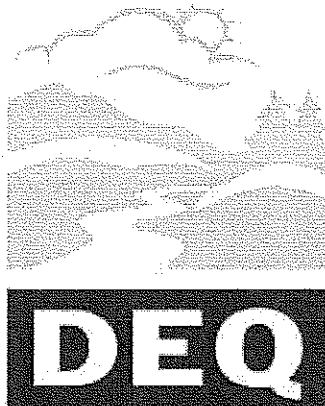


3/22/1974

**OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS**



**State of Oregon
Department of
Environmental
Quality**

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AGENDA

ENVIRONMENTAL QUALITY COMMISSION

Meeting of

March 22, 1974

Room 20 State Capitol, Salem, Oregon 97310

9 a.m.

- A. Minutes of February 22, 1974 EQC Meeting
- B. February Activity Report
- C. Tax Credit Applications
- D. Adoption of Temporary Rules Pertaining to Administrative Procedures

NORTHWEST REGION

- E. AMAX Aluminum Company (Warrenton)--Status Report Regarding Permit Applications
- F. Condominiums Northwest (Gearhart)--Request to Expand Complex
- FF. Damascus Union School, District No. 26--Variance Request to Open Burn

10 a.m.

PUBLIC FORUM

AIR QUALITY

- G. Proposed Noise Control Regulations--Hearings Officer's Report
- H. Maintenance of Air Quality Areas--Status Report on Designation of Air Quality Maintenance Areas
- I. Weyerhaeuser Company, Springfield--Hearing Officer Report on Public Hearing for Modifying Schedule for Air Quality Control of Lime Kilns beyond May 30, 1975
- J. Robert Dollar Lumber Company, Glendale--Request for Variance from OAR Chapter 340, Section 21-020, Fuel Burning Equipment Limitations.
- K. Receipt of Petition Letter from Wasco County Fruit and Produce League for Establishment of Special Problem Area Designation

LAND QUALITY

- * L. Public Hearing for Proposed Adoption of Permanent Rules Pertaining to Subsurface Sewage Disposal
- M. Proposed Adoption of Temporary Rules Pertaining to Fees for Subsurface Sewage Disposal Permits and Licenses

- N. Proposed Adoption of Temporary Rules Pertaining to Procedures for Permit Appeals Board
- O. Proposed Adoption of Temporary Rules Pertaining to Fees and Procedures for Evaluations of Methods of Sewage Disposal or of Site Suitability for Installation of Subsurface Sewage Disposal Systems

* tentatively scheduled for 2 p.m.

Luncheon at noon--Blue Room, State Capitol

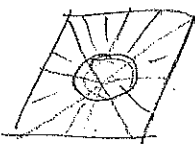
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Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

Hilda B. BAAR

1553 S.W. Wipperfloeg St.



Hilda B. Baar
(signature)

Home Builders Foothill League
(organization)

Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

AGENDA item 6.

AGENDA item 10.

Roy L. Burns
(signature)

LANE CO.
(organization)

MINUTES OF THE FIFTY-FOURTH MEETING
of the
Oregon Environmental Quality Commission

February 22, 1974

Public notice having been given to the news media, other interested persons and the Commission members as required by law, the fifty-fourth meeting of the Oregon Environmental Quality Commission was called to order by the Chairman at 9 a.m. on Friday, February 22, 1974, in the Auditorium of Consumers Power Company, 1940 N. W. Ninth Street, Corvallis, Oregon.

The Commission members present were B. A. McPhillips, Chairman, Dr. Morris K. Crothers, Mrs. Jacklyn L. Hallock, and Dr. Grace S. Phinney.

The Department was represented by Director Diarmuid F. O'Scannlain; Deputy Director Ronald L. Myles; Assistant Directors Fred Bolton, Wayne Hanson, Harold L. Sawyer, Kenneth H. Spies, and Donald Mezirow; Regional Administrators E. J. Weathersbee, Verner J. Adkison, and Richard P. Reiter; staff members M. J. Downs, Dr. Robert L. Gay, John Hector, Jack Osborne, Shirley Shay, Paul Stolpman, Warren Westgarth; Bend District Engineer John E. Borden; and Chief Counsel Ray P. Underwood. Representing EPA Region X, Oregon Division was John Vlastelicia.

MINUTES OF THE JANUARY 25, 1974 COMMISSION MEETING

It was MOVED by Dr. Crothers, seconded by Dr. Phinney and carried that the minutes of the fifty-third meeting of the Commission, held in Portland on January 25, 1974, be approved as prepared and distributed.

ELECTION OF VICE CHAIRMAN

Chairman McPhillips called for nominations for the position of Vice Chairman of the Commission, which was vacated by the resignation on February 1, 1974 of Arnold Cogan.

It was MOVED by Dr. Phinney, seconded by Mrs. Hallock and carried that Dr. Crothers be elected Vice Chairman.

CONFIRMATION OF DIRECTOR

Chairman McPhillips announced the Governor's recommendation of the appointment of Kessler R. Cannon, Assistant to the Governor for Natural Resources, as the new Director of the Department of Environmental Quality, effective March 1, 1974, to succeed Mr. O'Scannlain.

It was MOVED by Dr. Crothers, seconded by Dr. Phinney and carried that the Governor's recommended appointment be confirmed by the Commission.

ACTIVITY REPORT FOR THE MONTH OF JANUARY 1974

It was MOVED by Dr. Crothers, seconded by Mrs. Hallock and carried that the actions taken by the Department during the month of January 1974, as reported by Mr. Myles, regarding the 58 domestic sewerage, 5 industrial waste, 11 air quality control and 3 solid waste management projects be approved:

Water Quality Control

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
1-3-74	Madras	Collection system and non-discharge sewage lagoons - 0.45 MGD capacity	Prov. app.
1-3-74	Springfield	Five sanitary sewer projects	Prov. app.
1-3-74	West Linn	DeBok Road sewer	Prov. app.
1-3-74	Yamhill	Hemlock Street sewer extension	Prov. app.
1-3-74	Wallowa	Change Order No.B-4; STP contract	Approved
1-8-74	Salem (Willow Lake)	Livingston Estates Subdn. sewer	Prov. app.
1-9-74	Baker	Sanitary sewer projects: Phases VI through XI	Prov. app.
1-11-74	Silverton	Silver Ranch Subdn. sewer	Prov. app.
1-11-74	Rainier	C.O. #10 - STP expansion	Approved
1-11-74	Yachats	C.O. #2 and 3 - STP contract	Approved
1-11-74	St. Helens	C.O. #C-2 - STP contract	Approved
1-11-74	Bunker Hill S.D.	Pump station and force main to Coos Bay	Prov. app.
1-14-74	Salem (West)	Add. No. 2 - san. sewer replacement	Approved
1-14-74	USA (Fanno)	S.W. Brockman Street sewers	Prov. app.
1-14-74	Woodburn	Mill Creek Park sewer	Prov. app.
1-14-74	Reedsport	Ranch Road Addn. sewers	Prov. app.
1-14-74	USA (Aloha)	Tanasbrook Subdn. sewers	Prov. app.
1-15-74	McMinnville	Slusher-Davis Addition sewers	Prov. app.
1-15-74	Wood Village	C.O. #1, 2 & 3 - Interceptor Project	Approved
1-15-74	Eugene	DeSoto Lake sewer project	Prov. app.
1-15-74	Amity	Sewer lateral D-4	Prov. app.
1-15-74	Vernonia	C.O. #5 - Interceptor Project	Approved
1-15-74	Portland	S. W. Maplecrest Drive sewer	Prov. app.
1-16-74	Tri-City S.D.	C.O. #5 - STP contract	Approved
1-16-74	Rainier	C.O. #9 - STP contract	Approved
1-16-74	Charleston	Marine waste pumping station	Prov. app.

Municipal Projects - continued

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
1-17-74	Roseburg	Airport sewer	Prov. app.
1-17-74	Willamina	Oaken Hills Subdn. sewers	Prov. app.
1-17-74	Springfield	1. 40th Way Subdn. sewers 2. 1st Addn to Southway Subdn sewers 3. Olympic St. sewer - 18th to 21st	Prov. app.
1-21-74	Oak Lodge S.D.	Great Britten Estates sewers	Prov. app.
1-21-74	Portland	2 - pump station projects	Prov. app.
1-22-74	Rainier	C.O. #11 - STP contract	Approved
1-22-74	Wallowa	C.O. B-5 - sewerage contract	Approved
1-22-74	Astoria	C.O. #5, Sch. A - Int. contract	Approved
1-22-74	Ontario	McBain - Nielsen Addn sewers	Prov. app.
1-25-74	West Linn (Bolton)	Hidden Springs No. 1A Subdn sewers	Prov. app.
1-30-74	Inverness	C.O. #4, 5 & 6, Unit 5C Int.	Approved
1-30-74	Wasco	STP project 0.04 MGD aerated lagoon with disinfection and irrigation	Prov. app.
1-30-74	Prineville	Change Order No. 1 - Int. contract	Approved
1-30-74	USA (Fanno)	Main B-9 and Habitat Interceptor sewers	Prov. app.
1-30-74	Gresham	Mt. Hood USFS office sewer	Prov. app.
1-31-74	Wasco	Add. No. 1 - STP contract	Approved

Industrial Projects

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
1-4-74	Jefferson	Helms Brothers Feedlot, animal waste facilities	Prov. app.
1-11-74	McMinnville	Van Der Veen Dairy, animal waste facilities	Prov. app.
1-16-74	Portland	Union Oil Company of California, pollution control facilities	Prov. app.
1-18-74	Salem	Del Monte Corporation, proposed water pollution abatement program	Prov. app.
1-23-74	Portland	Shell Oil Company, Willbridge Plant, waste water treatment	Prov. app.

Air Quality Control

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
1-7-74	Multnomah County	Unity Center, Inc.--98-space parking facility	Approved
1-7-74	Multnomah County	Mt. Hood Community College--69-space parking facility	App. with cond.
1-9-74	Douglas County	Roseburg Shingle and Stud, Inc., Roseburg--cyclone and shaving storage bin	Approved
1-16-74	Deschutes County	Brooks Willamette, Bend--test and summary report on cyclone emissions	Approved
1-16-74	Washington County	Davies Office Building--66-space parking facility	Req. add. info.
1-18-74	Washington County	Greenway Apartments--864-space parking facility	App. with cond.

Air Quality Control - continued

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
1-22-74	Multnomah County	Woodlawn Housing Project-- 100-space parking facility	Req. add. info.
1-23-74	Josephine County	Carolina Pacific Plywood, Inc., Grants Pass--veneer dryer control, incinerator with heat recovery	Approved
1-24-74	Multnomah County	Sheri-Lynn Apartments-- 105-space parking facility	Req. add. info.
1-24-74	Linn County	Crown Zellerbach Corp., Lebanon-- Quench system for SO ₂ control	Approved
1-28-74	Multnomah County	Benj. Franklin Savings & Loan Assn. --100-space parking facility	App. with cond.

Solid Waste Management Division

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
1-2-74	Lane County	Zumwalt & Williams--new demoli- tion landfill, operational plan, letter authorization	Prov. app.
1-24-74	Benton County	Tremaine Demolition--existing demo- lition site, operational plan	Approved
1-29-74	Columbia County	Coates Tire Disposal Site (Crown Zellerbach Corp.)--existing tire disposal site, letter authorization	Prov. app.

Dr. Crothers said it would be helpful if the activity report also reflected projects and activities that could not be completed.

TAX CREDIT APPLICATIONS

Mr. Sawyer informed the Commission that Omark Properties, Inc. had requested deferral of its application, T-532, until the March Commission meeting. He then briefly reviewed the Department's evaluation of the three tax credit applications covered by the following motion:

It was MOVED by Dr. Phinney, seconded by Mrs. Hallock and unanimously carried that as recommended by the Director, tax credit certificates be issued to the applicants for the pollution control facilities described in the following applica- tions and bearing the costs as listed with 80 percent or more of the cost in each case being allocated to pollution control:

<u>App. No.</u>	<u>Applicant</u>	<u>Claimed Cost</u>
T-528	Boise Cascade Corporation, Southern Oregon Region	\$44,182.06
T-529	Boise Cascade Corporation, Southern Oregon Region	\$59,248.05
T-530	Fred Messerle & Sons, Inc., Home Ranch No. 1	\$ 6,974.00

Mr. Sawyer then presented an evaluation of the application by Hyster Company, T-433, denied by the Commission at its November 1973 meeting, and subsequently

held for reconsideration by the Commission pending an opinion by legal counsel.

It was MOVED by Mrs. Mallock, seconded by Dr. Crothers and carried that the Director's recommendation be approved denying certification of the facilities claimed in the application for the reason that said facilities do not function to dispose of or eliminate industrial waste.

JOHNS LANDING PARKING FACILITY

Mr. Downs presented the staff memorandum report dated February 14, 1974, regarding the proposed 2464-space parking facility for the Johns Landing Residential/Commercial Development in Portland.

Mr. Downs stated that the environmental impact statement received by the Department on December 31, 1973 provided details on the total Johns Landing project and the expected environmental effects of the project which would be significant in the areas of traffic, air quality and noise. The applicant proposes to reduce these impacts through several measures designed to increase transit ridership and to improve Macadam Avenue. However, several governmental units are involved in implementing these measures, and they have not as yet made the necessary commitments to do so. Construction of the first phase of the project would not adversely affect the environment, but approval of the entire project should be deferred until commitments are secured from these governmental units to improve Macadam Avenue and public transportation in the Macadam corridor.

Mr. Downs presented the Director's recommendation that the Commission approve for construction parking facilities D, G, F, E and P, totaling 272 spaces, according to the plans and specifications submitted by Macadam Investors, Oregon, Ltd., with the following conditions:

Macadam Investors, Oregon, Ltd. will:

1. Write into the Homeowners Association agreements, the Tenant Association agreements and the Office Management agreements a means of providing a 20 percent reduction in transit fares for residents, tenants and employees in the project.
2. Construct bus shelters to meet or exceed Tri-Met specifications on Macadam and Corbett Avenues at the Water Tower and on the east side of Macadam near the Town Center site.
3. Provide current Tri-Met scheduling and route information which will be displayed in shops and offices in the project and at the bus shelters.

Mr. Downs said the following should be added to the conditions:

4. Portland City Council to approve the zone change.

The Director further recommends that the Commission authorize him to approve the entire Johns Landing project only if the following commitments are made by the appropriate governmental agencies:

1. Improvement of Macadam Avenue to a four lane boulevard-type facility with 12-foot lanes and left turn refuges and including appropriate measures to reduce noise such that the median ambient noise level is not increased over existing levels.
2. Implementation of a demonstration light rail transit system using the existing Southern Pacific rail line.
3. Improved bus transit service in the corridor including feeder bus, mini-bus or dial-a-bus service.

Representing the applicant was Mr. Joe Griggs, project architect for Johns Landing. He gave a more detailed description of the project, which he described as an urban village, and the proposed transit improvements in the Macadam corridor. He discussed the commitment of the developer to work with the necessary governmental units to effect the recommended changes and felt an undue burden would be placed on the developer "to tie us to certain decisions which are beyond our control." He asked for approval of the entire project.

Discussion followed expressing approval of the concept, the Commissioners' concerns with respect to approving the entire project without first obtaining the commitments necessary to reduce the total environmental impact on the area, the need for a light rail transit system as a condition for granting approval to phase one, and the willingness of the Commission to further negotiate commitments 1 and 3.

Mr. O'Scannlain praised the project and the management of Johns Landing, but stated that neither the Commission nor the Department has any jurisdiction over the governmental agencies involved. He pledged the staff's support to lend help in securing the commitments that need to be made before approval of the entire project could be granted.

Mr. Downs explained the reason for including the light rail system. He said the Mayor's Task Force recommended the system and it is necessary to the improvement of the Macadam corridor. However, the Director's recommendation only requires that a commitment be made to implement such a transit system.

Dr. Crothers felt that if Johns Landing relocated the Southern Pacific tracks, as they stated they would, they would have fulfilled their segment of the proposed light rail transit project.

It was MOVED by Dr. Crothers, seconded by Dr. Phinney and carried to amend the Director's recommendation by deleting commitment 2, "Implementation of a

demonstration light rail transit system using the existing Southern Pacific rail line," and by inserting "A commitment by Johns Landing to rebuild the [Southern Pacific] tracks to accommodate a light rail transit system."

It was then MOVED by Dr. Crothers and seconded by Dr. Phinney to approve the Director's recommendation as amended. Mrs. Hallock voted "no".

Mr. Rick Reed of CH2M/Hill, responsible for the air quality analysis portion of the Johns Landing environmental impact statement, reviewed the basic assumptions made by his company in analyzing and assessing the impact of the project on the air quality of the area.

The motion was then voted upon and carried. Mrs. Hallock voted "no".

PUBLIC FORUM

Mrs. George Van Leeuwen of Halsey, representing Women for Agriculture, spoke to the Commission about her concerns regarding the Willamette Greenway, field burning, fuel requirements for farm vehicles and published criticisms of the use of DDT. She distributed to the Commissioners copies of an article she had recently written.

No one else wished to testify.

STATUS REPORT ON PROPOSED NOISE REGULATIONS

Mr. Hector presented the staff memorandum report regarding the proposed noise control standards presented to the Commission at its September meeting. Seven hearings were held throughout the state between October 29 and November 26, 1973. Public comments elicited at these hearings led the staff to make substantial revisions in the proposed regulations concerning the addition of sources to be controlled, more detailed exemptions for sources which cannot reasonably be controlled, adjustments (up and down) of allowable noise levels, and a broadening of variance procedures.

Mr. Hector presented the Director's recommendation requesting two additional public hearings to be held by the Department in Portland and Medford in early March, so that the public has an opportunity to comment on the substantial revisions which these proposed regulations have undergone.

It was MOVED by Dr. Phinney, seconded by Dr. Crothers and carried that the Director's recommendation be approved.

SEWERAGE WORKS LOANS, MODIFICATION OF PROJECT LIST

Mr. Sawyer presented the staff memorandum report dated February 11, 1974, regarding the project priority list for potential planning loans from the Pollution Control Bond Fund, approved by the Commission at its October 22, 1973 meeting. The priority list was revised to include additional planning loan requests or potential projects received since that date. Projected loan costs currently total \$1,413,100. Mr. Sawyer noted that on page 1 of the attached priority listing of these new requests, the location called "Rockaway" should be changed to "Rockaway-Twin Rocks Area."

With that addition, Mr. Sawyer presented the Director's recommendation that the priority ranking for the additional sewerage works planning advance requests be approved.

It was MOVED by Dr. Crothers, seconded by Mrs. Hallock and carried that the Director's recommendation be approved.

PROPOSED AMENDMENTS TO TEMPORARY SUBSURFACE SEWAGE DISPOSAL RULES

Mr. Spies presented the staff memorandum report dated February 12, 1974, concerning proposed amendments to the temporary rules pertaining to subsurface sewage disposal adopted by the Commission on January 25, 1974. Since the January EQC meeting, the Department staff has been informed that 300 or more lots in the Eugene-Springfield area were too small to comply with the redundant disposal field requirement of the temporary rules. However, these lots--and perhaps others in the state--are located in areas designated for future public sewer service, and in the interim are considered by local officials to have favorable soil and drainage conditions for subsurface sewage disposal facilities.

Mr. Spies then presented the proposed amendments to Section IV(C)--Subsurface Sewage Disposal System, Replacement Area:

1. In the first line of Subsection IV.C.1., after "2", delete "and" and insert a comma, and after "3" insert "and 4".
2. In Section IV.C., after subsection 3, insert a new subsection 4 to read as follows:
 - "4. On lots or parcels for which the deeds had been recorded or a subdivision plot or partitioning approved prior to January 1, 1974, a subsurface sewage disposal system may, with prior approval of the Director, be installed without either a replacement disposal area or redundant disposal field system, provided all of the following conditions are met:
 - a. The size of the lot is not sufficient to provide space for a replacement area.

- b. The lot is located within an area designated in a city or county plan for future sewer service.
- c. Water supply will be by a community water system.
- d. The soil in the lot has a textural classification which has been substantiated by a soil scientist's report and which requires a minimum side wall seepage area of not more than 150 square feet per 150 gallon daily waste flow and otherwise complies with the requirements pertaining to depth to restrictive layer and to temporarily perched groundwater.
- e. The lot has adequate space for a full initial drainfield as required by these rules for the particular soil classification and the subsurface sewage disposal system will otherwise meet all requirements of these rules."

Dr. Crothers asked about the matter of requiring disclosure of this kind of situation to a prospective buyer. The hope was expressed that the special session of the Legislature might resolve the entire real estate disclosure issue.

Mr. James Allison, Route 3, Box M 73, Sherwood, President of the Oregon Landowners Association, said he supported the idea of the proposed amendments but wished to present modifications in behalf of his association. He also distributed copies of the association's consumer protection program to the members. He suggested changes to the amendments as follows:

On line 1 of new subsection 4, delete the word "the" and change "deeds" to "deed", following which add the words "or sales contract".

On line 2 of new subsection 4, after the word "approved", add the words "by the appropriate governing body".

Delete subsection b. of new subsection 4.

Mr. Allison also proposed an amendment pertaining to Disposal Trenches, copies of which he distributed to the Commission members.

Mr. O'Scannlain said the staff would accept the first suggested change which added the words "or sales contract."

Mr. Roy Burns, Director of the Water Pollution Control Division, Environmental Management Department, Lane County, commented that Lane County people greatly appreciated DEQ's assistance with this problem. He said he wanted a balanced environmental approach without degradation of the waters of the state.

It was MOVED by Dr. Crothers, seconded by Dr. Phinney and carried that the proposed amendment to line 1 of new subsection 4 be adopted.

Mr. John Stearns, a subdivision owner from Lane County, had questions about the 100-foot setback from a water source for septic tank installation. He said

he had lots which had septic tanks built 50 feet from the waterline, and others which were for sale which could not meet the 100-foot requirement. Chairman McPhillips suggested that the Department staff and legal counsel study the matter and report back to the Commission. Mr. Burns said a meeting would take place in a week with Mr. Stearns and members of the Lane County Environmental Management Department, and that a copy of the report from that meeting would be sent to the DEQ staff.

Mr. Jack Kephardt, 2630 North 20th Street, Springfield, realtor, builder, land developer, and President of the Eugene-Springfield Homebuilders Association, agreed with the sales contract amendment proposed by Mr. Allison. He said he has no trouble with septic tanks installed in the subdivisions he has developed in the Springfield area. He was concerned, however, that the size of future subdivision lots to meet the replacement area requirement would hinder annexations of these subdivisions by the cities as well as the extension of public sewer lines, since these areas would be relatively trouble free.

There were no other witnesses and the chairman called for a vote on the motion. Motion carried.

Mr. O'Scannlain asked the Chairman if Ms. Margaretta Eakin, counsel for Hyster Company, could be heard by the Commission on the matter of the company's tax credit application which had been denied by the Commission shortly after the opening of today's meeting. Mr. McPhillips said she could present her arguments to the Commission, but her company would have to appeal the EQC decision or apply again for a tax credit before the Commission could reconsider the matter.

Ms. Eakin stated that Hyster's tax credit application was for a pollution prevention device and cited statutory authority which she considered supportive of her company's application.

Chairman McPhillips suggested that Hyster file an appeal rather than submit another application to the Commission.

BEND PILOT-SCALE TEST PROJECT

Mr. Sawyer presented the staff memorandum report dated February 12, 1974, concerning the City of Bend's request for funds for a predesign pilot-scale test project in the amount of \$35,000. The on-site study data collected would provide basic information for design of the city's sewerage collection system and would be of considerable assistance in other sewer construction projects in the state where adverse ground conditions are encountered.

Mr. Sawyer presented the Director's recommendation that the Department be directed to seek approval from the State Emergency Board for a \$35,000 grant from the Pollution Control Bond Fund to the City of Bend for the pressure-vacuum sewer pilot scale test project.

Mr. Art Johnson, City Manager for Bend, supported the grant request, noting that the city must be sewerred by 1980 and expects to spend \$15 to \$20 million for sewer construction over the next 5-6 years.

It was MOVED by Chairman McPhillips, seconded by Dr. Crothers and carried that the Director's recommendation be approved.

SKYLINE LOOP MANDATORY ANNEXATION

Mr. Sawyer presented the staff memorandum report dated February 11, 1974, concerning the Skyline Loop Area east of the City of Eugene which has been designated by the Oregon State Division of Health as an emergency health hazard area. As a result of an area survey conducted by Lane County in February 1971, and a reevaluation by the State Health Division in June 1973, a 46 percent sub-surface sewage disposal system failure rate was documented. Following annexation, construction of sanitary sewers would remove or alleviate the situation.

Dr. Crothers asked what kind of situation led to the determination that the area was a health hazard.

Mr. John Huffman, Oregon State Division of Health, replied that the soil in the area is poor and under present rules the area would not have been developed. He said that annexation is warranted.

It was MOVED by Dr. Crothers, seconded by Mrs. Hallock and carried that the Commission approve the preliminary plans, specifications and time schedule for design and construction of sanitary sewers for the Skyline Loop Mandatory Annexation Area and certify said approval to the Oregon Division of Health.

STATEMENT BY MR. O'SCANNLAIN

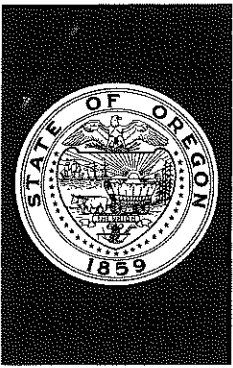
Mr. O'Scannlain expressed his deep appreciation to the Chairman and the Commission for an extremely exciting 13 months as DEQ Director, and the backing they have given him in these difficult times. He affirmed the Department's strong commitment to environmental enhancement in Oregon, and said that the major role for his successor is to broaden the understanding of the public about DEQ's accomplishments and requirements under the law and to keep the Department close

to the people. He said this effort must continue unabated and that the Commission and the Department must emphasize their problem-solving roles.

The Chairman adjourned the meeting at noon.

The next Commission meeting is scheduled for Salem on Friday, March 22, beginning at 9 a.m. in Room 20 State Capitol.

ss



ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

TOM McCALL
GOVERNOR

B. A. McPHILLIPS
Chairman, McMinnville

GRACE S. PHINNEY
Corvallis

JACKLYN L. HALLOCK
Portland

MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

MEMORANDUM

To : Environmental Quality Commission
From : Director
Subject: Agenda Item No. B, March 22, 1974 EQC Meeting
February 1974 Activity Report

DIARMUID F. O'SCANNLAIN
Director

During the month of February, staff action was taken relative to the attached itemized list of plans and specifications. These actions are summarized as follows:

Water Quality Control

1. Forty-two (42) domestic sewage projects were reviewed:
 - a. Provisional approval was given to:
 - 29 plans for sewer extensions
 - b. Approval without conditions was given to:
 - 13 Change Orders for sewage treatment plant projects
2. Four (4) industrial waste treatment plans were reviewed:
 - a. Provisional approval was given to:
 - 1 miscellaneous project
Steinfeld's Products Company, Scappoose
(waste water treatment facilities)
 - 3 animal waste facilities
 - 1) Rancho De Jam'on, La Grande
 - 2) Dauenhauer Feedlot, Dayton
 - 3) Derrick Dairy Farm, Tillamook

Air Quality Control

1. Nine (9) project plans or proposals were reviewed:



Contains
Recycled
Materials

a. Approval was given to:

3 miscellaneous projects

- 1) Columbia Plywood, Klamath County
(Evaluation of Source Test Report for hog fuel boiler)
- 2) Champion International, U.S. Plywood Division, Hood River County
(Evaluation of Source Test Report for cyclones)
- 3) Brooks Willamette Corporation, Deschutes County, N/C No. 226
(Installation of two Rotocyclone scrubbers to control cyclone emissions at particleboard plant)

b. Conditional approval was given to:

2 parking space facilities

- 1) Northwest Natural Gas Company, Multnomah County
(492-space parking facility for new office building)
- 2) Kon Koll Business Center, Washington County
(1047-space parking facility for new office/warehouse complex)

1 miscellaneous project

Boise Cascade Corporation, Jackson County
(Evaluation of Source Test Report for cyclones)

c. EQC gave partial approval to:

1 parking space facility

Johns Landing, Multnomah County
(2464-space parking facility for new residential/
commercial development)

d. Additional information was requested from:

2 miscellaneous projects

- 1) Georgia-Pacific Corporation, Lincoln County
(Evaluation of Source Test Report for hog fuel boiler)
- 2) Georgia-Pacific Corporation, Coos County
(Evaluation of Source Test Report for hog fuel boiler)

Solid Waste Management

Two (2) project plans were reviewed:

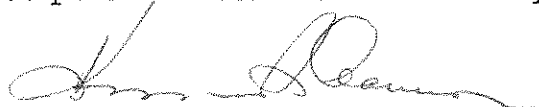
a. Approval was given to:

2 miscellaneous projects

- 1) Pope & Talbot, Inc., Lane County
(Existing Industrial Site, Operational Plan)
- 2) Park Lumber (Crown Zellerbach Corporation), Clackamas County
(Existing Industrial Site, Operational Plan)

Director's Recommendation

It is recommended that the Commission give its confirming approval to staff action on project plans for the month of February 1974.



KESSLER R. CANNON
Director

ss: 3/12/74
attachments



ENVIRONMENTAL QUALITY COMMISSION

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MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item C, March 22, 1974, EQC Meeting

Tax Credit Applications

Kessler R. Cannon
Director

Attached are review reports on six (6) Tax Credit Applications. These applications and the recommendations of the Director are summarized on the attached table.

KESSLER R. CANNON

WEG:ahc
March 12, 1974

Attachments: Tax Credit Application Summary
Tax Credit Review Reports (6)

T-520R, Coin Millwork Company
T-521, Willamette Industries, Duraflake Company
T-523, Willamette Industries, Duraflake Company
T-534, Evans Products Co., Fiber Products Division
T-537, Bohemia, Inc., Elkside Lumber Division
T-538, Bohemia, Inc., Cascade Fiber Division



Contains
Recycled
Materials

TAX CREDIT APPLICATIONS

<u>Applicant</u>	<u>Appl. No.</u>	<u>Facility</u>	<u>Claimed Cost</u>	<u>% Allocable to Pollution Control</u>	<u>Director's Recommendation</u>
Join Millwork Company	T-520R	Complete woodwaste processing and handling system, and modification of wigwam waste burner	\$120,165.58	80% or more	Issue
Willamette Industries, Inc. Duraflake Company	T-521	Wet centrifugal wood-dust cleaning system	84,836.88	80% or more	Issue
Willamette Industries, Inc. Duraflake Company	T-523	Wood-dust primary collection system for Plant #1	37,688.32	80% or more	Issue
Evans Products Company Fiber Products Division	T-534	Self-contained steam boiler	77,617.20	80% or more	Issue
Bohemia, Incorporated Elkside Lumber Division	T-537	Plant used to convert wood-wastes into hog fuel	90,449.52	80% or more	Issue
Bohemia, Incorporated Cascade Fiber Division	T-538	Enclosed truck dump area	44,511.21	80% or more	Issue

March 22, 1974 TOTALS

Air Quality	\$455,268.71
Water Quality	<u>-0-</u>
	\$455,268.71

Calendar Year TOTALS

Air Quality	\$13,391,242.16
Water Quality	<u>13,521,886.69</u>
	\$26,913,128.85

Date March 7, 1974

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Coin Millwork Company
P. O. Box 369
Prineville, Oregon 97754

The applicant operates a millwork facility primarily engaged in manufacturing mouldings at Prineville, Crook County, Oregon.

2. Description of Facility

The facility claimed in this application is described as a complete wood-waste processing and handling system, and modification of an existing wigwam waste burner consisting of the following:

1. Feed Conveying system.
2. Hog and blower system.
3. Relay blower system.
4. Cyclone collection systems.
5. Collection and metering bins.
6. Under-fire air and grate modification systems.
7. Auxiliary ignition systems.
8. Temperature recording system.

The facility was completed in October, 1973, and put into operation in December, 1973.

Certification is claimed under the 1969 Act, and the percentage claimed is 100%.

Facility costs: \$120,165.58 (Accountant's cost certification was provided).

3. Evaluation of Application

This facility was installed in accordance with a Department of Environmental Quality Stipulation and Order, No. 72-1110058, and with approved plans and specifications.

The completed modified wigwam waste burner was demonstrated to the Department as being capable of operating in compliance with OAR, Chapter 340, Section 25-026.

This facility does operate in a satisfactory manner, and has eliminated all open burning and land fill disposal of 30,000 Units per year of wood wastes generated in the plant.

This facility did reduce particulate emissions by an estimated 250 tons/year.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$120,165.58 with 80% or more of the cost allocated to pollution control be issued for the facility claimed in Tax Application T-520 R.

JEP:kok

Date March 6, 1974

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Willamette Industries, Inc.
Duraflake Company
3800 1st National Bank Tower
Portland, Oregon 97201

The applicant operates a particleboard plant at Albany, Linn County, Oregon.

2. Description of Facility

The facility claimed in this application is described as a wet centrifugal wood-dust cleaning system and consists of the following:

1. Three (3) AAF, Type R, Rotoclone Scrubbers.
2. Three (3) Carothers, #80 Industrial Exhausters.
3. Peco 3" X 4", model 11-30121, centrifugal pump.
4. Ducts, structures, and washing equipment.
5. Foundations, wiring, and installation.

The facility was completed and put into operation in July, 1972.

Certification is claimed under the 1969 Act and the percentage claimed for pollution control is 100%.

Facility costs: \$84,836.88 (Accountant's cost certification was provided).

3. Evaluation of Application

This facility was installed in accordance with approved plans and specifications of the Mid-Willamette Valley Air Pollution Authority.

The facility did reduce emissions of particulate matter from five (5) plant air systems by an estimated 90 pounds/hour.

This facility does operate in a satisfactory manner and has reduced emissions of particulate matter by an estimated 380 tons/year.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$84,836.88 with 30% or more of the cost allocated to pollution control be issued for the facility claimed in Tax Application T-521.

Date March 6, 1974

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Willamette Industries, Inc.
Duraflake Company
3800 First National Bank Tower
1300 S. W. Fifth Avenue
Portland, Oregon 97201

The applicant operates a fiberboard plant in Albany, Linn County, Oregon.

2. Description of Facility

The claimed facility is described to be a wood-dust primary collection system for the plant's #1 sander and consists of the following:

1. Carter-Day, model 144 RJ 96, baghouse.
2. Maintenance platform.
3. Proper fire sensing and fire suppression controls.

The facility was completed and put into operation in July, 1972.

Certification is claimed under the 1969 Act and the percentage claimed for pollution control is 100%.

Facility costs \$37,688.32 (Accountant's cost certification was provided).

3. Evaluation of Application

This facility enables the plant to collect an estimated 15 pounds/hour of sanderdust from the #1 sander, which is then burned as fuel in the plant's boiler.

The facility was installed with plans and specifications approved by the Mid-Willamette Valley Air Pollution Authority. The Authority has inspected the completed facility and has confirmed that the installation does operate as planned.

It is concluded that this installation does operate satisfactorily and did reduce sanderdust emissions by an estimated 15 pounds/hour or a total of 33 tons/year.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$37,688.32 with 80% or more of the costs allocated to pollution control be issued for the facility claimed in Tax Application T-523.

Date March 7, 1974

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Evans Products Company
Fiber Products Division
1120 S. W. Crystal Lake Drive
Corvallis, Oregon 97330

The applicant operates a hardboard plant in Corvallis, Benton County, Oregon.

2. Description of Facility

The claimed facility is described to be a self contained steam boiler used as a fume incinerator for hardboard tempering oven fumes, and consists of the following equipment items:

1. Boiler building.
2. CB 700-350, gas-fired, steam boiler with accessories.
3. Valve and motor
4. Monitor injector.
5. Sheet metal and duct works.
6. Miscellaneous materials, electrical parts, piping, gauges, etc.

Certification is claimed under the 1969 Act and the percentage claimed for pollution control is 100%.

Facility Costs: \$77,617.20 (Accountant's certification was provided).

3. Evaluation of Application

This facility enables the company to control tempering oven fumes as required by the Mid-Willamette Air Pollution Authority.

The facility was installed with plans and specifications approved by the Mid-Willamette Valley Air Pollution Authority. The Authority has inspected the completed facility and has confirmed that the installation does operate as planned.

The boiler normally runs at only 25% of full load, since the principal purpose of the boiler is to incinerate tempering oven fumes. The primary fuel is natural gas (firm basis).

It is concluded that this installation does operate satisfactorily, and did reduce air pollution by oxidizing tempering oven fumes to carbon dioxide and water.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$77,617.20 with 80% or more of the costs allocated to pollution control be issued for the facility claimed in Tax Application T-534.

JEP:kok

Date March 7, 1974

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Bohemia, Incorporated
Elkside Lumber Division
P. O. Box 1810
Eugene, Oregon 97401

The applicant operates a sawmill at Lakeside, Coos County, Oregon.

2. Description of Facility

The facility claimed in this application is described as a plant to convert wood wastes into hog fuel and consists of the following:

1. Jeffrey No. 56 AB Hog.
2. Electric motor drive.
3. Screw-bottom surge hopper.
4. Troughing belt conveyor.
5. Three (3) Peerless C-20 hog fuel bins.
6. Necessary supports, foundations, motors, wiring, controls, hog building, etc.

The facility was completed and put into operation in January, 1972.

Certification is claimed under the 1969 Act and the percentage claimed for pollution control is 100%.

Facility costs: \$90,449.52 (Accountant's cost certification was provided).

3. Evaluation of Application

This facility was installed to dispose of plant wood wastes as an alternative to modifying an existing wigwam waste burner as required by the Department.

The hog fuel is sold at a loss to local boiler customers.

This facility did reduce emissions of particulate matter by an estimated 200 tons/year and CO emissions by an estimated 1,300 tons/year.

This facility does operate in a satisfactory manner, and reduced emissions of CO and particulate matter by an estimated 1,500 tons/year.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$90,449.52 with 80% or more of the cost allocated to pollution control be issued for the facility claimed in Tax Application T-537.

JEP:kok

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Bohemia, Incorporated
Cascade Fiber Division
P. O. Box 1319
Eugene, Oregon 97401

The applicant operates a particleboard plant in Eugene, Lane County, Oregon.

2. Description of Facility

The facility claimed in this application is described as a completely enclosed truck dump area and consists of the following:

1. A completely enclosed truck dump building, 24ft. x 75ft. x 60ft.

The facility was completed and put into operation in October, 1969.

Certification is claimed under the 1969 Act and the percentage claimed for Pollution Control is 100%.

Facility Costs: \$44,511.21 (Accountant's cost certification was provided).

3. Evaluation of Application

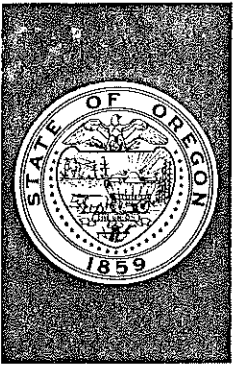
The facility was installed in accordance with a Lane Regional Air Pollution Authority approved compliance program and approved plans and specifications.

This facility did reduce emissions of particulate matter by an estimated 30 pounds/hour.

This facility does operate in a satisfactory manner and has reduced emissions of particulate matter by an estimated 130 tons/year.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$44,511.21 with 80% or more of the cost allocated to pollution control be issued for the facility claimed in Tax Application T-538.



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Portland

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Addendum to Agenda C, March 22, 1974, EQC Meeting

—
Kessler R. Cannon
Director

Tax Credit Applications

Attached are review reports on one (1) Tax Credit Application. This application and the recommendation of the Director is summarized on the attached sheet.

KESSLER R. CANNON

WEG:ahc
March 19, 1974

Attachment: Tax Credit Summary Addendum
Tax Credit Review Report (1)

T-518, Reynolds Metals Company, Troutdale Plant



Contains
Recycled
Materials

TAX CREDIT APPLICATIONS

<u>Applicant</u>	<u>Appl. No.</u>	<u>Facility</u>	<u>Claimed Cost</u>	<u>% Allocable to Pollution Control</u>	<u>Director's Recommendation</u>
Reynolds Metals Company Troutdale Plant	T-518	Two baghouses, two fans, and associated ductwork for removing dust, fumes, and gases in rodding room	\$25,563.90	80% or more	Issue

March 22, 1974 TOTALS

Air Quality	\$25,563.90
Water Quality	<u>-0-</u>
	\$25,563.90

Calendar Year TOTALS

Air Quality	\$13,416,806.06
Water Quality	<u>13,521,886.69</u>
	\$26,938,692.75

Date February 19, 1974

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Reynolds Metals Company
Troutdale Plant
Sundial Road
Troutdale, OR 97060

The applicant operates a primary aluminum reduction plant.

2. Description of Claimed Facility

The facility claimed in this application is described to include two baghouses, two fans and associated ductwork for removing dust, fumes and gases emitted by the two cast iron melting ore furnaces in the rodding room.

The facility was completed and placed in operation in March, 1973.

Certification must be made under the 1969 Act with 100% of the cost being claimed as allocable to pollution control.

Facility Cost: \$25,563.90 (Accountant's certification was provided).

3. Evaluation of Application

The claimed facility was installed in accordance with detailed plans and specifications reviewed and approved by the Department. An inspection of the facility indicates that the operation is capable of compliance with applicable Emission regulations.

The material collected is landfilled and does not yield any economic return.

It is concluded that the claimed facility was installed and is operated to control air pollution and that 100% of the cost is allocable to pollution control.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the actual cost of \$25,563.90 with 80% or more of the cost allocable to pollution control, be issued for the facility claimed in Tax Application T-518.

FAS:kok



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DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To : Environmental Quality Commission

From : Director

Subject: Agenda Item No. D, March 22, 1974 EQC Meeting

Adoption of Temporary Rules Pertaining to Administrative Procedures--Repealing Sections 11-005 through 11-170, Oregon Administrative Rules Chapter 340, Division 1, Subdivision 1, and Adopting in lieu Sections 11-005 through 11-135

Background

The administrative procedures of the Department of Environmental Quality are established through rules adopted by the Environmental Quality Commission pursuant to Oregon's Administrative Procedure Act (APA). While procedural rules adopted by the Commission may augment those promulgated in the APA, they are required by law to conform to the policies specified in the APA.

Because of the significance of federal programs such as the water pollution control permit program (NPDES) and the increasingly important nature of the contested case-type hearings brought to the Commission, there is an immediate need for both the Department and its various publics to have currently updated rules regarding procedures for contested case hearings and rulemaking consistent with legislative revisions of the APA to permit expeditious and orderly conduct of departmental responsibilities.

Director's Recommendation

It is the Director's recommendation that in view of legislative modifications of the APA, the attached temporary rules pertaining to procedures for rulemaking and contested case hearings be adopted immediately.

KESSLER R. CANNON
Director

ss
3/11/74
attachment

DEPARTMENT OF ENVIRONMENTAL QUALITY

AMENDMENT TO CHAPTER 340, OREGON ADMINISTRATIVE RULES

March 22, 1974

Sections 11-005 to 11-170, "Rules of Practice and Procedure," and ~~section 14-045~~, are hereby repealed and the following rules adopted in lieu thereof:

Division 1

RULES OF GENERAL APPLICABILITY AND ORGANIZATION

Subdivision 1

RULES OF PRACTICE AND PROCEDURE

Rule Making

11-005 DEFINITIONS. Unless otherwise required by context, as used in this subdivision:

- (1) "Commission" means the Environmental Quality Commission.
- (2) "Department" means the Department of Environmental Quality.
- (3) "Director" means the Director of the Department of Environmental Quality.
- (4) "License" includes the whole or part of any Department permit, certificate, approval, registration or similar form of permission required by law to pursue any commercial activity, trade, occupation or profession.
- (5) "Order" has the same meaning as given in ORS 183.310.

(6) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the Federal Government and any agencies thereof.

(7) "Rule" has the same meaning as given in ORS 183.310.

11-010 NOTICE OF RULE MAKING. (1) Except as specifically provided otherwise by statute, the Commission shall give notice of its intention to adopt, amend or repeal any rules by publication not less than twenty (20) days prior to the date of the proposed action in the bulletin published by the Secretary of State.

(2) A copy of the notice shall be furnished to such news media as the Commission may deem appropriate.

(3) A copy of the notice shall be mailed to persons on the mailing list established pursuant to ORS 183.335(3).

(4) Each rule-making notice shall contain a description of the Commission's intended action, setting forth the subjects and issues involved in sufficient detail to inform a person that his interest may be affected. Where practicable and appropriate, a copy of the rule proposed to be adopted, amended or repealed shall be included. If the proposed rule, amendment or repeal thereof is not set forth verbatim in the notice, the notice shall state the time, place and manner in which the rule or amendment may be obtained.

(5) When the Commission is required by law to hold a public hearing on the proposed rule making, or contemplates that a public hearing is necessary or appropriate, the notice shall additionally include:

(a) The time and place of the public hearing.

(b) The manner in which interested parties may present their views at the hearing.

(c) A designation of the person who is expected to preside at and conduct the hearing, if other than the full Commission.

(6) When the Commission is not required to hold a public hearing, and does not contemplate that a hearing is appropriate to the circumstances of the proposed rule making, the notice shall additionally include:

(a) A statement of the time and place at which data, views or arguments may be submitted in writing to the Commission.

(b) A statement that any interested person desiring to express or submit his data, views or arguments at a public hearing must request the opportunity to do so.

(c) A designation of the person to whom a request for public hearing must be submitted and the time and place therefor.

(d) A statement that a public hearing will be held if the Commission receives a request for public hearing within fifteen (15) days after the Commission's notice from ten (10) or more persons or from an association having not less than ten (10) members.

11-015 REQUEST FOR A PUBLIC HEARING. If ten (10) persons or an association having more than ten (10) members make a timely request for a public hearing on proposed rule making, the Commission shall give notice thereof in conformity with section 11-010(5).

11-020 POSTPONING INTENDED ACTION. (1) The Commission shall postpone its intended action upon request of an affected person, received within fifteen (15) days after the Commission's notice, in order to allow the requesting person an opportunity to submit data, views or arguments concerning the proposed action.

(2) Postponement of the date of intended action shall be no less than ten (10) nor more than ninety (90) days. In determining the length of postponement, the Commission shall consider the time necessary to give reasonable notice of the postponement and the complexity of the subject and issues of the intended action.

(3) The Commission shall give notice of the postponement pursuant to section 11-010 but publication in the Secretary of State's bulletin is required only when the notice can be published in the bulletin prior to the postponement date of the intended action.

(4) This section does not apply to adoption of temporary rules by the Commission pursuant to ORS 183.335(2) and section 11-050.

11-025 CONDUCT OF HEARING. (1) The hearing shall be conducted before the Commission, with the Chairman as the presiding officer, or before any member of the Commission, the Director, or other person designated by the Commission to be the presiding officer.

(2) At the commencement of the hearing, any person wishing to be heard shall advise the presiding officer of his name, address and affiliation. Additional persons may be heard at the discretion of the presiding officer. The presiding officer shall provide an appropriate form for listing witnesses which shall indicate the name of the witness, whether the witness favors or opposes the proposed action and such other information as the presiding officer may deem appropriate.

(3) At the opening of the hearing, the presiding officer shall state, or have stated, the purpose of the hearing.

(4) The presiding officer shall thereupon describe the manner in which interested parties may present their views at the hearing.

(5) Subject to the discretion of the presiding officer, the order of the presentation shall be:

- (a) Statements of proponents.
- (b) Statements of opponents.
- (c) Statements of any other witnesses present and wishing to be heard.

(6) The presiding officer and any member of the Commission shall have the right to question or examine any witness making a statement at the hearing. The presiding officer may, in his discretion, permit other persons to examine witnesses.

(7) There shall be no rebuttal or additional statements given by any witness except as requested by the presiding officer. However, when such additional statement is given, the presiding officer shall allow an equal opportunity for reply.

(8) The hearing may be continued with recesses as determined by the presiding officer until all listed witnesses present and wishing to make a statement have had an opportunity to do so.

(9) The presiding officer shall, where practicable and appropriate, receive all physical and documentary evidence presented by witnesses. Exhibits shall be marked and shall identify the witness offering each exhibit. The exhibits shall be preserved by the Department for a period of one year or, at the discretion of the Commission, returned to the party submitting it.

(10) The presiding officer may set reasonable time limits for oral presentation and may exclude or limit cumulative, repetitious or immaterial matter.

(11) A verbatim oral, written, or mechanical record shall be made of all the hearing proceedings, or, in the alternative, a record in the form of minutes.

11-030 PRESIDING OFFICER'S REPORT. Where the hearing has been conducted before other than the full Commission, the presiding officer, within a reasonable time after the hearing, shall provide the Commission with a written summary of statements given and exhibits received, and a report of his observations of physical experiments, demonstrations or exhibits. The presiding officer may also make recommendations to the Commission based upon the evidence presented, but the Commission is not bound by such recommendations.

11-035 ACTION OF THE COMMISSION. Following the hearing by the Commission, or after receipt of the report of the presiding officer, the Commission may adopt, amend or repeal rules within the scope of the notice of intended action.

11-040 NOTICE OF COMMISSION ACTION: CERTIFICATION TO SECRETARY OF STATE. The Department shall file in the Office of the Secretary of State a copy of each rule adopted, amended or repealed by the Commission, certified by the Director, or Deputy Director, of the Department.

11-045 PETITION TO PROMULGATE, AMEND OR REPEAL RULE: CONTENTS OF PETITION, FILING OF PETITION. (1) An interested person may petition the Commission requesting the promulgation, amendment or repeal of a rule. The petition shall be in typewritten form, signed by or on behalf of the petitioner and shall contain a detailed statement of:

(a) The rule petitioner requests the Commission to promulgate, amend or repeal. If amendment of an existing rule is sought, the rule shall be set forth in the petition in full with matter proposed to be deleted therefrom enclosed in brackets and proposed additions thereto shown by underlining.

(b) Ultimate facts in sufficient detail to show the reasons for adoption, amendment or repeal of the rule.

(c) All propositions of law to be asserted by petitioner.

(d) Sufficient facts to show how petitioner will be affected by adoption, amendment or repeal of the rule.

(e) The name and address of petitioner and of any other persons known by petitioner to be interested in the rule sought to be adopted, amended or repealed.

(2) The petition shall be deemed filed when received by the Department at the office of the Director.

(3) Upon receipt of the petition, the Department:

(a) Shall serve a true copy of the petition, together with a copy of any applicable rules of practice, on all persons named in the petition, and on those whom the Department believes to have an interest in the proceeding. For the purposes of this subsection, service shall be deemed perfected on the date such copies are mailed to the last known address of the person being served.

(b) Shall advise petitioner that he has fifteen (15) days in which to supplement his petition in writing with additional data, views or arguments.

(c) Shall advise all other persons served that they have fifteen (15) days in which to submit written data, views or arguments regarding the petition.

(d) May schedule oral presentation of petitioner's views if petitioner makes a request therefor, or if the Commission wishes to hear petitioner orally.

(4) The Commission shall promptly either deny the petition or initiate rule-making proceedings in accordance with sections 11-005 through 11-040 and, if it denies the petition, shall issue an order setting forth its reasons in detail. The order shall be mailed to the petitioner and to all other persons upon whom a copy of the petition was served.

11-050 TEMPORARY RULES. (1) The Commission may proceed without prior notice or hearing, or upon any abbreviated notice and hearing that it finds practicable and appropriate, to adopt a rule without the notice otherwise required by ORS chapter 183 and by these rules. In such a case, the Department shall:

(a) File a copy, certified by the Director or by the Deputy Director of the Department, of the rule with the Secretary of State.

(b) File with the Secretary of State the Commission's findings that failure of the Commission to act promptly will result in serious prejudice to the public interest or to the interest of the parties concerned. The findings shall be supported by a statement of specific facts and reasons.

(c) Take practicable and appropriate measures to make the temporary rule known to persons who may be affected by it.

(d) Furnish copies of the temporary rule to such news media as the Commission deems appropriate to comply with the notice requirement of these rules.

(2) A temporary rule adopted in compliance with this section becomes effective immediately upon filing with the Secretary of State, or at a designated later date.

(3) A temporary rule may be effective for no longer than 120 days, and may not be extended, renewed or repromulgated beyond the initial 120 days. In accordance with the procedures established by sections 11-005 through 11-040, the Commission may adopt a rule identical to an existing temporary rule.

11-055 APPLICATION OF SECTIONS 11-005 to 11-040. Sections 11-005 through 11-040 do not apply to rules establishing an effective date for a previously effective rule or establishing a period during which a provision of a previously effective rule will apply.

Declaratory Rulings

11-060 INSTITUTION OF PROCEEDINGS FOR DECLARATORY RULINGS. On petition of any interested person, the Commission may, at its discretion, issue a declaratory ruling with respect to the applicability to any person, property or state of facts of any statute or rule enforceable by the Commission.

11-065 CONTENTS OF PETITION. The petition shall be typewritten and shall contain:

(1) The statute or rule for which petitioner seeks a declaratory ruling.

(2) A detailed statement of the facts upon which petitioner requests the Commission to issue its declaratory ruling.

(3) Sufficient facts to show how petitioner will be affected by the requested declaratory ruling.

(4) All propositions of law or contentions to be asserted by petitioner.

(5) The questions presented for decision by the Commission.

(6) The specific relief requested.

(7) The name and address of petitioner and of any other person known by petitioner to be interested in the requested declaratory ruling and the reason for such interest.

11-070 FILING AND SERVICE OF PETITION. (1) The petition shall be deemed filed when received by the Department at the office of the Director.

(2) The Commission shall inform the petitioner promptly after the filing of the petition whether it intends to issue a ruling.

(3) If the Commission intends to issue a ruling, the Department shall serve a copy of the petition, and a notice of a hearing at which the petition will be considered, on all

persons named in the petition, and on all other persons the Department believes to have an interest in the outcome of such a ruling.

(4) The notice of hearing required by subsection (3) of this section shall include:

(a) The time and place of the hearing.

(b) A designation of the person who is expected to preside at and conduct the hearing, if other than the full Commission.

11-075 CONDUCT OF HEARING: BRIEFS AND ORAL ARGUMENT.

(1) A hearing for a declaratory ruling may be held before the Commission or a member thereof, the Director, or any other person designated by the Commission to preside at and conduct the hearing.

(2) At the hearing, petitioner and any other interested party shall have the right to present oral argument. The presiding officer may impose reasonable time limits on the time allowed for oral argument. Petitioner and other interested persons may file briefs with the Commission in support of their respective positions. The Commission or its designee shall fix the time and order of filing briefs.

11-080 PRESIDING OFFICER'S OPINION. In those instances where the hearing has been conducted before a person other than the full Commission, the presiding officer shall prepare an opinion conforming in form and content to the requirements of subsection 11-085(2). The Commission is not bound by the opinion of the presiding officer.

11-085 DECISION OF COMMISSION: TIME, FORM AND SERVICE.

(1) The Commission shall issue its declaratory ruling within sixty (60) days of:

(a) Where no briefs are permitted to be filed subsequent to the hearing, the close of the hearing.

(b) Where permission has been granted for the filing of briefs subsequent to the hearing, the deadline set for the filing of briefs.

(2) The ruling shall be in the form of a written opinion and shall set forth:

(a) The facts being adjudicated by the Commission.

(b) The statute or rule being applied to those facts.

(c) The Commission's conclusion as to the applicability of the statute or rule to those facts.

(d) The Commission's conclusion as to the legal effect or result of applying the statute or rule to those facts.

(e) The reasons relied upon the Commission to support its conclusions.

(3) The Department shall mail the Commission's ruling to all persons upon whom it served the petition in compliance with subsection 11-070(3), and to all other persons on the mailing list established pursuant to ORS 183.335(3).

11-090 EFFECT OF COMMISSION RULING. A declaratory ruling issued in accordance with these rules is binding between the Commission and the petitioner on the state of facts alleged, or found to exist, except:

- (1) When altered or set aside by a court.
- (2) When the ruling is based on a rule of the Commission, the rule is amended, repealed or superseded pursuant to rule making conducted in accordance with sections 11-005 through 11-040.
- (3) Where the declaratory ruling is adverse to petitioner, when altered by the Commission.

Contested Cases

11-095 IMMEDIATE SUSPENSION OR REFUSAL TO RENEW A LICENSE. If the Commission finds a serious danger to the public health or safety and sets forth the specific reasons for such findings, the Commission may suspend or refuse to renew a license without hearing. If the licensee demands a hearing within 90 days after the date of notice to the licensee of such suspension or refusal to renew, a hearing as provided in sections 11-110 through 11-135 shall be granted to the licensee as soon as practicable after such demand, and the Commission shall issue an order pursuant to such hearing confirming, altering or revoking its earlier order. Such a hearing need not be held where the order of suspension or refusal to renew is accompanied by or is pursuant to, a citation for violation which is subject to judicial determination in any court of this state, and the order by its terms will terminate in case of final judgment in favor of the licensee.

11-100 NOTICE OF OPPORTUNITY FOR A HEARING. (1) Except as otherwise provided in section 11-095, before the Commission or Department shall by order suspend, revoke, refuse to renew or issue a license or enter an order in any other contested case as defined in ORS chapter 183, it shall afford the licensee, the license applicant or other party to the contested case an opportunity for hearing after reasonable notice, served personally or by registered or certified mail.

(2) Notice of opportunity for a hearing shall include:

(a) A statement of the party's right to request a hearing.

(b) A statement of the authority and jurisdiction under which the hearing would be held.

(c) A reference to the particular sections of the statutes and rules involved.

(d) A short and plain statement of the matters asserted or charged.

(e) A statement that if the party desires a hearing, the agency must be notified within twenty (20) days of the date of mailing of the notice.

11-105 ORDERS WHEN NO HEARING REQUESTED. When a party has been given an opportunity to request a hearing within a specified time and no hearing has been requested, or if a hearing has been set, notice thereof given and the party does not appear, the Commission or the Department may, based upon a prima facie case made on the record of the Commission or

the Department, as the case may be, enter a written order at the expiration of the time, stating the matters before it supporting the order, and that the order shall become effective immediately upon service on the party.

11-110 NOTICE OF HEARING. (1) The Department shall serve notice of a hearing personally or by registered or certified mail upon each party.

(2) Notice of a hearing shall include:

(a) All matters required to be included in the notice of opportunity for hearing under section 11-100(2)(b)(c) and (d).

(b) A statement of the time and place of the hearing.

(c) A designation of the person who is expected to preside at and conduct the hearing, if other than the full Commission.

(d) A statement that any party to the contested case may be represented by counsel at the hearing.

11-115 SUBPOENAS AND DEPOSITIONS. (1) The Department shall issue subpoenas on behalf of any party to a contested case upon a showing of good cause, and a showing of general relevance within the reasonable scope of the proceedings. Witnesses appearing pursuant to subpoena, other than persons requesting the hearing, members of the Commission, the Director or employees of the Department, shall receive fees and mileage as prescribed by law for witnesses in civil actions.

(2) An interested person may petition the Department for an order that the testimony of a material witness be taken by deposition. Fees and mileage are to be paid as determined by applicable statutes.

11-120 CONDUCT OF HEARING. (1) The hearing shall be conducted before the Commission, under the control of the chairman as presiding officer, or before any Commission member or other person designated by the Commission or Director to be presiding officer.

(2) At the discretion of the presiding officer, the hearing shall be conducted in the following manner:

(a) Statement and evidence of the Commission or Department in support of its proposed action.

(b) Statement and evidence of affected persons in support of, requesting modification of or disputing the Commission's or the Department's proposed action.

(c) Rebuttal testimony, if any.

(3) All testimony shall be taken upon oath or affirmation of the witness from whom received. The officer presiding at the hearing shall administer oaths or affirmations to witnesses.

(4) The following persons shall have the right to question, examine or cross-examine any witness:

(a) The presiding officer.

(b) Where the hearing is conducted before the full Commission, any member of the Commission.

(c) Counsel for the Commission or the Department.

(d) Where the Commission or the Department is not represented by counsel, a person designated by the Commission or the Director.

(e) Any party to the contested case or such party's counsel.

(5) The hearing may be continued with recesses as determined by the presiding officer.

(6) The presiding officer may set reasonable time limits for oral presentation and shall exclude or limit cumulative, repetitious or immaterial matter.

(7) The presiding officer shall, where appropriate and practicable, receive all physical and documentary evidence presented by parties and witnesses. Exhibits shall be marked, and the markings shall identify the person offering the exhibits. The exhibits shall be preserved by the Department as part of the record of the proceedings.

(8) A verbatim oral, written or mechanical record shall be made of all motions, evidentiary objections, rulings and testimony.

11-125 EVIDENTIARY RULES. (1) The rules of evidence as in equity proceedings shall apply to all hearings in contested cases.

(2) All offered evidence, not objected to, will be received by the presiding officer subject to his power to exclude or limit cumulative, repetitious, irrelevant or immaterial matter.

(3) Evidence objected to may be received by the presiding officer with rulings on its admissibility or exclusion to be made at the time a final order is issued.

11-130 PROPOSED ORDERS: FILING OF EXCEPTIONS AND ARGUMENT.

(1) In contested cases before the Commission, if a majority of the members of the Commission were not present at the hearing or have not considered the record, and the order is adverse to a party, a proposed order, including findings of fact and conclusions of law, shall be served upon the parties. The Commission shall not render a final order in the contested case until each party adversely affected has been given an opportunity to file exceptions and present arguments to the Commission.

(2) In contested cases before the Department, if the Director was not present at the hearing or has not considered the record, and the order is adverse to a party, a proposed order, including findings of fact and conclusions of law, shall be served upon the parties. The Director shall not render a final order in the contested case until each party adversely affected has been given an opportunity to file exceptions and present arguments to the Director.

11-135 FINAL ORDERS IN CONTESTED CASES. NOTIFICATION.

(1) Final orders in contested cases shall be in writing or stated in the record, and may be accompanied by an opinion.

(2) Final orders shall include the following:

(a) Rulings on admissibility of offered evidence if not already in the record.

(b) Findings of fact, including those matters which are agreed as fact, a concise statement of the underlying facts supporting the findings as to each contested issue of fact and each ultimate fact required to support the Commission's or the Department's order.

(c) Conclusions of law.

(d) The Commission's or the Department's order.

(3) The Department shall serve a copy of the final order upon every party or, if applicable, his attorney of record.



ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

TOM McCALL
GOVERNOR

B. A. McPHILLIPS
Chairman, McMinnville

GRACE S. PHINNEY
Corvallis

JACKLYN L. HALLOCK
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MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

Memorandum

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. E, March 22, 1974 EQC Meeting

AMAX Pacific Aluminum Corp. (Warrenton) - Status Report
Regarding Permit Applications

Kessler R. Cannon
Director

Background

AMAX Pacific Aluminum Corp. filed applications for air, water and solid waste permits with the Department on November 2, 1973, for preliminary Department review. Since that time the Environmental Quality Commission at its November 26, 1973, meeting adopted Emission Standards for Primary Aluminum Plants which limit fluoride emissions from new plants to levels below those projected by AMAX in its preliminary air contaminant discharge permit application. Since the submission of AMAX's preliminary permit applications there has been considerable correspondence and meetings between AMAX representatives and Department staff regarding future proposed actions on the part of AMAX to complete its permit applications.

A detailed account of these activities including copies of pertinent correspondence related to the AMAX preliminary permit applications up to February 28, 1974, is contained in the attached report dated March 1, 1974.

Summary and Conclusions

In summary, AMAX and Department activities since submission of the preliminary permit applications have dealt with the following: 1) modifications AMAX must make in their permit application to comply with recently adopted Department Emission Standards for Aluminum Plants, 2) details of the Estuary Study of Youngs Bay which AMAX has contracted for with Oregon State University, 3) information the Department will need in order to assess the total environmental impact of the proposed AMAX facility, and 4) the necessity to set up a public information distribution system of pertinent items relating to the AMAX project.



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In general, AMAX is actively pursuing the gathering and submitting of all information required by the Department and expects to determine by early April, 1974, whether or not they can comply with the Department's recently adopted new plant fluoride standards. Final permit applications are projected to be submitted to the Department by the week of May 13, 1974. AMAX is concurrently proceeding to implement the Youngs Bay Estuary Study and other environmental monitoring programs. An extensive public information distribution system has been established to insure all interested parties easy access to pertinent information about this project.

Following completion of its application it is proposed that the staff will prepare an evaluation report and one or more public hearings will be held in the Warrenton/Astoria area prior to final Commission action to issue or deny the requested permits.

Director's Recommendation

This is intended as a status report on activities related to AMAX Pacific Aluminum Corp. applications to obtain air, water and solid waste permits from the Department and no formal action by the Commission is recommended at this time.



KESSLER R. CANNON
Director

Attachments



State of Oregon
 DEPARTMENT OF ENVIRONMENTAL QUALITY
 NORTHWEST REGION

INTEROFFICE MEMO

To: Director, EQC Members, B, J. Seymour Date: March 5, 1974
 From: E. J. Weathersbee , Administrator, Northwest Region
 Subject: Amax Pacific Aluminum Corp. Status Reports

Attached is a current status report regarding various aspects of the AMAX Aluminum Smelter proposed for warrenton. I have attached the following items which you may wish to refer to for greater detail when reading the status report.

<u>Item No.</u>	<u>Date</u>	<u>Description</u>
AQ-73-25	Nov. 6, 1973	DEQ press release on receipt of preliminary air, water and solid waste permit applications.
AQ-73-37	Nov. 7, 1973	DEQ press release on questions raised about aspects of AMAX's preliminary permit applications.
AQ-73-24	Nov. 6, 1973	DEQ letter to AMAX acknowledging receipt of preliminary permit applications.
AQ-73-36	Dec. 6, 1973	DEQ letter to AMAX requesting supplemental information to preliminary permit applications.
AQ-73-42	Dec. 18, 1973	AMAX letter to DEQ indicating they are reviewing our letter request of Dec. 6, 1973.
AQ-74-6	Jan. 11, 1974	DEQ confirmation letter of AMAX - DEQ meeting of January 9, 1974.
AQ-74-7	Jan. 18, 1974	DEQ letter request to AMAX for details of their proposed sampling and monitoring program.
AQ-74-9	Feb. 1, 1974	AMAX reply to DEQ letters of Dec. 6, 1973, including timetable for further action.

Should you desire copies of other items mentioned in the report or have further questions on this matter, please notify me. Further updates will be provided as significant developments transpire. cc: DEQ - Air Quality Division

cc: DEQ - Air Quality Division

STATUS REPORT AS OF FEBRUARY 28, 1974
AMAX PACIFIC ALUMINUM CORPORATION

Background (Period covered by press releases from B. J. Seymour items #AQ-73-25 and AQ-73-37)

On November 2, 1973 AMAX submitted State air, water and solid waste permit applications (item #AQ-73-23) for their proposed 187,000 ton/year aluminum reduction plant at Warrenton for preliminary Department review. AMAX was immediately notified by the Department (November 6, 1973 letter item #AQ-73-24) that prior to granting any permits the Department must be satisfied that unacceptable environmental impacts will not result from the construction and operation of the proposed facility. AMAX was also notified that their applications did not appear complete for evaluating all environmental aspects including power usage. In addition AMAX was asked to submit details of the Youngs Bay estuary study being contracted to Oregon State University for determination by the Department if additional studies would be required. AMAX was also asked to file a National Pollution Discharge Elimination System (NPDES) permit application for plant-site runoff waters. All material regarding AMAX was then transferred to the Northwest Region for processing.

On November 15, 1973 AMAX submitted as a supplement to their permit application a report by the H. E. Cramer Co. of Salt Lake City (AQ-73-28) presenting calculated impact on ambient air quality of emissions from AMAX (Diffusion Study).

On November 26, 1973, the Environmental Quality Commission adopted Emission Standards for Primary Aluminum Plants (item #AQ-73-30) which in essence were about 15% more stringent than fluoride emissions projected in AMAX's preliminary air permit application.

On November 30, 1973, AMAX submitted a Proposed Sampling and Monitoring Program (item #AQ-73-34) which in essence covers pre- and post-plant monitoring of ambient air, vegetation, livestock examination, soil survey and water monitoring. Stack sampling procedures after commencing operation of the plant were also described.

After thorough review of recent information submitted by AMAX the Northwest Region in a letter dated December 6, 1973 (item #AQ-73-36) requested additional information including clarification of certain calculations in the diffusion study and imposed two major requirements on AMAX. These requirements were: 1) a request for AMAX to modify its permit applications to meet recently adopted emission standards for Primary Aluminum Plants, and 2) a request for what amounted to a comprehensive environmental impact assessment including affects on resources, energy and aesthetic values and alternatives including no-build option to supplement information contained in their permit applications.

Recent History (Since Northwest Region request letter of December 6, 1973 and BJS last press release, of December 7, 1973.)

Since December 6, 1973 and up to February 28, 1974 Department activity related to AMAX is summarized as follows:

1. AMAX notified the Department by letter December 18, 1973 (#AQ-73-42) that a complete revision of the proposed Warrenton plant is being undertaken to see if modifications can be made to meet the recently adopted State emission standards. AMAX indicated they would know the scope of work and time frame to complete this review by the end of January.
2. AMAX representatives met with the Department staff on January 9, 1974 with a confirmation letter sent to AMAX on January 11, 1974 (#AQ-74-6) indicating:
 - a. AMAX would formally reply to the Department's information request letter of December 6, 1973 by the end of January 1974.
 - b. AMAX was confident it will be able to supply an environmental impact assessment adequately responding to areas of concern.
 - c. AMAX would submit a timetable for company actions relative to completing permit applications and submitting necessary supportive information by the end of January 1974.
 - d. The Department would set up and maintain a public distribution system for pertinent information relating to the AMAX project.
 - e. The Department established a technical review team to coordinate processing of AMAX's permit applications.
3. The Department notified AMAX by letter of January 18, 1974 (#AQ-74-7) that certain additional information must be submitted with the Proposed Sampling Monitoring Program before adequacy of the program can be determined. The Department requested that this information be submitted in sufficient time to allow initiating the sampling program by April 1, 1974 so that data would be available through two complete growing cycles prior to the projected plant operation date.
4. AMAX submitted written responses to the Department's December 6, 1973 letter on February 1, 1974 (#AQ-74-9) which included a time schedule for AMAX gathering and submitting requested information and an Environmental Impact Assessment outline; February 5, 1974 (#AQ-74-10) which included the Oregon State University Estuary Study proposal; and February 7, 1974 (#AQ-74-11) which included response to the questions the department had regarding AMAX's diffusion study.

The present status of major segments of the AMAX project to the best knowledge of the Department is as follows:

1. Permit Modification to Meet New State Emission Standards for Aluminum Reduction Plants:

AMAX has indicated their review of the proposed Warrenton Plant to determine if this plant can meet recently adopted standards will be complete by the week of April 8, 1974. AMAX has indicated that should this review indicate compliance with standards, a revised permit application would be submitted by the week of May 13, 1974. The Department staff is of the opinion that AMAX has provided all the available information relative to air emissions at this time and that AMAX is in the process of gathering all of the information needed and requested by the Department to assess compliance with recently adopted Department Rules. If this schedule is adhered to public hearings on the project could begin as early as late June, 1974.

2. Estuary Study

The Department has briefly reviewed the OSU Estuary Study of Youngs Bay and is of the opinion that although it is very comprehensive it may take longer than two years to completely describe the physical, chemical and biological characteristics of the estuary. Of most concern is the question of whether the study will provide sufficient information in time to have a build-no build decision within the time period required to process AMAX's permit applications - probably within the next 6 months. DEQ staff will be meeting with AMAX and OSU officials shortly to discuss and hopefully resolve these problems.

It appears that the decision to issue a permit or not will have to be based on impact projections prepared by qualified experts and reviewed by our staff. The OSU Study would provide baseline data and a procedure for evaluating actual long-term effects.

3. Environmental Impact Assessment (EIA)

The outline of AMAX's EIA has been reviewed by the Department and is considered all encompassing but void of sufficient detail to allow determination if all concerns of the Department will be adequately covered. DEQ staff will meet shortly with AMAX officials and their consultants to clarify areas of the EIA outline which need expansion in detail. AMAX has indicated the final EIA will be submitted to the Department by the week of May 6, 1974.

4. Diffusion Study

The reply to questions raised by the Department regarding the Cramer Diffusion Study has been evaluated. Some of the questions raised by the Department have been satisfactorily answered while others will need further clarification. AMAX has allowed in their timetable until the week of April 29, 1974 to submit a satisfactory study.

5. Proposed Sampling and Monitoring Program

AMAX has not replied as yet to questions raised by the Department. AMAX has scheduled initiation of the program by the first week in April which will require accelerated efforts on the part of AMAX to meet this time schedule.

6. Public Information Files

Pertinent information pertaining to the AMAX project will be maintained at the following locations for public review and comment:

- a. Astoria Public Library
- b. City of Warrenton - City Hall
- c. Clatsop County Health Department
- d. Clatsop County Environmental Council
- e. Oregon Environmental Council - Portland
- f. Salem District Office-Northwest Region - DEQ
- g. Department of Ecology - Olympia, Washington
- h. Olympia Air Pollution Control Authority - Olympia, Washington
- i. Southwest Washington Air Pollution Control Authority, Vancouver, Washington
- j. Department of Environmental Quality, 1234 S.W. Morrison, Portland

A complete chronological file of items pertaining to AMAX will be maintained at the Northwest Region office which will include items sent for public information. Each item in the Northwest Region AMAX files will be numbered and listed on a chronological log sheet which will be the first page of the file contents.

The following items will initially be distributed to the above locations along with a Department press release describing this program. Thereafter items considered of interest will be sent out from the Northwest Region as soon as practicable.

<u>Item No.</u>	<u>Date</u>	<u>Description</u>
AQ-73-23	11/2/73	Preliminary AMAX application for State air, water, solid waste permits
AQ-73-24	11/6/73	DEQ acknowledgement of Preliminary AMAX Permit Application
AQ-73-25	11/6/73	DEQ press release on Preliminary Permit Application
AQ-73-26	11/8/73	Calculated impact on ambient air quality of emissions from AMAX.

<u>Item No.</u>	<u>Date</u>	<u>Description</u> (Continued)
AQ-73-30	11/26/73	DEQ Emission Standards for Primary Aluminum Plants
AQ-73-34	11/30/73	AMAX Proposed Sampling and Monitoring Program
AQ-73-36	12/6/73	DEQ request for more information regarding preliminary AMAX permit application
AQ-73-37	12/7/73	DEQ press release on DEQ letter of 12/6/73
AQ-73-42	12/18/73	AMAX acknowledgement of DEQ letter of 12/6/73
AQ-74-6	1/11/74	DEQ-AMAX meeting of January 9, 1974 confirmation of agreements
AQ-74-7	1/18/74	DEQ request to AMAX for more information on sampling and monitoring program
AQ-74-9	2/1/74	AMAX response to DEQ letter of December 6, 1973 including AMAX projected work timetable
AQ-74-10	2/5/74	OSU-Youngs Bay Estuary Study - Proposal and Addendum
AQ-74-11	2/11/74	AMAX answers to DEQ questions on Diffusion Study

Department of Environmental Quality
1234 S. W. Morrison
Portland, Oregon 97205

For Immediate Release - November 6, 1973

The Department of Environmental Quality received an initial permit application late Friday for Amax Aluminum's proposed Warrenton plant.

