon tubing to allow a three-foot condensation loop between the Erlenmeyer flask and the input port of the instrument.

   (Items 3, 4, and 5 are needed when humidity control is maintained by saturation.)

6. One cylinder of span gas made of carbon monoxide and either reconstituted air or nitrogen, of a concentration to be in the upper 25% of the recorder scale (i.e. On a 0 to 100 ppm recorder, 85 ppm would be a good concentration for the span gas.).
7. One cylinder of zero gas of reconstituted air (21% O_2, 79% N_2).
8. One hopcalite tube.[2]

   (Items 7 and 8 may be replaced by other zero gas known to be free of CO.)

9. Two 2-stage pressure regulators with attendant valves and restraints for installation of gas cylinders.
10. Sufficient copper tubing, ¼ inch I.D., refrigeration grade, to plumb the cylinders of zero and span gas to the control panel. The attached drawings show the method for plumbing the instrument and the method for constructing the hopcalite tube.

Operation & Calibration

The instrument must be allowed to reach operating temperature before data is recorded. (Allow at least two hours for the instrument to reach equilibrium.) It should then be balanced, zeroed and spanned. Zeroing and spanning shall be repeated at least once per week. The zero and span gases and the sample air shall be passed through a bubbler or other humidity control device to maintain a constant moisture content. It is recommended to flow the reconstituted air (zero gas) through a hopcalite filter to eliminate any measurable concentrations of CO.

The instrument shall be rebalanced whenever there is inadequate zero and span adjustment available on the control panel and whenever maintenance

is performed on the instrument's electrical or optical systems.

Interferences

Water vapor and carbon dioxide have slight overlapping absorption spectra with carbon monoxide in the infrared region. These interferences are removed somewhat in the construction of the filter cell of the instrument.

Carbon dioxide (CO_2) response should be less than 1 ppm indicated CO for 1000 ppm CO_2. As atmospheric concentrations are in the order of 300 ppm CO_2, the interference from CO_2 should always be less than 0.5 ppm CO.

Water vapor concentration varies very widely in the atmosphere, and a rejection ratio of 2500:1 (2500 ppm H_2O may cause a response of not more than 1 ppm CO) is generally accepted. To correct for conditions where wide variations in atmospheric moisture content occur, proper humidity controls must be applied to assure that sample, zero and span gases all have the same relative humidity when passed into the analyzer. Insertion of a water bubbler in the sampling line of the instrument to assure a saturated gas stream at all times is one way of correcting for water vapor interference.

Other contaminants in concentrations commonly found in the atmosphere do not interfere with the infrared carbon monoxide analysis.

Data Recording & Reporting

Data shall be recorded on strip chart recorders, tape units or other devices compatible with the analyzer and data processing system in use.

Results shall be reported in parts per million and data for each day shall include:

1. All hourly averages (A minimum of six instantaneous readings are needed each hour to calculate the average.).
2. Maximum hourly average and time of occurrence.
3. Twenty-four hour average.

4. Number hours >20 ppm.
5. Maximum eight-hour average and time of occurrence.
6. All eight-hour averages >20 ppm and times of occurrences.

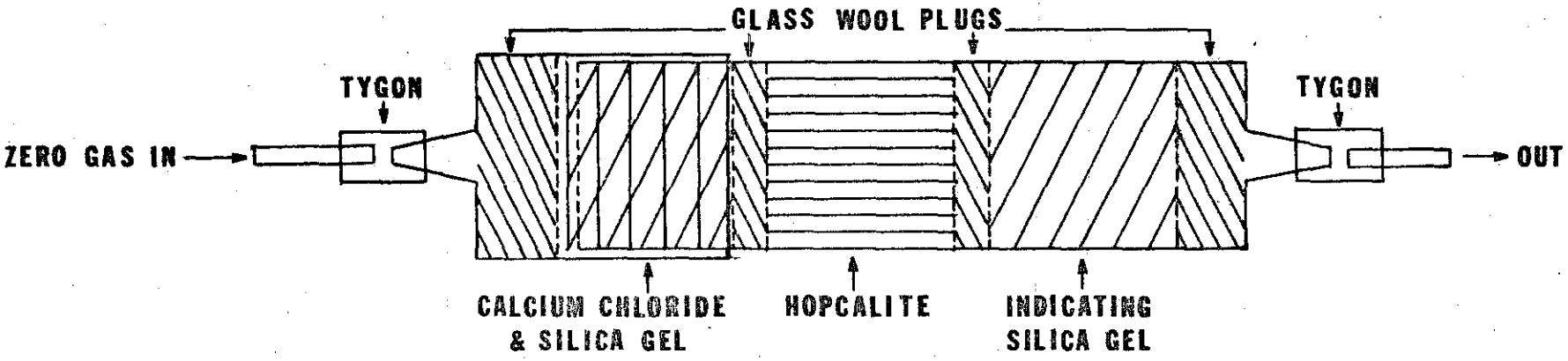
References

[1]Yaffee, C.D., Byers, D.H., and Hosly, A.D., "An Improved Luft Type Infrared Gas and Liquid Analyzer," Encyclopedia of Instrumentation for Industrial Hygiene, pp. 284-285, University of Michigan, Inst. of Industrial Health, 1956.

[2]Gordon, C.L., "Carbon Monoxide Free Gas for Analyzer Calibrations," 9th Conference on Methods in Air Pollution and Industrial Hygiene Studies, Feb. 7-9, 1968.

1/8/69

PLASTIC DRYING TUBE



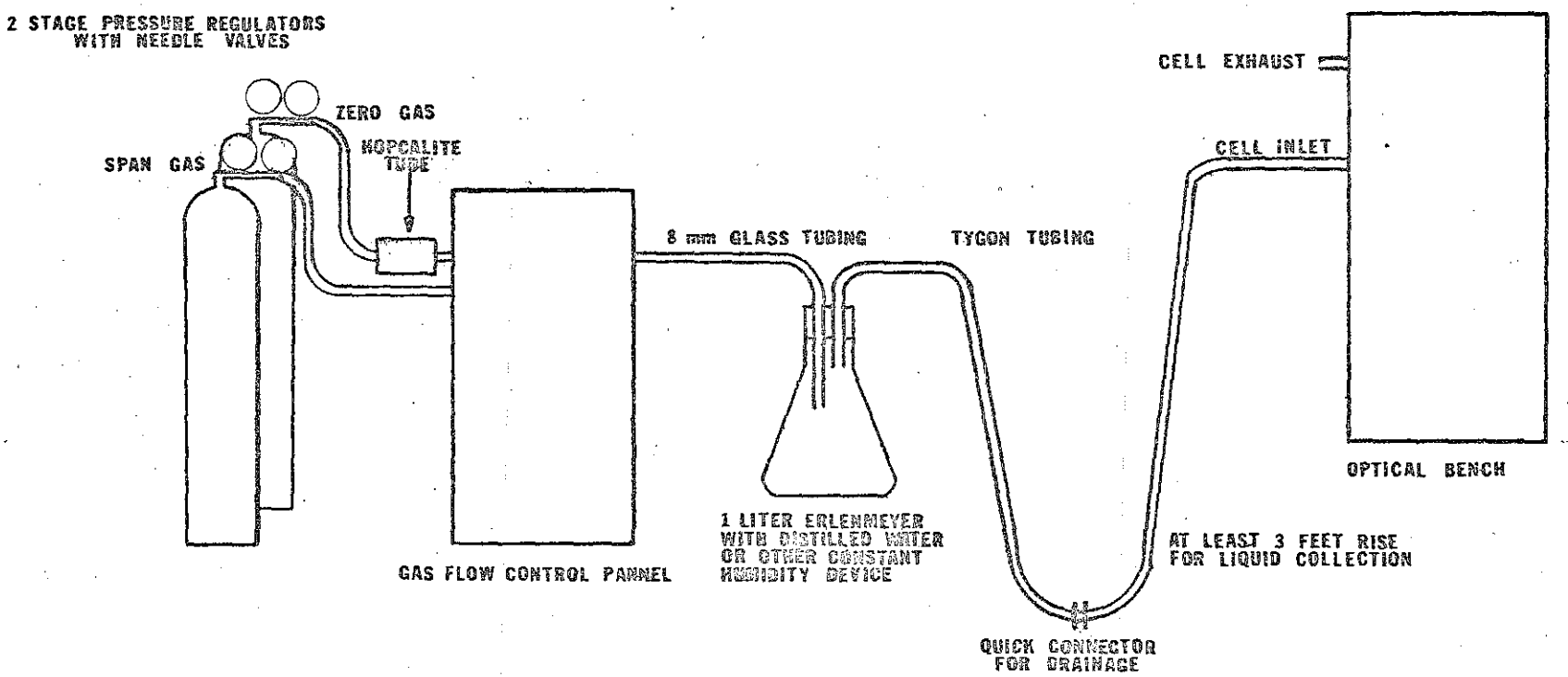
MATERIALS:

INDICATING SILICA GEL - MATHISON CO.
HOPCALITE - MINE SAFETY APPLIANCE CO.

HOPCALITE ZERO GAS TUBE

INFRA RED CO ANALYSERS

NO SCALE CLG-68



TYPICAL PLUMBING INSTALLATION

NON DISPERSIVE I. R. CARBON MONOXIDE ANALYZER

December 29, 1969

Mrs. Joe H. Rand
5411 S. E. Morrison Street
Portland, Oregon 97215

Dear Mrs. Rand:

In response to your request at the meeting of the Environmental Quality Commission on December 19, 1969, we are enclosing a copy of the statement made by you on that day.

Very truly yours,

H. M. Patterson, Director
Air Quality Control Director

HMP:ms

Enclosure

(I)

Statement by Mrs. Joe H. Rand

I would like to make some remarks relating to the programs for motor vehicle emissions as stated in the Oregon-Washington air quality commission meeting of December 9, 1968.

In this document it is stated that 20 ppm CO in a smoker can produce 5% carboxyhemoglobin. It is further stated that this level can cause significant physiological effects in many individuals. It would, therefore, seem that an allowable standard of 20 ppm/8 consecutive hours is neither reasonable nor safe.

