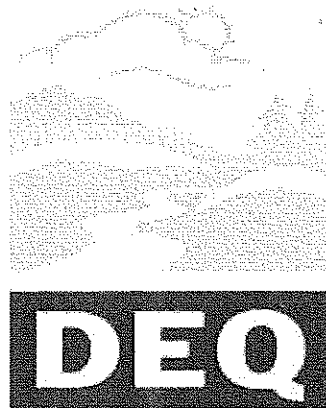


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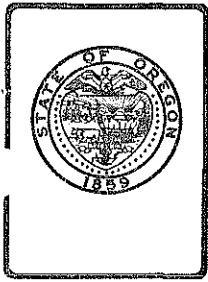
**OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS**



State of Oregon
**Department of
Environmental
Quality**

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Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

ENVIRONMENTAL QUALITY COMMISSION MEETING

February 23, 1979

Room 602, Multnomah County Courthouse
1021 S. W. Fourth Avenue
Portland, Oregon

AGENDA

- 9:00 am A. Minutes of the December 15, 1978, EQC Meeting
B. Monthly Activity Report for January 1979
C. Tax Credit Applications

PUBLIC FORUM - Opportunity for any citizen to give a brief oral or written presentation on any environmental topic of concern. If appropriate, the Department will respond to issues in writing or at a subsequent meeting. The Commission reserves the right to discontinue this forum after a reasonable time if an unduly large number of speakers wish to appear.

PUBLIC HEARING AUTHORIZATIONS (authorizes future public hearings)

- D. Request for authorization to conduct a public hearing on proposed rules governing contested case procedure and civil penalty assessment.
E. Request for authorization to conduct a public hearing on the matter of whether to modify the order prohibiting or limiting installation of subsurface sewage disposal systems within the River Road-Santa Clara area, Lane County.
F. Request for authorization to conduct a public hearing on proposed changes to Indirect Source Rules (OAR 340-20-100 through 20-135).
G. Request for authorization to conduct a public hearing on proposed amendment to rules for open burning (OAR 340-23-025 through 23-050).

ACTION ITEMS

- ~~9:45 am H. Subsurface Sewage Disposal - Appeal of a variance denial for Mr. Gene T. McCurley, Jackson County.~~ DELETED
- I. Open Burning Dump - Request by Clatsop County disposal sites for extension of variances from rules prohibiting open burning dumps (OAR 340-61-040(2)(c)).

(MORE)



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EQC MEETING AGENDA (continued)
February 23, 1979

- J. City of Gearhart - Request for permanent amendment of Clatsop Plains subsurface sewage system installation moratorium (OAR 340-71-020(7)).
- K. City of Seaside - Proposed amendment to Stipulation and Final Order number WQ-SNCR-77-159, Amendment number 2.
- L. Champion Building Products - Request for approval of Stipulated Consent Order for Champion Building Products' wet hardboard plant at Dee, Oregon.
- M. City of LaGrande - Request for approval of a Stipulated Consent Order.

10:30 am N. Sunrise Village, Bend - Request for variance from OAR 340-71-020(4).

OTHER INTEREST ITEMS (requiring no action)

11:00 am O. Noise Control Rules - Discussion of proposed noise control rules for airports.

P. Motor Vehicle Inspection - Report on Motor Vehicle Emissions Inspection Program, 1977-1978.

1:30 pm Q. Field Burning - Discussion of submission of final field burning rules to U. S. Environmental Protection Agency (EPA).

Because of uncertain time spans involved, the Commission reserves the right to deal with any item at any time in the meeting, except items H, N, O, and Q. Anyone wishing to be heard on an agenda item that doesn't have a designated time on the agenda should be at the meeting when it commences to be certain they don't miss the agenda item.

The Commission will breakfast (7:30 am) at the Standard Plaza Building, Conference Room A, 1100 S. W. Sixth; and lunch in Room 511, DEQ Headquarters, 522 S. W. Fifth Avenue, Portland.

MINUTES OF THE ONE HUNDRED SIXTH MEETING
OF THE
OREGON ENVIRONMENTAL QUALITY COMMISSION

February 23, 1979

On Friday, February 23, 1979, the one hundred sixth meeting of the Oregon Environmental Quality Commission convened in Room 602 Of the Multnomah County Courthouse, 1021 S. W. Fourth Avenue, Portland, Oregon.

Present were Commission members: Mr. Joe B. Richards, Chairman; Mr. Ronald Somers; Mrs. Jacklyn Hallock; and Mr. Albert Densmore. Dr. Grace Phinney, Vice-Chairman, was absent. Present on behalf of the Department were its Director William H. Young, and several members of the Department staff.

Staff reports presented at this meeting, which contain the Director's recommendations mentioned in these minutes, are on file in the Director's Office of the Department of Environmental Quality, 522 S. W. Fifth Avenue, Portland, Oregon.

AGENDA ITEM A - MINUTES OF THE DECEMBER 15, 1978 EQC MEETING

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that the minutes of the December 15, 1978 EQC meeting be approved as presented. -

AGENDA ITEM B - MONTHLY ACTIVITY REPORT FOR JANUARY 1979

It was MOVED by Commissioner Somers, seconded by Commissioner Densmore and carried unanimously that the Monthly Activity Report for January 1979 be approved as presented.