DEQ Director Diarmuid O'Scannlain said a thorough study of the Columbia River estuary would be required before a permit is issued. The company has already contracted with Oregon State University for study of the area. DEQ will review study plans and determine what additional information is needed. At issue is whether Young's Bay is a special area requiring more restrictive treatment than would be needed elsewhere.

O'Scannlain emphasized that a decision on a permit for the Warrenton plant will be a separate issue from the emission standards the Environmental Quality Commission establishes. The standards, which the Commission expects to adopt later this month, will apply uniformly to all aluminum plants in the State (although timetables by which existing plants can comply will be worked out individually). The permit will set specific conditions which the Warrenton plant must meet in complying with the standards.

A review of power consumption issues related to the energy crisis may also be undertaken by DEQ in connection with the permit application, O'Scannlain said. Other factors to be considered, besides compliance with all DEQ standards,

will be questions related to whether issuance of the permit will result in significant deterioration of air quality in the area.

The permit application received comprises three sections: an air contaminant discharge permit, a new waste disposal system permit and a new solid waste disposal facility permit.

O'Scannlain indicated still another permit application would probably be required to comply with federal requirements for the National Pollutant Discharge Elimination System (NPDES).

The permit application has been referred to DEQ's Northwest Regional Office. Regional Administrator Jack Weathersbee will notify the company as to what additional information DEQ will require before accepting the application for filing.

O'Scannlain emphasized there would be full public hearings on the permit application after formal filing and before any decision is made by DEQ.

#

file AQC - Amax Aluminum

B. J. Seymour
229-5327
or
364-1826 (Salem)

Department of Environmental Quality
1234 S. W. Morrison
Portland, Oregon 97205

For Immediate Release - December 7, 1973

The Department of Environmental Quality released a lengthy list today itemizing information AMAX Aluminum Company must submit for a permit.

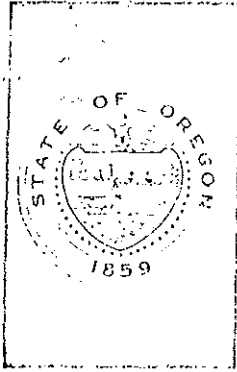
In a letter dated December 6, DEQ's Northwest Regional Administrator E. J. Weathersbee spelled out two major requirements and a fifteen-item list of technical data DEQ wants to see before it considers AMAX's permit application.

The two major requirements are modification of the application to meet new DEQ regulations adopted November 26, and a thorough environmental impact study covering "potential environmental impacts on land, air and water resources and aesthetic values." Also to be covered in the impact report is "the indirect impact on environmental quality of other areas that can reasonably be expected to result because of the potential necessity to operate fossil fuel and/or wood fired power plants to offset area power shortages directly or indirectly attributable to the proposed AMAX plant."

Weathersbee said DEQ wants to see discussion of alternatives including a change of location and the effects of a no-build decision.

DEQ will hold a public hearing in Astoria or Warrenton when the requested information has been received and analyzed, Weathersbee said.

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DEPARTMENT OF ENVIRONMENTAL QUALITY

EW-
File AQ-AMAX

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229- 5696

TOM McCALL
GOVERNOR

November 6, 1973

DIARMUID F. O'SCANNLAIN
Director

Mr. James A. Howarth
Project Manager
AMAX Pacific Aluminum Corporation
520 El Camino Real
San Mateo, CA 94402

Dear Mr. Howarth:

This is to acknowledge the receipt on November 2, 1973 of three copies of the AMAX Pacific Aluminum Corporation application for an air contaminant discharge permit, new waste disposal system permit and a new solid waste disposal facility permit for your proposed Warrenton plant.

Prior to granting of any permits, the Department must be satisfied that unacceptable adverse environmental impacts will not result from construction and operation of the proposed facility. We therefore expect to review the impacts of air emissions, water discharges, solid waste disposal, noise, power usage, and other environmental factors. The applications you have submitted do not appear to contain all of the information that will be needed to complete this evaluation.

Your applications are being transmitted to our Northwest Region Office at 1010 N. E. Couch Street for preliminary staff review. Based upon that review the Department will advise you of the specific additional information that will be required to complete your applications for filing.

We note that proposed discharges to the storm water system could be contaminated. Therefore an NPDES application will have to be filed for this proposed discharge. The necessary application forms are enclosed. We also note your reference to a contract with OSU

NORTHWEST REGION OFFICE
RECEIVED

NOV - 9 1973

DEPARTMENT OF ENVIRONMENTAL QUALITY

AQ-73-24 PI OF 2

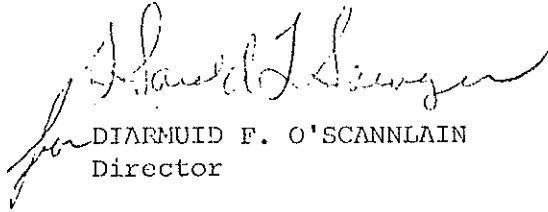
Mr. James A. Howarth

- 2 -

November 6, 1973

for a study of the Youngs Bay estuary. We would appreciate receiving a copy of this contract and the detailed objectives and task plan for this study as soon as possible so that we can determine whether additional studies will be required.

Sincerely yours,



DIARMUID F. O'SCANNLAIN
Director

HLS:ak

✓cc: Northwest Region Office

Encl.

AQ-73-2A P2 OF 2



**DEPARTMENT OF
ENVIRONMENTAL QUALITY**

NORTHWEST REGIONAL OFFICE
1010 N. E. Couch Street
Portland, Oregon 97232

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1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-

TOM McCALL
GOVERNOR

DIARMUID F. O'SCANNLAIN
Director

December 6, 1973

Mr. James Howarth
Project Manager
AMAX Pacific Aluminum Corporation
520 El Camino Real
San Mateo, CA 94402

Re: AMAX Pacific Aluminum Plant
Permit Application

Dear Mr. Howarth:

In the Department's letter of November 6, 1973, we acknowledged receipt of Amax's applications for air, water and solid waste permit for preliminary staff review. Also in that letter we advised Amax that it would be necessary to file an application for an NPDES permit to cover projected contaminated surface runoff from the plant environs and requested a copy of the Amax - OSU Estuary Study Contract and detailed information concerning the estuary study objectives and work plan. We have since received copies of H. E. Cramer Co., Inc.'s calculation on air quality impact of Amax.

We have reviewed all information submitted to date and are hereby notifying you of our further informational needs relative to your applications, as follows:

1. Amax's application must be modified to make it compatible with the Department's regulations. The application submitted contemplates atmospheric loadings greater than allowed under the Department's recently adopted regulations pertaining to emissions from primary aluminum plants.
2. Because of the large size and controversial nature of this proposed plant and the emissions therefrom a thorough environmental impact study and report must be prepared by a qualified, independent consulting firm and submitted to this Department for review and analysis as a part of the application documents.

AQ-73-36 PI OF 3

36

The Study and Report should cover the potential environmental impacts on land, air and water resources and aesthetic values of the Astoria-Warrenton area. It should also consider the indirect impact on environmental quality of other areas that can reasonably be expected to result because of the potential necessity to operate fossil fuel and/or wood fired power plants to offset area power shortages directly or indirectly attributable to the proposed Amax plant.

Alternatives should be discussed including use of other process or environmental control techniques, construction of a smaller facility, locating in an area which would experience less environmental impact and the effects of a no build decision.

3. Further specific needed information includes:

- a. Detailed plot plan of the proposed solid waste disposal area, surface and subsurface soils and groundwater data and a detailed operational plan including an analysis of potential iron and fluoride leaching and plans for collecting and treating any such leachates as may be necessary.
- b. A detailed analysis of the capability of the Warrenton sewerage system to serve the Amax plant and area growth generated by the Amax plant.
- c. A detailed characterization and evaluation of plant runoff waters with proposals for intercepting and treating all contaminated runoff waters.
- d. Back-up data and data sources used to develop projected fluoride and particulate emissions from the primary and secondary pot room control facilities and controls for the carbon bake furnace and cast house.
- e. A projection of the expected fluxuations in opacity and mass emissions from all emission points on a seasonal basis.
- f. A proposed detailed pre- and post-plant monitoring and survey program to commence as soon as possible.
- g. A proposal for controlling particulates emitted from the holding furnaces during fluxing.
- h. Detailed plan and specifications of the alumina handling, storage, and transporting facilities.
- i. An evaluation of the feasibility of reclaiming and re-cycling dross and sludge cake.

- j. Technical justification for combining secondary scrubber system exit points and metal services building stack discharge points for calculation purposes in the air quality impact report by H. E. Cramer.
- k. Technical justification for increasing Astoria mean wind speeds by 50% as indicated in the H. E. Cramer report. Specifically the justification for such increases at heights of expected plume rise.
- l. Technical justification for modifying the Pasquill-Gifford curves for σ_z values as stated in the H. E. Cramer report.
- m. Clarification as to whether or not calculated ground level concentrations of air contaminants in the H. E. Cramer report consider topography in the plant site vicinity, southeast of the plant site.
- n. Technical justification for reduction of ground level concentrations by 50% for north or south winds or 90% for other wind directions as presented in the H. E. Cramer Co. report.
- o. Calculated "worst day" maximum 3 hour and 24 hour ground level concentrations of air contaminants based on actual hourly "worst day" meteorological data instead of "mean" meteorological data. Such actual data should include "F" stability conditions if they occur.

It is the Department's plan to schedule a public hearing in the Astoria-Warrenton area regarding this matter as soon as the above information can be developed and analyzed.

It is requested that you advise us as soon as possible of the time you will need to develop this information. Please keep in mind that the Department's staff will require a reasonable review period and that 30 days Public Notice must be given prior to holding the hearing.

We would be glad to discuss any of the above items with you if you so desire.

Very truly yours,

DIARMUID F. O'SCANLAIN
Director

EJW:1b

E. J. Weathersbee, Administrator
Northwest Region Office

cc: Amax Aluminum Company, Inc.
Suite 250
1600 S.W. Fourth Avenue
Portland, Oregon 97201

AQ-73-36 P3 OF 3

*See also 12-6-73
JEP
HMP*

REPLY TO:

Suite 250
1600 S. W. Fourth
Portland, Oregon 97201

December 18, 1973

Mr. Diarmuid F. O'Scannlain
Director
Oregon Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
DEC 21 1973

OFFICE OF THE DIRECTOR

Dear Mr. O'Scannlain:

We have received your letter dated November 6, 1973 acknowledging receipt of our application for an Air Contaminate Discharge Permit, a new Waste Disposal Systems Permit and a new Solid Waste Disposal Facility Permit for the proposed Warrenton Aluminum Plant, these applications were submitted for the purpose of affording your staff an opportunity to make a preliminary review before AMAX formally requests the necessary permits.

We have also received a letter dated December 6, 1973 from Mr. E. J. Weathersbee, Administrator of the Northwest Regional Office, which lists further items of information requested by the DEQ with respect to our permit application.

First on this list is a requirement that AMAX modify the application to make it compatible with the recently adopted emissions standards for primary aluminum plants.

We are undertaking a complete review of the proposed Warrenton plant to see if it can be modified to meet the recently adopted DEQ regulations. This involves an increase in the size of our staff in Oregon and contracting with several engineering firms. Mobilization of such an effort will require several weeks, but we hope to develop a plan and undertake this emissions review before the end of January. We will know by then the scope of the work and the time required to complete the review.

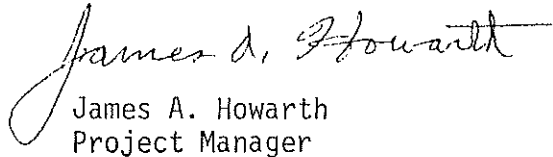
With respect to Mr. Weathersbee's second item (Environmental Impact Study) we would like to meet with you early in January to discuss the requested study. I plan to be on vacation until January 7, 1974; would it be possible to schedule a meeting on January 8, 9, or 10.

AQ-73-42 PI OF 2

We are developing a program to secure the information requested in items 3 A-0 of Mr. Weathersbee's letter. We are preparing a schedule for supplying this information and will forward it to you in January.

We will keep you advised at all stages of this work. Please let us know if a meeting concerning an Environmental Impact Study can be held in January.

Very truly yours,


James A. Howarth
Project Manager

JAH:as

January 11, 1974

Mr. James A. Howarth
AMAX Pacific Aluminum Corporation
Suite 250
1600 S.W. Fourth
Portland, Oregon 97201

Re: AMAX Aluminum Corporation
Warrenton Plant

Dear Mr. Howarth:

This will confirm our understanding of the major items of agreement reached at the meeting with AMAX representatives and Department of Environmental Quality staff on January 9, 1974:

1. AMAX will submit a detailed written response to our December 8, 1973, letter by no later than the end of January.

Specific answers will be given where possible, otherwise the company will indicate when and how the other requested information will be forthcoming.

AMAX is confident that they will be able to submit an environmental impact study report which adequately responds to areas of concern including energy usage, and product distribution. AMAX will discuss and perhaps meet with department staff to insure that the environmental impact report is prepared in a comprehensive and acceptable manner.

2. AMAX will submit, also by the end of January, a check list and "critical-path" type schedule for the significant actions the company proposes to take relative to completing and submitting its complete application including the requested supporting information.

January 11, 1974

It is important that we know what the company intends to do, and when, and when we can anticipate receiving the various requested elements of your application in relation to proposed start of construction, start of production, etc.

This is necessary in order to schedule staff participation, public hearings and to keep the public properly informed.

AMAX was concerned about legal ground rules and timetables for public hearing and procedures. It was understood that operations will be conducted within Department permit procedures. Environmental impact study information is considered necessary supplemental data to the permit application.

3. AMAX will submit a reasonable number of copies of application materials to facilitate DEQ review and the dissemination of information to environmental groups and the interested public.

It is our present belief that 12 copies should be sufficient. We would propose to supply the Southwest Air Pollution Control Authority in the State of Washington, Washington State Department of Ecology, the Oregon Environmental Council and the Clatsop Environmental Council with complete sets of all submitted materials and also to maintain complete sets at each of the DEQ offices in Portland and two sets in the Astoria Public Library.

In order to initiate the above described program, it is requested that you send us 8 additional copies of the documents submitted to date, namely: AMAX Permit Application Document, Diffusion Study Report and Proposed Sampling and Monitoring Program. Since we have not received the finally agreed on Estuary Study Plan, we need 12 copies of this document with the essential elements of the AMAX - Consultant Contract, i.e. what is to be done, when and by whom.

We would also like to have it understood by all parties involved that DEQ would receive complete copies of all final consultant's reports rather than excerpts or AMAX interpretations and have freedom to consult and coordinate with consultants, to the extent this may be practicable, during the course of their studies and report preparations.

January 11, 1974

4. DEQ will establish a Study/Evaluation team to process the AMAX application. The team leader will be Mr. John F. Kowalczyk, Assistant Administrator Northwest Region Office, Department of Environmental Quality, 1010 N. E. Couch, Portland, Oregon. ✓

AMAX technical staff contacts may be made directly with Mr. Kowalczyk. However, formal actions and legal status of your application will be based on the written record.

All AMAX correspondence (original and 3 copies) should be addressed to Diarmuid F. O'Scannlain, Director, DEQ Attention: E. J. Weathersbee, Administrator, Northwest Region and sent to 1010 N. E. Couch. DEQ responses will be sent to Mr. Jim Howarth, Project Director, Suite 250, 1600 S.W. Fourth, Portland, Until otherwise requested by AMAX.

5. It is understood that AMAX anticipates intensified activity during February and March that will require substantial DEQ staff time and that another meeting is desired by Mr. Dempsey shortly after February 6. ✓
6. AMAX will continue to actively pursue its monitoring and studies programs. DEQ will send a letter shortly to AMAX commenting on the proposed monitoring program.

The meeting was beneficial from our point of view and we appreciate AMAX's cooperative attitude. Please let me know if you have any different interpretations of the above items or wish to add or clarify other items.

Very truly yours,

DIARMUID F. O'SCANNLAIN
Director

EJW:lb

E. J. Weathersbee, Administrator
Northwest Region Office

cc: E. W. Hansen, AQC-DEQ
cc: H. M. Patterson, AQC
cc: H. L. Sawyer, WQC-DEQ
cc: W. C. Westgarth, DEQ Laboratories

NORTHWEST REGION OFFICE
1010 N. E. Couch Street
Portland, Oregon 97232

Telephone: (503) 238-8471

January 18, 1974

Mr. James A. Howarth
Project Manager
AMAX Pacific Aluminum Corporation
520 El Camino Real
San Mateo, California 94402

Re: AQ - AMAX, Warrenton
Proposed Sampling and
Monitoring Program

Dear Mr. Howarth:

The Department has completed an initial review of the sampling and monitoring program for AMAX as described in your November 13, 1973 proposal, and wishes to submit the following comments and requests for additional information:

General

The subject proposal contains references to the development phase of the monitoring program by mutual agreement between AMAX and independent contractors without mention of review and approval of these proposals by the Department. Please be advised that the details of programs are subject to review and approval by the Department, preferably at an early stage of development so as to avoid unnecessary delays in the implementation of an approved monitoring program.

Future evaluations of the AMAX plant's impact on air quality and the environment will require access to meteorological data representative of the plant site, including wind speed and direction data. It is anticipated that the data will be available to the Department from the Clatsop County Airport weather station, however, it is requested that AMAX install a meteorological station to give data representative of the plant site.

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Mr. James A. Howarth
January 18, 1974
Page 2

Insufficient information is presented in the proposal relative to the ambient air, vegetation, livestock, soil and water sampling phases to allow comment on the specifics of these sections of the proposal at this time. It will be necessary to have the details of the pre-plant survey submitted to the Department by mid-March of 1974. This would allow sufficient time for review of specific proposals and the implementation of the pre-plant surveys to insure that two complete years of data are available prior to plant start-up. The vegetation, livestock, ambient air, water and soil sampling pre-plant surveys should be implemented by April 1, 1974 with the first submission to the Department of data developed from these programs in June, 1974.

Stack Sampling

Since EPA Method 13, is still in the process of development and in its present form will not measure gaseous and particulate fluorides, the Department requests that you submit for review and approval a detailed description of the source sampling and analytical methods to be used for determining gaseous and particulate fluoride emissions. It is also requested that you submit the proposed pot room operating schedule to assist in evaluating your source sampling schedule.

With reference to the proposed frequency of source testing the primary dry collection and the secondary wet collection system stacks, the Department finds that the proposed minimum sampling duration of four hours should be extended to a minimum of eight hours to correspond with anticipated pot room operating cycles. A sampling period of 24 hours may eventually be required by this Department. A minimum of three complete related sets of data per month from the carbon plant, primary and secondary collection system will be required by current regulations. These samples should be taken on a pre-scheduled, statistically unbiased basis. The schedule should be filed with the Department prior to the effective period of the schedule. Deviations from the schedule will require notification of the Department.

Sampling of six of the 80 stacks included in the secondary wet collection system should be conducted by random selection of the six stacks to be sampled each month and should insure that all 80 stacks are sampled within 18 months after plant start-up.

Sulfur dioxide sampling of the primary dry and secondary treatment systems and the anode baking furnace should follow the approved schedule. One sample per month from each of the sulfur dioxide sources appears acceptable at this time. In addition, the sulfur content of coke and anode carbon should be determined on a monthly basis and that of coke no less frequently than with each new shipment of coke. These results should be submitted on a monthly basis.

The carbon monoxide sampling proposal employing a portable analyzer is acceptable to the Department if it follows the sampling schedule noted above for particulate and gaseous fluorides.

Ambient Air Sampling

As indicated above, insufficient information is presented in the proposals to allow comment in depth. The Department requests that detailed information on the following be submitted by March 15, 1974 for review and approval:

1. The number and locations (indicated on a map) of ambient air stations.
2. Proposed sampling schedules and methods of sampling and analysis.
3. A listing of air contaminants to be measured at each site.
4. Technical justification for the location of each site.
5. The specific formats for reporting air quality data.

As required by OAR, Chapter 340, Division 2, Section 25-285(1)(a) your proposal must include fluoride sampling by the calcium formate ("lined") paper method. Specifics of this phase of the sampling program should be developed and submitted to the Department. Sampling for both gaseous and particulate fluorides utilizing the bicarbonate tube followed by an in-line filter is requested rather than just gaseous fluoride sampling described in your proposal. The Department is investigating the acceptability of other methods, primarily the dual tape sampler.

Mr. James Howarth
January 18, 1974
Page 4

Vegetation Sampling

The Department requests that you submit further details of the vegetation sampling program indicating specific areas to be included in the survey, number of samples to be taken indicated by type of vegetation and technical justification for selection of both the areas and species to be surveyed.

Livestock Sampling

Details of the livestock sampling program including the anticipated number and type of samples to be obtained, expected locations from which the samples are to be collected and the justification for selection of these areas should be submitted to the Department. In the event that AMAX is not able to gain the cooperation of local farmers to participate in the livestock program, an alternative program should be developed by AMAX (and submitted to the Department) to insure that adequate data is obtained.

Soil and Water Sampling

The Department requests that specific locations, sampling schedules, data to be collected and justifications for the proposed soil and water sampling programs be submitted for review and approval.

The Department wishes to indicate its concern that the pre-plant survey be developed and implemented in sufficient time to insure that the program is operative by April 1, 1974 so that data will be available for at least two complete growing cycles prior to plant operations. It is therefore requested that the above information be submitted prior to March 15, 1974. Your submission should include a tentative timetable for implementation of the monitoring programs.

If you have any questions in these matters please feel free to contact this office.

Very truly yours,

DIARMUID F. O'SCANNLAIN
Director

JEC:cs
cc: AMAX, Portland
Mr. F. A. Skirvin
Mr. H. M. Patterson
Mr. R. L. Gay

E. J. Weathersbee, Administrator
Northwest Region Office

AQ-74-7 P 4 OF 4

REPLY TO:

Circle 250
1000 S. W. Fourth
Portland, Oregon 97201

February 1, 1974

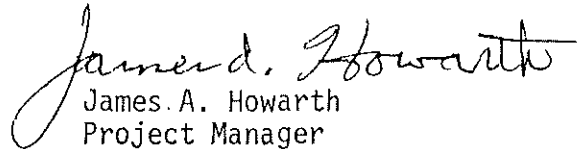
Mr. Diarmuid F. O'Scannlain
Director
Oregon Department of Environmental Quality

Attn: Mr. E. J. Weathersbee
Administrator North West Region
1010 N. E. Couch Street
Portland, Oregon 97232

Dear Mr. Weathersbee:

Pursuant to our meeting with Department of Environmental
Quality Staff on January 9, 1974, AMAX attaches the following
in response to your letter of December 6, 1973.

Very truly yours,


James A. Howarth
Project Manager

JAH:as

enc.

Response to letter from the Department of Environmental Quality to AMAX Pacific Aluminum Corporation of December 6, 1973.

This response will follow the format of the DEQ letter and reply to the requested information as listed.

1. MODIFICATION OF AMAX'S PERMIT APPLICATIONS

The AMAX review of the proposed Warrenton plant to determine if this plant can meet the recently adopted DEQ regulations (letter of December 18, 1973, J. Howarth to Diarmuid F. O'Scannlain) is not yet complete. The investigations listed under item 3(d) of this response represent the current scope of this review.

Should this review indicate compliance with the standards, revision of permit applications will commence immediately.

Current projected schedule for such revision is included in the overall AMAX schedule attached to this response.

2. ENVIRONMENTAL IMPACT STUDY REPORT

AMAX is confident that the completion of their Environmental Impact Assessment of the Warrenton Project will adequately respond to all areas of DEQ concern.

Included as an attachment is an index outline of the AMAX Environmental Impact Assessment.

When additional and final input is included in the existing assessment report AMAX staff will be pleased to meet with DEQ staff to insure that this report is prepared in a comprehensive and acceptable manner.

3(a) SOLID WASTE

AMAX does not plan a solid waste disposal area. As stated in the permit application the current study on solid waste disposal in Clatsop and Tillamook Counties should present a waste disposal program for these Counties acceptable to local and state regulatory agencies. AMAX staff will request a meeting with the DEQ staff on this matter.

3(b) ANALYSIS OF WARRENTON SEWERAGE SYSTEM

Mr. Carl Green, of Carl E. Green and Associates, Consulting Engineers and Planners, Consultant to the City of Warrenton, who was the Engineering Consultant for the Warrenton Sewer System, will prepare for AMAX, an analysis of the existing Warrenton System and of the systems capability to serve the AMAX plant and area growth generated by the AMAX plant.

Mr. Green's report, which will be forwarded to the DEQ, is expected to be available March 4, 1974.

3(c) STORM WATER RUNOFF

This requirement for specific information will be addressed in the requested submission of an NPDES Application covering the proposed discharge from the plant stormwater system.

With respect to the NPDES Application AMAX will require consultation with DEQ staff concerning the appropriate completion of the application.

3(d) BACK-UP DATA

With regard to required back-up data and data sources used to develop the Warrenton plant's projected emissions, AMAX is currently investigating and compiling data to cover the following emissions control facilities:

1. Cell emission - Total fluoride emissions per ton of aluminum produced at the cell. This emission is the base for projected fluoride emissions from primary and secondary control facilities.
2. Capture efficiency - reflects the efficiency of the cell hooding installation, under normal operating conditions, to capture cell emission to the primary control facility.
3. Primary Control efficiency - reflects the operating efficiency for emission control at the primary dry scrubbing control facility.
4. Secondary Control efficiency - reflects efficiencies of the water scrubbing of potroom air changes at the secondary control facility.
5. Bake Oven Control efficiency - reflects the operating efficiencies of the dry scrubbing of exhaust emission at the Bake Ovens.
6. Cast House - reflects the metal furnaces' stacks emission at the Cast House in conjunction with use of external diffuser degassing during molten metal transfer.

The following indicates the present status of these investigations and projects the current timetable for final compilation and presentation of data.

1. Cell Emission - Kaiser Aluminum and Chemical is compiling test and operating data on the Warrenton design cell to substantiate the cell fluoride emission base used in projecting fluoride emission from the Warrenton plant. This data can be available for presentation by March 11, 1974.
2. Capture efficiency - This data is not normally readily available. However, the NZAS - BLUFF plant in New Zealand operating with Warrenton type cells and cell hooding has operating data

on capture efficiency. AMAX is presently endeavoring to obtain the data history from this operation.

The data package on this item is expected to be available by April 8, 1974.

3. Primary Control efficiency - Operating test data from the Ravenswood plant of Kaiser Aluminum and Chemical will provide back-up data to substantiate the projected efficiency of the emission control system.

Data will be available by March 18, 1974.

4. Secondary Control efficiency - Demonstrable back-up data from a secondary wet scrubber operation treating potroom air exchange with a contaminant concentration as dilute as those projected for the Warrenton plant are not available. An aluminum reduction plant operating with the total proposed Warrenton potline emission control system and projected emissions does not exist.

A current test monitoring program at Intalco will provide operating efficiency data on their wet scrubber treatment of air flow of higher contaminant concentration.

A bridge between Intalco data and projected Warrenton wet scrubber operation may be theoretical in context.

This data will be available April 1, 1974.

5. Bake Oven Control efficiency - Operating data on this installation is available only from the pilot operation of its equipment at the Tacoma plant of Kaiser Aluminum and Chemical.

This back-up data can be submitted at March 11, 1974.

6. Cast House - Back-up data will consist of copies of patent, Intalco report, and results of stack emission measurements performed at Intalco by an independent testing company.

This test data will not be available before March 25, 1974.

3(e) SEASONAL FLUCTUATIONS

AMAX does not project seasonal fluctuations in opacity and mass emissions from any emission points.

An exception to this projection concerns only emissions saturated with water vapor; Secondary Scrubber System; such emissions will normally not be visible. However, on a season basis, when the ambient humidity is above 90%, the water vapor in the plumes may condense into small droplets that will cause the plume to be visible for perhaps one hundred feet above the roof openings on the potline buildings.

3(f) MONITORING

AMAX has met with Oregon State University concerning pre and post plant survey program and monitoring of vegetation, livestock, soil and water. OSU will submit a proposal to AMAX in mid-February. Subsequent to further discussions with OSU, AMAX will review this program with DEQ staff through to ultimate Department approval.

With regard to detailed proposals on stack sampling at the plant and to ambient air monitoring AMAX will shortly request a meeting with DEQ staff to discuss these subjects.

3(g) CAST HOUSE EMISSIONS

The Cast House operations of the AMAX reduction plant in Warrenton does not include gaseous fluxing of molten aluminum in the holding furnaces.

At the Warrenton plant molten aluminum will only be fluxed by the continuous injection of finely divided bubbles of nitrogen - chlorine mixture during the actual metal casting operation.

The generation of particulate through holding furnace stacks from this fluxing operation has consistently produced emissions of less than 10% opacity or 0.5 on the Ringelmann Chart.

As noted under (d) above further data on this procedure will be submitted.

3(h) ALUMINA HANDLING

Detailed plans and specifications of alumina handling, storage, and transportation facilities at the Port of Astoria will not be available for several months. However, general plans and criteria and specific details on emission control devices will be available in April 1974.

Details on alumina transport facilities are expected to be available in April 1974.

3(i) RECLAIM

At the present time AMAX staff have not commenced an evaluation of the reclaim and/or recycle of sludge cake or of that portion of dross presently designated for landfill disposal. Investigations will be scheduled to conform to the overall schedule.

3(j-o) CRAMER REPORT

These items have been referred to H. E. Cramer of H. E. Cramer Company, Inc.

Mr. Cramer's responses to these items will be available for submission to the DEQ by February 15, 1974.

ENVIRONMENTAL IMPACT ASSESSMENT

- I. SUMMARY
- II. INTRODUCTION AND PERSPECTIVE
- III. PROJECT BACKGROUND
 - A. Action proposed
 - B. What will the plant
 - 1. Basic process
 - 2. Recent improvements
 - C. Why located in Warrenton
 - D. What about the aluminum business
 - 1. Supply-demand balance and pricing
 - 2. Demand
 - 3. Supply
 - 4. Long-range United States outlook
- IV. THE PHYSICAL PROJECT
 - A. General arrangement
 - B. Required facility development - plant
 - C. Required facility development - dock
 - D. Required traffic pattern
 - E. Processes
 - F. Raw materials - chemicals used
 - G. Process residuals
 - 1. Emission to the air
 - 2. Solid waste
 - 3. Liquid waste
 - 4. Noise
 - 5. Heat
 - H. General timetable
- V. EXISTING ENVIRONMENTAL SETTING
 - A. Existing natural factors
 - 1. Physiography and structures
 - 2. Water regimen
 - 3. Climate
 - 4. Meterology
 - 5. The biotic community
 - 6. The Columbia River Estuary
 - 7. Costal salt marshes
 - 8. The open coast sandy beach community
 - 9. The Shore Pine Community
 - 10. Mixed Conifer-Trailing Blackberry Communities
 - 11. Western Hemlock/Douglas Fir Community

12. The true Fir Community
13. Inland Marsh Community
14. The Eelgrass Flat Community
15. Coastal, Island and Reef Community

B. Existing and Planned Man-Made features

1. Community values
2. Community character
3. Population characteristics
4. Regional land use
5. Residential
6. Commercial land use
7. Industrial land use
8. Agricultural land use
9. Conservation
10. Land use - immediate vicinity

C. Community Facilities

1. Education
2. Recreation
3. Libraries
4. Hospitals
5. County Civic, administrative and institutional facilities
6. Cultural and Historic facilities
7. Public safety
8. County welfare

D. Utility Systems

1. Water
2. Sewage
3. Solid Waste Disposal
4. Electrical Power
5. Natural Gas
6. Communications
7. Transportation Systems
8. Streets, arterials and highways
9. Public transit
10. Railroads
11. Airport
12. Marine

E. Economy

1. Employment
2. Income levels
3. Value of economy
4. Property values

F. Local Government

1. Clatsop County
2. Port of Astoria
3. City of Astoria
4. City of Warrenton

- G. Citizen participation and organizations
 - 1. Clatsop County
 - 2. Astoria
 - 3. Warrenton

- H. Capital Improvements
 - 1. Clatsop County
 - 2. Astoria

VI. IMPACT ANALYSIS PROCEDURE

- A. National Environmental Policy Act of 1969
- B. Assessment approach
- C. Method of impact analysis
 - 1. Impact classification
- D. Subjectivity of impact analysis
- E. Components of the Warrenton impact analysis

VII. IMPACTS - CONSTRUCTION PERIOD

- A. Summary
 - 1. Natural systems
 - 2. Man-made systems
- B. Additional interpretive comments
 - 1. Geology, soil and groundwater
 - 2. Temporary population influx and land use
 - 3. Community facilities
 - 4. Utilities
 - 5. Transportation
 - 6. Economic
 - 7. Local government

VIII. IMPACTS - OPERATING PERIOD

- A. Summary
 - 1. Natural systems
 - 2. Man-made systems
- B. Additional interpretive Comments - Natural systems
 - 1. Geology
 - 2. Climate, Meteorology and air quality
 - 3. Water Regiman
 - 4. Groundwater
 - 5. Water sheds
 - 6. Columbia River
 - 7. Biotic Community
 - 8. Forestry, wildlife, and agriculture

- C. Additional interpretive comments - Man-made systems
 - 1. Community values
 - 2. Population
 - 3. Land use - Probable Development Pattern
 - a. Residential
 - b. Commercial
 - c. Industrial
 - d. Other
 - e. Impact upon the region
 - 4. AMAX employment objectives
 - 5. Land use - Immediate plant vicinity
 - 6. Land use - Summary of Impacts
 - a. Positive
 - b. Adverse
 - 7. Community facilities
 - a. Schools
 - b. Parks
 - c. Libraries
 - d. Hospitals
 - e. Civic, cultural, historic
 - 8. Utilities
 - a. Water
 - b. Sewer
 - c. Solid Waste
 - d. Electricity
 - e. Natural Gas
 - f. Communications
 - 9. Transportation Systems
 - a. Streets and highways
 - b. Public transit
 - c. Railroads
 - d. Airports
 - 10. Economic
 - 11. Local Government
 - 12. Awareness of Impacts
 - a. Public issues - negative
 - b. Public issues - positive
 - c. Citizens' awareness

IX. RELATED IMPACTS - PORT

- A. Port impact assessment
- B. Discussion

X. IMPACT BALANCING

- A. Summary
- B. Value balancing method
- C. Numerical value results
- D. Port impact values
 - 1. Increased traffic
 - 2. Potential alumina spillage and dusting
 - 3. Dredging and filling
 - 4. Aesthetics of Port
 - 5. Economic necessity

XI. UNAVOIDABLE EFFECTS

- A. Approach
- B. Discussion of primary - direct impacts
 - 1. Natural systems
 - 2. Meteorology
 - 3. Visible emissions
 - 4. Biotic community
 - 5. Use of energy
 - 6. Man-made systems
 - a. Population
 - b. Land use
 - c. Traffic
 - d. Economic
- C. Specific discussion - Secondary indirect effects

XII. ALTERNATIVES

- A. Purpose
- B. The Siting Decision
 - 1. Criteria for siting
 - 2. Selection of Warrenton
- C. Location of Power Contract
- D. Delay construction
 - 1. Advantages
 - 2. Disadvantages
- E. Do not build plant
- F. Process alternatives
 - 1. Basic process
 - 2. Selection of Warrenton process
 - 3. Siting of Warrenton plant

4. Power availability
5. Economics
6. Emission controls
7. Choice of fuel
 - a. Natural gas
 - b. Light oil
 - c. Heavy oil
 - d. Electricity
 - e. Propane
8. Water supply alternatives
 - a. Availability
 - b. Quality
 - c. Cost
 - d. Environmental Impact
9. Sewer alternatives
10. Transportation alternatives
 - a. Criteria
11. Effluent discharge alternatives
 - a. Criteria
12. Environmental/process evolution
- G. Alternatives to unavoidable primary effects
- H. Alternatives to unavoidable secondary effects
- I. Industry Replacement
 1. Use of resources
 2. Environment
 3. The alternative

XIII. SHORT TERM/LONG TERM PRODUCTIVITY

- A. Definition
- B. Short term implications
 1. Productivity factors
 2. Unavoidable effects
 3. Favorable and unfavorable trade off
- C. Long term implications

XIV. IRREVERSIBLE COMMITMENTS

XV. CONSULTATION

XVI. RESEARCH NEEDS

- A. Introduction
- B. Socio-Economic research needs
- C. Governmental research needs
- D. Energy research needs
- E. Water resources needs
- F. Biotic resources needs
- G. Industrial technology needs

PLANNING & PROGRESS CHART - OREGON

January 31, 1974

	JANUARY				FEBRUARY				MARCH				APRIL				MAY				JUNE				
	7	14	21	28	4	11	18	25	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24
Dr. Cramer reply to DEQ of 12/6/73					★																				
<u>Documentation</u>																									
Cell emissions									★																
Hooding efficiency															★										
Primary control efficiency											★														
Secondary control efficiency													★												
Carbon baking control efficiency									★																
Casthouse emissions												★													
Emissions Summary																★									
Diffusion model																				★					
Monitoring Program													★												
NPDES											★														
Port general arrangement																				★					
Port emission control													★												
Environmental Impact Assessment																				★					
Sewerage Study								★																	
Solid Waste and reclaim																									★ To be Scheduled
Permit Application																									★



ENVIRONMENTAL QUALITY COMMISSION

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MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F, March 22, 1974 EQC Meeting

Proposed Construction of a New Swimming Pool at the
Tillamook House Condominium Structure, Clatsop County

Background

The present Tillamook House condominium structure is located on the site of the old Gearhart Hotel. The site is located within the area that is affected by the Environmental Quality Commission's Resolution Regarding the Beach Area North of Seaside, in Clatsop County that was adopted on April 24, 1970. As a matter of record, this resolution affects all proposed development within the areas formed by the Columbia River on the north, the Pacific Ocean on the west, the City of Seaside on the south, and the foothills which run north and south immediately east of Highway 101. The Resolution, in essence, provides that further high density development will not be allowed using subsurface sewage disposal systems until a regional sewerage plan for the area is developed and adopted for implementation. Presently, a regional sewerage study is underway in this area with funds made available from the State Pollution Control Bonds through the Department of Environmental Quality.

The replacement of the old Gearhart Hotel with a more modern complex was approved at the September, 1971 meeting of the Environmental Quality Commission. The reason for the Commission's involvement at that time was to determine if replacing the existing hotel with a new development would compromise the Clatsop Plains Resolution that was adopted on April 24, 1970. It was the Commission's judgement that allowing a new development to replace an existing structure would not compromise the Resolution as long as the projected sewage flow from any new development would not be greater than the sewage flow from the existing structure. With that in mind, engineering studies were conducted to determine what the sewage flow was from the existing Gearhart Hotel. As a result of these studies, it was determined

Kessler R. Cannon
Director



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that the existing Gearhart Hotel had a sewage flow equivalent to 20,823 gallons per day. From this, approval was granted for the development of a new complex to replace the hotel that would have a projected sewage flow of not greater than 20,823 gallons per day.

Development proposals were submitted and approved for the construction of the following complex to replace the existing hotel:

1. Tillamook House Condominium structure:
 - a. 96 condominium units having a total of 145 bedrooms.
2. Golf Course and Convention Center Structure
 - a. Restaurant and bar - 97 seats
 - b. Club House - 144 persons per day
 - c. Banquet facility - 498 seating capacity

In addition, the existing septic tanks and drainfield lines which were serving the old hotel were abandoned and replaced with a new subsurface sewage disposal system. This new system was relocated to a more ideal site on the golf course further away from the beach and is comprised of the following:

1. An 18,700 gallon septic tank
2. 4,400 lineal feet of disposal trenches

The design criteria for this new system was approved by the Oregon State Health Division and the actual installation was approved by the Clatsop County Health Department.

To date, only the Tillamook House Condominium structure has been built. The Convention Center building construction has not yet begun.

Proposals for Constructing a New Swimming Pool
at Gearhart Condominium Complex

During the month of October, 1973, representatives of Gearhart Condominium Management, Inc. contacted the Clatsop County Health Department to obtain a building permit for the installation of a new swimming pool. It is our understanding that a swimming pool is needed to make the overall project more attractive. Discussions on this matter were held between the staff of the Clatsop County Health Department and

representatives of the Department of Environmental Quality. It was indicated that by allowing the construction of a new swimming pool with sanitary facilities located at poolside would compromise both the Clatsop Plains Resolution and the maximum allowable sewage flows that could be generated from the Gearhart Condominium complex that was established by the Environmental Quality Commission at their September, 1971 meeting. As a result of these discussions, the Clatsop County Health Department replied to Gearhart Condominium Management, Inc., that they could not approve a building permit for a new swimming pool at the complex which would be served by subsurface sewage disposal facilities. The Department was also made aware during this period, through a letter from Dr. Berg (who is an owner of one of the condominium units), that there is some opposition to the construction of the swimming pool at the proposed location.

On January 17, 1974, representatives of Gearhart Condominium Management, Inc. met with the staff of the DEQ Northwest Region Office to discuss the situation and seek possible alternatives. At this meeting, the developers indicated that they had been in contact with the Oregon State Health Division regarding the necessity of locating sanitary facilities at the proposed new swimming pool. The State Health Division indicated that they would not require any sanitary facilities to be located at the pool provided that the pool is located so that it is within 1,000 feet of all condominium units. This, in fact, would eliminate any sewage flow being generated from the pool area itself except for a backwash operation. However, the staff was concerned over additional quantities of wastewater that would be generated away from the swimming pool assuming that people generally shower before and after using the swimming pool facilities. It was the staff's opinion that the addition of a swimming pool at this complex would significantly increase the use of shower facilities, thereby potentially increasing the daily sewage flow beyond the 20,823 gallons per day as established by the Environmental Quality Commission.

On February 4, 1974, Gearhart Condominium Management, Inc. submitted a revised proposal to modify the construction plans of the Convention Center building by reducing the banquet facility in size from the 498 seating capacity to a more modest facility so as not to increase the projected sewage flows from the condominium complex should the construction of a swimming pool be authorized.

Discussions with the State Health Division have revealed that the waste water discharge from the backwash cycle of the swimming pool can be completely eliminated by the installation of a separation tank in conjunction with a dacron fiber filter bag. With this type of arrangement, the swimming pool backwash water could be recycled directly back into the swimming pool.

Considering this, the staff has determined that the addition of a swimming pool with no sanitary facilities located at the pool would potentially increase the daily sewage flow by approximately 750 gallons per day that would be generated through the increased use of shower facilities in the adjacent living units.

Referring back to the previously approved banquet facility with a seating capacity of 498 persons, it has the potential of generating a total of 2,988 gallons of sewage flow per day. If the banquet facility were reduced in size to a seating capacity of 373 persons, then the potential sewage flow from this facility would be reduced 750 gallons per day. If this were done, then the addition of a swimming pool may be installed without any significant change in the maximum sewage flow established by the Commission of 20,823 gallons per day.

Staff Recommendation:

The staff feels that this proposal is a reasonable approach to resolving the situation of allowing the pool construction without compromising the Clatsop Plains Resolution. If the swimming pool is located within 1,000 feet of all condominium units, then sanitary facilities would not be required at the pool. If (a) the seating capacity of the banquet facility is reduced to a maximum of 373 persons; (b) the swimming pool is installed with no sanitary facilities located at the pool; and (c) the backwash operation is recycled back into the swimming pool; then there would be no significant change in previously approved sewage flows and the pool could be installed without compromising the Clatsop Plains Resolution.

Director's Recommendation:

It is the Director's recommendation that approval be given to install the proposed swimming pool facility subject to the following conditions:

1. No additional sanitary facilities would be constructed.
2. Construction of the swimming pool without poolside sanitary facilities is approved by the Oregon State Health Division.
3. Water generated from the backwash operation be recycled back into the pool.
4. Any future banquet facility that might be constructed would be limited to a maximum seating capacity of 373 persons.



KESSLER R. CANNON
Director



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MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. FF, March 22, 1974, EQC Meeting

Variance Request Damascus - Union School, District No. 26

Background

Damascus Union School District No. 26 is located in Clackamas County and serves the City of Damascus and surrounding area which is primarily residential-agricultural. Due to a rapidly increasing student enrollment the District has found it necessary to construct a new school. On June 5, 1973, a bond levy for a new school was passed and a new school site was purchased on Deep Creek Road, one and one-half (1-1/2) miles east/southeast of Damascus. The new site covers 20 acres and contains approximately 2,200 filbert trees.

Due to exorbitant land clearing and hauling costs which are described in the attached letter from the District, school officials sought assistance from the Oregon National Guard and were able to have the land cleared for a nominal cost.

Following the land clearing operation, the District is faced with the disposal of the 2,200 filbert trees which have been piled on the property. Again faced with high costs for removal, the District has requested a variance from OAR, Chapter 340, Section 28-020, to allow for the open burning of the filbert trees.

Analysis

The open burning site is on property located approximately one and one-half (1-1/2) miles east/southeast of Damascus on Deep Creek Road. The area immediately adjacent to said property presently consists of approximately 750 acres of farm land containing 19 houses located on Deep Creek Road within 1,000 yards of the site. No homes lie east, northeast, or southeast of the site for a considerable distance.

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—
Kessler R. Cannon
Director



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The debris to be burned consists of approximately 2,200 filbert trees which have been wind rowed on the property.

According to the District, costs of other alternatives of disposal, such as chipping and haulaway, are prohibited.

Conclusions

1. According to the Damascus - Union School District No. 26, funds are not available to finance the disposal of filbert trees other than by open burning.
2. Because of the location of the proposed site which is in an area of low population density, it is judged that the material could be open burned provided proper precautions are taken, without causing significant air pollution problems.
3. Open burning appears to be the only economically feasible means of disposal for the school district.
4. The Boring Rural Fire Protection District has recommended the variance be granted with burning to occur during the spring burn period.
5. The granting of this variance by the Environmental Quality Commission would be allowable in accordance with Oregon Revised Statutes 449.810 (1) which authorizes the Environmental Quality Commission to grant specific variances of any rule, upon such condition it may deem necessary if it finds strict compliance with such rule is inappropriate because of conditions beyond the control of persons granted such variances.

Director's Recommendation

It is recommended that this variance request be approved under the following conditions:

1. Disposal shall be completed during the spring open burning period of April 12, 1974, through May 19, 1974.
2. Material to be burned must be removed of excess earth in order to enhance combustion.

3. Ignition of fires may be allowed only on those days classified as "burn days" by the State Fire Marshall's Office and the Department of Environmental Quality.
4. All burning must comply with local fire department regulations.
5. The burning of rubber, plastics, or materials likely to generate obnoxious odors and/or excessive smoke are prohibited.
6. The school district shall advise the Department each day fires are ignited. Should the open burning and adverse meteorological conditions result in nuisance conditions, burning shall be terminated.

A handwritten signature in cursive script, appearing to read "Kessler R. Cannon".

KESSLER R. CANNON

3/13/74

Attachment

Vernon L. Lang, Superintendent-Principal
Joseph A. Bucher, Vice Principal

Sandra Rollins, Sec.
Edie Adams, Deput.

REG
TR
EJW

March 6, 1974

Mr. E. J. Weathersbee
Regional Administrator
Columbia-Willamette Region
1010 N. E. Couch
Portland, Oregon 97232

Can we accommodate these
people during upcoming open
period?
Re-file of burn plan on 5-top

Dear Mr. Weathersbee:

The Damascus Union School District #26 requests variance be granted to the school district for the burning of approximately 2,200 filbert trees on the new school site. The twenty acre site purchased by the school district is located about one-half mile south of Highway 212, on Deep Creek Road. Variance was granted last fall, 1973, during the October-November burning period. As you are well aware it was impossible to burn during that period because of the inclement weather which set record rainfall levels for the area.

The district sought help in clearing the land from the Oregon National Guard, Lake Oswego Engineer Battalion. Estimates for clearing and hauling from Bob's Excavating and Loren Obrist Excavating ranged from \$15,000.00 to as high as \$67,000.00, which in the latter case would be in excess of the land purchase price. The Oregon National Guard rendered their services in September of 1973, which enabled the school district to have the land cleared at a nominal cost.

To reiterate some of the problems that are facing the Damascus School District, the following information will be of help in making your important decision:

1. The enrollment at Damascus Grade School is now past capacity. The 1971-72 school year experienced a 28.9% increase in student enrollment. The 1972-73 school year ended with a 20% increase, an enrollment of 660 students. If predictions hold true with another 20% increase, we will be housing approximately 790 students in a building designed for 500.

The Damascus Union School Board in the December meeting also approved a Year-Round School plan that will aid the school district in its search for sustaining its educational endeavor, while coping with the influx of students.

RECEIVED

MAR 08 1974

DEPARTMENT OF ENVIRONMENTAL QUALITY

agreed to the...
Revised 11/11/73

Mr. E. J. Weathersbee

Page 2

March 6, 1974

2. Lack of funds: The Damascus Union School District is almost entirely supported by the local homeowner, the exception being small businesses.

The bond levy for the new school was approved by the voters on the first election, June 5, 1973, which shows the local support by the taxpayers, but the tremendous need acknowledged by the taxpayers in a time when most other school budgets are being defeated.

The bid opening for the new school will take place March 26, 1974, and construction will proceed at the earliest possible time.

We appreciate your consideration of this matter.

Sincerely,



Joseph A. Bucher, Jr.

Vice-Principal

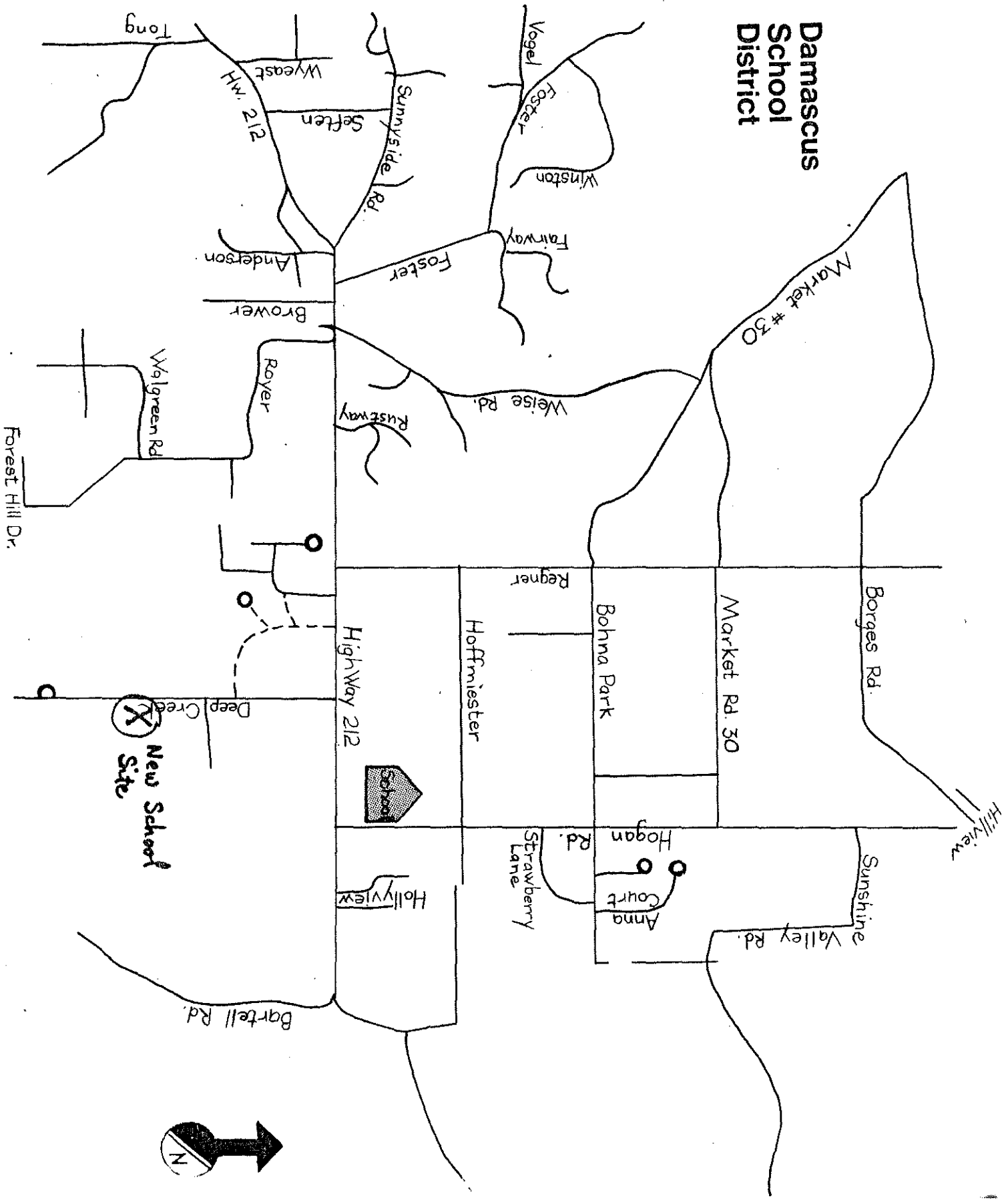
DAMASCUS UNION SCHOOL DISTRICT #26

JAB:sr

agreed to the conditions

Page 11 of 12

Damascus School District





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MEMORANDUM

To : Environmental Quality Commission
From : Thomas Guilbert, Hearings Officer
Subject: Agenda Item No. G, March 22, 1974 EQC Meeting
Proposed Noise Control Regulations

Kessler R. Cannon
Director

Background

Chapter 452, Oregon Laws 1971, now codified as ORS Ch. 467, directs the Environmental Quality Commission to "investigate and, after appropriate public notice and hearing, establish maximum permissible levels of noise emission for each category [of noise emission sources], as measured by units of perceived noise, in decibels . . ." In the fall of 1973, the Air Quality Control Division proposed rules establishing maximum permissible levels of noise emission for various categories of sources, and held hearings on the rules throughout the state. From testimony received at those hearings, it became evident that the rules needed to be revised. Revised proposed rules were completed in early February, and hearings thereon were held in Portland on 4 March and in Medford on 7 March 1974.

Summary of Testimony

A. Procedural questions: Many witnesses addressed themselves less to the substantive provisions of the proposed rules than to their philosophy, the mode by which they were written and, especially, the time schedule in which the rules were distributed and hearings held.

John Coleman, representing the Pacific Northwest Four-wheel Drive Association, in Portland, Darryl Carper, of the Pacific Northwest Four-wheel Drive Association, in Portland, Martin Craine,



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representing the Southern Oregon Timber Industries, in Medford, Tom L. Davis, representing The Towmotor Corporation, in Portland, Roger Emmons, representing the Oregon Sanitary Service Institute, in Portland, Gene Hopkins, representing the Medford Chamber of Commerce, in Medford, David Klick, representing Northwest Food Processors, in Portland, State Senator L. W. Newbry, in Medford, Robert F. O'Neil, representing a snowmobile club, in Medford, Don Page, representing the Pacific Northwest Four-wheel Drive Association, in written testimony, K. L. Patrick, representing the Oregon members of the Western Wood Products Association, in Portland, Paul C. Paulson, representing himself, in Portland, Bruce Scharen, representing International Paper Company, in Portland, Ed Sims, representing Cascade Inboard Racing Association, in Portland, Dick Tuttle, representing Georgia-Pacific, in Portland, and Chuck Willcox, representing Santiam Four-wheel Drive Association, in Portland, all objected to either the length of time between receipt of the proposed rules and the scheduled hearing, or to the number of copies of the proposed rules sent out by the DEQ, or both.

Martin Craine, Roger Emmons, Tyrell P. Hart, representing a motorcycle riders' association, in Medford, Ben Heald, representing Sanderson Safety Supply, in Portland, C. M. Helfrich, chairman of the Economic Development Committee of the Medford Chamber of Commerce, in Medford, Gene Hopkins, David Klick, S. V. McQueen, a veneer manufacturer in Medford, in Medford, State Senator L. W. Newbry, K. L. Patrick, Bruce Scharen, Walt Sewell, of Cascade Wood Products, in Medford, Joe M. Smith, safety director of Medford Corporation, in Medford, Dick Tuttle, and Carleton A. Wold, representing Boise Cascade, in Portland, all recommended postponement of adoption of the rules -- the usual request being for 90 days -- and establishment of an industrial advisory committee to work with the DEQ staff on possible revision of the rules during that period. No suggestion was made by any person other than Mr. Hart that any representative of any group other than in industry serve on such an advisory committee.

Fran Ariniello, representing herself, in Portland, S. C. Bates, representing himself, in Medford, Barbara Dierker of Ashland, representing herself, in Medford, and Edward Mitchell of Milwaukie, representing himself, in Portland, all opposed delaying any longer enactment of noise regulations. Mrs. Ariniello specifically requested that we not await action by the Federal Government before proceeding; Mr. Bates sees the advisory committee proposal as a stalling procedure; Ms. Dierker requests that an industrial advisory committee not delay implementation of motor vehicle segments of the proposed regulations; and Mr. Mitchell suggested that any unpreparedness of industry to respond to the proposed rules is self-imposed, and does not warrant a postponement.

W. M. Peters of Medford, representing himself, objected in Medford to any regulations at all. If DEQ persists in issuing regulations, he

wants them written in laymen's language. Bernard Young, also testifying in Medford, requested DEQ to try to simplify the regulations

Fran Ariniello noted that it appeared that the taxes she pays to support the DEQ end up fighting the taxes she spends to support the State Highway Division.

S. C. Bates wants references in the rules to studies justifying various levels of noise.

B. Much of the testimony received could not be related to specific sections of the proposed rules. David B. Charlton, representing himself and the Southwest Hills Residential League, noted that there is lax enforcement of present anti-noise laws, and suggested that as a start, DEQ enforce the fitting of proper mufflers, perhaps by instituting a compliance schedule. Ray W. Murphy, representing the Freightliner Corporation, also testified in Portland that the regulatory program should begin with stronger enforcement against violations of existing regulations. Gary M. Carlson, representing the League of Oregon Cities, Martin Craine, and Barbara Dierker also raised the question of how DEQ intended to enforce the proposed rules. Edward Mitchell questioned how to differentiate offending sources where there is a complex noise pattern. Michael Harrington, representing Boise-Cascade, in Portland, Ben Heald, and Carlton A. Wold also saw enforcement problems with a regulatory scheme based on ambient noise levels rather than the control of specific sources.

There was sharp disagreement among those testifying as to whether the regulations should establish standards of ambient noise at a level to protect health or at a level to minimize annoyance. [ORS 467.010 directs the Environmental Quality Commission "to adopt reasonable state-wide standards . . . to provide protection of the health, safety, and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions."] Richard L. Croly, an audiologist representing himself, in Medford, testified that the 55 dBA level set for industry is excessively low to protect health. Questioned by the hearings officer as to whether 55 dBA may nonetheless cause considerable annoyance and disturb sleep, speech, and other activities, Mr. Croly opined that annoyance levels to various types of sound is too subjective to form the basis for legal regulation. Barbara Dierker testified extensively on her belief that the regulations should protect intellectual and emotional, as well as physical, well-being. Francis Finney, representing the Oregon Environmental Council, in Portland, used as a standard for objectionable noise that at which children's sleep is disturbed. Dr. Michael Haynes, an economist from Southern Oregon College representing himself, testified in Medford that the noise levels should be established at levels where the marginal benefit from lowering the noise levels equals the marginal cost of suppressing the noise. Dr. Haynes did not specify,

however, how one could measure the benefits on a scale comparable to dollar cost, nor how one allocates cost among several sources contributing to a high ambient noise level. Diane Meyer of Ashland, representing the Rogue River Group of the Sierra Club, testified in Medford that the primary concern should be with noises exceeding 70 dBA, which are a danger to health. Jim Parsons, representing Parsons Pine Products of Ashland, testifying in Medford, said at levels low enough that health is not endangered, the type, not the level of noise is objectionable. He recommends setting standards at levels causing physiological harm, with a margin for safety, but no lower. Paul C. Paulson also said that the purpose of noise regulation should be to cut off the top, most objectionable noise, and not to make fine distinctions below that level. Dick Tuttle wanted to know by what criteria DEQ staff set the noise levels in the regulations. Paul Ventura, an audiologist representing the Oregon Environmental Council, testified in Portland that the regulations should be written using the concept that noise is pollution, not restricting consideration to the public health hazard aspects. Bernard Young also wanted the regulations to control annoying, as well as health-hazardous noise. T. C. Price Zimmerman, representing the Sierra Club, testified in Portland that sleep is disturbed at 50 dBA, and the regulations should protect this value.

The interaction of these proposed regulations with land use planning was noted by several witnesses. William Doernbach, a City Councilman in Medford, testified in Medford that the public roads section of the rules would affect zoning, and that for fully informed zoning decisions, there would be the necessity to make a noise map, showing all stationary noise sources, all noise sensitive property, and projected traffic flow and mix for each street. Jeanette Egger, chairwoman of the Oregon Environmental Council's noise committee, encouraged regulation by zones. She deplored, however, duplication of effort by the EPA HUD, AND DEQ. Roger W. Emmons testified that there ought to be a central listing of all quiet areas designated under the regulations. Tyrell P. Hart wants noise "sanctuaries", where people can go to be as noisy as they want. His views were echoed in Medford by James C. Wilson who, citing a county-operated rifle range, said that encroaching neighborhoods should not be allowed to restrict this noise park. Fred B. Klaboe testified that highway standards would not need to be as stringent as in the proposed rules if more attention were paid to land use. John C. McIntyre, Director of Public Works for Clackamas County, noted that counties could "beat" the regulations by commercially zoning areas along roads, but that might not be desirable from a land use standpoint. William P. Meyer of Ashland, representing himself, testified in Medford that we need zoning throughout the state to avoid conflict between noise sources and noise-sensitive areas. Joe M. Smith noted that changes in land use could jeopardize the future ability of an industry already in compliance to comply with the regulations.

C. Testimony relating to "General" provisions of the proposed regulations. Jerry E. Butler, representing Stayton Canning Company, testified

in Portland that Section B., "Highest and Best Practicable Treatment" is not clearly enough defined. Roger Emmons regards that section as repealing all the specific standards which follow. Mike Harrington requested that the last word in the paragraph relating to new sources be changed from "possible" to "practicable", so as not to require the installation of possible but impracticable noise suppression devices. K. L. Patrick gave the same testimony on this section, as did Dick Tuttle.

K. L. Patrick, Bruce Scharen, and Dick Tuttle also objected to the use of the phrase "quantity and quality of noise generated" in Section C., saying the reference is vague and ambiguous.

Roger Emmons wanted to know if the definition of a motor vehicle included graders and scrapers at landfills; he found the definition of "quiet areas" ambiguous, and the lack of provision for public hearings in establishing quiet areas objectionable. He wanted to know if auxiliary units attached to in-use vehicles had to comply with new or in-use standards, and requested a definition therefor. He wants a definition for "capital equipment." Mr. Emmons had questions about several other definitions in his extensive written testimony.

The definition of "quiet areas" was also found ambiguous by Walt Hitchcock, representing the Port of Portland, in written testimony, and by Dick Tuttle. Mr. Hitchcock, like Mr. Emmons, wants opportunity for public comment to precede designation as a quiet area. Hilda B. Baar, representing Goose Hollow Foothill League and herself, would designate all places where people sleep as "quiet areas".

S. C. Bates and Dean P. Gisvold, the latter testifying in Portland representing the Irvington Community Association, wanted to know the basis for the 15,000 vehicles-per-day figure in the definition of "Modification of Any Public Road." Mr. Gisvold also wanted to know specifically if Irvington Park would be covered by the definition of "Noise Sensitive Property".

Edward Mitchell suggested two new definitions, for "Lawn Care, Garden, and Snow-removal Equipment" and for "Portable Power Equipment", and suggested these two classes of machines be included under the regulations for new and in-use motor vehicles.

Dick Tuttle testified that he would like to see definitions distinguishing between "exceptions", "exemptions", and "variances".

D. Testimony relating to regulation of new and in-use motor vehicles (except racing vehicles). Alfred Amend, who lives on an artery serving Swan Island, testified in Portland that truck noise levels must be

greatly reduced. John W. Bour, testifying in Medford, said it is more important to regulate vehicles than industry, since vehicles can move in close to dwellings. Esther Berberick, representing the Terwilliger Community League, testified in Portland that truck and bus noise from Interstate 5 is high throughout her neighborhood. She disagrees with the exemption given truck tire and motor noise in the Industrial and Commercial section of the regulations [probably a misinterpretation of that exemption's intent: trucks and buses are covered elsewhere in the rules]. She urges taking into account topography, which can funnel and amplify noise. Gary Carlson advocates control of vehicle noise over changing road design as a strategy of minimizing noise from public roads. Darryl Carper testified that the dBA values for four-wheel drive vehicles (which, unless they are licensed under ORS 481.210 (1) (c), must meet motorcycle standards) are too low and the compliance schedule too short. He wanted to know where the test procedures for noise pollution control may be found.

Dennis E. David, representing the Motorcycle Industry Council, Inc. of Washington D. C., submitted detailed written testimony which suggested new definitions for "motorcycle" and "off-road recreational vehicle"; requested separate treatment of those vehicles from that accorded to vehicles used on public roads, and objected to post-1977 noise level requirements for both classes of vehicles. Dr. and Mrs. Gordon Dickerson of Medford, representing themselves, also submitted written testimony primarily concerned with motorcycles. They suggest that a regulation requiring a particular type of muffler be fitted to motorcycles would be more easily enforced than one specifying particular dBA levels.

Barbara Dierker testified that motorcycles were particularly flagrant noise polluters, and cited the DEQ's 1972 survey to substantiate that the Oregon public regards motor vehicle noise as the most offensive source. She opposed changing the proposed rules to give manufacturers an extra year to meet compliance schedules, and deplores the deletion of exhaust system rules from the September 1973 proposed rules. Henry Germond, testifying in Portland and representing the Oregon Environmental Council, finds the allowable noise levels established for new vehicles too high. He suggests conforming to the California vehicle standards, which have been established for years, noting that if manufacturers can meet the standards for the large California market, they can, too, for the smaller Oregon market. Mr. Germond found the in-use regulations for trucks and buses too permissive, suggesting a tiered regulation establishing differing permissible noise levels according to the weight class of the vehicle. Finally, he suggested emulation of Wood Village's regulation of truck exhaust brakes.

Mike Harrington testified that all vehicles should have to conform to the same noise levels. Tyrrell P. Hart objected to the fact that the

proposed rules would regulate vehicles even when they were operated on private property. Ron Holloway of KSHA Radio testified in Medford that it is unreasonable to allow higher noise levels for buses and trucks than for other vehicles. W. C. Jackson of Honda of Roseburg, representing the Oregon Motorcycle Dealers' Association, testified in Medford that his association agrees with the concept of regulation, but finds the 1976 and 1978 standards too tough. James B. Lee wants a supplemental vehicle regulation which would not require instruments to enforce, noting that upward of 90 percent of California Highway Patrol citations are made without the use of instruments. Claude L. Long, hospitalized in Canyonville, sent written testimony that truck noise inside his hospital is great enough to make sleep impossible. Diane Meyer wants lawn mowers included as regulated vehicles. William P. Meyer wants pleasure aircraft included as regulated vehicles; advocates strong regulations to stimulate control technology.

Robert Mix, Esq. of Corvallis, in written testimony, advocates extending the zone of protection around noise sensitive property for vehicle noise from 1,000 feet to one-half mile. W. Fred Morgan, representing the Multnomah County Farm Bureau, testified that nighttime harvesting with machines is often absolutely necessary, and requested that agricultural vehicles be exempt from regulation. His comments would apply equally to the industrial and commercial section of the regulations. R. L. Murch of Milwaukie, in written testimony, complained of motorcycles, particularly as used off of public roads. He testified that he has had no success in convincing law enforcement agencies to enforce nuisance and harrassment statutes and ordinances when the motorcyclists are on private lands. He supports the DEQ control efforts.

Ray W. Murphy, noting that his corporation, Freightliner, has been awarded a contract from the United States Department of Transportation to develop a quiet truck, said that the vehicle noise levels in the proposed regulations are stringent but for the most part attainable. He did object, however, to the standard of 87 dBA for vehicles in use after 1975 and 84 dBA after 1977 at speeds in excess of 35 miles per hour. At these speeds, he testified, tire noise alone exceeds these standards, and tire noise is sensitive to many external factors, such as the condition of the pavement. He suggests substitution of the California standard of 90 dBA at speeds over 35 miles per hour.

State Senator L. W. Newbry generally favors the regulatory concept and agrees with the vehicle regulations, except that he asks a variance for garbage compactors. Robert F. O'Neil testified that all vehicles should be treated equally. Jim Parsons supports the vehicle standards, but wondered if forklifts fall within the vehicular or industrial and commercial categories. Bill Penhollow, representing the Association of Oregon Counties, testified in Portland that the regulatory approach to

quieting public roads should be to control truck and motorcycle noise at the source. Joe M. Smith objected to the burden placed on private landowners to enforce the DEQ's noise regulations against off-road vehicles using their lands. Chuck Willcox testified that the first plateau of permissible noise levels for off-road recreational vehicles is too low. Bernard Young questioned why the proposed regulations for new motor vehicles make distinctions between kinds of vehicles, since the noise is equally disturbing no matter what the source. He also thinks DEQ should equalize standards for in-use vehicles. He questions the exemption in the industrial and commercial section for lawn care maintenance and snow removal equipment.

S. C. Bates, Francis Finney, testifying in Portland and representing the Oregon Environmental Council, Dean P. Gisvold, and Diane Meyer all testified that the lower nighttime maximum allowable ambient noise limits cover too short a period nightly. Children, especially, are likely to be trying to sleep before the hours begin, and adults after they end. These comments apply also to the regulations on racing events and industrial and commercial activities.

E. Testimony relating to regulations of racing events. Ron Ail, representing the Northwest Auto Racers' Association, testified in Portland that he could see no rationale for the distinction made in the proposed regulations between acceleration and other racing events. Noise is noise, and all events should be treated similarly. He testified that the standards of 70 dBA for day racing will be hard to meet. He noted that most racing cars come to Oregon from out-of-state on tour, and if they were disqualified because of noise, there would be a severe adverse effect on auto racing in this state. Ron Holloway testified that the 65 dBA maximum noise level for day racing is unreasonable.

Dale La Follette, representing Portland International Raceway, testified that auto racing should be treated like all other sports, noting that spectator noise at football games often exceeds the maximum which the proposed regulations allow for auto racing. He stated that the DEQ has been very cooperative in working with him the last few months. He suggests amending the rules so that dB readings are taken at a specified location, and so that there is advance notice that testing will be conducted. Because of the nature of the auto racing business, he believes the eventual regulations will have to be uniform nationwide. Jim Rockstad, representing International Raceway Parks, submitted written testimony that additional testing should be done before promulgating regulations. He noted that the Illinois Environmental Protection Agency has exempted motorsports from the Illinois state noise regulations.

Roy R. Smith of North Portland, representing himself, said in written testimony that he is seriously disturbed by the noise from Delta Park race track, and wants regulations to take effect before 1976.

Ken Thunderbird, representing Cascade Inboard Racing Association, testified in Portland that he wants equal treatment for racing events. He thinks that there should be an exception for state parks so that high noise levels may be allowed there. With mufflers on his boats, the lowest dBA reading he has yet recorded on the shore is 123 dBA, and he thinks that the 75 dBA limitation for acceleration racing events is unrealistic. He notes that overly stringent regulation of organized racing will encourage the kids back to the streets. Bernard Young testified that acceleration racing events should have to conform to the same noise levels as any other source.

F. Testimony related to the public roads section of the proposed rules. Mayor Lester Anderson of Eugene submitted written testimony in opposition to the proposed rules. He believes the decibel levels are set too low; does not believe local agencies should be responsible for monitoring and reporting; and believes desired levels should be achieved by controlling vehicles rather than by controlling the construction of public roads. Hilda B. Baar testified in favor of a 55 dBA level in lieu of the proposed rules' 63 dBA level for public roads in urban areas. To protect sleep, she argues for the concept of a more stringent nighttime standard for urban areas. She argued that, for the enjoyment of gardens, the measurement point should be at least 50 feet toward the noise source from that point on the inhabited building nearest the noise source, rather than the 25 feet of the proposed rules. She testified that there should be a moratorium on new highway construction until present roads are quieted. Gary Carlson testified that section C., "Monitoring and Reporting", is unacceptable to the League of Oregon Cities. William Doernbach called for setting back public roads deadlines one year.

Jeanette Egger called for a return to the September 1973 rules for public roads. She noted that L₁₀ and L₅₀ are the only measurement standards of the five standards of those rules, whereas many of the most objectionable noises are made almost instantaneously (at any rate, less than 10 percent of the time) by hot-rodders. She charged the DEQ with having "caved in" to Mr. George Baldwin's testimony of October 1973, while ignoring the Oregon Environmental Council's letters of December 1973. Roy Hemmingway, representing the Oregon Environmental Council's Noise Committee, testified in Portland that noise impact should be given full consideration in calculation of the cost-benefit ratio of new highway construction. He believes that the noise levels of the September 1973, proposed rules are attainable. He expressed concern that the variance procedure of the proposed rules would become a loophole that would be applied for whenever a public road is to be built. He is particularly concerned with the phrase allowing variances for the "public welfare", which standard is over-broad and invites abuse.

Walt Hitchcock testified for the Port of Portland that noise standards for new or modified public roads should not become effective

until the estimation techniques for projecting statistical noise levels are established. Fred B. Klaboe testified that the standard of 63 dBA in Table I of this section is 7 dBA more strict than the current Federal guideline, established in 1970. This, he said, would require right-of-way lines 1,000 feet from highway centerlines versus the 250 feet required to meet the 70 dBA level or else an 80 percent reduction in traffic from predicted levels. Table II of that section, regulating the noise from public roads adjoining quiet areas, is 15 dBA below current Federal-Aid Highway guidelines. He testified that the 5 dBA increase allowed by A. 1. c. of this section is too strict. He suggested basing noise level projections on the highway's predicted traffic level rather than on its capacity. Finally, he advocated noise control through controlling vehicular noise and by controlling land use around new public roads rather than through road design. On examination by the hearings officer, Mr. Klaboe conceded that the alternatives he highlighted -- 1,000 feet of right-of-way from the centerline or reduction in traffic by 80 percent -- would not necessarily be chosen over other alternatives he mentioned in passing: construction of sound barriers and/or depression of the highway (as is done in West Portland). Depression of the highway, he testified, is very effective in reducing sound levels, and adds less than half again per mile to the road's cost.