I therefore propose a lower level of 15 parts per million / 8 hours to go into effect immediately and furthermore that the regulation state that the allowable level be reduced to 10 ppm by January 1973.

What we are primarily interested in is the health of the population. The health studies that have been done and will be done on CO and other pollutants will be correlated with the concentrations that people breathe. If we are measuring levels at 10 or 20 feet in the air this may or may not correlate the pollutants that people breathe at 5 or 6 feet above the street. In this case the levels measured at a higher elevation would tend to give us a sense of false security; therefore, we propose that the CO level be measured at 6 ft. above ground level, which is, after all, 4 to 5 feet above the level at which the CO is emitted.

In addition, I would like to make some suggestions. A supplementary method to help control pollution in the downtown area (or any designated area of congestion or high pollution) would be to place a regulation on the direct emission level of cars which are allowed in these designated areas. California has placed regulations on car emissions and has proposed even stricter regulations to be required in the next few years. I understand that these levels are easily measured and could perhaps be measured as part of a yearly auto safety inspection. Colored stickers could be given showing which cars met the required emission standards and only these cars allowed in the designated areas.

An alternate method of regulating pollutants from individual cars in highly congested areas would be to regulate the horsepower of the auto engines allowed in these designated congested areas. The horsepower required to drive at maximum highway speeds is certainly not more than 100 horsepower. Many of the Detroit monsters now being produced have engines that range from 300 to 500 horsepower. Automobiles with unnecessarily large engines could be prohibited from these designated areas.

I would like to close with a quote from D.H.E. Landsbery, biometeorologist with the U.S. Dept. of Commerce Weather Bureau - "If extraordinary steps are not taken now to control air pollution, in the very near future the population will be an allergic lot with subacute CO poisoning and lead poisoning, suffering from chronic bronchitis and emphysema and dying from cardio-respiratory insufficiency or from lung cancer."

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : December 15, 1969

SUBJECT : VISIBLE EMISSION MOTOR VEHICLE REGULATION

To date no data has been received from the Engine Manufacturing Association and if such data is not received by the time of the meeting, (and is evaluated) we will request continuance to the January meeting.

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

PROPOSED

REGULATIONS FOR MOTOR VEHICLE VISIBLE EMISSIONS

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

1. Dealer - means any person who is engaged wholly or in part in the business of buying, selling, or exchanging, either outright or on conditional sale, bailment lease, chattel mortgage or otherwise, motor vehicles.
2. Department - means Department of Environmental Quality.
3. Motor Vehicle - means any self-propelled vehicle designed and used for transporting persons or property on a public street or highway.
4. Motor Vehicle Fleet Operation - means ownership, control, or management or any combination thereof by any person of 5 or more motor vehicles.
5. Opacity - means the degree to which transmitted light is obscured, expressed in percent.
6. Person - means the same as ORS 449.760 and also includes registered owners, lessees and lessors of motor vehicles.
7. Regional Authority - means a regional air quality control authority established under the provisions of ORS 449.760 to 449.330 and 449.850 to 449.920.
8. Visible Emissions - means those gases or particulates, [excluding uncombined water,] which separately or in combination are visible upon release to the outdoor atmosphere.

II. VISIBLE EMISSIONS - GENERAL REQUIREMENTS, EXCLUSIONS

1. No person shall operate, drive, or cause or permit to be driven or operated any motor vehicle upon a public street or highway which emits into the atmosphere any visible emission.
2. Excluded from this section are those motor vehicles:
   a) Powered by compression ignition or diesel cycle engines,
   b) Excluded by written order of the Department by ORS 449.810.

III. VISIBLE EMISSIONS - SPECIAL REQUIREMENTS FOR EXCLUDED MOTOR VEHICLES

No person shall operate, drive, or cause or permit to be driven or operated upon a public street or highway, any motor vehicle excluded from Section II,

which emits visible emissions into the atmosphere:

1. Of such opacity as to obscure an observer's view to a degree of 10% or greater; provided however,
2. Visible emissions may be emitted into the atmosphere for a period aggregating not more than 5 consecutive seconds, if said emission does not equal or exceed an opacity of 40%.

IV. UNCOMBINED WATER - WATER VAPOR

Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Section II or III, such sections shall not apply.

V. MOTOR VEHICLE FLEET OPERATION

1. The Department may, by written notice, require any motor vehicle fleet operation to certify annually that its motor vehicles are maintained in good working order, and, if applicable, in accordance with the motor vehicle manufacturers' specifications and maintenance schedule as may or tend to affect visible emissions. Records pertaining to observations, tests, maintenance and repairs performed to control or reduce visible emissions from individual motor vehicles shall be available for review and inspection by the Department.
2. The Department, by written notice, may require any motor vehicle of a motor vehicle fleet operation to be tested for compliance with Sections II and III of these regulations.
3. A regional authority, within its territory, may perform the functions of the Department as set forth in Items 1 and 2, upon written directive of the Department, expressly permitting such action.

VI. DEALER COMPLIANCE

No dealer shall sell, exchange or lease or offer for sale, exchange or lease, any motor vehicle which operates in violation of Sections II or III of these regulations, except as permitted by Federal regulations.

VII. METHOD OF MEASUREMENT

1. The opacity observation for purposes of these regulations shall be made by a person trained as an observer, provided however that,
2. The opacity Chart, marked "Exhibit A", with instructions for use, attached hereto and by reference incorporated into these regulations may be used in grading the opacity of emissions for purposes of these regulations.

VIII. ADOPTION OF ALTERNATIVE METHODS OF MEASURING VISIBLE EMISSIONS

1. The Department may permit the use of alternative methods of measurement to determine compliance with the visible emissions standards in Sections II and III of these regulations, when such alternative methods are demonstrated to be reproducible, selective, sensitive, accurate and applicable to a specific program.
2. Any person desiring to utilize alternative methods of measurement shall submit to the Department such specifications and test data as the Department may require, together with a detailed specific program for utilizing the alternative methods. The Department shall require demonstration of the effectiveness and suitability of the program.
3. No person shall undertake a program using an alternative method of measurement without having obtained prior written approval of the Department.

IX. ENFORCEMENT

Any person who drives, operates, or causes or permits to be driven or operated upon a public street or highway a motor vehicle which emits visible emissions into the atmosphere in violation of Section II or III of these regulations, shall be ordered to bring the vehicle into conformity with these regulations and to present the vehicle to a police office within 15 days for inspection and verification that the vehicle does conform to these regulations. Notice of nonconformity with these regulations may be given on Oregon State Police Form 53 (Inspection Chest List), a copy of which is attached hereto, marked "Exhibit B", and by this reference incorporated into these regulations. Any person so ordered who willfully fails to present the designated vehicle to a police office within the time specified, shall be punished as provided in ORS 449.990 for violations of rules and regulations of the Department.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : December 17, 1969 for December 19, 1969 Meeting

SUBJECT: AUTHORIZATION FOR PUBLIC HEARINGS

The staff requests authorization from the Commission to establish Public Hearing dates as required for the purpose of adopting the ambient air standards and regulations listed with tentative hearing dates as follows:

1. AMBIENT AIR STANDARDS
   a. Suspended Particulate - January 30, 1970
   b. Particle Fallout - January 30, 1970
   c. Fluorides - February 27, 1970

2. REGULATIONS
   a. Aluminum Reduction plants - February 27, 1970
   b. Sulfite Pulp mills - February 27, 1970
   c. Registration, sampling, testing and management of Sources- February 27, 1970

At the present time it is anticipated that hearings on ambient air standards for suspended particulate and particle fallout will be scheduled for the January Commission meeting. Adoption of these standards at an early date is consistent with the recommendations contained in the report "Analysis of an Air Pollution Episode", dated December 12, 1969 and included in the notebooks.

This report examined air quality data during an air pollution episode that represents an extreme example of the typical fall-winter pollution regime in the Willamette Valley. It concluded that the most critical problem throughout the Valley is the degradation of visual air quality resulting primarily from high concentrations of suspended particulates. The report makes several specific recommendations that will be implemented by the Department in cooperation with the Regional Authorities as a means of better identifying the sources of suspended particulate and re-evaluating current control programs. In addition to this study-oriented activity, it appears certain that additional standards and regulations will be required in order to achieve a higher degree of control over particulate emissions.

The proposed standard for suspended particulate and particle fallout is a needed first step. In addition, the staff is currently working on particulate emission standards for all industrial processes, fuel burning equipment, and incinerators. These regulations will be complementary to existing and proposed regulations governing visible emissions, wigwam burners, asphalt plants, kraft and sulfite pulp mills and aluminum reduction plants. It is expected that authorization to hold public hearings on these particulate emission control regulations will be requested at the January or February meeting.

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OFFICE BUILDING • 1400 S.W. 5th AVENUE • PORTLAND, OREGON • 97201

December 15, 1969

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

SUBJECT: December 19, 1969 Meeting

Mr. Kenneth H. Spies is preparing a composite agenda based on needs of both Air and Water Quality. In the meantime, we are submitting these items of the agenda for your information:

1. Continuance of Hearing for regulations pertaining to visible emissions from motor vehicles.

2. Continuance of the Hearing relative to ambient air standards for carbon monoxide. (No enclosure, however, it is proposed to adopt the standard as presented.)

3. B. F. Cleat and Slat Co., Roseburg. Enclosure.

4. Variances granted by Mid-Willamette Valley Air Pollution Authority. Enclosure.

5. Columbia-Willamette Air Pollution Authority Rules and Regulations, submitted for approval of air purity standards. Enclosed are the Rules and Regulations.

6. Request for Public Hearing. The staff will be requesting authorization for a Public Hearing relative to ambient air standards pertaining to suspended particulate (enclosed) particle fallout (enclosed) and fluorides (including forage standards - enclosed); and for rules pertaining to aluminum reduction (enclosed) and sulfite pulp mills. It is anticipated that the Hearing would be preferred for a February period so that if desirable, testimony from experts who apparently will be in the area to testify in Washington at the hearing, can also testify in Oregon in regard to fluorides.