AGENDA ITEM C - TAX CREDIT APPLICATIONS

Mr. Ralph Nordland, Stimson Lumber, appeared regarding the Director's recommendation to approve Preliminary Certification for Tax Credit for their bark dryer. He said this was only a part of the facility and they appreciated the Director granting Preliminary Certification for that part and wanted to make the Commission aware that the rest of the project would come up at a later date.

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that the Director's Recommendation as follows be approved:

1. Issue Pollution Control Facility Certificates to applications T-1034 (Willamette Industries, Inc.) and T-1040 (Tektronix, Inc.)
2. Reissue Pollution Control Facility Certificates 659, 726 and 941 to reflect change of ownership from Georgia-Pacific Corporation to Husky Industries, Inc.
3. Be informed of the Director's intention to issue Preliminary Certification for Tax Credit to the Stimson Lumber Company for their bark dryer.

PUBLIC FORUM

No one wished to appear on any subject.

PUBLIC HEARING AUTHORIZATIONS

AGENDA ITEM D - REQUEST FOR AUTHORIZATION TO CONDUCT A PUBLIC HEARING ON PROPOSED RULES GOVERNING CONTESTED CASE PROCEDURE AND CIVIL PENALTY ASSESSMENT

AGENDA ITEM F - REQUEST FOR AUTHORIZATION TO CONDUCT A PUBLIC HEARING ON PROPOSED CHANGES TO INDIRECT SOURCE RULES (OAR 340-20-100 THROUGH 20-135)

AGENDA ITEM G - REQUEST FOR AUTHORIZATION TO CONDUCT A PUBLIC HEARING ON PROPOSED AMENDMENT TO RULES FOR OPEN BURNING (OAR 340-23-025 through 23-050)

Mr. Jan Sokol, speaking on Item F, appeared representing OSPIRG. He said the Indirect Source Program directly addressed automobile traffic in Metropolitan Portland. He said the automobile had been identified as the greatest contributor to particulate problems in the Portland airshed. The proposed rule, Mr. Sokol continued, should go to the Portland Air Quality Advisory Committee for discussion prior to the holding of a hearing.

In regard to Item G, Mr. Sokol (speaking as the Vice-Chairman of the Portland AQMA Committee) wanted to make clear that the Committee's recommendations weren't limited to those they made in a letter which was included in the staff report. They wished all alternatives to be investigated, he said. In response to Chairman Richards, Mr. Sokol said the Committee was not opposed to holding a public hearing on the open burning rules at this time.

Commissioner Hallock asked how much time the Advisory Committee would need on the Indirect Source Rule revision. Mr. Sokol replied they were waiting for the final study from the Oregon Graduate Center and assumed that they might be able to submit something to the Commission within one month.

Ms. Melinda Renstrom, appeared representing the Oregon Environmental Council in regard to Item F. Ms. Renstrom said she was also a member of the Portland Air Quality Advisory Committee and was speaking for Steve Lockwood, the Chairman of the Committee. She said they were opposed to Item F on the Indirect Source Rule going to hearing at this time. She said the Committee was interested in this program and would not like to see it abandoned at this time.

Commissioner Hallock asked if the hearing on the Indirect Source Rule could be postponed for 60 days to give the Advisory Committee a chance to study the problem. Director Young replied that if the Commission was reluctant to authorize a hearing at this time, he would prefer the staff be instructed to bring this matter back at the next meeting with whatever input the Advisory Committee would have in that period of time.

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that public hearings be authorized on proposed rules governing contested case procedures and civil penalty assessment and on the proposed amendment to rules for open burning (OAR 340-25-025).

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that Item F, a request for authorization to hold a public hearing on proposed changes to the Indirect Source Rules, be postponed until the Commission's next meeting.

AGENDA ITEM E - REQUEST FOR AUTHORIZATION TO CONDUCT A PUBLIC HEARING ON THE MATTER OF WHETHER TO MODIFY THE ORDER PROHIBITING OR LIMITING INSTALLATION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS WITHIN THE RIVER ROAD-SANTA CLARA AREA OF LANE COUNTY

Mr. John Borden, Willamette Valley Regional Manager, said the purpose of this item was to determine whether or not to authorize a public hearing on modifying the order prohibiting or limiting installation of subsurface sewage disposal systems in the River Road-Santa Clara area of Lane County.

Mr. Roy Burns, Lane County, presented a slide show demonstrating the progress of the groundwater study in this area.

Ms. Vora E. Heintz, spoke in favor of holding public hearings regarding this matter. She also presented several letters from various persons favoring the holding of public hearings. Ms. Heintz's written statement and the letters she presented are made a part of the Commission's record on this matter.

Ms. Bonnie Lindsay, requested that public hearings be held on this matter.

Ms. Dian Crumpacker, also requested that public hearings be held in the Eugene area on this matter.

Mr. Don Cole, asked that the public hearings be held as soon as possible in the Eugene area. He said he was concerned that with removal of the moratorium hundreds of septic tank permits would be issued unwisely.

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that the following Director's Recommendation be approved and that public hearings be authorized to be held in Eugene on March 28 and March 29, 1979.