Dr. Nancy Marshall, representing the Oregon Environmental Council, supports the proposed rules. She stated that the more stringent September 1973 rules are in line with the authoritative findings of Bolt, Baranek, and Newman findings of "acceptable" criteria for highways. Dr. Marshall gave detailed testimony of the effects of noise on sleeping and learning, which your hearings officer commends to the Commission's attention. One element of the testimony was that intermittent noise, as from a highway with a scattering of trucks, is more disturbing than a louder noise which is steady.

John C. McIntyre testified that the public roads section would be costly for local governments to implement and enforce. Conceding that the 70 dBA Federal-Aid guideline may be dangerous to health and does cause considerable annoyance, Mr. McIntyre testified that counties such as his (Clackamas) cannot fund highways which would meet a more stringent standard. Further, some highways that already exceed 70 dBA, which could be quieted somewhat by construction of parallel routes or modification of the existing roadway, could not be relieved under these rules unless the alternate route or modified highways can meet the much lower noise levels of these rules. State Senator L. W. Newbry, stating that his information comes from the State Highway Division, recommends reconsideration of the public roads section.

K. L. Patrick noted the overlap between the public roads, motor vehicle, and industrial and commercial sections, and suggested the DEQ

make an effort to bring the three into harmony. Bill Penhollow testified that the Association of Oregon Counties supports the League of Oregon Cities and State Highway Division testimony. He requested that the Environmental Quality Commission consider the fiscal burden on cities and counties and set guideline rather than mandatory standards for public roads. He requests starting with Federal levels, raising L_{10} to 70 from 63, and the one-hour level similarly. He suggested a 60 dBA level rather than the proposed rules' 45 dBA for quiet areas.

T. C. Price Zimmerman testified that the Sierra Club supports generally the Oregon Environmental Council's testimony. He stated that the present proposed rules' standards for public roads, which are significantly relaxed from last September's, should be relaxed no further.

G. Testimony relating to standards for industrial and commercial activities. S. C. Bates and Michael Burrill, the latter representing the Eugene F. Burrill Lumber Company, agreed on the facts but disagreed on their interpretation in Medford. Mr. Bates testified that, except for the industrial and commercial regulations, the proposed rules are not strict enough. Mr. Burrill testified that industrial and commercial noise sources were unfairly controlled more strictly than other activities.

Jerry E. Butler stated that the standards, especially the nighttime standards, are unattainable. During peak season, he stated, his Stayton Canning Company operates 24 hours per day. He has not yet had a chance to monitor his noise emissions during peak activity, but is sure the noise would violate the proposed rules. If the rules cannot be postponed, he asks that food processors be added to the list of exemptions.

Martin Craine testified that he sees an inconsistency between industrial and commercial and vehicle regulations. He noted that, because of the competitive nature of the national wood products market, it is unlikely his industry can pass on the costs of Oregon's local noise suppression requirements to consumers.

Rich L. Croly, an audiologist, testified that the 55 dBA prescribed maximum noise level is very low.

Roger Emmons submitted extremely detailed comments regarding the rules' application to garbage compactors and sanitary landfills. Those comments will not be summarized here, but are commended to the Commission's attention.

Ben Heald also testified that industry cannot comply with the rules as proposed. He stated that the Occupational Safety and Health Act (OSHA)

has already cost industry millions of dollars in noise suppression equipment. A reduction in noise levels by only 3 dB requires a 50% absorption (or reduction) of sound energy since the decibel scale is logarithmic. He noted that the same machines causing OSHA difficulties are the ones causing noise at noise-sensitive property lines.

Allard J. Heitkemper argued in written testimony that control of railroad noise is pre-empted under the Federal Noise Control Act of 1972. He submitted additional testimony relating to the proposed rules' application to railroad noise which will not be summarized here.

C. M. Helfrich testified that compliance with the standards would be economically unfeasible. Gene Hopkins stated that this section of the rules would apply unfairly to agriculture. David Klick, representing Northwest Food Processors, testified that neither he nor DEQ has data to determine feasibility of attainment of the proposed standards. He opposes taking noise measurements on neighboring property. He testified that the inclusion of a reference to octave-band measurement is confusing, and asked for a reinstatement of a section deleted from the February 5, 1974 draft of the proposed rules. James B. Lee also opposed the octave-band measurement technique.

Marilyn Lum of Portland testified in written form to the detrimental effects on her family's home life of the intrusion of industrial noise. S. V. McQueen of Kogap Manufacturing Company testified that his company's tests show that compliance is impractical.

State Senator L. W. Newbry testified that the proposed rules' maximum level of 55 dBA is difficult to achieve, and difficult to enforce. He noted that noise from a neighboring highway near an industrial site could put the site out of compliance. He deplored the monetary burden the rules would impose on industry. He proposed establishing a maximum industrial level of 70 dBA.

Jim Parsons was among those who testified that he believed there exists a disparity in the proposed rules between the vehicle and industrial sections. He testified that devices that move air, in particular, make a lot of noise. He stated that to reduce this noise below 70 dBA for OSHA might cost \$50,000; to reduce further to 60 dBA might cost many times that figure; and to reduce to 55 dBA might well be impossible.

K. L. Patrick testified that his association was happy to see the wording which followed "QUIET AREA" in subsection A. 1. b. of this section in the February 5, 1974 draft had been dropped. Like several others, Mr. Patrick objected to inclusion of octave-band measurements, which require expensive equipment beyond the capability of private industry to make tests: he recommends deletion of the reference. He characterized Table I of this section as arbitrary and without consideration of, or provision for, multiple-shift operations. He believes the standards should differentiate levels by industry, related to OSHA-allowed occupa-

tional noise. He requested guidelines to restrain unlimited discretion in DEQ with regard to designated quiet areas. He raised the question of self-incrimination arising from the monitoring and reporting requirements. He wanted to know how a variance differs from an exception, and wants DEQ, rather than, or in addition to, the EQC to have the power to grant variances.

Sharon Roso, representing the North Portland Citizens' Committee, testified in Portland that she is concerned with the kind of noise that is emitted from PGE at Harborton. She testified that Northwest Natural Gas makes similar noise. She questions if the exemption for emergency equipment will not become a loophole for licensing, with all sorts of facilities claiming that their service is "emergency" related.

Bruce Scharen testified that he, too, objects to the inclusion of octave-band measurements in the proposed rules, mainly due to the expense of measuring equipment. He thinks the monitoring requirement is laborious, and requests DEQ consider the use of a sound recorder. Under "Variances", part C., he notes that an adversary system is built in, with no possibility for an informal conference.

Walt Sewell, representing Cascade Wood Products, asked specifically that the 7:00 a.m. to 10:00 p.m. standard be set at 70 dBA instead of the presently proposed 55 dBA. Joe M. Smith wants the levels set higher, also, but wants them uniform, 24 hours per day. Dick Tuttle of Georgia-Pacific objected to the octave-band equivalents.

Paul Ventura, an audiologist, wants a return to last September's use of a noise-sensitive property line as a measurement point.

Carleton A. Wold of Boise-Cascade also objected to the octave-band concept, saying that it is not a measure of perceptible annoyance. The ear is less sensitive to frequencies below 200 Hertz and above 6,000 Hertz, he noted, and pointed out that Illinois uses the concept in its regulatory scheme of "prominent discrete tones" or one-third octave bands.

Summary and Conclusions

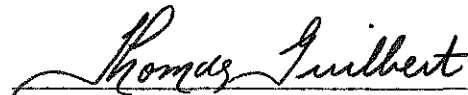
The Commission will note from the above summary of testimony that witnesses rarely joined issue with each other. Those testifying in favor of stringent noise controls can document health and emotional danger of exposure to high noise levels, or testify eloquently and convincingly of annoyance and degradation of quality of life from noise intrusion. Those testifying in favor of relaxing standards do not dispute the health or annoyance problems, but emphasize cost of compliance.

Because of the logarithmic nature of the decibel scale, the cost of noise suppression escalates rapidly with each increment downward.

The portions of the proposed rules which were the subject of the least heated testimony were the vehicle standards, but those were the portions which set the highest allowable decibel levels. At the other end of the scale, the portion of the proposed rules most often labelled "impossible" or "economically unfeasible" was the industrial and commercial section, in which standards are established which are more or less consistent with the health and annoyance data submitted by proponents of strong noise controls.

Unquestionably the most politically volatile of the portions of the rules is the public roads section. Far more than any other section, this received the attention of opponents of noise, arguing for strong controls. On the other side of the issue are the State Highway Division, the cities, and the counties, none of whom argue impossibility of compliance, but who argue that the public welfare is better served by maximizing the number of miles of roads built for the taxpayers' money, rather than using a large portion of the money available for road-building to design the roads for quiet, and have less total miles of road built therefore.

Submitted this 15th day of March 1974.



Thomas Guilbert
Hearings Officer

Attachments: Testimony of Dr. Nancy Marshall, advocate of strong controls.
Testimony of Mr. Roger Emmons, detailing impact of proposed rules on a particular industry.



ENVIRONMENTAL QUALITY COMMISSION

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MEMORANDUM

To : Environmental Quality Commission

From : Director

Subject: Agenda Item No. H, March 22, 1974 EQC Meeting

Maintenance of Air Quality Areas--Status Report on
Designation of Air Quality Maintenance Areas

Kessler R. Cannon

Director

This will be an oral status report by Michael Downs relative to designating areas of the state for air quality during the next ten years (1975 through 1985). This is a federally required program, and public hearings will be held before a hearings officer on April 12, 1974 in Portland, and April 15, 1974 in Eugene. A hearings officer report will be presented to the Commission at its April 19, 1974 meeting.

Copies of the staff report will be available at the March 22, 1974 meeting.

HLP:ss

3/15/74

KESSLER R. CANNON
Director



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**REPORT ON DESIGNATION OF
AIR QUALITY MAINTENANCE AREAS**

March 18, 1974

**Department of Environmental Quality
Air Quality Control Division
1234 S. W. Morrison St., Portland, Oregon 97205**

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INTRODUCTION

Pursuant to 40 CFR 51.12(c), published on June 18, 1973, in the Federal Register, Volume 38, P.15834, all state Clean Air Act implementation plans must identify those areas (counties, urbanized areas, standard metropolitan statistical areas, et cetera) which, due to current ambient air quality and/or projected growth rate, may have the potential for exceeding any national ambient air quality standard within the ten year period subsequent to June, 1975.

By March 18, 1974, in accordance with these regulations, the state is required to designate the "Air Quality Maintenance Areas" which may exceed a national standard. The Governor has delegated the Department of Environmental Quality to act in this matter on his behalf.

For each area so identified, the state must then undertake a thorough air quality analysis. Where this analysis shows that an area will definitely not maintain compliance with a national air quality standard during the ten-year period (ending June, 1985), a plan must be developed by the state for such areas delineating the rules, regulations, policies and procedures which will be implemented to ensure that compliance with the national ambient air quality standards will be maintained.

The Department has completed a study to determine which areas of the state should be designated as Air Quality Maintenance Areas. The purpose of this document is to report the conclusions of this study and to summarize the data and methodology used by the Department in reaching these conclusions.

The reader of this report should keep in mind that the study described herein is only for the purpose of determining which areas of the state should be designated as having the potential to exceed national ambient air quality standards by 1985. Subsequent to the designation of these Air Quality Maintenance Areas, the state will undertake an in-depth air quality study of each area to determine if an amendment to the Oregon Clean Air Act Implementation Plan is required to maintain compliance with the national ambient air quality standards.

SUMMARY

The methodology used by the Department in the study of various areas of the state to determine the potential for exceeding the ambient air quality standards is basically the one developed by the Environmental Protection Agency and set forth in a document entitled Guidelines for Designation of Air Quality Maintenance Areas, OAQPS No. 1.2-016, January 11, 1974. Appropriate modifications, corrections, and assumptions were made by the Department to these guidelines in order to make them compatible with information available to the Department. A copy of the EPA guidelines is available for inspection at the Department of Environmental Quality offices, 1234 SW Morrison Street, Portland.

Generally the methodology involves the use of existing air quality data, emission rate data, meteorological parameters, projected growth rates, and existing source emission limitation regulations to predict ambient air quality in 1985. These projected air quality levels were compared with state and national ambient air quality standards to determine whether the area under study should be designated. Appropriate state and national air quality standards are delineated in Appendix A.

The areas chosen for detailed study by the Department are described as follows:

1. Portland Metropolitan Area
2. Longview-Kelso Corridor
3. Salem Metropolitan Area
4. Albany-Lebanon Area
5. Eugene-Springfield Metropolitan Area
6. Medford-Ashland Area

Areas of the state, other than the six study areas listed above, were not studied in detail by the Department due to ambient air quality data indicating substantial compliance with state and national ambient air quality standards and/or insignificant growth rates.

The areas of the state proposed for designation as Air Quality Maintenance Areas are listed in Table 2.1 and illustrated in Figures 2.1 through 2.4. Within the body of this report are maps depicting each of the six study areas listed previously. It should be noted that in some instances the areas proposed for designation are somewhat larger than the original study area. This was generally done to ensure that the boundaries of the designated areas would be legally definable and that the areas designated are consistent with land use and transportation planning areas used by local and regional planning agencies.

The reasons each of the six study areas were chosen for designation or non-designation are summarized in Tables 2.2 through 2.7.

Figure 2.1

PROPOSED PORTLAND METROPOLITAN AIR QUALITY MAINTENANCE AREA

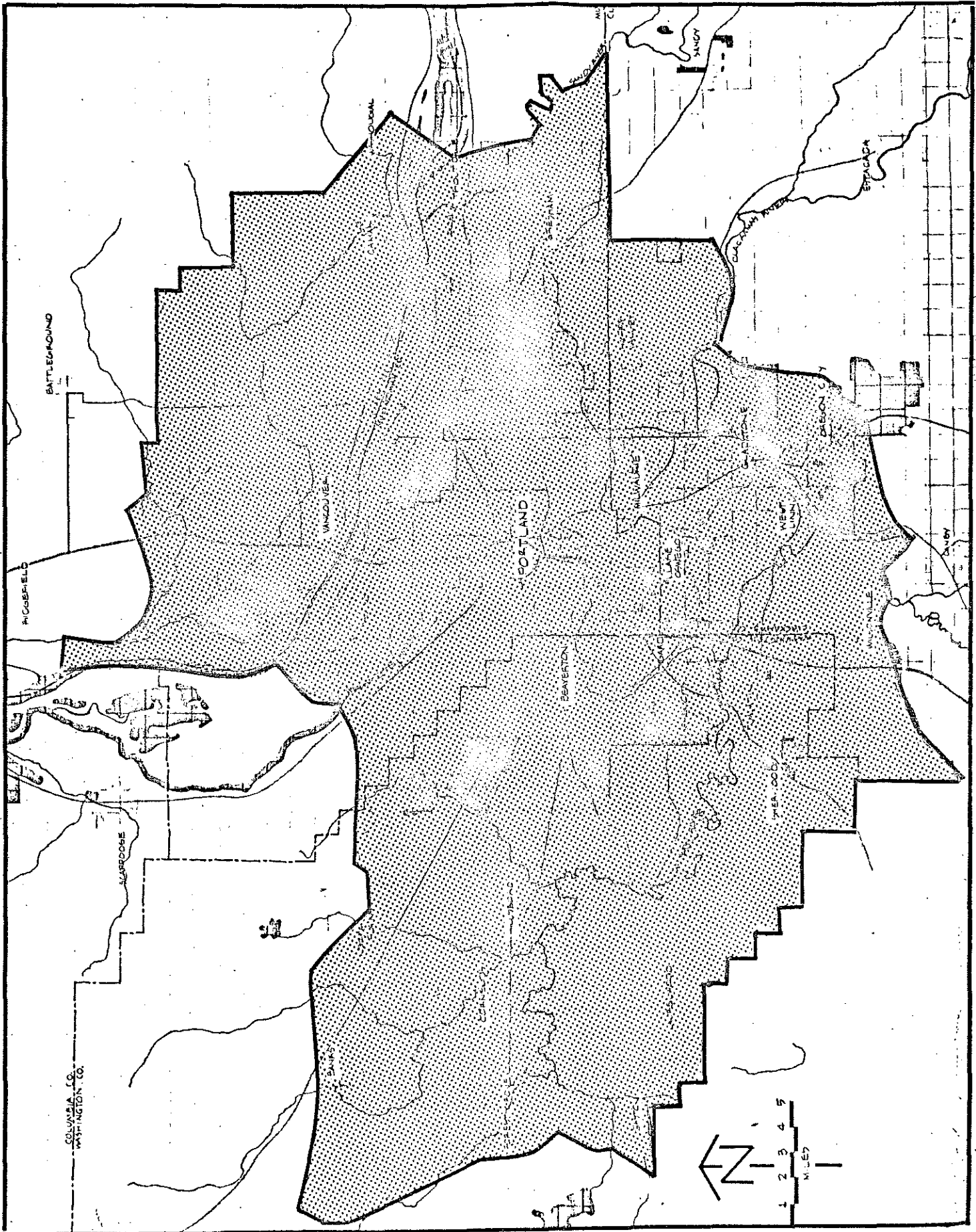


FIGURE 2.2

PROPOSED LONGVIEW-KELSO
AIR QUALITY MAINTENANCE AREA

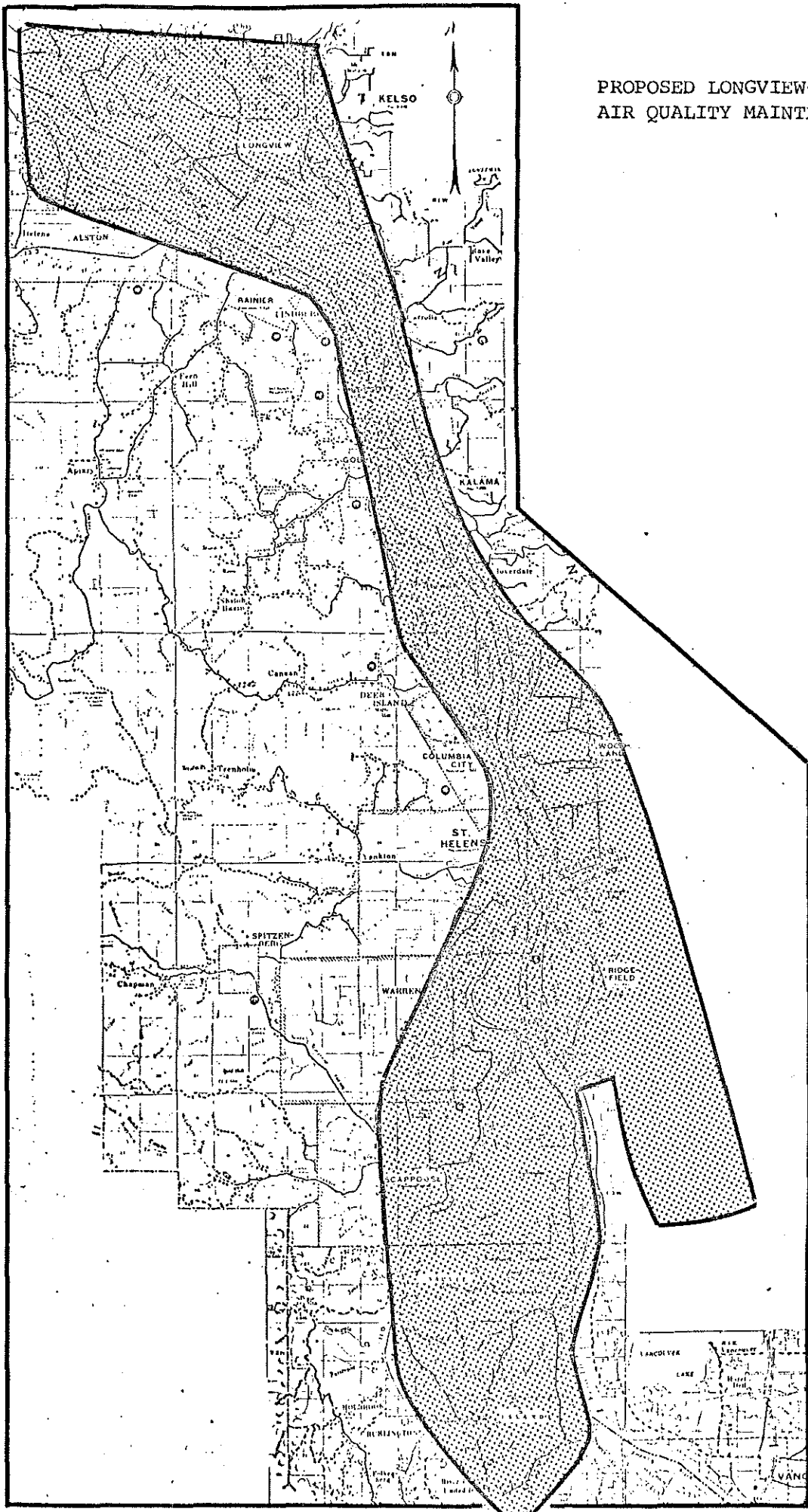


FIGURE 2.3

PROPOSED EUGENE-SPRINGFIELD AIR QUALITY MAINTENANCE AREA

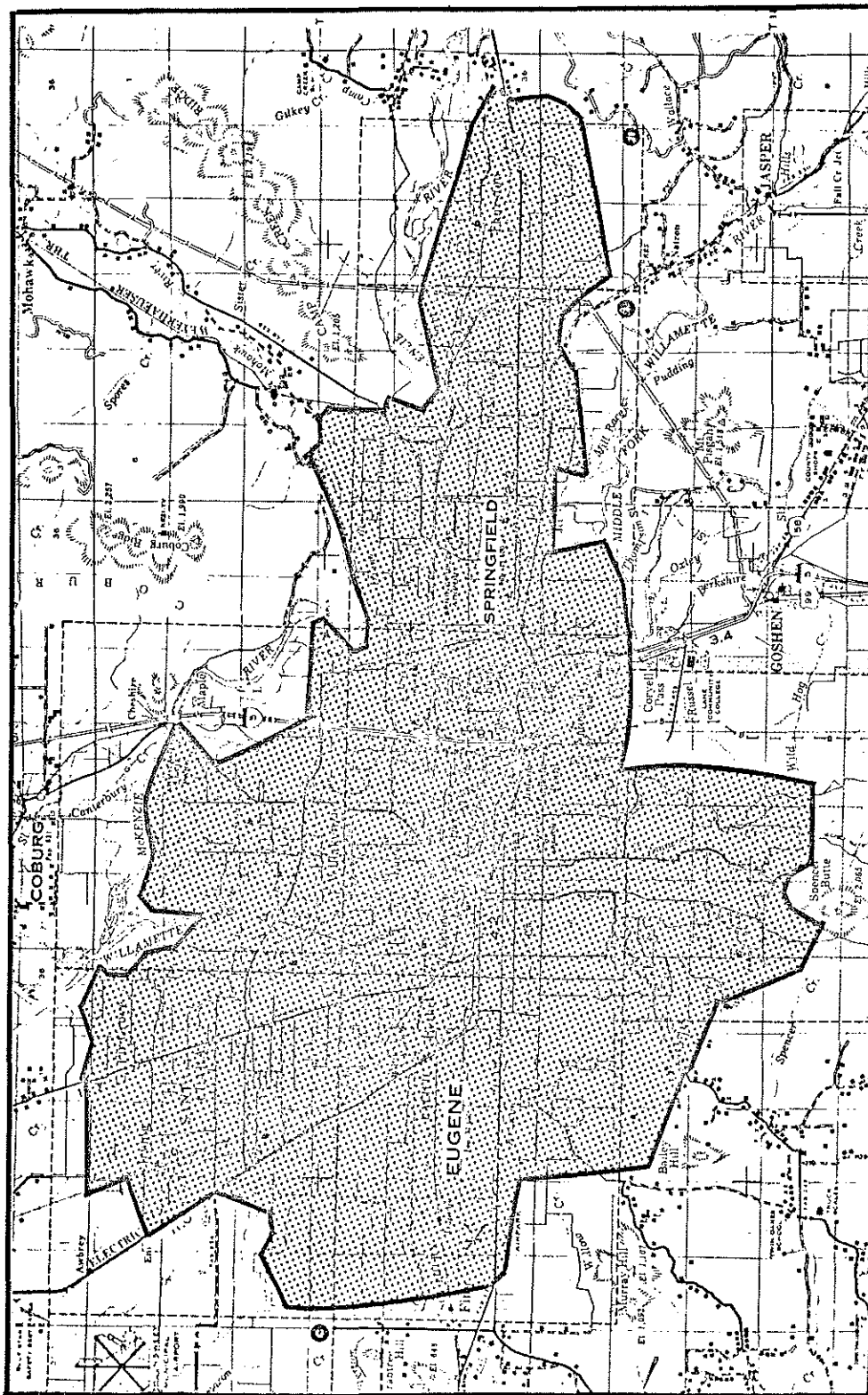


FIGURE 2.4

PROPOSED MEDFORD - ASHLAND AIR QUALITY MAINTENANCE AREA

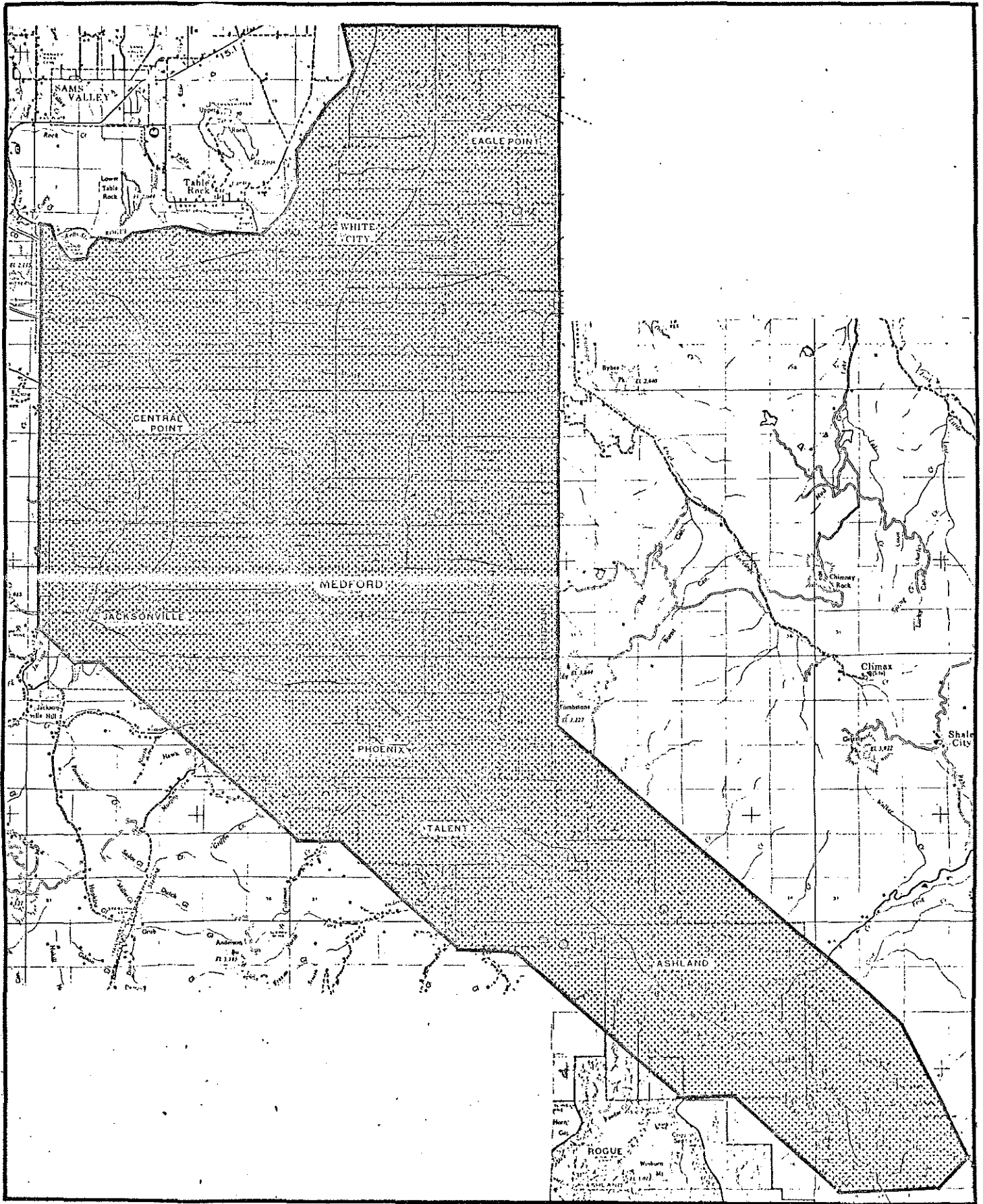


TABLE 2.1

SUMMARY OF PROPOSED AIR QUALITY MAINTENANCE AREAS

STUDY AREA	CONTAMINANTS FOR WHICH DESIGNATION IS EFFECTIVE				
	Particulate	Sulfur Dioxide	Carbon Monoxide	Photochemical Oxidants	Nitrogen Dioxide
1. Portland Metropolitan Area	Yes	Yes	Yes	Yes	No
2. Longview-Kelso Corridor	Yes	Yes	No	No	No
3. Salem Metropolitan Area	No	No	No	No	No
4. Albany-Lebanon Area	No	No	No	No	No
5. Eugene-Springfield Metropolitan Area	Yes	No	No	No	No
6. Medford-Ashland Area	Yes	No	No	No	No

TABLE 2.2

SUMMARY OF REASONS FOR DESIGNATION OR
NON-DESIGNATION OF PORTLAND STUDY AREA

<u>CONTAMINANT</u>	<u>REASONS FOR DESIGNATION</u>	<u>REASONS FOR NON-DESIGNATION</u>
Particulate	Projected 1985 particulate air quality in study area exceeds state and national air quality standards.	
Sulfur Dioxide	Projected 1985 sulfur dioxide air quality in study area exceeds state and national air quality standards.	
Carbon Monoxide	Transportation Control Strategy for carbon monoxide required in study area.	
Photochemical Oxidants	EPA Initial Criteria - Transportation Control Strategy for photochemical oxidants required in study area.	
Nitrogen Dioxide		Meets EPA initial criteria for exclusion.

TABLE 2.3

SUMMARY OF REASONS FOR DESIGNATION OR
NON-DESIGNATION OF LONGVIEW-KELSO STUDY AREA

CONTAMINANT	REASONS FOR DESIGNATION	REASONS FOR NON-DESIGNATION
Particulate	Projected 1985 particulate air quality in study area exceeds state and national air quality standards.	
Sulfur Dioxide	Projected 1985 sulfur dioxide air quality in study area is increased by a factor of two over present levels and study area is upwind of Portland area which is also designated for sulfur dioxide.	
Carbon Monoxide		Meets EPA initial criteria for exclusion.
Photochemical Oxidant		Meets EPA initial criteria for exclusion.
Nitrogen Dioxide		Meets EPA initial criteria for exclusion.

TABLE 2.4

SUMMARY OF REASON FOR DESIGNATION OR
NON-DESIGNATION OF SALEM STUDY PLAN

CONTAMINANT	REASONS FOR DESIGNATION	REASONS FOR NON-DESIGNATION
Particulate		Projected 1985 particulate air quality in study area is less than state and national standards.
Sulfur Dioxide		Meets EPA initial criteria for exclusion.
Carbon Monoxide		Meets EPA initial criteria for exclusion.
Photochemical Oxidants		Meets EPA initial criteria for exclusion.
Nitrogen Dioxide		Meets EPA initial criteria for exclusion.

TABLE 2.5

SUMMARY OF REASONS FOR DESIGNATION OR
NON-DESIGNATION OF ALBANY-LEBANON STUDY AREA

CONTAMINANT	REASONS FOR DESIGNATION	REASONS FOR NON-DESIGNATION
Particulate		Projected 1985 particulate air quality in study area is less than state and national standards.
Sulfur Dioxide		Meets EPA initial criteria for exclusion.
Carbon Monoxide		Meets EPA initial criteria for exclusion.
Photochemical Oxidants		Meets EPA initial criteria for exclusion.
Nitrogen Dioxide		Meets EPA initial criteria for exclusion.

TABLE 2.6

SUMMARY OF REASONS FOR DESIGNATION OR
NON-DESIGNATION OF EUGENE-SPRINGFIELD STUDY AREA

CONTAMINANT	REASONS FOR DESIGNATION	REASONS FOR NON-DESIGNATION
Particulate	Projected 1985 particulate air quality in study area exceeds state and national air quality standards.	
Sulfur Dioxide		Meets EPA initial criteria for exclusion.
Carbon Monoxide		Meets EPA initial criteria for exclusion.
Photochemical Oxidants		Meets EPA initial criteria for exclusion.
Nitrogen Dioxide		Meets EPA initial criteria for exclusion.

TABLE 2.7

SUMMARY OF REASONS FOR DESIGNATION OR
NON-DESIGNATION OF MEDFORD-ASHLAND STUDY AREA

<u>CONTAMINANT</u>	<u>REASONS FOR DESIGNATION</u>	<u>REASON FOR NON-DESIGNATION</u>
Particulate	Projected 1985 particulate air quality in study area exceeds state and national air quality standards.	
Sulfur Dioxide		Meets EPA initial criteria for exclusion.
Carbon Monoxide		Meets EPA initial criteria for exclusion.
Photochemical Oxidants		Meets EPA initial criteria for exclusion.
Nitrogen Dioxide		Meets EPA initial criteria for exclusion.

STUDY AREA ONE

PORTLAND METROPOLITAN AREA

STUDY RESULTS FOR THE PORTLAND METROPOLITAN AREA

A. Total Suspended Particulate

A summary of the projected 1985 particulate air quality levels at each of the total suspended particulate monitoring stations in the Portland metropolitan study area is shown in Table 3.1. It can be seen that five of the monitoring stations are projected to be in violation of either the annual geometric mean air quality standard of 60 ug/m^3 or the annual maximum 24-hour average air quality standard of 150 ug/m^3 established by the Department of Environmental Quality and Environmental Protection Agency. Thus, it is proposed that the Portland Metropolitan Area illustrated in Figure 2.1 be designated as an Air Quality Maintenance Area for total suspended particulate. The area depicted in Figure 2.1 represents the Columbia Region Association of Governments 1970 Transportation Study Area.

The Portland study area is shown in Figure 3.1. It covers 389 square miles in the Portland metropolitan area and is defined in a study published by the Columbia Region Association of Governments entitled "Planning In the CRAG Region: The Second Step", July, 1973 (Sketch Plan IV).

Table 3.2 is a summary of the total suspended particulate air quality data measured at each of the monitoring stations in the Portland metropolitan area during the period 1970 through 1973.

Table 3.3 details the emissions of particulates from various types of sources within the Portland Standard Metropolitan Statistical Area, which includes the Portland study area, for the years 1970, 1975 and 1985.

B. Sulfur Dioxide

A summary of the projected 1985 sulfur dioxide air quality levels at the two sulfur dioxide monitoring stations in the Portland metropolitan study area, for which adequate data was available to make projections, is set forth in Table 3.4. A review of this table shows that one monitoring station, based upon 1972 emissions and air quality data, is projected to exceed the national air quality standards for sulfur dioxide of 80 ug/m^3 annual arithmetic mean and 365 ug/m^3 annual maximum 24-hour average.

It can also be seen that, based on either 1972 or 1973 data, both monitoring stations are projected to be in violation or very close to violation of the state air quality standards for sulfur dioxide of 60 ug/m^3 annual arithmetic mean and 260 ug/m^3 annual maximum 24-hour average.

Further, Figure 3.2 depicts a steady upward trend in sulfur dioxide levels monitored at the Portland CAMS since 1967. This significant upward trend in conjunction with the predicted 1985 air quality levels makes it imperative that the Portland Metropolitan Area illustrated in Figure 2.1 be designated as an Air Quality Maintenance Area for sulfur dioxide.

Table 3.5 is a summary of the sulfur dioxide air quality data measured at each of the monitoring stations in the Portland metropolitan area during the period 1967 through 1973.

Table 3.6 delineates the emissions of sulfur dioxide from various types of sources within the Portland Standard Metropolitan Statistical Area for the years 1970, 1975 and 1985.

C. Carbon Monoxide

The area shown in Figure 2.1, excluding the Washington State portion, presently is subject to a series of transportation control measures designed to achieve compliance with state and national air quality standards by June, 1976, in the central business district of Portland.

Figure 3.3 illustrates a present slight downward trend in levels of carbon monoxide measured at the Portland CAMS during the period 1970 through 1973. It is concluded that the majority of this improvement is due to the air pollution control devices required on new automobiles, because none of the state and local transportation control measures contained in the Portland Transportation Control Strategy, an amendment to the Oregon Clean Air Act Implementation Plan, has been substantially implemented to date.

Successful implementation of the state and local transportation control measures should result in compliance with the carbon monoxide air quality standards in downtown Portland by June, 1976. However, due to the fact that the effectiveness of the control measures has not yet been demonstrated, the uncertainty of the effect of the control measures on areas outside of downtown Portland, the uncertainty of proposed Congressional action on delaying the air pollution controls for new cars, and the fact that EPA requires that the Portland metropolitan area be designated for photochemical oxidants (see below), the Department proposes that the Portland Metro-

politan Area illustrated in Figure 2.1 be temporarily designated for carbon monoxide until an in-depth study can be completed to determine the need for such designation.

Table 3.7 contains a summary of the carbon monoxide air quality data measured at the CO monitoring stations in the Portland area during the period 1970 through 1973. The data shows that significant numbers of violations of the state and national air quality standard of 10 mg/m^3 maximum 8-hour average are still occurring in the Portland area.

D. Photochemical Oxidants

According to the criteria developed by the Environmental Protection Agency for designation of Air Quality Maintenance Areas, any area for which a transportation control strategy for photochemical oxidants is required must be designated. Since a transportation control strategy for photochemical oxidants has been developed and adopted for the Portland area, it is proposed that the Portland Metropolitan Area illustrated in Figure 2.1 be designated for photochemical oxidants.

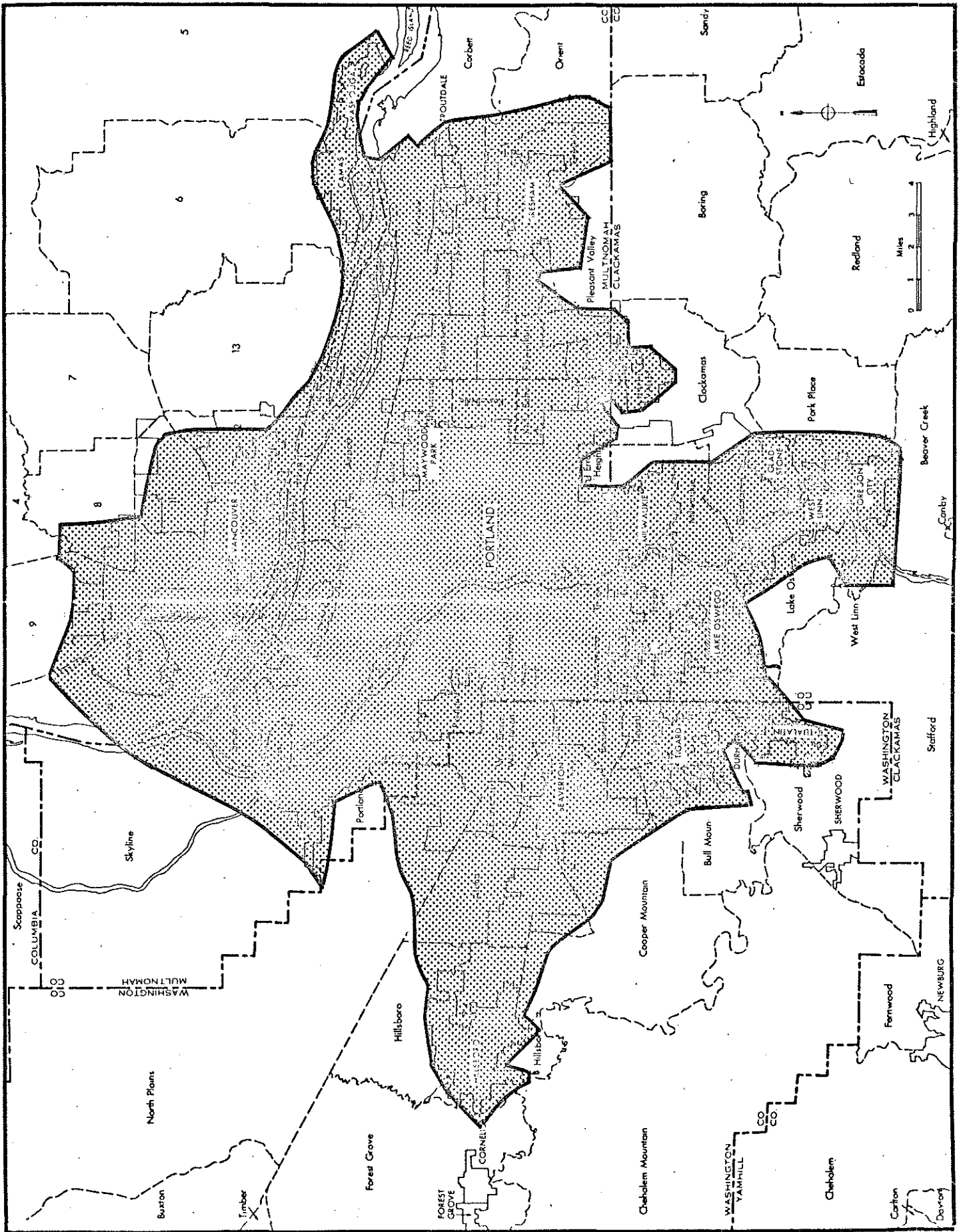
Table 3.8 is a compilation of the available total oxidant data in the Portland area.

E. Nitrogen Dioxide

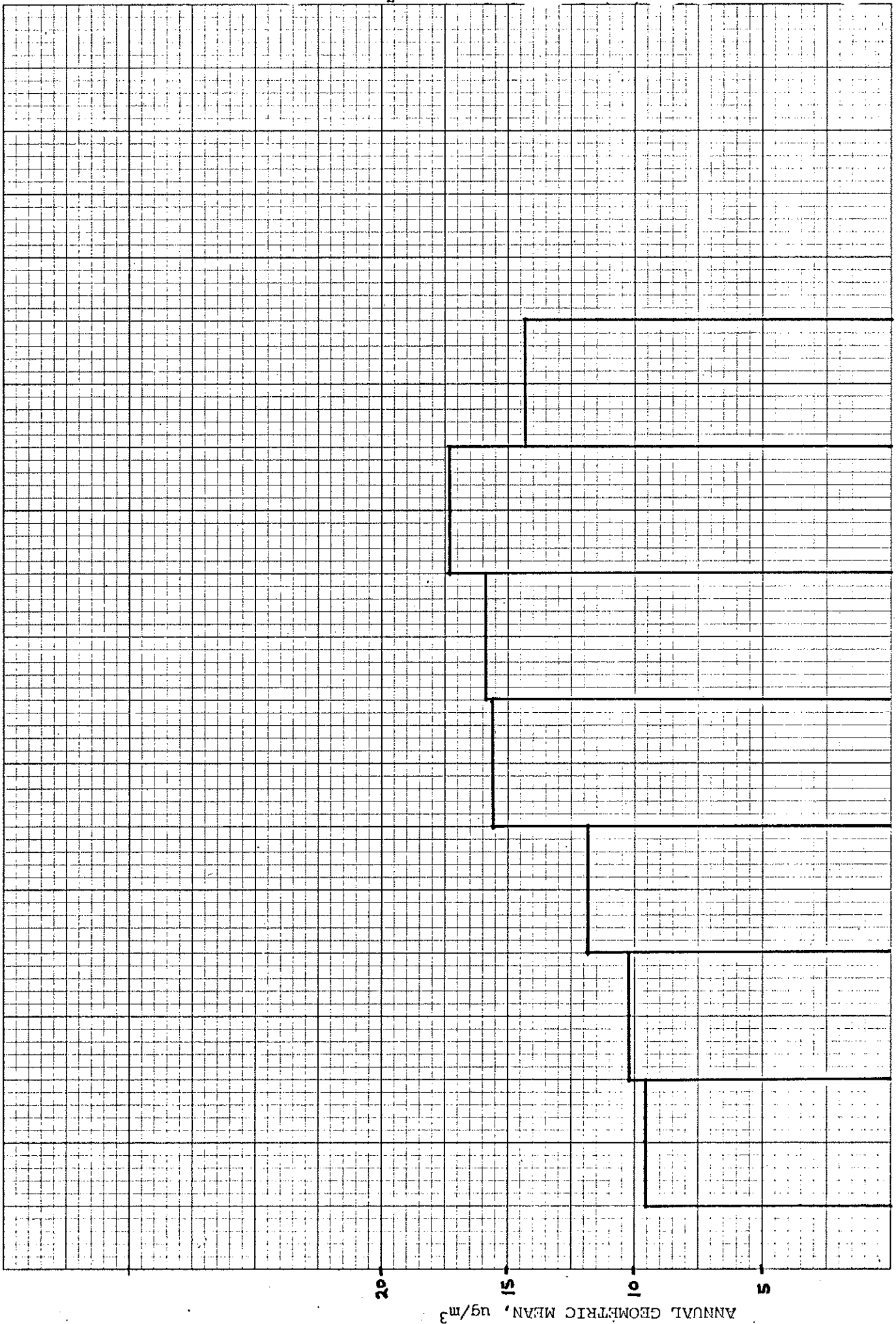
According to the criteria developed by the Environmental Protection Agency for designation of Air Quality Maintenance Areas, only the appropriate parts of those Standard Metropolitan Statistical Areas whose central cities are Los Angeles, Chicago, New York, Denver, and Salt Lake City are to be designated. Thus the Portland area is not proposed to be designated for nitrogen dioxide.

Table 3.9 lists the available nitrogen dioxide air quality data in the Portland area.

FIGURE 3.1
PORTLAND METROPOLITAN STUDY AREA



ANNUAL GEOMETRIC MEAN FOR SO₂ by YEAR AT PORTLAND CAMS



46 0782

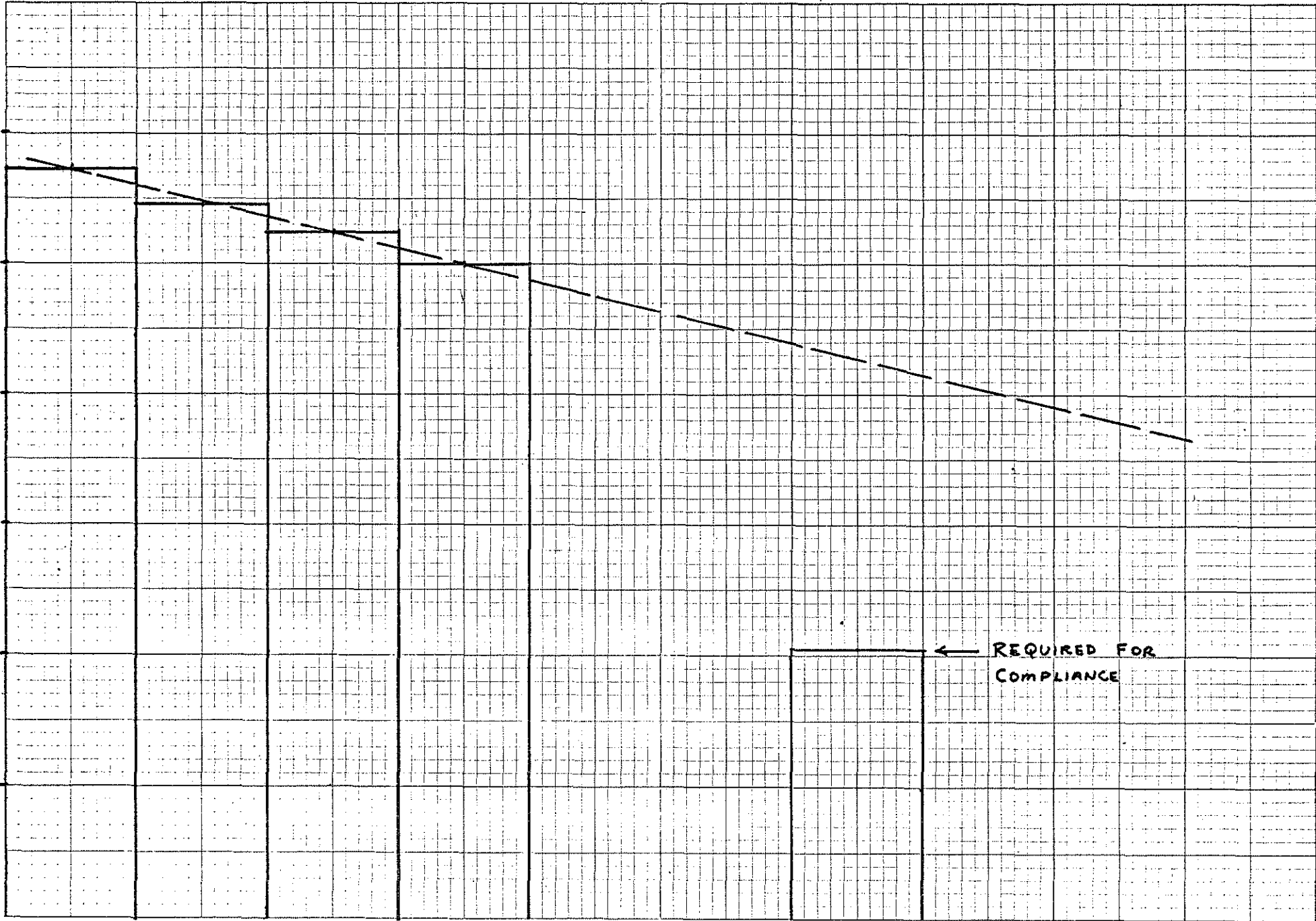
10 X 10 TO THE INCH • 7 X 10 INCHES
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CARBON MONOXIDE DATA FROM PORTLAND CAMS

SLOPE OF THE LOGNORMAL DISTRIBUTIONS FOR MAX. 8-HR CARBON MONOXIDE LEVELS

TREND IN MAXIMUM 8-HOUR AVERAGE CARBON MONOXIDE LEVELS



1970

1971

1972

1973

1976

← REQUIRED FOR
COMPLIANCE

TABLE 3.1
 PROJECTED 1975 and 1985 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY
 IN PORTLAND METROPOLITAN AREA

Station Number	Station Location	1975	1975	1975	1985	1985	1985
		Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	2nd Highest 24-hr Avg. ug/m ³	Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	2nd Highest 24-hr Avg. ug/m ³
0340004	Lake Oswego Lakewood Grade School	53.3	45.9	120.0	63.2	54.4	150.0*
0343003	Milwaukie Milwaukie High School	30.9	26.4	73.0	40.8	34.9	97.0
0355001	Oregon City Clackamas Co. Courthouse	32.7	27.4	81.7	42.6	35.8	105.0
2614003	Portland Pac. Mtr. Trk, SE Schiller	61.5	53.4	140.0	71.4	62.3*	160.0*
2614007	Portland Roosevelt High School	32.8	28.4	76.0	42.7	37.0	98.0
2614008	Portland Central Fire Sta, SW Ash	69.3	58.3	169.0*	79.2	66.6*	194.0*
2614010	Portland Jackson High School	17.9	14.6	46.8	27.8	22.6	72.0
2614012	Portland Moffat, 1845 N. E. Couch	40.2	36.1	84.0	50.1	45.0	107.0
2614016	Portland Ind. Air Prod., NW Yeon	62.4	51.0	165.0*	72.3	59.0	185.0*
2614023	Portland Mt. Hood Nat'l Forest Ser.	35.2	30.1	83.0	45.1	38.6	112.0

TABLE 3.1 (Continued)

PROJECTED 1975 and 1985 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY
IN PORTLAND METROPOLITAN AREA

Station Number	Station Location	1975	1975	1975	1985	1985	1985
		Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	2nd Highest 24-hr Avg. ug/m ³	Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	2nd Highest 24-hr Avg. ug/m ³
2614033	Portland Rivergate Waterways	38.4	32.1	95.0	48.3	40.3	122.0
2614035	Portland Linnton Fire Stations	53.0	43.1	138.0	62.9	51.2	170.0*
2614070	Portland KOIN, SW Barnes Rd.	17.2	14.1	44.3	27.1	22.3	69.2
2617001	Troutdale Troutdale Airport	14.4	11.5	38.9	24.3	19.4	65.2
3410001	Beaverton Beaverton Library	27.5	22.9	68.0	37.4	31.2	94.0
3434002	Hillsboro Hillsboro Airport	24.6	19.8	75.8	34.5	27.8	92.0
	Camas Fuller Building	32.1	31.2	48.2	42.0	40.8	63.5

* Exceeds state or national ambient air quality standard.

TABLE 3.2

TOTAL SUSPENDED PARTICULATE AMBIENT

AIR QUALITY DATA IN THE PORTLAND METROPOLITAN AREA 1970 - 1973

Station Number	Station Location	Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geometric Std. Dev.	Max. 24-hr Avg, ug/m ³	
0340004	Lake Oswego Lakewood Grade School	1970	84.0	67.4	1.99	338.0
		1971	84.7	68.8	1.94	287.0
		1972	77.2	61.8	1.97	281.0
		1973	71.4	62.3	1.73	190.0
0343003	Milwaukie Milwaukie High School	1970	62.1	53.0	1.79	185.0
		1971	58.7	50.1	1.77	213.0
		1972	56.7	49.3	1.76	139.9
		1973	49.0	41.8	1.75	167.9
0355001	Oregon City Clackamas County Courthouse	1970	-	-	-	-
		1971	84.7	68.8	1.94	287.
		1972	59.0	51.9	1.71	155.5
		1973	50.8	43.8	1.81	171.2
2614003	Portland Pacific Mtr Trk, SE Schiller	1970	78.2	65.3	1.90	197.2
		1971	92.5	77.3	1.90	256.0
		1972	87.7	74.7	1.85	207.1
		1973	79.6	70.2	1.69	251.4
2614007	Portland Roosevelt High School	1970	45.4	39.2	1.70	131.6
		1971	57.2	47.7	1.80	182.0
		1972	55.6	48.9	1.71	134.1
		1973	50.9	43.9	1.71	214.5
2614008	Portland Central Fire Station	1970	83.7	68.2	1.90	214.3
		1971	101.2	85.8	1.80	270.0
		1972	95.7	84.7	1.67	229.5
		1973	87.4	73.9	1.80	376.4

TABLE 3.2 (Continued)

TOTAL SUSPENDED PARTICULATE AMBIENT

AIR QUALITY DATA IN THE PORTLAND METROPOLITAN AREA 1970 - 1973

Station Number	Station Location	Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geometric Std. Dev.	Max. 24-hr Avg., ug/m ³	
2614010	Portland Jackson High School	1970	36.2	27.2	2.20	212.6
		1971	40.0	32.2	2.00	109.0
		1972	38.1	31.1	1.96	117.7
		1973	36.0	29.8	1.90	117.2
2614012	Portland Moffat, 1845 N. E. Couch	1970	58.7	51.1	1.70	138.3
		1971	65.1	56.9	1.70	206.0
		1972	62.9	57.9	1.53	124.8
		1973	58.3	52.1	1.59	206.6
2614016	Portland Industrial Air Products	1970	90.5	71.6	2.10	232.5
		1971	73.8	61.1	1.90	194.0
		1972	81.3	69.4	1.85	179.1
		1973	80.5	66.4	1.89	341.1
2614023	Portland Mt. Hood Nat'l Forest Service	1970	50.8	39.3	2.20	177.1
		1971	63.8	52.5	1.90	175.0
		1972	54.7	48.2	1.67	153.7
		1973	53.3	46.0	1.75	150.4
2614033	Portland Rivergate Waterways Terminal	1970	-	-	-	-
		1971	-	-	-	-
		1972	61.7	54.2	1.75	149.5
		1973	56.5	47.4	1.82	180.0
2614035	Portland Linnton Fire Station	1970	59.8	49.2	1.90	167.0
		1971	63.7	52.3	1.80	302.0
		1972	66.2	55.4	1.80	271.4
		1973	71.1	57.0	1.90	376.0

TABLE 3.2 (Continued)

TOTAL SUSPENDED PARTICULATE AMBIENT
AIR QUALITY DATA IN THE PORTLAND METROPOLITAN AREA 1970-1973

Station Number	Station Location		Annual Arith Mean, $\mu\text{g}/\text{m}^3$	Annual Geo. Mean, $\mu\text{g}/\text{m}^3$	Geometric Std. Dev.	Max. 24-hr Avg., $\mu\text{g}/\text{m}^3$
2614070	Portland KOIN, SW Barnes Rd.	1970	-	-	-	-
		1971	-	-	-	-
		1972	-	-	-	-
		1973	35.3	29.6	1.87	88.3
2617001	Troutdale Troutdale Airport	1970	37.8	29.4	2.20	153.2
		1971	43.0	35.5	2.10	139.0
		1972	32.3	26.7	1.93	84.0
		1973	32.5	26.8	1.96	87.0
3410001	Beaverton Beaverton Library	1970	53.1	43.1	1.84	418.0
		1971	61.1	48.4	1.93	287.0
		1972	50.5	44.0	1.72	165.3
		1973	45.6	38.8	1.83	131.0
3434002	Hillsboro Hillsboro Airport	1970	-	-	-	-
		1971	-	-	-	-
		1972	44.8	32.7	2.3	209.6
		1973	42.7	34.5	1.93	147.5
	Camas Fuller Building	1970	-	-	-	-
		1971	-	-	-	-
		1972	48.0	44.0	1.53	107.0
		1973	50.2	44.9	1.27	122.0
	Vancouver Federal Building	1970	-	56.0	-	126.0
		1971	-	51.0	-	179.0
		1972	-	63.1	-	163.5
		1973	-	52.9	-	181.7
Vancouver Columbia Slope Treatment Plant	1970	-	-	-	-	
	1971	-	-	-	-	
	1972	-	44.0	-	116.3	
	1973	-	35.8	-	93.9	

TABLE 3.3

PROJECTED 1975 and 1985 PARTICULATE EMISSIONS

FOR THE PORTLAND STANDARD METROPOLITAN STATISTICAL AREA

SOURCE CLASS	1970 Emissions, Tons/yr.	1975 Emissions, Tons/yr.	1985 Emissions, Tons/yr.
I. Fuel Combustion			
A. Residential	690	904	1373
B. Commercial	413	504	766
C. Industrial	1996	1570	2307
Subtotal Fuel Combustion	3099	2978	4446
II. Process Loss Sources	14176	6111	7259
III. Transportation			
A. Light duty vehicles	1562	1703	2008
B. Heavy duty vehicles	130	142	168
Subtotal Transportation	1692	1845	2176
IV. Solid Waste			
A. Incineration	90	27	31
B. Open Burning	513	397	427
C. Wigwam Waste Burners	200	2	2
Subtotal Solid Waste	803	426	460
V. Miscellaneous Sources			
A. Field Burning	399	203	203
B. Forest Fires	194	194	194
C. Slash Burning	878	781	781
D. Other	960	1258	1912
Subtotal Misc. Sources	2431	2436	3090
VI. Power Plants	53	134	134
Total Area Sources	6219	6761	8817
Total Point Sources	16035	7169	8748
Total All Sources	22254	13930	17565

TABLE 3.4

PROJECTED 1975 and 1985 SULFUR DIOXIDE AMBIENT

AIR QUALITY IN THE PORTLAND METROPOLITAN AREA

Station Number	Station Location	1975		1985	
		1975 Annual Arith Mean, ug/m ³	1975 2nd Highest 24-hr. Avg. ug/m ³	1985 Annual Arith Mean, ug/m ³	1985 2nd Highest 24-hr. Avg. ug/m ³
2614068	Portland Standard Oil Office				
	(1972 base)	68.6*	330.0*	90.2*	430.0*
	(1973 base)	49.3	210.0	64.1*	270.0*
2614576	Portland CAMS, W. Burnside				
	(1972 base)	33.4	148.0	55.0	240.0
	(1973 base)	34.0	185.0	48.8	250.0

*Exceeds State or National Air Quality Standard

TABLE 3.5

SULFUR DIOXIDE AMBIENT AIR QUALITY DATA IN THE PORTLAND METROPOLITAN AREA

Station Number	Station Location		Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geometric Std. Dev.	Max. 24-hr. Avg, ug/m ³	Max. 3-hr. Avg, ug/m ³
2614068	Portland Standard Oil Office, NW Doane Sept.-Dec.	1972	75.0	16.9	19.4	282.0	462.5
		1973	48.3	7.1	18.7	236.0	436.0
2614576	Portland CAMS, 718 W. Burnside	1967	25.9	9.6	4.08	226.0	332.0
		1968	24.1	10.2	3.9	125.0	296.0
		1969	29.5	11.9	4.16	113.0	480.0
		1970	33.6	15.6	3.92	193.0	288.0
		1971	37.1	15.9	4.19	226.0	392.0
		1972	39.8	17.3	4.27	185.0	427.0
		1973	33.0	14.3	4.05	210.0	410.0
2614035	Portland Linnton Fire Station July - Dec.	1973	10.9	-	-	47.0	95.0
2614033	Portland Rivergate Waterways Terminal July - Dec.	1973	28.0	-	-	116.0	715.0
	Camas Fuller Building	1972	25.7	-	-	78.6	157.0
		1973	-	-	-	-	-

TABLE 3.6

PROJECTED 1975 and 1985 SULFUR DIOXIDE EMISSIONS
FOR THE PORTLAND STANDARD METROPOLITAN STATISTICAL AREA

SOURCE CLASS	1970 Emissions, Tons/yr.	1975 Emissions, Tons/yr.	1985 Emissions, Tons/yr.
I. Fuel Combustion			
A. Residential	2203	2886	4386
B. Commercial	3757	4921	7479
C. Industrial	7910	8072	11865
Subtotal Fuel Combustion	13870	15879	23730
II. Process Loss Sources	17153	4226	5022
III. Transportation			
A. Light duty vehicles	947	1032	1219
B. Heavy duty vehicles	234	255	302
Subtotal Transportation	1181	1287	1521
IV. Solid Waste			
A. Incineration	8	7	9
B. Open Burning	25	0	0
C. Wigwam Waste Burners	2	0	0
Subtotal Solid Waste	35	7	9
V. Miscellaneous Sources			
A. Field Burning	0	0	0
B. Forest Fires	0	0	0
C. Slash Burning	0	0	0
D. Other	1085	1421	2161
Subtotal Misc. Sources	1085	1421	2161
VI. Power Plants	240	400	400
Total Area Sources	11569	12430	18285
Total Point Sources	21995	10791	14558
Total All Sources	33564	23221	32843

TABLE 3.7

CARBON MONOXIDE AMBIENT AIR QUALITY DATA IN THE PORTLAND METROPOLITAN AREA

Station Number	Station Location	Annual Geo. Mean, mg/m ³	Max. 1-hr Avg., mg/m ³	Max. 8-hr. Avg., mg/m ³	No. Times 1-Hr. Std. Exceeded	No. Times 8-Hr. Std. Exceeded
2614576	Portland CAMS - 718 W. Burnside					
	1970	3.11	50.6	25.6	3	90
	1971	3.47	48.3	22.1	3	124
	1972	3.76	42.6	28.9	1	123
	1973	3.72	39.1	25.6	0	110
2614066	Portland 600 S. W. Fourth Ave.					
	June-Dec. 1972	-	38.9	29.4	0	54
	1973	4.68	34.5	28.0	0	178
2614581	Portland DEQ, 1234 SW Morrison St.					
	1972	-	-	-	-	-
	May-Dec. 1973	-	18.4	12.5	0	6
2614579	Portland KOIN, S. W. Columbia St.					
	Sept.-Dec. 1972	-	32.2	17.1	0	14
	Jan.-May 1973	-	39.1	21.5	0	10
2614069	Portland Hollywood, 4112 N. E. Sandy Blvd.					
	December 1972	-	41.2	27.4	1	18
	1973	3.85	32.2	23.4	0	178

TABLE 3.8

TOTAL OXIDANT AMBIENT AIR QUALITY
DATA IN THE PORTLAND METROPOLITAN AREA

Station Number	Station Location	Annual Geo. Mean, ug/m ³	Max. 1-hr. Average, ug/m ³	Number of Times 1-Hr. Std. exceeded	
	Portland				
2614576	CAMS - 718 W. Burnside				
	March-Dec.	1967	-	294.0	22
		1968	9.63	274.0	5
		1969	9.72	215.6	4
		1970	8.21	294.0	7
		1971	8.46	196.0	5
		1972	17.9	323.0	17
		1973	13.7	167.0	1

The state and national air quality standard for photochemical oxidants is 160 ug/m³ maximum one-hour average not to be exceeded more than once per year.

TABLE 3.9

NITROGEN DIOXIDE AMBIENT AIR QUALITY DATA IN THE
PORTLAND METROPOLITAN AREA

Station Number	Station Location	Annual Arithmetic Mean, ug/m ³	
2614576	Portland		
	CAMS - 718 W. Burnside		
		1970	52.6
		1971	45.1
		1972	46.7
		1973	54.5

The state and national air quality standard for nitrogen dioxide is 100 ug/m³ annual arithmetic mean.

STUDY AREA TWO

LONGVIEW - KELSO CORRIDOR

4.1

STUDY RESULTS FOR THE LONGVIEW - KELSO CORRIDOR

A. Total Suspended Particulate

A compilation of the projected 1985 particulate air quality levels at each of the total suspended particulate monitoring stations in the Longview-Kelso study area is delineated in Table 4.1. One of the monitoring stations is projected to be in violation of the annual geometric mean air quality standard of 60 ug/m^3 . Thus, it is proposed that the Longview-Kelso Corridor illustrated in Figure 2.2 be designated as an Air Quality Maintenance Area for total suspended particulate.

The area depicted in Figure 2.2 is the area within the following boundaries: (1) a line running due east from Stella, Washington to intersect with a line one-half mile east of and parallel to Interstate 5 running south and east to intersect with the northern boundary of the proposed Portland Air Quality Maintenance Area; (2) a line running due south from Stella, Washington to intersect with a line one-half mile south and west of and parallel to Oregon U.S. Route 30 running south and east to intersect with the northern boundary of the Portland Air Quality Maintenance Area.

The Longview-Kelso study area is illustrated in Figure 4.1. It contains 158 square miles between St. Helens, Oregon and Longview, Washington.

Table 4.2 is a summary of the total suspended particulate air quality data measured at each of the monitoring stations in the Longview-Kelso study area for the period 1970 through 1973.

Table 4.3 contains the emissions of particulates from various types of sources within the Longview-Kelso study area for the years 1970, 1975, and 1985. For the purposes of this study it was assumed that three proposed new industrial particulate sources and two major expansions of existing industrial particulate sources would be constructed within the next few years in the study area. These proposed new and enlarged particulate sources are listed in Table 4.4 with their estimated emissions.

B. Sulfur Dioxide

Projections of 1985 sulfur dioxide air quality levels at the SO₂ monitoring station in the Longview-Kelso study area are presented in Table 4.5. The annual arithmetic mean is expected to at least double by 1985 over existing levels. This would bring the arithmetic mean to within 3 ug/m³ of the state standard of 60 ug/m³. Due to the closeness of the projected levels to the state standards, the uncertainty about the availability of low sulfur fuel, and the fact that the study area is upwind of the Portland area, which is proposed to be designated for sulfur dioxide, it is concluded that the Longview-Kelso Corridor should be designated for sulfur dioxide. Figure 2.2 shows the area proposed for designation.

Table 4.6 is a summary of available sulfur dioxide ambient air quality data in the Longview-Kelso study area for the period 1970 through 1973.

Table 4.7 lists the sulfur dioxide emissions by various source types within the study area for the year 1970, 1975, and 1985. For the purposes of this study, it was assumed that three proposed new SO₂ point sources and two proposed expansions of existing SO₂ sources would occur within the next few years in the study area. These proposed sources are listed in Table 4.4 with estimates of their emissions.

C. Carbon Monoxide, Photochemical Oxidants, and Nitrogen Dioxide

Estimated levels of existing air quality for carbon monoxide and photochemical oxidants, and EPA's criteria for designation of areas, do not require that the Longview-Kelso Corridor be designated for any of these air contaminants at this time. Refer to Appendix B for available data.

FIGURE 4.1
LONGVIEW - KELSO STUDY AREA

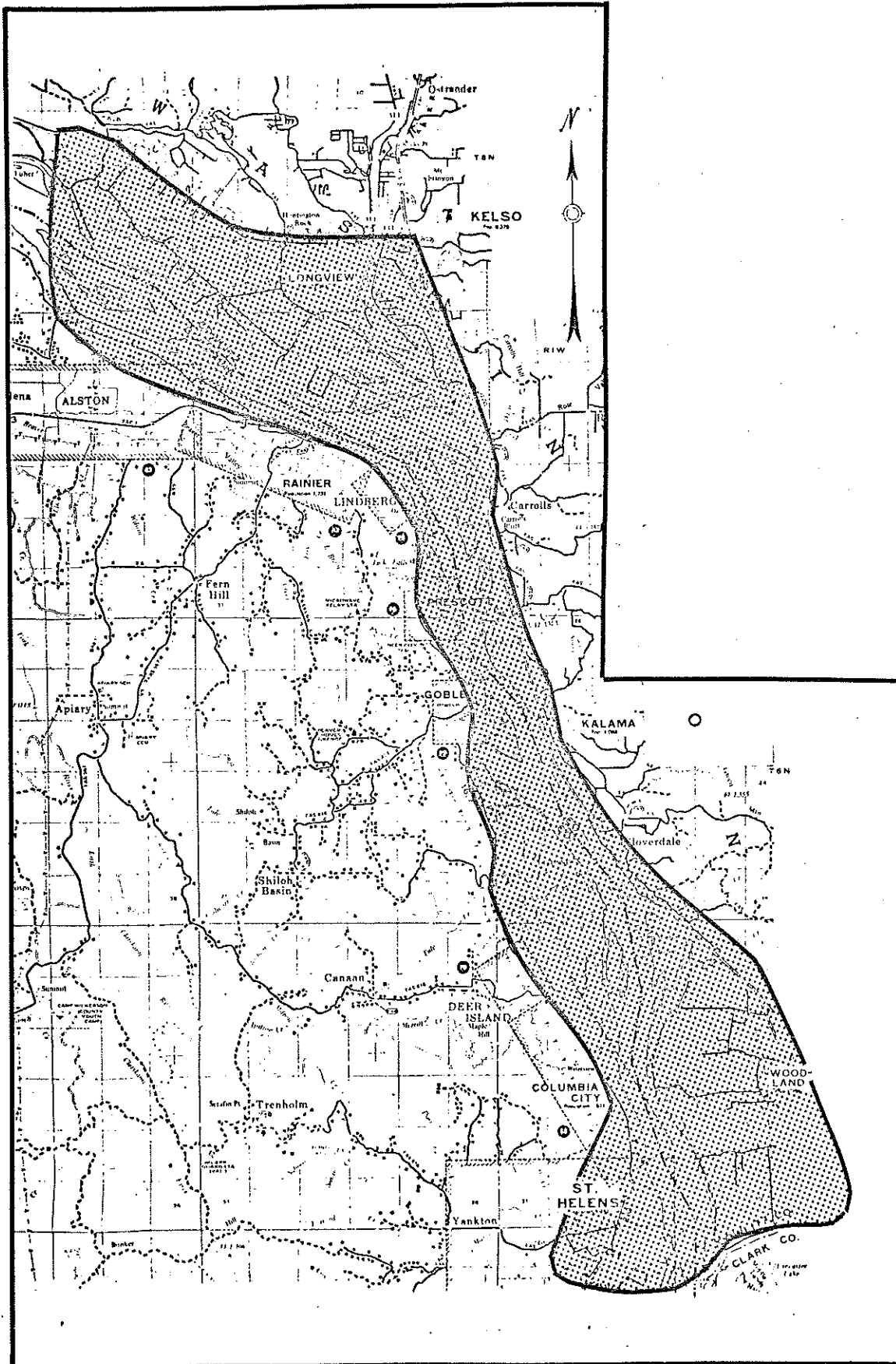


TABLE 4.1

PROJECTED 1975 and 1985 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY IN LONGVIEW-KELSO CORRIDOR

Station Number	Station Location	1975			1985		
		Annual Arith Mean, ug/m ³	Annual Geo ₃ Mean, ug/m ³	2nd Highest 24-hr Avg. ug/m ³	Annual Arith Mean, ug/m ³	Annual Geo ₃ Mean, ug/m ³	2nd Highest 24-hr Avg. ug/m ³
	Longview						
	Longview Trailer 706 30th Avenue	65.8	64.1*	98.0	69.4	67.5*	104.0
0522001	Prescott National Fish Lab	23.0	19.2	60.7	26.5	22.1	66.0
0528004	St. Helens Columbia County Court- house	26.3	22.9	58.7	29.8	26.0	66.6

*Exceeds State or National Air Quality Standard.