Mailing Address: P.O. Box 231, Portland, Oregon 97207 — Telephone: (503) 226-2161

12/17/69

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

PROPOSED

REGULATIONS FOR MOTOR VEHICLE VISIBLE EMISSIONS

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

1. Dealer - means any person who is engaged wholly or in part in the business of buying, selling, or exchanging, either outright or on conditional sale, bailment lease, chattel mortgage or otherwise, motor vehicles.
2. Department - means Department of Environmental Quality.
3. Motor Vehicle - means any self-propelled vehicle designed and used for transporting persons or property on a public street or highway.
4. Motor Vehicle Fleet Operation - means ownership, control, or management or any combination thereof by any person of 5 or more motor vehicles.
5. Opacity - means the degree to which transmitted light is obscured, expressed in percent.
6. Person - means the same as ORS 449.760 and also includes registered owners, lessees and lessors of motor vehicles.
7. Regional Authority - means a regional air quality control authority established under the provisions of ORS 449.760 to 449.330 and 449.850 to 449.920.
8. Visible Emissions - means those gases or particulates, excluding uncombined water, which separately or in combination are visible upon release to the outdoor atmosphere.

II. VISIBLE EMISSIONS - GENERAL REQUIREMENTS, EXCLUSIONS

1. No person shall operate, drive, or cause or permit to be driven or operated any motor vehicle upon a public street or highway which emits into the atmosphere any visible emission.
2. Excluded from this section are those motor vehicles:
   a) Powered by compression ignition or diesel cycle engines,
   b) Excluded by written order of the Department by ORS 449.810.

III. VISIBLE EMISSIONS - SPECIAL REQUIREMENTS FOR EXCLUDED MOTOR VEHICLES

No person shall operate, drive, or cause or permit to be driven or operated upon a public street or highway, any motor vehicle excluded from Section II,

which emits visible emissions into the atmosphere:

1. Of such opacity as to obscure an observer's view to a degree of 10% or greater; provided however,
2. Visible emissions may be emitted into the atmosphere for a period aggregating not more than 5 consecutive seconds, if said emission does not equal or exceed an opacity of 40%.

IV. UNCOMBINED WATER - WATER VAPOR

Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Section II or III, such sections shall not apply.

V. MOTOR VEHICLE FLEET OPERATION

1. The Department may, by written notice, require any motor vehicle fleet operation to certify annually that its motor vehicles are maintained in good working order, and, if applicable, in accordance with the motor vehicle manufacturers' specifications and maintenance schedule as may or tend to affect visible emissions. Records pertaining to observations, tests, maintenance and repairs performed to control or reduce visible emissions from individual motor vehicles shall be available for review and inspection by the Department.
2. The Department, by written notice, may require any motor vehicle of a motor vehicle fleet operation to be tested for compliance with Sections II and III of these regulations.
3. A regional authority, within its territory, may perform the functions of the Department as set forth in Items 1 and 2, upon written directive of the Department, expressly permitting such action.

VI. DEALER COMPLIANCE

No dealer shall sell, exchange or lease or offer for sale, exchange or lease, any motor vehicle which operates in violation of Sections II or III of these regulations, except as permitted by Federal regulations.

VII. METHOD OF MEASUREMENT

1. The opacity observation for purposes of these regulations shall be made by a person trained as an observer, provided however that,
2. The opacity Chart, marked "Exhibit A", with instructions for use, attached hereto and by reference incorporated into these regulations may be used in grading the opacity of emissions for purposes of these regulations.

VIII. ADOPTION OF ALTERNATIVE METHODS OF MEASURING VISIBLE EMISSIONS

1. The Department may permit the use of alternative methods of measurement to determine compliance with the visible emissions standards in Sections II and III of these regulations, when such alternative methods are demonstrated to be reproducible, selective, sensitive, accurate and applicable to a specific program.
2. Any person desiring to utilize alternative methods of measurement shall submit to the Department such specifications and test data as the Department may require, together with a detailed specific program for utilizing the alternative methods. The Department shall require demonstration of the effectiveness and suitability of the program.
3. No person shall undertake a program using an alternative method of measurement without having obtained prior written approval of the Department.

IX. ENFORCEMENT

Any person who drives, operates, or causes or permits to be driven or operated upon a public street or highway a motor vehicle which emits visible emissions into the atmosphere in violation of Section II or III of these regulations, shall be ordered to bring the vehicle into conformity with these regulations and to present the vehicle to a police office within 15 days for inspection and verification that the vehicle does conform to these regulations. Notice of nonconformity with these regulations may be given on Oregon State Police Form 53 (Inspection Chest List), a copy of which is attached hereto, marked "Exhibit B", and by this reference incorporated into these regulations. Any person so ordered who willfully fails to present the designated vehicle to a police office within the time specified, shall be punished as provided in ORS 449.990 for violations of rules and regulations of the Department.

Form 53

INSPECTION CHECK LIST	LOCATION	DATE	OREGON STATE POLICE	
YEAR MODEL	MAKE	VEH. TYPE	DRIVER'S LICENSE NO.	
VEHICLE LICENSE NO.	STATE	MILEAGE	STATE	DATE OF BIRTH
REGISTERED OWNER		ADDRESS		

NOTICE: Correct any violation checked immediately. Proof of compliance must be submitted to a State Police office within 15 days. I UNDERSTAND THAT FAILURE TO COMPLY MAY RESULT IN COURT ACTION.

DRIVER'S SIGNATURE

X

ADDRESS: LAST, FIRST, MIDDLE; NO. STREET, CITY, STATE, ZIP CODE

Name _____

Res. Address _____

City _____ State _____ Zip Code _____

Officer _____ No. _____

Date Violation Corrected

CHECK LIST (A check below indicates a defect or violation)

A. DRIVER'S LICENSE	B. REGISTRATION		C. HORN
1 NOT IN POSSESSION	1 NOT IN POSSESSION	6 DISPLAY PLATE	1 DEFECTIVE
2 EXPIRED	2 TAB NOT ATTACHED	7 PLATE COVERED	2 INAUDIBLE
3 CHANGE OF ADDRESS	3 PLATE NOT SECURED	8 PLATE ILLEGIBLE	3 NONE
4 RESTRICTIONS	4 CHANGE OF ADDRESS	9 EXPIRED	
5 OTHER	5 PLATE ON WRONG VEHICLE	10 TRANSFER DUE	

D. WIPERS	E. MIRRORS	F. GLASS	G. EXHAUST
1 INOPERATIVE	1 NONE	1 DEFECTIVE	1 EXCESS NOISE
2 DEFECTIVE BLADES	2 INADEQUATE	2 VISION OBSCURED	2 MODIFIED, ETC.
		3 UNAPPROVED	3 EXCESS SMOKE
			4 LEAKY

H. LIGHTS			I. TIRES/WHEELS
1 HEAD LAMP DEFECTIVE	5 BEAM—OUT	10 REFLECTORS	1 DEFECTIVE TIRE
2 LOOSE/IMPROPERLY MOUNTED	6 DEFECTIVE DIMMER SWITCH	11 STOPLIGHT DEFECTIVE	2 DEFECTIVE WHEEL
3 HEADLAMP ADJUST.	7 SIGNALS REQUIRED	12 STOPLIGHTS	
4 BEAM INDICATOR	8 SIGNALS DEFECTIVE	13 LICENSE LIGHT DEFECTIVE	
	9 TAILLIGHT DEFECTIVE	14 LICENSE LIGHT REQ.	
		15 CLEARANCE LIGHTS	
		16 UNAPPROVED LIGHTS	

J. POLLUTION DEVICES		K. BRAKES	L. OTHER
1 DEFECTIVE	TYPE (CHK. AS APPROP.)	1 SERVICE BRAKE DEFECTIVE	1 DEFECTIVE STEERING
2 REQUIRED	☐ CRANKCASE	2 PARKING BRAKE REQ.	2 LOWERED VEHICLE
3 DISCONNECTED	☐ EXHAUST	3 PARKING BRAKE DEFECTIVE	3 FENDER REQUIRED
			4 FUEL CAP
			5 UNSAFE SUSPENSION

☐ Your vehicle has been inspected and no defects found. This check list may be used as a guide to assist you in keeping your vehicle and its equipment in legal condition and proper repair. Should you encounter another inspection lane, this form may be shown to the officer; however, you must bear in mind that a defect may occur at any time.

☐ WARNING

☐ CITATION

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL DIVISION

DATE : December 17, 1969

SUBJECT: AVAILABILITY OF EXHAUST EMISSION CONTROL SYSTEMS FOR USED CARS

In light of testimony given at its meeting on November 24, 1969, the Commission requested the staff to investigate the availibility of exhaust emission control systems for used cars. The staff found no exhaust emission control systems currently available which would be considered satisfactory in terms of emission reduction, availability for a wide range of used cars, servicability and service life, or cost. However, there is considerable activity in this area as witnessed by the Ford Motor Company announcement that they are working on the development of such a system. The staff conferred with a staff member of the California Air Resources Board last week, who stated that two firms have recently inquired into having control systems of their design tested for compliance with new California law.

The California law in question is Assembly Bill 1056, recently signed by Governor Reagan. This bill authorized the Air Resources Board to set exhaust emission standards for used cars. These standards may not exceed 350 ppm of hydrocarbon gases, 2% carbon monoxide and 880 ppm of oxides of nitrogen. The board is authorized to accredit a control device if it meets two of these standards and does not cost more than $65. California has had similar laws in the past, however this particular current law is more lenient in a further attempt to promote the development of such controls.

As is well known, California has been active in motor vehicle emission control for many years. In June, 1964, the Motor Vehicle Pollution Control Board of California approved the American Machine and Foundry - Chromalloy Corporation afterburner exhaust control device for installation on used cars back to 1962 models. The used car installation price was quoted as being $81. In November, 1964, the California staff reported that while the Company quoted an installation cost for used cars of $81.50 and an annual maintenance cost of $11.75 for the AMF system, they estimated the installation cost to be $133 and the annual maintenance cost to be $80. At this meeting, approval of the Walker Manufacturing Co. - American Cyanamid Exhaust control device for used car installation was being sought. The California staff reported the used car installation cost would be $110 and the annual maintenance cost would be $80. The Walker device was rejected for used car installation at the December 1964 meeting of the Board. California law at that time required approval of two devices before installation of exhaust control devices on used cars could be required. To this time, no such second device has been approved.