Director's Recommendation

Based on the summation in the staff report, the Director recommends that:

1. The River Road-Santa Clara moratorium under Oregon Administrative Rule 340-71-020 be continued until March 1980, at which time sufficient data and analysis will be available to predict groundwater quality, including a relationship to growth.
2. The Department staff be directed to continue working with staff of the Metropolitan Wastewater Management Commission, Lane County, the cities of Eugene and Springfield, and the Lane County Local Government Boundary Commission to obtain development and implementation of a plan for preventing and reducing groundwater pollution in the River Road-Santa Clara area.

3. A public hearing be authorized and the Department staff be directed to provide the Commission with recommendations by March 1980 on whether to modify the "Order Prohibiting or Limiting Installation of Subsurface Sewage Disposal Systems within the River Road-Santa Clara Area, Lane County."

AGENDA ITEM N - SUNRISE VILLAGE, BEND - REQUEST FOR VARIANCE FROM OAR 340-71-020(4)

Mr. Richard Nichols, Central Region Manager, presented the following Summation and Director's Recommendation from the staff report.

Summation

The Commission may grant a variance to OAR 340-71-020(4). However, the Department believes a sewer agreement between the City of Bend and Sunrise Village is the most desirable form of municipal control. Sunrise Village was aware of the need for municipal control and was discouraged, but not prevented from forming a sanitary district. The City of Bend has expressed to Department staff a willingness to enter into a sewer agreement. Formation of a sanitary district is also possible. The homeowners association proposed by Sunrise Village, even with a \$25,000 performance bond and a proposed County maintenance agreement, is not equivalent to a municipality as defined by ORS 454.010(3).

Director's Recommendation

Based upon the summation in the staff report, it is recommended that the request by Sunrise Village for a variance from subsurface sewage disposal system rule OAR 340-71-020(4) be denied.

Mr. Nichols presented letters from the City of Bend and Deschutes County concerning this matter. These letters are made a part of the Commission's record on this matter. The letter from the City of Bend indicated a willingness to work with the Developers of Sunrise Village and the City Commission's belief that this property should be included in a regional solution to the sewer problem. The letter from the Deschutes County Board of Commissioners asked that the request for a variance be denied Sunrise Village.

Mr. Tim Ward, developer of Sunrise Village, said that the letters presented by Mr. Nichols caught him off-guard. He expressed the opinion that the City and County would not have known they were asking for a variance unless Mr. Nichols had told them and asked for the letters.

Mr. Ward said that due to time delays they have lost their market for the land and interest on their loans was costing more than \$70,000 per month.

Mr. Ward said that in order to get a PUD designation they included providing sewer and water service into their full-service development. He said they had all the approvals for a community sewer system and that those approvals had come within the past two years. The law, Mr. Ward continued, made these approvals binding on local and state governments.

Mr. Ward said five homeowners associations, such as the one they had, existed in the Bend area. Just downstream from their proposed development, Mr. Ward said, Mt. Bachelor Village had a community sewer system. He said that the experience of these community sewer systems proved them to be functionally superior to sanitation districts.

Commissioner Somers asked what the recourse would be if the system failed, other than collecting on the \$25,000 bond. Mr. Ward replied that because of the vested interest the persons in the development would have, they could assess themselves for costs. He said they wanted the system to work so they would not lose the \$25,000.

Chairman Richards asked if there was a jurisdiction that would oppose Sunrise Village forming a sanitary district at this time. Mr. Nichols replied that he did not know of any, however the Deschutes County Commissioners were more inclined to try to get a City agreement before a sanitary district was formed.

Some discussion followed among Commission members regarding the feasibility of granting the variance for a specific period of time with the understanding that unless a sanitary district was formed in that time, the system would be abandoned. Mr. Young said he believed that it would be a mistake for the Commission to proceed on that assumption.

Chairman Richards said he felt that both the Department and the developer had acted in good faith on this matter, and if granting the variance under the condition that a sanitary district be formed within a specific period of time was a risk to the developer, then the developer need not take advantage of the variance.

Mr. Young said the Department was concerned that the system be installed within some management structure and that it be made clear the nature of the service that would ultimately be required in the area. The reason for his recommendation to not approve the variance, he said, was that he did not think the Department was well served by individually owned systems with multiple ownership and use of the properties.

It was MOVED by Commissioner Somers, seconded by Commissioner Densmore and carried unanimously that a variance be granted to Sunrise Village, Inc. for a period not to exceed six months and as a condition of granting this variance, any property that is sold would have deed restrictions placed on it notifying prospective buyers that a system had been approved which must be taken over by a sanitary district within a six month period or the system would have to be abandoned.

AGENDA ITEM J - CITY OF GEARHART - REQUEST FOR PERMANENT AMENDMENT OF CLATSOP PLAINS SUBSURFACE SEWAGE SYSTEM INSTALLATION MORATORIUM (OAR 340-71-020(7))

AGENDA ITEM K - CITY OF SEASIDE - PROPOSED AMENDMENT TO STIPULATION AND FINAL ORDER NUMBER WQ-SNCR-77-159, AMENDMENT NUMBER 2

AGENDA ITEM L - CHAMPION BUILDING PRODUCTS - REQUEST FOR APPROVAL OF STIPULATED CONSENT ORDER FOR CHAMPION BUILDING PRODUCTS' WET HARDBOARD PLANT AT DEE, OREGON

AGENDA ITEM M - CITY OF LAGRANDE - REQUEST FOR APPROVAL OF A STIPULATED
CONSENT ORDER

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that the following Director's Recommendations in regard to the above agenda items be approved.