TABLE 4.2

TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY DATA IN THE LONGVIEW-KELSO CORRIDOR

Station Number	Station Location	Annual Arith ³ Mean, ug/m	Annual Geo ₃ Mean, ug/m	Geometric Std. Dev.	Max. 24-hr Avg., ug/m ³
	Longview				
	Longview Trailer, 706 30th				
	1970	-	-	-	-
	1971	70.0	64.0	1.58	165.0
	1972	75.0	67.0	1.60	246.0
	1973	73.9	65.76	1.26	216.0
0522001	Prescott				
	National Fish Laboratories				
	1970	-	-	-	-
	1971	33.9	29.2	1.70	105.0
	1972	37.4	31.0	1.89	120.2
	1973	31.1	26.3	1.83	64.4
0528004	St. Helens				
	Columbia County Courthouse				
	1970	-	-	-	-
	1971	-	-	-	-
	1972	39.0	33.3	1.80	97.8
	1973	34.4	30.3	1.69	81.0

TABLE 4.3

PROJECTED 1975 and 1985 PARTICULATE EMISSIONS FOR THE LONGVIEW-KELSO CORRIDOR

SOURCE CLASS	1970 Emissions Tons/Year	1975 Emissions Tons/Year	1985 Emission Tons/Year
I. Fuel Combustion			
A. Residential	55	72	114
B. Commercial	29	31	49
C. Industrial	<u>2759</u>	<u>2535</u>	<u>3346</u>
Subtotal - Fuel Combustion	2843	2638	3509
II. Process Loss Sources	14125	5335	6017
III. Transportation			
A. Light duty vehicles	434	460	524
B. Heavy duty vehicles	<u>75</u>	<u>79</u>	<u>90</u>
Subtotal - Transportation	509	539	614
IV. Solid Waste			
A. Incineration	13	13	15
B. Open Burning	177	36	41
C. Wigwam Waste Burners	<u>69</u>	<u>0</u>	<u>0</u>
Subtotal - Solid Waste	259	49	56
V. Miscellaneous Sources			
A. Field Burning	1	1	1
B. Forest Fires	212	212	212
C. Slash Burning	872	872	872
D. Other	<u>130</u>	<u>175</u>	<u>276</u>
Subtotal Miscellaneous Sources	1219	1260	1361
VI. Power Plants	0	0	0
Total Area Sources	2155	1825	2332
Total Point Sources	16800	7768	9226
Total All Sources	18955	10120	11558

TABLE 4.4

PROPOSED NEW AND EXPANDED POINT SOURCES IN THE LONGVIEW-KELSO CORRIDOR

SOURCE NAME	LOCATION	PARTICULATES	SULFUR DIOXIDE
Caribou Refinery (new)	Rainier, (Columbia County)	400 tons/yr	2900 tons/yr
Charter Refinery (new)	St. Hérens (Columbia County)	400 tons/yr	2600 tons/yr
Kraft Paper Mill (new)	Cowlitz County	1800 tons/yr	2400 tons/yr
Longview Fiber (exp)	Longview, (Cowlitz County)	1300 tons/yr	500 tons/yr
Weyerhaeuser (exp)	Longview (Cowlitz County)	1600 tons/yr	200 tons/yr
	TOTALS	5500 tons/yr	8600 tons/yr

TABLE 4.5

PROJECTED 1975 and 1985 SULFUR DIOXIDE AMBIENT AIR QUALITY IN LONGVIEW-KELSO CORRIDOR

Station Number	Station Location	1975	1975	1985	1985
		Annual Arith Mean, ug/m ³	2nd Highest 24 hr. Avg, ug/m ³	Annual Arith Mean, ug/m ³	2nd Highest 24 hr. Avg, ug/m ³
	Longview				
	Longview Trailer 706 30th Avenue	51.6	-	56.9	

TABLE 4.6

SULFUR DIOXIDE AMBIENT AIR QUALITY DATA IN THE LONGVIEW-KELSO CORRIDOR

Station Number	Station Location	Annual Arith Mean, ug/m ³	Annual Geo ₃ Mean, Ug/m ³	Geometric Std. Dev.	Max. 24-hr. Avg., ug/m ³	Max. 3-hr. Avg., ug/m ³
	Longview					
	Longview Trailer					
		1970	-	-	-	-
		1971	54.0	-	157.0	393.0
		1972	28.3	-	157.0	341.0
		1973	-	-	-	-

TABLE 4.7

PROJECTED 1975 and 1985 SULFUR DIOXIDE EMISSIONS FOR THE LONGVIEW-
KELSO URBANIZED AREA

SOURCE CLASS	1970 EMISSIONS TONS/YEAR	1975 EMISSIONS TONS/YEAR	1985 EMISSIONS TONS/YEAR
I. Fuel Combustion			
A. Residential	189	248	392
B. Commercial	259	339	535
C. Industrial	<u>7187</u>	<u>8110</u>	<u>9385</u>
Subtotal Fuel Combustion	7635	8697	10312
II. Process Loss Sources	2332	2332	2630
III. Transportation			
A. Light duty vehicles	121	129	147
B. Heavy duty vehicles	<u>143</u>	<u>144</u>	<u>164</u>
Subtotal - Transportation	264	273	311
IV. Solid Waste			
A. Incineration	2	2	2
B. Open Burning	18	0	0
C. Wigwam Waste Burn.	<u>0</u>	<u>0</u>	<u>0</u>
Subtotal - Solid Waste	20	2	2
V. Miscellaneous Sources			
A. Field Burning	0	0	0
B. Forest Fires	0	0	0
C. Slash Burning	0	0	0
D. Other	<u>641</u>	<u>840</u>	<u>995</u>
Subtotal Misc. Sources	641	840	995
VI. Power Plants	0	0	0
Total Area Sources	1701	1902	2486
Total Point Sources	9184	10242	11764
Total All Sources	10885	12144	14250

STUDY AREA THREE

SALEM METROPOLITAN AREA

STUDY RESULTS FOR THE SALEM METROPOLITAN AREA

A. Total Suspended Particulate

Projected 1985 total suspended particulate air quality levels at the particulate monitoring stations in the Salem metropolitan study area are provided in Table 5.1. As can be seen from the table, this monitor is presently in substantial compliance with both state and national ambient air quality standards for suspended particulates and is projected to remain in compliance through 1985. Thus, it is not proposed to designate the Salem metropolitan area for particulates.

Figure 5.1 depicts the Salem metropolitan study area. This area contains 72 square miles and is described as the Salem Urban Service Area as defined by the Mid-Willamette Valley Council of Governments.

Table 5.2 is a summary of the total suspended particulate air quality data measured at the particulate monitoring stations in the Salem study area for the period 1970 through 1973.

Table 5.3 is a summary of particulate emissions by source category in the Salem Standard Metropolitan Statistical Area for the years 1970, 1975 and 1985.

B. Sulfur Dioxide

Ambient air monitoring of sulfur dioxide is presently in progress at Center and Liberty Streets in Salem using a gas bubbler sampler (Station No. 2438029). Sampling results for the period, June-December 1973, indicate an arithmetic mean of 13.1 ug/m^3 and 178.2 ug/m^3 maximum 24 hour average. These values are well below both state and national ambient air quality standards for sulfur dioxide.

Sulfur dioxide emission projections for 1975 and 1985 in the Salem SMSA are contained in Table 5.4. The increase in emissions between 1970 and 1985 will not be significant enough to raise the SO_2 air quality levels above either state or national ambient air quality standards. Thus, it is not proposed to designate the Salem metropolitan area for sulfur dioxide.

C. Carbon Monoxide, Photochemical Oxidants, and Nitrogen Dioxide

Measured and estimated levels of present air quality for carbon monoxide and photochemical oxidants, and EPA's criteria for area designations, do not require that the Salem metropolitan area be designated for any of these air contaminants at this time. Refer to Appendix B for available data.

FIGURE 5.1
SALEM METROPOLITAN STUDY AREA

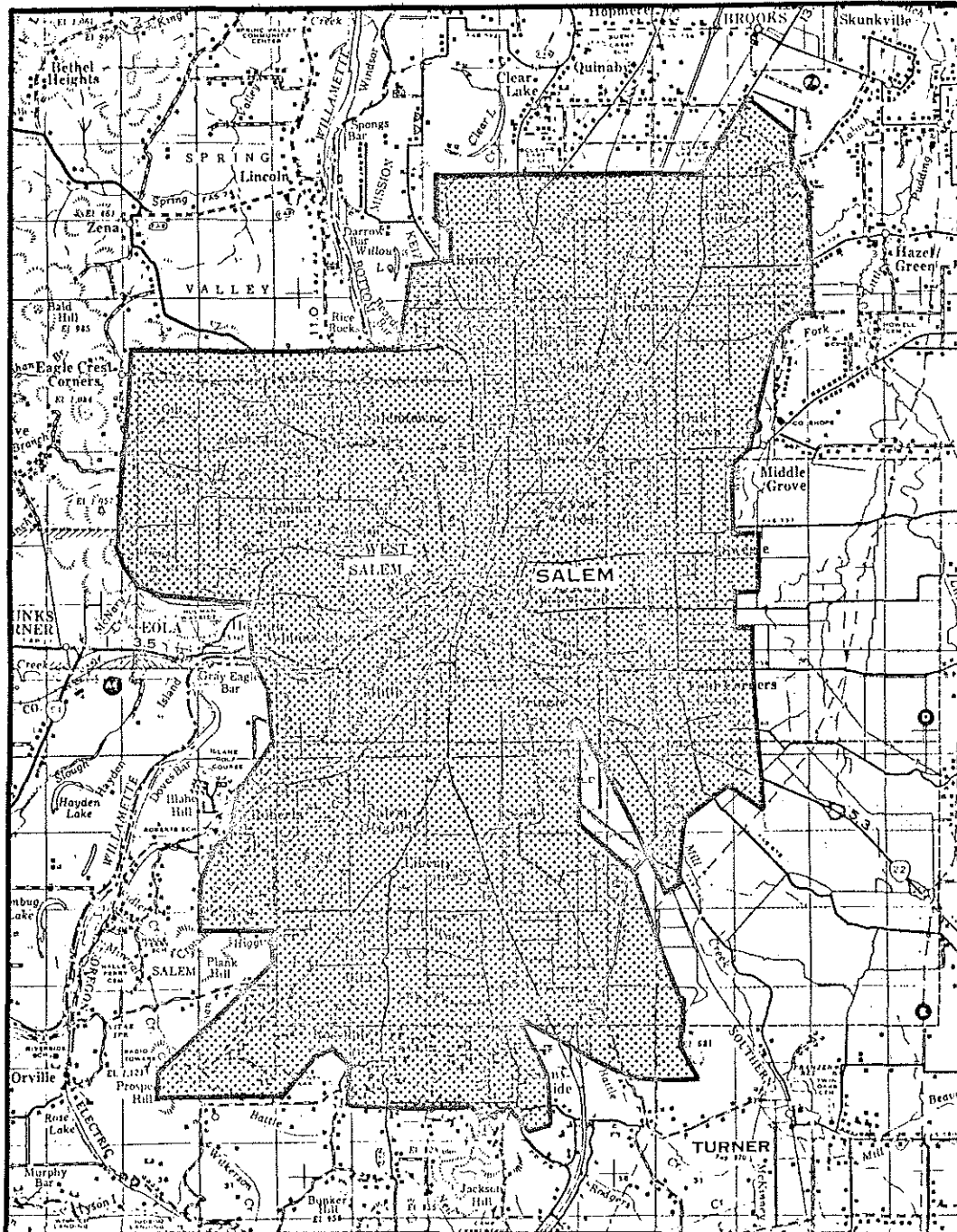


TABLE 5.1
 PROJECTED 1985 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY
 IN SALEM METROPOLITAN AREA

Station Number	Station Location	1973 Annual Arith Mean, ug/m ³	1973 Annual Geo. Mean, ug/m ³	1973 Geometric Std. Dev.	1985 Annual Arith Mean, ug/m ³	1985 Annual Geo. Mean, ug/m ³	1985 2nd Highest 24-hr Avg. ug/m ³
2438020	Salem-2585 State Street	41.3	37.7	1.54	32.0	29.1	63.5

Table 5.2

TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY
DATA IN THE SALEM METROPOLITAN AREA 1970-1973

Station Number	Station Location	Annual Arith Mean, $\mu\text{g}/\text{m}^3$	Annual Geo Mean, $\mu\text{g}/\text{m}^3$	Geometric Std.Dev.	Max. 24-hr Avg., $\mu\text{g}/\text{m}^3$
2438020	Salem - 2585 State Street				
	1970	-	-	-	-
	1971	-	-	-	-
	1972	55.1	47.4	1.86	96.3
	1973	41.3	37.7	1.54	98.5
	Salem 24 - Willamette Univ.				
	1970	43.4	35.2	1.91	170.0
	1971	43.8	36.6	1.83	155.0
	1972	-	-	-	-
	1973	-	-	-	-

TABLE 5.3

PROJECTED 1975 and 1985 PARTICULATE EMISSIONS
FOR THE SALEM STANDARD METROPOLITAN STATISTICAL AREA

SOURCE CLASS	1970 Emissions Tons/yr	1975 Emissions Tons/yr	1985 Emissions Tons/yr
I. Fuel Combustion			
A. Residential	105	138	218
B. Commercial	49	49	78
C. Industrial	<u>577</u>	<u>391</u>	<u>548</u>
Subtotal Fuel Combustion	731	578	843
II. Process Loss Sources	175	81	94
III. Transportation			
A. Light duty vehicles	375	405	474
B. Heavy duty vehicles	<u>135</u>	<u>145</u>	<u>169</u>
Subtotal Transportation	510	550	643
IV. Solid Waste			
A. Incineration	2	2	2
B. Open Burning	134	110	128
C. Wigwam Waste Burners	<u>257</u>	<u>0</u>	<u>0</u>
Subtotal Solid Waste	393	112	130
V. Miscellaneous Sources			
A. Field Burning	1868	718	718
B. Forest Fires	67	67	67
C. Slash Burning	288	288	288
D. Other	<u>55</u>	<u>73</u>	<u>111</u>
Subtotal Misc. Sources	2278	1146	1184
VI. Power Plants	0	303	303
Total Area Sources	3014	1957	2192
Total Point Sources	<u>1073</u>	<u>813</u>	<u>1005</u>
Total All Sources	4087	2770	3197

TABLE 5.4

PROJECTED 1975 and 1985 SULFUR DIOXIDE EMISSIONS
FOR THE SALEM STANDARD METROPOLITAN STATISTICAL AREA

SOURCE CLASS	1970 Emissions Tons/yr	1975 Emissions Tons/yr	1985 Emissions Tons/yr
I. Fuel Combustion			
A. Residential	328	433	684
B. Commercial	523	690	1091
C. Industrial	<u>468</u>	<u>580</u>	<u>812</u>
Subtotal Fuel Combustion	1319	1703	2587
II. Process Loss Sources	3175	800	928
III. Transportation			
A. Light duty vehicles	227	246	287
B. Heavy duty vehicles	<u>244</u>	<u>263</u>	<u>309</u>
Subtotal Transportation	471	509	596
IV. Solid Waste			
A. Incineration	1	1	1
B. Open Burning	26	23	27
C. Wigwam Waste Burners	<u>3</u>	<u>0</u>	<u>0</u>
Subtotal Solid Waste	30	24	28
V. Miscellaneous Sources			
A. Field Burning	0	0	0
B. Forest Fires	0	0	0
C. Slash Burning	0	0	0
D. Other	<u>86</u>	<u>113</u>	<u>179</u>
Subtotal Misc. Sources	86	113	179
VI. Power Plants	0	860	860
Total Area Sources	907	1077	1485
Total Point Sources	<u>4174</u>	<u>2932</u>	<u>3693</u>
Total All Sources	5081	4009	5178

STUDY AREA FOUR

ALBANY-LEBANON AREA

STUDY RESULTS FOR THE ALBANY-LEBANON AREA

A. Total Suspended Particulate

Projected 1985 total suspended particulate air quality levels at the particulate monitoring stations in the Albany-Lebanon study area are provided in Table 6.1. As can be seen from the table, these monitors are projected to be in substantial compliance with state and national ambient air quality standards for suspended particulates in 1985. Thus, it is not proposed to designate the Albany-Lebanon area for particulates.

Figure 6.1 illustrates the Albany-Lebanon study area. This area contains 41 square miles of urbanized area in the vicinity of the cities of Albany and Lebanon.

Table 6.2 is a summary of the total suspended particulate air quality data measured at the particulate monitoring stations in the Albany-Lebanon study area for the period 1970 through 1973.

Table 6.3 is a compilation of particulate emissions by source category in Linn County for the years 1970, 1975 and 1985.

B. Sulfur Dioxide, Carbon Monoxide, Photochemical Oxidants, and Nitrogen Dioxide

There is no ambient air quality data available for sulfur dioxide, carbon monoxide, photochemical oxidants or nitrogen dioxide in the Albany-Lebanon study area. It is not expected that the levels of these contaminants are significant or would be significant by 1985. Thus, it is not proposed to designate the Albany-Lebanon area for any of these air contaminants at this time.

FIGURE 6.1

ALBANY-LEBANON STUDY AREA

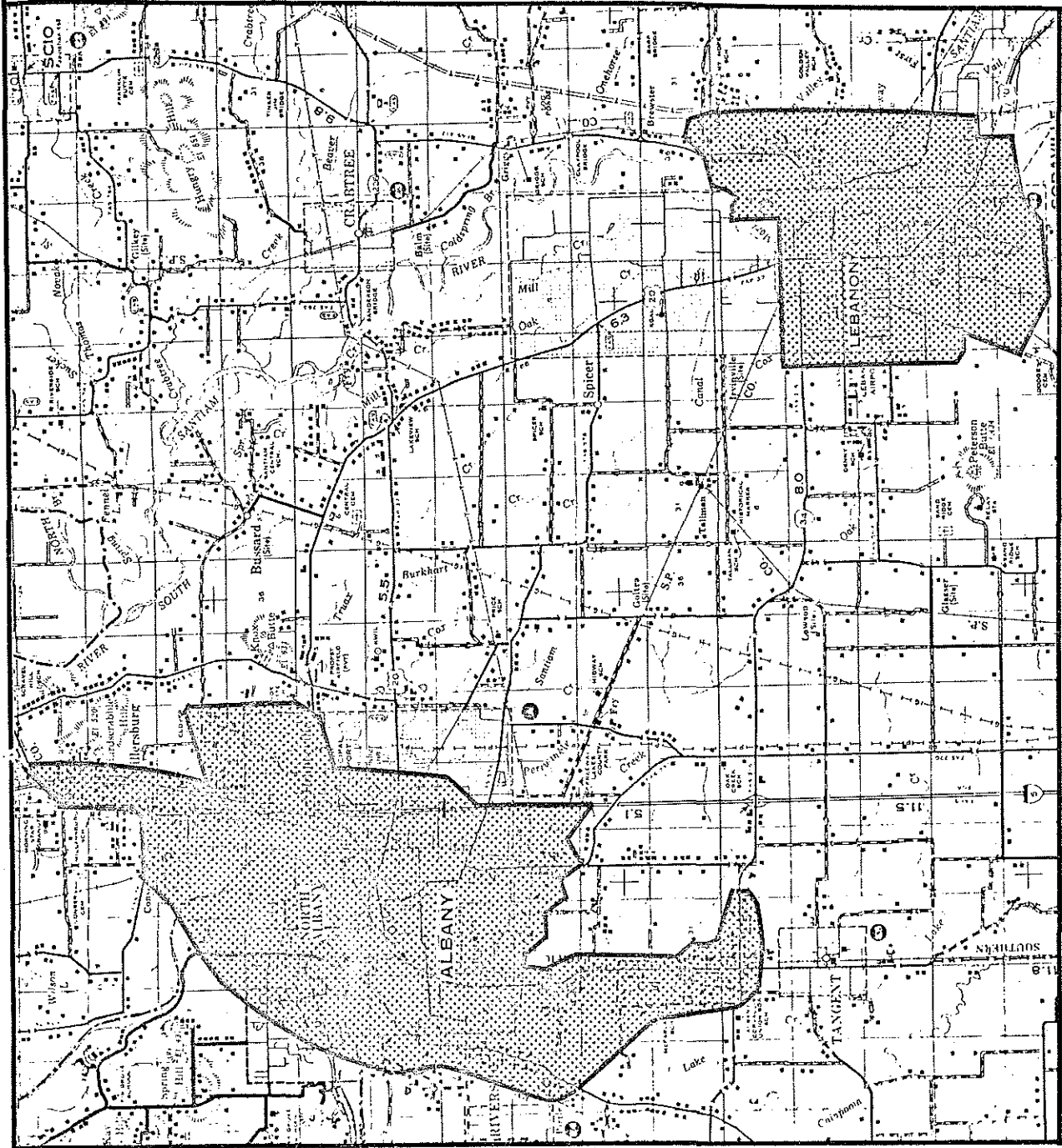


TABLE 6.1
 PROJECTED 1985 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY
 IN ALBANY-LEBANON AREA

Station Number	Station Location	1973 Annual Arith Mean, ug/m ³	1973 Ann. Geo. Mean, ug/m ³	1985 Annual Arith Mean, ug/m ³	1985 Annual Geo Mean, ug/m ³	1985 2nd Highest 24-hr Avg. ug/m ³
2202001	Albany	37.6	32.9	24.2	21.0	55.0
2214002	Lebanon	52.7	46.2	33.9	29.5	76.0

TABLE 6.2
 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY DATA
 IN THE ALBANY-LEBANON AREA

Station Number	Station Location	Year	Annual Arith Mean, ug/m ³	Annual Geo ₃ Mean, ug/m ³	Geometric Std. Dev.	Max. 24-hour Avg., ug/m ³
2202001	Albany	1970	51.4	44.0	1.75	171.0
		1971	43.4	38.7	1.63	120.0
		1972	48.4	44.0	1.57	106.1
		1973	37.6	32.9	1.71	93.3
2214002	Lebanon	1970	-	-	-	-
		July-December 1971	72.5	65.3	1.65	104.8
		1972	74.5	64.1	1.76	203.2
		1973	52.7	46.2	1.69	147.1

TABLE 6.3

PROJECTED 1975 and 1985 PARTICULATE EMISSIONS

FOR LINN COUNTY

SOURCE CLASS	1970 Emissions Tons/yr	1975 Emissions Tons/yr	1985 Emissions Tons/yr
I. Fuel Combustion			
A. Residential	29	38	60
B. Commercial	23	22	35
C. Industrial	<u>1081</u>	<u>687</u>	<u>962</u>
Subtotal Fuel Combustion	1133	747	1057
II. Process Loss Sources	2848	966	1121
III. Transportation			
A. Light duty vehicles	196	212	248
B. Heavy duty vehicles	<u>159</u>	<u>172</u>	<u>201</u>
Subtotal Transportation	355	384	449
IV. Solid Waste			
A. Incineration	1	1	1
B. Open Burning	56	40	47
C. Wigwam Waste Burners	<u>142</u>	<u>0</u>	<u>0</u>
Subtotal Solid Waste	199	41	48
V. Miscellaneous Sources			
A. Field Burning	4328	1510	1510
B. Forest Fires	205	205	205
C. Slash Burning	515	515	515
D. Other	<u>21</u>	<u>28</u>	<u>44</u>
Subtotal Misc. Sources	5069	2258	2274
VI. Power Plants	-	-	-
Total Area Sources	5533	2771	2906
Total Point Sources	<u>4071</u>	<u>1625</u>	<u>2043</u>
Total All Sources	9604	4396	4949

STUDY AREA FIVE

EUGENE-SPRINGFIELD METROPOLITAN AREA

STUDY RESULTS FOR THE EUGENE-SPRINGFIELD METROPOLITAN AREA

A. Total Suspended Particulate

Projected 1985 total suspended particulate air quality levels at the particulate monitoring stations in the Eugene-Springfield study area are provided in Table 7.1. Four of the five monitoring stations are projected to exceed state and national ambient air quality standards for particulates. Thus, it is proposed that the Eugene-Springfield metropolitan area illustrated in Figure 2.3 be designated as an Air Quality Maintenance Area for total suspended particulate.

The area depicted in Figure 2.3 is the Eugene-Springfield Urban Service Area as defined by the Lane Council of Governments in 1971. The Eugene-Springfield study area is illustrated in Figure 7.1 and has the same boundaries as the Eugene-Springfield Urban Service Area. The study area covers 90 square miles of land area.

Table 7.2 summarizes the suspended particulate air quality data measured at the particulate monitoring stations in the Eugene-Springfield study area for the period 1970 through 1973.

Particulate emissions for the Eugene-Springfield Standard Metropolitan Statistical Area are compiled in Table 7.3 for various emission source categories.

B. Sulfur Dioxide

Ambient air monitoring of sulfur dioxide is presently being conducted at 11th and Willamette Streets in Eugene using a gas bubbler sampler (Station No. 2018052). Sampling results for the period, June-December 1973, show an arithmetic mean of 13.1 ug/m^3 and 13.1 ug/m^3 maximum 24-hour average. These values are well below both state and national ambient air quality standards for sulfur dioxide.

Sulfur dioxide emission projections for 1975 and 1985 in the Eugene-Springfield SMSA are contained in Table 7.4. The increase in emissions between 1970 and 1985 will not be significant enough to raise the SO_2 air quality levels above either state or national ambient air quality standards. Thus, it is not proposed to designate the Eugene-Springfield metropolitan area for sulfur dioxide.

C. Carbon Monoxide, Photochemical Oxidants, and Nitrogen Dioxide

Measured and estimated levels of present air quality for carbon monoxide and photochemical oxidants, and EPA's criteria for area designations, do not require that the Eugene-Springfield metropolitan area be designated for any of these air contaminants at this time. Refer to Appendix B for available data.

FIGURE 7.1

EUGENE-SPRINGFIELD METROPOLITAN STUDY AREA

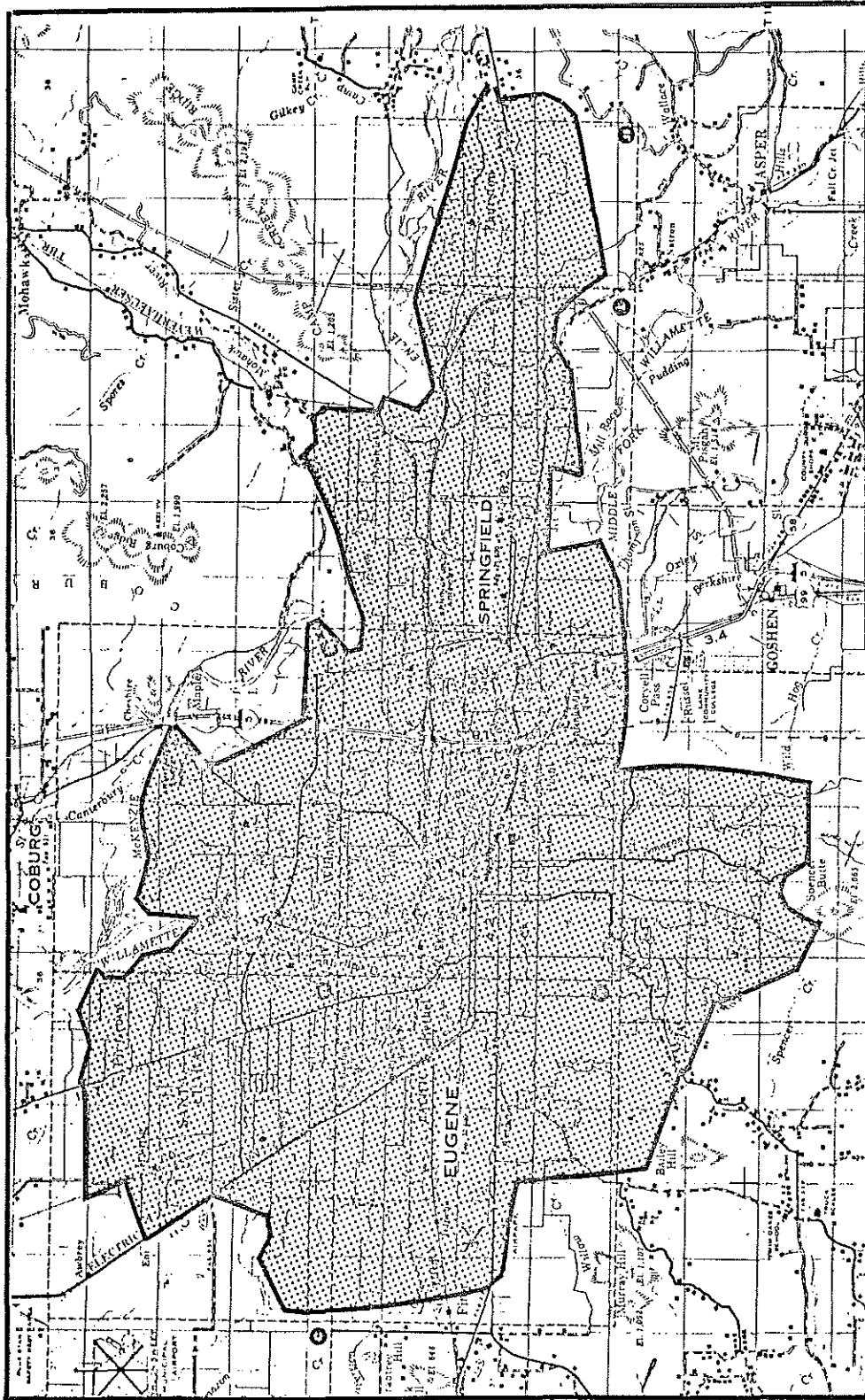


TABLE 7.1

PROJECTED 1985 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY

IN EUGENE-SPRINGFIELD METROPOLITAN AREA

Station Number	Station Location	1973 Annual Arith Mean, ug/m ³	1973 Annual Geo. Mean, ug/m ³	1973 Geometric Std. Dev.	1985 Annual Arith Mean, ug/m ³	1985 Annual Geo. Mean, ug/m ³	1985 2nd Highest 24-hr Avg. ug/m ³
2000033	Eugene Airport	39.2	32.1	1.95	35.5	28.4	95.0
2018032	Eugene City Hall	85.8	73.0*	1.78	82.1	69.5*	200.0*
2018035	Eugene Commerce Bldg.	81.1	70.2*	1.77	77.4	65.7*	183.0*
2033035	Springfield City Shops	107.0	95.3*	1.64	99.4	89.0*	207.0*
2033037	Springfield Library	103.1	93.1*	1.60	103.3	91.4*	222.0*

* Exceeds state or national air quality standard

TABLE 7.2

TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY DATA
IN THE EUGENE-SPRINGFIELD METROPOLITAN AREA

Station Number	Station Location		Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geometric Std. Dev.	Max. 24-hr Avg., ug/m ³
2000033	Eugene Airport April - Dec.	1970	51.4	40.7	2.08	177.0
		1971	40.3	31.2	2.18	141.0
		1972	41.2	33.0	2.02	134.0
		1973	39.2	32.1	1.95	119.0
2018032	Eugene City Hall April - Dec.	1970	82.8	70.8	1.79	214.0
		1971	91.8	75.7	1.90	397.0
		1972	105.8	86.1	1.95	317.0
		1973	85.8	73.0	1.78	265.0
2018035	Eugene Commerce Bldg.	1970	68.3	55.8	1.98	171.0
		1971	56.3	48.2	1.79	148.0
		1972	83.4	73.3	1.70	214.0
		1973	81.1	70.2	1.77	203.0
2033035	Springfield City Shops April - Dec.	1970	155.7	133.0	1.86	367.0
		1971	107.5	90.3	1.87	425.0
		1972	104.0	89.7	1.77	238.0
		1973	107.0	95.3	1.64	238.0
2033037	Springfield Library Oct. - Dec.	1970	73.0	63.0	1.75	180.0
		1971	94.4	81.9	1.74	246.0
		1972	102.3	85.4	1.87	347.0
		1973	103.1	93.1	1.60	271.0

TABLE 7.3

PROJECTED 1975 and 1985 PARTICULATE EMISSIONS
FOR THE EUGENE-SPRINGFIELD STANDARD METROPOLITAN STATISTICAL AREA

SOURCE CLASS	1970 Emissions Tons/yr	1975 Emissions Tons/yr	1985 Emissions Tons/yr
I. Fuel Combustion			
A. Residential	96	123	186
B. Commercial	337	149	225
C. Industrial	<u>4577</u>	<u>2707</u>	<u>3682</u>
Total Fuel Combustion	5010	2979	4093
II. Process Loss Sources	9923	2439	2790
III. Transportation			
A. Light duty vehicles	756	801	897
B. Heavy duty vehicles	76	81	91
Subtotal Transportation	832	882	988
IV. Solid Waste			
A. Incineration	1	1	1
B. Open Burning	388	388	435
C. Wigwam Waste Burners	<u>580</u>	<u>156</u>	<u>156</u>
Subtotal Solid Waste	969	555	592
V. Miscellaneous Sources			
A. Field Burning	637	247	247
B. Forest Fires	391	391	391
C. Slash Burning	2150	2150	2150
D. Other	<u>351</u>	<u>449</u>	<u>678</u>
Subtotal Misc. Sources	3529	3237	3466
VI. Power Plants	117	144	144
Total Area Sources	4998	4820	5340
Total Point Sources	<u>15382</u>	<u>5406</u>	<u>6733</u>
Total All Sources	20380	10226	12073

TABLE 7.4

PROJECTED 1975 and 1985 SULFUR DIOXIDE EMISSIONS
FOR THE EUGENE-SPRINGFIELD STANDARD METROPOLITAN STATISTICAL AREA

SOURCE CLASS	1970 Emissions Tons/yr	1975 Emissions Tons/yr	1985 Emissions Tons/yr
I. Fuel Combustion			
A. Residential	317	406	613
B. Commercial	286	285	430
C. Industrial	<u>1233</u>	<u>998</u>	<u>1357</u>
Subtotal Fuel Combustion	1836	1689	2400
II. Process Loss Sources	0	0	0
III. Transportation			
A. Light duty vehicles	255	270	302
B. Heavy duty vehicles	<u>321</u>	<u>340</u>	<u>381</u>
Subtotal Transportation	576	610	683
IV. Solid Waste			
A. Incineration	0	0	0
B. Open Burning	0	0	0
C. Wigwam Waste Burners	<u>1</u>	<u>1</u>	<u>1</u>
Subtotal Solid Waste	1	1	1
V. Miscellaneous Sources			
A. Field Burning	0	0	0
B. Forest Fires	0	0	0
C. Slash Burning	0	0	0
D. Other	<u>878</u>	<u>1124</u>	<u>1697</u>
Subtotal Misc. Sources	878	1124	1697
VI. Power Plants	0	4	4
Total Area Sources	3031	3105	4347
Total Point Sources	<u>260</u>	<u>323</u>	<u>438</u>
Total All Sources	3291	3428	4785

STUDY AREA SIX

MEDFORD-ASHLAND AREA

STUDY RESULTS FOR THE MEDFORD-ASHLAND AREA

A. Total Suspended Particulate

Projected 1985 total suspended particulate air quality levels at the particulate monitoring stations in the Medford-Ashland study area are provided in Table 8.1. One of the two monitoring stations in the study area is projected to exceed state and national ambient air quality standards for particulates in 1985. Thus, it is proposed that the Medford-Ashland area illustrated in Figure 2.4 be designated as an Air Quality Maintenance Area for total suspended particulate.

The area depicted in Figure 2.4 is the Bear Creek Urban Region Land Use Planning Area as defined by the Jackson County Planning Commission. The Medford-Ashland study area is illustrated in Figure 8.1. It contains 68 square miles of industrial, commercial and urban residential area within the Bear Creek Urban Region.

Table 8.2 summarizes the suspended particulate air quality data measured at the particulate monitoring stations in the Medford-Ashland study area for the period 1970 through 1973.

Particulate emissions for Jackson County are compiled in Table 8.3 for various emission source categories.

B. Sulfur Dioxide

Ambient air monitoring of sulfur dioxide is presently being conducted at Main and Oakdale Streets in Medford using a gas bubbler sampler (Station No. 1520017). Sampling results for the period, May - December 1973, indicate an arithmetic mean of 13.1 ug/m^3 and 13.1 ug/m^3 maximum 24 hour average. These values are well below both state and national ambient air quality standards for sulfur dioxide.

The product of the existing SO_2 air quality levels and the growth rate in total earnings (1.97) for the period 1970 through 1985 does not exceed state or national ambient air quality standards for sulfur dioxide. Thus, according to the criteria developed by EPA, the Medford-Ashland area is not recommended for designation for sulfur dioxide.

C. Carbon Monoxide, Photochemical Oxidants, and Nitrogen Dioxide

Estimated levels of existing air quality for carbon monoxide and photochemical oxidants, and EPA's criteria for area designations, do not require that the Medford-Ashland area be designated for any of these air contaminants at this time.

FIGURE 8.1
MEDFORD-ASHLAND STUDY AREA

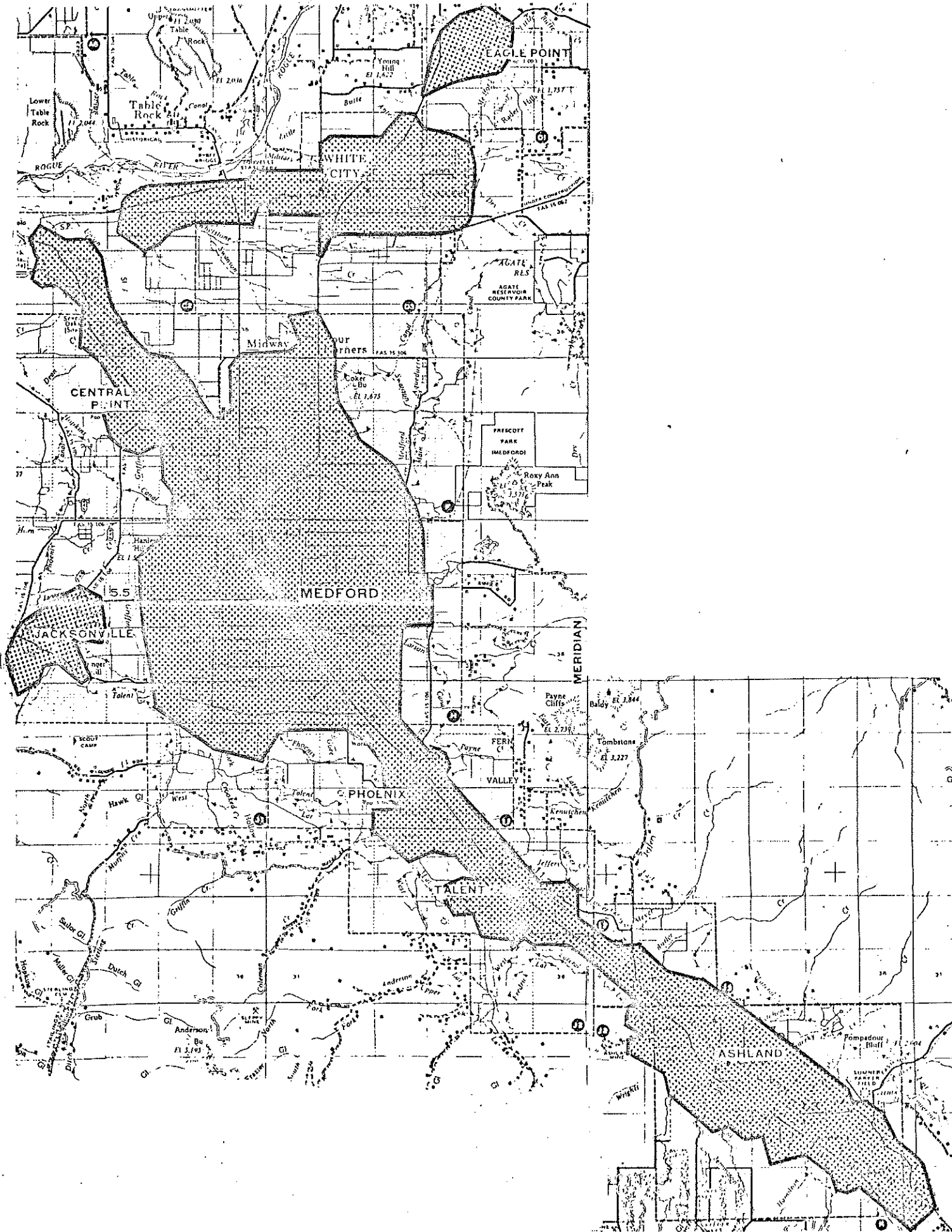


TABLE 8.1
 PROJECTED 1985 TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY
 IN MEDFORD-ASHLAND AREA

Station Number	Station Location	1973		1973 Geometric Std. Dev.	1985		1985
		Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³		Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	2nd Highest 24-hr. Avg. ug/m ³
1502005	Ashland	52.9	48.3	1.54	58.5	53.3	117.0
1520017	Medford	77.2	69.9*	1.56	82.8	75.0*	150.0*

*Exceeds state or national air quality standards.

TABLE 8.2

TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY DATA

IN THE MEDFORD-ASHLAND AREA

Station Number	Station Location		Annual Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geometric Std. Dev.	Max. 24-hr Avg., ug/m ³
1502005	Ashland	1970	52.2	47.2	1.61	118.0
		1971	66.4	58.0	1.69	237.0
		1972	58.7	53.7	1.56	125.0
		1973	52.9	48.3	1.54	127.0
1520017	Medford	1970	88.8	78.0	1.71	298.0
		1971	90.3	78.9	1.72	226.0
		1972	92.5	83.4	1.60	207.0
		1973	77.2	69.9	1.56	183.0

TABLE 8.3

PROJECTED 1975 and 1985 PARTICULATE EMISSIONS
FOR JACKSON COUNTY

SOURCE CLASS	1970 Emissions Tons/yr	1975 Emissions Tons/yr	1985 Emissions Tons/yr
I. Fuel Combustion			
A. Residential	24	30	47
B. Commercial	19	24	38
C. Industrial	<u>1854</u>	<u>1267</u>	<u>1774</u>
Subtotal Fuel Combustion	1897	1321	1859
II. Process Loss Sources	550	302	350
III. Transportation			
A. Light duty vehicles	193	207	257
B. Heavy duty vehicles	<u>66</u>	<u>71</u>	<u>88</u>
Subtotal Transportation	259	278	345
IV. Solid Waste			
A. Incineration	0	0	0
B. Open Burning	91	69	85
C. Wigwam Waste Burners	<u>714</u>	<u>307</u>	<u>307</u>
Subtotal Solid Waste	805	376	392
V. Miscellaneous Sources			
A. Field Burning	101	101	101
B. Forest Fires	166	166	166
C. Slash Burning	210	210	210
D. Other	<u>86</u>	<u>108</u>	<u>170</u>
Subtotal Misc. Sources	563	585	647
VI. Power Plants	0	0	0
Total Area Sources	965	1025	1219
Total Point Sources	<u>3109</u>	<u>1837</u>	<u>2374</u>
Total All Sources	4074	2862	3593

APPENDIX A

STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY CONTROL DIVISION
AMBIENT AIR STANDARDS

CONTAMINANT	FEDERAL STANDARDS		STATE OF OREGON STANDARDS
	PRIMARY	SECONDARY	
Carbon-Monoxide	(1) 10 mg/M ³ max. 8-hr average ^a	Same as primary	(1) 10 mg/M ³ max. 8-hr average ^a
	(2) 40 mg/M ³ max. 1-hr average ^a	Same as primary	(2) 40 mg/M ³ max. 1-hr average ^a
Sulfur-Dioxide	(1) 80 ug/M ³ annual arithmetic mean		(1) 60 ug/M ³ annual arithmetic mean ^b
	(2) 365 ug/M ³ max. 24-hr concentration ^a	1300 ug/M ³ max. 3-hr average	(2) 260 ug/M ³ max. 24-hr average ^{a, b}
			(3) 1300 ug/M ³ max. 3-hr average ^a
Photochemical Oxidant	160 ug/M ³ max. 1-hr average ^a	Same as primary	160 ug/M ³ max. 1-hr average ^a
Nitrogen-Dioxide	100 ug/M ³ annual arithmetic mean	Same as primary	100 ug/M ³ annual arithmetic mean
Reactive Hydrocarbons	160 ug/M ³ max. 3-hr average 0600-0900 ^a	Same as primary	160 ug/M ³ max. 3-hr avg. 0600-0900 ^a
Suspended Particulate	(1) 75 ug/M ³ annual geometric mean	(1) 60 ug/M ³ annual geometric mean as a guide	(1) 60 ug/M ³ annual geometric mean
	(2) 260 ug/M ³ max. 24-hr concentration ^a	(2) 150 ug/M ³ max. 24-hr concentration ^a	(2) 100 ug/M ³ 24-hr concentration more than 15% of time ^c (3) 150 ug/M ³ maximum 24-hr concentration ^a

Ambient Air Standards (Contd)

CONTAMINANT	FEDERAL STANDARDS		STATE OF OREGON STANDARDS
	PRIMARY	SECONDARY	
Particle Fallout	None	None	(1) 10 gms/M ² /month in an industrial area (2) 5.0 gms/M ² /month in an industrial area if presence of soot or wood-waste and volatile fraction exceeds 70%. (3) 5.0 gms/M ² /month in a residential or commercial area or 3.5 gms/M ² /month if soot, wood-waste are present or volatile portion exceeds 70%.
Calcium Oxide As Suspended Particulate	None	None	(1) shall not exceed 20 ug/M ³ in residential or commercial areas at any time
Calcium Oxide As Particle Fallout	None	None	(2) shall not exceed 0.35 gms/M ² /month at any station

a = "not to be exceeded more than once per year."

b = "Federal Regulations on this standard revoked September 14, 1973."

c = "For samples collected during a calendar month."

OREGON STATE STANDARDS ARE TO BE COMPLIED WITH
"AT THE EARLIEST POSSIBLE DATE BUT NOT LATER
THAN JULY, 1, 1975."

FEDERAL STANDARDS TAKE EFFECT AFTER JULY 1, 1975.

APPENDIX B

AMBIENT AIR QUALITY DATA SUMMARIES

TABLE B.1

TOTAL SUSPENDED PARTICULATE AMBIENT AIR QUALITY DATA SUMMARY
FOR MONITORING STATIONS OUTSIDE OF AQMA STUDY AREAS

Station Number	Station Location	Ann.Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geometric Std. Dev.	Max. 24-hr. Avg., ug/m ³	
0104004	Baker - 4	1970	77.8	65.4	1.79	286.0
		1971	71.4	67.3	1.45	139.0
		1972	74.1	68.4	1.51	180.0
		1973	76.4	68.4	1.62	162.0
0204006	Corvallis - 6	1970	40.9	35.7	1.69	121.0
		1971	49.3	43.2	1.70	116.0
		1972	38.5	33.9	1.70	83.4
		1973	29.0	25.4	1.67	68.3
0364001	Sandy Fire Station	1970	45.1	36.4	1.98	257.6
		1971	43.1	34.1	2.10	126.0
		1972	65.3	51.4	2.12	213.8
		1973	-	-	-	-
0402005	Astoria - 5	1970	40.5	35.6	1.66	137.0
		1971	40.4	37.0	1.49	156.0
		1972	50.9	44.1	1.71	166.0
		1973	51.7	45.1	1.72	112.0
0607001	Coos Bay - 1	1970	58.7	51.7	1.67	152.0
		1971	61.6	53.6	1.74	185.0
		1972	49.8	44.9	1.60	108.0
		1973	56.3	50.4	1.60	164.0
0904005	Bend - 5	1970	59.1	50.7	1.69	400.0
		1971	54.8	49.5	1.57	162.0
		1972	58.4	53.6	1.50	192.0
		1973	56.0	48.7	1.58	236.0
1027017	Roseburg -17	1970	59.0	50.6	1.71	231.0
		1971	59.0	51.2	1.72	185.0
		1972	66.9	59.3	1.63	222.0
		1973	63.0	52.9	1.79	233.0
1707005	Grants Pass -5	1970	68.3	58.0	1.76	249.0
		1971	69.2	59.1	1.76	246.0
		1972	69.3	61.3	1.65	197.0
		1973	61.1	53.8	1.66	140.0

TABLE B.1 (Continued)

Station Number	Station Location	Ann.Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geometric Std. Dev.	Max.24-hr. Avg., ug/m ³	
1810014	Klamath Falls -14	1970	78.3	68.8	1.69	195.0
		1971	89.6	80.3	1.65	207.0
		1972	79.2	70.1	1.62	251.0
		1973	74.1	64.0	1.69	295.0
1810015	Klamath Falls -15	1970	-	-	-	-
		1971	35.5	29.6	1.87	173.0
		1972	37.0	29.1	1.97	217.0
		1973	47.2	41.4	1.68	105.0
2009001	Cottage Grove	1970	-	-	-	-
		1971	-	-	-	-
		1972	47.1	42.1	1.63	109.0
		1973	47.3	43.2	1.53	102.0
2024004	Junction City	1970	54.0	-	-	126.0 Nov-Dec
		1971	61.6	-	-	204.0
		1972	65.8	57.0	1.72	184.0
		1973	55.9	47.9	1.78	133.0
2030001	Oakridge	1970	-	-	-	-
		1971	-	-	-	-
		1972	82.6	73.8	1.59	283.0
		1973	71.9	63.4	1.69	160.0
2704002	Dallas	1970	33.1	29.7	1.59	94.0
		1971	40.6	38.2	1.46	61.0
		1972	39.2	35.0	1.62	113.7
		1973	33.2	30.4	1.54	75.4
3000001	Umatilla -1	1970	-	-	-	-
		1971	-	-	-	-
		1972	47.3	35.5	2.11	405.0
		1973	55.6	39.4	2.36	243.0
3020018	Pendleton -18	1970	83.5	75.7	1.54	282.0
		1971	89.1	77.9	1.63	504.0
		1972	85.9	78.3	1.55	307.0
		1973	90.3	77.7	1.81	243.0

TABLE B.1 (Continued)

Station Number	Station Location		Ann.Arith Mean, ug/m ³	Annual Geo. Mean, ug/m ³	Geom etric Std. Dev.	Max. 24-hr. Avg., ug/m ³
3116012	La-Grande -12	1970	58.8	48.2	1.94	180.0
		1971	40.3	33.9	1.82	119.0
		1972	-	-	-	-
		1973	46.0	35.1	2.18	171.0
3317016	The Dalles -16	1970	65.6	56.5	1.71	240.0
		1971	56.6	49.5	1.67	190.0
		1972	57.7	51.0	1.64	168.0
		1973	62.0	51.1	1.76	288.0
3617001	McMinnville	1970	35.8	31.8	1.64	99.0
		1971	34.4	31.7	1.52	73.0
		1972	31.7	28.5	1.64	64.1
		1973	33.7	30.7	1.56	72.8

TABLE B.2

SULFUR DIOXIDE AMBIENT AIR QUALITY DATA SUMMARY
 BUBBLER SAMPLING NETWORK, 24-Hour Samples *

Station Number	Station Location	Number of Samples	Arithmetic Mean, ug/m ³	Max. 24-hour Avg., ug/m ³
0402005	Astoria -5 857 Commercial Street Oct-Dec., 1973	21	13.1	52.4
0204006	Corvallis Roger's Hall, OSU June-Dec., 1973	34	13.1	13.1
1520017	Medford Main and Oakdale Street May-Dec. 1973	47	13.1	13.1
3020018	Pendleton Umatilla County Courthouse May-Dec., 1973	33	13.1	13.1
2614068	Portland Standard Oil Office, NW Doane Oct.-Dec., 1973	14	41.6	133.0
2438029	Salem Center and Liberty Street June-Dec., 1973	37	13.1	178.2
2018035	Eugene 11th and Willamette Street June-Dec., 1973	43	13.1	13.1
1810015	Klamath Falls OTI Oct.-Dec., 1973	19	13.1	73.3

* Minimum detectable level is 13.1 ug/m³ with bubbler samplers

TABLE B.3

CARBON MONOXIDE AMBIENT AIR QUALITY DATA SUMMARY FOR EUGENE-SPRINGFIELD

Station Number	Station Location	Ann. Geo. Mean, mg/m ³	Max. 1-hr Avg., mg/m ³	Max. 8-hr Avg., mg/m ³	No. Times 1-Hr. Std. Exceeded	No. Times 8-Hr. Std. Exceeded
2018035	Eugene 11th and Willamette					
	May-Dec. - 1971	2.16	16.1	9.9	0	0
	1972	2.92	31.6	18.3	0	13
	1973	2.80	16.7	10.5	0	3

TABLE B.4

PHOTOCHEMICAL OXIDANT AMBIENT AIR QUALITY DATA SUMMARY FOR SALEM METROPOLITAN AREA

Station Number	Station Location	Arithmetic Mean, ug/m ³	Maximum 1-hour Avg., ug/m ³	Number Times 1 Hr. Std. Exceeded
2438007	Salem Salem Airport			
	June-December 1973	12.2	42.0	0

APPENDIX C

CALCULATION AND PREDICTION METHODOLOGY

METHODOLOGY

The methodology used by the Department to predict 1985 emissions of air contaminants and ambient air quality levels was a modified version of the methodology developed by the Environmental Protection Agency and set forth in Guidelines for Designation of Air Quality Maintenance Areas, OAQPS No. 1.2-016, January 11, 1974.

The EPA guidelines are divided into four major steps as follows: 1) choice of study areas; 2) initial designation/nondesignation criteria; 3) method of projecting emissions; and 4) method of projecting ambient air quality levels. The discussion that follows describes these four steps and the modifications and assumptions made by the Department in utilizing them.

I. Choice of Study Areas

EPA selected Standard Metropolitan Statistical Areas (SMSA's), as defined by the Office of Management and Budget, as the areas which, as a minimum, should be analyzed in determining which areas are or are not to be designated as Air Quality Maintenance Areas.

Presently, there are three SMSA's in Oregon which are defined below:

- A. Portland SMSA (Clackamas County, Multnomah County, Washington County, and Clark County, Washington)
- B. Salem SMSA (Marion County and Polk County)
- C. Eugene-Springfield SMSA (Lane County)

The Department began its study with these three areas and later expanded it to include two other study areas (Medford-Ashland and Albany-Lebanon) which are not within SMSA's, but are recognized as probable air pollution problem areas. The SMSA study areas were later reduced in land area to urbanized areas to give better estimates of the actual problem areas and provide consistency with land use and transportation planning areas used by regional and local governmental agencies.

The final areas chosen by the Department for analysis are illustrated in the maps identified below:

- | | |
|-------------------------------------|------------|
| A. Portland Metropolitan Study Area | Figure 3.1 |
| B. Longview-Kelso Study Area | Figure 4.1 |
| C. Salem Metropolitan Study Area | Figure 5.1 |
| D. Albany-Lebanon Study Area | Figure 6.1 |
| E. Eugene-Springfield Study Area | Figure 7.1 |
| F. Medford-Ashland Study Area | Figure 8.1 |

II. Initial Designation/Nondesignation Criteria

Criteria were developed by EPA by which obvious non-problem study areas could be eliminated and obvious problem areas could be designated without performing an analysis of projected 1985 ambient air quality. These criteria are delineated below with the slight modifications made by the Department:

A. Elimination of obvious non-problem areas.

In lightly urbanized areas and in rural areas, it is considered that properly administered new source review procedures will be adequate to assure maintenance of air quality standards and, therefore, more complex and burdensome maintenance programs will not ordinarily be needed.

Study areas which meet the following criteria may be automatically excluded from consideration as an Air Quality Maintenance Area for the particular pollutant:

1. Particulate matter:

- a. Study areas for which measured total suspended particulate ambient air quality data for 1972 and 1973 indicate the area is below state and national ambient air quality standards for particulates.

2. Sulfur dioxide:

- a. Study areas for which measured sulfur dioxide ambient air quality data for 1972 and 1973 indicate the area is below state and national ambient air quality standards for sulfur dioxide and, the product of the ambient air quality concentration in 1973 and the relative growth in study area total earnings, between 1973 and 1985, is less than the state and national ambient air quality standards for sulfur dioxide.

3. Carbon monoxide:

- a. Estimate the percent contribution of CO emissions from light-duty vehicles to total mobile source CO emissions on heavily used, central city streets; choose the area where light-duty vehicles (LDV) contribution is representative of the local area in the vicinity of the air quality monitoring site.
- b. Locate the point on Figure C.1 corresponding to the highest measured 8-hour CO concentration in the central city in 1970 and the LDV contribution to local mobile source emissions estimated under a. above.

c. If the intersection determined in b., above, lies on or below the curve, the area may be automatically eliminated from consideration as an Air Quality Maintenance Area.

4. Photochemical oxidants:

a. Study areas which have no transportation control strategy for photochemical oxidants, and which have had a maximum 1-hour oxidant concentration of less than 320 ug/m^3 during 1972 and 1973.

5. Nitrogen dioxide:

a. Study areas other than the central cities of Los Angeles, Chicago, New York, Denver, and Salt Lake City.

B. Designation of obvious problem areas.

Study areas which meet any one of the following criteria are to be designated as Air Quality Maintenance Areas for the particular pollutant.

1. Particulate matter:

a. Areas within Federal Air Quality Control Regions which are not projected to attain compliance with state and national ambient air quality standards for suspended particulate by 1985.

2. Sulfur dioxide:

a. Areas within Federal Air Quality Control Regions which are not projected to attain compliance with state and national ambient air quality standards for sulfur dioxide by 1985.

3. Carbon monoxide:

No automatic inclusion criteria.

4. Photochemical oxidants:

a. Any areas for which a transportation control strategy for photochemical oxidants is required.

III. Method of Projecting 1975 and 1985 Emissions

A. Base Year Emissions

In order to predict air pollutant emissions in future years it is first necessary to establish a base year for which emissions are known. The Department chose 1970 as the base year for which the best information on emissions was available.

C.4

The 1970 emissions used by the Department are from the 1970-71 historical emission inventory data files maintained by the Air Quality Control Division. These files contain detailed information on air contaminant emissions (total particulate, fine particulate, hydrocarbons, carbon monoxide, sulfur dioxide, and nitrogen oxides) for each stationary source in the state emitting significant quantities of any contaminant. In addition to the sources recorded individually, other sources which are too numerous to record individually, such as residential space heating and motor vehicles, are recorded as an aggregate on a county by county basis. For a further discussion of the state emission inventory maintained by the Department refer to the Clean Air Act Implementation Plan for Oregon, January, 1972.

The emissions information contained in the 1970-71 historical files was summarized by computer into a format showing emissions by source category for each county of the state. Samples of these formats are illustrated in Tables C.1 through C.6. These computer summaries formed the base data for the prediction of 1975 and 1985 emissions.

From the computer summaries described above and the detailed state emission inventory files, the Department transferred the emissions data into the format shown in Table C.7 for the calculation of 1975 and 1985 emissions. The following modifications were made to the data in the process of transposing it into the format shown in Table C.7:

1. Under fuel combustion-industrial point sources in Table C.7, electric power generating plants were removed and tabulated separately. A discussion of the power plant emission calculations is delineated below in Section III.D.
2. Off-highway emission sources were removed from the transportation source classification in Table C.7 and included under miscellaneous area sources - other. Off-highway sources include railroads, ships, aircraft, and construction, farming and logging equipment.
3. Emissions for orchard prunings and orchard heating were included under field burning in Table C.7.
4. Emissions for light duty and heavy duty motor vehicles were calculated using the latest EPA emission factors; Compilation of Air Pollution Emission Factors, AP-42, Supplement No. 2, September, 1973.
5. 1970 base year emissions data for Lane County was corrected to reflect an update in the 1970-71 historical files submitted by the Lane Regional Air Pollution Authority but not included in the computer files at the time this study was undertaken.
6. Determination of 1970 emissions of fine particulate and sulfur dioxide in the Longview-Kelso Study Area was based upon emissions from sources in St. Helens and Longview-Kelso.

7. Determination of 1970 emissions of fine particulate in the Albany-Lebanon Study Area was based upon emissions from sources in Albany and Lebanon.

B. Projection of 1975 Emissions

Once the base year emissions had been tabulated for each of the study areas (eg. Column B, Table C.7), calculation of 1975 emissions could proceed. Of course, the Department had previously calculated 1975 emissions in the preparation of the Clean Air Act Implementation Plan for Oregon, January, 1972 and in most instances these emissions were used in this study. In Table C.7, between Columns C and C-1, the letters "IP" appear for several source categories. The letters "IP" indicate that 1975 emissions were taken from the state implementation plan for the source categories referenced.

Calculation of 1975 emissions was undertaken for residential, commercial and industrial fuel combustion area sources, transportation sources, and miscellaneous area sources-other. Column C in Table C.7 contains the emission reduction factors used by the Department for each of these source categories. It can be seen from Table C.7 that the emission reduction factors are all 1.0 in Column C. This is because there are no federal, state, or local regulations in effect for reducing emissions (particulate and sulfur dioxide) from any of these source categories. Refer to Table C.8 for other emission reduction factors used.

Column C-1 in Table C.7 contains the growth factors for the period 1970 through 1975 used in the emission calculations. The growth factors are from Projections of Economic Activity for Air Quality Control Regions, U.S. Department of Commerce, Bureau of Economic Analysis, August 1973. The type of factor applied to each source category is listed below:

<u>Source Category - Area Sources</u>	<u>Growth Factor</u>
Residential Fuel Combustion	Total Earnings
Commercial Fuel Combustion	Total Earnings
Industrial Fuel Combustion	Manufacturing Earnings
Transportation	Population
Miscellaneous - Other	Total Earnings

Table C.10 contains a tabulation of the growth factors utilized for the period 1970 through 1975. The following modifications and assumptions were made by the Department in using these growth factors:

1. Growth factors for the Longview-Kelso study area are from the Northwest Oregon Intrastate Air Quality Control Region.

C.6

2. Jackson County growth factors were calculated from growth factors for the Southwest Oregon Intrastate Air Quality Control Region by the following methodology:
 - a. Population projections for Jackson County and Southwest AQCR were obtained from Population and Household Trends in Washington, Oregon and Northern Idaho, 1970-1985, Pacific Northwest Bell, January 1972.
 - b. The percent of population within the region that is in Jackson County was calculated for 1970, 1975, and 1985. It was assumed that the percent of total earnings and manufacturing earnings within the region that are in Jackson County were equal to the population percentage.
3. Growth factors for the Albany-Lebanon study area were the same as the factors used for the Salem study area.

C. Projection of 1985 Emissions

Calculation of 1985 emissions was generally accomplished by using the EPA methodology contained in Guidelines for Designation of Air Quality Maintenance Areas, OAQPS No. 1.2-016, January 1974. Table C.7 demonstrates the calculation procedure and Tables C.9, C.10, and C.11 contain the emission reduction factors and growth rates used by the Department. The type of growth factors used for each source category are listed below:

<u>Source Category</u>	<u>Growth Factor</u>
Residential Fuel Combustion	Total Earnings
Commercial Fuel Combustion	Total Earnings
Industrial Fuel Combustion	Manufacturing Earnings
Process Loss Sources	Manufacturing Earnings
Transportation	Population Increase
Incineration and Open Burning	Population Increase
Wigwam Waste Burners	No Growth
Field Burning, Forest Fires &	
Slash Burning	No Growth
Miscellaneous - Other	Total Earnings

D. Power Plant Emissions

Emissions from electric power generating plants were calculated for individual facilities by contacting each of the power companies operating in Oregon and requesting the best available information on the use of existing facilities and the construction of new facilities in Oregon through 1985.

The resulting power plant emission projections are tabulated in Table C.12.

IV. Method of Projecting 1985 Ambient Air Quality

A. Suspended Particulate and Sulfur Dioxide

The Department generally followed the methodology prepared by EPA in Guidelines for Designation of Air Quality Maintenance Areas, January 1974, to predict 1985 ambient air quality for total suspended particulate and sulfur dioxide from predicted 1985 emissions for these contaminants. This methodology primarily involves the use of the Miller - Holzworth Atmospheric Diffusion Model for Metropolitan Areas.

The Miller - Holzworth Model can be used only for the calculation of annual averages of suspended particulate matter and sulfur dioxide. Short-term concentrations were calculated by using A Mathematical Model for Relating Air Quality Measurements to Air Quality Standards, EPA, November 1971, based upon the annual averages calculated using the Miller - Holzworth Model.

The Miller - Holzworth Model for metropolitan areas assumes pollutant concentrations to be a function of emission density, wind speed, atmospheric mixing depth, and city size. These parameters are tabulated in Tables C.13 and C.14 for each of the areas studied by the Department.

The model implicitly assumes that the atmosphere is slightly unstable (between Turner Stability Classes C and D). Stability assumptions cannot be varied. The model, as set forth below, estimates the area-wide annual average pollutant concentration for the pollutant studied. The relationship among average area-wide concentration, emission density, city size, wind speed and mixing depth is:

$$\bar{\chi} = 0.011Q \left[3.61H^{0.13} + \frac{800S}{uH} - \frac{(5.5 \times 10^5) u H^{1.26}}{S} \right]$$

Where: $\bar{\chi}$ = annual average concentration, $\mu\text{g}/\text{m}^3$
 Q = emission density, tons/year - miles²
 H = mixing depth, meters
 S = along-wind distance of the study area, miles
 u = wind speed, meters/second

The procedure followed by the Department in utilizing this model is outlined as follows:

1. The model was calibrated for each study area for a base year of 1973 by determining the approximate annual average study

area pollutant concentration using 1973 ambient air quality data and adjusting the concentration predicted by the model to equal the measured concentration.

2. The predicted change in annual average pollutant concentrations for the period 1973 through 1985 was calculated for each study area from the following equation:

$$\Delta \bar{X} = 0.011 \Delta Q \left[3.61H^{0.13} + \frac{800S}{\mu H} - \frac{(5.5 \times 10^{-5} \mu H)^{1.26}}{S} \right]$$

3. This change in annual average pollutant concentration was then added to the annual average concentration measured at each monitoring station in the study area to provide the 1985 annual arithmetic mean expected at each station in the appropriate study area.
4. Where required for comparison with the ambient air standards, the annual geometric mean was calculated from the following relationship:

$$\ln mg = \ln m - 0.5 \ln^2 sg$$

where: mg = annual geometric mean
 m = annual arithmetic mean
 sg = geometric standard deviation (1973)

5. As mentioned previously, short-term pollutant concentrations were calculated, where necessary for comparison with ambient air quality standards, by using the relationships set forth in A Mathematical Model for Relating Air Quality Measurements to Air Quality Standards, EPA, November 1971.

B. Carbon Monoxide

Prediction of 1985 carbon monoxide air quality was only necessary in the Portland study area. The Department followed the methodology presented in Guidelines for Designation of Air Quality Maintenance, OAQPS No. 1.2 - 016, January 11, 1974.

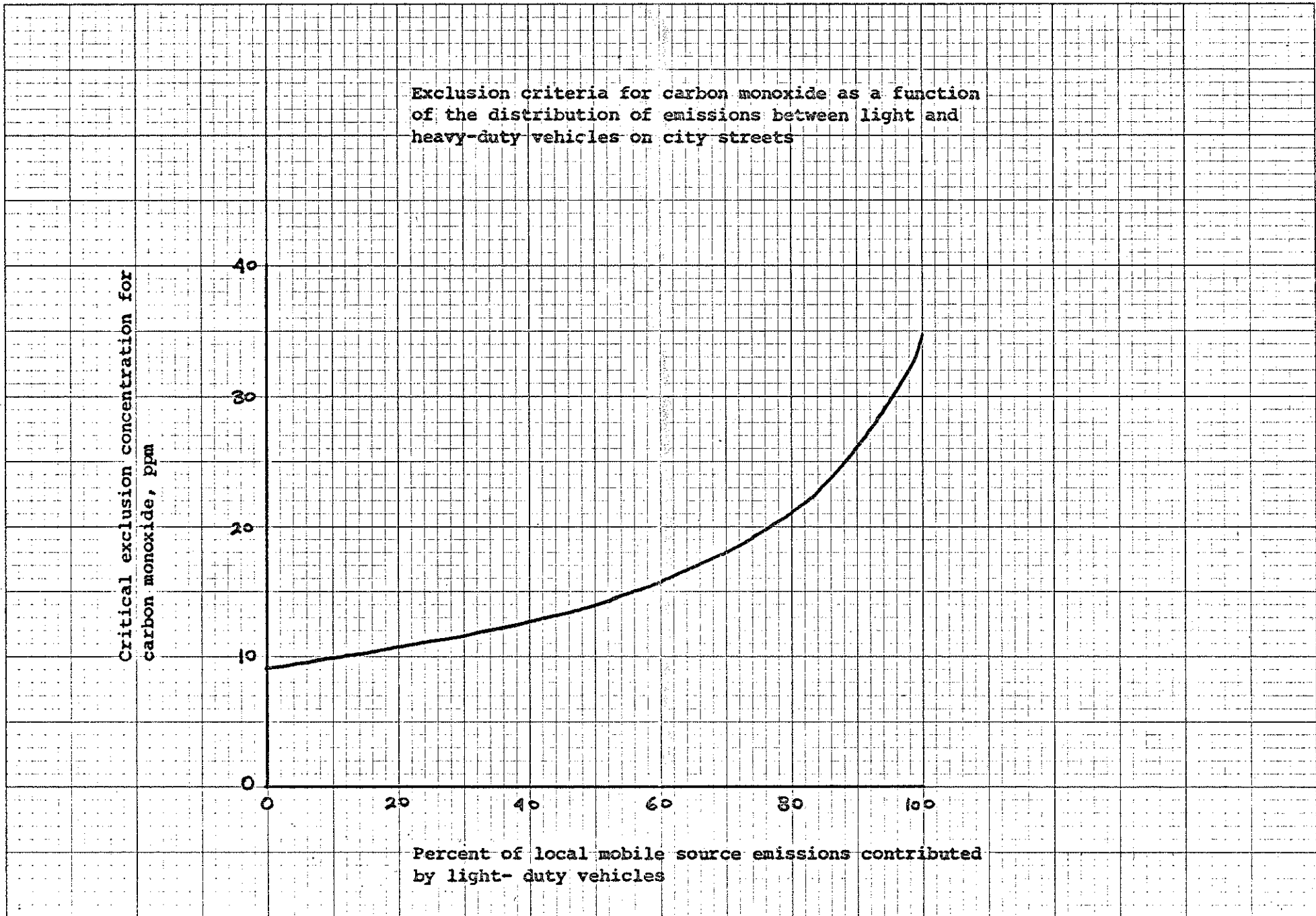


Figure C. 1

Table C.1
SUMMARY OF ESTIMATED ANNUAL EMISSIONS (TONS/YEAR) BY SOURCE CATEGORY

MULTNOMAH COUNTY

TOTAL PARTICULATES

SOURCE CATEGORY	TONS/YEAR
-----------------	-----------

A. FUEL COMBUSTION SOURCES:

1. RESIDENTIAL FUEL COMBUSTION	532
2. COMMERCIAL FUEL COMBUSTION	364
3. INDUSTRIAL FUEL COMBUSTION	1,159

TOTAL FUEL COMBUSTION	2,057
-----------------------	-------

B. PROCESS LOSS SOURCES:

1. CHEMICAL INDUSTRIES	87
2. FOOD/AGRICULTURE INDUSTRIES	1,094
3. METALLURGICAL INDUSTRIES	2,127
4. MINERAL PRODUCTS INDUSTRIES	724
5. PETROCHEMICAL INDUSTRIES	155
6. WOOD PROCESSING INDUSTRIES	638
7. OTHER INDUSTRIES	1,539

TOTAL PROCESS LOSS	6,367
--------------------	-------

C. TRANSPORTATION SOURCES:

1. MOTOR VEHICLES	915
2. OFF-HIGHWAY FUEL USE	831

TOTAL TRANSPORTATION	1,746
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D. SOLID WASTE SOURCES:

1. INCINERATION	67
2. OPEN BURNING	66
3. WIGWAM WASTE BURNERS	2

TOTAL SOLID WASTE	135
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E. MISCELLANEOUS AREA SOURCES:

1. FIELD BURNING	0
2. FOREST FIRES	6
3. SLASH BURNING	87
4. OTHER	2

TOTAL MISCELLANEOUS	96
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SUMMARY BY SOURCE CLASS:

1. AREA SOURCES	3,056
2. POINT SOURCES	7,347

TOTAL OF ALL SOURCES	10,403
----------------------	--------

AS OF DEC 1971

SUMMARY OF ESTIMATED ANNUAL EMISSIONS (TONS/YEAR) BY SOURCE CATEGORY

MULTNOMAH COUNTY

FINE PARTICULATES

SOURCE CATEGORY TONS/YEAR

A. FUEL COMBUSTION SOURCES:

1. RESIDENTIAL FUEL COMBUSTION	532
2. COMMERCIAL FUEL COMBUSTION	345
3. INDUSTRIAL FUEL COMBUSTION	846

TOTAL FUEL COMBUSTION 1,725

B. PROCESS LOSS SOURCES:

1. CHEMICAL INDUSTRIES	73
2. FOOD/AGRICULTURE INDUSTRIES	341
3. METALLURGICAL INDUSTRIES	2,006
4. MINERAL PRODUCTS INDUSTRIES	311
5. PETROCHEMICAL INDUSTRIES	150
6. WOOD PROCESSING INDUSTRIES	135
7. OTHER INDUSTRIES	678

TOTAL PROCESS LOSS 3,697

C. TRANSPORTATION SOURCES:

1. MOTOR VEHICLES	915
2. OFF-HIGHWAY FUEL USE	831

TOTAL TRANSPORTATION 1,746

D. SOLID WASTE SOURCES:

1. INCINERATION	50
2. OPEN BURNING	66
3. WIGWAM WASTE BURNERS	0

TOTAL SOLID WASTE 117

E. MISCELLANEOUS AREA SOURCES:

1. FIELD BURNING	0
2. FOREST FIRES	6
3. SLASH BURNING	87
4. OTHER	2

TOTAL MISCELLANEOUS 96

SUMMARY BY SOURCE CLASS:

1. AREA SOURCES	3,013
2. POINT SOURCES	4,369

TOTAL OF ALL SOURCES 7,383

AS OF DEC 1971

Table C.3
SUMMARY OF ESTIMATED ANNUAL EMISSIONS (TONS/YEAR) BY SOURCE CATEGORY

MULTNOMAH COUNTY

TOTAL ORGANICS

SOURCE CATEGORY	TONS/YEAR
-----------------	-----------

A. FUEL COMBUSTION SOURCES:

1. RESIDENTIAL FUEL COMBUSTION	300
2. COMMERCIAL FUEL COMBUSTION	138
3. INDUSTRIAL FUEL COMBUSTION	339

TOTAL FUEL COMBUSTION	778
-----------------------	-----

B. PROCESS LOSS SOURCES:

1. CHEMICAL INDUSTRIES	5
2. FOOD/AGRICULTURE INDUSTRIES	42
3. METALLURGICAL INDUSTRIES	81
4. MINERAL PRODUCTS INDUSTRIES	10
5. PETROCHEMICAL INDUSTRIES	2
6. WOOD PROCESSING INDUSTRIES	754
7. OTHER INDUSTRIES	11

TOTAL PROCESS LOSS	907
--------------------	-----

C. TRANSPORTATION SOURCES:

1. MOTOR VEHICLES	55,589
2. OFF-HIGHWAY FUEL USE	2,724

TOTAL TRANSPORTATION	58,314
----------------------	--------

D. SOLID WASTE SOURCES:

1. INCINERATION	17
2. OPEN BURNING	77
3. WIGWAM WASTE BURNERS	0

TOTAL SOLID WASTE	95
-------------------	----

E. MISCELLANEOUS AREA SOURCES:

1. FIELD BURNING	0
2. FOREST FIRES	8
3. SLASH BURNING	117
4. OTHER	10,558

TOTAL MISCELLANEOUS	10,683
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SUMMARY BY SOURCE CLASS:

1. AREA SOURCES	69,756
2. POINT SOURCES	1,023

TOTAL OF ALL SOURCES	70,780
----------------------	--------

AS OF DEC 1971

Table C.4

SUMMARY OF ESTIMATED ANNUAL EMISSIONS (TONS/YEAR) BY SOURCE CATEGORY

MULTNOMAH COUNTY

CARBON MONOXIDE

SOURCE CATEGORY TONS/YEAR

A. FUEL COMBUSTION SOURCES:

1. RESIDENTIAL FUEL COMBUSTION	304
2. COMMERCIAL FUEL COMBUSTION	40
3. INDUSTRIAL FUEL COMBUSTION	49

TOTAL FUEL COMBUSTION 394

B. PROCESS LOSS SOURCES:

1. CHEMICAL INDUSTRIES	0
2. FOOD/AGRICULTURE INDUSTRIES	69
3. METALLURGICAL INDUSTRIES	3,283
4. MINERAL PRODUCTS INDUSTRIES	9
5. PETROCHEMICAL INDUSTRIES	0
6. WOOD PROCESSING INDUSTRIES	2
7. OTHER INDUSTRIES	88

TOTAL PROCESS LOSS 3,451

C. TRANSPORTATION SOURCES:

1. MOTOR VEHICLES	279,447
2. OFF-HIGHWAY FUEL USE	2,765

TOTAL TRANSPORTATION 282,212

D. SOLID WASTE SOURCES:

1. INCINERATION	33
2. OPEN BURNING	233
3. WIGWAM WASTE BURNERS	7

TOTAL SOLID WASTE 273

E. MISCELLANEOUS AREA SOURCES:

1. FIELD BURNING	0
2. FOREST FIRES	44
3. SLASH BURNING	624
4. OTHER	7

TOTAL MISCELLANEOUS 675

SUMMARY BY SOURCE CLASS:

1. AREA SOURCES	283,495
2. POINT SOURCES	3,513

TOTAL OF ALL SOURCES 287,009

AS OF DEC 1971

Table C.5

SUMMARY OF ESTIMATED ANNUAL EMISSIONS (TONS/YEAR) BY SOURCE CATEGORY

MULTNOMAH COUNTY

SULFUR OXIDES

SOURCE CATEGORY TONS/YEAR

A. FUEL COMBUSTION SOURCES:

1. RESIDENTIAL FUEL COMBUSTION	1,732
2. COMMERCIAL FUEL COMBUSTION	3,178
3. INDUSTRIAL FUEL COMBUSTION	4,092

TOTAL FUEL COMBUSTION 9,002

B. PROCESS LOSS SOURCES:

1. CHEMICAL INDUSTRIES	0
2. FOOD/AGRICULTURE INDUSTRIES	0
3. METALLURGICAL INDUSTRIES	1,330
4. MINERAL PRODUCTS INDUSTRIES	48
5. PETROCHEMICAL INDUSTRIES	0
6. WOOD PROCESSING INDUSTRIES	4
7. OTHER INDUSTRIES	1

TOTAL PROCESS LOSS 1,383

C. TRANSPORTATION SOURCES:

1. MOTOR VEHICLES	595
2. OFF-HIGHWAY FUEL USE	647

TOTAL TRANSPORTATION 1,243

D. SOLID WASTE SOURCES:

1. INCINERATION	3
2. OPEN BURNING	0
3. WIGWAM WASTE BURNERS	0

TOTAL SOLID WASTE 3

E. MISCELLANEOUS AREA SOURCES:

1. FIELD BURNING	0
2. FOREST FIRES	0
3. SLASH BURNING	0
4. OTHER	0

TOTAL MISCELLANEOUS 0

SUMMARY BY SOURCE CLASS:

1. AREA SOURCES	7,842
2. POINT SOURCES	3,792

TOTAL OF ALL SOURCES 11,634

AS OF DEC 1971

MULTNOMAH COUNTY

NITROGEN OXIDES

SOURCE CATEGORY TONS/YEAR

A. FUEL COMBUSTION SOURCES:

1. RESIDENTIAL FUEL COMBUSTION	739
2. COMMERCIAL FUEL COMBUSTION	1,801
3. INDUSTRIAL FUEL COMBUSTION	2,887

TOTAL FUEL COMBUSTION 5,428

B. PROCESS LOSS SOURCES:

1. CHEMICAL INDUSTRIES	0
2. FOOD/AGRICULTURE INDUSTRIES	2
3. METALLURGICAL INDUSTRIES	589
4. MINERAL PRODUCTS INDUSTRIES	73
5. PETROCHEMICAL INDUSTRIES	1
6. WOOD PROCESSING INDUSTRIES	126
7. OTHER INDUSTRIES	8

TOTAL PROCESS LOSS 802

C. TRANSPORTATION SOURCES:

1. MOTOR VEHICLES	12,468
2. OFF-HIGHWAY FUEL USE	1,424

TOTAL TRANSPORTATION 13,892

D. SOLID WASTE SOURCES:

1. INCINERATION	9
2. OPEN BURNING	7
3. WIGWAM WASTE BURNERS	0

TOTAL SOLID WASTE 17

E. MISCELLANEOUS AREA SOURCES:

1. FIELD BURNING	0
2. FOREST FIRES	1
3. SLASH BURNING	19
4. OTHER	0

TOTAL MISCELLANEOUS 21

SUMMARY BY SOURCE CLASS:

1. APEA SOURCES	17,650
2. POINT SOURCES	2,510

TOTAL OF ALL SOURCES 20,161

AS OF DEC 1971

EMISSION PROJECTION CALCULATIONS
 COUNTY MULTNOMAH
 POLLUTANT FINE PARTICULATE

A		B	C	C-1	D	E	F	G					
SOURCE CLASS		1970 EMISSIONS	REDUCTION FACTORS	GROWTH FACTORS	1975 EMISSION	GROWTH RATE	EMISSION FACTOR	1985 EMISSIONS					
				1975/1970		(85/75)-1	ADJUST.	G=D(1+EF)					
I	FUEL COMBUSTION												
	A. RESIDENTIAL (AREA)	533	1.0	1.31	698	0.52	1.0	1060					
	B. COMMERCIAL												
	1. AREA SOURCES	256	1.0	1.31	335	0.52	1.0	509					
	2. POINT SOURCES	89		IP	89	0.52	1.0	135					
	C. INDUSTRIAL												
	1. AREA SOURCES	311	1.0	1.35	420	0.47	1.0	617					
	2. POINT SOURCES less PP	486		IP	169	0.47	1.0	248					
	SUBTOTAL FUEL COMBUSTION	1675			1711			2569					
II	PROCESS LOSS SOURCES (POINT)	3697		IP	1532	0.47	.40	1820					
	SUBTOTAL PROCESS LOSS	3697			1532			1820					
III	TRANSPORTATION (AREA)												
	A. LIGHT DUTY VEHICLES	831	1.0	1.09	960	0.18	1.0	1132					
	B. HEAVY DUTY VEHICLES	34	1.0	1.09	37	0.18	1.0	44					
	C. OFF HIGHWAY												
	SUBTOTAL TRANSPORTATION	915			997			1176					
IV	SOLID WASTE												
	A. INCINERATION												
	1. AREA SOURCES	5		IP	5	0.18	1.0	6					
	2. POINT SOURCES	45		IP	12	0.18	1.0	14					
	B. OPEN BURNING												
	1. AREA SOURCES	66		IP	47	0.18	1.0	17					
	2. POINT SOURCES	0		IP	0	0.18	1.0	0					
	C. WIGWAM WASTE BURNERS (POINT)	0		IP	0	0.00	1.0	0					
	SUBTOTAL SOLID WASTE	116			66			37					
V	MISCELLANEOUS AREA SOURCES												
	A. FIELD BURNING	2		IP	2	0.00	1.0	2					
	B. FOREST FIRES	6		IP	6	0.00	1.0	6					
	C. SLASH BURNING	87		IP	88	0.00	1.0	88					
	D. OTHER	831	1.0	1.31	1089	0.52	1.0	1655					
	SUBTOTAL MISC. AREA SOURCES	926			1185			1751					
	TOTAL AREA SOURCES	3012			3689			5136					
	TOTAL POINT SOURCES	4317			1802			2217					
	TOTAL	7329			5491			7353					

Table C.7

Table C.8

1970-1975 Emission Reduction Factors
(Ratio of 1975 allowable emissions to 1970 emissions)

Source Category	Fine Particulate	Sulfur Dioxide	Carbon Monoxide	Hydrocarbons
I. Fuel - Combustion				
A. Residential	1.0 ^c	1.0 ^c	1.0	1.0
B. Commercial				
1. Area Sources	1.0 ^c	1.0 ^c	1.0	1.0
2. Point Sources	a	1.0 ^c	1.0	1.0
C. Industrial				
1. Area Sources	1.0 ^c	0.57	1.0	1.0
2. Point Sources	a	1.0 ^c	1.0	1.0
I. Process Loss Sources	a	a	1.0 ^c	0.47
II. Transportation	1.0	1.0	b	b
V. Solid Waste	a	a	a	a
V. Miscellaneous Area Sources				
A. Field Burning, Forest Fires and Slash Burning	a	a	a	a
B. Other	1.0	1.0	1.0	1.0

- a. 1975 emissions taken directly from the Clean Air Act Implementation Plan for Oregon, January 1972.
- b. 1985 emissions calculated directly from 1970 base data using the transportation emission reduction found in Table C.9.
- c. These Emission Reduction Factors are other than those suggested by EPA in Guidelines for Designation of Air Quality Maintenance Areas, OAQPS No. 1.2-016, January, 1974.