In conclusion, the staff finds that no satisfactory exhaust control devices are currently available for general installation on used cars. There is activity in this area though, and the situation may change in the near future.

APPENDIX I

Proposed Ambient Air and Forage Standards and Regulations

FLUORIDES

I. Policy Limitations

The standards set forth within these regulations are intended to protect livestock and vegetation. All sampling to measure compliance with said standards will be conducted in areas and during time periods appropriate to protect vegetation and livestock.

II. Definitions as used in Sections I to VII, unless otherwise required by context:

A. Forage: Grasses, pasture and other vegetation that is consumed or is intended to be consumed by livestock.

B. Cured Forage: Hay, straw, ensilage that is consumed or is intended to be consumed by livestock.

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

III. Intent of Regulations

Two standards are established by these rules. One shall be for the fluoride content of forage and the other for gaseous fluorides in the ambient air. No person shall cause, let, permit or allow any emission of elemental or chemically combined fluorine, which either alone or in combination with other fluorides that may be present in forage or the ambient air, to be in excess of the standards in Sections IV or V.

IV. Forage Standard

A. The fluoride content of forage calculated by dry weight shall not exceed:

1. Forty parts per million fluoride ion (40 ppm F^-) average for any twelve (12) consecutive months.
2. Sixty parts per million fluoride ion (60 ppm F^-) each month for more than two (2) consecutive months.
3. Eighty parts per million fluoride ion (80 ppm F^-) more than once in any two (2) consecutive months.

B. Cured forage grown for sale as livestock feed shall not exceed forty parts per million fluoride ion (40 ppm F^-) by dry weight after curing or preparing for sale.

C. In areas where cattle are not grazed continually, but are fed cured forage part of the year, the fluoride content of the cured forage shall be used as the forage fluoride content for as many months as it is fed to establish the yearly average.

V. Ambient Air Standards

Gaseous fluorides in the ambient air calculated as HF by volume shall not exceed:

A. Four and one-half parts per billion (4.5 ppb) average for any twelve (12) consecutive hours.

B. Three and one-half parts per billion (3.5 ppb) average for any twenty-four (24) consecutive hours.

C. Two parts per billion (2.0 ppb) average for any seven (7) consecutive days.

D. One part per billion (1ppb) average for any thirty (30) consecutive days.

VI. Compliance with Standards

When requested by the Department, persons emitting fluorides to the atmosphere shall be required to establish compliance with Sections IV and V by conducting a monitoring program approved in writing by the

Department and submitting all data obtained.

VII. Sampling and Analysis

A. Forage samples shall be taken once each calendar month at 25-35 day intervals as specified in the approved monitoring program to determine compliance with Section IV.

B. Gaseous fluoride shall be sampled according to the approved monitoring program, using the sodium bicarbonate tube method to determine compliance with Section V.

C. Samples shall be analyzed by the Technicon Auto Analyzer or the Modified Willard-Winter Distillation Method. The Orion probe may be used to analyze the gaseous ambient air sample when the fluoride is in soluble form. Other sampling and analyses methods which are equivalent in accuracy, sensitivity, reproductibility and applicability under similar conditions may be used after approval by the Department.

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

PROPOSED REGULATION AND STANDARDS

for

PRIMARY ALUMINUM PLANTS

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

   A. Require, in accordance with a specific program and time table for each operating primary aluminum plant, control, collection and treatment of atmospheric pollutants emitted from primary aluminum plants through the utilization of all equipment, devices and procedures consistent with attaining and maintaining desired air quality.

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

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

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

II. Definitions

   A. All Sources - Means sources including, but not limited to, the reduction process, alumina plant, anode plant, anode baking plant, cast house, and collection, treatment and recovery systems.

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

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

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

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

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

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

H. Fluorides - Means matter containing fluoride ion.

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

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

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

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

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

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

III. Emission Standards

A. The emission of gaseous fluorides and particulate fluorides from all sources within a primary aluminum plant shall be restricted so that the ambient air and forage standards for fluorides are not exceeded outside the premises controlled by the aluminum plant owner or operator (See Appendix I).

B. The total emission of solid particulate matter to the atmosphere from the reduction process (pot-lines) shall not exceed fifteen (15) pounds per ton of aluminum produced on a daily basis.

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

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

E. The Commission may, after public hearing, establish more restrictive emission limits for new primary aluminum plants or for plants that expand existing facilities. Data documenting projected emissions and changes in or effects upon air quality that would result from the construction or expansion, must be submitted to the Commission, together with plans and specifications, in accordance with Section VI (C).

IV. Compliance

Each primary aluminum plant shall proceed promptly with a program to comply with this regulation. A proposed schedule of compliance shall be submitted by each plant to the Commission not later than one hundred and eighty (180) days after the effective date of this regulation. After receipt of the proposed schedule, the State shall establish a schedule of compliance for each plant. Such schedule shall include the date by which full compliance must be achieved but, in no case, shall full compliance be later than July 1, 1972, for Section III (A) and January 1, 1975, for Sections III (B) and (C).

V. Monitoring

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

Commission. The program shall include regularly scheduled monitoring for emissions of gaseous and particulate fluorides and total particulates. A schedule for measurement of fluoride levels in forage and ambient air shall be submitted.

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

VI. Reporting

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

1. Ambient air: Twelve-hour concentrations of gaseous fluoride in ambient air expressed in ppb of hydrogen fluoride on a volume basis.
2. Forage: Concentrations of fluoride in forage expressed in ppm of fluoride on a dried weight basis.
3. Particulate emissions: Results of all emission sampling conducted during the month for particulates, expressed in grains per standard dry cubic foot, in pounds per day, and in pounds per ton of aluminum produced. The method of calculating pounds per ton shall be as specified in the approved monitoring programs. Particulate data shall be reported as total particulates and percentage of fluoride ion contained therein.

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

4. Gaseous Emissions: Results of all sampling conducted during the month for gaseous fluorides. All results shall be expressed as hydrogen fluoride in ppm on a volume basis and pounds per day of hydrogen fluoride.
5. Other emission and ambient air data as specified in the approved monitoring program.
6. Changes in collection efficiency of any portion of the collection or control system that resulted from equipment or process changes.

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

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

VII. Special Studies

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

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

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

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

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

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

VIII. Other Air Quality Limitations

The emission limits established under these sections are in addition to other emission standards and ambient air standards established or to be established by the Commission unless otherwise provided by rule or regulation.

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CONTROL DIVISION

December 15, 1969

SUMMARY

"ANALYSIS OF AN AIR POLLUTION EPISODE"

The Department of Environmental Quality staff report "Analysis of an Air Pollution Episode", dated December 12, 1969, gives the results of an in-depth study of meteorological and air quality conditions during the period October 18 - October 22, 1969. Because the poorest air quality during the period occurred during National Cleaner Air Week, it is referred to in the report as the "Cleaner Air Week Pollution Episode".

The Cleaner Air Week Pollution Episode was the result of an intense and persistent subsidence inversion based below 2000 feet, combined with light and fluctuating surface winds, which led to steady accumulation of contaminants and deterioration of air quality. These weather conditions occur frequently in the Willamette Valley during fall and winter months, and in fact have re-occurred since October 22 on several occasions, resulting in poor air quality similar to that observed during Cleaner Air Week. It is largely because of the recurring nature of the problem that an in-depth study of this episode was considered to be of value.

An analysis of air contaminant concentrations during the episode indicates that the most significant effects of the episode were those associated with reduced visibility resulting primarily from extremely high suspended particulate concentrations. Suspended particulates are defined as very small solid or liquid particles, the most common examples being smoke and dust. Proposed air quality standards for suspended particulate were exceeded throughout the period in question. No existing or proposed standards for gaseous contaminants were exceeded, although the maximum level of nitrogen dioxide recorded in downtown Portland on October 21, was an all-time high for that station and approached the level set by the State of California as an air quality standard. Nitrogen dioxide is a small contributor to visibility reduction.

Emission inventory data indicate that on a weighted average basis from 50% to 80% of the contaminants contributing to visibility reduction are emitted from industrial sources, primarily in the form of suspended particulates. Motor vehicles are considered to emit 30% or less. The

following table appears in the report:

CONTRIBUTION TO VISIBILITY REDUCTION (Pollution Haze Index)

Source	Multnomah County	Lane County
Industry	50%	78%
Motor Vehicles	28%	16%
Other Sources	22%	6%

Commenting on this table, the report states, "the indication that industrial emissions account for 50% or more of the total degradation of visibility, and contributes from 2 to 5 times as much visibility reducing contamination as motor vehicles, is clear and should not be overlooked".

Evidence considered in the report indicates that sources external to the Valley, such as forest slash burning, had a negligible effect on Valley air quality, and that "the episode was essentially a case of the entire airshed choking on its own emissions for a whole week."

Taking into account the excessive levels of suspended particulate and resulting poor visual air quality, the report concludes with the recommendation that state and regional control programs relative to control of particulate emissions be re-evaluated. Recognizing that control of particulates has always been a major part of control agency programs in Oregon, the report states that nevertheless, "at no time have definite priorities and program objectives been established and integrated into a concrete control strategy specific to suspended particulates."

In order to facilitate such a strategy, the report calls for a detailed Valley-wide inventory of suspended particulate sources to be completed by the Regions and DEQ by June 1970. As the inventory results become available, the state and regional air quality authorities are to re-evaluate their program plans and priorities for controlling particulate emissions. The report recommends that the Regional Air Pollution Authorities be requested to submit to DEQ an annual summary of information relative to particulate emissions. The information to be submitted along with the agencies' grant applications, would include a breakdown of emissions by source type, totals for current and preceding years, and an estimate of emissions controlled during the past year.

While recognizing that suspended particulate presents the most serious generalized air quality problem in the Willamette Valley, the report also emphasizes the need for continued surveillance of gaseous contamination. To this end, the Department will analyze three years of data from the Continuous Air Monitoring Station in Portland, in order to try to identify current trends in ambient air levels of gaseous contaminants. Such a study will be complicated by the need to account for meteorological factors in order to make valid comparisons on a year to year basis.