Agenda Item J - Director's Recommendation

It is the Director's recommendation that, based on the summation in the staff report, the Commission take action as follows:

1. Adopt as a permanent rule Attachment A of the Hearing Report, such rule to be filed with Legislative Counsel and the Secretary of State before its expiration as a temporary rule.
2. Adopt as its final State of Need for Rulemaking the Statement of Need incorporated in the staff report, such statement to be filed with the rule as set forth above.

Agenda Item K - Director's Recommendation

Based on the summation in the staff report, it is recommended that the Commission approve Amendment No. 3 (attachment no. 2) to Stipulation and Final Order No. WQ-SNCR-77-159, DEQ v. City of Seaside.

Agenda Item L - Director's Recommendation

Based on the summation in the staff report, it is the Director's Recommendation that the Environmental Quality Commission approve the Stipulated Consent Order for the Champion Building Products Dee Plant. It is also recommended that the Commission direct the Department to impose necessary penalties for failure to comply with the Order.

Agenda Item M - Director's Recommendation

Based upon the summation in the staff report, it is recommended that the Commission approve Stipulation and Final Order No. WQ-SNCR-77-260, DEQ v. City of LaGrande, Union County.

AGENDA ITEM O - NOISE CONTROL RULES - DISCUSSION OF PROPOSED NOISE CONTROL
RULES FOR AIRPORTS

Mr. John Hector of the Department's Noise Control Section, said that at the last meeting, the staff was directed to prepare proposed noise regulations for airports. These proposed rules, he said, had been distributed to airport proprietors and other interested parties throughout the state for their review and comment. In addition, he said, the Department met informally with staff from the City of Portland and the Port of Portland.

Mr. Hector said they received letters from four families living near the Portland Airport expressing concern about noise. In addition, he said, they received comments from the City of Portland, the State Aeronautics Division, and the Federal Aviation Administration.

Ms. Melinda Renstrom, Oregon Environmental Council, said they were pleased with the staff recommendations on this matter and they felt the draft regulations were excellent. She said it was imperative that these regulations go to public hearing soon. Due to the air traffic controllers designating specific flight paths for safety reasons, she continued, the proposed regulations would be more workable and enforceable.

Mr. Clifford Hudsick, Port of Portland, said they felt that to hold informational hearings right away would be premature because there were several public policy and technical questions which needed clarification, direction, or revision for clarity in order to reasonably inform the public. He recommended a 30 day "breathing period" to resolve some of these differences. A written presentation from the Port of Portland is made a part of the Commission's record on this matter.

Mr. Richard Daniels, Multnomah County Department of Environmental Services, said they were concerned about the effect of noise from the Portland International Airport on the residents around it. The County Commissioners requested, he said that DEQ as the lead agency coordinate the development of a noise abatement program for Portland International Airport. He said that if the proposed regulations were adopted the county would continue to work with all concerned parties to improve the present situation.

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that the Department be authorized to undertake discussions and hold informational hearings with affected parties and return within 90 days with recommendations for action, be approved.

AGENDA ITEM I - REQUEST BY CLATSOP COUNTY DISPOSAL SITES FOR EXTENSION OF VARIANCES FROM RULES PROHIBITING OPEN BURNING DUMPS (OAR 340-61-040(2)(c))

It was MOVED by Commissioner Somers, seconded by Commissioner Densmore and carried unanimously that the following Director's Recommendation be approved.

Director's Recommendation

Based upon the findings in the summation of the staff report, the Director recommends that:

1. Variances be granted to expire on March 1, 1980 for Seaside, Cannon Beach and Elsie landfills in Clatsop County.
2. Disposal sites be closed prior to expiration date of variance if a practical alternative method of disposal is available.
3. The EQC find the variance requests meet the intent of ORS 459.225(3)(c) in that strict compliance would result in closing of the disposal sites and no alternative facility or alternative method of solid waste management is available.

AGENDA ITEM O - DISCUSSION OF SUBMISSION OF FINAL FIELD BURNING RULES TO
U. S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

Mr. Scott Freeburn of the Department's Air Quality Division, said that at the time the field burning rules were adopted in December, the staff was directed to submit them to EPA and to ask EPA to withhold action on them until the Department could pursue some means of restricting the submittal of the rules and minimize the adoption of those rules into the State Implementation Plan (SIP). He said the staff and others were concerned about the need to have an acreage limitation included in the SIP.

Mr. Freeburn said that something needed to be submitted to EPA in order to revise the 50,000 acre limitation currently in the SIP to the 180,000 acres provided for in the recently adopted rules. He said that legislation was now pending which would have no acreage limitation and disallow the field burning rules to be submitted in the SIP. Also, Mr. Freeburn said, the Eugene-Springfield AQMA SIP revision submittal had been postponed until sometime after the 1979 field burning season and the final report of the field burning and slash burning study are also not expected to be available early enough to become part of a SIP revision.