Table C.9

Transportation Emission Reduction Factors *

Year	LDV	HDV
<u>Carbon Monoxide</u>		
1970	1.00	1.00
1975	0.59	0.98
1985	0.18	0.93
<u>Hydrocarbons</u>		
1970	1.00	1.00
1975	0.53	0.77
1985	0.17	0.77

* calculated from Compilation of Air Pollutant Emission Factors, AP-42, US EPA, April 1973, Chapter 3

Table C.10

Study Area Growth Factors

Population Growth Factors						
Study Area	1970 Population	1975 Population	1985 Population	('75/'70) Growth Factor	('85/'75-1) Growth Rate	('85/'70) Growth Factor
Portland SMSA	1,013,780	1,099,500	1,298,700	1.085	0.181	1.27
Salem SMSA	187,605	202,700	237,400	1.080	0.171	1.27
Eugene SMSA	214,440	226,200	255,300	1.055	0.123	1.19
Jackson County	94,533	101,150	125,500	1.060	0.241	1.33
Cowlitz County	72,525	77,200	88,000	1.060	0.140	1.21
Columbia County	28,800	30,500	35,100	1.060	0.143	1.21

Total Earnings Growth Factors (1967 dollars)

Study Area	1970 Earnings	1975 Earnings	1985 Earnings	('75/'70) Growth Factor	('85/'75-1) Growth Rate
Portland SMSA	2,949,102	3,850,600	5,841,400	1.306	0.517
Salem SMSA	405,087	534,600	844,800	1.320	0.580
Eugene SMSA	468,188	597,000	900,100	1.275	0.508
Jackson County	200,470	252,042	394,406	1.257	0.565
Cowlitz County	159,724	210,000	331,900	1.314	0.580
Columbia County	159,000	210,000	332,000	1.310	0.581

Manufacturing Earnings Growth Factors (1967 dollars)

Study Area	1970 Earnings	1975 Earnings	1985 Earnings	('75/'70) Growth Factor	('85/'75-1) Growth Rate
Portland SMSA	705,985	949,400	1,396,300	1.345	0.471
Salem SMSA	74,724	92,400	129,400	1.237	0.400
Eugene SMSA	150,023	184,300	250,700	1.228	0.360
Jackson County	72,469	85,680	119,654	1.182	0.397
Cowlitz County	52,107	61,900	81,900	1.188	0.323
Columbia County	52,107	61,900	81,900	1.188	0.323

Table C.11

1975-1985 Emission Reduction Factors

Source Category	Fine Particulate	Sulfur Dioxide	Carbon Monoxide	Hydrocarbons
I. Fuel Combustion				
A. Residential	1.0	1.0	1.0	1.0
B. Commercial				
1. Area Sources	1.0	1.0	1.0	1.0
2. Point Sources	1.0	1.0	1.0	1.0
C. Industrial				
1. Area Sources	1.0	1.0	1.0	1.0
2. Point Sources	1.0	1.0	1.0	1.0
II. Process Loss Sources	0.4	0.4	0.4	0.4
III. Transportation	1.0	1.0	a	a
IV. Solid Waste	1.0	1.0	1.0	1.0
V. Miscellaneous Area Sources				
A. Field Burning, Forest Fires & Slash Burning	1.0	1.0	1.0	1.0
B. Other	1.0	1.0	1.0	1.0

a. 1985 emissions calculated directly from 1970 base data using the transportation emission reduction factors found in Table C.9.

Table C.12

Power Plant Emissions

Power Plant	Estimated Emissions, Tons/yr.											
	Fine Particulate			Sulfur Dioxide			Carbon Monoxide			Hydrocarbons		
	1970	1975	1985	1970	1975	1985	1970	1975	1985	1970	1975	1985
FGE Harborton	--	90	90	--	68	68	--	82	82	--	80	80
PP&L Lincoln Station	49	44	44	250	317	317	3	1	1	11	43	43
PGE Bethel	--	300	300	--	860	860	--	80	80	--	100	100
EWEB	120	147	147	--	4	4	40	40	40	50	107	107
PGE Beaver	--	527	527	--	3712	3712	--	--	--	--	--	--

Table C.13

Particulate and Sulfur Dioxide Emission
Densities, Tons/Year-Mile²

Study Area	Particulates			Sulfur Dioxide		
	1973	1975	1985	1973	1975	1985
Portland	53	36	45	56	59	83
Longview-Kelso	120	99	108	72*	131	145
Salem	57	39	44	--	--	--
Albany-Lebanon	187	107	120	--	--	--
Eugene-Springfield	140	114	134	--	--	--
Medford	49	42	53	--	--	--

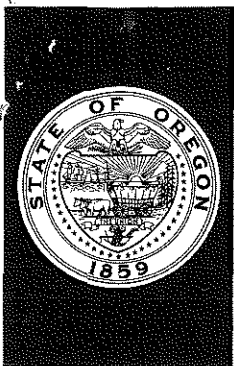
* 1972 emission density

Table C.14

Wind Speed, Atmospheric Mixing Depth, and City Size

Study Area	Mean Annual Morning Wind Speed in Mixed Layer, meters/sec*	Mean Annual Morning Mixing Depth meters *	Along-wind Distance of Study Area miles	Land Area of Study Area miles ²
Portland	3.2	515	30.4	389
Longview-Kelso	3.5	500	25.4	158
Salem	2.9	471	13.1	72
Albany	2.9	460	11.0	27.8
Lebanon	2.8	440	5.8	13.4
Eugene-Springfield	2.5	410	16.0	90
Medford	1.7	375	10.4	68

* Values for mixing depth and wind in the mixed layer are taken from AP-101 by George C. Hollsworth, Mixing Heights, Wind Speeds and Potential for Urban Air Pollution Throughout the Contiguous United States. Calculated values for Salem and Medford are presented in Table B-1. Values for other locations are interpolated from Figures 1 and 11 of AP-101.



ENVIRONMENTAL QUALITY COMMISSION

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MORRIS K. CROTHERS
Salem

MEMORANDUM

To : Environmental Quality Commission

From : Hearings Officer

Subject: Agenda Item No. I, March 22, 1974 EQC Meeting

Weyerhaeuser Company, Springfield: Modification of
Compliance Schedule for Air Quality Control of Lime
Kilns.

Kessler R. Cannon
Director

Background

The Weyerhaeuser Company Kraft pulp and paper mill in Springfield currently operates under Air Contaminant Discharge Permit No. 20-8850 issued by the Department of Environmental Quality. In accord with OAR, Ch. 340, section 25-165 (2) (b), which requires that emissions of particulate matter from lime kilns associated with Kraft pulp mills be brought below one pound per ton of production "as soon as practicable, but not later than May 1, 1975", the compliance schedule in the permit heretofore has contemplated the installation of venturi scrubbers on the No. 1 and No. 2 lime kilns by the "soonest practicable" date of July 1, 1974. The No. 3 lime kiln is already controlled by a venturi scrubber, and averages 0.59 pounds of particulate emissions per ton of production, well within the limitations of OAR, Ch. 340, section 25-165 (2)(b). The Nos. 1 and 2 lime kilns currently emit on the average 3.73 pounds of particulates per ton of production.

Weyerhaeuser Company has proposed to install an electrostatic precipitator which would control the particulate emissions from lime kilns Nos. 1, 2, and 3 in lieu of installing venturi scrubbers on lime kilns Nos. 1 and 2. Alleged benefits of such a substitution are: that the electrostatic precipitators would reduce particulate emissions below those obtained using a venturi scrubber; reduction in the total reduced sulfur (TRS) emissions from the lime kilns; reduction of polluting waste water discharges from air emission



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control equipment; and minimization of the water vapor plume from the lime kiln stacks. Offsetting costs of the proposal are that the order time for delivery of the electrostatic precipitator would require extending the time schedule for full compliance with OAR, Ch. 340, section 25-105 (2)(b) to January 1, 1976, a delay of 18 months; and a cost to Weyerhaeuser Company of \$1.4 million compared to the \$400 thousand estimated cost of installing venturi scrubbers on lime kilns Nos. 1 and 2. (There is a possibility that some of the extra cost could be recouped by tax credit, however.)

Following public notice, a hearing was held at Harris Hall, Eugene, Oregon on the evening of the fifth of March 1974 to receive public testimony on whether Weyerhaeuser Company should be granted an extension in its compliance schedule for meeting the particulate emission standards from July 1, 1974 to January 1, 1976, in order to allow the installation of an electrostatic precipitator.

Summary of Testimony

H. H. Burkitt of the Department of Environmental Quality testified first in support of the application for extension. He noted that the design criteria for the proposed electrostatic precipitator predict a reduction in particulate emissions to 0.5 pounds per ton of production, which is below the level currently achieved through venturi scrubber technology on lime kiln No. 3. Because there is little technical information to assure that design criteria can be met on a daily operational basis and because Weyerhaeuser Company had previously specifically expressed concern in this area, Mr. Burkitt proposed that the permit limit the particulate emissions to 0.75 pounds per ton of production, and a total of 900 pounds of particulate emissions per day. This latter requirement is consistent with maximum current plant capacity of 1200 tons per day production. The 0.75 pounds per ton of production figure compares with the 0.73 pounds per ton maximum high figure for lime kiln No. 3 (with a venturi scrubber) during the last half of 1973, and is considerably below the 1.48 pounds per ton maximum reported for the same lime kiln during the first six months of 1973.

On the basis of lime kiln No. 3's proven performance, Mr. Burkitt proposed an interim limitation of 800 pounds of particulate emissions per day and 1.0 pounds per ton of production as a monthly average. Lime kilns Nos. 1 and 2, continuing to operate without venturi scrubbers until the installation of the electrostatic precipitator by January 1, 1976, would be allowed to emit a combined total of 2,400 pounds per day and 5.0 pounds per ton of production.

Verner Adkison, Director of the Lane Regional Air Pollution Authority, concurred with Mr. Burkitt's recommendation to allow additional time for

the installation of an electrostatic precipitator, which will provide a higher level of control. He testified that the LRAPA's efforts to roll back suspended particulates in the Springfield area will be somewhat hindered by the extension, but that the benefits of eventually lowered emissions outweigh this cost.

Jerry L. Harper, representing Weyerhaeuser Company, testified that his company could and would comply with all interim and final standards of the proposed modification to the permit. He expressed some concern, however, that the eventual permit limit of 0.75 pounds of particulate emissions per ton of production and ceiling of 900 pounds of particulate emissions per day, standards which he alleged are more stringent than those applying to any other Kraft mill in Oregon, would serve as a disincentive to future efforts of industry to introduce new and better pollution control technology which not only meets but exceeds then-current standards.

In written testimony timely received, Sue Blix, a private citizen from Eugene representing herself, directed some questions for the Commission's consideration. She asked, if there is such a long lead time on orders for the electrostatic precipitator, it is relevant to know when Weyerhaeuser Company became aware of the availability of this better technology? Did the company delay application for an extension to buy "unregulated" time? Ms. Blix also wished to know by how much water vapor and TRS emissions would be reduced, and the effect on land and water pollution of disposal of the solids extracted by the electrostatic precipitator. She questions, given the lack of data on whether design criteria can be met on a daily operational basis, whether the DEQ can be assured the predicted benefits will outweigh the costs of 18 months in which lime kilns Nos. 1 and 2 lack even venturi scrubbers.

Conclusions and Recommendation

The cost of allowing Weyerhaeuser Company an extension in its compliance schedule for the installation of an electrostatic precipitator can be fairly accurately predicted on the basis of testimony received. Comparing the performance of lime kiln No. 3 with a venturi scrubber with lime kilns Nos. 1 and 2, which lack venturi scrubbers, $3.73 \text{ minus } 0.59$ equals 3.14 pounds of particulate emissions per ton of production for lime kilns Nos. 1 and 2 which would not be produced over the 18-month period from July 1, 1974 to January 1, 1976 if the original compliance schedule is adhered to (using 1973 data).

Due to the newness of electrostatic precipitator technology, the magnitude of benefits of the extension are less certain. Ms. Blix raised some laymen's doubts, which your hearings officer shared, with regard to the assurance of net benefits of the extension. Mr. Harper's testimony with regard to the excellent results of this device at a mill

Agenda Item No. I
Page Four

in Pasadena, Texas, however, resolve the major question of whether the device works at all. Your hearings officer thus recommends granting of the extension as proposed by the Department's staff.

Submitted this twelfth day of March 1974.

A handwritten signature in cursive script that reads "Thomas Guilbert". The signature is written in dark ink and is positioned above a horizontal line.

Thomas Guilbert
Hearings Officer



DEPARTMENT OF ENVIRONMENTAL QUALITY

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TOM McCALL
GOVERNOR

KESS CANNON
Director

MEMORANDUM

To: ENVIRONMENTAL QUALITY COMMISSION
From: Director
Subject: Agenda Item No. J, March 22, 1974, EQC Meeting

Variance Request, The Robert Dollar Company, Forest Products
Division, Glendale, Douglas County, SIC 2421, Extension of
Proposed Air Contaminant Discharge Permit Compliance Dates

Background:

The Robert Dollar Co. is located on the northern edge of the town of Glendale in Douglas County. Glendale is located approximately 25 miles north of Grants Pass and 10 miles West of Interstate No. 5. The plant produces lumber, veneer, chips and decorative bark. It has a normal work force of 350 employees and currently operates 16 hours/day, 5 days/week, 52 weeks/yr.

At the July 23, 1971 meeting of the Environmental Quality Commission, approval was granted for the Robert Dollar Co. to proceed with the installation of a decorative bark plant in order to permit the phase-out of their wigwam waste burner.

The bark plant was completed in March, 1972, and the wigwam waste burner was phased out. The bark plant now employs 8 people and is producing decorative bark at a normal hourly rate of 11 tons/hour, or approximately 46,000 tons/year. The bark is packaged in 3 cu. ft. bags, each weighing approximately 50 pounds.

Before packaging, the bark is dried in a rotary drier which is supplied heat from the combustion of small dried wood particles in a Wellons fuel-cell type combustion furnace. These small wood particles are separated from the bark in a cyclone at the drier discharge. The drier cyclone exhaust gases, controlled by a damper, are either sent back to the furnace or are discharged out of the stack. The dried bark product is separated by trommels to the desired size, packaged and sold.



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Materials

Results from the first stack tests in May, 1973, of the bark drier exhaust revealed a particulate loading of 0.90 grains/scf and 25% opacity, with neither value being in compliance with Oregon Administrative Rules, Chapter 340, Sections 21-015(2b) and 21-020(2) requiring 20% opacity and 0.1 grains/scf. Modifications of the drier system were made during the summer of 1973 as recommended by a consulting firm retained by the company. These modifications reduced the particulate loading to 0.20 gr/scf with an average opacity of 22% as indicated in a source test conducted on October 12, 1973. Although a substantial reduction in particulate emission was achieved, the bark drier did not demonstrate compliance with regulatory emission limitations. The hourly emission rate from the drier stack is 8.7 pounds/hour.

A baghouse filter was installed by the company over the bark packaging area in October, 1972, as required by the Department in Stipulation and Order No. 73-0110075 to eliminate a dust problem in the packaging area.

A Notice for Issuance of an Air Contaminant Discharge Permit (Application No. 0115) to the Robert Dollar Co. was mailed January 16, 1974. This pending permit contains a compliance schedule for the bark plant, and specifies that plans and specifications must be submitted and be approved by no later than June 30, 1974, emission tests were to be conducted, and the results submitted to the Department of Environmental Quality, in order to demonstrate compliance with OAR, Chapter 340, Sections 21-015(2b) and 21-020(2).

On February 5, 1974, a letter was received from the company informing the Department that the bark plant could not support any added investment for control equipment, such as a scrubber at this time, and requested a variance under ORS 449.810, for the proposed permit conditions No. 2 and 5, allowing continuous operation at 0.20 grains/scf and 25% opacity.

During telephone conversations, company management has stated that the bark plant made approximately \$20,000 during 1972, but did not yield any profit last year. The original plant investment was \$300,000.

Current Program:

The company is planning on expanding their bark plant operation. They are now purchasing bark from the Spalding and Son, Inc. sawmill in Grants Pass, and are negotiating to purchase bark from the McGrew Brothers sawmill in Ashland. Company personnel estimate their decorative bark production should be increased by 50% this year. The bark plant now has the capability to increase production by 100% with no additional plant expenditures if the required bark can be purchased, and if markets can be developed.

Conclusions:

The Robert Dollar Company has requested a variance from administrative rules relating to emissions from the bark drier stating it is not reasonably possible to comply with the proposed permit conditions. The company requests a variance to allow emissions of 0.2 grains/scf and 25% opacity for continuous operation based upon the following factors:

1. The bark drier stack does meet the 0.2 grains per SCF requirement for "old" sources.
2. This drier stack is less visible and offensive than emissions from "modified" burners in the Glendale, Grants Pass, and Medford area.
3. Glendale is an isolated, sparsely populated area.
4. This bark process utilizes bark to produce a product thus employing eight people.
5. This process eliminated an 80 foot wigwam burner.
6. A scrubber to correct this emission problem is too expensive to be supported by the bark plant.

In order to determine if the variance continues to be necessary, the company should perform another source test in accordance with procedures on file at the Department prior to June 1, 1974, and the test report should be submitted to the Department prior to June 15, 1974. The company should be required to notify the Department of the time and date that the source test is to be performed so as to allow the Department to monitor the test.

Director's Recommendation:

It is recommended that the Robert Dollar Company, Forest Products Division, be granted a variance from OAR, Chapter 340, Sections 21-015(2b) Visible Air Contaminant Emission Limitations, and 21-020(2), Fuel Burning Equipment Emission Limitation, until March 1, 1975, subject to the following compliance schedule and emission limitations, and that the Air Contaminant Discharge Permit, No. 10-0045, to be issued, be modified to reflect this schedule:

1. August 1, 1974, submit plans and specifications.
2. September 1, 1974, submit purchase orders.
3. December 1, 1974, commence construction.
4. January 1, 1975, complete construction.
5. March 1, 1975, demonstrate compliance with OAR, Chapter 340, Section 21-015(2b) and 21-020(2).

In addition, the following emission limitations should be incorporated into the Air Contaminant Discharge Permit for the duration of this variance.

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all air contaminant control equipment at full efficiency and effectiveness, such that the emissions of air contaminants are kept at the lowest practicable levels.
2. Particulate emissions from the wood-fired drier shall not exceed the following:
 - a. 0.2 grains per standard cubic foot corrected to 12% carbon dioxide (CO₂),
 - b. An opacity equal to or greater than twenty-five percent (25%) for a period or periods aggregating more than three (3) minutes in any one (1) hour.



KESSLER R. CANNON



THE ROBERT DOLLAR CO.

FOREST PRODUCTS DIVISION

TELEPHONES

Area Code 503

OFFICE: 832-2111 SALES: 832-2131

GLENDAL, OREGON 97442

HEAD OFFICE
311 CALIFORNIA STREET
SAN FRANCISCO 94104

5 FEB 1974

January 30, 1974

ROUTING	
To	Noted by
HMP	<i>[Signature]</i>
JEP	<i>[Signature]</i>
File No.	10-0045 10-0045
From:	HB
Action:	

DEQ
1234 S.W. Morrison Street
Portland, Oregon 97205

Re: Air contaminant discharge permit application
number 0115.

Gentlemen:

It is not reasonably possible for us to comply with Section A, condition #2 and condition #5 of your proposed permit. These two conditions pertain to our wood fired bark dryer.

Some important facts pertaining to the wood-fired bark dryer are:

1. Our bark plant was constructed in 1972 to utilize as decorative bark, material that was then disposed of in an 80 foot wigwam burner.
To successfully utilize this bark which is 100% Douglas-fir required us to dry the material and to develop a market. These two requirements demanded large investment and risk.
2. The bark plant is now employing eight full time personnel and the market has been expanded to accept 100% of our production.
3. On May 1, 1973 tests were conducted on the bark dryer showing "no pass" on the dryer stack. During Sept., 1973 changes recommended by Larry Wellon's and Associates were made to the bark dryer (see our letter to you dated Sept. 28, 1973). Tests were then conducted on October 12, 1973 to demonstrate compliance. The results of both tests are as follows:

<u>Test Date</u>	<u>Average Grain Loading</u>	<u>Average Opacity</u>
May 1, 1973	0.903 Gr/SCF	25%
Oct. 12, 1973	0.20	22% (maximum 25)

Please note the improvement in grain loading after modifications.

AIR QUALITY CONTROL

R E F E R E N C E
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4. The only remaining alternative to improve the emission from the plant is a scrubber. The expense of a scrubber can not be supported by the bark plant.

We hereby request a variance under ORS449.810 from your proposed permit Section A, conditions #2 and #5 to conditions allowing 0.20 grains/SCF and 25% opacity for continuous operation.

We make the request based upon the following factors:

1. The bark dryer stack does meet the 0.2 grain per SCF requirement for "old" sources.
2. This dryer stack is less visible and offensive than emissions from "modified" burners in the Glendale, Grants Pass, and Medford area.
3. Glendale is an isolated, sparsely populated area.
4. This bark process utilizes bark to produce a product thus employing eight people.
5. This process eliminated an 80 foot wigwam burner.
6. A scrubber to correct this emission problem is too expensive to be supported by the bark plant.

I am available to provide any information you might need on this request.

Very truly yours,
THE ROBERT DOLLAR CO.



T. H. Mehl, III
Asst. Manager

PROPOSED

AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
 1234 S.W. Morrison Street
 Portland, Oregon 97205
 Telephone: (503) 229-5696
 Issued in accordance with the provisions of
 ORS 449.727

<p>ISSUED TO: THE ROBERT DOLLAR CO. P. O. Box "C" Glendale, OR 97442</p> <p>PLANT SITE: THE ROBERT DOLLAR CO. P. O. Box "C" Glendale, OR 97442</p> <p>ISSUED BY DEPARTMENT OF ENVIRONMENTAL QUALITY</p> <hr style="width: 80%; margin-left: 0;"/> <p style="display: flex; justify-content: space-between; width: 80%; margin-left: 0;"> Diarmuid F. O'Scannlain Director Date </p>	<p>REFERENCE INFORMATION</p> <p>Application No. <u>0115</u></p> <p>Date Received <u>July 6, 1973</u></p> <p>Other Air Contaminant Sources at this Site:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 60%;">Source</th> <th style="width: 15%;">SIC</th> <th style="width: 20%;">Permit No.</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(2)</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>		Source	SIC	Permit No.	(1)	_____	_____	_____	(2)	_____	_____	_____
	Source	SIC	Permit No.										
(1)	_____	_____	_____										
(2)	_____	_____	_____										

SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:

Name of Air Contaminant Source	Standard Industry Code as Listed
SAWMILL AND PLANING MILL	2421
VENEER MANUFACTURING PLANT	2434

Permitted Activities

Until such time as this permit expires or is modified or revoked, THE ROBERT DOLLAR CO. is herewith permitted to discharge treated exhaust gases containing air contaminants including emissions from those processes and activities directly related or associated thereto in conformance with the requirements, limitations, and conditions of Sections A through C of this permit from its sawmill, planing mill, bark plant, steam generating facility and green veneer plant, located at Glendale, Oregon.

The specific listing of requirements, limitations and conditions contained herein does not relieve the permittee from complying with all other rules and standards of the Department.

Divisions of Permit Specifications

	<u>Page</u>
Section A - Sawmill and Planing Mill	2
Section B - Veneer Manufacturing Plant	4
Section C - General Requirements	5

For Requirements, Limitations and Conditions of this Permit, see attached Sections

PROPOSED
AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS
 Issued by the
 Department of Environmental Quality for
THE ROBERT DOLLAR CO. (Glendale)

Expiration Date 6/1/78
 Page 2 of 7
 Appl. No.: 0115
 File No.: 10-0045

SECTION A - SAWMILL AND PLANING MILL (INCLUDES BARK PLANT)
 (Including (3) Cyclones, (1) Baghouse Filter, (1) Bark
 Dryer, and (1) Steam Generating Boiler)

Performance Standards and Emission Limits

1. Particulate emissions from any single air contaminant source other than the bark dryer and steam generating boiler shall not exceed the following:

- a. 0.2 grains per standard cubic foot for sources existing prior to June 1, 1970,
- b. 0.1 grains per standard cubic foot for sources installed, constructed, or modified after June 1, 1970, or
- c. An opacity equal to or greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any one (1) hour.

2. Particulate emissions from the wood-fired bark dryer shall not exceed the following:

- a. 0.1 grains per standard cubic foot corrected to 12% carbon dioxide (CO₂) or at 50% excess air,
- b. An opacity equal to or greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any one (1) hour.

3. The permittee shall operate and control the steam generating boiler(s) in accordance with the following listing of boiler operating parameters and emission limitations:

Boiler Identification	Operating Parameters		Maximum Allowable Emission Limitations	
	Fuel to be used (1)	Max. Steaming Capacity (2)	Opacity (3)	Particulates (4)
1	H.F., S.D.	40,000	40%	0.2

- (1) H. F. means wood residues commonly referred to as hog fuel; R.O. means residual oil; D.O. means distillate oil; S.D. means sanderdust; N.G. means natural gas; and LPG means liquefied petroleum gas.
- (2) Steam production in pounds per hour.
- (3) Maximum opacity that shall not be equalled or exceeded for a period or periods aggregating more than three minutes in any one hour, excluding uncombined water vapor.
- (4) Emission limitation for particulates which shall not be exceeded and is stated in grains per standard cubic foot, corrected to 12% carbon dioxide (CO₂) or at 50% excess air.

4. The permittee shall not operate the boiler(s) with other fuels or at greater steam generating rates than those specified in Condition 3 without prior written approval from the Department.

Compliance Demonstration Schedule

5. The permittee shall provide controls for the wood-fired bark dryer so as to limit emissions in accordance with Condition 2 and the following schedule:

- a. By no later than February 28, 1974, submit plans and specifications to the Department of Environmental Quality for all necessary construction and/or modification work,
- b. By no later than March 30, 1974, issue all purchase orders for components and control equipment,
- c. By no later than April 30, 1974, commence construction and/or modification work,
- d. By no later than May 30, 1974, complete all construction and/or modification work, and
- e. By no later than June 30, 1974, demonstrate that the wood-fired bark dryer is operated in continuous compliance with Condition 2.

SECTION B - VENEER MANUFACTURING PLANT
(Includes (3) Cyclones)

Performance Standards and Emission Limits

6. Particulate emissions from any single air contaminant source shall not exceed the following:

- a. 0.2 grains per standard cubic foot for sources existing prior to June 1, 1970,
- b. 0.1 grains per standard cubic foot for sources installed, constructed, or modified after June 1, 1970, or
- c. An opacity equal to or greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any one (1) hour.

PROPOSED
AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS
Issued by the
Department of Environmental Quality for
THE ROBERT DOLLAR CO. (Glendale)

Expiration Date 6/1/78
Page 5 of 7
Appl. No.: 0115
File No.: 10-0045

SECTION C - GENERAL REQUIREMENTS
(for all manufacturing activities listed in this permit)

Monitoring and Reporting

7. The permittee shall submit an annual statement giving the total plant production for the preceding year. This statement shall be submitted with the Annual Compliance Determination Fee.

General Conditions

- G1. A copy of this permit or at least a copy of the title page and an accurate and complete extraction of the operating and monitoring requirements and discharge limitations shall be posted at the facility and the contents thereof made known to operating personnel.
- G2. This issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
- G3. The permittee is prohibited from conducting any open burning at the plant site or facility.
- G4. The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site emissions to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.
- G5. The permittee shall at all times conduct dust suppression measures to meet the requirements set forth in "Fugitive Emissions" and "Nuisance Conditions" in OAR, Chapter 340, Section 21-050.
- G6. (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.
- G7. The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas at all reasonable times for the purposes of making inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emission discharge records and otherwise conducting all necessary functions related to this permit.
- G8. The permittee, without prior notice to and written approval from the Department of Environmental Quality, is prohibited from altering, modifying or expanding the subject production facilities so as to affect emissions to the atmosphere.
- G9. The permittee shall be required to make application for a new permit if a substantial modification, alteration, addition or enlargement is proposed which would have a significant impact on air contaminant emission increases or reductions at the plant site.

PROPOSED
AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS
Issued by the
Department of Environmental Quality for
THE ROBERT DOLLAR CO. (Glendale)

Expiration Date 6/1/78
Page 7 of 7
Appl. No.: 0115
File No.: 10-0045

G10. This permit is subject to revocation for cause, as provided by law, including:

- a. Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
- b. Violation of any of the requirements, limitations or conditions contained herein; or
- c. Any material change in quantity or character of air contaminants emitted to the atmosphere.

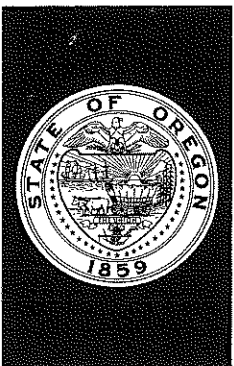
G11. The permittee shall notify the Department by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:

- a. The nature and quantity of increased emissions that have occurred or are likely to occur,
- b. The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,
- c. The corrective action that is proposed to be taken, and
- d. The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.

G12. Application for a modified or renewal of this permit must be submitted not less than 60 days prior to permit expiration date. A filing fee and Application Investigation and Permit Issuing or Denying Fee must be submitted with the application.

G13. The permittee shall submit the Annual Compliance Determination Fee to the Department of Environmental Quality according to the following schedule:

<u>Amount Due</u>	<u>Date Due</u>
\$125.00	June 1, 1974
\$125.00	June 1, 1975
\$125.00	June 1, 1976
\$125.00	June 1, 1977



ENVIRONMENTAL QUALITY COMMISSION

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5696

TOM McCALL
GOVERNOR

B. A. McPHILLIPS
Chairman, McMinnville

GRACE S. PHINNEY
Corvallis

JACKLYN L. HALLOCK
Portland

MORRIS K. CROTHERS
Salem

MEMORANDUM

TO : ENVIRONMENTAL QUALITY COMMISSION
FROM : Director
SUBJECT: Agenda Item No. K, March 22, 1974 EQC Meeting

Martin Marietta, The Dalles, Proposed ACDP, and Petition
Requesting Establishment of Special Problem Area Designation

—
Kessler R. Cannon
Director

The Environmental Quality Commission amended the Primary Aluminum Plant Regulation (OAR Chapter 340, Division 2, Sections 25-255 through 25-290) at its November 26, 1973 meeting. The amended regulation became effective December 25, 1973. Section 25-270 of the amended regulation allows the Department to require more restrictive emission limits than the numerical emission standards specified in Section 25-265 upon a finding by the Commission that an individual plant is located or is proposed to be located in a special problem area. (The amended regulation is appended hereto.)

The Department has prepared a proposed air contaminant discharge permit for the Martin Marietta plant which is essentially ready for the public notice procedures. These procedures were established to allow comment from the public.

Petition Received

A letter dated February 19, 1974, and a petition on behalf of the Wasco County Fruit and Produce League were submitted to the Department by Mr. Arden E. Shenker and Mr. Robert M. Kerr, respectively and are appended hereto.

The following is a summary of the action requested by the petition:

1. Require Martin Marietta Aluminum to comply by June 1, 1974, with the January 1, 1977 emission limitations.
2. Adopt more restrictive emission limits during the period March 25, 1974 through July 15, 1974 upon a finding by the Commission that The Dalles is a Special Problem Area. The



Contains
Recycled
Materials

more restrictive limitations requested are: (a) total fluorides from all sources shall not exceed 1.0 pound fluoride ion per ton of aluminum produced as a weekly average, and (b) the concentration of gaseous fluoride in the ambient air shall not exceed 0.6 micrograms per cubic meter when measured during six consecutive hour periods.

3. Compliance testing and monitoring shall be performed by the Department.

Proposed Permit

The proposed permit establishes emission limitations more restrictive than the 1977 emission limitations for fluorides set forth in the amended regulations, and requires a compliance schedule to meet the particulate emission limits by no later than January 1, 1977 in accordance with the amended regulation.

An office conference was held with the company on March 13, 1974, relative to the proposed permit conditions. Generally, the company objects to the more restrictive emission limitations in the proposed permit on the basis that administrative hearings have been conducted and rules adopted establishing emission limits based on best technology for existing plants. The company expressed concern that more restrictive emission limits are in essence a penalty for having accomplished good control during the preceding periods. Further, the company indicated its intent to operate its facilities which represent best control technology for existing aluminum plants in a manner to minimize emissions to the atmosphere. The company has not been able to identify the parameters that cause the variability in emissions (i.e. during 1973 the monthly average of total fluoride emissions have varied from 0.83 to 3.33 pounds F⁻ per ton of aluminum produced). The company requested that emission limits in the permit be consistent with regulatory limitations.

A comparison of limitations contained in the amended regulation, the proposed permit and requested in the petition is presented in Table A.

Discussion

In drafting the proposed permit, the Department has considered the 1973 emission data as representing the performance capabilities of the Martin Marietta control systems. Attached as an appendage is a copy of data compiled from 1973 potroom emission reports. This data indicates that the plant exceeded the total fluoride limit as proposed in the permit during October and the total particulate limit in August.

Fluoride samples were collected on a 12-hour basis at six stations in The Dalles area during 1973. A review of the data, which is attached, shows that the 0.6 ugF⁻/m³ concentration requested by the petitioners during the period March 25 through July 15, 1974 was exceeded twice

TABLE A
 Limitations Contained in Amended Regulation,
 Proposed Permit and Requested in Petition

<u>Emission Limitations</u>	<u>Amended Regulation (Compliance date)</u>	<u>Proposed Permit (Compliance date)</u>	<u>Petition (Compliance date)</u>
<u>Total Fluoride, lb F⁻/ton aluminum produced</u>			
Monthly average <u>1/</u>	3.5 (7-1-77)	3.0 (6-1-74)	3.5 (6-1-74)
Annual average <u>1/</u>	2.5 (7-1-77)	2.0 (6-1-74)	2.5 (6-1-74)
Weekly average <u>2/</u>	None	None	1.0 (3-25-74 through 7-15-74)
Monthly limit <u>1/</u>	22 tons F ⁻ (7-1-77)	22 tons F ⁻ (6-1-74)	None
<u>Total Particulates, lb/ton aluminum produced</u>			
Monthly average <u>1/</u>	13 (7-1-77)	13 (7-1-77)	13 (6-1-74)
Annual average <u>1/</u>	10 (7-1-77)	10 (7-1-77)	10 (6-1-74)
<u>Ambient Air Limitations</u>			
Gaseous Fluoride, <u>3/</u> Micrograms F ⁻ per cubic meter of air	None	None	0.6 (3-25-74 through 7-15-74)

1/ Required minimum sampling frequency - 3 times per month

2/ Required minimum sampling frequency - 3 times per week

3/ Required minimum sampling frequency - twice daily at each location

at station 19 with 0.82 and 0.79 ugF-/m³ readings and once at station 26 with a 0.63 ugF-/m³ value. From this record, it is concluded that Martin Marietta is essentially capable of meeting the petitioner's requested 0.6 ugF-/m³ value on a 12-hour sampling basis since only 3 of 1147 samples obtained in 1973 exceeded 0.6 ugF-/m³.

It is generally agreed that reducing the ambient air sampling period might result in obtaining higher maximum values. The Department conducted simultaneous 6-hour and 12-hour samplings at Flecks in 1972 with the following results:

	6 hr.	12 hr.
Maximum	2.09 ugF-/m ³	1.1 ugF-/m ³
Second Highest	1.46	.84
3rd Highest	.42	.3
Geometric Mean	.031	.04
Standard Deviation	3.86	3.34

The Department concluded at that time that on a basis of air pollution control merits, general monitoring needs, determining trends, and cost, that 12-hour sampling would provide the Department with reasonable surveillance data. Twelve hour sampling periods have been used by the Department, Martin Marietta and Reynolds Metals Company during 1972 and 1973.

The Department plans to continue its ambient air monitoring program in 1974 by operating stations at the Fleck and Bailey orchards. The company has indicated that it will operate station No's 19, 26, 30 and 31 and submit the monitoring results to the Department.

The Department has confirmed receipt of the petition by letter to Mr. Arden E. Shenker dated March 6, 1974, informing him that the DEQ is currently in the process of drafting an Air Contaminant Discharge Permit for the Martin Marietta plant. The permit will implement all of the appropriate amended regulation requirements as soon as practicable. The Department has anticipated that the permit issuing procedure would include a public hearing and is preparing a review report which will contain control capability, emission rates, ambient air values and other pertinent information.

The letter to Mr. Shenker, also indicated that the Commission would receive the petition at this meeting and consider setting a date for a public hearing relative to issuance of a proposed permit. The Department letter requested that a listing and preferably one reproducible copy of all exhibits, statements, or other testimony presented at the hearings, or any other pertinent materials considered to support the petitioner's claims, be provided to the Department.

The Department proposes that the proposed permit be the subject of a public hearing at which time the Commission may receive testimony concerning the proposed permit, the establishment of The Dalles area as a Special Problem Area, and establishment and incorporation into the permit of more restrictive emission limitations.

Recommendation

The Director recommends that a public hearing be held before the Environmental Quality Commission on a date and at a location to be decided by the Commission to consider a proposed Air Contaminant Discharge Permit to be issued to the Martin Marietta plant.

A handwritten signature in cursive script, appearing to read "Kessler R. Cannon".

KESSLER R. CANNON
Director

FAS:vt
Attached

1973 Potroom Emissions - Martin Marietta, The Dalles

Month	Monthly Averages	
	Total Fluoride (lb F ⁻ /ton Al)	Total Particulate (lb partic./ton Al)
January	2.284	8.46
February	0.830	6.68
March	1.364	8.41
April	1.031	7.68
May	1.71	8.96
June	1.51	6.70
July	2.48	9.93
August	2.87	14.42
September	1.40	8.65
October	3.33	9.56
November	1.12	8.15
December	1.29	8.90
"Existing Plant" Standard (Section 25-265(3))	3.5	13.0
	Annual Averages	
Calendar 1973	1.768	8.875
"Existing Plant" Standard (Section 25-265(3))	2.5	10.0

MARTIN MARIETTA ALUMINUM

REDUCTION DIVISION
POST OFFICE BOX 711
THE DALLES, OREGON 97054
TELEPHONE (503) 325-2121

21 March 1974

Mr. H. M. Patterson
Administrator AQCD
Dep't. Environmental Quality
1234 S. W. Morrison Street,
Portland, Ore. 97205

Dear Mr. Patterson:

Herewith a summary of our position as discussed with the Department in our recent conferences regarding an air contaminant discharge permit for The Dalles plant of Martin Marietta.

We have expressed our concern about serious deficiencies in the present draft of a proposed permit.

The draft contains emission limits significantly below those established in the recently adopted regulations! It is our position that the Department would exceed its statutory authority if these more stringent levels were adopted by the Department.

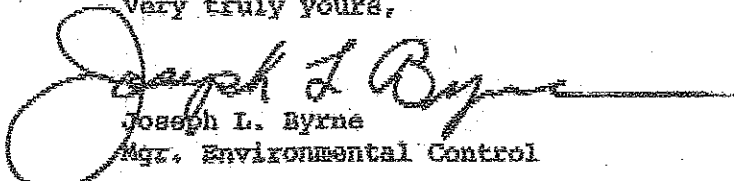
It is further our position that said more stringent limits are not practicable. An examination of the data which has been reported to the Department since the start of the sampling and reporting program under the regulations before amendment, demonstrates that the annual average limits for particulate and/or fluoride in the draft permit would have been exceeded 14 times in the past 12 months. In fact, the limits of the regulation would have been exceeded 8 times in this same period. This examination also demonstrates that the annual average is the most stringent condition to be met. A summary table of this evaluation is attached.

We know of no changes in fume control technology that would allow us to accomplish the substantial improvement necessary to meet the draft limits. It is our strong belief that it would not serve the purposes of the Department to put Martin Marietta in a position of borderline performance and probable chronic violation of permit requirements, when in fact the permit is a permit to operate.

We feel we can meet the requirements of the regulation and that we can meet them prior to 1977.

We look forward to a resolution of these matters with the Department.

Very truly yours,


Joseph L. Byrne
Mgt. Environmental Control

JLB:kl
Enclosure

TOOZE KERR PETERSON MARSHALL & SHENKER

ROBERT M. KERR
LAMAR TOOZE, JR.
EDWIN J. PETERSON
L. GUY MARSHALL
ARDEN E. SHENKER
CHAS. R. HOLLOWAY, III
PAUL R. DUDEN
STEPHEN R. FRANK
WM. G. SHERIDAN, JR.
E. RICHARD BODYFELT
MICHAEL J. GENTRY
FARRAND M. LIVINGSTON
JAMES T. HUBLER
BARRY M. MOUNT

ATTORNEYS AT LAW
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EARLE P. SKOW
OF COUNSEL
LAMAR TOOZE
1895-1971

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
FEB 19 1974
OFFICE OF THE DIRECTOR

February 19, 1974
HAND DELIVERED

Mr. Diarmuid O'Scannlain, Director
Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

Dear Mr. O'Scannlain:

RE: In the Matter of OAR, Chapter 340,
Division 2, Sections 25-265(3) and (4),
and 25-270

I enclose the petition of the Wasco County Fruit and Produce League for action to be taken both by the Environmental Quality Commission and the Oregon Department of Environmental Quality, pursuant to newly adopted amended regulations, Section 25-270, Special Problem Areas, and 25-265(3) and (4), from Division 2, Chapter 340, of the Oregon Administrative Rules.

I do not know whether this petition should be presented individually to the Department of Environmental Quality and the Oregon Environmental Quality Commission. I would appreciate your guidance on that issue. Because, as the petition requests, we ask for action to be taken both by the Commission and the Department prior to March 25, 1974, I would appreciate the matter being set down for prompt hearing, if such hearing is necessary or advisable.

If you believe that this petition should be served on particular parties, inclusive of the Martin Marietta Aluminum, Inc., representatives, we would be happy to effect such service as you may direct. We will await your response.


Arden E. Shenker

AES:et
cc: Wasco County Fruit and
Produce League

1 BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
2 AND
3 THE DEPARTMENT OF ENVIRONMENTAL QUALITY

4 STATE OF OREGON

5 In the Matter of)
6 OAR, Chapter 340, Division 2,) PETITION
7 Sections 25-265(3) and (4),
8 and 25-270)

9 The Wasco County Fruit and Produce League petitions
10 for the following relief:

11 1. Pursuant to Section 25-270, Division 2, Chapter 340
12 of Oregon Administrative Rules, adopted by the Environmental
13 Quality Commission on the recommendation of the Department of
14 Environmental Quality's Air Quality Control Division on
15 November 26, 1973, that this Commission adopt a more restrictive
16 emission limit during the fruit growing season, from March 25,
17 1974, through July 15, 1974, for the Martin Marietta Aluminum, Inc.,
18 primary aluminum reduction plant located at The Dalles, Oregon.

19 2. Pursuant to Section 25-265(3) and (4), of Divi-
20 sion 2, Chapter 340, Oregon Administrative Rules, that this
21 Commission direct, and that the Department's compliance schedule
22 for the Martin Marietta Aluminum, Inc. plant at The Dalles,
23 Oregon, require full compliance with the emission standards
24 provided in Section 25-265(3) by June 1, 1974.

25 * * *

26 1. SPECIAL PROBLEM AREA RELIEF REQUESTED

27 Section 25-270, Division 2, Chapter 30, OAR, permits
28 the Department to require more restrictive emission limits for

TOOZE, KERR, PETERSON
MARSHALL & SHENKER
ATTORNEYS AT LAW
801 STANDARDS PLAZA
PORTLAND, OREGON 97204
TELEPHONE 223-5181

1 an individual plant than the numerical emission standards contained
2 in Section 25-265, upon a finding by the Commission that an indi-
3 vidual plant is located in a special problem area. More restric-
4 tive emission limits for special problem areas can be established
5 on the basis of a seasonal term. Emission limits can be established
6 on the basis of allowable emissions per ton of aluminum produced
7 or total maximum daily emissions to the atmosphere, or a combination
8 thereof.

9 The record before the Commission and the materials
10 prepared by and for the Department are replete with the express
11 finding of fact that the orchard areas surrounding the Martin
12 Marietta Aluminum, Inc. primary reduction plant in The Dalles,
13 Oregon, constitute a special problem area. The fruits grown in
14 that area are a multimillion dollar industry. They are extremely
15 sensitive to the fluoride pollution which continues to be emitted
16 by Martin Marietta at The Dalles.

17 Previous statements submitted on behalf of the Wasco
18 County Fruit and Produce League summarize and detail the extensive
19 history of research and findings of the extreme fluoride sensi-
20 tivity of the fruit growing industry surrounding the aluminum plant
21 in The Dalles, Most particularly, see the testimony of Dr. Timothy
22 J. Facticeau before the Commission in connection with the hearings
23 held for consideration of the proposed amended regulations which
24 finally were adopted on November 26, 1973. Subsequent to that
25 time the Circuit Court for the State of Oregon in the County of
26 Hood River entered a judgment in favor of one of the fruit growers

1 in the The Dalles area, whose orchard lies some two miles further
2 from the aluminum plant than the nearest of the orchards to the
3 aluminum plant in The Dalles. That judgment was on the basis of
4 a jury verdict which found damage to the fruit orchardist's crops
5 for every year from 1960 through 1973. Inasmuch as there was a
6 finding of damage to the fruit orchardist's crops for the most
7 current year, 1973, there is a reasonable basis to seek protection
8 for the next ensuing year, 1974.

9 The record before the Commission shows that the vulner-
10 able period of maximum injury to the fruit growing industry in
11 the The Dalles area is during the cherry fruit blossom period
12 which occurs normally in the first two weeks of April. From
13 April the vulnerable period for peach fruit continues through
14 the pit hardening stage, which normally has concluded by the
15 second week in July. The petitioner submits that the following
16 more restrictive limits for emissions during the period March 25,
17 1974, through July 15, 1974, would place no unreasonable burden
18 on the Martin Marietta Aluminum, Inc., plant at The Dalles, and
19 would be a prudent step for avoiding continued substantial
20 economic damage to the fruit growing industry in the area of
21 The Dalles:

22 A. During the time period proposed, the weekly average
23 of fluorides emitted from all sources shall not exceed 1.0 pounds
24 of fluoride ion per ton of aluminum produced.

25 B. Concentrations of gaseous matter including the
26 element fluorine shall not exceed .6 micrograms per cubic meter

1 measured over any period of six consecutive hours.

2 The Oregon Department of Environmental Quality continues
3 to receive reports from the Martin Marietta Aluminum Company, Inc.,
4 plant at The Dalles, Oregon. Both those records and the records
5 from the Martin Marietta Aluminum, Inc. plant at John Day, Oregon,
6 establish that the company is capable of operating its pollution
7 control system so as to prevent the emissions of more than
8 1.0 pounds of total fluorides per ton of aluminum produced.
9 Ambient air monitoring data maintained by the company and by the
10 Oregon State University Hood River Experiment Station establish
11 that the company is capable of limiting its emissions so that
12 concentrations of gaseous matter containing the element fluorine
13 do not exceed more than a concentration of .6 of a microgram per
14 cubic meter for any six hour period of time measured consecutively.

15 The petitioner submits that if the company is capable
16 of operating in such a manner as to restrict its emissions both
17 on the basis of pounds of total fluorides emitted per ton of
18 aluminum produced and on the basis of the ambient air concentra-
19 tions of fluorides, then certainly the company should be required
20 so to operate, during the period of maximum vulnerability of a
21 multimillion dollar fruit industry.

22 The Department has experience in evaluating data
23 submitted by the Martin Marietta Aluminum Company, Inc. plant at
24 The Dalles. The Department also has experience in monitoring
25 ambient air concentration of fluorine elements in the gaseous
26 state. Moreover, the Oregon State University Hood River

1 Experiment Station also has experience in making such monitoring
2 measurements and the reporting of same for evaluation. If the
3 Commission does adopt these recommendations of the petitioner,
4 as requested by the petitioner, then the Department can take the
5 necessary steps for testing and appropriate enforcement, and the
6 petitioner so requests.

7 2. COMPLIANCE SCHEDULE RELIEF REQUESTED

8 The record before the Environmental Quality Commission
9 and the material submitted to and by the Department of Environmental
10 Quality in connection with the proposed amendments adopted by the
11 Commission on November 26, 1973, establish that the Martin Marietta
12 Aluminum, Inc. primary reduction plant at The Dalles, Oregon, can
13 and frequently does meet the existing requirements of Section
14 25-265(3) at the present time. It is the thrust of the regulations,
15 as interpreted by the Director of the Department of Environmental
16 Quality in his statement presented at the meeting of the Commission
17 on November 26, 1973, that the compliance schedules should require
18 existing aluminum plants in Oregon to meet the newly amended
19 regulations at the earliest practicable date.

20 If the Martin Marietta Aluminum, Inc. plant at The Dalles
21 now meets the requirements of Section 25-265(3), from time to
22 time, as company representatives have asserted to the Commission
23 and Department and have sworn in courts in this state, then the
24 company now has the capacity to meet those requirements on a
25 regular basis. The company should be required to do so, without
26 delay. The effect of extending the date of compliance is to

1 organizations and institutions. Now that the Commission has
2 adopted regulations and requirements which will apply to the
3 aluminum plant at The Dalles, Oregon, the petitioner is concerned
4 that those requirements take effect in order to provide maximum
5 protection for the Wasco County fruit growers and for the allied
6 and dependent (processing, storing, handling, marketing and
7 transporting) industries in the Wasco County area.

8 The petitioner submits that the fruit growing industry
9 in The Dalles should not be submitted to torture testing any
10 longer. There is no reason to see how long the orchardists will
11 suffer and how extensive their sufferance need be. The Commission
12 and the Department have the statutory and administrative authority
13 now to take steps to insure further protection of the fruit growing
14 industry. The petitioner asks that such authority be implemented
15 forthwith to provide the protection requested in this petition.
16 No sensible retort can be made by Martin Marietta when it is told
17 to do what it can do to protect the public.

18 NOW, THEREFORE, PETITIONER REQUESTS:

19 1. The Commission again find that the fruit growing
20 area in The Dalles, Oregon, near the Martin Marietta Aluminum, Inc.
21 primary reduction plant is a special problem area.

22 2. The Commission direct the Department to and the
23 Department require the more restrictive emission limits requested
24 in this petition.

25 3. The Commission direct the Department to and the
26 Department take the necessary administrative steps to implement

1 and enforce those more restrictive limits adopted in accordance
2 with this petition.

3 4. The Commission direct the Department to and the
4 Department establish a schedule of compliance for the Martin Marietta
5 Aluminum, Inc. primary aluminum reduction plant at The Dalles,
6 Oregon, which shall require full compliance by June 1, 1974, a
7 period which will have exceeded the 180 days following the adoption
8 of the amended regulations by this Commission on November 26, 1973.

9
10 Respectfully submitted,

11 WASCO COUNTY FRUIT AND PRODUCE LEAGUE
12 THE DALLES, OREGON

13 BY

14 TOOZE KERR PETERSON MARSHALL & SHENKER

15
16 BY 

17 Robert M. Kerr

18 Of Counsel for Wasco County Fruit and
19 Produce League
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21
22
23
24
25
26

PROPOSED

AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
 1234 S.W. Morrison Street
 Portland, Oregon 97205
 Telephone: (503) 229-5696
 Issued in accordance with the provisions of
 ORS 449.727

<p>ISSUED TO: MARTIN MARIETTA ALUMINUM, INC. P.O. Box 711 The Dalles, OR 97058</p> <p>PLANT SITE: Martin Marietta Aluminum, Inc. 3303 W. Second Street The Dalles, OR 97058</p> <p>ISSUED BY DEPARTMENT OF ENVIRONMENTAL QUALITY</p> <p>_____ Director</p> <p>_____ Date</p>	<p>REFERENCE INFORMATION</p> <p>Application No. <u>0151</u></p> <p>Date Received <u>5/18/73</u></p> <p>Other Air Contaminant Sources at this Site:</p> <table border="0"> <thead> <tr> <th style="text-align: center;">Source</th> <th style="text-align: center;">SIC</th> <th style="text-align: center;">Permit No.</th> </tr> </thead> <tbody> <tr> <td>(1) <u>None</u></td> <td></td> <td></td> </tr> <tr> <td>(2) _____</td> <td></td> <td></td> </tr> </tbody> </table>	Source	SIC	Permit No.	(1) <u>None</u>			(2) _____		
Source	SIC	Permit No.								
(1) <u>None</u>										
(2) _____										

SOURCE(S) PERMITTED TO DISCHARGE AIR CONTAMINANTS:

Name of Air Contaminant Source	Standard Industry Code as Listed
PRIMARY ALUMINUM PRODUCTION	3334

Permitted Activities

Until such time as this permit expires or is modified or revoked, MARTIN MARIETTA ALUMINUM, INC. is herewith permitted to discharge treated exhaust gases containing air contaminants including emissions from those processes and activities directly related or associated thereto in conformance with the requirements, limitations, and conditions of this permit from its primary aluminum production facility located in The Dalles, Oregon.

The specific listing of requirements, limitations and conditions contained herein does not relieve the permittee from complying with all other rules and standards of the Department.

Fee Paid: \$500.00

3/22/74

Performance Standards and Emission Limits

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all contaminant control equipment at full efficiency and effectiveness, such that the emissions of air contaminants are kept at the lowest practicable levels.
2. The permittee shall comply with the following emissions limitations in accordance with compliance schedules and control plans to be submitted to and approved by the Department as required in Conditions 4 and 5 of this permit.
 - a. The total fluoride emissions from all sources shall not exceed:
 - 1) A monthly average of 3.0 pounds of fluoride ion per ton of aluminum produced,
 - 2) An annual average of 2.0 pounds of fluoride ion per ton of aluminum produced, and
 - 3) Twenty-two tons of fluoride ion per month.
 - b. The total organic and inorganic particulate matter emissions from all sources shall not exceed:
 - 1) A monthly average of 13.0 pounds of particulate per ton of aluminum produced,
 - 2) An annual average of 10.0 pounds of particulate per ton of aluminum produced.
 - c. The visible emissions from any source shall not exceed 20 percent opacity at any time.
3. The use of fuels containing more sulfur than the levels indicated below is prohibited:

<u>Fuel oil grade</u>	<u>Maximum allowable S content</u>
a. ASTM Grade 1	0.3 % by weight
b. ASTM Grade 2	0.5 % S by weight
c. ASTM Grades 4, 5 and 6	1.75% S by weight

Compliance Schedules

4. The permittee shall, no later than June 5, 1974, control emissions from all sources (exclusive of total particulate emissions from the potrooms which are covered under Condition No. 5) so as to achieve and maintain compliance with Conditions 2a, 2b, and 2c of this permit.

MARTIN MARIETTA ALUMINUM, INC. (The Dalles)

5. The permittee shall, no later than June 23, 1974, submit to the Department for review and approval proposed compliance schedules and control plans to reduce particulate emissions from the potrooms to achieve as soon as practicable but no later than January 1, 1977, plant wide compliance with Condition 2b of this permit.
6. The compliance schedules and control plans referred to in Conditions 2 and 5 shall include the following increments of progress:
 - a. Date by which orders will be issued for the purchase of major component parts to accomplish emission control or process modification,
 - b. Date of initiation of on-site construction or installation of emission control equipment or process change,
 - c. Date by which on-site construction or installation of emission control equipment or process modification will be completed,
 - d. Date by which final compliance will be achieved.

Monitoring and Reporting

7. The permittee shall conduct an approved monitoring program which shall include:
 - a. Prescheduled plant wide emission testing for gaseous fluoride, particulate fluoride and total particulate,
 - b. Measuring of forage fluoride,
 - c. Measuring ambient air gaseous fluoride, particulate fluoride, suspended particulate, particle fallout and wind speed and direction.
8. Detailed descriptions of the sampling and analytical methods, equipment, procedures and frequencies employed in the monitoring program shall be submitted no later than June 1, 1974 for review and approval by the Department.
9. The permittee shall effectively monitor the operation and maintenance of the primary aluminum production plant and control facilities. A record of all such data shall be maintained and submitted to the Department of Environmental Quality within (30) days after the end of each calendar month unless requested in writing by the Department to submit this data at some other frequency. Unless otherwise agreed to in writing the information collected and submitted shall include, but not necessarily be limited to, the following parameters and monitoring frequencies:

<u>Parameter</u>	<u>Minimum Monitoring Frequency</u>
a. Wind direction and velocity	Continuously
b. Forage fluoride at the Tideman Ranch and Martin Marietta hay fields	Each cutting with prior notice to the Department.

MARTIN MARIETTA ALUMINUM, INC. (The Dalles)

<u>Parameter</u>	<u>Minumum Monitoring Frequency</u>
c. Primary potroom control system emissions	
1) Total particulates	Three times per month or once per line per month whichever is greater with prior notice to the Department.
2) Fluoride particulates	as above
3) Fluoride gases	as above
d. Secondary potroom control system emissions	
1) Total particulates	Three times per month or once per line per month whichever is greater with prior notice to the Department.
2) Fluoride particulates	as above
3) Fluoride gases	as above
e. Ambient air fluorides at station Nos. 19, 26, 30 and 31	
1) Fluoride gases and particulates (bicarbonate tube and filter method with 12 hour sampling)	Twice daily from April 1 through November 30
2) Fluoride gases and particulates (calcium formate or "limed" paper method)	Monthly
f. Air pollution control systems down time (all such equipment or systems), stud blows and paste leaks	
	Each occurence
10. The final monthly report, as required in Condition 9, submitted for any calendar year shall also include the quantities and types of fuels used during the calendar year.	

General Conditions

G1. A copy of this permit or at least a copy of the title page and an accurate and complete extraction of the operating and monitoring requirements and discharge limitations shall be posted at the facility and the contents thereof made known to operating personnel.

MARTIN MARIETTA ALUMINUM, INC. (The Dalles)

- G2. This issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
- G3. The permittee is prohibited from conducting any open burning at the plant site or facility.
- G4. The permittee is prohibited from causing or allowing discharges of air contaminants from source(s) not covered by this permit so as to cause the plant site emissions to exceed the standards fixed by this permit or rules of the Department of Environmental Quality.
- G5. The permittee shall at all times conduct dust suppression measures to meet the requirements set forth in "Fugitive Emissions" and "Nuisance Conditions" in OAR, Chapter 340, Section 21-050.
- G6. (NOTICE CONDITION) The permittee shall dispose of all solid wastes or residues in manners and at locations approved by the Department of Environmental Quality.
- G7. The permittee shall allow Department of Environmental Quality representatives access to the plant site and record storage areas at all reasonable times for the purposes of making inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emission discharge records and otherwise conducting all necessary functions related to this permit.
- G8. The permittee, without prior notice to and written approval from the Department of Environmental Quality, is prohibited from altering, modifying or expanding the subject production facilities so as to affect emissions to the atmosphere.
- G9. The permittee shall be required to make application for a new permit if a substantial modification, alteration, addition or enlargement is proposed which would have a significant impact on air contaminant emission increases or reductions at the plant site.
- G10. This permit is subject to revocation for cause, as provided by law, including:
- a. Misrepresentation of any material fact or lack of full disclosure in the application including any exhibits thereto, or in any other additional information requested or supplied in conjunction therewith;
 - b. Violation of any of the requirements, limitations or conditions contained herein; or
 - c. Any material change in quantity or character of air contaminants emitted to the atmosphere.

PROPOSED

AIR CONTAMINANT DISCHARGE PERMIT PROVISIONS

Issued by the
Department of Environmental Quality for

Expiration Date: 7/1/78

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Appl. No.: 0151

File No.: 33-0001

MARTIN MARIETTA ALUMINUM, INC. (The Dalles)

G11. The permittee shall notify the Department by telephone or in person within one (1) hour of any scheduled maintenance, malfunction of pollution control equipment, upset or any other conditions that cause or may tend to cause a significant increase in emissions or violation of any conditions of this permit. Such notice shall include:

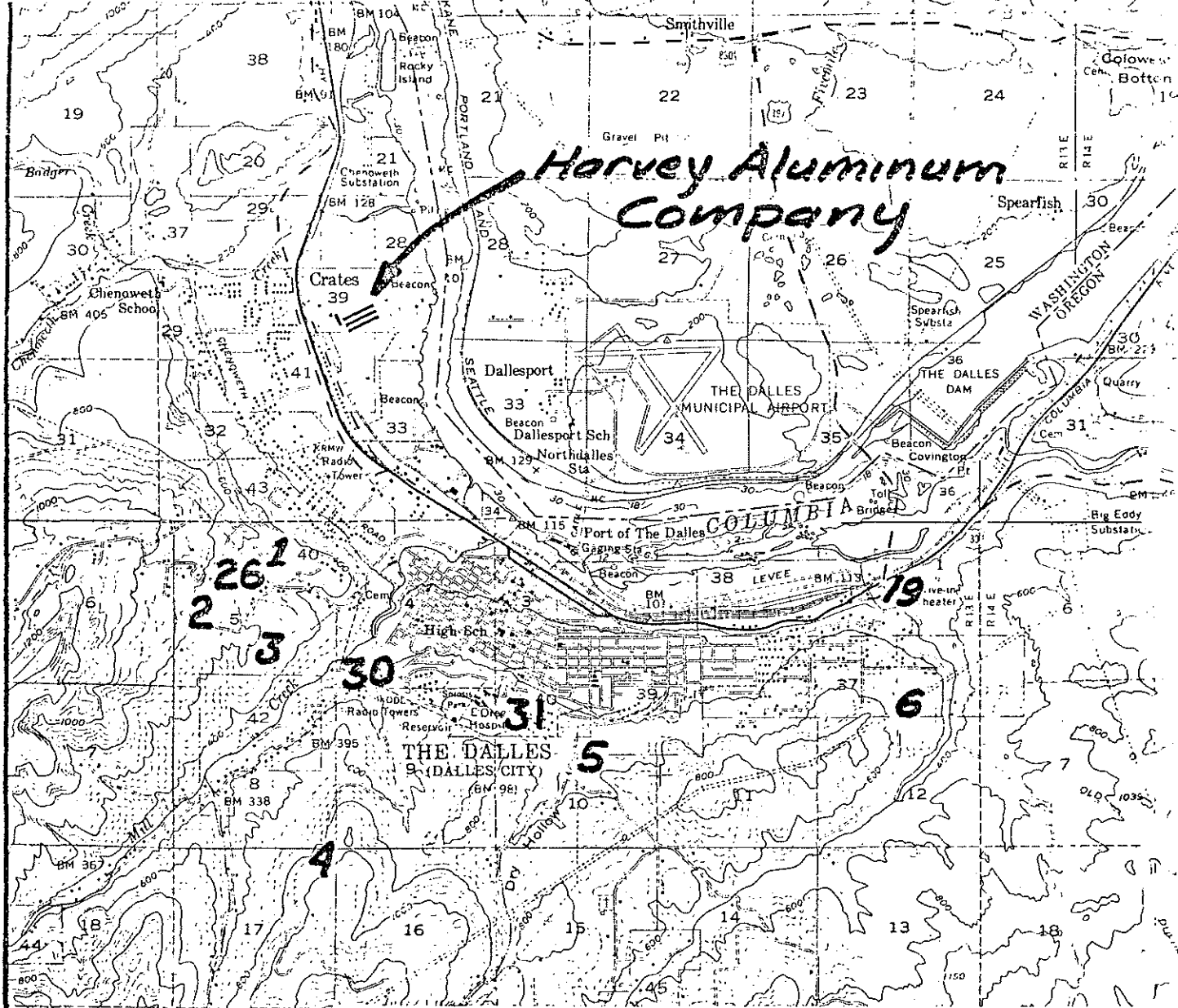
- a. The nature and quantity of increased emissions that have occurred or are likely to occur,
- b. The expected length of time that any pollution control equipment will be out of service or reduced in effectiveness,
- c. The corrective action that is proposed to be taken, and
- d. The precautions that are proposed to be taken to prevent a future recurrence of a similar condition.

(Condition G11 shall not apply to those events required to be reported by Condition 9 f. of this permit.)