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

December 12, 1969

ANALYSIS OF AN AIR POLLUTION EPISODE

(1969 Cleaner Air Week Pollution Episode)

CONTENTS

THE CLEANER AIR WEEK POLLUTION EPISODE IN THE WILLAMETTE VALLEY

INTRODUCTION

The week of October 19-25, 1969, was designated as National Cleaner Air Week and observed as such by pollution control agencies and citizens' groups. It is ironic that during this week, Portland and the rest of the Willamette Valley experienced a severe air pollution episode.

Beginning on October 17, stable atmospheric conditions allowed the accumulation of air contaminants in the valley to the point that on the basis of measured air contaminant concentrations, Tuesday, October 21, was concluded to be one of the most severe air pollution days in Portland during the past three years. The air pollution condition, compounded by fog, was widespread from southwest Washington to the south end of the Willamette Valley with visibilities in Eugene remaining at 4 miles or less for 52 consecutive hours. By comparison, the infamous "Black Tuesday" (August 12, 1969) of the recent field burning season was characterized in Eugene by visibility at the Eugene airport of 6 miles or less for 6 hours.

During this period, the extreme air pollution condition was widely commented on by air quality authorities and by the general public, indicating a widespread interest in both the severity and the cause of the problem. Due to the nature of air quality and meteorological data recording and analysis, a clear and detailed picture of the episode was not available at that time. Such information is considered to be of value at this time not only because of the severity of the episode but also because of its recurring nature. The meteorological conditions that made the Cleaner Air Week episode possible are typical of fall and winter in the Willamette Valley, making it fairly certain that at present emission levels, such air pollution conditions will not only re-occur in the future, but may occur with even higher levels of air contamination.

The object of this report, therefore, is to analyze the nature and extent of the Cleaner Air Week pollution episode, attempting to define causative and contributing factors where possible. Such information should prove valuable to both state and regional air quality control programs.

METEOROLOGICAL DISCUSSION

General

The air pollution episode which reached its peak during the week of October 20 was characterized by generally stable conditions within the Willamette basin, and an effective decoupling of the basin air mass from the air above by an intense subsidence inversion based below 2000 feet. Winds throughout the Valley were light and flow patterns were indicative of local, rather than general, circulations. These conditions were very conducive to local accumulations of air contaminants.

The episode was ended on October 23 by movement of an active cyclonic system into the area and consequent flushing of the Valley. The end of the episode was evident first at Eugene at about midnight on the 22nd, then at Salem in the early morning hours of the 23rd, and finally at Portland after midday on the 23rd.

Visibility

Visibility records from the ESSA Weather Bureau stations at the airports in Portland, Salem and Eugene were obtained for the period October 17-24. Examination of these records revealed the following points:

1. Visibilities at all three airports showed quite similar cyclic variations. Visibilities were lowest in the late night and early morning hours, primarily due to fog formation. Improvement in visibility usually began after mid-morning, and reached highest levels in late afternoon.

2. In general, airport visibilities during the episode were better at Portland than at Salem or Eugene. Salem had the poorest overall visibilities. (In part, the better visibilities at the Portland airport may be attributed to its location at the mouth of the Columbia Gorge.) Visibilities in the core area of Portland were probably poorer at times than those observed at the airport.

3. Of the three stations, Eugene showed the most well-defined pattern of continued deterioration of visibility throughout the episode.

4. During the episode, Portland had 53 consecutive hours of visibilities less than 10 miles, Salem had 148 consecutive hours of less than 10 miles, and Eugene had 97 consecutive hours of visibilities less than 10 miles.

AVERAGE VISIBILITY (Miles) BETWEEN 10 a.m. and 4 p.m.

	Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 22	Oct. 23	Oct. 24
Portland	9.5	2.4	8.6	6.0	3.8	2.8	7.3	17.9
Salem	5.9	3.4	2.9	4.1	3.3	1.7	17.9	21.7
Eugene	11.9	7.1	4.3	4.6	2.4	1.2	18.9	20.7

MAXIMUM AND MINIMUM DAILY VISIBILITIES (Miles)

Portland	-Max.	20	7	15	15	6	7	15+	20
	-Min.	2	0	2	3	1/16	1/16	6	8
Salem	-Max.	8	7	7	7	8	4	20	40
	-Min.	1.5	0	1.5	1	1/8	1/8	2	10
Eugene	-Max.	15	10	8	8	4	10	25	25
	-Min.	1/4	0	1/4	0	0	0	7	10

Wind

Wind data was obtained from stations in Portland, Salem, and Eugene. The surface wind patterns were typical of stagnation conditions. Local, rather than general circulations were evident throughout the Valley. As an example, wind data from the Portland airport and Morrison Street Bridge were compared for the period October 17-24. At both stations winds were generally quite light during the episode, with the airport reporting more calms than the Morrison Bridge. Mean hourly wind speeds for each day were higher in the core area than at the airport.

The Morrison Bridge data show quite definitely a pattern of northwesterly and southeasterly flows, indicating possible channeling effects of the West Hills. It is interesting to note than on October 17, 21 and 22, winds at the Bridge were light northwesterly in the late night and morning, but tended to die out near midday before picking up again in the afternoon. This pattern indicates that air contaminants from the North Portland industrial area were regularly brought over the city center.

PORTLAND AIRPORT AND MORRISON BRIDGE MEAN HOURLY WIND SPEEDS (Miles per Hour)

	Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 22	Oct. 23	Oct. 24
Airport	3.7	1.3	2.9	1.4	0.7	2.5	2.7	4.6
Morrison Bridge	3.7	3.0	5.8	2.4	3.2	3.2	3.2	7.5

MEASURED AIR QUALITY

Visibility

Visibility is the one air quality parameter that every citizen on the street both measures and applies as a criterion to determine how good or bad the air pollution problem may be on any given day. For this reason it is important to consider visibility in any air pollution episode evaluation.

The actual visibility data for three Valley cities is discussed in the previous section. Figure 1 shows graphically the average visibilities during the hours of 10 a.m. - 4 p.m. -- the period in which humidity effects would be minimized and air pollution factors should be the most significant cause of poor visibility. The graph demonstrates well the steady decline in air quality from October 17 to October 22.

Suspended Particulate

The primary air contaminant contributing to reduced atmospheric visibility is particulate matter in the 0.1 to 1 micron (1 micron = .001 mm.) size range. Suspended particulates are measured by various instruments and agencies throughout the Valley; since Portland data is most readily available and since examination of visibility data indicates Portland to be typical of the Valley, only Portland area measurements will be considered in this section.

Figure 2 shows two continuous measurements of suspended particulate plotted together with Portland visibility. An AISI sampler is operated by the Department of Environmental Quality at the Continuous Air Monitoring Station at 718 W. Burnside, Portland, and collects a 2-hour integrated sample of particulate on a filter tape reported as a soiling index in units of CoH (Coefficient of Haze). The Columbia-Willamette Air Pollution Authority (CWAPA) operates an integrating nephelometer at its offices at 1010 N. E. Couch Street. This instrument measures the scattering of light in a continuous sample of ambient air and provides a direct reading of the scattering coefficient, which has been empirically determined to have a logarithmic relation with suspended particulate concentrations. The values shown in Figure 2 are 1-hour averages of the scattering coefficient.

A review of the suspended particulate data shows that the highest levels during the episode were obtained on Tuesday, October 21. The AISI 24-hour

average soiling index of 2.05 is the 12th highest value recorded at the CAM station during the 3 years since the station began operations.

The nephelometer data obtained from CWAPA also shows that maximum levels of particulate occurred on the 21st. The peak scattering coefficient of 12 (in units of 10^{-4} m^{-1}) represents an approximate suspended particulate concentration of over 450 micrograms/cubic meter, compared with an annual median average in Portland of around 70 ug/m^3. The actual daily average on October 21, measured by high-volume sampling at the CWAPA office, was 211 ug/m^3. Based on CWAPA data, this value would be exceeded on fewer than 18 days per year.

The data of Figure 2 show several different diurnal trends in particulate levels. Most noticeable are the peak values occurring about 10 a.m. on the 20th and 21st. This phenomenon was not as noticeable or not present on other days of the episode. Less obvious but more consistently observed is the occurrence of a maximum during the midnight hours. Presumably due to stable atmospheric conditions at this time of day, the "midnight peak" is more pronounced than the increasing trend during peak traffic hours. In fact, while nephelometer readings generally increased during morning hours (due to increased motor vehicle emissions, space heating start-up, and industrial emissions being carried over the urban area) decreases were noted more frequently than increases during evening commuter periods.

Gaseous Contaminants

In addition to high levels of suspended particulate, concentrations of most gaseous contaminants were recorded at high levels during the Cleaner Air Week pollution episode. The maximum 1-hour average and maximum 8-hr. average concentrations of nitrogen dioxide (NO_2) on October 21 represented the highest values ever recorded at the CAM station in 34 months of sampling. Other gases, while not reaching record concentrations, were well above normal levels.

Gaseous contaminant levels are shown graphically in Figures 3 and 4. Maximum 1-hr., 8-hr., and 24-hr., averages for each day are tabulated in Table 1. An interpretation of maximum or characteristic concentrations is as follows:

Nitric Oxide - The peak hourly average of 0.51 ppm was recorded on October 17, second highest levels on Oct. 21; neither value is unusual by comparison with previously observed maximum levels.

Nitrogen Dioxide - All-time CAM Station record values of 0.24 ppm 1 hr. average and 0.16 maximum 8-hr. average, were reached on October 21.

Total Oxidant - The peak hourly average of 0.04 ppm on Oct. 20 and 21, is exceeded less than 4% of the time; predominant values were .01 or lower during the episode.

Total Hydrocarbons - The maximum 1-hr. average of 6.6 ppm was significantly lower than the maximum observed in most months.

Carbon Monoxide - The maximum 8-hr. average of 15.6 ppm on October 21 is exceeded about 23 days per year, based on 3 years of sampling data.