Mr. Freeburn then presented the following Director's Recommendation from the staff report.

Director's Recommendation

Based upon the information set forth in pages one through four of the Director's February 23, 1979 staff report to the Commission, it is recommended that the Environmental Quality Commission instruct the staff to submit the rules previously adopted and set forth in Attachment 1 to the Director's Staff Report of December 15, 1978, to the Environmental Protection Agency and request that these submitted rules be approved as a one-year interim strategy for the control of open field burning during 1979.

Chairman Richards said he had talked to EPA Region X's Director, Donald Dubois to see if EPA would disapprove a one-year control strategy. In effect, Chairman Richards said, Mr. Dubois indicated he would prefer a SIP revision and that the last one-year control strategy was approved to solve a special problem. However, he said, EPA would consider a second one-year control strategy.

Chairman Richards said Mr. Dubois through the passage of prospective legislation to not limit the acreage would be a large problem for EPA because it would not give enough guidelines by which EPA could determine whether or not the source was being controlled.

Mr. Bob Elfers, City of Eugene, said the City opposed the staff proposal for another one-year interim control strategy. He said they were concerned that the staff proposal was more political than technical.

Mr. Elfers said their concern was the same as EPA in that they wanted to have something in the SIP that could be enforced. EPA had indicated to the City of Eugene, he said, that they did not see how the field burning rules could be enforced unless there was some reference to acreage limitations.

Chairman Richards said he knew that a SIP amendment would be the most acceptable to the City, however it sounded as if the granting of an interim control strategy would not give the City what it wanted in terms of an acreage control for the coming burning season. Mr. Elfers replied that although they had some reservations about the recently adopted rules, there was a feeling of semi-permanence to those rules. He said that the staff proposal now before the Commission went back to a more temporary situation.

Mr. Elfers questioned whether or not a state agency should be responding to potential legislative changes. He said the bill was still in Committee and he felt it would probably never become law.

Mr. Elfers said the proposal before the Commission would invite potential litigation and they felt strongly that if the Commission accepted the proposal the City would have no alternative but to petition EPA to reject another one-year control strategy on the basis that there was no evidence which indicated the need for one.

Mr. Elfers urged that the Commission reject the staff recommendation and submit the 1979-1980 field burning rules as part of a partial revision to the SIP.

It was MOVED by Commissioner Somers, seconded by Commissioner Hallock and carried unanimously that the Director's Recommendation be adopted.

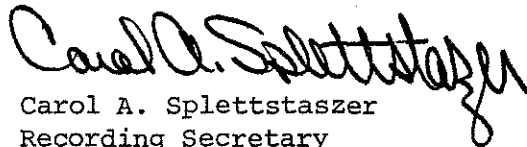
AGENDA ITEM P - REPORT ON MOTOR VEHICLE EMISSIONS INSPECTION PROGRAM, 1977-78

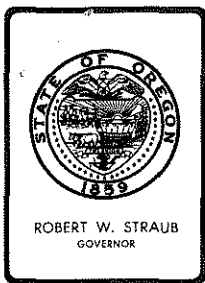
Mr. William Jasper of the Motor Vehicle Inspection Program, presented the Commission with the vehicle emission inspection program report for 1977-78 as a means to update the Commission on the activities of the Vehicle Inspection Program.

This report was presented for the Commission's information and no action was necessary.

There being no further business, the meeting was adjourned.

Respectfully submitted,


Carol A. Splettstaszer
Recording Secretary



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item B, February 23, 1979, EQC Meeting

January Program Activity Report

Discussion

Attached is the January Program Activity Report.

ORS 468.325 provides for Commission approval or disapproval of plans and specifications for construction of air contaminant sources.

Water and Solid Waste facility plans and specifications approvals or disapprovals and issuance, denials, modifications and revocations of permits are prescribed by statutes to be functions of the Department, subject to appeal to the Commission.

The purposes of this report are:

- 1) to provide information to the Commission regarding the status of reported program activities and a historical record of project plan and permit actions;
- 2) to obtain confirming approval from the Commission on actions taken by the Department relative to air contamination source plans and specifications; and
- 3) to provide a log on the status of DEQ contested cases.

Recommendation

It is the Director's Recommendation that the Commission take notice of the reported program activities and contested cases, giving confirming approval to the air contaminant source plans and specifications listed on page 2 of the report.