G12. Application for a modified or renewal of this permit must be submitted not less than 60 days prior to permit expiration date. A filing fee and Application Investigation and Permit Issuing or Denying Fee must be submitted with the application. (May 1, 1978)

G13. The permittee shall submit the Annual Compliance Determination Fee to the Department of Environmental Quality according to the following schedule:

	<u>Amount Due</u>	<u>Date Due</u>
a.	\$175.00	May 1, 1974
b.	\$175.00	May 1, 1975
c.	\$175.00	May 1, 1976
d.	\$175.00	May 1, 1977



THE DALLES AREA
 FLUORIDE AMBIENT AIR SAMPLING STATIONS
 1972 SEASON

Station Identification No.	Property Owner	Location	
		Distance and Direction from Aluminum Factor Miles	Direction
1	Mr. Joe Fleck	1.5	SSW
2	Mr. E. W. Hendricks	2.0	SSW
3	Mr. Walter Erickson	2.3	S
4	Mr. Don W. Bailey	3.3	S
5	Mr. Minor Brady	3.2	SSE
6	Mrs. Edit Gilbert Graff	4.2	ESE
19	The Dalles Drive-In Theatre	4.0	SE
26	Harvey Aluminum Co. Cherry Orchard	1.8	SSW
30	Mr. George Hartung	2.5	S
31	Mr. Nick LaFrenz	3.0	SSE

Figure 1

MONTH

	STATION # 1 FLECK ORCHARD ug/m ³ F ⁻		STATION # 4 BAKEY ORCHARD ug/m ³ F ⁻		STATION # 19 DRIVE IN THEATRE ug/m ³ F ⁻	
	08-20	20-08	08-20	20-08	08-20	20-08
MARCH						
25-31, 1973						
MAXIMUM					0.41	0.41
2ND MAX	NO	DATA	NO	DATA	0.22	0.41
3RD MAX					0.18	0.18
MINIMUM						
2ND MIN					0.05	0.05
3RD MIN					0.05	0.05
					0.18	0.09
MONTHLY AVG					0.18	0.20
APRIL 1973						
MAXIMUM					0.23	0.82
2ND MAX	NO	DATA	NO	DATA	0.18	0.41
3RD MAX					0.18	0.23
MINIMUM					0	0
2ND MIN					0	0
3RD MIN					0	0.05
MONTHLY AVG					0.086	0.133

MONTH

1973

STATION #1 FLECK
49/143 F-

STATION #4 BAILEY
49/143 F-

STATION #19
DRIVE IN
49/143 F-

MAY 5-9 TO 5-31

	08-20	20-08	08-20	20-08	08-20	20-08
MAXIMUM	0.17	0.08	0.06	0.05	0.43	0.24
2ND MAX	0.13	0.04	0.06	0.05	0.31	0.19
3RD MAX	0.12	0.04	0.04	0.04	0.23	0.19
MINIMUM	0.009	0.009	0.02	0.02	0	0
2ND MINIMUM	0.04	0.02	0.03	0.03	0	0
3RD MINIMUM	0.05	0.04	0.03	0.04	0	0
MONTHLY AVERAGE	0.08	0.04	0.04	0.04	0.13	0.11

JUNE 1973

MAXIMUM	0.21	0.49	0.09	0.07	0.41	0.42
2ND MAX	0.16	0.12	0.09	0.06	0.33	0.29
3RD MAX	0.13	0.06	0.05	0.04	0.24	0.29
MINIMUM	0.02	0.01	0.009	0.009	0	0
2ND MIN.	0.02	0.02	0.009	0.01	0	0
3RD MIN.	0.03	0.03	0.02	0.01	0	0
MONTHLY AVG.	0.07	0.08	0.04	0.03	0.095	0.124

MONTH

	STATION #1 FLECK ORTHOD µg/m ³ F ⁻		STATION #4 BAILEY µg/m ³ F ⁻		STATION #19 DRIVE IN TH. µg/m ³ F ⁻	
	08-20	20-08	08-20	20-08	08-20	20-08
JULY 1973						
MAXIMUM	0.17	0.11	0.10	0.114	.79	.42
2ND MAX	0.16	0.10	0.08	0.08	.37	.38
3RD MAX	0.12	0.07	0.08	0.07	.34	.38
MINIMUM	0.03	0.03	0.02	0.03	0	0
2ND MIN	0.03	0.04	0.03	0.03	0	.05
3RD MIN	0.05	0.04	0.04	0.04	.05	.05
MONTHLY AVE	0.09	0.05	0.06	0.05	0.190	0.171
MAXIMUM						
2ND MAX						
3RD MAX						
MINIMUM						
2ND MIN						
3RD MIN						
MONTHLY AVE						

MONTH

STATION
#26
H.A. CHERRY
ORCH.
ug/m³ F⁻

STATION
#30
HARTUNG
ug/m³ F⁻

STATION
#21
LA FRENZ
ug/m³ F⁻

	08-20		20-08		08-20		20-08		08-20		20-08	
	25-31, 1973											
MAXIMUM	0.16	0.39	0.23	0.36	0.25	0.25						
2ND MAX	0.09	0.35	0.22	0.22	0.23	0.24						
3RD MAX	0.09	0.05	0.18	0.18	0.19	0.18						
MINIMUM	0	0	0.05	0.05	0	0						
2ND MIN	0.05	0.05	0.05	0.05	0.05	0.05						
3RD MIN	0.05	0.05	0.05	0.05	0.05	0.09						
MONTHLY AVG	0.071	0.167	0.137	0.157	0.115	0.135						
APRIL 1973												
MAXIMUM	0.19	0.63	0.18	0.18	0.29	0.38						
2ND MAX	0.17	0.27	0.18	0.18	0.19	0.19						
3RD MAX	0.17	0.27	0.18	0.10	0.19	0.19						
MINIMUM	0	0	0	0	0	0						
2ND MIN	0	0	0	0	0	0						
3RD MIN	0	0	0	0	0	0						
MONTHLY AVG	0.057	0.086	0.057	0.057	0.067	0.067						

MONTH	# 26 H.D. CHERRY ORCH. -119/143 F-	# 30 HARKINS -119/143 F-	# 31 LA TRENT -119/143 F-			
	08-20	20-08	08-20	20-08	08-20	20-08
MAY 1973						
MAXIMUM	0.29	0.81	0.26	0.21	0.24	0.29
2ND MAX.	0.26	0.61	0.21	0.21	0.24	0.24
3RD MAX.	0.22	0.60	0.21	0.21	0.21	0.19
MINIMUM	0	0	0	0	0	0
2ND MIN.	0	0	0	0	0	0
3RD MIN.	0	0	0	0	0	0
MONTHLY AVG.	0.095	0.152	0.095	0.057	0.086	0.076
JUNE 1973						
MAXIMUM	0.35	0.74	0.26	.09	0.15	0.19
2ND MAXIMUM	0.29	0.38	0.17	.05	0.10	0.10
3RD MAXIMUM	0.28	0.28	0.14	.05	0.10	0.05
MINIMUM	0	0	0	0	0	0
2ND MINIMUM	0	0	0	0	0	0
3RD MINIMUM	0	0	0	0	0	0
MONTHLY AVG	0.076	0.076	0.047	0.019	0.038	0.019

MONTH

STATION
26
H.A. CHERRY
ORCHARD
ug/m³ F⁻

STATION
30
HARTUNG
ug/m³ F⁻

STATION
31
LA FRENZ
ug/m³ F⁻

08-20 20-08 08-20 20-08 08-20 20-08

JULY 1973

MAXIMUM	0.35	0.35	0.79	0.42	0.37	0.19
2ND MAX	0.31	0.17	0.29	0.38	0.29	0.18
3RD MAX	0.26	0.17	0.24	0.38	0.23	0.18
MINIMUM	0	0	0	0	0	0
2ND MIN	0	0	0	0	0	0
3RD MIN	0	0	0	0	0	0
MONTHLY AVG	0.114	0.067	0.133	0.114	0.095	0.048

MAXIMUM
2ND MAX
3RD MAX

MINIMUM
2ND MIN
3RD MIN

MONTHLY AVG

1973
#4 BAILEY
MONTHLY AVG

0.10
ug/m³

0.05

0.01

0

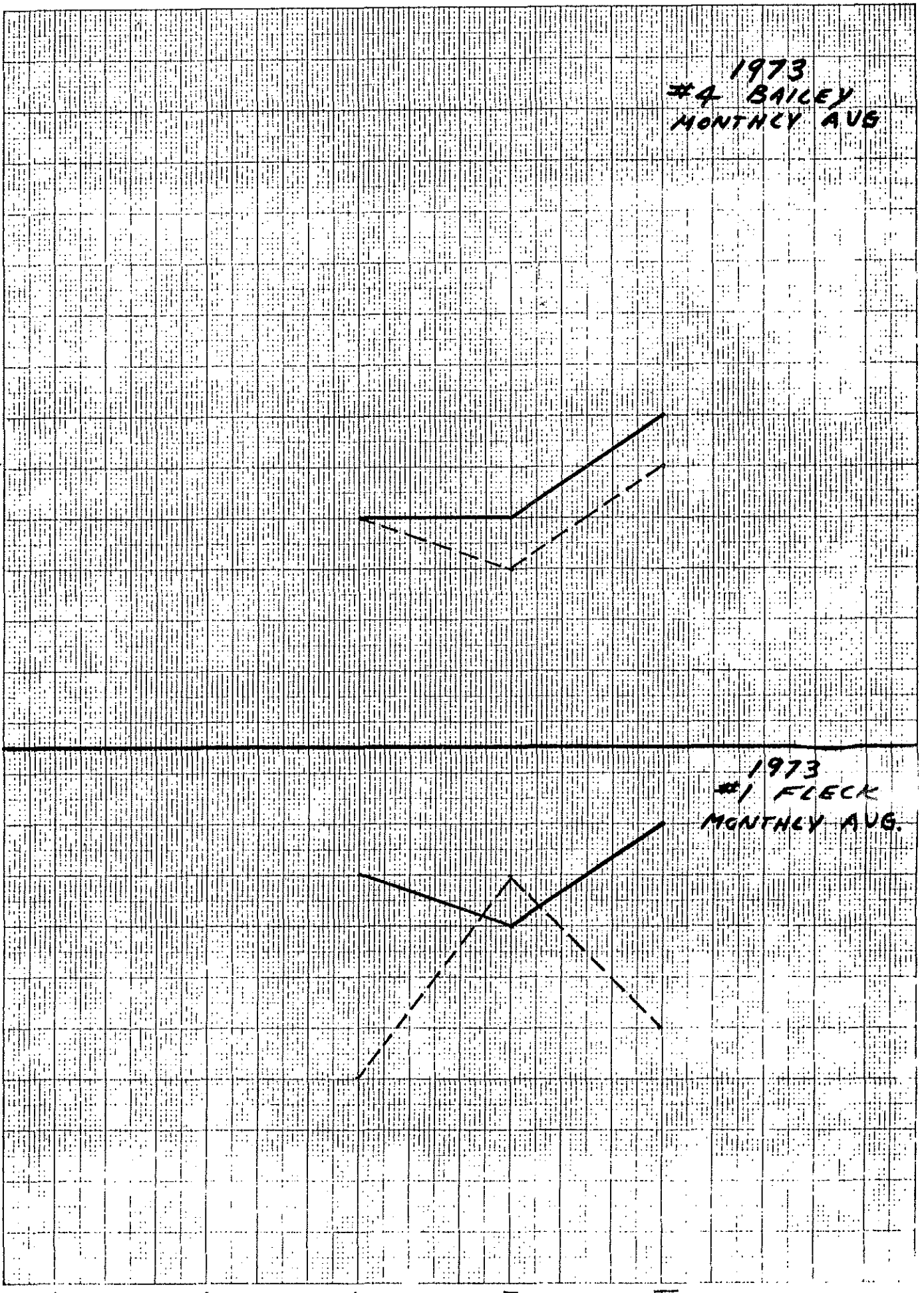
0.10

ug/m³

0.05

0.01

0



1973
#1 FLECK
MONTHLY AVG.

1973
#19 DRIVE IN
MONTHLY AUB

09/142
0.15

0.20

0.15

0.10

0.05

0

0.20

1973
#26
MONTHLY AUB

09/143

0.15

0.10

0.05

0

M

A

M

J

Q

KE 10 X 10 TO THE CENTIMETER 46 1512
16 X 25 CM.
KEUFFEL & ESSER CO
MADE IN U.S.A.

10 X 10 TO THE CENTIMETER 46 1512
18 X 25 CM. KEUFFEL & ESSER CO.

ug/m³

1973
#30 HARTUNG
MONTHLY AVG.

0.20

0.15

0.10

0.05

0

0.20

0.15

0.10

0.05

0

M

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M

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J

1973
#31 CA FREUZ
MONTHLY AVG.

ug/m³

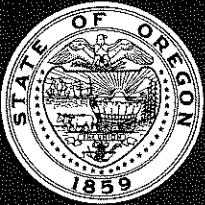
M

A

M

J

J



DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-5288

TOM McCALL
GOVERNOR

KESS CANNON
Director

ADDENDUM TO MEMORANDUM

TO: ENVIRONMENTAL QUALITY COMMISSION

FROM: Director

SUBJECT: Agenda Item No. K, March 22, 1974 EQC Meeting

Martin Marietta, The Dalles - Addendum to Memorandum

Since this report was prepared, the staff and Martin Marietta have conferred on this matter and the petition and letters from Mr. Ragan and Mr. Byrne were received.

The petition and letter by Mr. Ragan is in your notebooks. Unless the Commission wishes that this be read, only the conclusion will be presented.

The letter from Mr. Byrne primarily relates to the performance data base and the difference between emission limitations in the proposed permit and the regulation. Mr. Byrne uses all available data since the existing control systems were completed, i.e., March, 1972 through February, 1974, whereas the Department used only the 1973 data. In the table attached to the Company letter, the instances when the data exceeded the emission limitations in both the proposed permit and regulation are indicated. Since March, 1973, the data reported exceeded regulatory limits a total of 8 times. This breaks down to:

Monthly total particulates	1
Annual total particulates	3
Monthly total fluoride	0
Annual total fluoride	4

The staff concludes that using either the 1973 data or the expanded data base is acceptable. Both methods indicate that the Company is essentially capable of complying with regulatory limits for fluorides and the annual average for total particulates. Both methods indicate that the August 1973 monthly average for total particulates exceeded the 13.0 pounds per ton of aluminum limit set forth in the regulation. For this reason, the proposed permit requires a compliance schedule for reducing particulate emissions.



Contains
Recycled
Materials

The Company also indicated in the letter that it can meet the requirements of the regulation and meet them prior to January 1, 1977.

In summary, the Company has requested that the currently proposed permit be modified to include the regulatory emission limits and further, the company has indicated a desire to establish realistic compliance dates and schedules for insertion in the proposed permit before the Department issues notices relative to a public hearing.



KESSLER R. CANNON
Director

MARTIN MARIETTA ALUMINUM

REDUCTION DIVISION
POST OFFICE BOX 711
THE DALLES, OREGON 97054
TELEPHONE (503) 254-2161

21 March 1974

Mr. H. M. Patterson
Administrator AQCD
Dep't. Environmental Quality
1234 S. W. Morrison Street,
Portland, Ore. 97205

Dear Mr. Patterson:

Herewith a summary of our position as discussed with the Department in our recent conferences regarding an air contaminant discharge permit for The Dalles plant of Martin Marietta.

We have expressed our concern about serious deficiencies in the present draft of a proposed permit.

The draft contains emission limits significantly below those established in the recently adopted regulations. It is our position that the Department would exceed its statutory authority if these more stringent levels were adopted by the Department.

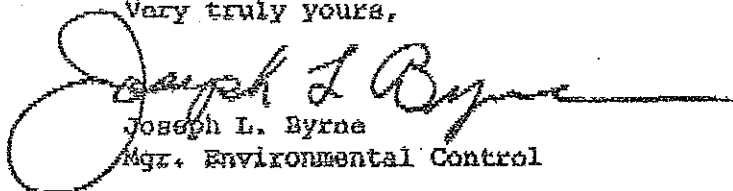
It is further our position that said more stringent limits are not practicable. An examination of the data which has been reported to the Department since the start of the sampling and reporting program under the regulations before amendment, demonstrates that the annual average limits for particulate and/or fluoride in the draft permit would have been exceeded 14 times in the past 12 months. In fact, the limits of the regulation would have been exceeded 8 times in this same period. This examination also demonstrates that the annual average is the most stringent condition to be met. A summary table of this evaluation is attached.

We know of no changes in fume control technology that would allow us to accomplish the substantial improvement necessary to meet the draft limits. It is our strong belief that it would not serve the purposes of the Department to put Martin Marietta in a position of borderline performance and probable chronic violation of permit requirements, when in fact the permit is a permit to operate.

We feel we can meet the requirements of the regulation and that we can meet them prior to 1977.

We look forward to a resolution of these matters with the Department.

Very truly yours,



Joseph L. Byrne
Mgr. Environmental Control

JLB:kl
Enclosure

EMISSION DATA - THE DALLES

Date	Total Particulate	12 Mo. Running Total	12 Mo. Running Average	Total Fluoride	12 Mo. Running Total	12 Mo. Running Average
1972	9.9			1.40		
Apr.	11.3			1.61		
May	10.8			1.97		
June	10.7			1.38		
July	17.7			4.28		
Aug.	11.6			3.08		
Sep.	11.5			4.65		
Oct.	8.5			3.41		
Nov.	11.9			4.15		
Dec.						
Jan. 1973	8.5			2.30		
Feb.	6.7			.83		
Mar.	8.5	127.6	10.6 ^{EX}	1.38	30.44	2.51 ^{EX}
Apr.	7.6	125.3	10.4 ^{EX}	1.20	30.24	2.52 ^{EX}
May	9.0	123.0	10.3 ^{EX}	1.71	30.34	2.52 ^{EX}
June	6.7	118.9	9.9	1.51	29.88	2.49 ^{EX}
July	9.9	118.1	9.8	2.47	30.97	2.58 ^{EX}
Aug.	14.5 ^{EX}	114.9	9.6	2.87	29.56	2.46 ^{EX}
Sep.	8.7	112.1	9.3	1.41	27.89	2.32 ^{EX}
Oct.	9.6	110.2	9.2	3.44 ^{EX}	26.68	2.22 ^{EX}
Nov.	8.2	109.9	9.2	1.13	24.40	2.03 ^{EX}
Dec.	8.9	106.9	8.9	1.29	21.54	1.79
Jan. 1974	6.9	105.3	8.8	.95	20.19	1.68
Feb.	11.7	108.5	9.0	2.09	20.90	1.74
REGULATION	13.0		10.0	3.5		2.5
PERMIT DRAFT	13.0		10.0	3.0		2.0

NOTE: All lbs./ton Al produced.

^{EX} EXCEEDS REGULATION

^{EX} EXCEEDS PERMIT DRAFT

EMISSION DATA - THE DALLES

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July	17.7 ✓			4.28 ✓✓		
Aug.	11.6			3.08 ✓		
Sep.	11.5			4.65 ✓✓		
Oct.	8.5			3.41 ✓		
Nov.	11.9			4.15 ✓✓		
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June	6.7	118.9	9.9	1.51	29.88	2.49 ✓
July	9.9	118.1	9.8	2.47	30.97	2.58 ✓✓
Aug.	14.5 ✓✓	114.9	9.6	2.87	29.56	2.46 ✓
Sep.	8.7	112.1	9.3	1.41	27.89	2.32 ✓
Oct.	9.6	110.2	9.2	3.44 ✓	26.68	2.22 ✓
Nov.	8.2	109.9	9.2	1.13	24.40	2.03 ✓
Dec.	8.9	106.9	8.9	1.29	21.54	1.79
Jan. 1974	6.9	105.3	8.8	.95	20.19	1.68
Feb.	11.7	108.5	9.0	2.09	20.90	1.74
Regulation	13.0		10.0	3.5		2.5

NOTE: All lbs./ton Al produced.

✓ Exceeds Regulation
 ✓ Exceeds Permit

3-20-74

with KE

Letter & proposed permit 3-8-74

Met March 13, 1974

with Joe B

March 15 1974

with Joe B & Mc Regan ATty

Review data for Condoboro - considered 1973 data DE& Company says no real data in control since Nov 1973

Congress proposed

All emissions limit in permit to be same as regulations.

Be in compliance by June 1, 1974.

Omit acceptance schedule if not 30 day after permit issued

3.5

7 of 22 in 1901

3.6

6 of 22

MILLER, ANDERSON, NASH, YERKE & WIENER
ATTORNEYS AND COUNSELORS AT LAW

900 S. W. FIFTH AVENUE
PORTLAND, OREGON 97204

TELEPHONE
(503) 224-5858

CABLE ADDRESS
"KINGMAR"

March 19, 1974

RALPH H. KING
BERT S. MILLER
ANT T. ANDERSON
FRANK E. NASH
FREDRIC A. YERKE
NORMAN J. WIENER
ORVAL O. HAGER
JOHN W. HILL
CURTIS W. CUTSFORTH
MAURICE O. GEORGES
MARK C. McCLANAHAN
CLIFFORD N. CARLSEN, JR.
DONALD R. HOLMAN
KENNETH W. HERGENHAN
WILLIAM B. CROW
HARVEY C. BARRAGAR
GERALD A. FROEBE
CONRAD L. MOORE
DEAN D. DECHAIINE
R. ALAN WIGHT
DAVID W. MORTHLAND
DOUGLAS M. RAGEN
J. FRANKLIN CABLE

RICHARD A. EDWARDS
DAVID M. MUNRO
JOHN R. BAKKENSEN
G. TODD NORVELL
MARTIN B. VIDGOFF
LOUIS B. LIVINGSTON
WARREN C. DERAS
ANTON C. KIRCHHOFF, JR.
J. DAVID PETERSEN
JOHN C. HOLBERTON
DONALD A. BURNS
RICHARD A. CANADAY
BRUCE E. SPEIDEL
JEFFREY L. DYE
PETER C. RICHTER

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
MAR 19 1974

OFFICE OF THE DIRECTOR

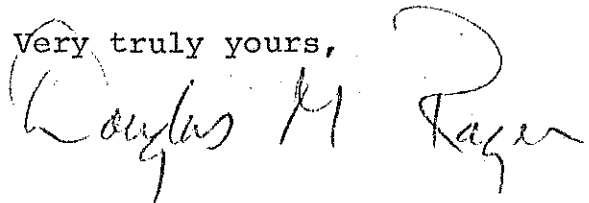
Mr. Kessler R. Cannon
Director
Department of Environmental
Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

Subject: Martin Marietta Aluminum Inc. Response
to Petition of Wasco County Fruit and
Produce League

Dear Mr. Cannon:

I enclose Martin Marietta Aluminum Inc. Response
to Petition of Wasco County Fruit and Produce League for
submission to the Environmental Quality Commission.

Very truly yours,



cc: Mr. Jack P. Doan
Vice-President and General Manager
Northwest Operations
Martin Marietta Aluminum Inc.
(with enclosure)

1 reduction plant at The Dalles. The Commission received numerous
2 technical reports. Having considered the alternatives of establishing
3 separate standards for each of the existing plants and a separate
4 standard for newly constructed plants, the Commission adopted
5 regulations on November 26, 1973. The petition of the League
6 requests that the Commission again emerge itself in the same
7 problems and issues it carefully considered in 1973. The Commission
8 has been presented with no new information or developments which
9 justify a departure from the regulations adopted in November.
10 Contrary to the representations of the Wasco County Fruit and Produce
11 League, there is nothing in the record which justifies classifying
12 the reduction plant of Martin Marietta Aluminum Inc. as a "special
13 problem area." Rather, the record reflects that the Martin Marietta
14 Aluminum Inc. plant has one of the most efficient emission control
15 systems in the world.

16 The petition asks that during the period March 25, 1974,
17 through July 15, 1974, the weekly average of fluorides emitted from
18 all sources shall not exceed 1.0 pound of fluoride ion per ton
19 of aluminum produced. It also asks that the gaseous matter
20 including the element fluorine shall not exceed .6 micrograms per
21 cubic meter measured over any six consecutive hours. The League
22 makes no showing that such standards are attainable. The 1.0
23 pound monthly standard was initially proposed by the staff of the
24 Department of Environmental Quality in 1973. The Commission
25 recognized in its adoption of the regulations in November 1973 that

.6

1 a 1.0 pound standard was not "reasonably attainable," nor
2 "practicable." The regulations requested by the League are even
3 more restrictive than those required by Section 25-265, Chapter 340,
4 OAR, for newly constructed plants. It has been repeatedly reported
5 to the Department and the Commission that the plant of Martin Marietta
6 Aluminum Inc. at The Dalles has one of the world's most efficient
7 emission control systems. However, its plant simply cannot presently
8 comply with the regulations proposed by the League.

9 The League refers to a judgment entered in Hood River.
10 The League fails to report that the judgment was rendered in a case
11 which was first tried in 1970. The results of the first trial were
12 reversed on appeal. The judgment in the second trial was challenged
13 on posttrial motions for, among other reasons, insufficient evidence
14 to support the verdict. In lieu of a resolution of those motions
15 by the trial court and the prospect of a subsequent appeal, the
16 grower entered into a settlement with Martin Marietta Aluminum Inc.
17 It is interesting to note that during the course of the trial
18 there were no scientists who testified that they had found damage in
19 the cherry orchard of the grower in 1973. The grower himself made
20 no claim for damage for cherry crop loss in 1973. The case of the
21 grower has now been dismissed with prejudice. The case of the grower
22 provides no basis for extraordinary restrictions on the operations
23 of Martin Marietta Aluminum Inc. in The Dalles.

24 Furthermore, there is no showing anywhere in the record
25 that the restrictions proposed by the League will have any material
26 beneficial effect on the orchards.

1 2. THE REQUEST OF THE LEAGUE TO ADVANCE THE COMPLIANCE
2 DATE TO JUNE 1, 1974.

3 The League has petitioned the Commission to advance the
4 date for full compliance with the emission standards in Section
5 25-265(3) from January 1, 1977, to June 1, 1974. The Commission
6 carefully considered throughout the year 1973 all phases of the
7 emission regulations for the aluminum industry including the com-
8 pliance schedule. Again, the League has failed to report any new
9 developments which justify a departure from the regulations adopted
10 November 26, 1973.

11 A substantial part of the efforts of the aluminum industry
12 in the hearings in 1973 was to explain to the Department and the
13 Commission the inherent variability of the operations of an aluminum
14 plant and the associated variability in emissions. Nothing has
15 occurred in the reduction technology nor in the emission control
16 technology which eliminates the variability in the emission
17 measurements. It was in recognition of this variability in
18 emission measurements that the Commission established its definitions
19 of the monthly average and annual average and set the standards at
20 the levels of emissions set forth in the regulations.

21 With one exception, Martin Marietta Aluminum Inc. complied
22 in 1973 with Section 25-265(3). This achievement is another
23 example of the ability of Martin Marietta Aluminum Inc. to lead the
24 industry in emission control and to provide the best "practicable"
25 emission systems. The single instance of failure of Martin Marietta
26

1 Aluminum Inc. to meet the standards which go into effect
2 no later than January 1, 1977, occurred in August 1973 when its
3 monthly average exceeded 13 pounds of particulate per ton of aluminum
4 produced. In that month the monthly average particulate was 14.2
5 pounds. The record shows that this test result was not typical. It
6 also shows that Martin Marietta Aluminum Inc. can expect continued
7 variability in the test results.

8 This report of the outstanding performance of Martin
9 Marietta Aluminum Inc. in 1973 is mentioned here for a very important
10 reason. Except for the one instance in August 1973, Martin
11 Marietta Aluminum Inc. achieved compliance with the regulations
12 three years before it was required to do so under the regulations.

This achievement should convince the Commission that it can rely
14 upon Martin Marietta Aluminum Inc. to comply with the purpose of
15 the regulations to attain " * * * the highest and best practical
16 collection, treatment and control * * *."

17 CONCLUSION

18 The petition of the League should be rejected because:

19 a. The issues presented in the petition have
20 been fully considered by the Commission as recently as
21 November 26, 1973.

22 b. There has been no change in any pertinent
23 facts since November 1973.

24 c. Martin Marietta Aluminum Inc. has
25 demonstrated it is continuing to lead the industry

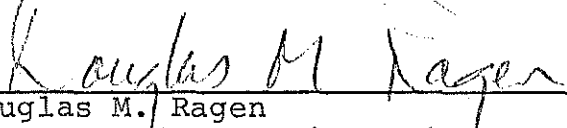
1 in emission control and to provide the best "practicable"
2 emission systems.

3 Respectfully submitted,

4 MARTIN MARIETTA ALUMINUM INC.

5 By

6 MILLER, ANDERSON, NASH, YERKE & WIENER

7 
8 Douglas M. Ragen
9 Attorneys for Martin Marietta
10 Aluminum Inc.

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MILLER, ANDERSON, NASH, YERKE & WIENER
ATTORNEYS AND COUNSELORS AT LAW
224-5358
500 S. W. FIFTH AVENUE PORTLAND, OREGON 97204

5359

March 8, 1974

Martin Marietta Aluminum Inc.
P. O. Box 711
The Dalles, OR 97058

Attn: Mr. Jack Doan
Vice President and General Manager
Reduction Division

Final Date for Submission
Written Comments: March 20, 1974

Re: Proposed Air Contaminant
Discharge Permit # 33-0001

Gentlemen:

Your application for an Air Contaminant Discharge Permit has been reviewed by the Department of Environmental Quality and proposed air contaminant discharge permit provisions have been drafted. You are invited to review the attached copy and submit any comments you may have in writing prior to the date indicated above.

Your comments will be considered by the Department of Environmental Quality prior to conducting a public hearing, the schedule for which will be established at the March 22, 1974 Environmental Quality Commission meeting in Salem. A notice of the public hearing on the permit will be sent to you as soon as it is available.

In drafting the proposed permit, the Department has considered the 1973 emission data as representing the performance capabilities of your control systems. The fluoride emission limits proposed in Condition No. 2a of the permit are less than the rates set forth in Section 25-265 (3) of the Primary Aluminum Plant Regulation because the Department considers it necessary to require the levels of emissions control as demonstrated by your 1973 data. In addition, it is considered mandatory to require immediate compliance, i.e., by June 1, 1974, as specified by Condition No. 4, since the capability to comply with these fluoride limitations apparently exists at this time.

A review of these data obtained during 1973 for total particulate indicates that the control capability to comply with the monthly average limitation, i.e., 13.0 lb/ton Al, does not presently exist since the value obtained during August, 1973, equalled 14.42 lb/ton Al produced. For this

Martin Marietta Aluminum Inc.
March 8, 1974
Page 2

reason the Department has required the submission of the compliance schedule and control plan as indicated in Condition No. 5.

The compliance schedules and control plans referred to in Condition 5 of the proposed permit will, after submittal to and approval by the Department, be incorporated in the permit as an addenda item.

The Department hereby requests that the current monitoring and reporting programs be continued until the permit is issued and the programs required therein become effective.

Should you have any questions on this matter, please feel free to contact this office.

Very truly yours,

KESSLER CANNON
Director

H. M. Patterson, Administrator
Air Quality Control

FAS:mh
cc: Joe Bryne
Air Quality Control Division

Enc.

1977 Existing Plants met

A 3.5 mo/ave
2.5 annual
22 lbs

13
10 annual

Jan 1, 1984

1.3 mo. ave

1 annual ave

Partic

7 "

5 annual

2.

EMISSION DATA - THE DALLES

Date	Total Particulate	12 Mo. Running Total	12 Mo. Running Average	Total Fluoride	12 Mo. Running Total	12 Mo. Running Average
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Mar.	8.5	127.6	10.6✓	1.38	30.44	2.51✓
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June	6.7	118.9	9.9	1.51	29.88	2.49
July	9.9	118.1	9.8	2.47	30.97	2.58✓
Aug.	14.5 ✓	114.9	9.6	2.87	29.56	2.46
Sep.	8.7	112.1	9.3	1.41	27.89	2.32
Oct.	9.6	110.2	9.2	3.44	26.68	2.22
Nov.	8.2	109.9	9.2	1.13	24.40	2.03
Dec.	8.9	106.9	8.9	1.29	21.54	1.79
Jan. 1974	6.9	105.3	8.8	.95	20.19	1.68
Feb.	11.7	108.5	9.0	2.09	20.90	1.74
<i>Regulation</i>	13.0		10.0	3.5		2.5

NOTE: All lbs./ton Al produced.

✓ Exceeds Regulation

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July	9.9	118.1	9.8	2.47	30.97	2.58✓
Aug.	14.5 ✓	114.9	9.6	2.87	29.56	2.46
Sep.	8.7	112.1	9.3	1.41	27.89	2.32
Oct.	9.6	110.2	9.2	3.44	26.68	2.22
Nov.	8.2	109.9	9.2	1.13	24.40	2.03
Dec.	8.9	106.9	8.9	1.29	21.54	1.79
Jan. 1974	6.9	105.3	8.8	.95	20.19	1.68
F.	11.7	108.5	9.0	2.09	20.90	1.74
Regulation	13.0		10.0	3.5		2.5

NOTE: A11 lbs./ton A1 produced. ✓ Exceeds Regulation



State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: HMP, HHB, RBP, RLV, R. Gay

Date: February 20, 74

From: FAS

Subject: Martin Marietta, The Dalles, EI 33-0001
Monitoring Program Proposal

Attached is a sampling and monitoring program proposal recently submitted by Martin Marietta. This proposal is an addition to and modification of the program submitted on December 10, 1970 which is attached. The total of which is intended to meet the requirements of the new DEQ aluminum plant regs, also attached.

Your review of this material and any comments in your individual areas of expertise and interest is hereby requested. Let me know asap if you have any questions or would like to confer on this.

cc: MJD

FAS

diagram blogs

MARTIN MARIETTA ALUMINUM

REDUCTION DIVISION
POST OFFICE BOX 711
THE DALLES, OREGON 97058
TELEPHONE (503) 296-6161

13 February 1974

H. M. Patterson
Administrator, AQCD,
Dep't. of Environmental Quality
1234 S. W. Morrison Street,
Portland, Oregon 97205

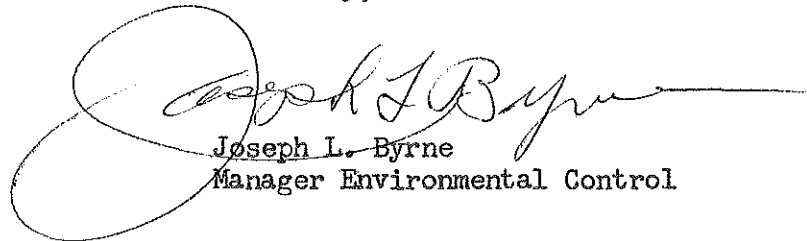
Dear Mr. Patterson:

The enclosed sampling methods and schedule, and methods of analysis are submitted as a supplement to the program previously submitted. This previous, December 1970, submission was made and accepted under the then existing OAR Chapter 340, Sections 25-255 through 25-285.

This supplement will bring the program at The Dalles into conformity with the requirements of the recently adopted changes in the regulations. All aspects of the earlier program not changed by this submission will, of course, be continued as per approval of your department.

I shall be happy to respond to any questions or comments that you may have.

Sincerely,



Joseph L. Byrne
Manager Environmental Control

JLB:kl
Enclosure
cc: file

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
FEB 15 1974

AIR QUALITY CONTROL

MARTIN MARIETTA ALUMINUM
The Dalles, Oregon

Procedure used in Sampling and Analysis of Emissions

PRIMARY SYSTEM - WET ELECTROSTATIC PRECIPITATOR EXHAUST

Nature of the Emission:

These units handle the gaseous and particulate material drawn directly from either 30 or 15 vertical stud Soderberg cells, according to size.

The velocity of the gas stream is low (about 700 to 1000 linear ft. min.) Loading of solids is light (between .003 and .001 gr/s.c.f.) and a large fraction is sub-micron. For these reasons no special effort is made to sample isokinetically.

The system contains a fan and is not subject to sudden changes in resistance so the velocity and nature of the gas stream is not subject to large sudden variations.

Velocity Determination:

The low velocity makes pitot readings inaccurate. (Readings are between .03 and .07" W.G. which cannot be read to better than $\pm .02$) Anemometers can be used and are more accurate but the fact that the gas is wet discourages this. For these reasons the rated capacity of the unit is used in the calculations.

were they ever checked at some

Sampling:

W.E.P.'s are sampled for 22-24 hours which covers 6 working cycles. The portion of the secondary system which covers the same cells as the W.E.P. (as nearly as possible) is sampled simultaneously.

Layout of Sampling Apparatus.

The sampling probe is a piece of 3/8" I.D. stainless steel tube curved as in Fig. 1. A single hole about 3/4" diameter is drilled in the wooden diverter on top of the precipitator stack. The sampling probe is inserted to approximately the middle of the gas stream.

The filter holder is of aluminum with a teflon coating on the inside surfaces. A 12.5 cm S & S 589 Blue filter paper is used. The filter is supported by a metal can containing a 300 watt infra-red bulb as a heat source.

The filter holder is connected with rubber tubing to three Greenburg Smith impingers in series. The first impinger contains distilled water to prevent the formation of insoluble sodium aluminate, which can plug the impinger if the concentration is high enough. The next two impingers contain 2% sodium hydroxide solution.

The apparatus is connected and the heat lamp is switched on for a few minutes before sampling starts. The gas meter is set to 0 cu. ft. and the pump is switched on and the sampling rate is set to about 0.5 c.f.m. Then the volume, temperature and vacuum on the meter are recorded. These readings are taken 4-5 times during the test.

Analysis

Total Solids are obtained from the difference in weight of the filter paper, before and after sampling. Filter paper is air dried to constant weight \pm 0.5 mg at 105°C for both weighings.

Solid Fluoride Filter paper and sample are transferred to Inconel crucible and water, and sufficient CaO to produce a basic solution is added. Crucible and contents are heated at 105°C until dry and then a fusion with sodium hydroxide is performed. The contents are transferred to a distillation flask and a standard Willard & Winter steam distillation is performed using perchloric acid.

Fluoride Concentration is measured on the distillate with the Orion fluoride electrode using procedure outlined in 1971 E.P.A. "Methods for Chemical Analysis of Water & Wastes". C.D.T.A. is used as complexing solution.

Gaseous Fluoride The contents of the impingers are transferred to a 1 litre volumetric flask together with washings and made up to volume. Fluoride concentration is determined with the Orion electrode as before. Comparison of many results has shown that distillation of these samples is not necessary.

SECONDARY SYSTEM - ROOF SCRUBBING SYSTEM

Velocity Determination

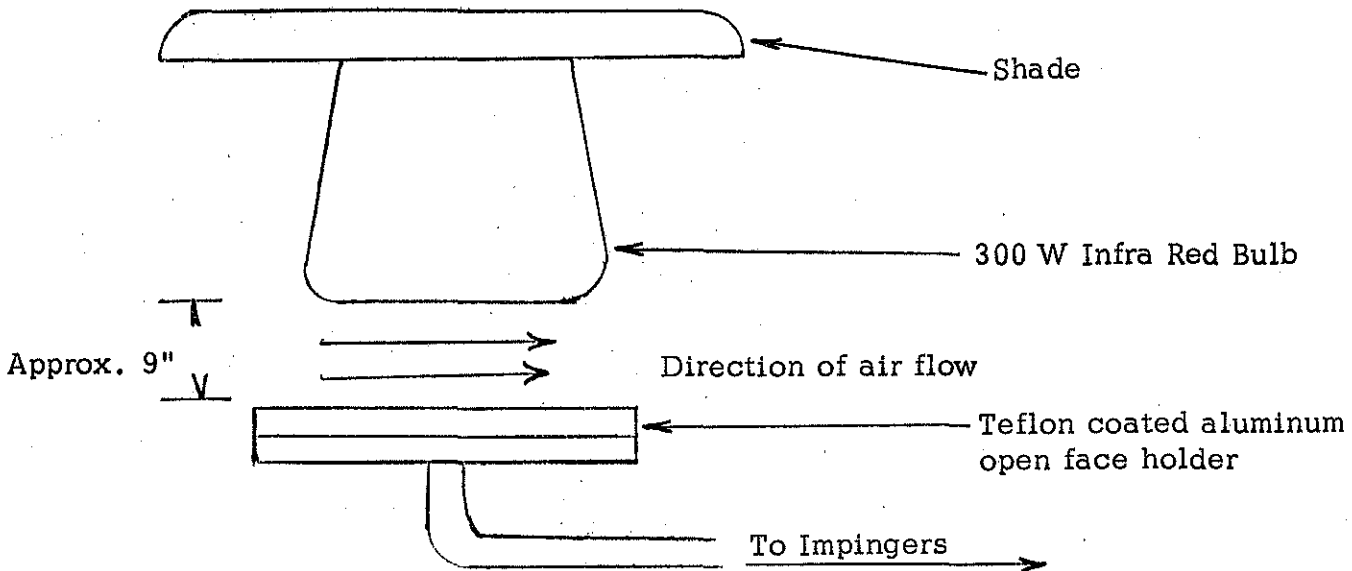
Air velocity through the tunnel is measured with a Taylor rotating vane anemometer. The tunnel is naturally divided into 24 sections by the mist eliminator panels which are at the end of the scrubbing section and just before the fan. (See Fig. 3) The anemometer is started in front of the top right hand panel and a stopwatch is started at the same time. The anemometer is left in front of each panel for half a minute then moved on without stopping it. After twelve minutes and the last panel, the anemometer is stopped and the total is read and divided by twelve to obtain average linear feet per minute for that side of the tunnel.

Sampling

Air flow through this unit is not linear as the air must change direction 90° between the mist eliminator and the fan. The velocity is low (average 650 linear ft./min.), and most particles are less than 1 micron. For these reasons no attempt is made to sample isokinetically.

This arrangement of the apparatus is similar to that used for the W.E.P.'s. The main difference is that an open face filter is used and the paper is heated directly.

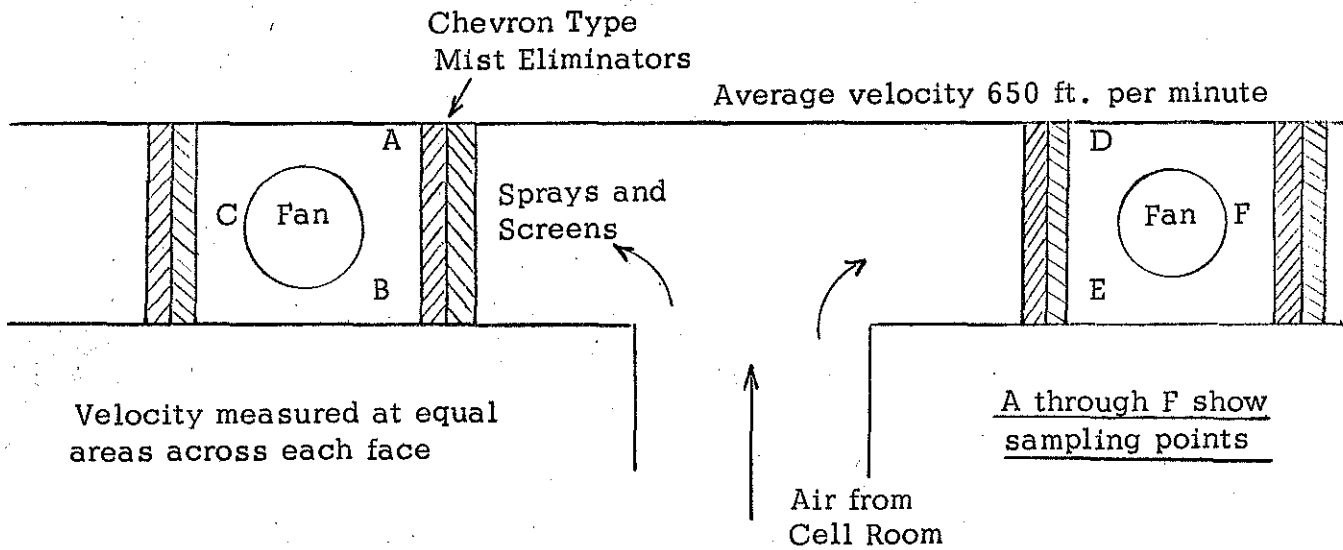
Figure 2



Various sampling locations have been tried across the face of the mist eliminator and no consistent variation has been found. The location currently in use is 4-6 ft. above floor level and 2-4 ft. from the face of the mist eliminator.

Six impinger trains are used in each test arranged as below:

Figure 3

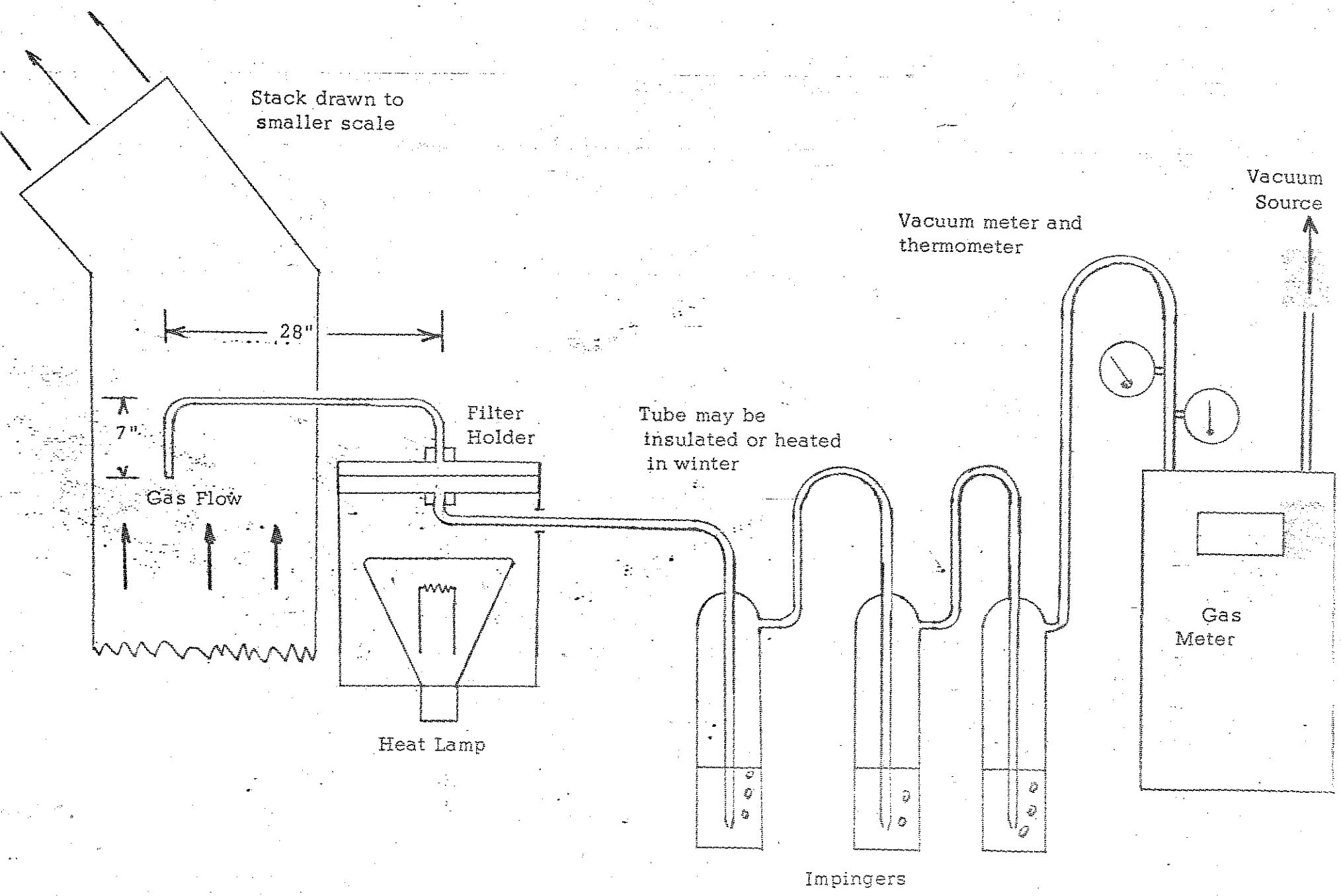


Sampling period is 22-24 hours (six working cycles) at 0.2 to 0.4 c. f. m

Analysis:

Analysis is identical to the procedure described under W.E.P. exhaust.

Fig. 1 Layout of Sampling Apparatus



In accordance with OAR Cap. 340 25-280 and 25-285, the following sampling schedule is proposed:

1. EMISSIONS

Two fans of the roof scrubbing (secondary) system will be sampled three times each month.

A W.E.P. which takes gas from the same cells as the roof fans (as closely as this can be accomplished) will be sampled simultaneously with the roof fans.

Sampling will be done in accordance with the detailed methods submitted to D.E.Q.

The following timetable will be followed as far as is possible.

In February 1974 the east end of C room will be sampled. In March D room east, April E room east. Then sampling will move to A room west in May and progress:-

June B West
July C West etc.

Each time E room is completed, sampling will start on A room at the alternate end, e.g. E room east to A room west.

The time table followed in each month will be:

1st full working week:
Two tests

2nd working week
One test + velocity measurements

3rd working week:
Moving, clean-up, instrument calibration etc.

It is expected that it will not be possible to follow this schedule exactly due to mechanical failures, illness among the sampling crew, etc. It is, therefore, proposed that the responsible officer of the D.E.Q. be notified by telephone each time that the timetable is not followed. This will be followed up by a written explanation of the deviation contained in the report of the test results.

AMBIENT AIR

Twelve-hour concentrations of gaseous fluoride in ambient air will be sampled by the bicarbonate tube method, at four locations from the middle of March to the end of October. Results will be reported at the end of each calendar month in micrograms per cubic metre of air and parts per billion.

reported as F HF

CALCIUM FORMATE PAPERS

We know of no method for determining fluoride exposure on a paper in micrograms of fluoride per square centrimetre of paper per cubic metre of air.

SQUAD MAX

The above proposed sampling schedule replaces our previous proposal submitted on December 9th, 1970 under Oregon Administrative Rules 340 Sections 25 - 255 through 25 - 285.

PAGE: 1 of 2
CATEGORY: General Procedures
TEST: Fluoride ion - Volumetric
Thorium Nitrate Procedure
METHOD NO: C-277-62
METHOD STATUS: Tentative

1. Reference: Stanford Research Institute Method

2. Reagents Required:

- a. Thorium Nitrate Solution, 0.01 Normal - Dissolve 13.805 gm $\text{Th}(\text{NO}_3)_4 \cdot 4\text{H}_2\text{O}$ in distilled water and dilute to 1 liter. Dilute 50 ml of this solution to 500 ml for use as a 0.01 normal solution.
- b. 0.05N HCl - See Method C-4-57.
- c. 0.05N NaOH - See Method C-13-57.
- d. Monochloroacetic Acid Buffer Solution - Dissolve 2.0 gm NaOH in 40 ml distilled water. Dissolve 9.5 gm Monochloroacetic acid in 60 ml distilled water. Slowly add the NaOH solution to the Monochloroacetic Acid solution with stirring. This solution is stable for five days.
- e. Standard Sodium Fluoride Solution, 500 $\mu\text{g F/ml}$ - Dissolve 1.105 gm dry C.P. NaF crystals in distilled water and dilute to one liter.
- f. Standard Sodium Fluoride Solution 5 $\mu\text{g F/ml}$ - Dilute 10 ml of solution (e) to 1 liter.
- g. Standard Sodium Fluoride Solution 0.5 $\mu\text{g F/ml}$ - Dilute 10 ml of solution (f) to 100 ml.
- h. Sodium Alizarin Sulfonate Indicator 0.05% - Dissolve 0.500 gm of the dye in distilled water and dilute to 1 liter.

3. Equipment Required:

- a. Flasks, titration - Erlenmeyer, wide-mouth, 250 ml capacity.
- b. Burets (4), 25 ml capacity, subdivisions 1/10 ml.
- c. Buret (1), Koch micro buret, capacity 2 ml, sub-divisions 1/100 ml.
- d. Pipets, Normax or equivalent 1, 5, 10, 20, 25, 50 and 100 ml capacity.

4. Calibration Procedure:

Pipette portions of Standard NaF solution directly into the Erlenmeyer titration flasks. Use a range of concentrations from 5 to 100 μg fluorine. Make up to 200 ml volume with fluoride free distilled water. Also make up a 'blank' of the distilled water. Add 1.0 ml 0.05% Alizarin red indicator and titrate to pink color with dropwise addition of 0.05 N NaOH. ⁽¹⁾ Just discharge pink color by dropwise addition of 0.05 N HCl. Then add 1.0 ml of monochloroacetic acid buffer solution. Titrate the blank solution to a faint pink color with 0.01 N Thorium nitrate. ⁽²⁾ Titrate the standard solutions to match the color of this titration blank.

Subtract the volume of Thorium nitrate used on the titration blank from the volume used on each standard. Construct a graph and table to relate the quantity of fluoride to the net volume of thorium nitrate titrated.

5. Test Procedure:

Take a suitable aliquot of the test sample and dilute to 200 ml in the Erlenmeyer titration flask. The aliquot should be at least 5 mls and should not exceed 100 μg of fluorine. Add indicator, NaOH, HCl and buffer solutions in the same manner as described for the calibration procedure. Titrate the sample with the 0.01 N Thorium nitrate solution to the color produced in the titration blank. Subtract from the titer of the sample, the titer of the titration blank. The net titer is then converted to the micrograms of fluoride present in the aliquot by using the calibration table (See Calibration Procedure). Calculations for total fluoride present in the sample are shown in the procedures for the particular material tested.

-
- (1) If sample is already a pink color, first discharge it with dropwise addition of 0.05 N HCl; then proceed with the 0.05 N NaOH.
(2) Blanks should be 0.15 - 0.20 ml titration.

MARTIN MARIETTA ALUMINUM

OFFICIAL METHOD OF ANALYSIS

PAGE: 1 of 6
CATEGORY: Air
TEST: Fluorine by Sodium bicarbonate tube & filter
METHOD NO: C-298-69
METHOD STATUS: Tentative

I. General

This method provides a means of separating gaseous and aerosol fluorides. The gaseous fluorides are absorbed by a coating of sodium bicarbonate on the inside wall of a glass tube, and the aerosol particles are removed by filtration at the tube outlet.

Reference: Symposium on Air Pollution Control - Special Technical Publication No. 281 published by the American Society for Testing Materials, 1959, entitled, "Determination of Gaseous and Particulate Inorganic Fluorides in the Atmosphere".

II. Equipment and Reagents Needed for Sampling

- (a) Sodium Bicarbonate, 3% solution - dissolve 30 grams of NaHCO_3 in about 750 mls of distilled water placed in a one liter volumetric flask. Add 30 mls of glycerol and mix well before diluting the solution to the 1 liter mark with distilled water. To this solution add 100 microliters or less of a wetting agent (Aerosol O.T., 10% from Fisher Chemical Company-Catalog #S.O. A-292) and agitate until this solution is well mixed.
- (b) Soda Lime, 8 - 16 mesh
- (c) Drying Tower
- (d) Filter Paper, Whatman No. 30, 12.5 cm diameter
- (e) Filter Paper Holder (see attached drawing) constructed out of Aluminum with all metal parts coated on the inside⁽¹⁾ with tygon paint mixed 1:5 with thinner.
- (f) Glass Tubing - 4 feet lengths of 10 mm I.D. tubing with the ends fire polished.

(1) To prevent pick-up of fluorine by the bare metal.

- (g) Sampling Station - The cabinet at the bottom of the sampling station accomodates the motor, pump and filter holder. A chimney supports and protects the glass tube; and the conical rain deflector above the chimney is positioned high enough so that aerosol particulates passing beneath it are still above the glass tube inlet (see attached drawing).
- (h) Pump - Air pump capable of drawing approximately one cubic foot of air per minute through the tube and filter. Example: Gast model 0440-V2B with by-pass control to regulate the air flow.
- (i) Meter - Dry gas meter with an index having a sweep hand of one cubic foot and smaller clocks indicating summations of units - 10's and 100's cubic feet. Example: Sprague Meter No. 175 - 1A Zephyr
- (j) Tube Dryer to provide fluorine free warm dry air - for example, Fluorine free warm dry air can be supplied by passing air from a controllable source such as a pump through a heated coiled copper tubing. The warm air is passed through a soda lime filled drying tower to remove any fluorine in the air. Glass wool plugs are used on either end of the drying tower to prevent entrainment of soda lime dust or particles from the copper tubing.

III. Preparation of Sampling Equipment

(a) Glass Tubes

1. Cleaning new tubes or used tubes that have an oily film on the inside

First, clean the inside of the glass tubes with a brush using labtone (soap) solution. Next rinse the tubes with warm cleaning acid followed by distilled water, the tubes now should be ready for the normal rinsing and treatment with sodium bicarbonate.

2. Coating tubes with NaHCO₃ solution

Place a number of tubes in a vertical holder and wet the inside walls with a fine stream of distilled water from a plastic wash bottle. Using a second squeeze bottle containing the 3% NaHCO₃ solution start washing down a tube while rotating it by hand. When the solution has wet* the entire length of the tube start drying the tube by passing warm dry air down through it. Dry until the entire length of the tube shows the frosted dried bicarbonate coating. Wipe off bottom of tube to remove excess NaHCO₃. Cap tube ends until they are ready for installation in the field.

(b) Filters

Wash all parts of filter and dry with paper towel. Place Whatman No. 30 paper between gasket and wire screen and reassemble. Seal inside of filter holder by attaching a short length of rubber tubing (about 20 inches) to inlet and outlet side of filter holder.

IV. Sampling

At the sampling station, un-cap glass tube and place tube in the chimney. Connect tube to filter holder with a short piece of rubber tubing butting the glass up against the metal of the filter inlet, and connect filter outlet to the pump and pump outlet to the meter. Start the pump and adjust sampling rate to about one cubic foot per minute.

Record data showing starting and stopping time and flow-rate; then, calculate and record elapsed time, average sampling rate, and total sample volume. Test data on micrograms fluoride found in the tube and on the filter are used along with the total sample volume to calculate the parts per billion gaseous fluoride and particulate (aerosol fluorides) on a volume basis. At completion of test period, remove glass tube and filter and cap ends of each until ready to analyze.

* A dirty tube will not become wet as the solution tends to separate and go around oily or dirty areas. These tubes need cleaning as in previous paragraph.

V. Procedure

Water soluble fluorides in the tube and on the paper are analyzed as follows:

- (a) The inside wall of the tube is rinsed with distilled water catching the rinse water in a 250 ml erlenmeyer flask. The water volume in the erlenmeyer flask is adjusted to 200 mls and titrated for fluoride following Standard Method No. C-277-62 "Fluoride Ion - Volumetric Thorium Nitrate Procedure".
- (b) Remove the filter paper from the holder and place in an erlenmeyer flask. Add the rinse water from the inlet side of the filter-holder into the flask, and adjust the volume to 200 mls and titrate for fluoride as above.

VI. Calculation

The test results can be expressed in several ways. When reporting on a volumetric parts per billion basis, the micrograms of fluoride ion found are converted to a volume basis; One microgram fluoride ion at 68°F (20°C) and 1 atmosphere pressure (760 mm Hg) occupies 44.664×10^{-9} cubic feet.

$$\text{PPB F(Ion) by Volume} = \frac{\mu\text{gF (gaseous, aerosol, or total)} \times 44.664 \times 10^{-9}}{\text{cu. ft. gas sampled}} \times 10^9$$

Example:

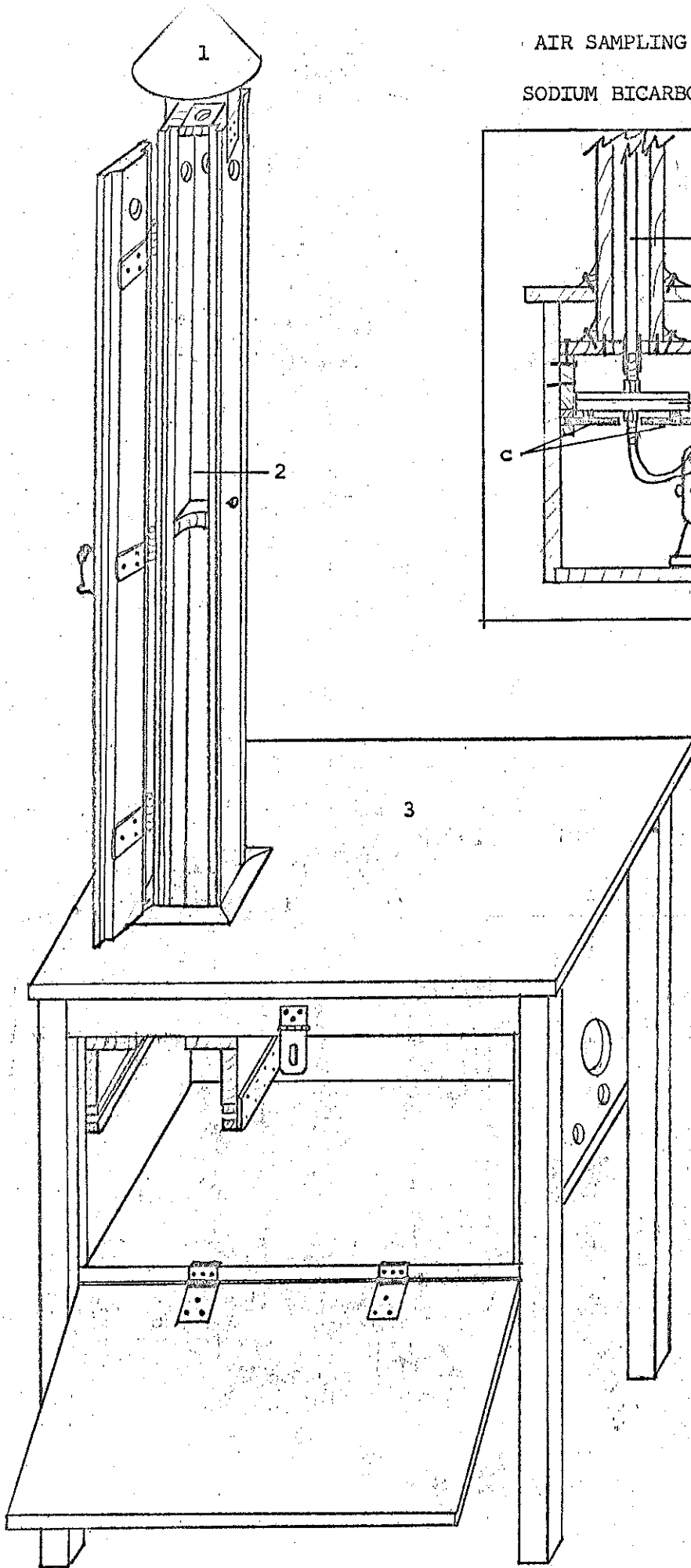
Tube = 12 μg Fluorine Ion. Filter = 20 μg Fluorine Ion. Volume = 1440 cu. ft.

$$\text{PPB F(Ion) (gaseous)} = \frac{12 \times 44.664 \times 10^{-9}}{1440} \times 10^9 = 0.37$$

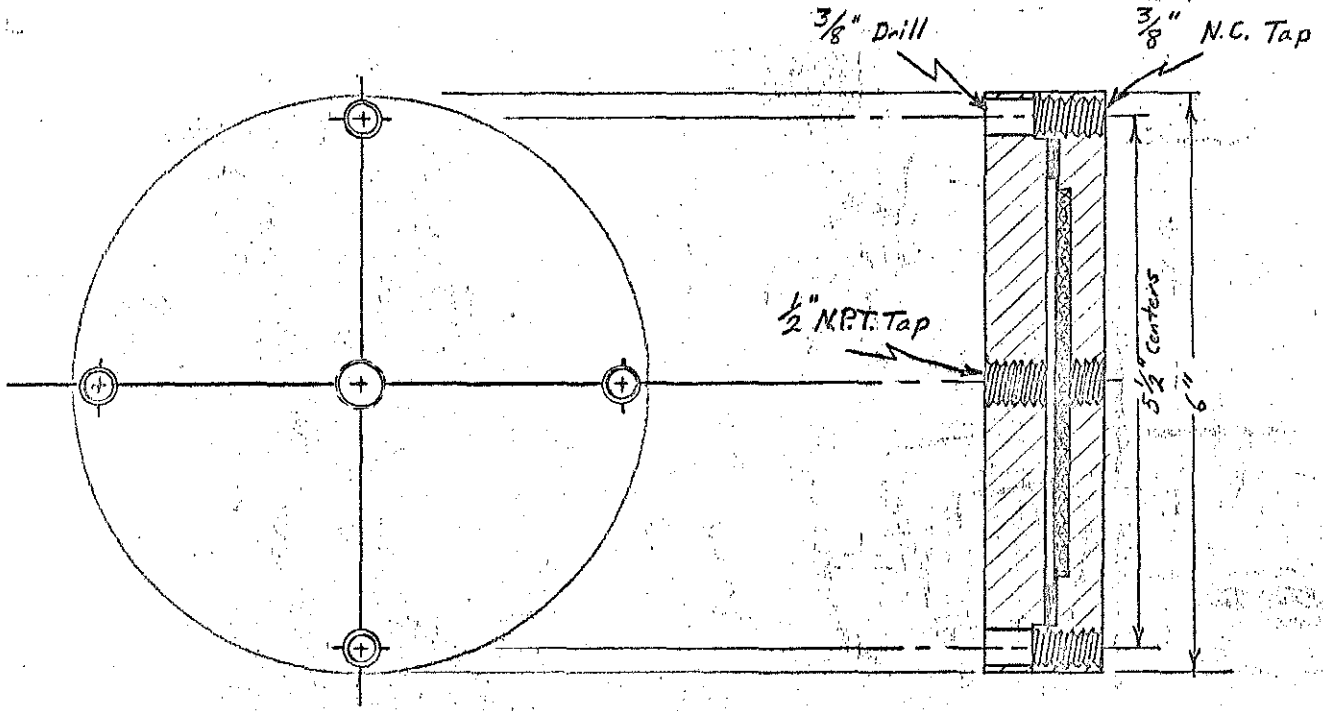
$$\text{PPB F(Ion) (aerosol)} = \frac{20 \times 44.664 \times 10^{-9}}{1440} \times 10^9 = 0.62$$

$$\text{PPB F(Ion) (total)} = \frac{32 \times 44.664 \times 10^{-9}}{1440} \times 10^9 = 0.99$$

AIR SAMPLING STATION FOR FLUORINE
 By
 SODIUM BICARBONATE TUBE AND FILTER



- 1. Conical rain deflector
- 2. Chimney
- 3. Cabinet
- a. glass tube
- b. filter
- c. sliding filter support
- d. pump
- e. motor



4- Allen Head
Cap Screws
3/8" x 1"

Inlet
Plate

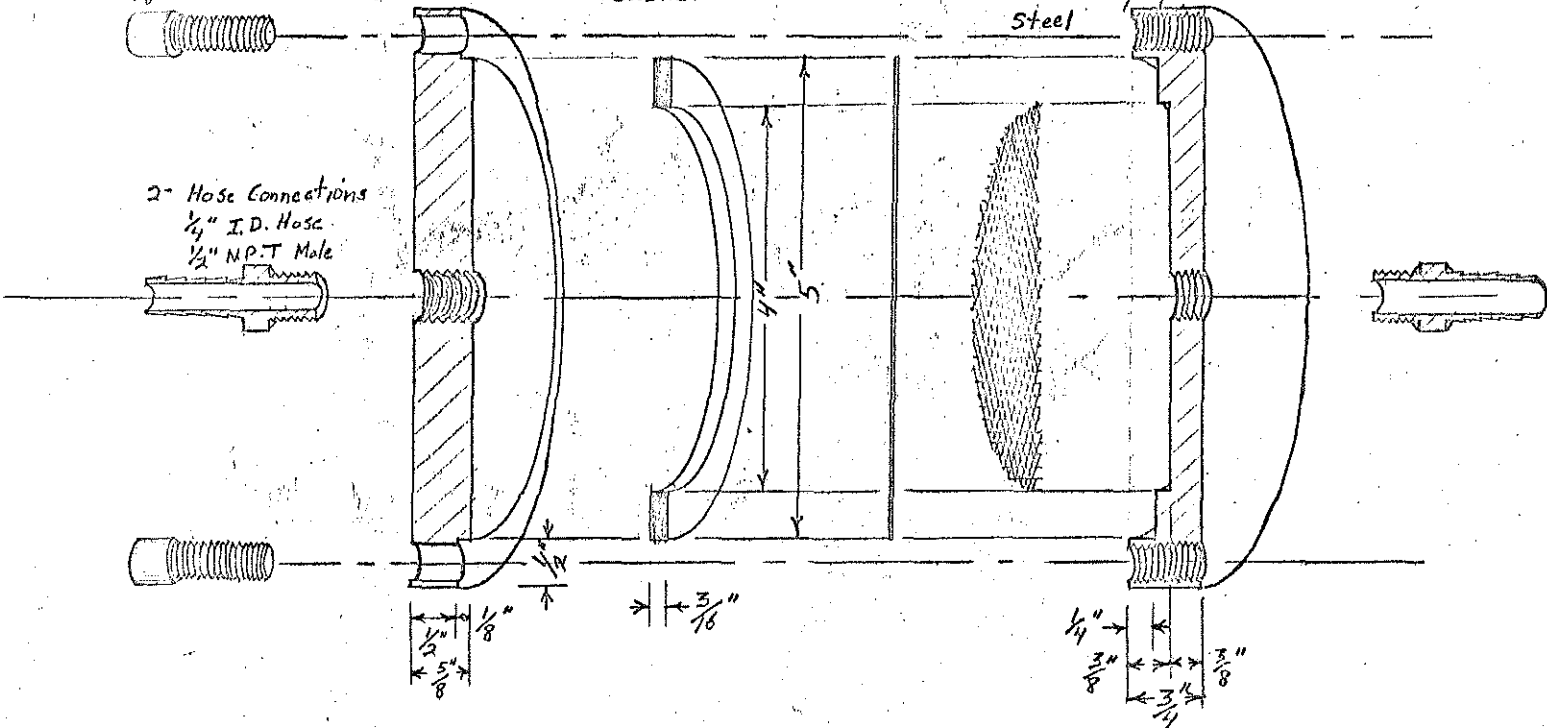
Soft Rubber
Gasket

Filter Paper
12 cm

Wire Screen
8 mesh-20 gauge
Steel

Outlet
Plate

2- Hose Connections
1/2" I.D. Hose
1/2" N.P.T. Male



Scale: 1/2" = 1"

BR

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DEC 10 1970

ORIGINAL PROPOSAL
Submitted 12/10/70

AIR QUALITY CONTROL

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

EMISSION SOURCES

Potrooms - Primary.

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

Potrooms - Secondary.

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

Paste Plant.

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

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

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

Casting Department.

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

ORIGINAL PROPOSAL

Submitted 12/10/70

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

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

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

Special Studies.

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

	Parti- culate	opa- city	SO ₂	Hc	CO	Cl ₂	Cl ⁻	NO _x	O ₃	H ₂ O	F
Potroom Control System	X	X	X	X	X			X	X	X	X
Potroom Roof Scrubber	X	X	X	X	X			X	X	X	X
Metal Casting	X	X			X	X	X	X	X		
Paste Plant	X	X		X							

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

ORIGINAL PROPOSAL
Submitted 12/10/70

TEST PROCEDURES

Scrubber Tower.

(a) Velocity determination:

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

(b) Sampling:

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

Potroom Air Scrubbers.

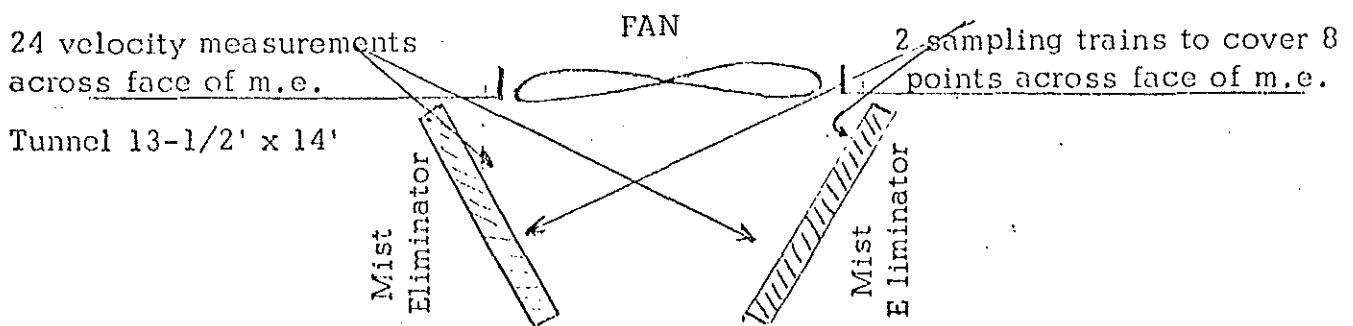
(a) Velocity determination:

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

(b) Sampling:

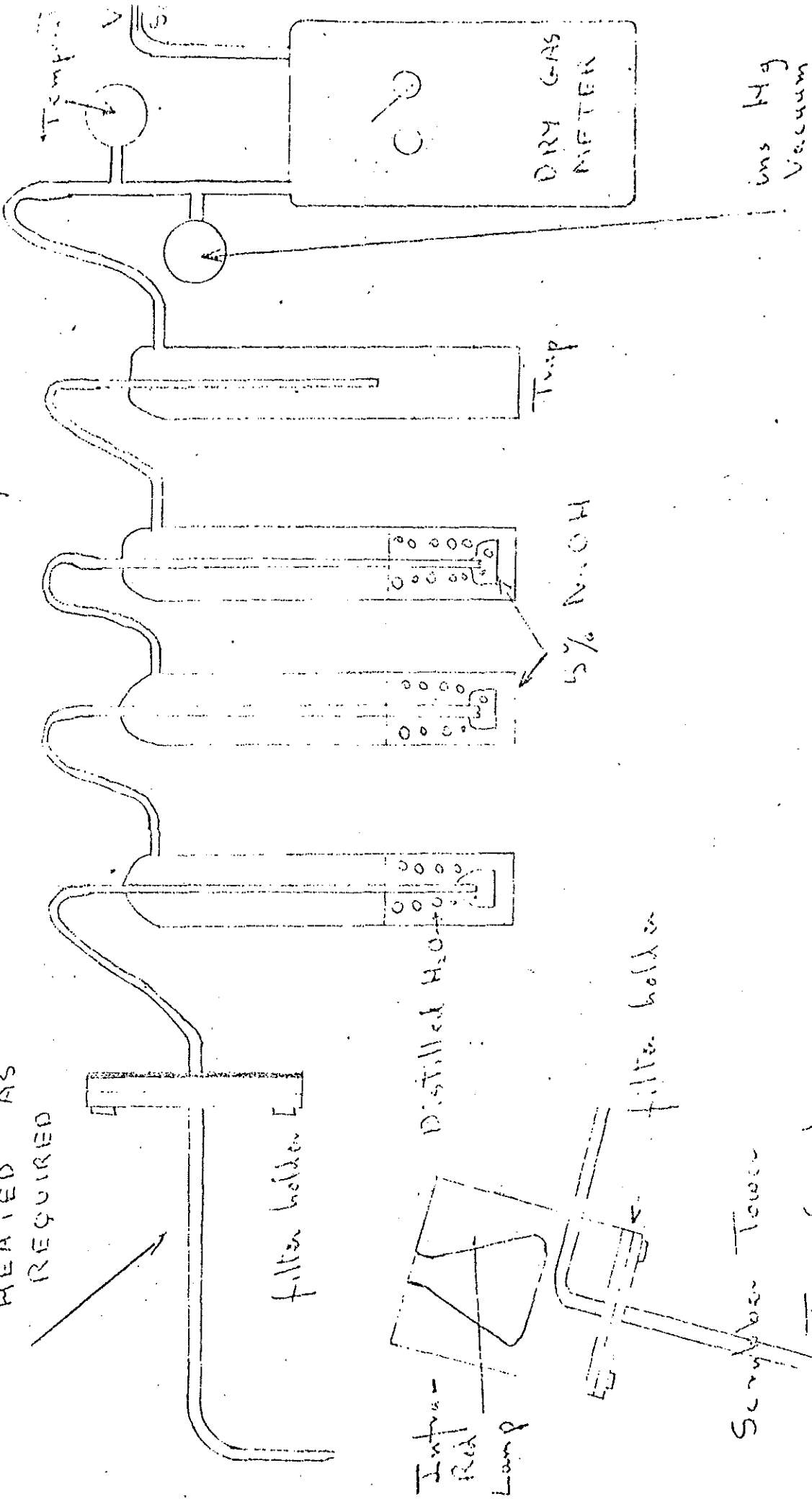
Two sampling trains are used per fan and are moved to new positions every hour for the duration of a four-hour test.

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



4 Greenberg Smith Pumping
 cc red gas required.

PROBE OR FILTER
 HEATED AS
 REQUIRED



Sampling Apparatus

ORIGINAL PROPOSAL
 Submitted 12/10/70

ORIGINAL PROPOSAL
Submitted 12/10/70

Special Studies.

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

OUT-PLANT MEASUREMENTS

Ambient Air Sampling.

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

Forage.

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

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

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

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CONTROL DIVISION

OAR Chapter 340, Division 2, Sections 25-255 through 25-290:

25-255 STATEMENT OF PURPOSE.