Sulfur Dioxide - The maximum 1-hr. average of .09 ppm on October 20 is exceeded less than 5% of the time.

In general, it is concluded that the overall levels of gaseous contaminants on October 20 and 21 would be exceeded on fewer than 5 or 10% of all days or 20 to 40 days per year.

It is concluded from Figure 3, which shows NO, NO_2, and oxidant plotted on the same axes, that the level of photochemical activity in the atmosphere was fairly low during most of the episode. In all but a few cases, the level of nitric oxide (NO) remained above the NO_2 concentration, indicating that the conversion of NO to NO_2 was considerably retarded to moderate temperatures and decreased insolation due to morning fog. The two occasions of major production of NO_2 on the afternoons of October 20 and 21 coincide with peaks in total oxidant; this indicates that on these two days, Portland did experience a mild version of the classical photochemical smog reaction, which greatly over-simplified is as follows:

Hydrocarbons + Nitrogen Oxides + Sunlight ---------➤ Oxidant

Nitric Oxide + Oxidant -------➤ Nitrogen Dioxide.

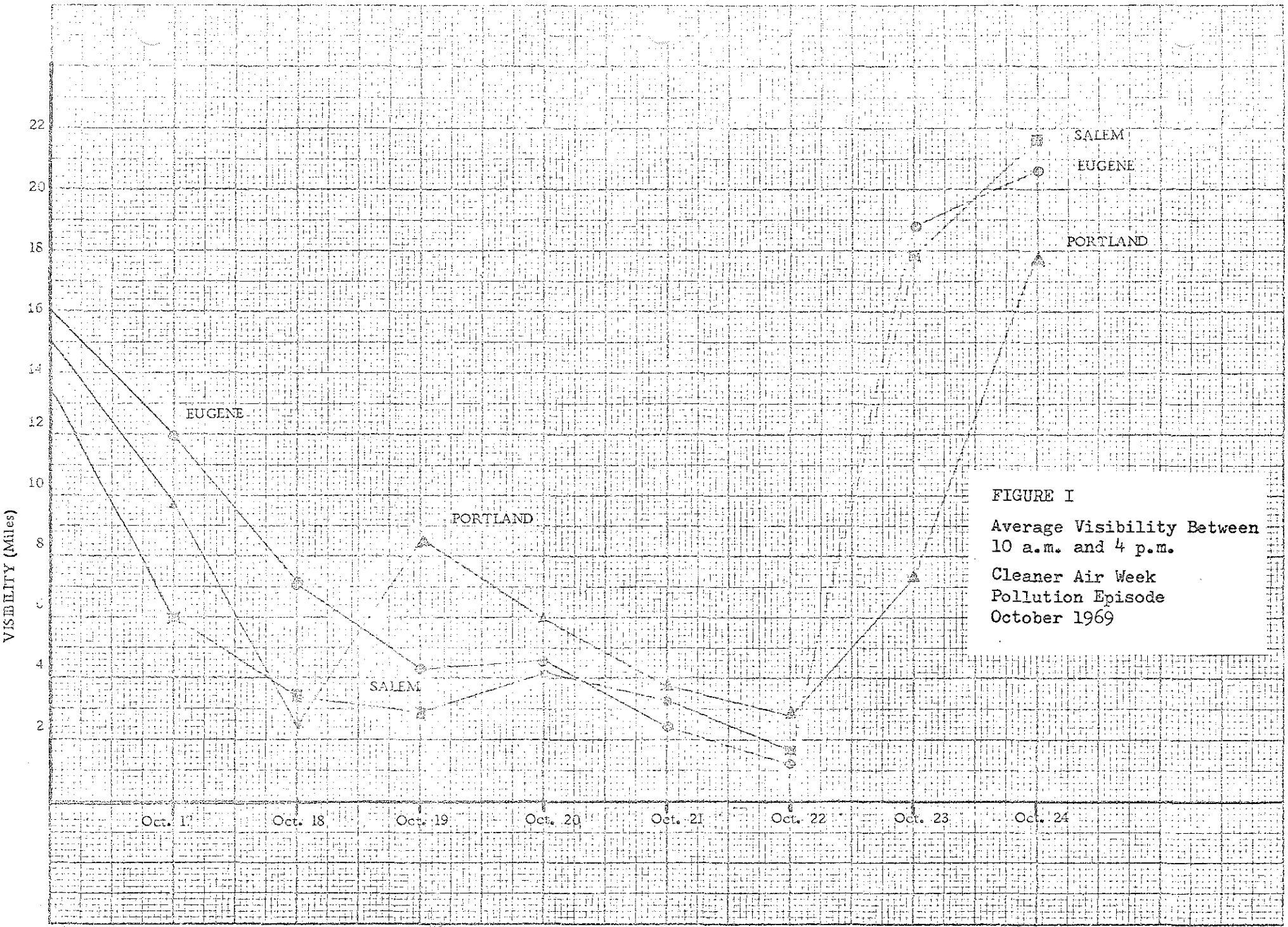
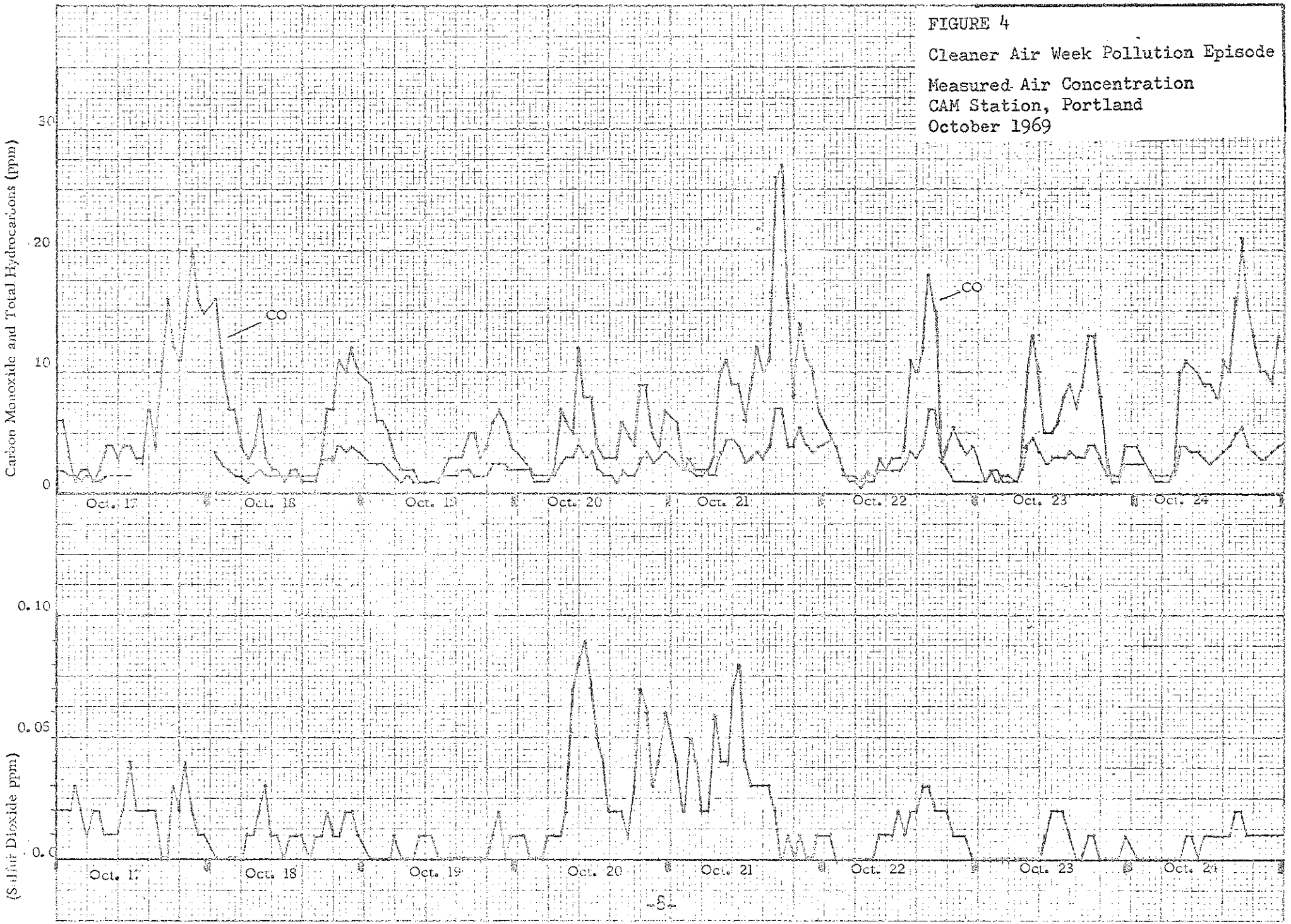


FIGURE I

Average Visibility Between 10 a.m. and 4 p.m.