Michael Downs
WILLIAM H. YOUNG

M. Downs: ahe
229-6485
02-12-79



Contains
Recycled
Materials

DEPARTMENT OF ENVIRONMENTAL QUALITY

Monthly Activity Report

January, 1979

Month

TABLE OF CONTENTS

	<u>Page</u>
<u>Air Quality Division</u>	
16 . . . Plan Actions Completed - Summary	1
32 . . . Plan Actions Pending - Summary	1
Plan Actions Completed - Listing	2
21 . . . Permit Actions Completed - Summary	4
142 . . . Permit Actions Pending - Summary	4
Permit Actions Completed - Listing	5
<u>Water Quality Division</u>	
66 . . . Plan Actions Completed - Summary	1
22 . . . Plan Actions Pending - Summary	1
Plan Actions Completed - Listing	8
23 . . . Permit Actions Completed - Summary	11
142 . . . Permit Actions Pending - Summary	11
Permit Actions Completed - Listing	12
<u>Solid Wastes Management Division</u>	
2 . . . Plan Actions Completed - Summary	1
2 . . . Plan Actions Pending - Summary	1
Plan Actions Completed - Listing	14
23 . . . Permit Actions Completed - Summary	15
52 . . . Permit Actions Pending - Summary	15
Permit Actions Completed - Listing	16
<u>Hearings Section</u>	
DEQ Contested Case Log	18

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality, Solid Waste,
Water Quality Divisions
(Reporting Unit)

January, 1979
(Month and Year)

SUMMARY OF PLAN ACTIONS

	Plans Received		Plans Approved		Plans Disapproved		Plans Pending
	Month	Fis.Yr.	Month	Fis.Yr.	Month	Fis.Yr.	
<u>Air</u>							
Direct Sources	<u>14</u>	<u>118</u>	<u>16</u>	<u>123</u>		<u>2</u>	<u>32</u>
Total	<u>14</u>	<u>118</u>	<u>16</u>	<u>123</u>	<u>0</u>	<u>2</u>	<u>32</u>
<u>Water</u>							
Municipal	<u>58</u>	<u>783</u>	<u>66</u>	<u>745</u>			<u>22</u>
Industrial	<u>6</u>	<u>73</u>	<u>11</u>	<u>72</u>			<u>18</u>
Total	<u>64</u>	<u>856</u>	<u>77</u>	<u>817</u>	<u>0</u>	<u>0</u>	<u>40</u>
<u>Solid Waste</u>							
General Refuse	<u>2</u>	<u>13</u>	<u>2</u>	<u>14</u>		<u>2</u>	<u>2</u>
Demolition		<u>3</u>					<u>1</u>
Industrial	<u>3</u>	<u>13</u>		<u>16</u>			<u>4</u>
Sludge		<u>2</u>		<u>2</u>			<u>1</u>
Total	<u>5</u>	<u>31</u>	<u>2</u>	<u>32</u>	<u>0</u>	<u>2</u>	<u>8</u>
<u>Hazardous Wastes</u>							
<u>GRAND TOTAL</u>	<u>83</u>	<u>1,005</u>	<u>95</u>	<u>972</u>	<u>0</u>	<u>4</u>	<u>80</u>

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

January, 1979
(Month and Year)

PLAN ACTIONS COMPLETED - 16

* * County * * * *	* * Name of Source/Project * * /Site and Type of Same * *	* * Date * * Received * *	* * Action * * * *
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Direct Stationary Sources

Marion (NC 1223)	Brookman Cast, Inc. Steel casting plant	12/19/78	Approved
Coos (NC 1241)	Coos County Incinerator	1/4/79	Approved
Klamath (NC 1247)	Weyerhaeuser Company Lumber sander to hardboard plant	12/15/78	Approved
Douglas (NC 1268)	Champion Internation Corp. Veneer Burley Scrubbers (4)	11/3/78	Approved
Baker (NC 1271)	Ellingson Lumber Company Pave log deck	12/7/78	Approved
Portable (NC 1272)	Roy L. Houck Constr. Co. Baghouse	1/4/79	Approved
Harney (NC 1286)	Edward Hines Lumber Co. Veneer scrubbers & dryer	12/28/78	Approved
Douglas (NC 1288)	Roseburg Lumber Co., Roseburg Wellons H. F. boiler	12/22/78	Approved
Douglas (NC 1289)	Roseburg Lumber Co., Dixonville Wellons H. F. boiler	12/15/78	Approved
Douglas (NC 1294)	Mt. Mazama Plywood Replacement baghouse	12/27/78	Approved
Hood River (1295)	Mt. View Orchards Four electric orchard fans	12/22/78	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

January, 1979
(Month and Year)

PLAN ACTIONS COMPLETED - 16, cont'd

* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
County	Name of Source/Project /Site and Type of Same	Date Received	Action	

Direct Stationary Sources (cont.)

Linn (NC 1298)	Publishers Paper Co., Sweet Home Add a cyclone to present system	12/27/78	Approved
Linn (NC 1299)	Teledyne Wah Chang Albany Convert to oil fired boiler	1/10/79	Approved
Clackamas (NC 1301)	Publishers Paper Co. Recovery furnace controls	12/28/78	Approved
Linn (NC 1306)	Wilcos Feed & Seed Inc. Add 2 cyclones	1/5/79	Approved
Jackson (NC 1311)	Boise Cascade Corp. Venturi Rod Scrubber	1/23/79	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

January, 1979
(Month and Year)

SUMMARY OF AIR PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sources Under Permits	Sources Reqr'g Permits
	Month	FY	Month	FY			
<u>Direct Sources</u>							
New ¹	2	29	-	23	24		
Existing ²	-	21	8	42	7		
Renewals ³	15	75	2	55	94		
Modifications	5	54	5	69	8		
Total	22	179	15	189	133	1894	1925
<u>Indirect Sources</u>							
New	2*	15	4	20	9		
Existing							
Renewals							
Modifications	-	6	2	6	-		
Total	2	21	6	26	9	110	
<u>GRAND TOTALS</u>	24	200	21	215	142	2004	

Number of Pending Permits

Comments

10	To be drafted by Northwest Region Office
8	To be drafted by Willamette Valley Region Office
23	To be drafted by Southwest Region Office
1	To be drafted by Central Region Office
0	To be drafted by Eastern Region Office
6	To be drafted by Program Operations
3	To be drafted by Program Planning & Development
<u>51</u>	
43	Permits awaiting next public notice
<u>39</u>	Permits awaiting end of 30-day public notice period
82	

*Cascade Highway, Monterey Avenue - Harmony Blvd. omitted from December Report - Final Permit issued 1/23/79.