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

- (1) Require, in accordance with a specific program and time table for each operating primary aluminum plant the highest and best practicable collection, treatment and control of atmospheric pollutants emitted from primary aluminum plants through the utilization of technically feasible equipment, devices and procedures necessary to attain and maintain desired air quality.
- (2) Require effective monitoring and reporting of emissions, ambient air levels of fluorides, fluoride content of forage and other pertinent data. The Department will use these data, in conjunction with observation of conditions in the surrounding areas, to develop emission and ambient air standards and to determine compliance therewith.
- (3) Encourage and assist the aluminum industry to conduct a research and technological development program designed to reduce emissions, in accordance with a definite program, including specified objectives and time schedules.
- (4) Establish standards which based upon presently available technology, are reasonably attainable with the intent of revising the standards as needed when new information and better technology are developed.

25-260 DEFINITIONS.

- (1) All Sources - Means sources including, but not limited to, the reduction process, alumina plant, anode plant, anode baking plant, cast house, and collection, treatment and recovery systems.
- (2) Ambient Air - The air that surrounds the earth, excluding the general volume of gases contained within any building or structure.
- (3) Annual Average - Means the arithmetic average of the twelve most recent consecutive monthly averages reported to the Department.
- (4) 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.
- (5) Anode Plant - Means all operations directly associated with the preparation of anode carbon except the anode baking operation.
- (6) Commission - Means Environmental Quality Commission.
- (7) Cured Forage - Means hay, straw, ensilage that is consumed or is intended to be consumed by livestock.
- (8) Department - Means Department of Environmental Quality.
- (9) Emission - Means a release into the outdoor atmosphere of air contaminants.
- (10) Emission Standard - Means the limitation on the release of a contaminant or multiple contaminants to the ambient air.
- (11) Fluorides - Means matter containing fluoride ion.
- (12) Forage - Means grasses, pasture and other vegetation that is consumed or is intended to be consumed by livestock.

- (13) Monthly Average - Means the arithmetic average of three test results obtained during any calendar month, utilizing test methods and procedures approved by the Department.
- (14) Opacity - Means the degree to which an emission reduces transmission of light or obscures the view of an object in the background.
- (15) Particulate Matter - Means a small, discrete mass of solid or liquid matter, but not including uncombined water.
- (16) 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).
- (17) 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.
- (18) Regularly Scheduled Monitoring - Means sampling and analyses in compliance with a program and schedule approved pursuant to Section 25-280.
- (19) Ringelmann Smoke Chart - Means the Ringelmann Smoke Chart with instructions for use as published in May 1967 by the U.S. Department of Interior, Bureau of Mines.
- (20) Standard Dry Cubic Foot of Gas - Means that amount of the gas which would occupy a cube having dimensions of one foot on each side, if the gas were free of water vapor at a pressure of 14.7 P.S.I.A. and a temperature of 60°F.

25-265 EMISSION STANDARDS.

- (1) The exhaust gases from each primary aluminum plant constructed on or after January 1, 1973, shall be collected and treated as necessary so as not to exceed the following minimum requirements:
 - (a) Total fluoride emissions from all sources shall not exceed:
 - (1) a monthly average of 1.3 pounds of fluoride ion per ton of aluminum produced; and (2) an annual average of 1.0 pound of fluoride ion per ton of aluminum produced; and (3) 12.5 tons of fluoride ion per month from any single aluminum plant without prior written approval by the Department.
 - (b) The total of organic and inorganic particulate matter emissions from all sources shall not exceed: (1) a monthly average of 7.0 pounds of particulate per ton of aluminum produced; and (2) an annual average of 5.0 pounds of particulate per ton of aluminum produced.
 - (c) Visible emissions from any source shall not exceed ten (10) percent opacity or 0.5 on the Ringelmann Smoke Chart at any time.
- (2) Each primary aluminum plant constructed and operated after January 1, 1973, shall be in full compliance with these regulations no later than 180 days after completing potroom start-up and shall maintain full compliance thereafter.
- (3) The exhaust gases from each primary aluminum plant constructed on or before January 1, 1973, shall be collected and treated as necessary so as not to exceed the following minimum requirements:
 - (a) Total fluoride emissions from all sources shall not exceed:
 - (1) a monthly average of 3.5 pounds of fluoride ion per ton of aluminum produced; and (2) an annual average of 2.5

- pounds of fluoride ion per ton of aluminum produced; and
- (3) 22.0 tons of fluoride ion per month from any single aluminum plant without prior written approval by the Department.
- (b) The total organic and inorganic particulate matter emissions from all sources shall not exceed: (1) a monthly average of 13.0 pounds of particulate per ton of aluminum produced; and (2) an annual average of 10.0 pounds of particulate per ton of aluminum produced.
- (c) Visible emissions from any source shall not exceed 20 percent opacity or 1.0 on the Ringelmann Smoke Chart at any time.
- (4) Each existing primary aluminum plant shall proceed promptly with a program to comply as soon as practicable with these regulations. A proposed program and implementation plan shall be submitted by each plant to the Department not later than 180 days after the effective date of these amended regulations. The Department shall establish a schedule of compliance for each existing primary aluminum plant. Each schedule shall include the dates by which compliance shall be achieved but in no case shall full compliance be later than the following dates:
- (a) Existing plants shall comply with emission standards in Section 25-265(3) by January 1, 1977;
- (b) Existing plants shall comply with emission standards in Section 25-265(1) by January 1, 1984, pending a review by the Commission as described in 25-265(5).

- (5) The Commission shall review during calendar year 1979 the feasibility of applying Section 25-265(4)(b) based on their conclusions regarding:
- (a) the then current state of the art of controlling emissions from primary aluminum plants;
 - (b) the progress in controlling and reducing emissions exhibited at that time by then existing aluminum plants;
 - (c) the need for further emissions control at those facilities based on discernible environmental impact of emissions up to that time.

25-270 SPECIAL PROBLEM AREAS.

The Department may require more restrictive emission limits than the numerical emission standards contained in Section 25-265 for an individual plant upon a finding by the Commission that the individual plant is located or is proposed to be located in a special problem area. Such more restrictive emission limits for special problem areas may be established on the basis of allowable emissions per ton of aluminum produced or total maximum daily emissions to the atmosphere, or a combination thereof, and may be applied on a seasonal or year-round basis.

25-275 HIGHEST AND BEST PRACTICABLE TREATMENT AND CONTROL REQUIREMENT.

In order to maintain the lowest possible emissions of air contaminants, the highest and best practicable treatment and control currently available shall in every case be provided, but this section shall not be construed to allow emissions to exceed the specific emission limits set forth in Section 25-265.

25-280 MONITORING.

- (1) Each primary aluminum plant constructed and operated on or before January 1, 1973, shall submit, within sixty (60) days after the effective date of these amended regulations, a detailed, effective monitoring program. The program shall include regularly scheduled monitoring and testing by the plant of emissions of gaseous and particulate fluorides and total particulates. The plant shall take and test a minimum of three (3) representative emission samples each calendar month. The samples shall be taken at specified intervals. A schedule for measurement of fluoride levels in forage and ambient air shall be submitted. The Department shall establish a monitoring program for the plant which shall be placed in effective operation within ninety (90) days after written notice to the plant by the Department of the established monitoring program.
- (2) Each primary aluminum plant proposed to be constructed and operated after January 1, 1973, shall submit a detailed pre-construction of post-construction monitoring program as a part of the air contaminant discharge permit application.

25-285 REPORTING.

- (1) Unless otherwise authorized in writing by the Department, data shall be reported by each primary aluminum plant within thirty (30) days of the end of each calendar month for each source and station included in the approved monitoring program as follows:
 - (a) Ambient air: Twelve-hour concentrations of gaseous fluoride in ambient air expressed in micrograms per cubic meter of air, and in parts per billion (ppb); also 28-day test

- results using calcium formate ("limed") paper expressed in micrograms of fluoride per centimeter squared per cubic meter ($\mu\text{g}/\text{cm}^2/\text{m}^3$).
- (b) Forage: Concentrations of fluoride in forage expressed in parts per million (ppm) of fluoride on a dried weight basis.
 - (c) Particulate emissions: Results of all emission sampling conducted during the month for particulates, expressed in grains per standard dry cubic foot, in pounds per day, and in pounds per ton of aluminum produced. The method of calculating pounds per ton shall be as specified in the approved monitoring programs. Particulate data shall be reported as total particulates and percentage of fluoride ion contained therein.
 - (d) Gaseous emissions: Results of all sampling conducted during the month for gaseous fluorides. All results shall be expressed as hydrogen fluoride in micrograms per cubic meter and pounds per day of hydrogen fluoride, and in pounds per ton of aluminum produced.
 - (e) Other emission and ambient air data as specified in the approved monitoring program.
 - (f) Changes in collection efficiency of any portion of the collection or control system that resulted from equipment or process changes.
- (2) Each primary aluminum plant shall furnish, upon request of the Department, such other data as the Department may require to evaluate the plant's emission control program. Each primary

aluminum plant shall report the value of each emission test performed during that reporting period, and shall also immediately report abnormal plant operations which result in increased emission of air contaminants.

- (3) No person shall construct, install, establish or operate a primary aluminum plant without first applying for and obtaining an air contaminant discharge permit from the Department. Addition to, or enlargement or replacement of, a primary aluminum plant or any major alteration thereof shall be construed as construction, installation or establishment.

25-290 deleted by EQC on 11-26-73.



DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229-

TOM McCALL
GOVERNOR

DIARMUID F. O'SCANNLAIN
Director

December 6, 1973

Dr. Richard Boubel
Department of Mechanical Engineering
Oregon State University
Corvallis, Oregon 97331

Dear Dr. Boubel:

The enclosed materials explain the emissions standards for primary aluminum plants adopted on November 26, 1973 by the Environmental Quality Commission (EQC). The standards limit total emissions of fluoride ion and particulate matter per ton of aluminum produced and are the toughest standards ever adopted for new plants. For Oregon's (2) existing plants, less stringent interim standards were adopted, effective in 1977, but new plant standards are to be met by existing plants within 10 years (by 1984), unless an EQC review scheduled in five years (during 1974) concludes that this requirement is infeasible.

The numerical standards adopted last week were based in large part upon a statistical evaluation of available emissions data from existing aluminum plants. The enclosed Technical Report details the statistical evaluation which is the subject of this request for review and comment. The Department is not seeking comments on the appropriateness of the standards themselves, but rather on the methodology and conclusions of the statistical evaluation.

The statistical evaluation described in the Technical Report is a novel approach for our department which shows promise of aiding the establishment of other emissions standards. Some of our residual concerns after completing this initial application of such a statistical approach are attached as a list. It is hoped that you can review the Technical Report and comment upon these concerns, or suggest any other aspects of our analysis where you believe refinement is needed. I have included duplicate copies in case you wish to indicate your comments by "redlining" a spare copy or in case you'd like to ask someone else to review a copy.

I have been pursuing a firm inquiry into the possibility of paying you a fee for your assistance - and, as of today, I think some funds can be arranged. The total amount might be no more than several hundred dollars, but that would make me, (and, I presume, you) feel a lot better about the arrangement. Rather than delay this

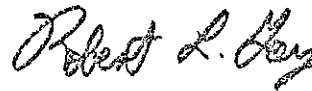
December 6, 1973

letter until I can confirm what the fee ceiling is, I decided to send the enclosures in order that you can ascertain our general needs. The attached questions were not written as a task description for a personal service contract. If we get to the point of drawing up such a contract I would expect to include specific requests similar to these (but perhaps with additions) and spell out some rate of compensation (probably maximum lump sum rather than hourly rate would be preferred here).

I'll be in contact with you as soon as I can find out our financial limitations. Until then I appreciate your willingness to help out in this situation.

Sincerely yours,

DIARMUID F. O'SCANNLAIN
Director



R. L. Gay, Special Assistant
Research & Analysis

RLG/dvh

Encls.

QUESTIONS REGARDING STATISTICAL EVALUATION OF ALUMINUM PLANT DATA

I. Based on available series of monthly averages (of 2-4 emissions tests):

(1) the arithmetic mean (m) and arithmetic standard deviation (σ) are calculated for each data series, and; (2) maximum permissible monthly averages (of 3 tests) and annual averages (of 36 tests) are calculated, which should "not be exceeded 99% of the time", if performance is maintained consistent with that described by each data series. The following expressions were used to calculate permissible maximums which, we assert, consider not only the average emissions performance required (m), but also account for the inherent availability of any series of such data by employing a second factor, $Y\sigma/\sqrt{n}$, where n = the number of tests averaged.

Single Test = $m + Y\sigma/\sqrt{1}$
Maximum

Monthly = $m + Y\sigma/\sqrt{3}$
Maximum Ave.
(of 3 tests)

Annual = $m + Y\sigma/\sqrt{36}$
Maximum Ave.
(of 36 tests)

where m = arithmetic mean of data series

σ = arithmetic standard deviation

Y = constant which allows the "probability factor", $Y\sigma/\sqrt{n}$, to represent the case: not to be exceeded 99% of the time, for any average of n tests.

- A. How do you think the description in the Technical Report (pp 8-16) of the basis for use of the above expressions could be improved?
- B. The values for the coefficient Y of the standard deviation (σ) listed in Table IV (page 14) of the Technical Report were taken from Table II, page 625 of Statistics for Scientists and Engineers, by R. Lowell Wine, Prentice Hall, Inc. 1964. Do you think values for Y are appropriate?
- C. Do you think the expression, $m + Y\sigma/\sqrt{n}$ truly represents what is intended, namely, the value which should not be exceeded 99% of the time by a single emissions test, if performance is consistent with that described by the data series from which (m) and (σ) were obtained?
- D. On page 15 of the Technical Report (m) is said to properly represent both (1) the long-term average plant emissions required for compliance with the standard, and; (2) the arithmetic mean of a (continuing) series of tests of that plant's emissions: (a) which exhibit log normal distribution; (b) whose absolute values are always in compliance with the standard, and (c) whose standard deviation is (σ). Is this a proper dual interpretation of (m) as used here?

Questions Regarding Statistical Evaluation of Aluminum Plant Data (Continued)

- II. It was necessary to predict the emissions of an aluminum plant after proposed improvements (see Cases #7 and #8, and #9 and #10 in Appendix B). To do so involved the following assumptions: (1) that a series of monthly average emissions reported to our Department would exhibit log normal distribution and, therefore, could be represented as a straight line on log probability paper; (2) that emissions data after the proposed improvements would also be log normally distributed and that the straight line best representing the situation after plant improvement would be parallel to the line referred to in II(1) above; (3) the parallel line representing "after improvements" could be most properly located by considering that it's 99th percentile value would be equal to the performance that the company had pledged "not to exceed", namely 5.4 lbs fluoride per ton of aluminum produced.

Having thus located this straight line representation of plant performance after improvements, the geometric mean (m_g) and geometric standard deviation (σ_g) determined by the line were found and used to calculate arithmetic parameters (m, σ) to be used in the expressions in I above to obtain maximum permissible monthly and annual average emissions, "after improvements." The key assumptions involved are probed by the following questions:

- A. Appendix A described an analysis of 64 individual emissions test results which concludes that this data is log normally distributed.
1. Do you agree that the data exhibits log normal distribution? Why or why not, and how much data would be needed to determine this?
 2. Is there enough data (64 points) to draw this, or any conclusions about distribution of this data.
- B. A major assumption is that any series of carefully collected emissions data from a single aluminum plant will also exhibit log normal distribution. Unfortunately, no other series of test data available to us at the time seemed extensive enough to conduct a similar statistical analysis to determine its distribution.
1. Would you agree that the above assumption is: plausible? not uncommon in air pollution analysis? valid? why?
- C. A second assumption is that within a series of carefully collected emissions data, the sub-series of monthly averages reported for purposes of compliance will also exhibit log normal distribution. The monthly average consists of the arithmetic mean of the data collected during that month, usually from two to four samples. The adopted standards contain not only a maximum monthly average (of 3 tests) but also a maximum annual average (of 12 consecutive months, or 36 tests).
1. How would you characterize this second assumption?
 2. What problems exist in treating monthly averages (e.g., of 3 tests per month) or annual averages (36 tests) using the same assumed distribution found for individual emissions tests?

Questions Regarding Statistical Evaluation of Aluminum Plant Data (Continued)

- D. What do you think of the use of straight lines on long probability paper to graphically represent aluminum plant emission performance and to conclude that
- (a) the geometric parameters (m_g, σ_g) of these lines can be used to derive arithmetic parameters (m, σ), for the plant performance represented by those lines; then the arithmetic parameters can be used to calculate maximum permissible ("not to be exceeded 99% of the time") monthly and annual average emissions as per I above?
 - (b) the plant performance before and after improvements are most properly represented by parallel lines: [An alternative approach, that of using the same standard deviation (σ) before and after plant improvements, was rejected because difference in the magnitude of the average emissions before and after improvements was considered large].
 - (c) the use, as 99th percentile, of the company's pledged value (5.4 lbs F/ton Aluminum (Al)) was proper? [One concern is why the subsequent calculation of a maximum single test value, $m + Y\sigma/\sqrt{i}$, for Case #8, Appendix B equals 4.8 lbs F/Ton Al, and not 5.4 lbs F/Ton Al. Our tentative conclusion: that 4.8 is the maximum single test value which constitutes compliance with the performance represented by the straight line "curve of best fit" whose 99th percentile value happens to be 5.4].
- E. What elements of the projection of the plant's performance after improvements do you find most solid and which do you find most in need of refinement?
- III. The analytical approach taken in this analysis of aluminum plants has promise for application in establishing emissions standards for other industries.
- A. What elements of the entire approach do you find most solid or most in need of refinement?
 - B. If this approach is not satisfactory (in your view) can you suggest an alternative one, designed to accomplish the same goals?

STATE OF OREGON
ROUTE SLIP

TC. Date 12/6
F A Skirvin

FROM: Bob Ray

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COMMENTS:

For your info,

A QUANTITATIVE STUDY OF THE LIMED FILTER PAPER TECHNIQUE FOR FLUORINE AIR POLLUTION STUDIES*

DONALD F. ADAMS

Division of Industrial Research, Washington State University, Pullman, Washington

(Received in final form, 8 July 1960)

Abstract—Exposed, lime-treated filter paper will accumulate fluoride from the atmosphere at a finite rate, associated with the relative concentration of pollution at each sampling site. Data are presented which relate (a) the rate of fluoride accumulation per unit surface area of the exposed limed paper with (b) the fluoride concentration in the air of a plant growth chamber. The data show an average fluoride collection rate of $7.6 \mu\text{g F}^-/\text{dm}^2/\text{day}/\mu\text{g F}^-/\text{m}^3$. The data are discussed in relation to previously published literature relating fluoride accumulation in limed paper exposed to industrial air pollution under field and greenhouse conditions. Additional data are presented which show that the fluoride concentration in a greenhouse atmosphere is significantly decreased over relatively short distances through processes of surface adsorption and foliar pickup.

INTRODUCTION

THE relative fluoride pollution intensity at different distances and directions from a source of a fluoride-containing effluent may be established by analyzing lime-treated filter papers which have been exposed in the area of contamination. The method is predicated on the assumption that the gaseous fluorides will react with and be fixed by the lime at some rate which is related to the atmospheric concentration of fluorides.

The limed paper survey technique involves the simple and inexpensive expedient of exposing lime-impregnated filter papers in protective shelters designed to permit adequate air circulation. The usual exposure period is either one calendar month or 28 days. At the end of the exposure period the papers are then exchanged for fresh papers, the fluorine content of the exposed papers chemically determined and the data reported in terms of micrograms per square decimeter of exposed surface of the treated paper per unit time for each sampling site. The limed paper fluoride level found at each site for each sampling period is an index of the degree of fluoride exposure in the vicinity of each sampling site.

Although this survey method has been widely used in many areas in the United States during the past ten years, limited data of this type has been reported in the literature (ADAMS, 1957; MCINTIRE, *et al.*, 1956; MILLER, *et al.*, 1953; and ROBINSON, 1957). This dearth of information may be attributed to the nature of the technique, that of routine surveillance of suspected areas of pollution. Compilations of routine data are not generally submitted for publication.

The limed paper technique for fluorine survey was first reported by MILLER *et al.*, (1953). These authors obtained a 5-year statistical correlation between the fluoride levels in forage grown at lime paper exposure sites during the exposure period and the fluoride content of simultaneously exposed papers. These authors also showed a significant correlation between the extent of fluoride-induced leaf burn on exposed gladiolus and the fluoride accumulated by simultaneously exposed limed filter papers. ADAMS (1957) related the average monthly filter paper fluoride level for the entire

* Presented Division of Water, Sewage and Sanitation, 136th meeting, ACS, Atlantic City, N.J., September 1959.

growing season (two different years) with the fluoride content of heterogeneous ground cover vegetation available at each of 20 sampling sites. The curvilinear relation had an r value of +0.922. This study further showed that the lime paper technique was quite reliable in measuring the decrease in relative intensity of fluoride pollution following installation of extensive fume control equipment by the major source of fluoride in one of the areas surveyed. The limed papers showed a 65 per cent pollution reduction, whereas the industry stated that a 71 per cent reduction had been achieved. In addition, it was shown that a 5.2 per cent coefficient of variation existed between duplicate limed paper shelters at 5 sampling sites.

ROBINSON (1957) proposed that lime papers respond to the total fluoride brought in contact with it, rather than responding to atmospheric concentrations as do air samplers having constant, positive sampling rates. He then postulated that doubling the air flow will result in bringing roughly double the fluoride into contact with the exposed limed papers.

A similar technique of exposing lead peroxide coated cylinders for delineation of areas of sulfur dioxide pollution has been used in Great Britain since 1932. Certain variables which might affect the rate of absorption of the sulfur dioxide by lead peroxide have been studied by WILSON and MCCONNELL (1934). These studies included such environmental factors as wind speed, rainfall, humidity and temperature. In the range of air speeds between 1.5 and 9 meters per second (3.3–20.1 m.p.h.) and SO_2 concentrations of 1–6 p.p.m. the rate of reaction was not found to be significantly dependent upon air speed.

Meteorological and topographical factors may combine to increase or decrease the fluoride concentration in the air at various times contacting the treated surface. These factors will produce an equivalent change in the rate of accumulation of fluoride. However, the levels of fluoride accumulated by the limed papers in the vicinity of a given source should be virtually independent of the normal variations in air flow rate. Under conditions of extremely high air flow rates, the contact time would become an important factor in the rate of accumulation. Regardless of the precise role of the inter-related variables of wind speed, diffusion, etc., and the resultant atmospheric concentration or the pollutant flux at a given site, the lime papers are exposed in a manner similar to exposed, adjacent vegetation.

No data, other than that of ROBINSON (1957), have been found in the literature which attempts to relate the fluoride concentrations in the exposed lime papers to known concentrations of atmospheric fluorides in experimental chambers. This present paper reports some statistical relationships which have been found between lime paper fluoride levels and experimental HF atmospheric concentrations at constant air flow rates. These relationships are stated as a function of an exposure factor expressed as a time-concentration product. No direct information is yet available to relate atmospheric concentration and wind speed with fluoride pickup by limed papers.

MATERIALS AND METHODS

The lime-impregnated papers were prepared by dipping Whatman No. 2, 11.0 cm. filter paper in a lime suspension (10 g./l. of Fisher "low in fluorine" lime). (The use of higher concentrations of lime suspensions will result in treated papers which will "flake off" during storage and exposure.) The wet papers were dried in a large Pyrex tray in a forced-draft oven at 50–60° C. The treated papers, six to a set, were hung

from plastic clothes pins in a phytotron plant growth chamber. These papers were not enclosed in a shelter as would be necessary for outdoor exposure.

The chamber in which the filter papers were exposed had the interior dimensions of $8\frac{1}{2}$ ft. \times 5 ft. \times $7\frac{1}{2}$ ft. Hydrogen fluoride was introduced into the incoming air duct from a fumigator system similar to that described by HILL *et al.* (1958). The fluoride-containing air stream is then divided into two ducts and each stream passes through a ceiling diffuser grille into a 42.5 ft.³ air space above the chamber. The ceiling of the chamber (the floor of the air space) consists of a perforated masonite (peg board) panel which further diffuses the incoming air into the growth area. The air flow rate in the vicinity of the suspended limed papers was approximately 25 lineal ft. per minute (0.3 m.p.h.). This air flow rate remained constant throughout these studies.

The light intensity at the level of the limed papers was approximately 1500 foot-candles. The light source was comprised of twelve 8 ft, 200 watt VHO fluorescent lamps and six 60 watt incandescent bulbs. The on-off cycle of the lights was automatically controlled by a time clock to yield a daily photoperiod of 13 hours duration. The incoming air conditioning unit controlled the air temperature at $10^{\circ}\text{C} \pm 2^{\circ}$ for the nectoperiod and $30^{\circ}\text{C} \pm 2^{\circ}$ for the photoperiod. The relative humidity was $42\% \pm 3\%$ and $74\% \pm 3\%$ respectively.

Continuous air samples were obtained by withdrawing room air at the approximate rate of 1 ft³/min through distilled water in a fritted glass absorption system (ADAMS *et al.*, 1952). The air sample inlet was placed in the immediate vicinity of the suspended limed papers. The scrubbing solutions were collected twice daily and titrated with thorium nitrate using Alizarin Red S as indicator (ADAMS and KOPPE, 1956 and SMITH and GARDNER, 1950). The atmospheric fluoride concentration for each sampling period was calculated from the total micrograms of fluoride collected and the total volume of air samples as measured with a dry test flow meter. The results were expressed as μg of fluoride per m³ of air.

At the end of each lime paper exposure period, the papers were removed from the fumigation chamber, dried for 24 hours at 70°C , weighed, ashed, and distilled by a modification of the WILLARD and WINTER (1933) procedure. The distillates were titrated to a photometric end point using a modification (ADAMS and KOPPE, 1956) of the SMITH and GARDNER (1950) thorium nitrate titration. An equal number of unexposed, lime-treated filter papers were used for a blank analysis. The blank values were subtracted from the exposed values prior to calculation.

For comparison with lime paper indexes, the atmospheric fluoride concentrations for each lime paper exposure period have been expressed as weighted averages. The fluoride concentration in $\mu\text{g}/\text{m}^3$ for each discrete air sampling period was multiplied by the total length of the respective sampling period in minutes. The sum of the time-concentration products for each lime paper exposure period was then divided by the total minutes to yield the weighted average.

RESULTS

A total of 23 exposure trials were conducted. Each exposure period was different in duration, thus each trial represented a different exposure index with a somewhat different average atmospheric fluoride concentration for each exposure period. Table 1 gives a tabulation of the data obtained from the 23 exposures.

Linear and curvilinear regression equations were calculated from the relationship

between the exposure indexes and the fluoride accumulated in the lime papers. The curvilinear relationship showed a significant improvement over the linear relationship between the variables, as indicated by the obtained "F" value of 14.99. A logarithmic relationship was not observed.

The correlation between the fluoride accumulated by the lime papers and the exposure indexes is quite high as indicated by the linear and curvilinear r values of +0.946 and +0.969. These r values are well in excess of the 0.549 required for significance at the 1 per cent probability level. These results are summarized in Tables 1 and 2 and are graphically presented in Fig. 1.

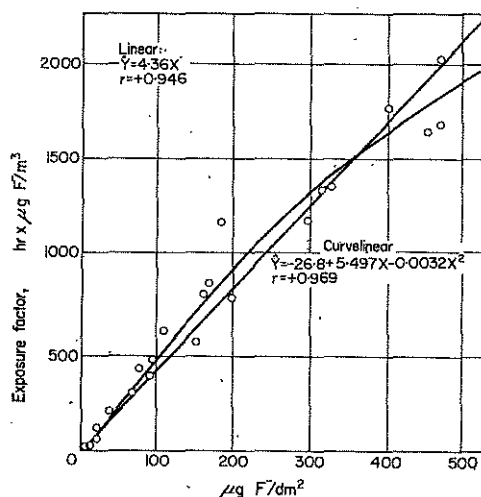


FIG. 1. Limed paper fluorides vs. exposure factors.

From these data it is apparent that there is a high degree of relationship between the fluoride concentration in the atmosphere and the length of the exposure with the fluoride accumulated by the exposed limed papers. In these tests the predicted exposure indexes had a coefficient of variation of ± 10.7 per cent from the measured indexes.

The rate of accumulation of fluoride per unit surface area (both sides) of limed paper exposed was found to range from 3.9 to 30 $\mu\text{g F}^-/\text{dm}^2/\text{day}/\mu\text{g F}^-/\text{m}^3$. The two highest rates of accumulation were associated with average atmospheric fluoride concentrations of 0.04 and 0.14 $\mu\text{g F}^-/\text{m}^3$. The other 21 rates ranging from 3.9 to 8.9 were associated with average atmospheric concentrations between 0.46 and 3.64 $\mu\text{g F}^-/\text{m}^3$.

DISCUSSION

Previously reported studies have shown that a relatively large number of filter paper exposure sites will adequately delineate areas of varying fluoride exposure (ADAMS, 1959; MACINTIRE *et al.*, 1956; MILLER *et al.*, 1953). Not only will the method discriminate between areas of higher and lower exposure intensity, but will reflect major changes in emission rates from known sources within the area of study (ADAMS, 1957.)

The results of the experiment herein reported show that the limed filter paper

TABLE 1. FILTER PAPER TEST DATA

Exposure (Hrs.)	Ave. Air Conc. ($\mu\text{g F}^-/\text{m}^3$)	Exposure Factor ($\mu\text{g F}^-/\text{m}^3$) (hrs.)	Filter Paper Conc. ($\mu\text{g F}^-/\text{dm}^2$)	Rate of Fluoride Accumulation $\mu\text{g F}^-/\text{dm}^2/\text{day}/\mu\text{g F}^-/\text{m}^3$
95.0	0.04	3.8	4.8	30.0
47.8	0.14	6.7	7.8	27.9
72.5	0.46	33.4	12	8.9
46.6	1.4	66.1	24	8.8
67.8	2.0	134.3	22	3.9
118.0	1.8	207.8	36	4.2
168.4	1.8	304.9	68	5.4
112.9	3.6	411.0	91	5.3
221.7	1.9	430.0	82	4.5
263.5	1.9	492.7	96	4.7
225.2	2.6	585.3	150	6.2
270.2	2.4	645.7	110	4.1
292.2	2.8	821.2	199	5.8
359.6	2.3	830.8	160	4.6
364.8	2.4	893.6	165	4.4
486.5	2.4	1157.8	188	3.9
654.6	1.8	1158.7	293	6.0
688.8	2.0	1343.2	316	5.6
726.1	1.9	1357.9	327	5.8
580.0	2.8	1641.5	450	6.6
721.1	2.3	1673.0	468	6.7
642.1	2.8	1772.3	402	5.4
734.6	2.8	2042.0	470	5.5

TABLE 2. COMPARISON OF LINEAR AND QUADRATIC REGRESSION BETWEEN FLUORINE IN LIME PAPER AND ATMOSPHERIC INDEXES

	Linear		Quadratic		
	d.f.	S.S.	d.f.	S.S.	M.S.
Due to Linear Regression (b_1)	1	8,232,293	1	8,232,293	13,532
Due to Quadratic Regression (b_2)			1	202,976	
Total Due to Regression	1	8,232,293	2	8,435,269	
About Regression	21	473,612	20	270,636	
Total	22	8,705,905	22	8,705,905	
r , correlation coefficient		0.946		0.969	
F , value for improvement of fit due to quadratic regression				14.99 *	

* Value of F for 1 per cent significance 8.10.

method may be expected to reflect the exposure intensity within limits of ± 10 per cent.

Studies of the similar lead peroxide method for sulfur dioxide conducted by other workers have shown that the rate of accumulation of SO_2 by lead peroxide is virtually independent of normal changes in humidity of the air, the normal range of wind speeds, concentrations of SO_2 up to 1000 p.p.m. (which is in excess of that normally

encountered in air pollution studies), etc. The primary source of error introduced by ambient air conditions appeared to involve air temperatures. It was reported that a rise of 10° F increased the reactivity of the treated surface by approximately 2 per cent. Information thus far established for the limed filter paper method is in general agreement with British information developed with the lead peroxide method.

A curvilinear relationship is shown between the exposure index and the level of fluoride accumulated by the exposed paper in this study. This substantiates similar inferences which can be drawn from the data of MILLER *et al.* (1953) which shows that the average fluoride accumulated in 8-week exposures of filter papers was 93 per cent of the total accumulated in two successive 4-week exposures.

These data verify the obvious consideration that the possible number of molecular collisions between the airborne fluoride molecules and the calcium oxide will be decreased as the surface of the treated paper changes from calcium oxide to fluoride. It may be inferred from the data that, up to a concentration in the paper of approximately 200–250 $\mu\text{g F}^-$ per square decimeter, the rate of fluoride accumulation is virtually linear. Above this level of fluoride concentration in the lime papers, the rate of accumulation begins to take on a curvilinear character. Thus should levels exceeding 200–250 $\mu\text{g F}^-$ /square decimeter be found in field studies, the inference would be that a somewhat proportionately higher atmospheric exposure level actually existed than would have been predicted on the basis of a linear arithmetic ratio between sites of higher and lower exposure indexes.

Working in opposition to this trend is the possibility that fluoride is accumulated at a greater rate from absolute air concentrations somewhat below 0.4 $\mu\text{g F}^-/\text{m}^3$. However, this will, undoubtedly, not be observed under many field conditions, since the usually reported low average concentrations are in reality a sampling artifact. This artifact results from the use of sampling techniques which are inadequate to disclose the short term exposure periods of higher concentration produced by meteorological variables. The existence of these artifacts has been demonstrated through development and use of an automatic fluoride analyzer (ADAMS and KOPPE, 1959).

Comparison between the average lime filter paper fluoride collection rates reported by ROBINSON (1957) and the data herein reported show that the calculated average collection rates are of the same order of magnitude even though exposure conditions were somewhat different. Table 3 summarizes the three sets of data.

Although good agreement is shown between ROBINSON's data and the "fumigation chamber" air data herein reported, one may speculate about the cause(s) of the variations in average collection rates obtained. Differences of this magnitude of average

TABLE 3. COMPARISON OF LIMED FILTER PAPER COLLECTION RATES

Exposure Location	Wind Speed (Ave. m.p.h.)	No. of Results	Ave. Collection Rate $\mu\text{g F}^-/\text{dm}/\text{day}^2/\mu\text{g F}^-/\text{m}^3$	Range of Exposure Concentrations $\mu\text{g F}^-/\text{m}^3$
Greenhouse Air *	3	11	3.6	0.05–2.1
Outdoor Air *	8	18	8.2	0.14–0.44
Indoor Growth Chamber Air	0.3	23	7.6	0.01–3.6

* Data after ROBINSON (1957)

collection rates, i.e. 3.6 as compared with 7.6-8.2, might possibly result from a spatial relationship which may have existed between the location of exposed filter paper and the nearby point source from which the air samples were obtained in the determination of the air concentration data. No air samples were obtained which related the actual air concentration at the filter paper exposure positions, although it was reported that air samples were independently obtained prior to the exposure of the filter papers indicating that the concentration of fluoride at the greenhouse inlet and outlet were comparable (ROBINSON, 1960). No information is available concerning the comparative density of growing vegetation in the greenhouse during these two samplings.

Dense growing vegetation within the greenhouse could conceivably produce a decrease in the atmospheric fluoride concentration from one end of the greenhouse to the other. Although this may seem doubtful at first glance, marked differences in the foliar fluoride content of greenhouse roses related to the spatial location of the bushes sampled with respect to the alleged source of fluorine contamination have been discovered by the author. HILL *et al.* (1959) also suggests that "abundant vegetation in a chamber may result in differences in the fluoride content of the air in different parts of the chamber". Tables 4 and 5 give data obtained by the author which relates the

TABLE 4. RELATIONSHIP OF SAMPLE LOCATION TO FOLIAR FLUORIDE CONCENTRATION

House and Bench No.	Rose Leaves p.p.m. F ⁻ (dry wt. basis)
6-2 *	75
5-6	53
3-7	46
3-5	33
2-5	18
2-3	23

* House and benches in order of increasing distance from alleged source.

foliar fluoride content (p.p.m. F⁻ on a dry wt. basis) of rose leaves of equivalent age and exposed lined filter paper taken from adjacent, interconnected greenhouses with the direction away from the primary alleged source of fluoride located some 3-4 miles away. Adsorption and reaction with the interior greenhouse surfaces also undoubtedly play a significant role in the observed decrease in concentration of atmospheric fluoride through the greenhouse.

Although no air concentration data is directly available to substantiate this rather striking reduction of the foliar and lined paper fluoride level with distance away from the source within the large greenhouse (Table 4), the data indicate that a relatively heavy growth of vegetation and expanse of wall area will effectively remove soluble gaseous air pollutants such as fluoride from a moving flow of air. The air flow through ROBINSON'S greenhouse was reported to be 3 m.p.h., a rate undoubtedly greater than that existing in the greenhouses reported in Table 4. The more rapidly moving air would certainly tend to minimize differences between incoming and outgoing atmospheric fluoride levels, although one is unable to establish the presence or absence of a concentration gradient in this particular instance with the existing data.

Thus, in the absence of evidence to the contrary, one may at least speculate that the

TABLE 5. RELATIONSHIP OF SAMPLE LOCATION TO LIMED PAPER FLUORIDE CONCENTRATION

House No.	$\mu\text{g F}^-/\text{dm}^2$
6 *	7.6
5	6.4
4	5.0
3	3.6
2	4.8
1	3.8

* Houses in order of increasing distance from alleged source.

lower collection rate which ROBINSON (1957) obtained with the greenhouse-exposed limed papers could be due in part to the existence of lower-than-reported atmospheric fluoride concentrations at the surface of the limed filter papers resulting from removal of the fluoride from the air by the plants growing in the greenhouse.

Although ROBINSON (1957) gave no description of the outdoor exposure conditions, it was subsequently determined that the outdoor samplings were favorably arranged so as to eliminate the possibility for differences in reported and actual air concentrations between the scrubber-type air sampling unit and the exposed filter paper (ROBINSON, 1960).

The possibility for variation between reported and actual atmospheric fluoride concentration was virtually non-existent in the experimental arrangement herein described. The contaminated air entered the plant growth chambers through many small holes in the ceiling and passed down across the suspended filter papers before approaching the surface of the leaves of plants growing on benches 4-5 feet below the air inlet. The inlet of the air sampling tube was at the same level as the filter papers. Thus, conditions for comparison of air concentration and collection were ideal.

It should also be noted that the rate of fluoride collection by the limed filter paper is not a linear function. Thus, differences in observed collection rates could also be partially explained on the basis of possible variations in average atmospheric fluoride levels among these three experimental conditions.

Another source of variation between the exposures of ROBINSON and those herein reported involves the differences in type of atmospheric fluorides being used. ROBINSON (1957) exposed his limed paper to an industrial source of fluoride of unstated molecular composition(s). Hydrofluoric acid was used as the fluoride source in these present studies. No information is available which relates the limed paper collection efficiency for HF vs. the unknown gaseous and/or particulate fluorides of ROBINSON's experiments.

In view of the general agreement obtained between ROBINSON's average collection rates and the average collection rate herein reported, and considering the uncertainties involved in the "greenhouse" exposures, the non-linear collection rate, the widely varying rates of air flow and the unknown heterogeneous character of the fluoride-containing pollutant, the range of average collection rates thus far reported does not appear to indicate the existence of any serious shortcoming attributable to the lime paper survey method *per se*.

CONCLUSIONS

Based on the data thus far reported by the various investigators, the lime paper technique may be used with reliability and low cost (*a*) to delineate areas of fluoride pollution (*b*) to determine the relative intensity of pollution between exposure sites within a given area, (*c*) to reflect changes in pollution intensity which may occur as the result of installation of fluoride fume controls at a source, or (*d*) to indicate the relative contribution of a newly established source of fluoride contamination.

Success in the application of this method will be dependent upon (i) exposing the limed papers in adequate shelters to protect them from rain-leaching or extraneous deposits, (ii) using lime suspension below 10 g/l CaO to prevent flaking off of lime during exposure, (iii) selecting exposure sites according to the best known and published site selection criteria, and (iv) having an adequate number of exposure sites to represent the study area.

Acknowledgements—The author is indebted to T. S. RUSSELL for assistance in statistical analysis and JULIA JOWDERS for chemical analysis of samples for fluoride content. Appreciation is also expressed to D. A. THOMAS and V. L. MILLER for helpful suggestions and critical review of the manuscript.

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RECEIVED

FEB 27 1964

Air Pollution

November 19, 1965

Mr. William L. Wilson
Industrial Hygiene Engineer
The Boeing Company
Aero-Space Division
P. O. Box 3707
Seattle, Washington 98124

Dear Mr. Wilson:

This will acknowledge your letter of November 15, 1965 pertaining to the filter paper analyses forwarded for our information. We expect to have our analyses completed within a week and we will either forward them to you at that time or give you a copy of the results when you are here on December 2.

We expect you at 10:00 a.m. on December 2 for your presentation. We will have available a 35 mm slide projector and a 16 mm movie projector and screen.

Very truly yours,

H. M. Patterson, Chief
Air Quality Control

HMP:ms

cc: Fred M. Bolton, District Engineer + copy of Wilson's letter.

ROUTING	
To	Initials
KHS	KHS
EBW	EBW
RBP	RBP
Prep:	HMP
Area:	

NOV 17 1965

THE **BOEING** COMPANY

Air Pollution

AERO - SPACE DIVISION • P.O. BOX 3707 • SEATTLE, WASHINGTON 98124

November 15, 1965

IN REPLY REFER TO

2-1887-9I-588

H. M. Patterson, Chief
Air Quality Control
Oregon State Sanitary Authority
State Office Building
1400 Southwest Fifth Avenue
Portland, Oregon 97201

Dear Mr. Patterson:

The following filter paper analyses are forwarded for your information. Essentially they represent baseline gaseous fluorides collected at Boardman during the summer of 1965.

<u>Sample Number</u>	<u>General Location</u>	<u>ug F⁻/dm²/mo</u>
2	Administration Area	3.5
22	North Side Bombing Range	3.5
46	North Side Bombing Range	3
24	Northeast Corner Bombing Range	2
45	East Side Bombing Range	3
26	East Side Bombing Range	2
44	East Side Bombing Range	3.5
25	East Side Bombing Range	3
31	South Side Range	5
33	South Side Range	4

A number of shelters were damaged by livestock and samples were lost. Papers were exposed from approximately June 1 to October 29. During this period no fluorine was on the site.

The samples were analyzed by a microdiffusion method which recovers inorganic gaseous fluorides collected by the paper but gives low recoveries for fluorides contained in soil.

Since the amount of fluorides collected is dependent on wind velocity as well as fluoride dosage, no accurate translation to dosage can be made. For comparison, our calibration indicates that 6 micrograms F⁻/dm² is equal to about 1 ppm minutes of HF when our shelters were subjected to a 4-6 mile per hour wind.

H. M. Patterson

-2-

2-1887-9I-588

One thousand pounds of fluorine were received at Boardman, November 1, 1965, for closed system testing. There are no plans to release this fluorine.

I plan to present a summary of our activities in the fluorine area to date on December 2, 1965. For this presentation I would like a 35 mm slide projector and a 16 mm movie projector.

Sincerely yours,

THE BOEING COMPANY
Aerospace Group



William L. Wilson
Industrial Hygiene Engineer
Organization 2-1887
Mail Stop 38-59

WLW:klm

cc FHP

Office Memorandum •

OREGON STATE BOARD OF HEALTH

To : File

Date: January 3, 1966

From : H. M. Patterson

Subject: AP-6 Morrow County, Boeing Company

A conference was held with Bill Wilson on December 2, 1965 at which time he reviewed the Boeing Company program at the Boardman site with K. H. Spies, Fred M. Bolton, R. B. Percy and me. Films and slides were shown.

He indicated all fluorine releases essentially resulted in formation of HF. A review slide was presented indicating some of the tolerances of fluorine or HF.

HF IRRITATION

.001 ppm	- upper limit	
.1 ppm	- odor present	<i>3 ppm - slight irritation</i>
10. ppm	- definite irritation	<i>10 ppm - definite irritation</i>
100 ppm	- Intolerable for 1 minute, skin irritation	<i>100 ppm - intolerable for 1 minute</i>
1000-3000 ppm	- LC 50 for animals on 5 minute exposure	

Levels for continuous content in forage or uptake

Dairy	30-50 ppm
Beef	40-50
Sheep	70-100

Mr. Wilson stated that the louvred bird cage type lime paper holder had been tested in wind tunnel with essentially the result that fluorine uptake varied almost directly with wind velocity.

Mr. Wilson repeated that releases of fluorine had been as follows:

May 21, 1965	104 lbs.
May 26, 1965	276 lbs.
May 28, 1965	476 lbs.

He stated that boundaries from the test site were 6.8 and 12.8 miles and while they had used balloons with samples at 3 and 33 meter and other tests that while monitoring was less than what they would desire, significant recordings of HF at any distance was not obtained. He indicated they had attempted to study cloud rise by adding ammonium chloride. Tests were conducted with wind speed at greater than 3 mph.

A copy of our lime paper results was given to Mr. Wilson.

In a conference that followed with R. B. Percy, F. M. Bolton and me, it was determined that the schedule for changing lime paper at other stations shall now be once each two months except for special tests or releases.

cc. F.M.B.

BOEING BOARDMAN LINED PAPER

ANALYSIS

By: R. B. Percy

DATES SAMPLED	BOEING #1		BOEING #2		BOEING #3		BOEING #4		BOEING #5		BLANK FILTER
	Net uF ⁻	uF ⁻ / Day	Net uF ⁻	uF ⁻ / Day	Net uF ⁻	uF ⁻ / Day	Net uF ⁻	uF ⁻ / Day	Net uF ⁻	uF ⁻ / Day	
5-18-64 to 7-23-64			LO	ST	LO	ST	LO	ST	7.3	0.11	6.3 uF ⁻
7-23-64 to 8-20-64			12.	0.43	10.4	0.37	3.1	0.11	LO	ST	6.3 uF ⁻
8-20-64 to 11-20-64			15.5	0.17	LO	ST	14.6	0.16	15.5	0.17	4.0 uF ⁻
11-20-64 to 1-19-65			LO	ST	LO	ST	LO	ST	LO	ST	
1-19-65 to 2-19-65			17.9	0.58	14.6	0.47	17.1	0.55	6.3	0.2	5.7 uF ⁻
2-19-65 to 3-16-65	6.3	0.25	4.3	0.17			19.4	0.78	9.6	0.38	14. uF ⁻

NOTE: uF⁻/day equals micrograms Fluoride/dayBoeing #1 - Umatilla Ordnance Depot T₁N R₂₇E, Bldg. 101Boeing #2 - Highway Station on Lexington-US 30 County Road, rail tie on fence line 9.3 miles South of US 30 viaduct T₃N R₂₅E Sec. 36Boeing #3 - Morrow County O. V. Nelson Ranches T₂N R₂₅E SW₁ Sec. 19Boeing #4 - Morrow County Irvin E. Rauch T₁N R₂₅E SW₁ Sec. 18Boeing #5 - Ione Municipal Water Res. T₁S R₂₁E Sec. 4 N. Res. Roof

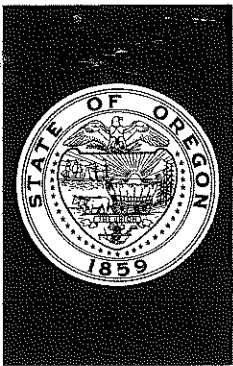
BOARDMAN LIMED PAP. 2 RESULTS BOEING STUDY

WORK SHEET

SAMPLE DATES	BOEING #1		BOEING #2		BOEING #3		BOEING #4		BOEING #5		BOEING #6		REMARKS
	$\frac{\mu\text{GF}}{\text{CM}^2 \text{ DAY}}$	$\frac{\mu\text{GF}}{\text{MO}}$	$\frac{\mu\text{GF}}{\text{CM}^2 \text{ DAY}}$	$\frac{\mu\text{GF}}{\text{MO}}$	$\frac{\mu\text{GF}}{\text{CM}^2 \text{ DAY}}$	$\frac{\mu\text{GF}}{\text{MO}}$	$\frac{\mu\text{GF}}{\text{CM}^2 \text{ DAY}}$	$\frac{\mu\text{GF}}{\text{MO}}$	$\frac{\mu\text{GF}}{\text{CM}^2 \text{ DAY}}$	$\frac{\mu\text{GF}}{\text{MO}}$	$\frac{\mu\text{GF}}{\text{CM}^2 \text{ DAY}}$	$\frac{\mu\text{GF}}{\text{MO}}$	
5-18-64 TO 7-23-64			LOST		—	—	LOST		0.06	1.8	—	—	All results expressed as Micrograms of fluoride ion per square decimeter per day, or micrograms of fluoride ion per square decimeter per month.
7-23-64 TO 8-20-64			0.23	6.9	0.19	5.7	0.06	1.8	0.11	3.3	—	—	
8-20-64 TO 11-20-64			0.09	2.7			0.08	2.4	0.09	2.7	—	—	Limed papers were made from Whatman No.2, 11.0 cm filter paper. Calculated area of exposure (includes both sides) was 1.9 square decimeters.
11-20-64 TO 1-19-65											—	—	
1-19-65 TO 2-19-65			0.30	9.0	0.25	7.5	0.30	9.0	0.10	3.0	—	—	
2-19-65 TO 3-16-65			0.09	2.7	0.5	15.0	0.40	12.0	0.20	6.0	—	—	<div style="text-align: right;"> <i>Released</i> <u>Tested: of F</u> May 21 104 lbs May 26 276 lbs May 28 476 lbs </div>
3-16-65 TO 4-19-65					0.1	3.0	0.01	0.3	0.02	0.6	—	—	
4-19-65 TO 5-19-65			0.07	2.1	0.7	21.	0.45	13.5			0.14	4.2	
5-19-65 TO 5-23-65	1.2	36.	0.6	18.	LOST		0.30	9.0	0.20	6.0	0.36	10.8	
5-23-65 TO 5-28-65	0.44	13.2	—	—	—	—	—	—	—	—	—	—	
5-28-65 TO 6-1-65	0.38	11.4	—	—	—	—	—	—	—	—	—	—	
5-23-65 TO 6-1-65			0.33	9.9	0.22	6.6	0.22	6.6	0.22	6.6	0.05	1.5	
6-1-65 TO 7-2-65	0.09	2.7	0.21	6.3	0.04	1.2	0.11	3.3	0.15	4.5	0.005	0.15	
7-2-65 TO 8-2-65	0.17	5.1	0.12	3.6	0.28	8.4	0.09	2.7	0.24	7.2	0.07	2.1	
8-2-65 TO 9-2-65	0.10	3.0	0.12	3.6	0.24	7.2	0.09	2.7	0.18	5.4	0.05	1.5	
9-2-65 TO 10-8-65	0.08	2.4	0.02	0.6	0.16	4.8	0.18	5.4	0.13	3.9	0.07	2.1	

BOEING AIR QUALITY STATIONS

- Boeing #1 - Umatilla Ordnance Depot T₄N R₂₇E, Bldg. 101
- Boeing #2 - Highway Station on Lexington-US 30 County Road, rail tie on fence line 9.3 miles South of US 30 Viaduct T₃N R₂₅E Sec. 26
- Boeing #3 - Morrow County O. V. Nelson Ranches T₂N R₂₆E SW¹/₄ Sec. 19
- Boeing #4 - Morrow County Irvin E. Ranch T₁N R₂₆E SW¹/₄ Sec. 18
- Boeing #5 - Ione Municipal Water Res. T₁S R₂₄E Sec. 4 N. Res. Roof
- Boeing #6 - S. J. Wallulis Pumphouse 1½ miles South of Town on US Highway 395 near McKay Dam.



ENVIRONMENTAL QUALITY COMMISSION

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MEMORANDUM

To: : Environmental Quality Commission
From : Director
Subject: Agenda Item No. L, March 22, 1974 EQC Meeting

Public Hearing on Adoption of Permanent Rules Pertaining
to Standards for Subsurface Sewage and Nonwater-carried
Waste Disposal

Kessler R. Cannon
Director

Background

The 1973 Legislature assigned responsibility to the Department of Environmental Quality for regulating subsurface sewage and nonwater-carried waste disposal effective January 1, 1974. Such responsibility had previously been vested in the State Health Division but was terminated October 5, 1973.

Temporary rules adopted on September 21, 1973 by the Environmental Quality Commission were in effect from October 5, 1973 to January 25, 1974. On January 25, 1974 revised temporary rules were adopted by the Commission. These latter temporary rules which were subsequently amended on February 22, 1974 will expire on May 25, 1974 unless superseded prior to that date by adoption of permanent rules.

The purpose of the hearing today is to consider the adoption of permanent rules pertaining to standards for subsurface sewage and nonwater-carried waste disposal, pursuant to authority granted by the Legislature to the Commission in Section 209, Chapter 835, Oregon Laws 1973.

It is proposed that the present temporary rules with the revisions shown in Attachment A be adopted as permanent rules.

Discussion

The present temporary rules which consist of the following ten sections have been discussed in detail at previous hearings and meetings of the Commission:



Contains
Recycled
Materials

Section I.	Statement of Purpose
Section II.	Definitions
Section III.	Procedures for Issuance or Denial of Permits
Section IV.	Subsurface Sewage Disposal Systems
Section V.	Septic Tanks
Section VI.	Disposal Areas
Section VII.	Distribution Techniques
Section VIII.	Nonwater-Carried Waste Disposal Facilities
Section IX.	Sewage Disposal Service
Section X.	Appendices

The latter section consists of twelve subsections pertaining primarily to material and construction standards.

Proposed revisions Nos. 1 and 2 in Attachment A are for the purpose of making the wording in the two definitions for "Building Sewer" and "Sewage Disposal Service" identical to the respective wording in the statute (Section 208, Chapter 835, Oregon Laws 1973). When the temporary rules were drafted certain words were inadvertently omitted from these two definitions.

Proposed revision No. 3 provides that no permit shall be issued if the proposed construction would be in conflict with any legally adopted local ordinance or regulation.

Proposed revision No. 4 will allow needed flexibility for certain subdivisions or lots that were approved by the appropriate governing body prior to May 1, 1973 which was the effective date on which rules adopted by the State Health Division increased from 50 feet to 100 feet the required setback from public surface waters for sewage disposal areas. This flexibility was requested by one of the witnesses from Lane County at the Commission meeting in Corvallis on February 22, 1974. It is considered to be in agreement with the stated purpose of these rules.

Proposed revision No. 5 will also provide increased flexibility by allowing construction of subsurface sewage disposal systems in areas of high seasonal ground water but where there will be no hazards created to public health or to safety of ground water supplies.

Proposed revision No. 6 is for the purpose of permitting installation of subsurface sewage disposal systems under certain conditions using limited fill or soil modification.

Proposed revision No. 7 eliminates a possible conflict with the Commission's rules pertaining to solid waste permits issued by the Department for disposal of septic tank sludge. Without this revision the rules would inadvertently prohibit the issuance of a permit for disposal of sludge by dumping on agricultural lands and tilling into the soil which under controlled conditions is an acceptable method of disposal.

Proposed revisions Nos. 8, 9 and 10 pertain to standards for construction of septic tanks and are necessary to insure adequate strength of materials, proper access, and compliance with other construction requirements.

Proposed revisions Nos. 11 and 12 delete unnecessary limitations on the design of lift pumps and pump sumps.

Recommendation

It is the recommendation of the Director that the present temporary rules with the revisions listed in Attachment A be approved and adopted as permanent Rules Pertaining to Standards for Subsurface Sewage and Nonwater-Carried Waste Disposal and that they be filed promptly with the Secretary of State and become effective 10 days after publication by that office.



KESSLER R. CANNON
Director

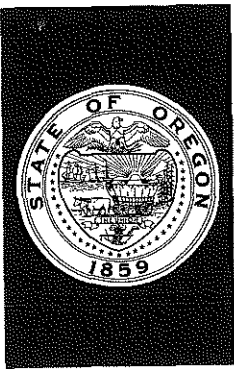
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1/12/74

Attachments: Proposed Revisions to Temporary Rules Pertaining to
Standards for Subsurface Sewage and Nonwater-Carried
Waste Disposal

PROPOSED REVISIONS
TO
TEMPORARY RULES PERTAINING TO STANDARDS FOR SUBSURFACE SEWAGE
AND NONWATER-CARRIED WASTE DISPOSAL

1. On page 2, in definition (5) "Building Sewer", after the word "unit" in the second line, delete the word "from" and add "that begins five feet outside".
2. On page 10, in definition (52) "Sewage Disposal Service", after paragraph (d), add a new paragraph (e) to read: "The construction of drain and sewage lines from five feet outside a building or structure to the service lateral at the curb or in the street or alley or other disposal terminal holding human or domestic sewage".
3. On page 16, in section III.D., add the following sentence: "Notwithstanding that the proposed construction would be in accordance with all other rules of the Environmental Quality Commission, the Director or his authorized representative shall not issue a permit if he finds such construction would violate any ordinance or regulation enacted or promulgated by a constitutive local governmental agency having jurisdiction over the subject real property".
4. On page 24, in section IV. B.3, item 3 of chart, after "4" add "7".
At the bottom of the page add footnote 7 to read: "In subdivisions or lots approved by the appropriate governing body prior to May 1, 1973 with a minimum setback from surface public waters of 50 feet, the Department will consider and may approve installation of a subsurface system with a setback of not less than 50 feet".
5. On page 31, in section VI. A.3., second line, after the word "surface" delete "or" and insert a comma and the words "except in defined areas where the Department has determined that degradation of ground water supplies or health hazards would not be caused, or an area".

6. On page 32, in section VI. A.7., after the word "modified" and before the period, insert a comma and the words "except in subdivisions approved by the appropriate governing body prior to January 1, 1974, lots or parcels in rural zoning classifications designated by the county and approved by the Department, or individual lots for repair of existing systems, provided in the case of subdivisions the native soil and fill material shall consist of poorly structured soils such as sand, sandy loam or loamy sand."
7. On page 51, in section IX. H.1., delete the period at the end of the sentence and add "unless specifically authorized by the Department in writing."
8. On page 53, in Appendix A, section I. C.1., third line, after the word "steel" insert "for 750 gallon tanks and twelve (12) gauge steel for tanks larger than 750 gallons".
9. On page 56, in Appendix A, section I. C.12., delete the present wording and insert the following: "In a single compartment tank access shall be provided by a manhole, not less than fourteen (14) inches square or equivalent, placed over the inlet. In a multiple compartment tank one access manhole, not less than fourteen (14) inches square or equivalent, shall be provided in each compartment."
10. On page 56, in Appendix A, add a new section I. C.13. to read as follows: "Each manufacturer of septic tanks shall certify in writing to the Department that the septic tanks to be distributed for use within the State of Oregon will comply with all requirements of this section."
11. On page 59, in Appendix B, Section II.A., delete subsection 1 and renumber subsections 2,3,4 and 5 as 1,2,3 and 4 respectively.
12. On page 60, in Appendix B, Section II, C.2., after the word "gallons", delete the comma and the words "and shall be sized to provide between 3 and 6 pumping cycles per day", and in Section II.C.3. delete "24" and insert "22".



ENVIRONMENTAL QUALITY COMMISSION

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Chairman, McMinnville

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Portland

MORRIS K. CROTHERS
Salem

MEMORANDUM

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item No. M, March 22, 1974, EQC Meeting

Adoption of Temporary Rules Pertaining to Fees for
Subsurface Sewage Disposal Permits and Licenses

Kessler R. Cannon
Director

Background

Effective January 1, 1974, Senate Bill 77 (Chapter 835, Oregon Laws 1973) required fees to support the new subsurface sewage disposal control program which was established in the Department of Environmental Quality on that same date.

The 1973 law prohibits any person from constructing a new subsurface sewage disposal system or repairing, altering or extending an existing system without first obtaining a permit from the Department, pursuant to filing an application, paying a non-refundable fee and receiving a favorable evaluation of the suitability of the site for the system. The law also prohibits any person from performing the business of sewage disposal services, including construction or pumping out of these systems, without first obtaining a license from the Department, pursuant to filing an application and paying a non-refundable fee. The amounts of the fees that could be charged for the required permits and licenses were set by the Legislature and were not subject to any adjustment by administrative rules of the Commission.

As January 1, 1974 approached and the Department prepared for administration of the program, it became apparent that both the permit and license fees would need to be increased in order to support the cost of the program. The major problems were as follows:

1. The law authorized rules and standards for, among other things, the design and construction of a subsurface sewage disposal system, but did not adequately recognize or provide that the permit issuance for a new system must be preceded by evaluation of the



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potential site's suitability for the system before the design may be confirmed and approved prior to actual permit issuance. Although most applicants apply for site evaluation and permit at the same time, actual final design, plan submission and permit application may sometimes follow site evaluation by several months. Frequently the site evaluation is performed for a subdivider who then sells to another party who actually applies for the permit at a later time. No fee was authorized for the site evaluation which constitutes at least half of the work in the total job from site evaluation through approval of the installed system. Under the 1973 law a \$30 fee for new systems is now charged only for the permit itself and this fee does not cover the average cost of the total procedure.

2. The 1973 law authorized a continuation of the \$50 annual license fee previously charged by the State Health Division for sewage disposal service businesses. This fee, likewise, will not be adequate to cover the administration costs of the programs DEQ has planned for improving control over these businesses, namely examination of system installers and an origin-destination record for sewage pumped from the systems.

To correct these problems, the Department submitted a Bill for an Act to the February 1974 Special Legislative Session, which was assigned the number Senate Bill 1007, and, after Amendments, was passed and signed into law by the Governor, effective immediately. Among other things it authorizes the Commission to establish by rule within specified maximums the amounts of fees to be charged for permits, licenses and evaluation reports.

Evaluation

The new law provides that the Commission shall establish by rule the amount of non-refundable application fees to be charged for:

- a. Evaluation reports for suitability of new subsurface sewage disposal system sites or for methods of sewage disposal, such as sewerage or subsurface sewage systems, for subdivision plats or land sales; said fee to be not in excess of \$25 for each lot or parcel evaluated, and be deducted from the fee amount required for a subsequent subsurface sewage disposal permit application.
- b. Subsurface sewage disposal system permits for new or repair, alteration or extension construction; said fees not to exceed \$50 for a new construction permit or \$15 for a repair, alteration or extension permit.
- c. Sewage disposal service business licenses; said license fee not to exceed \$100.

Proposed temporary rules pertaining to fee schedules for evaluation reports of site suitability or method of sewage disposal will be considered under another agenda item.

Regarding the proposed temporary rules pertaining to the setting by the Commission of fees for subsurface sewage disposal permits and sewage disposal service business licenses, which is the subject of this report, the Department is authorized by the new law to propose that all fees be regulated by rules of the Commission, but that only the fees for new construction permits and the business licenses can be increased above present fees. It should also be noted that the maximum fees authorized in section 3 of Senate Bill 1007 are, proposed here, since the Legislature decreased the Departments initial maximum fee proposals in the Bill for an Act to correspond with these fees which we initially contemplated proposing to the Commission.

Conclusion

It is concluded that the following temporary rules should be adopted today, to go into effect April 1, 1974, in fulfillment of certain provisions of Senate Bill 1007 passed by the 1974 Special Session:

Proposed
Temporary Rules

Pertaining to Fees for Subsurface Sewage Disposal Permits and Sewage Disposal Service Business Licenses

Section 1. Definitions contained in Chapter 835, Oregon Laws 1973 (SB77) shall apply as applicable.

Section 2. The following non-refundable fees are required to accompany applications for permits and licenses issued under Sections 213 and 217, Chapter 835, Oregon Laws 1973:

Subsurface Sewage Disposal System	<u>Fee</u>
New Construction Installation Permit - - - - -	\$50
Alteration, Repair or Extension Permit - - - - -	\$15
Sewage Disposal Service Business License - - - - -	\$100

Section 3. No governmental unit shall be required to pay the fees prescribed in Section 2. of these rules.

Section 4. Each fee received pursuant to subsection (1), section 1, 1974 Senate Bill 1007 and rules of the Environmental Quality Commission adopted pursuant thereto, for a report of evaluation of site suitability or method or adequacy of a new subsurface sewage disposal system, shall be deducted from the amount of the \$50 fee otherwise required for the subsequent issuance of a permit for the installation or construction of the new system for which the site evaluation was conducted, provided its findings are still valid or another evaluation study is not considered necessary.

Director's Recommendation

It is recommended that the above proposed rules be adopted as temporary rules, to become effective April 1, 1974.



Kessler R. Cannon
Director

RDJ:mm
3/13/74



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MORRIS K. CROTHERS
Salem

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. N, March 22, 1974 EQC Meeting

Adoption of Temporary Rules Pertaining to Subsurface Sewage Disposal Permit Appeals Boards

Background

Kessler R. Cannon
Director

SB 1007 passed by the 1974 Special Session of the Legislature has been signed by the Governor and is now in effect. Section 4 of that 1974 Act was added to the original bill by the Joint Committee on Ways and Means. It authorizes the Director of DEQ to create a five-member subsurface sewage disposal permit appeals board for each county in the state. It also authorizes the Commission to adopt rules as it considers necessary to carry out the purposes of Section 4 of the Act.

In the past some counties which have issued permits for subsurface sewage system installations have established local appeals boards to review and rule on denials which have been referred to them upon appeal from the applicants. Since January 1, 1974, when the new subsurface sewage disposal law went into effect, these local appeals boards have had no official status because they were not authorized by Chapter 835, Oregon Laws 1973. However, some of them have continued to function in a review or advisory capacity. The Department has not discouraged this practice.

Discussion

Section 4 of SB 1007, Oregon Laws 1974 (Special Session) sets forth certain requirements pertaining to the creation of a county appeals board, including the following:

- (1) Each board is to consist of 5 members appointed by the Director to carry out the provisions of Section 4 of the Act.
- (2) Each member must be a resident of the county and knowledgeable with respect to subsurface sewage disposal methods, facilities and systems.



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- (3) Each member serves at the pleasure of the Director and in case of a vacancy in any position the Director is required to appoint a replacement for the remainder of the term of that position.
- (4) Either through the Department or through agreement with local government the Director is required to provide all necessary staff and technical assistance to an appeals board.
- (5) Appeals board members serve without compensation but are entitled to reimbursement of actual and necessary expenses incurred in the performance of their duties.
- (6) The appeals board upon application for appeal of a permit denial is required to review the denial in a manner provided by rules adopted by the Commission and to determine, using reasonable discretion, whether or not the denial was made in accordance with rules adopted by the Commission.
- (7) Any decision made by an appeals board shall be final. If the board finds that a permit denial subject to its review does not comply with the rules of the Commission it shall order the issuance of such permit.

To implement the provisions of Section 4 of SB 1007 as passed by the 1974 Special Session it is necessary that administrative rules be adopted by the Commission as soon as possible. The following temporary rules are therefore proposed.

Proposed Temporary Rules

Pertaining to Subsurface Sewage Disposal Permit Appeals Boards

- Section 1. If a county desires to have a subsurface sewage disposal permit appeals board established, its governing body shall submit in writing to the Director a request that such a board be established and may submit nominations for members of such a board.
- Section 2. If the Director elects to create an appeals board for a county, he shall appoint five (5) persons to the board, each of whom shall serve for 4 years from the date of appointment, except that 2 of the members appointed initially shall serve for 2 years from the date of appointment. A member shall be eligible for reappointment to the board.
- Section 3. Three members of the board shall constitute a quorum which shall be necessary for the board to take any action.
- Section 4. Procedures for board review of appeals as authorized by Section 4, SB 1007, 1974 Oregon Special Session, shall include the following:

- (1) An appeal may be made by filing with the board an appeal application in a form prescribed by the board.
- (2) The board may require such additional information as it deems necessary.
- (3) The board shall act upon any such application promptly after receiving the application and all additional information required by the board and after a hearing thereof held by the board following reasonable notice of the hearing given to all parties known to the board to be interested. Any such actions shall be in the form of a written order of the board.

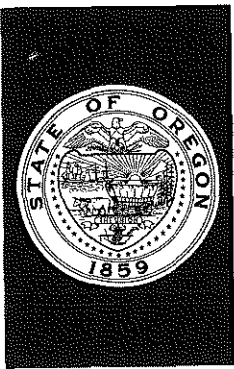
Recommendation:

It is the recommendation of the Director that the above proposed rules be adopted as temporary rules, to become effective upon filing with the Secretary of State.



Kessler R. Cannon
Director

KHS:mm
3/13/74



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Kessler R. Cannon
Director

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. 0, March 22, 1974 EQC Meeting

Adoption of Temporary Rules Pertaining to Fees and Procedures for Evaluations of Methods of Sewage Disposal or of Site Suitability for Installation of Subsurface Sewage Disposal Systems

Background

On December 17, 1973 the Commission adopted temporary rules governing the processing of applications for approval statements (evaluations) regarding proposed methods of sewage disposal required under Chapter 421, Oregon Laws 1973 (HB 2607). On January 24, 1974 at a special session of the Legislature Chapter 421, Oregon Laws 1973 was repealed and replaced by SB 950, Chapter 1, Oregon Laws 1974. The afore-mentioned temporary rules are, therefore, no longer valid.

At the February continuation of the 1974 Special Session SB 1007 was approved and subsequently signed by the Governor. It is now in effect. Section 1 of SB 1007 requires the payment of a fee in an amount to be established by rule by the Commission, not to exceed \$25 for each lot or parcel, by any person making application to the Department for a report of evaluation (a) of a method of sewage disposal required pursuant to Chapter 1, Oregon Laws 1974 (SB 950), (b) of site suitability for subsurface sewage disposal pursuant to section 213, Chapter 835, Oregon Laws 1973 (SB 77), and (c) of adequacy of a sewage disposal system required prior to approval of a plot of a subdivision pursuant to ORS 92.090, as amended.

Discussion

To implement the provisions of Section 1 of SB 1007 as passed by the 1974 Special Session, which is now in effect, it is necessary that administrative rules be adopted by the Commission as soon as possible. The following temporary rules are therefore proposed.



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Proposed Temporary Rules

Pertaining to Fees and Procedures for Processing of Applications for Evaluations of Methods of Sewage Disposal or of Site Suitability for Installation of Subsurface Sewage Disposal Systems

- Section 1. Definitions contained in Chapter 835, Oregon Laws 1973 (SB 77) shall apply as applicable.
- Section 2. An application may be made to the Department by any person, pursuant to the provisions of Section 1, SB 1007 of the 1974 Special Session (Oregon Laws 1974), for an evaluation report of a method of sewage disposal required pursuant to Chapter 1, Oregon Laws 1974 (Special Session), of a site suitability for a subsurface sewage disposal system, or part thereof, pursuant to Section 213, Chapter 835, Oregon Laws 1973, or of adequacy of a sewage disposal system required prior to the approval of a plot of a subdivision, pursuant to ORS 92.090, as amended. Any such application shall be in writing in a form prescribed by the Department and shall be accompanied by the nonrefundable fee specified in Section 6 of these rules. Each application shall be completed in full and shall be signed by the applicant or his legally authorized representative.
- Section 3. Applications which are obviously incomplete, unsigned or which do not contain the required exhibits will not be accepted by the Department and will be returned to the applicant for completion.
- Section 4. If the Department determines that additional information is needed it will promptly request the needed information from the applicant. The application will not be considered complete for processing until the requested information is received. The application will be considered to be withdrawn if the applicant fails to submit the requested information within 90 days of the request.
- Section 5. Applications which are complete will be processed by the Department and a statement will be furnished to the applicant indicating whether or not the proposed method of sewage disposal for each individual lot, parcel or unit is approved by the Department, and listing any condition or limitations placed on such approval, including, but not limited to, location or capacity of the proposed sewage disposal system. In addition to the evaluation report the Department, upon request by a County or City, may also indicate approval of the proposed method of sewage disposal by signing a subdivision plat.

Section 6. The following nonrefundable fees are required to accompany applications for evaluation reports submitted pursuant to Section 1, Senate Bill 1007, Oregon Laws 1974 (Special Session).

<u>Method</u>	<u>Fee</u>
Sewerage system	\$ 5 - first lot \$10 - Maximum (two or more lots)
Subsurface sewage disposal (site suitability)	\$15 - per lot

Section 7. At the discretion of the Department, evaluation reports for partitioning of three (3) lots or less may be completed and the fees retained by the owner of the sewerage system involved or by the county under agreement with the Department pursuant to Section 219a, Chapter 835, Oregon Laws 1973.

Section 8. Any county operating under agreement with the Department pursuant to Section 219a, Chapter 835, Oregon Laws 1973 shall remit 1/3 of the fee for each lot up to a maximum of \$5 per lot together with its recommendations to the Department in connection with applications for reports on subdivision plats and real estate evaluations requiring Department approval. The other 2/3 of the fee may be retained by the County.

Section 9. No charge shall be made for the conduct of an evaluation and issuance of a report requested by any person on any proposed repair, alteration or extension of an existing subsurface sewage disposal system or part thereof.

Recommendation

It is the recommendation of the Director that the above proposed rule be adopted as temporary rules, to become effective April 1, 1974.



Kessler R. Cannon
Director

KHS:mm
3/13/74

MINUTES OF THE FIFTY-FIFTH MEETING
of the
Oregon Environmental Quality Commission
March 22, 1974

Public notice having been given to the news media, other interested persons and the Commission members as required by law, the fifty-fifth meeting of the Oregon Environmental Quality Commission was called to order by the Vice Chairman in the absence of the Chairman at 9 a.m. on Friday, March 22, 1974, in Room 20 State Capitol, Salem, Oregon.

The Commission members present were Dr. Morris K. Crothers, Vice Chairman, Mrs. Jacklyn L. Hallock and Dr. Grace S. Phinney.

The Department was represented by Director Kessler R. Cannon; Deputy Director Ronald L. Myles; Assistant Directors Frederick M. Bolton, Wayne Hanson, Harold L. Sawyer, and Kenneth H. Spies; Regional Administrator Richard P. Reiter (Southwest Region); staff members Thomas R. Bispham, Harold H. Burkitt, Michael J. Downs, Thomas Guilbert, Robert D. Jackman, John S. Kowalczyk, Carole L. Moscato, T. Jack Osborne, Harold M. Patterson, Barbara J. Seymour, Shirley G. Shay, Fredric A. Skirvin, and Warren C. Westgarth; Salem Branch Sanitarian Gary W. Messer; and Chief Counsel Raymond P. Underwood. Representing EPA Region X, Oregon Operations Office, was Director John J. Vlastelicia.

MINUTES OF THE FEBRUARY 22, 1974 COMMISSION MEETING

It was MOVED by Dr. Phinney that the minutes of the fifty-fourth meeting of the Commission, held in Corvallis on February 22, 1974, be approved as prepared and distributed. There being no objection, it was so ordered by unanimous consent.

ACTIVITY REPORT FOR THE MONTH OF FEBRUARY 1974

It was MOVED by Mrs. Hallock that the actions taken by the Department during the month of February 1974, as reported by Mr. Myles, regarding the 42 domestic sewerage, 4 industrial waste, 9 air quality control, and 2 solid waste management projects be approved. There being no objection, it was so ordered by unanimous consent.