Cleaner Air Week
Pollution Episode
October 1969



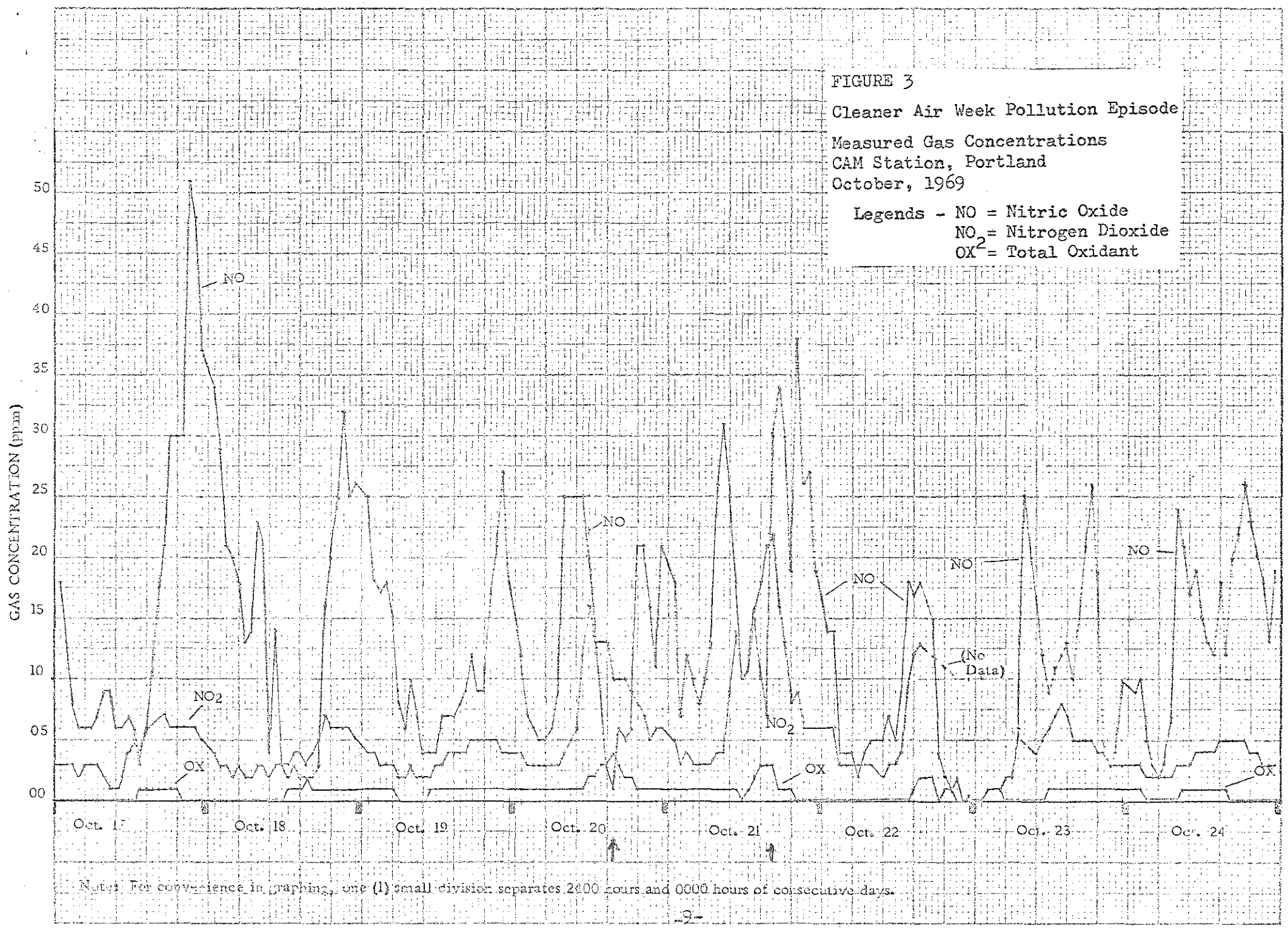


FIGURE 3
Cleaner Air Week Pollution Episode
Measured Gas Concentrations
CAM Station, Portland
October, 1969
Legends - NO = Nitric Oxide
NO2 = Nitrogen Dioxide
OX = Total Oxidant
GAS CONCENTRATION (ppm)
50
45
40
35
30
25
20
15
10
05
00
NO
NO2
OX
(No Data)
Oct. 17
Oct. 18
Oct. 19
Oct. 20
Oct. 21
Oct. 22
Oct. 23
Oct. 24
Note: For convenience in graphing, one (1) small division separates 2400 hours and 0000 hours of consecutive days.

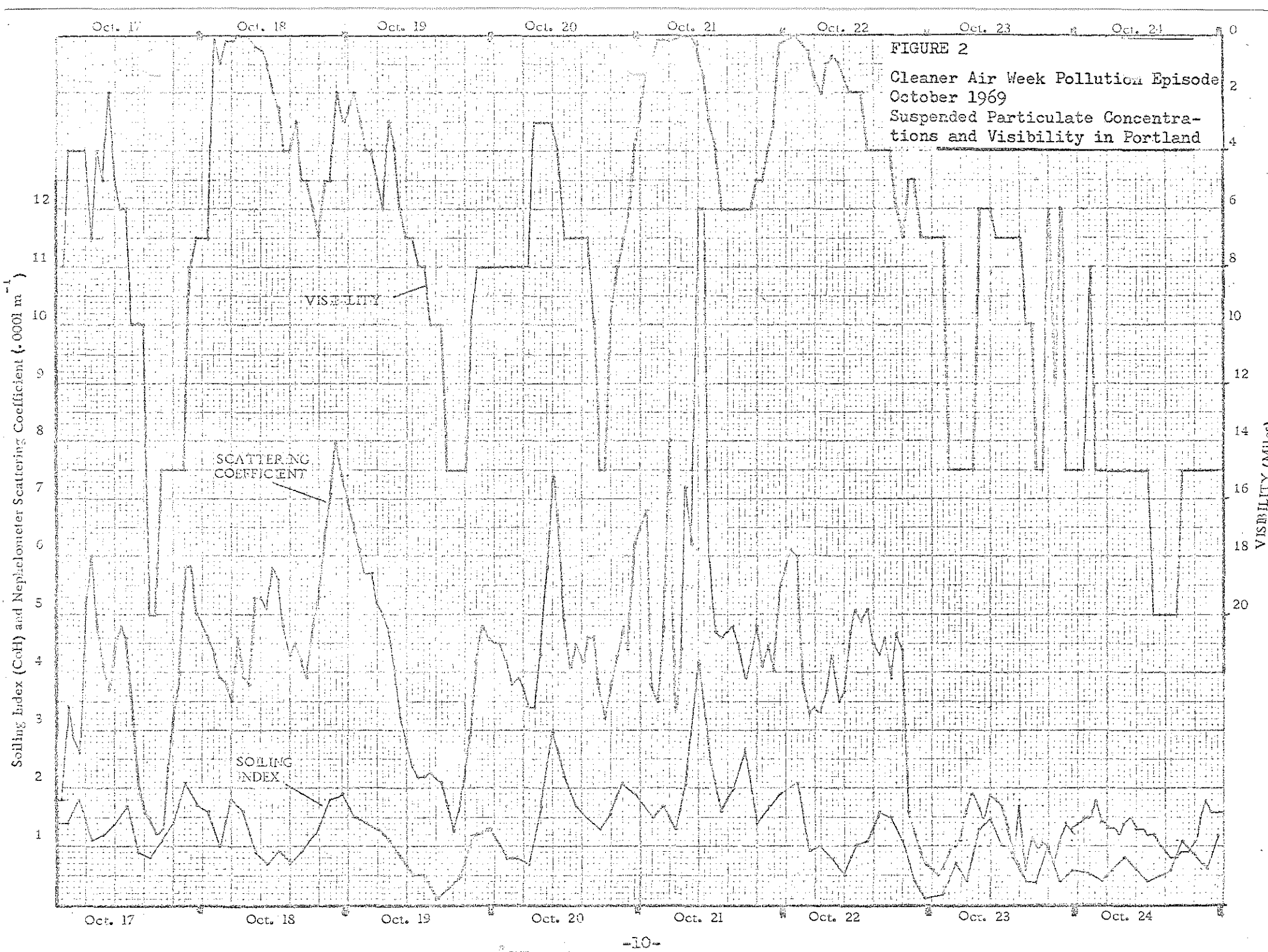


FIGURE 2
Cleaner Air Week Pollution Episode
October 1969
Suspended Particulate Concentrations and Visibility in Portland
Oct. 17
Oct. 18
Oct. 19
Oct. 20
Oct. 21
Oct. 22
Oct. 23
Oct. 24
VISIBILITY
SCATTERING COEFFICIENT
SOILING INDEX
Soiling Index (CoH) and Nephelometer Scattering Coefficient (.0001 m⁻¹)
VISIBILITY (Miles)

TABLE 1: CLEANER AIR WEEK POLLUTION EPISODE SUMMARY

POLLUTANT	MEASUREMENT	APPLICABLE STANDARDS	Recorded Level Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 22	Oct. 23	Oct. 24
Suspended Particulate	24-hr AISI	None	1.4	1.2	0.9	1.6	2.0	1.0	0.7	-
	24-hr. Hi-Vol. sample	100 ug/m^3 for 15% of monthly samples (CWAPA)	140	190	140	170	211	106	58	61
Nitrogen Dioxide	Max. 1-hr. average	0.25 ppm (California)	.07	.07	.05	.16	.24	.13	.08	.05
	Max. 8-hr. average	none	.06	.06	.05	.12	.16	.07	.06	.05
Nitric Oxide	Max. 1-hr. average	none	.57	.34	.27	.25	.38	.22	.30	.27
Carbon Monoxide	Max. 8-hr. average	20 ppm (DEQ Proposed)	14.4	7.6	5.0	6.6	15.6	9.5	9.1	13.4
Oxidant	Max. 1-hr. average	.10 ppm (DEQ Proposed)	.01	.02	.02	.04	.04	.02	.01	.01
	Max. 8-hr. average	.05 ppm (DEQ Proposed)	.01	.01	.01	.03	.02	.01	.01	.01
Total Hydrocarbons	Max. 1-hr. average (ppm)	none	-	4.0	3.0	4.5	8.0	6.5	5.0	6.0
Sulfur Dioxide	Max. 1-hr. average	1 hr. avg. 0.50 ppm 30-day avg. 0.05 ppm (CWAPA Proposed)	0.05	0.03	0.02	0.09	0.09	0.03	0.02	0.02

Note: All data are from DEQ Continuous Air Monitoring station except hi-volume sampler data submitted by CWAPA. Hi-volume results reported for Oct. 17-Oct. 21 are estimates based on 24-hr. nephelometer data and nephelometer calibration chart.

SUMMARY OF AIR CONTAMINANT LEVELS

Table 1 provides a comparison of pollution levels occurring during the Cleaner Air Week episode with various air quality standards. The data indicates that in spite of the relatively high gaseous pollutant levels, no existing standards for gaseous pollutants were exceeded. The peak 1-hour average of NO_2 (0.24 ppm), although a record value for Portland, was slightly under the California state standard of 0.25 ppm. Carbon monoxide levels reached only 80% of the proposed standard, while sulfur dioxide and total oxidant levels peaked at less than 50% of proposed or prospective maximum allowable levels. No standards have been set for other gases.