¹One pending new source was included in the list twice, one entry was removed

²One existing application was previously issued with a different number - the pending application was removed

³One pending renewal was previously issued with a different number - the pending application was removed

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

January, 1979
(Month and Year)

PERMIT ACTIONS COMPLETED - 21

* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
County	Name of Source/Project /Site and Type of Same	Date of Action	Action	

Direct Stationary Sources

Clackamas	Northwest Pipe & Casing Co. 03-2637 (Renewal)	1/2/79	Addendum Issued
Douglas	*Lone Star Minerals, Inc. 10-0066 (Modification)	1/2/79	Addendum Issued
Jackson	Medford Plaza Apts. 15-0127 (Existing)	12/22/79	Permit Issued
Jackson	Bellview School 15-0128 (Existing)	12/22/79	Permit Issued
Jackson	Briscoe School 15-0129 (Existing)	12/22/79	Permit Issued
Jackson	Helman School 15-0130 (Existing)	12/22/79	Permit Issued
Jackson	Lincoln School 15-0131 (Existing)	12/22/79	Permit Issued
Jackson	Walker School 15-0132 (Existing)	12/22/79	Permit Issued
Jackson	Ashland Junior High School 15-0133 (Existing)	12/22/79	Permit Issued
Jackson	Ashland Senior High School 15-0134 (Existing)	12/22/79	Permit Issued
Linn	Duraflake 22-0143 (Renewal)	12/13/79	Permit Issued
Linn	Bohemia, Inc. 22-1001 (Modification)	12/22/79	Permit Issued

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

January, 1979
(Month and Year)

PERMIT ACTIONS COMPLETED - 21, cont'd

* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
County	Name of Source/Project /Site and Type of Same	Date of Action	Action	

Direct Stationary Sources

Linn	North Santiam Sand & Gravel, Inc. 22-6309 (Modification)	12/22/79	Permit Issued
Multnomah	*Farmers Union Central Exchange, Inc. 26-2976 (Modification)	12/22/79	Permit Issued

Portable Sources

Portable	*Johnson Rock Products, Inc. 37-0201 (Modification)	1/2/79	Permit Issued
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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

January, 1979
(Month and Year)

PERMIT ACTIONS COMPLETED - 21, cont'd

* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
County	Name of Source/Project /Site and Type of Same	Date of Action	Action		

Indirect Sources

Marion	S.R. 99E, Pine St. - Academy St., Highway Widening, File No. 29-6023	1/19/79	Final Permit Issued		
Washington	Koll Business Center (Scholls Ferry Road), 1200 spaces, File No. 34-8026	1/19/79	Final Permit Issued		
Marion	Lancaster Mall, 953 spaces, File No. 24-8030	1/2/79	Final Permit Issued		
Washington	Tektronix - Walker Rd. Phase IV, 873 spaces File No. 34-8002	1/17/79	Final Addendum No. 1 to original permit issued		
Washington	Koll Business Center Phase IV Cirrus Drive, 261 additional spaces, File No. 34-8014	1/19/79	Final Addendum No. 1 to original permit issued		
Clackamas	Cascade Highway, Monterey Ave. - Harmony Blvd. Highway Widening, File No. 03-8034	1/23/79	Final Permit Issued		