Water Quality Control

<u>Date</u>	<u>Location</u>	<u>Location</u>	<u>Action</u>
2-5-74	Sweet Home	C.O. #2 - STP Contract	Approved
2-5-74	West Linn	Green Hills Subdn - Ph 2 - Sewers	Prov. app.
2-7-74	Portland	S.E. 98th Ave. Sewer and N. Upland Dr. Sewer	Prov. app.
2-7-74	The Dalles	West 14th St. Sewer & Pump Sta.	Prov. app.
2-8-74	Lake Oswego	LID 158 San. Sewers	Prov. app.
2-8-74	USA (Sunset)	Torreyview Subdn Sewers	Prov. app.
2-8-74	USA (Fanno)	Habitat Interceptor	Prov. app.
2-8-74	USA (Cornelius)	LID #3 San. Sewer	Prov. app.
2-15-74	BCVSA	Vilas Road Trunk Extension	Prov. app.
2-19-74	Sunriver	River Park 1 - Sewers	Prov. app.
2-19-74	Gresham	N.E. Burnside, N.E. Division St. Shopping Center Sewers	Prov. app.
2-20-74	Tualatin	Hi-West Estates, Ph 1 Sewers	Prov. app.
2-20-74	Hillsboro	N.E. Hyde St. Sewers	Prov. app.
2-20-74	Wilsonville	Wilsonville Indust. Pk. Sewer	Prov. app.
2-22-74	The Dalles	Cascade Square Shopping Center Sewer	Prov. app.
2-22-74	Springfield	Ramada Inn Sewer & Gateway Pk. 2nd Addn. Sewer	Prov. app.
2-25-74	Phoenix	Eleven Oaks Subdn # 1 & 2 Sewers	Prov. app.
2-25-74	Eugene	6 - Sewer Projects	Prov. app.
2-25-74	Eastside	Revised Pumping Station and Force Main	Prov. app.
2-25-74	Tri-City S.D.	C.O. #4 - STP Contract	Approved
2-25-74	Astoria	C.O. #5 & 6 - Schd. A C.O. #3 & 4 - Schd. B	Approved
2-25-74	Gresham	C.O. No. 12, Contr. 1 - STP Contract	Approved
2-25-74	St. Helens	C.O. #C-3 STP Contr.	Approved
2-25-74	Prineville	C.O. No. 1 - Int. Proj.	Approved
2-25-74	Yachats	C.O. #4 - STP Contr.	Approved
2-25-74	Gresham	N.E. Everett St. Sewer	Prov. app.
2-27-74	Clack Co. S.D. #1	C.O. No. 6 - Ph. II Int. Proj.	Approved
2-27-74	Bend	Knoll Hts. Subdn - Dry Sewers	Prov. app.
2-27-74	Springfield	Cogburn Subdn Sewers	Prov. app.
2-28-74	USA (Oak Hills)	N.W. 148th & West Union Rd. Sewer	Prov. app.

Industrial Projects

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
2-1-74	La Grande	Rancho De Jam'on--animal waste facilities	Prov. app.
2-6-74	Dayton	Dauenhauer Feedlot--animal waste facilities	Prov. app.
2-6-74	Tillamook	Derrick Dairy Farm--animal waste facilities	Prov. app.
2-6-74	Scappoose	Steinfeld's Products Co.--waste water treatment facilities	Prov. app.

Air Quality Control

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
2-14-74	Multnomah County	<u>Northwest Natural Gas Co.--</u> 492-space parking facility for new office building	Cond. app.
2-15-74	Lincoln County	<u>Georgia Pacific Corporation--</u> Evaluation of Source Test Report for hog fuel boiler	Req. add. info.
2-19-74	Coos County	<u>Georgia Pacific Corporation--</u> Evaluation of Source Test Report for hog fuel boiler	Req. add. info.
2-21-74	Jackson County	<u>Boise Cascade Corporation--</u> Evaluation of Source Test Report for cyclones	Cond. app.
2-22-74	Multnomah County	<u>Johns Landing--</u> 2,464-space park- ing facility for new residential/ commercial development	EQC Partial App.
2-25-74	Washington County	<u>Kon Koll Business Center--</u> 1,047-space parking facility for new office/warehouse complex	Cond. app.
2-26-74	Klamath County	<u>Columbia Plywood--</u> Evaluation of Source Test Report for hog fuel boiler	Approved
2-26-74	Hood River County	<u>Champion International, U.S.</u> Plywood Division--Evaluation of Source Test Report for cyclones	Approved
2-27-74	Deschutes County	<u>Brooks-Willamette Corporation--</u> N/C No. 226. Installation of two Rotoclone scrubbers to control cyclone emissions at particle- board plant	Approved

Solid Waste Management

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
2-8-74	Lane County	<u>Pope & Talbot, Inc.--</u> Existing Industrial Site, Operational Plan	Approved
2-28-74	Clackamas County	<u>Park Lumber (Crown Zellerbach</u> Corp.)--Existing Industrial Site, Operational Plan	Approved

Mr. Myles told the Commission that the status report on pending projects, requested at the February meeting, would be included in future activity reports.

TAX CREDIT APPLICATIONS

Mr. Skirvin summarized the Department's evaluation of the seven tax credit applications covered by the following motion:

It was MOVED by Dr. Phinney that as recommended by the Director, tax credit certificates be issued to the applicants for the pollution control facilities

described in the following applications and bearing the costs as listed with 80 percent or more of the cost in each case being allocated to pollution control. There being no objection, it was so ordered by unanimous consent.

<u>App. No.</u>	<u>Applicant</u>	<u>Claimed Cost</u>
T-520R	Coil Millwork Company	\$120,165.58
T-521	Willamette Industries, Inc., Duraflake Company	84,836.88
T-523	Willamette Industries, Inc., Duraflake Company	37,688.32
T-524	Evans Products Company, Fiber Products Division	77,617.20
T-537	Bohemia, Incorporated, Elkside Lumber Division	90,449.52
T-538	Bohemia, Incorporated, Cascade Fiber Division	44,511.21
T-518	Reynolds Metals Company, Troutdale Plant	25,563.90

TEMPORARY RULES PERTAINING TO ADMINISTRATIVE PROCEDURE

Mr. Myles presented the staff recommendation report dated March 11, 1974, regarding the adoption of temporary rules pertaining to administrative procedure, as required by the Oregon Administrative Procedure Act. The rules proposed would repeal sections 11-005 to 11-170, Oregon Administrative Rules, Chapter 340, Division 1, Subdivision 1, and adopt in lieu sections 11-005 through 11-135.

Mr. Underwood answered questions by the Commissioners relative to certain definitions and sections of the proposed rules.

It was MOVED by Mrs. Hallock to adopt the proposed rules pertaining to administrative procedure as temporary rules of the Commission. There being no objection, it was so ordered by unanimous consent. A copy of these rules is attached to and made a part of the original minutes.

AMAX ALUMINUM COMPANY STATUS REPORT

Mr. Kowalczyk presented the staff memorandum report on the status of the applications filed by AMAX Pacific Aluminum Corp. (Warrenton) for air, water and solid waste permits. The complete file relative to the AMAX preliminary permit applications is maintained at the Northwest Region, Department of Environmental Quality, 1010 N. E. Couch, Portland.

CONDOMINIUMS NORTHWEST (Gearhart)

Mr. Messer presented the staff memorandum report dated March 11, 1974, regarding the request of Condominiums Northwest for construction of a new swimming pool at the Tillamook House condominium structure in Gearhart, Clatsop County.

Mr. Messer presented the Director's recommendation that the Commission approve the installation of the proposed swimming pool facility subject to the following conditions:

1. No additional sanitary facilities would be constructed.
2. Construction of the swimming pool without poolside sanitary facilities is approved by the Oregon State Health Division.
3. Water generated from the backwash operation be recycled back into the pool.
4. Any future banquet facility that might be constructed would be limited to a maximum seating capacity of 373 persons.

It was MOVED by Dr. Phinney to approve the Director's recommendation. There being no objection, it was so ordered by unanimous consent.

DAMASCUS UNION HIGH SCHOOL, VARIANCE REQUEST

Mr. Bispham presented the staff memorandum report dated March 13, 1974, regarding the request of Damascus Union High School, District No. 26, Damascus, Clackamas County, to open burn the 2,200 filbert trees cleared from a new school site purchased on Deep Creek Road, and the Director's recommendation to grant the variance request subject to the following conditions:

1. Disposal shall be completed during the spring open burning period of April 12, 1974 through May 19, 1974.
2. Material to be burned must be removed of excess earth in order to enhance combustion.
3. Ignition of fires may be allowed only on those days classified as "burn days" by the State Fire Marshal's Office and the Department of Environmental Quality.
4. All burning must comply with local fire department regulations.
5. The burning of rubber, plastics, or materials likely to generate obnoxious odors and/or excessive smoke is prohibited.
6. The school district shall advise the Department each day fires are ignited. Should the open burning and adverse meteorological conditions result in nuisance conditions, burning shall be terminated.

Dr. Crothers asked why the trees weren't made available to the public to cut for firewood. Mr. Bispham replied that there is no access into the site and that the trees are nearly buried in dirt.

It was MOVED by Mrs. Hallock to approve the Director's recommendation. There being no objection, it was so ordered by unanimous consent.

PUBLIC FORUM

Mrs. Hilda B. Baar, 1553 S. W. Upper Hall Street, Portland, a board member of the Goose-Hollow Foothill League, representing the League, read a prepared statement objecting to the revised road standards portion of the Department's proposed noise pollution control rules. Her statement is attached to and made a part of the original minutes.

Mrs. Baar replied to questions by the Commissioners relative to her statement and to specific noise problems in her area.

Mrs. Evelyn Powell, 1905 S. W. Mill Street Terrace, Portland, also a board member of the Goose-Hollow Foothill League, spoke in support of Mrs. Baar's statement.

No one else wished to testify.

PROPOSED NOISE CONTROL RULES

Mr. Guilbert summarized his Hearings Officer's report dated March 15, 1974 on the public hearings on proposed noise control rules held in Portland on March 4 and in Medford on March 7, 1974.

Mr. Cannon said the Department staff is reviewing the testimony received at all the public hearings and will prepare recommendations for consideration by the Commission. He announced his appointment of a statewide ad hoc committee from the technical community to study the standards proposed for the industrial and commercial sections of the rules, and to report their findings within 90 days. He stated further that other portions of the proposed rules would be presented for adoption at an early date.

AIR QUALITY MAINTENANCE AREAS

Mr. Downs summarized his report relative to designating areas of the state for air quality maintenance during the next ten years (1975 through 1985), as required by the Environmental Protection Agency. Each state is to submit to EPA a list of those areas that within this ten-year period could potentially exceed the air quality standards established in the Oregon Clean Air Act Implementation Plan, and following public hearings to propose designating those areas as air quality maintenance areas. Public hearings are scheduled before the Hearings Officer on April 12 in Portland and April 15 in Eugene, with a report to be presented to the Commission at its April 19 meeting in La Grande. Proposed for designation are (1) Portland Metropolitan Area, (2) Longview-Kelso Corridor, (3) Eugene-Springfield Metropolitan Area, and (4) Medford-Ashland Area.

WEYERHAEUSER COMPANY, Springfield

Mr. Guilbert read his Hearings Officer's report regarding the request of Weyerhaeuser Company Kraft pulp and paper mill in Springfield for modification of its compliance schedule for air quality control of lime kilns in accord with Oregon Administrative Rules, Chapter 340, section 25-165(2)(b), by extending the time schedule for full compliance from July 1, 1974 to January 1, 1976.

Mr. Cannon asked Mr. Burkitt, who had testified in support of the application for extension at the public hearing held on March 5, 1974, to comment on the impact of the request for an extension on the area's air shed.

Mr. Burkitt replied that the particulate emissions would have some impact but that the ambient air standards for 1975 could still be met.

It was MOVED by Mrs. Hallock to grant the extension as proposed by the Department's staff. There being no objection, it was so ordered by unanimous consent.

ROBERT DOLLAR COMPANY, VARIANCE REQUEST

Mr. Burkitt presented the staff memorandum report dated March 13, 1974, regarding the request of the Robert Dollar Company, Forest Products Division, Glendale, Douglas County (SIC 2421) for a variance from the administrative rules relating to emissions from the rotary drier which dries the decorative bark produced by the company.

The Director's recommendation would grant the company's Forest Products Division a variance from Oregon Administrative Rules, Chapter 340, sections 21-015(2b), Visible Air Contaminant Emission Limitations, and 21-020(2), Fuel Burning Equipment Emission Limitation, from June 30, 1974 until March 1, 1975, subject to the following compliance schedule and emission limitations, and that the Air Contaminant Discharge Permit, No. 10-0045, to be issued, be modified to reflect the following schedule:

1. August 1, 1974, submit plans and specifications
2. September 1, 1974, submit purchase orders
3. December 1, 1974, commence construction
4. January 1, 1975, complete construction
5. March 1, 1975, demonstrate compliance with the administrative rules.

In addition, the following emission limitations should be incorporated into the Air Contaminant Discharge Permit for the duration of this variance:

1. The permittee shall at all times maintain and operate all air contaminant generating processes and all air contaminant control

equipment at full efficiency and effectiveness, such that the emissions of air contaminants are kept at the lowest practicable levels.

2. Particulate emissions from the wood-fired drier shall not exceed the following:
 - a. 0.2 grains per standard cubic foot corrected to 11% carbon dioxide (CO₂),
 - b. An opacity equal to or greater than twenty-five percent (25%) for a period or periods aggregating more than three (3) minutes in any one (1) hour.

Dr. Crothers asked what would be the opacity of one of the old unmodified wigwam burners. Mr. Burkitt replied that in the case of the Robert Dollar Company, it was probably consistently close to 100 percent, and less than 20 percent for a modified wigwam burner.

Mr. T. H. Mehl, III, Assistant Manager of the Robert Dollar Company, answered questions about his company's product, which he also displayed to the Commissioners.

It was MOVED by Dr. Phinney to approve the Director's recommendation. There being no objection, it was so ordered by unanimous consent.

MARTIN MARIETTA ALUMINUM, INC., The Dalles

Mr. Skirvin presented the staff memorandum report and addendum regarding the proposed air contaminant discharge permit for the Martin Marietta aluminum plant at The Dalles, and the petition on behalf of the Wasco County Fruit and Produce League requesting establishing of Special Problem Area designation for The Dalles, submitted to the Department by counsel for the League. The proposed permit as presented would establish emission limitations more restrictive than the 1977 emission limitations for fluorides set forth in the amended primary aluminum plant regulations, and require a compliance schedule to meet the particulate emission limits by no later than January 1, 1977, in accordance with the amended regulations.

The Director's recommendation proposed that a public hearing be held during which the Commission may receive testimony on the proposed permit.

Mr. Skirvin then read the conclusions of Martin Marietta's reponse to the League's petition, sent by letter to the Department from Mr. Douglas Ragen, an attorney with the Portland firm of Miller, Anderson, Nash, Yerke & Wiener, counsel for Martin Marietta.

It was MOVED by Mrs. Hallock to approve the Director's recommendation regarding the proposed public hearing before the Commission. There being no objection, it was so ordered by unanimous consent.

The Commission also indicated that it would receive testimony on the petition as a separate but related matter at the same time and place as the hearing on the permit.

The Vice Chairman acknowledged the request of several persons representing the Wasco County Fruit and Produce League and Martin Marietta Aluminum, Inc. to address the Commission on various aspects of this agenda item.

Mr. Arden Shenker, an attorney with the Portland firm of Tooze, Kerr, Peterson, Marshall & Shenker, representing the Wasco County Fruit and Produce League, supported the recommendation for a public hearing on the permit. He said that the petition contained two requests--one, to accelerate the time table for the compliance of Martin Marietta Aluminum, Inc. at The Dalles with the fluoride and particulate regulations adopted by the Commission in November 1973; and two, to take prompt action and perhaps accelerate the time table to impose stricter fluoride emission limitations on the Martin Marietta plant during the special growing season from March 25 to July 15, 1974. He urged the designation of Special Problem Area for Wasco County at the earliest possible time.

Dr. Crothers commented that the staff report states that Martin Marietta is currently achieving lower fluoride emissions. Mr. Shenker replied that the League is asking the Commission to require the Company to operate on the basis of stricter emission limitations.

Mr. Jack Doan, Vice President and General Manager, Reduction Division, Martin Marietta Aluminum, Inc., stated that Martin Marietta's application for a permit, submitted to the Department in June 1973, was deferred by the Department pending adoption by the Commission of revised regulations for primary aluminum plants. Following adoption in November 1973, the company expected issuance of a permit in conformity with the revised regulations. Martin Marietta learned just 12 days ago that the Department would propose emission standards in the permit more restrictive than those contained in the regulations. Mr. Doan said that at the present time the company cannot meet either the 1977 emission standards or the proposed permit emission standards without the probability of being in chronic violation, "which would be untenable for all parties concerned."

He contended that it is the Department and not the Commission which has responsibility for establishing the terms of the permit, and said the staff should issue a permit to Martin Marietta requiring compliance with the regulations as promulgated and including a realistic compliance schedule. He concluded by stating that the Commission can be confident that Martin Marietta will continue to abide by the spirit of the regulations and will maintain its position as a leader in emissions control.

Dr. Crothers asked Mr. Underwood to comment on Mr. Doan's statement that the Commission does not have the authority to hold hearings on proposed permits. He replied that there is no specific requirement to hold a hearing, but that the Commission does have the discretion to hold a hearing if it wishes to do so on any subject within its jurisdiction.

Mr. Jeffrey L. Dye, an attorney with the Portland firm of Miller, Anderson, Nash, Yerke & Wiener, representing Martin Marietta, pointed out to the Commission that an air pollution case involving Martin Marietta filed by a cherry grower seeking damages has been set for trial at The Dalles in mid-April. He also read into the record Martin Marietta's full response to the petition, a copy of which is attached to and made a part of the original minutes. Mr. Dye referred to Martin Marietta's record of compliance in 1973, and stated that the petition is both untimely and unsupported by data.

Dr. Crothers asked Mr. Underwood if a formal notice of more restrictive standards is required. Mr. Underwood replied that no notice was necessary because a rule change was not being proposed, that upon a finding by the Commission, the Department can adopt more restrictive standards.

In reply to Mr. Cannon's question concerning problems for the Commission or the Department because of the scheduled trial, Mr. Underwood replied that the Department was not a party to the case and should proceed with its business regardless of pending litigation to which it was not a party.

The meeting was recessed until 1:30 p.m.

ADOPTION OF TEMPORARY RULES PERTAINING TO FEES FOR SUBSURFACE SEWAGE DISPOSAL PERMITS AND LICENSES

Following the luncheon recess and reconvening of the meeting by the Vice Chairman, Mr. Spies presented the staff memorandum report dated March 13, 1974,

regarding the adoption of temporary rules pertaining to the amounts of fees to be charged for subsurface sewage disposal permits, licenses, and site evaluation reports, as authorized by Senate Bill 1007, passed in the 1974 Special Session of the Legislature.

The temporary rules proposed to go into effect April 1, 1974, follow:

Proposed Temporary Rules

Pertaining to Fees for Subsurface Sewage Disposal Permits and Sewage Disposal Service Business Licenses

Section 1. Definitions contained in Chapter 835, Oregon Laws 1973 (SB 77) shall apply as applicable.

Section 2. The following non-refundable fees are required to accompany applications for permits and licenses issued under Sections 213 and 217, Chapter 835, Oregon Laws 1973:

<u>Subsurface Sewage Disposal System</u>	<u>Fee</u>
New Construction Installation Permit-----	\$ 50
Alteration, Repair or Extension Permit-----	\$ 15
Sewage Disposal Service Business License-----	\$100

Section 3. No governmental unit shall be required to pay the fees prescribed in Section 2. of these rules.

Section 4. Each fee received pursuant to subsection (1), section 1, 1974 Senate Bill 1007 and rules of the Environmental Quality Commission adopted pursuant thereto, for a report of evaluation of site suitability or method or adequacy of a new subsurface sewage disposal system, shall be deducted from the amount of the \$50 fee otherwise required for the subsequent issuance of a permit for the installation or construction of the new system for which the site evaluation was conducted, provided its findings are still valid or another evaluation study is not considered necessary.

Mr. Spies presented the Director's recommendation that the above proposed rules be adopted as temporary rules to become effective April 1, 1974.

Dr. Crothers asked how the proposed \$25 evaluation portion of the permit fee would apply to a parcel of land which is subsequently divided. Mr. Spies replied that for an evaluation of a subdivision, a \$25 fee for a site evaluation of each lot or parcel would be required, to be deducted from the permit fee paid by the individual purchaser of a lot or parcel.

Mr. Carl S. Sherman, Marion County Health Department, stated that he had no objection to the permit fee increase but from an administrative standpoint would prefer to have the evaluation fee separated from the permit fee. He said

that any evaluation is incomplete without a review of the building plans which could alter the findings of the evaluation, but that many people ask for evaluations even when they don't have any immediate building plans. He also objected to the charge for a repair of a septic tank because a faulty tank constitutes an immediate health hazard and the Health Division is primarily interested in having a voluntary correction without a fee.

Discussion followed concerning administrative problems that might arise from combining the fee for a site evaluation and permit. Mr. Cannon suggested that an applicant for a site evaluation be required to state the use to which he intended to put the land and the approximate size of the structure. Mr. Spies commented that the Legislature has decreed that any fee charged for site evaluation must be deducted from the permit fee.

Fred VanNatta of Salem, representing the Oregon State Homebuilders Association, expressed concern that a new policy might be set if the Director's statement is applied to implementing the rules. He said that a subdivider initially has to know if the land is suitable for septic tank installation before he can know what type and size structure can go on the property.

Mr. Roy L. Burns of Eugene, Director of the Water Pollution Control Division, Environmental Management Department, Lane County, said that Lane County requires that proposed developments indicate what utilization would be made of the land. He sees problems in administering the proposed rules attributable to certain provisions of the legislation that was recently passed.

It was MOVED by Mrs. Hallock to adopt the temporary rules as presented, to become effective April 1, 1974. There being no objection, it was so ordered by unanimous consent.

PUBLIC HEARING ON ADOPTION OF PERMANENT SUBSURFACE SEWAGE DISPOSAL RULES

Proper notice having been given as required by state law and administrative rules, the public hearing in the matter of adoption of permanent rules pertaining to subsurface sewage and nonwater-carried waste disposal was called to order by Vice Chairman Morris Crothers at 2 p.m. on Friday, March 22, 1974, in Room 20 State Capitol, Salem, Oregon. Commissioners Crothers, Hallock and Phinney were in attendance.

Mr. Spies presented the staff memorandum report proposing that the present temporary rules adopted by the Commission on January 25, 1974 and subsequently

revised on February 25, 1974, together with the attached current revisions be adopted as permanent rules of the Commission. Mr. Spies noted a correction to the proposed revisions which he then presented together with an explanation for their inclusion.

Mr. Roy L. Burns, representing Lane County, expressed appreciation for the Department's response to the County's needs, and urged permanent adoption of the revised temporary rules.

Mr. Ben Beetham of Portland, a realtor with Sunrise Properties, asked if the use of fill material on poorly structured soils applied to soils with a restrictive layer. Mr. Osborne replied that it would not and further, that it applies only to prior-approved lots.

Mr. Fred VanNatta, representing the Oregon State Homebuilders Association, had questions about the use of fill material on new subdivisions, particularly with respect to a subdivision with only a few lots that would require fill material before installing a subsurface system. Mr. Osborne replied that the proposed revision would not apply in that circumstance. Mr. VanNatta said that in the future he may want to propose a rule change to allow fill in certain circumstances on new subdivisions. He also objected to the proposed revision that would require the Department not to issue a permit if any local ordinance or regulation would be violated, even though the permit application met all the rules of the Commission. Mr. Burns said such language was fairly typical and he believed quite necessary.

At Mr. Underwood's suggestion, the language on line 6 of proposed revision 6. of Attachment A was changed to read: "...provided in the case of the aforesaid subdivisions or lots approved prior to January 1, 1974..." (clarifying language underscored).

Mr. Dick Lermon, Marion County Health Department, commented on the rural areas section of the rules. He was concerned that the flexibility permitted in the rural areas designation might allow a relaxing of standards. Mr. Cannon explained that it was voluntary on the part of counties to designate rural areas.

It was MOVED by Dr. Phinney to approve the Director's recommendation that the present temporary rules with the revisions listed in Attachment A as corrected be approved and adopted as permanent rules pertaining to standards for subsurface sewage and nonwater-carried waste disposal. There being no objection, it was so ordered by unanimous consent. A copy of the rules is attached to and made a part of the original minutes.

SUBSURFACE SEWAGE DISPOSAL PERMIT APPEALS BOARDS

Mr. Spies presented the staff memorandum report dated March 13, 1974, concerning Section 4 of Senate Bill 1007, passed by the 1974 Special Session of the Legislature, authorizing the Director of the Department of Environmental Quality to create a five-member subsurface sewage disposal permit appeals board for each county in the state which requested such a board, and the Commission to adopt the necessary rules of procedure. The following temporary rules were proposed:

Proposed Temporary Rules

Pertaining to Subsurface Sewage Disposal Permit Appeals Boards

- Section 1. If a county desires to have a subsurface sewage disposal permit appeals board established, its governing body shall submit in writing to the Director a request that such a board be established and may submit nominations for members of such a board.
- Section 2. If the Director elects to create an appeals board for a county, he shall appoint five (5) persons to the board, each of whom shall serve for 4 years from the date of appointment, except that 2 of the members appointed initially shall serve for 2 years from the date of appointment. A member shall be eligible for reappointment to the board.
- Section 3. Three members of the board shall constitute a quorum which shall be necessary for the board to take any action.
- Section 4. Procedures for board review of appeals as authorized by Section 4, SB 1007, 1974 Oregon Special Session, shall include the following:
- (1) An appeal may be made by filing with the board an appeal application in a form prescribed by the board.
 - (2) The board may require such additional information as it deems necessary.
 - (3) The board shall act upon any such application promptly after receiving the application and all additional information required by the board and after a hearing thereof held by the board following reasonable notice of the hearing given to all parties known to the board to be interested. Any such actions shall be in the form of a written order of the board.

Mr. Spies presented the Director's recommendation that the above proposed rules be adopted as temporary rules to become effective April 1, 1974.

Mr. Spies responded to questions concerning payment of the board members and technical and staff support to the boards.

Mr. Carl Sherman, Marion County Health Department, objected to the boards on the basis that an aggrieved citizen of a county which did not have an appeals

board would have recourse only in a court of law. Mr. Cannon disagreed, saying that the rules provided for appeal to the Commission.

It was MOVED by Mrs. Hallock to approve the Director's recommendation that the proposed rules as presented be adopted as temporary rules of the Commission. There being no objection, it was so ordered by unanimous consent.

FEEs AND PROCEDURES FOR EVALUATIONS OF SEWAGE DISPOSAL METHODS OR SUBSURFACE SEWAGE SITE SUITABILITY

Mr. Spies presented the staff memorandum report dated March 13, 1974, concerning the adoption of temporary rules pertaining to fees and procedures for evaluations of methods of sewage disposal or of site suitability for installation of subsurface sewage disposal systems, as required by Section 1 of Senate Bill 1007, passed by the 1974 Special Session of the Legislature. The following temporary rules were proposed:

Proposed Temporary Rules

Pertaining to Fees and Procedures for Processing of Applications for Evaluations of Methods of Sewage Disposal or of Site Suitability for Installation of Subsurface Sewage Disposal Systems

- Section 1. Definitions contained in Chapter 835, Oregon Laws 1973 (SB 77) shall apply as applicable.
- Section 2. An application may be made to the Department by any person, pursuant to the provisions of Section 1, SB 1007 of the 1974 Special Session (Oregon Laws 1974), for an evaluation report of a method of sewage disposal required pursuant to Chapter 1, Oregon Laws 1974 (Special Session), of a site suitability for a subsurface sewage disposal system, or part thereof, pursuant to Section 213, Chapter 835, Oregon Laws 1973, or of adequacy of a sewage disposal system required prior to the approval of a plat of a subdivision, pursuant to ORS 92.090, as amended. Any such application shall be in writing in a form prescribed by the Department and shall be accompanied by the nonrefundable fee specified in Section 6 of these rules. Each application shall be completed in full and shall be signed by the applicant or his legally authorized representative.
- Section 3. Applications which are obviously incomplete, unsigned or which do not contain the required exhibits will not be accepted by the Department and will be returned to the applicant for completion.
- Section 4. If the Department determines that additional information is needed it will promptly request the needed information from the applicant. The application will not be considered complete for processing until the requested information is received. The application will be considered to be withdrawn if the applicant fails to submit the requested information within 90 days of the request.

Section 5. Applications which are complete will be processed by the Department and a statement will be furnished to the applicant indicating whether or not the proposed method of sewage disposal for each individual lot, parcel or unit is approved by the Department, and listing any condition or limitations placed on such approval, including, but not limited to, location or capacity of the proposed sewage disposal system. In addition to the evaluation report the Department, upon request by a County or City, may also indicate approval of the proposed method of sewage disposal by signing a subdivision plat.

Section 6. The following nonrefundable fees are required to accompany applications for evaluation reports submitted pursuant to Section 1, Senate Bill 1007, Oregon Laws 1974 (Special Session).

<u>Method</u>	<u>Fee</u>
Sewerage System	\$ 5 - first lot \$10 - Maximum (two or more lots)
Subsurface Sewage Disposal (site suitability)	\$15 - per lot

Section 7. At the discretion of the Department, evaluation reports for partitioning of three (3) lots or less may be completed and the fees retained by the owner of the sewerage system involved or by the county under agreement with the Department pursuant to Section 219a, Chapter 835, Oregon Laws 1973.

Section 8. Any county operating under agreement with the Department pursuant to Section 219a, Chapter 835, Oregon Laws 1973 shall remit 1/3 of the fee for each lot up to a maximum of \$5 per lot together with its recommendations to the Department in connection with applications for reports on subdivision plats and real estate evaluations requiring Department approval. The other 2/3 of the fee may be retained by the County.

Section 9. No charge shall be made for the conduct of an evaluation and issuance of a report requested by any person on any proposed repair, alteration or extension of an existing subsurface sewage disposal system or part thereof.

Mr. Spies presented the Director's recommendation that the above proposed rules be adopted as temporary rules, to become effective April 1, 1974.

Discussion followed on the amount of the fee charged for site evaluation, with the recommendation that the proposed temporary rules be amended to increase the site suitability fee from \$15 to \$25.

It was MOVED by Dr. Phinney to amend the fee charged for subsurface sewage disposal site suitability evaluation from \$15 to \$25. There being no objection, it was so ordered by unanimous consent.

It was MOVED by Mrs. Hallock to approve the Director's recommendation to adopt the proposed rules, as amended, as temporary rules, to become effective April 1, 1974. There being no objection, it was so ordered by unanimous consent.

Mr. Cannon distributed to the members of the Commission copies of the final recommendations of the Chem-Nuclear Advisory Committee, whom he thanked publicly for their fine work.

The meeting was adjourned at 3:30 p.m.

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attachments - 4

DEPARTMENT OF ENVIRONMENTAL QUALITY

AMENDMENT TO CHAPTER 340, OREGON ADMINISTRATIVE RULES

March 22, 1974

Sections 11-005 to 11-170, "Rules of Practice and Procedure," are hereby repealed and the following rules adopted in lieu thereof:

Division 1

RULES OF GENERAL APPLICABILITY AND ORGANIZATION

Subdivision 1

RULES OF PRACTICE AND PROCEDURE

Rule Making

11-005 DEFINITIONS. Unless otherwise required by context, as used in this subdivision:

(1) "Commission" means the Environmental Quality Commission.

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

(3) "Director" means the Director of the Department of Environmental Quality.

(4) "License" includes the whole or part of any Department permit, certificate, approval, registration or similar form of permission required by law to pursue any commercial activity, trade, occupation or profession.

(5) "Order" has the same meaning as given in ORS 183.310.

(6) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the Federal Government and any agencies thereof.

(7) "Rule" has the same meaning as given in ORS 183.310.

11-010 NOTICE OF RULE MAKING. (1) Except as specifically provided otherwise by statute, the Commission shall give notice of its intention to adopt, amend or repeal any rules by publication not less than twenty (20) days prior to the date of the proposed action in the bulletin published by the Secretary of State.

(2) A copy of the notice shall be furnished to such news media as the Commission may deem appropriate.

(3) A copy of the notice shall be mailed to persons on the mailing list established pursuant to ORS 183.335(3).

(4) Each rule-making notice shall contain a description of the Commission's intended action, setting forth the subjects and issues involved in sufficient detail to inform a person that his interest may be affected. Where practicable and appropriate, a copy of the rule proposed to be adopted, amended or repealed shall be included. If the proposed rule, amendment or repeal thereof is not set forth verbatim in the notice, the notice shall state the time, place and manner in which the rule or amendment may be obtained.

(5) When the Commission is required by law to hold a public hearing on the proposed rule making, or contemplates that a public hearing is necessary or appropriate, the notice shall additionally include:

(a) The time and place of the public hearing.

(b) The manner in which interested parties may present their views at the hearing.

(c) A designation of the person who is expected to preside at and conduct the hearing, if other than the full Commission.

(6) When the Commission is not required to hold a public hearing, and does not contemplate that a hearing is appropriate to the circumstances of the proposed rule making, the notice shall additionally include:

(a) A statement of the time and place at which data, views or arguments may be submitted in writing to the Commission.

(b) A statement that any interested person desiring to express or submit his data, views or arguments at a public hearing must request the opportunity to do so.

(c) A designation of the person to whom a request for public hearing must be submitted and the time and place therefor.

(d) A statement that a public hearing will be held if the Commission receives a request for public hearing within fifteen (15) days after the Commission's notice from ten (10) or more persons or from an association having not less than ten (10) members.

11-015 REQUEST FOR A PUBLIC HEARING. If ten (10) persons or an association having more than ten (10) members make a timely request for a public hearing on proposed rule making, the Commission shall give notice thereof in conformity with section 11-010(5).

11-020 POSTPONING INTENDED ACTION. (1) The Commission shall postpone its intended action upon request of an affected person, received within fifteen (15) days after the Commission's notice, in order to allow the requesting person an opportunity to submit data, views or arguments concerning the proposed action.

(2) Postponement of the date of intended action shall be no less than ten (10) nor more than ninety (90) days. In determining the length of postponement, the Commission shall consider the time necessary to give reasonable notice of the postponement and the complexity of the subject and issues of the intended action.

(3) The Commission shall give notice of the postponement pursuant to section 11-010 but publication in the Secretary of State's bulletin is required only when the notice can be published in the bulletin prior to the postponement date of the intended action.

(4) This section does not apply to adoption of temporary rules by the Commission pursuant to ORS 183.335(2) and section 11-050.

11-025 CONDUCT OF HEARING. (1) The hearing shall be conducted before the Commission, with the Chairman as the presiding officer, or before any member of the Commission, the Director, or other person designated by the Commission to be the presiding officer.

(2) At the commencement of the hearing, any person wishing to be heard shall advise the presiding officer of his name, address and affiliation. Additional persons may be heard at the discretion of the presiding officer. The presiding officer shall provide an appropriate form for listing witnesses which shall indicate the name of the witness, whether the witness favors or opposes the proposed action and such other information as the presiding officer may deem appropriate.

(3) At the opening of the hearing, the presiding officer shall state, or have stated, the purpose of the hearing.

(4) The presiding officer shall thereupon describe the manner in which interested parties may present their views at the hearing.

(5) Subject to the discretion of the presiding officer, the order of the presentation shall be:

- (a) Statements of proponents.
- (b) Statements of opponents.
- (c) Statements of any other witnesses present and wishing to be heard.

(6) The presiding officer and any member of the Commission shall have the right to question or examine any witness making a statement at the hearing. The presiding officer may, in his discretion, permit other persons to examine witnesses.

(7) There shall be no rebuttal or additional statements given by any witness except as requested by the presiding officer. However, when such additional statement is given, the presiding officer shall allow an equal opportunity for reply.

(8) The hearing may be continued with recesses as determined by the presiding officer until all listed witnesses present and wishing to make a statement have had an opportunity to do so.

(9) The presiding officer shall, where practicable and appropriate, receive all physical and documentary evidence presented by witnesses. Exhibits shall be marked and shall identify the witness offering each exhibit. The exhibits shall be preserved by the Department for a period of one year or, at the discretion of the Commission, returned to the party submitting it.

(10) The presiding officer may set reasonable time limits for oral presentation and may exclude or limit cumulative, repetitious or immaterial matter.

(11) A verbatim oral, written, or mechanical record shall be made of all the hearing proceedings, or, in the alternative, a record in the form of minutes.

11-030 PRESIDING OFFICER'S REPORT. Where the hearing has been conducted before other than the full Commission, the presiding officer, within a reasonable time after the hearing, shall provide the Commission with a written summary of statements given and exhibits received, and a report of his observations of physical experiments, demonstrations or exhibits. The presiding officer may also make recommendations to the Commission based upon the evidence presented, but the Commission is not bound by such recommendations.

11-035 ACTION OF THE COMMISSION. Following the hearing by the Commission, or after receipt of the report of the presiding officer, the Commission may adopt, amend or repeal rules within the scope of the notice of intended action.

11-040 NOTICE OF COMMISSION ACTION: CERTIFICATION TO SECRETARY OF STATE. The Department shall file in the Office of the Secretary of State a copy of each rule adopted, amended or repealed by the Commission, certified by the Director, or Deputy Director, of the Department.

11-045 PETITION TO PROMULGATE, AMEND OR REPEAL RULE: CONTENTS OF PETITION, FILING OF PETITION. (1) An interested person may petition the Commission requesting the promulgation, amendment or repeal of a rule. The petition shall be in typewritten form, signed by or on behalf of the petitioner and shall contain a detailed statement of:

(a) The rule petitioner requests the Commission to promulgate, amend or repeal. If amendment of an existing rule is sought, the rule shall be set forth in the petition in full with matter proposed to be deleted therefrom enclosed in brackets and proposed additions thereto shown by underlining.

(b) Ultimate facts in sufficient detail to show the reasons for adoption, amendment or repeal of the rule.

(c) All propositions of law to be asserted by petitioner.

(d) Sufficient facts to show how petitioner will be affected by adoption, amendment or repeal of the rule.

(e) The name and address of petitioner and of any other persons known by petitioner to be interested in the rule sought to be adopted, amended or repealed.

(2) The petition shall be deemed filed when received by the Department at the office of the Director.

(3) Upon receipt of the petition, the Department:

(a) Shall serve a true copy of the petition, together with a copy of any applicable rules of practice, on all persons named in the petition, and on those whom the Department believes to have an interest in the proceeding. For the purposes of this subsection, service shall be deemed perfected on the date such copies are mailed to the last known address of the person being served.

(b) Shall advise petitioner that he has fifteen (15) days in which to supplement his petition in writing with additional data, views or arguments.

(c) Shall advise all other persons served that they have fifteen (15) days in which to submit written data, views or arguments regarding the petition.

(d) May schedule oral presentation of petitioner's views if petitioner makes a request therefor, or if the Commission wishes to hear petitioner orally.

(4) The Commission shall promptly either deny the petition or initiate rule-making proceedings in accordance with sections 11-005 through 11-040 and, if it denies the petition, shall issue an order setting forth its reasons in detail. The order shall be mailed to the petitioner and to all other persons upon whom a copy of the petition was served.

11-050 TEMPORARY RULES. (1) The Commission may proceed without prior notice or hearing, or upon any abbreviated notice and hearing that it finds practicable and appropriate, to adopt a rule without the notice otherwise required by ORS chapter 183 and by these rules. In such a case, the Department shall:

(a) File a copy, certified by the Director or by the Deputy Director of the Department, of the rule with the Secretary of State.

(b) File with the Secretary of State the Commission's findings that failure of the Commission to act promptly will result in serious prejudice to the public interest or to the interest of the parties concerned. The findings shall be supported by a statement of specific facts and reasons.

(c) Take practicable and appropriate measures to make the temporary rule known to persons who may be affected by it.

(d) Furnish copies of the temporary rule to such news media as the Commission deems appropriate to comply with the notice requirement of these rules.

(2) A temporary rule adopted in compliance with this section becomes effective immediately upon filing with the Secretary of State, or at a designated later date.

(3) A temporary rule may be effective for no longer than 120 days, and may not be extended, renewed or repromulgated beyond the initial 120 days. In accordance with the procedures established by sections 11-005 through 11-040, the Commission may adopt a rule identical to an existing temporary rule.

11-055 APPLICATION OF SECTIONS 11-005 to 11-040. Sections 11-005 through 11-040 do not apply to rules establishing an effective date for a previously effective rule or establishing a period during which a provision of a previously effective rule will apply.

Declaratory Rulings

11-060 INSTITUTION OF PROCEEDINGS FOR DECLARATORY RULINGS. On petition of any interested person, the Commission may, at its discretion, issue a declaratory ruling with respect to the applicability to any person, property or state of facts of any statute or rule enforceable by the Commission.

11-065 CONTENTS OF PETITION. The petition shall be typewritten and shall contain:

(1) The statute or rule for which petitioner seeks a declaratory ruling.

(2) A detailed statement of the facts upon which petitioner requests the Commission to issue its declaratory ruling.

(3) Sufficient facts to show how petitioner will be affected by the requested declaratory ruling.

(4) All propositions of law or contentions to be asserted by petitioner.

(5) The questions presented for decision by the Commission.

(6) The specific relief requested.

(7) The name and address of petitioner and of any other person known by petitioner to be interested in the requested declaratory ruling and the reason for such interest.

11-070 FILING AND SERVICE OF PETITION. (1) The petition shall be deemed filed when received by the Department at the office of the Director.

(2) The Commission shall inform the petitioner promptly after the filing of the petition whether it intends to issue a ruling.

(3) If the Commission intends to issue a ruling, the Department shall serve a copy of the petition, and a notice of a hearing at which the petition will be considered, on all

persons named in the petition, and on all other persons the Department believes to have an interest in the outcome of such a ruling.

(4) The notice of hearing required by subsection (3) of this section shall include:

(a) The time and place of the hearing.

(b) A designation of the person who is expected to preside at and conduct the hearing, if other than the full Commission.

11-075 CONDUCT OF HEARING: BRIEFS AND ORAL ARGUMENT.

(1) A hearing for a declaratory ruling may be held before the Commission or a member thereof, the Director, or any other person designated by the Commission to preside at and conduct the hearing.

(2) At the hearing, petitioner and any other interested party shall have the right to present oral argument. The presiding officer may impose reasonable time limits on the time allowed for oral argument. Petitioner and other interested persons may file briefs with the Commission in support of their respective positions. The Commission or its designee shall fix the time and order of filing briefs.

11-080 PRESIDING OFFICER'S OPINION. In those instances where the hearing has been conducted before a person other than the full Commission, the presiding officer shall prepare an opinion conforming in form and content to the requirements of subsection 11-085(2). The Commission is not bound by the opinion of the presiding officer.

11-085 DECISION OF COMMISSION: TIME, FORM AND SERVICE.

(1) The Commission shall issue its declaratory ruling within sixty (60) days of:

(a) Where no briefs are permitted to be filed subsequent to the hearing, the close of the hearing.

(b) Where permission has been granted for the filing of briefs subsequent to the hearing, the deadline set for the filing of briefs.

(2) The ruling shall be in the form of a written opinion and shall set forth:

(a) The facts being adjudicated by the Commission.

(b) The statute or rule being applied to those facts.

(c) The Commission's conclusion as to the applicability of the statute or rule to those facts.

(d) The Commission's conclusion as to the legal effect or result of applying the statute or rule to those facts.

(e) The reasons relied upon the Commission to support its conclusions.

(3) The Department shall mail the Commission's ruling to all persons upon whom it served the petition in compliance with subsection 11-070(3), and to all other persons on the mailing list established pursuant to ORS 183.335(3).

11-090 EFFECT OF COMMISSION RULING. A declaratory ruling issued in accordance with these rules is binding between the Commission and the petitioner on the state of facts alleged, or found to exist, except:

- (1) When altered or set aside by a court.
- (2) When the ruling is based on a rule of the Commission, the rule is amended, repealed or superseded pursuant to rule making conducted in accordance with sections 11-005 through 11-040.
- (3) Where the declaratory ruling is adverse to petitioner, when altered by the Commission.

Contested Cases

11-095 IMMEDIATE SUSPENSION OR REFUSAL TO RENEW A LICENSE. If the Commission finds a serious danger to the public health or safety and sets forth the specific reasons for such findings, the Commission may suspend or refuse to renew a license without hearing. If the licensee demands a hearing within 90 days after the date of notice to the licensee of such suspension or refusal to renew, a hearing as provided in sections 11-110 through 11-135 shall be granted to the licensee as soon as practicable after such demand, and the Commission shall issue an order pursuant to such hearing confirming, altering or revoking its earlier order. Such a hearing need not be held where the order of suspension or refusal to renew is accompanied by or is pursuant to, a citation for violation which is subject to judicial determination in any court of this state, and the order by its terms will terminate in case of final judgment in favor of the licensee.

11-100 NOTICE OF OPPORTUNITY FOR A HEARING. (1) Except as otherwise provided in section 11-095, before the Commission or Department shall by order suspend, revoke, refuse to renew or issue a license or enter an order in any other contested case as defined in ORS chapter 183, it shall afford the licensee, the license applicant or other party to the contested case an opportunity for hearing after reasonable notice, served personally or by registered or certified mail.

(2) Notice of opportunity for a hearing shall include:

(a) A statement of the party's right to request a hearing.

(b) A statement of the authority and jurisdiction under which the hearing would be held.

(c) A reference to the particular sections of the statutes and rules involved.

(d) A short and plain statement of the matters asserted or charged.

(e) A statement that if the party desires a hearing, the agency must be notified within twenty (20) days of the date of mailing of the notice.

11-105 ORDERS WHEN NO HEARING REQUESTED. When a party has been given an opportunity to request a hearing within a specified time and no hearing has been requested, or if a hearing has been set, notice thereof given and the party does not appear, the Commission or the Department may, based upon a prima facie case made on the record of the Commission or

the Department, as the case may be, enter a written order at the expiration of the time, stating the matters before it supporting the order, and that the order shall become effective immediately upon service on the party.

11-110 NOTICE OF HEARING. (1) The Department shall serve notice of a hearing personally or by registered or certified mail upon each party.

(2) Notice of a hearing shall include:

(a) All matters required to be included in the notice of opportunity for hearing under section 11-100(2)(b)(c) and (d).

(b) A statement of the time and place of the hearing.

(c) A designation of the person who is expected to preside at and conduct the hearing, if other than the full Commission.

(d) A statement that any party to the contested case may be represented by counsel at the hearing.

11-115 SUBPOENAS AND DEPOSITIONS. (1) The Department shall issue subpoenas on behalf of any party to a contested case upon a showing of good cause, and a showing of general relevance within the reasonable scope of the proceedings. Witnesses appearing pursuant to subpoena, other than persons requesting the hearing, members of the Commission, the Director or employees of the Department, shall receive fees and mileage as prescribed by law for witnesses in civil actions.

(2) An interested person may petition the Department for an order that the testimony of a material witness be taken by deposition. Fees and mileage are to be paid as determined by applicable statutes.

11-120 CONDUCT OF HEARING. (1) The hearing shall be conducted before the Commission, under the control of the chairman as presiding officer, or before any Commission member or other person designated by the Commission or Director to be presiding officer.

(2) At the discretion of the presiding officer, the hearing shall be conducted in the following manner:

(a) Statement and evidence of the Commission or Department in support of its proposed action.

(b) Statement and evidence of affected persons in support of, requesting modification of or disputing the Commission's or the Department's proposed action.

(c) Rebuttal testimony, if any.

(3) All testimony shall be taken upon oath or affirmation of the witness from whom received. The officer presiding at the hearing shall administer oaths or affirmations to witnesses.

(4) The following persons shall have the right to question, examine or cross-examine any witness:

(a) The presiding officer.

(b) Where the hearing is conducted before the full Commission, any member of the Commission.

(c) Counsel for the Commission or the Department.

(d) Where the Commission or the Department is not represented by counsel, a person designated by the Commission or the Director.

(e) Any party to the contested case or such party's counsel.

(5) The hearing may be continued with recesses as determined by the presiding officer.

(6) The presiding officer may set reasonable time limits for oral presentation and shall exclude or limit cumulative, repetitious or immaterial matter.

(7) The presiding officer shall, where appropriate and practicable, receive all physical and documentary evidence presented by parties and witnesses. Exhibits shall be marked, and the markings shall identify the person offering the exhibits. The exhibits shall be preserved by the Department as part of the record of the proceedings.

(8) A verbatim oral, written or mechanical record shall be made of all motions, evidentiary objections, rulings and testimony.

11-125 EVIDENTIARY RULES. (1) The rules of evidence as in equity proceedings shall apply to all hearings in contested cases.

(2) All offered evidence, not objected to, will be received by the presiding officer subject to his power to exclude or limit cumulative, repetitious, irrelevant or immaterial matter.

(3) Evidence objected to may be received by the presiding officer with rulings on its admissibility or exclusion to be made at the time a final order is issued.

11-130 PROPOSED ORDERS: FILING OF EXCEPTIONS AND ARGUMENT.

(1) In contested cases before the Commission, if a majority of the members of the Commission were not present at the hearing or have not considered the record, and the order is adverse to a party, a proposed order, including findings of fact and conclusions of law, shall be served upon the parties. The Commission shall not render a final order in the contested case until each party adversely affected has been given an opportunity to file exceptions and present arguments to the Commission.

(2) In contested cases before the Department, if the Director was not present at the hearing or has not considered the record, and the order is adverse to a party, a proposed order, including findings of fact and conclusions of law, shall be served upon the parties. The Director shall not render a final order in the contested case until each party adversely affected has been given an opportunity to file exceptions and present arguments to the Director.

11-135 FINAL ORDERS IN CONTESTED CASES. NOTIFICATION.

(1) Final orders in contested cases shall be in writing or stated in the record, and may be accompanied by an opinion.

(2) Final orders shall include the following:

(a) Rulings on admissibility of offered evidence if not already in the record.

(b) Findings of fact, including those matters which are agreed as fact, a concise statement of the underlying facts supporting the findings as to each contested issue of fact and each ultimate fact required to support the Commission's or the Department's order.

(c) Conclusions of law.

(d) The Commission's or the Department's order.

(3) The Department shall serve a copy of the final order upon every party or, if applicable, his attorney of record.

1 reduction plant at The Dalles. The Commission received numerous
2 technical reports. Having considered the alternatives of establishing
3 separate standards for each of the existing plants and a separate
4 standard for newly constructed plants, the Commission adopted
5 regulations on November 26, 1973. The petition of the League
6 requests that the Commission again emerge itself in the same
7 problems and issues it carefully considered in 1973. The Commission
8 has been presented with no new information or developments which
9 justify a departure from the regulations adopted in November.
10 Contrary to the representations of the Wasco County Fruit and Produce
11 League, there is nothing in the record which justifies classifying
12 the reduction plant of Martin Marietta Aluminum Inc. as a "special
13 problem area." Rather, the record reflects that the Martin Marietta
14 Aluminum Inc. plant has one of the most efficient emission control
15 systems in the world.

16 The petition asks that during the period March 25, 1974,
17 through July 15, 1974, the weekly average of fluorides emitted from
18 all sources shall not exceed 1.0 pound of fluoride ion per ton
19 of aluminum produced. It also asks that the gaseous matter
20 including the element fluorine shall not exceed .6 micrograms per
21 cubic meter measured over any six consecutive hours. The League
22 makes no showing that such standards are attainable. The 1.0
23 pound monthly standard was initially proposed by the staff of the
24 Department of Environmental Quality in 1973. The Commission
25 recognized in its adoption of the regulations in November 1973 that
26

1 a 1.0 pound standard was not "reasonably attainable," nor
2 "practicable." The regulations requested by the League are even
3 more restrictive than those required by Section 25-265, Chapter 340,
4 OAR, for newly constructed plants. It has been repeatedly reported
5 to the Department and the Commission that the plant of Martin Marietta
6 Aluminum Inc. at The Dalles has one of the world's most efficient
7 emission control systems. However, its plant simply cannot presently
8 comply with the regulations proposed by the League.

9 The League refers to a judgment entered in Hood River.
10 The League fails to report that the judgment was rendered in a case
11 which was first tried in 1970. The results of the first trial were
12 reversed on appeal. The judgment in the second trial was challenged
13 on posttrial motions for, among other reasons, insufficient evidence
14 to support the verdict. In lieu of a resolution of those motions
15 by the trial court and the prospect of a subsequent appeal, the
16 grower entered into a settlement with Martin Marietta Aluminum Inc.
17 It is interesting to note that during the course of the trial
18 there were no scientists who testified that they had found damage in
19 the cherry orchard of the grower in 1973. The grower himself made
20 no claim for damage for cherry crop loss in 1973. The case of the
21 grower has now been dismissed with prejudice. The case of the grower
22 provides no basis for extraordinary restrictions on the operations
23 of Martin Marietta Aluminum Inc. in The Dalles.

24 Furthermore, there is no showing anywhere in the record
25 that the restrictions proposed by the League will have any material
26 beneficial effect on the orchards.

1 2. THE REQUEST OF THE LEAGUE TO ADVANCE THE COMPLIANCE
2 DATE TO JUNE 1, 1974.

3 The League has petitioned the Commission to advance the
4 date for full compliance with the emission standards in Section
5 25-265(3) from January 1, 1977, to June 1, 1974. The Commission
6 carefully considered throughout the year 1973 all phases of the
7 emission regulations for the aluminum industry including the com-
8 pliance schedule. Again, the League has failed to report any new
9 developments which justify a departure from the regulations adopted
10 November 26, 1973.

11 A substantial part of the efforts of the aluminum industry
12 in the hearings in 1973 was to explain to the Department and the
13 Commission the inherent variability of the operations of an aluminum
14 plant and the associated variability in emissions. Nothing has
15 occurred in the reduction technology nor in the emission control
16 technology which eliminates the variability in the emission
17 measurements. It was in recognition of this variability in
18 emission measurements that the Commission established its definitions
19 of the monthly average and annual average and set the standards at
20 the levels of emissions set forth in the regulations.

21 With one exception, Martin Marietta Aluminum Inc. complied
22 in 1973 with Section 25-265(3). This achievement is another
23 example of the ability of Martin Marietta Aluminum Inc. to lead the
24 industry in emission control and to provide the best "practicable"
25 emission systems. The single instance of failure of Martin Marietta
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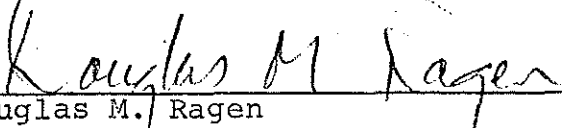
1 in emission control and to provide the best "practicable"
2 emission systems.

3 Respectfully submitted,

4 MARTIN MARIETTA ALUMINUM INC.

5 By

6 MILLER, ANDERSON, NASH, YERKE & WIENER

7 
8 Douglas M. Ragen
9 Attorneys for Martin Marietta
10 Aluminum Inc.

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1 an individual plant than the numerical emission standards contained
2 in Section 25-265, upon a finding by the Commission that an indi-
3 vidual plant is located in a special problem area. More restric-
4 tive emission limits for special problem areas can be established
5 on the basis of a seasonal term. Emission limits can be established
6 on the basis of allowable emissions per ton of aluminum produced
7 or total maximum daily emissions to the atmosphere, or a combination
8 thereof.

9 The record before the Commission and the materials
10 prepared by and for the Department are replete with the express
11 finding of fact that the orchard areas surrounding the Martin
12 Marietta Aluminum, Inc. primary reduction plant in The Dalles,
13 Oregon, constitute a special problem area. The fruits grown in
14 that area are a multimillion dollar industry. They are extremely
15 sensitive to the fluoride pollution which continues to be emitted
16 by Martin Marietta at The Dalles.

17 Previous statements submitted on behalf of the Wasco
18 County Fruit and Produce League summarize and detail the extensive
19 history of research and findings of the extreme fluoride sensi-
20 tivity of the fruit growing industry surrounding the aluminum plant
21 in The Dalles. Most particularly, see the testimony of Dr. Timothy
22 J. Facteau before the Commission in connection with the hearings
23 held for consideration of the proposed amended regulations which
24 finally were adopted on November 26, 1973. Subsequent to that
25 time the Circuit Court for the State of Oregon in the County of
26 Hood River entered a judgment in favor of one of the fruit growers

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1 in the The Dalles, area, whose orchard lies some two miles further
2 from the aluminum plant than the nearest of the orchards to the
3 aluminum plant in The Dalles. That judgment was on the basis of
4 a jury verdict which found damage to the fruit orchardist's crops
5 for every year from 1960 through 1973. Inasmuch as there was a
6 finding of damage to the fruit orchardist's crops for the most
7 current year, 1973, there is a reasonable basis to seek protection
8 for the next ensuing year, 1974.

9 The record before the Commission shows that the vulner-
10 able period of maximum injury to the fruit growing industry in
11 the The Dalles area is during the cherry fruit blossom period
12 which occurs normally in the first two weeks of April. From
13 April the vulnerable period for peach fruit continues through
14 the pit hardening stage, which normally has concluded by the
15 second week in July. The petitioner submits that the following
16 more restrictive limits for emissions during the period March 25,
17 1974, through July 15, 1974, would place no unreasonable burden
18 on the Martin Marietta Aluminum, Inc., plant at The Dalles, and
19 would be a prudent step for avoiding continued substantial
20 economic damage to the fruit growing industry in the area of
21 The Dalles:

22 A. During the time period proposed, the weekly average
23 of fluorides emitted from all sources shall not exceed 1.0 pounds
24 of fluoride ion per ton of aluminum produced.

25 B. Concentrations of gaseous matter including the
26 element fluorine shall not exceed .6 micrograms per cubic meter

1 measured over any period of six consecutive hours.

2 The Oregon Department of Environmental Quality continues
3 to receive reports from the Martin Marietta Aluminum Company, Inc.,
4 plant at The Dalles, Oregon. Both those records and the records
5 from the Martin Marietta Aluminum, Inc. plant at John Day, Oregon,
6 establish that the company is capable of operating its pollution
7 control system so as to prevent the emissions of more than
8 1.0 pounds of total fluorides per ton of aluminum produced.
9 Ambient air monitoring data maintained by the company and by the
10 Oregon State University Hood River Experiment Station establish
11 that the company is capable of limiting its emissions so that
12 concentrations of gaseous matter containing the element fluorine
13 do not exceed more than a concentration of .6 of a microgram per
14 cubic meter for any six hour period of time measured consecutively.

15 The petitioner submits that if the company is capable
16 of operating in such a manner as to restrict its emissions both
17 on the basis of pounds of total fluorides emitted per ton of
18 aluminum produced and on the basis of the ambient air concentra-
19 tions of fluorides, then certainly the company should be required
20 so to operate, during the period of maximum vulnerability of a
21 multimillion dollar fruit industry.

22 The Department has experience in evaluating data
23 submitted by the Martin Marietta Aluminum Company, Inc. plant at
24 The Dalles. The Department also has experience in monitoring
25 ambient air concentration of fluorine elements in the gaseous
26 state. Moreover, the Oregon State University Hood River

1 Experiment Station also has experience in making such monitoring
2 measurements and the reporting of same for evaluation. If the
3 Commission does adopt these recommendations of the petitioner,
4 as requested by the petitioner, then the Department can take the
5 necessary steps for testing and appropriate enforcement, and the
6 petitioner so requests.

7 2. COMPLIANCE SCHEDULE RELIEF REQUESTED

8 The record before the Environmental Quality Commission
9 and the material submitted to and by the Department of Environmental
10 Quality in connection with the proposed amendments adopted by the
11 Commission on November 26, 1973, establish that the Martin Marietta
12 Aluminum, Inc. primary reduction plant at The Dalles, Oregon, can
13 and frequently does meet the existing requirements of Section
14 25-265(3) at the present time. It is the thrust of the regulations,
15 as interpreted by the Director of the Department of Environmental
16 Quality in his statement presented at the meeting of the Commission
17 on November 26, 1973, that the compliance schedules should require
18 existing aluminum plants in Oregon to meet the newly amended
19 regulations at the earliest practicable date.

20 If the Martin Marietta Aluminum, Inc. plant at The Dalles
21 now meets the requirements of Section 25-265(3), from time to
22 time, as company representatives have asserted to the Commission
23 and Department and have sworn in courts in this state, then the
24 company now has the capacity to meet those requirements on a
25 regular basis. The company should be required to do so, without
26 delay. The effect of extending the date of compliance is to

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1 delay the full force and effect of the requirements of both
2 Section 25-265(3) and Section 25-265(1). Those facts are
3 obviously deemed the necessary measure of protection; therefore,
4 delay is at the expense of the public. Delay can be justified
5 only to permit a company to develop the capacity for compliance.
6 If it has demonstrated the capacity, as Martin Marietta has, then
7 the delay is unjustifiable.

8 There are times that the Martin Marietta Aluminum, Inc.
9 primary aluminum reduction plant at The Dalles even meets the
10 requirements of Section 25-265(1). Those regulations, if balked
11 to their furthest extreme by a procrastinating compliance schedule,
12 would permit an existing aluminum plant to wait until January 1,
13 1984, to comply. The problem created by fluoride emissions at
14 The Dalles can be significantly reduced by compliance, now. The
15 Martin Marietta plant has created a special problem area that now
16 requires compliance. There would appear to be no good reason for
17 waiting a protracted period of time for eventual compliances. At
18 some later date after requiring the Martin Marietta Aluminum, Inc.
19 The Dalles, Oregon, plant to comply with Section 25-265(3), this
20 Commission then can evaluate the compliance schedule which should
21 be set for full enforcement of Section 25-265(1) with respect to
22 the Martin Marietta Aluminum, Inc., plant at The Dalles, Oregon, at
23 the earliest practicable date.

24 CONCLUSION

25 The petitioner has had an extensive history of appearances
26 before this Environmental Quality Commission and its predecessor

1 organizations and institutions. Now that the Commission has
2 adopted regulations and requirements which will apply to the
3 aluminum plant at The Dalles, Oregon, the petitioner is concerned
4 that those requirements take effect in order to provide maximum
5 protection for the Wasco County fruit growers and for the allied
6 and dependent (processing, storing, handling, marketing and
7 transporting) industries in the Wasco County area.

8 The petitioner submits that the fruit growing industry
9 in The Dalles should not be submitted to torture testing any
10 longer. There is no reason to see how long the orchardists will
11 suffer and how extensive their sufferance need be. The Commission
12 and the Department have the statutory and administrative authority
13 now to take steps to insure further protection of the fruit growing
14 industry. The petitioner asks that such authority be implemented
15 forthwith to provide the protection requested in this petition.
16 No sensible retort can be made by Martin Marietta when it is told
17 to do what it can do to protect the public.

18 NOW, THEREFORE, PETITIONER REQUESTS:

19 1. The Commission again find that the fruit growing
20 area in The Dalles, Oregon, near the Martin Marietta Aluminum, Inc.
21 primary reduction plant is a special problem area.

22 2. The Commission direct the Department to and the
23 Department require the more restrictive emission limits requested
24 in this petition.

25 3. The Commission direct the Department to and the
26 Department take the necessary administrative steps to implement

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1 and enforce those more restrictive limits adopted in accordance
2 with this petition.

3 4. The Commission direct the Department to and the
4 Department establish a schedule of compliance for the Martin Marietta
5 Aluminum, Inc. primary aluminum reduction plant at The Dalles,
6 Oregon, which shall require full compliance by June 1, 1974, a
7 period which will have exceeded the 180 days following the adoption
8 of the amended regulations by this Commission on November 26, 1973.
9

10 Respectfully submitted,

11 WASCO COUNTY FRUIT AND PRODUCE LEAGUE
12 THE DALLES, OREGON

13 By

14 TOOZE KERR PETERSON MARSHALL & SHENKER

15
16 BY 
17

18 Robert M. Kerr

19 Of Counsel for Wasco County Fruit and
20 Produce League
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Hilda B. Baar.

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We both, Mrs. Powell and myself, are Board-members of the Goose-Hallow Foothill League, and ~~am~~ ^{am} representing this League here today. I have, in both hearings, the D.E.Q. held in Portland, represented this League. Here are copies of these statements, made at this meetings, though copies were left with the D.E.Q.

At the first meeting, when the D.E.Q. presented the standards, they have arrived at, after working about 14 months of extended scientific work and efforts, we all, in our League, as well as all the other neighborhood Associations present, supported wholeheartedly the data and figures, the D.E.Q. came up with.

But than the State Highway Division, behind closed doors, met twice with Mr. Cliff Sroka, who has left the Department since. Later Mr. Baldwin met with Mr. John Hector, in the presence of members of the Oregon Environmental Council. Mr. John Hector, at that time was the head and only member of the SOUND and NOISE DEP.

Mr. John Hector, a very nice Gentleman, and, being the Gentleman he is was no match for the shrewdness and pressure politics of Mr. Baldwin, from the Federal Department of Transportation, as he calls himself now; Mr. Baldwin got far too much out of this meetings.

This is the reason for my being here today, in an open meeting, not excluded from the public. I would like to ask the Commission, after reading my statement from the second public hearing, where I protested especially 3 basic points in the standards, to have the permission, and if possible, in the presence of at least one member of this Commission, to meet with Mr. Hector, to present my point of views to him. I promise, I will do it in a much softer way, to push back some of the big concessions, Mr. Baldwin achieved, and therefore I speak only of road standards. The State Highway Division should work it out with the Automotive Industries, their allies, for whom they build the roads. I am speaking here for the health and welfare of the people, and for no special interest groups.

The 3 points I want to improved from the last standards are:

1. To cut in half the difference of 8 DBA they achieved from the original 55 DBA to 63 DBA. This is too high for roads through residential areas. Noise levels should include also existing roads, they can be improved. Seattle is covering up existing roads now.

2. To put back into the standards again the night-time standards; now under the revised standards these figures are for day-time, and in force only for roads near parks and quiet places, where people seek recreation. I think sleep at night is even more important, and the high peaks, that originally were in the standards, should be left in. Just a few big, loud trucks with double bottoms during the night, are certainly enough to ruin the sleep for the whole night. The old figures are very moderate and conservative, they are 10 DBA above the standards recommended in Germany and Russia.

3. Extend the allowable DBA from 25 feet to 50 feet from an inhabited building to the noisiest point of the road. Before the revised standards it was measured from the property line, though this might have been a whole block away from the building.

Though the State Highway Division has a noise-expert, Mr. Dave Crowell, he was not allowed to speak at either hearing; he was present and was permitted only, to listen to the noise Mr. Baldwin himself made at the first hearing and Mr. Klaboe at the second one.. Mr. Al Double, the first noise expert, the State Highway Division had, left after less than one year of service. His recommendations for the improvement of the tunnel-noise, inside and at the entrances and exits, to reduce the noise, were not followed. The letter he wrote to me about the proposed improvements, was intercepted by his superiors. The same thing happened to Mr. Crowell.

The demands of Mr. Baldwin were not at all supported by experts. The Oregon Environmental Council had 3 experts speaking at the hearing, besides Mrs. Janette Egger, the Chairman of that Council, and an audiologist herself. The speakers were: Dr. Marshal, an Environmental Psychologist for the Ph.D. Programm at PSU., Dr. Ventura, a clinical audiologist from Kaiser Hospital and expert on speech perceptibility and hearing and Miss Francis Finney, about sleep in terms of children. Of course, Dr. Paul Herman from the University of Oregon Medical School, and presently employed by the City, was also there.

None of the speakers, representatives of the Trucking Associations, motorcycle clubs or other noise producing enterprises had any economists or experts of any kind, speaking and testifying, to substantiate their objections and demands. I do not believe they could find any scientist, who could nor would be able to testify and prove that noise is harmless, does not hurt severely human health and life, physically or mentally, or is too expensive to conform to the noise standards. We, the people spend billions of dollars for medical research and treatments of diseases individually, as well as with our tax-dollars. They should spend some funds on their equipments to prevent these diseases. One grain of prevention is better than a pound of cure.

P.S. I was awakened this very morning before 5:a.m. again by trucks on the freeway. Without noise standards for the night, this revised standards would be a farce.

Hilda B. Baar
Hilda B. Baar.

One clear example of what we are saying may be seen in comparing what has been done here to the demands of George Baldwin of the Highway Division in October, 1973. Mr. Baldwin lives on Hessler Heights in the airy reaches of Portland where I doubt he will ever have a noise problem since freeways are rarely sited near Council Crest. The oral testimony given October 30, 1973 was:

1. Mr. Baldwin wanted the regulations changed to move the noise sensitive property line to the land use site --

This has been done; it is now 25' from the house,

2. Mr. Baldwin wanted the L-Max and L-1 removed. These are the noisiest sounds up to 10% of an hour. This has been done.
3. Mr. Baldwin testified he wanted the L-10, L-50 and L-90 increased to "attainable levels". They were attainable in October, but nevertheless have been raised 8 dB from the old L-10 at 55 to the new L-10 at 63 dBA. To illustrate the impact of an 8 dBA increase imagine having 100 cars passing your house over a period of an hour and the noise therefrom. Remove 20 cars and substitute 20 diesel trucks. The difference in loudness is 8 dBA.
4. Mr. Baldwin wanted the regulations not to be retroactively applied. He got this. They now cover only new roads over 15,000 vehicles/day and only where the projections -- not the actual noise but the drawing board estimates of capacity show the noise over the maximum limits. *in Seattle they now cover partly existing roads*
5. He also wanted to defer action until the DEQ, the DOT

and representatives from cities and counties sat down together to "determine technically and financially feasible regulations". Between October, 1973 and now, *Any Roofing Co.* those requested meetings were held; because the OEC planted itself squarely in the DEQ's doorway, we were invited to two of these sessions and observed first hand the kind of pressure these ^{NOISE CONTROL} men -- new to the tasks and engineers, not politicians, have had to endure.

In summary, the four changes in the regulations requested by Mr. Baldwin in oral testimony for the Highway Division last October have been granted along with his desire for "closeted sessions". In addition -- not requested but appeasing the Highway Division nonetheless -- is the alteration in the definition of Noise Sensitive Property. It now omits the phrase, "outdoor speech communication appropriate for residential use". The definition is related only to sleep with a presumed loss of $> 15\text{dBA}$ through the structure -- much too high a factor as our studies indicate.

We ask that the DEQ note those comments still relevant in our letters responding to earlier drafts to the present proposed regulations (Dec. 17, 1973 - Roadways; Dec. 26, 1973 - Industry and Commerce). We further ask that all testimony given today by proponents of more protective noise laws be weighed on the same scale that weighed Mr. Baldwin's requests. And we further urge that the final regulations be presented to the EQC only after adequate public notice and an opportunity to review and assess the result has been given. Thank you.

Jeanette R. Egger
 Jeanette R. Egger
 Chairwoman THE OREGON ENVIRONMENTAL COUNCIL

1553 S. W. UPPER HALL STREET
PORTLAND, OREGON 97201

*My statement
At the 2. hearing of J. E. Qm.
on March 4, 1974*

My name is Hilda B. Baar and I reside at 1553 S.W. Upper Hall St. Portland, Oregon.

I am speaking here today for the Goose Hollow Foothill League, as well as for myself. Our whole area is one of the most noise-polluted areas in the city. Especially my house has the most unfortunate setting between the tunnels and the foothill freeway, this freeway, being used by large and heavy diesel trucks with double bottoms and sometimes tripple bottoms.

I have last time, outlined the very grave consequences of noise on our physical and mental health. The scientific knowledge about this crippling menace is rather new, but this danger not only ruines our health, noise-pollution is also a vicious killer. Sleep is the food for nerves, and interruption of sleep, interruption of dreams, is the most serious offender to our mental health and the whole nervous system. It produces intolerable stress, that in turn, is the source of great damage to physical health.

The standars for roads in urban areas, the D.E.Q. has worked out, after 14 months of scientific studies, were excellent and protective for the public. But then, the powerful sources of the dollar-hungry Automotive Industry, Oil Companies, as well as big business at large, and, last not least, the very powerful State Highway Division, started to push, and succeeded to push the 55 DBA for roads, ahead to 63 DBA. Quite a jump, even for so powerful an Agency as the State Highway Division. *Mr. Klabe from State Highway Div said the new standards of 63 DBA can only met*
Tom Gilbert, hearing officer *Warning themselves using drastic measures - (copy in?)*
It is a physical law that preasure produces counter-preasure, and we, the people, if we want to survive, have to press back. On January 20. of this year, on "Face the Nation" Hugh Scott, the Minority Leader in the U.S. Senate said, in a much editorialized statement in reference to Watergate: "You can do the wrong thing, if you have the power". The question before us is now: Do the people in the United States have more power, to stop these wrong doings? I think, they have. Whenever I challenged Democracy, it worked, but I had to fight for it. In this case we all, the urban dwellers, have all together to fight for it, and there is no doubt in my mind, that we will succeed, and we shall survive. We have to bring the tolerable level back were it was, or at least near to that desirable point.

D.E.Q. has neglected to come up with some night-time standards for roads in urban areas, where people sleep. They gave night-time levels in quiet areas near parks etc., under Table I, section b) Do these standards also apply to bed rooms? If so, it should be made clear in the text.

I also challenge the distance of 25 feet from the edge of a residence to the source of noise-pollution. Most people have larger gardens; don't they have the right to work in, and enjoy their gardens more than 25 feet from their homes? I think, I am very reasonable, when I ask, to extend the 25 feet to 50 feet.

At the end I like to extend my invitation to representatives of any neighborhood group in existence or to be organized, in a noise-pollution threatened area, to an open-house party at any daytime hour, and also at night, between 2:a.m. and 7:30 a.m. They will listen to the most modern Symphony of noise, with the stage setting provided by the State Highway Division, with all possible devices to amplify the vehicle-noise, as grooves in the road and glazed tiles inside and outside of the tunnels, at the entrance as well as at the exits. All this has been achieved with the hard-earned tax-dollars of the people.

No new highways or freeways should be allowed to be constructed, until the State Highway Division can prove, together with Automotive Industry, on the existing freeways that they are able to bring their roads, especially in urban areas, in line with the accepted standards.

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breath for your right, to escape this horrible torture. Highways and freeway through urban, populated areas, are the torture-chambers of the 20th century.

Russel E Train, Chairman of the Council to Environmental Quality was interviewed on "Meet the Press". He said: "Why single out one source as to be responsible for our air or noise-pollution? The Federal Government, local Government, and Federal and local Agencies are responsible, as well as industries, plus the people that are too complacent about it.

Well, I shall not be complacent about it, neither should you. The people of the United States, that represent the highest tribunal in our democracy. But, I can not do it myself, nor can D.E.Q. do it, without the help of all of us.

At the end a quotation of Dr. Samuel Rosen, the famous Otologist from the Mt. Sinai Medical School in New York:

"You might forgive noise, but your body never will.