Examination of suspended particulate levels during the episode indicate that the proposed air quality standard was exceeded. The applicable standard, formulated by the Oregon-Washington Air Quality Committee, in addition to specifying a maximum annual median of 60 ug/m^3, stipulates that concentrations of suspended particulate shall not exceed 100 ug/m^3 for more than 15% of the samples in any month. If sampling were done every day, this would imply that 5 or more days of 100 ug/m^3 or greater would constitute a violation. Since the levels during the 6-day period of October 17 through October 22 were above 100 ug/m^3, it may be concluded that the standard was exceeded at the given sampling site (the CWAPA office).

SOURCES AND CONTROL OF EMISSIONS OF PRIMARY CONTAMINANTS

Since it appears that the most significant effect of the Cleaner Air Week episode was that associated with poor visibility, the sources of those contaminants directly related to visibility reduction, nitrogen dioxide and suspended particulate, have been reviewed.

Although the relationships governing atmospheric visibility are complex, theoretical considerations indicate that at levels observed in Portland during the period in question, NO_2 is responsible for about 15% of the visibility loss and suspended particulates for the rest. Coincidentally, this is the weighting given to NO_2 by CWAPA in its daily Pollution Haze Index.

Nitrogen oxides (NOx) are products of all combustion processes, particularly in the internal combustion engine. In Multnomah County approximately 60% of

the totals of nitrogen oxides are emitted by motor vehicles, primarily in the form of nitric oxide, which is converted to nitrogen dioxide in the presence of ozone and other oxidants. The balance of NOx emissions are for the most part from industrial, commercial, and domestic fuel burning. Industrial sources account for about 20% of the total.

Practical control methods or programs for NOx have not been devised for external combustion processes, and are in the beginning stages of development and initial implementation for motor vehicles at this time. A series of emission standards have been adopted by the State of California that will require a reduction of approximately 30% in 1971 model year cars, compared with 1970 models, and about 75% by 1974. Depending upon the automobile industry's success in meeting the California standards, it is expected that similar Federal standards will be adopted in the future.

Suspended particulates, responsible for 85% of the visibility loss, are emitted by both industrial and domestic sources. Based on preliminary information it appears that on an annual basis the sources of suspended particulate within the two most heavily populated valley counties are as shown in Table II.

5μ size & less

TABLE II - Emission Inventory of Suspended Particulates - % of Annual Total

Source	Multnomah County	Lane County*
Industry	56%	88%
Motor Vehicles	21%	8%
Ships and Aircraft	12%	1%
Domestic & Commercial Spaceheating	9%	1%
Other	2%	4%
	100% (5400 ton/yr)	100% (8800 ton/yr)

*Excluding field and slash burning

6000 Tons/Mile

A weighted average of the particulate and NOx emissions of the major sources according to the assumed relative effect of particulates and NOx on visibility gives the approximate contribution of each source to the local visibility problem. Since the relative effect of the contaminant is the same as that used in computing the CWAPA Pollution Haze Index, the results may be applied to the PHI as well.

TABLE III - Contribution to Visibility Reduction (Pollution Haze Index)

Source	Multnomah County	Lane County*
Industry	50%	78%
Motor Vehicles	28%	16%
Other Sources	22%	6%

*Excluding field and slash burning

While it should be stressed that these figures are based on a number of assumptions and represent only a best estimate of the situation, the indication that industrial emissions account for 50% or more of the total degradation of visibility, and contribute from 2 to 5 times as much visibility-reducing contamination as motor vehicles, is clear and should not be overlooked.

In any widespread episode such as the one in question, it is necessary to look beyond local boundaries and consider the possibilities of contamination transported into the Valley from outside sources. Specifically, the effects of forest slash burning have been mentioned as a possible contribution to suspended particulate in the Valley. There is strong evidence, however, that slash burning had a negligible effect on Valley air quality.

During the period Oct. 20-22, considerable slash burning was conducted only in the Cascades, with the total amount of material burned estimated at 540,000 tons, all at elevations of 2500 feet or greater. On Oct. 20 and 22, U. S. Forest Service personnel made over-flights of the Valley and the Cascades and photographically documented a large number of slash fire plumes on the west slopes drifting east away from the Valley. No intrusion of slash smoke into the Valley was observed during daylight hours. These observations, in addition to the previously mentioned meteorological conditions governing the episode (strong decoupling of the stable Valley air mass from winds aloft, and local, rather than general, circulation patterns) indicate that slash burning actually had very little to do with poor air quality in the Valley.

The uniformity of the conditions from North to South during the episode would further indicate that industrial emissions along the Columbia north of Portland, while tending to drift southward during the episode, had but a nominal influence on conditions in Portland and the Valley. With these factors in mind, it is concluded that the episode was essentially a case of the entire airshed choking on its own emissions for a whole week.

The control of particulate emissions from industrial sources has in the past been a major activity of Oregon control authorities, and will be emphasized even more in the future as process weight emission standards are enacted and enforced. The need for such an emphasis in program activities is obvious, not only from consideration of episode conditions but also in view of the fact that the proposed ambient air standard for suspended particulate is consistently exceeded throughout the Valley. It is particularly important that future programs place more emphasis on the kind and size of particulates, rather than on gross weight, in order to reduce the emissions of submicron particles that cause visibility reduction.

The control of particulate emissions from motor vehicles has received little emphasis in vehicle emission control programs to date. Visible emission standards such as those being considered for adoption in Oregon by the Environmental Quality Commission may have a slight effect on particulate emissions. Improved combustion in diesel engines will have but a minor effect, since only 10% of the total particulates from motor vehicles is emitted by diesels. Gasoline powered vehicles emit 90% of the vehicular total.

CONCLUSIONS AND RECOMMENDATIONS

In accordance with the stated objective of this report, the following conclusions and recommendations are made:

1. Surveillance of gaseous pollutants

Although no air quality standards for gaseous pollutants were exceeded during the Cleaner Air Week episode, the record levels of nitrogen dioxide may be viewed as an indication of possible future problems. Due primarily to the fact that the episode occurred during a period of moderate temperatures and foggy mornings, the level of photochemical activity was quite low; had equally stable atmospheric conditions occurred a month earlier under warmer and drier conditions, a severe photochemical situation might have developed. Therefore, the following program activities will be undertaken by the staff during the first half of 1970.

A statistical analysis of the three years of CAM Station data will be performed with the objective of identifying trends in concentrations of gaseous pollutants as measured at that site. With the limited data

available it will be necessary to apply meteorological criteria to the data before year to year comparisons can be made. Past NASN gas sampling data at Portland will also be examined in order to identify trends.

An additional analysis of CAMS data will be made to determine the degree of photochemical smog production in Portland at various times of the year. The analysis will have to be related to meteorological factors and emission trends in order to identify the potential for future problem development.

2. Inventory of particulate sources and development of control strategies

It has been shown that industrial sources are the major source of suspended particulates responsible for such episodes as the October 17-23 period. If the frequency and severity of such episodes are to be decreased, emissions of suspended particulates will have to be reduced throughout the airshed. A concerted effort on the part of all control agencies will be required if this is to be achieved.

As has been stated, control of particulate emissions has always been a major part of control agency activities in Oregon. However, at no time have definite priorities and program objectives been established and integrated into a concrete control strategy specific to suspended particulates. In order to facilitate such a development, the following recommendations are made.

In order to determine proper control program priorities, current emission inventory activities should be redirected and accelerated in order to complete a detailed inventory of suspended particulate sources by June 1970. Regional Authorities in both Oregon and Washington should be requested to submit data to the Department of Environmental Quality for compilation into an airshed inventory including all major valley sources from Longview to Eugene. In order to complete this project the Division of Air Quality Control will devote the full time of one staff engineer to emission inventory activities.

DEQ and each of the Regional Authorities should immediately begin a re-assessment of control activities relative to particulate emissions. As data from the emission inventory outlined above becomes available, further re-evaluation should be made, including re-evaluation of source type priorities and staff assignments.

A summary of information relative to suspended particulates should be submitted by each Region to the Department annually with its grant application. The information should include but not be limited to:

a) A breakdown of suspended particulate emissions by source category.

b) Total emission of suspended particulate during the current year and preceding year.

c) Emissions controlled during the current year and preceding year.

TO : MEMBERS OF THE ENVIRONMENTAL QUALITY COMMISSION

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

FROM : AIR QUALITY CONTROL STAFF

DATE : December 11, 1969 for Meeting of December 19, 1969

SUBJECT: APPLICATION FOR CERTIFICATION OF POLLUTION CONTROL FACILITY FOR TAX RELIEF PURPOSES, NO. T-99.

This application was initially received on September 29, 1969. The Company submitted additional information on October 28, 1969. A summary of the contents and results of the staff review are given below.

1. Applicant: The May Department Stores Company, dba
Meier & Frank Co.
621 S. W. Fifth Avenue
Portland, Oregon 97204
John G. Praegner, Vice-President, Meier & Frank Co.
Phone: 227-4411

The facility is located at a company-owned and operated warehouse located at 1438 N. W. Irving, Portland, Oregon.

2. The facility claimed in this operation consists of a device for baling scrap paper. The bales of paper, having dimensions of 72" x 30" x 50" are sold.* Installation of the facility was completed on June 14, 1968. Operation commenced on June 17, 1968.

3. The total cost of facility is $10,487.65. The company submitted notarized copies of invoices and cancelled checks as documentation of the claimed total cost in lieu of an accountant's certification.

4. STAFF REVIEW:

Use of the claimed facility in conjunction with sanitary service pick-up of non-balable combustible material has eliminated the use of an incinerator.

The company submitted satisfactory evidence that during the approximate period August 1968 through July 1969 the income from scrap-paper bales ($3,749.00) was less than the operating expenses of the claimed facility ($4,778.96).

The staff findings indicate that the claimed facility was installed and does operate for the purpose of reducing air pollution.

5. STAFF RECOMMENDATION:

The staff recommends that a "Pollution Control Facility Certificate" bearing the actual cost of $10,487.65 be issued for the facility claimed in Application No. T-99.

* 2220 Tons/yr.