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION MONTHLY ACTIVITY REPORT

PLAN ACTIONS COMPLETED: 77

MUNICIPAL SOURCES: 66

JANUARY 1979

INNER COUNTY	LOCATION	PROJECT	REVIEWER	DATE REC	DATE OF ACTION	ACTION	DAYS TO COMPLETE
	MULT CO	SUMMERPLACE PH 1	K	1/05/79	1/23/79	PROV APP	18
	REDMOND	PLAT OF HALL	K	1/15/79	1/25/79	PROV APP	10
	LEBANON	15TH - MAPLE	K	1/22/79	1/26/79	PROV APP	04
	BCVSA	EXT NOR OF WILSON	K	1/22/79	1/26/79	PROV APP	04
	GREEN SD	CUNNINGHAM EXT	K	1/12/79	1/29/79	PROV APP	18
	TROUTDALE	ELDON SNYDER FARMS	K	1/15/79	1/30/79	PROV APP	15
	TALENT	SECOND ST EXT	K	1/17/79	1/26/79	PROV APP	09
	FLORENCE	SIUSLAW VIL REV	K	1/17/79	1/26/79	PROV APP	09
	SPRINGFIELD	ROYAL RIDGE	K	1/12/79	1/25/79	PROV APP	13
	USA-TIGARD	COLONY CREEK ESTATES	J	1/11/79	1/26/79	PROV APP	15
	NEWPORT	WATKINS BLOCKS	J	1/05/79	1/24/79	PROV APP	19
	NOR RSBG SD	WAREWOOD PLAZA	K	1/11/79	1/29/79	PROV APP	18
	SPRINGFIELD	MICHELLE EAST	J	1/15/79	1/22/79	PROV APP	07
	ALBANY	SALEM AVE EXTEN SS-78-16	K	12/27/78	1/22/79	PROV APP	26
	REDMOND	HOLAN'S ADDITION REV ADD 1	K	1/27/79	1/30/79	PROV APP	03
	BAKER	COLORADO PLACE	K	1/11/79	1/25/79	PROV APP	14
	BAKER	"K" STREET 17TH-13TH STS	K	1/11/79	1/25/79	PROV APP	14
	BAKER	SECONDARY ST DIST 2-S	K	1/11/79	1/25/79	PROV APP	14
	FLORENCE	15TH - SPRUCE ST	K	1/12/79	1/21/79	PROV APP	10
	ASHLAND	REVISED-PRIM ST	J	1/15/79	1/17/79	PROV APP	02
1	USA-TIGARD	SOUTHERN PACIFIC TRANSP	J	1/11/79	1/25/79	PROV APP	14
8	GRESHAM	BROOKFIELD	J	1/11/79	1/26/79	PROV APP	15
	HUBBARD	WINCHESTER SUBD	J	1/15/79	1/26/79	PROV APP	11
1	MEDFORD	GARNET SUBD	J	1/15/79	1/26/79	PROV APP	11
	SPRINGFIELD	COLT PARK 2ND ADDITION	J	1/15/79	1/22/79	PROV APP	07
	STAYTON	STAYTON INDUSTRIAL PARK	J	1/05/79	1/19/79	PROV APP	14
	REDMOND	UMATILLA VILLA REV SPEC	K	1/15/79	1/17/79	PROV APP	02
	GREEN SAN DST	EXTENSION ON GREEN AVE REV	K	12/26/78	1/16/79	PROV APP	21
	SPRINGFIELD	HENTHORNE HEIGHTS	K	12/27/78	1/17/79	PROV APP	21
	BEND	REV DETAIL SHTS CONT 14	K	12/29/78	1/17/79	PROV APP	19
	GRESHAM	KINDSFATHER'S ADD	K	1/16/79	1/17/79	PROV APP	01
	KLAMATH FALLS	BERKELEY ST EXTEN	K	12/26/78	1/22/79	PROV APP	27
	LAKE OSWEGO	WHISPERING FIRS SUBD	J	1/11/79	1/19/79	PROV APP	08
	SPRINGFIELD	S ST APTS	J	1/12/79	1/22/79	PROV APP	10
	PHOENIX	HOLIDAY ON BEAR CREEK	J	1/15/79	1/17/79	PROV APP	02
	PORTLAND	SW BROADLEAF	K	1/03/79	1/12/79	PROV APP	09
	SCAPPOOSE	4TH ST SEWER	J	1/08/79	1/11/79	PROV APP	03
	SALEM	CHEMAMA TRUNK SEWER	J	1/03/79	1/16/79	PROV APP	13
	SALEM	GREENTREE MOBILE HOME SUBD	J	1/05/79	1/16/79	PROV APP	11
	E SALEM	LANCASTER GREEN	J	1/08/79	1/17/79	PROV APP	09
	USA	MARITA PARK NO 3	J	1/08/79	1/16/79	PROV APP	08
	OAK LODGE SD	KARI RAE ESTATES	J	1/08/79	1/16/79	PROV APP	08
	EAGLE POINT	RACHELLE SUBD	J	1/11/79	1/17/79	PROV APP	06
9	BEND	CONTRACT 23 F A SCRUBBERS	V	12/27/78	1/19/79	PROV APP	23
9	BEND	CONTRACT 12 WATERWELL	V	12/29/78	1/19/79	PROV APP	21
1	HAINES	COLLECTION + STP	V	12/15/78	1/18/79	PROV APP	34
9	BEND	CONTRACT 9 S B GENERATRS	V	12/27/78	1/19/79	PROV APP	23

DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION MONTHLY ACTIVITY REPORT

PLAN ACTIONS COMPLETED (CONTINUED)

MUNICIPAL SOURCES

JANUARY 1979

SINER COUNTY	LOCATION	PROJECT	REVIEWER	DATE REC	DATE OF ACTION	ACTION	DAYS TO COMPLETE
30	UMATILLA	CHANGE ORDER NO 1 PUMP STAT	V	12/15/78	1/19/79	PROV APP	25
26	PORTLAND	COLUMBIA BLVD DIGESTERS	V	12/14/78	1/22/79	PROV APP	39
	LAKESIDE	STP	V	10/03/78	1/18/79	PROV APP	15
	LAKESIDE	COLLECTION SYSTEM	V	10/03/78	1/18/79	PROV APP	15
26	PORTLAND	SE 144TH-HARNEY COURT	K	12/22/78	1/12/79	PROV APP	21
20	SPRINGFIELD	NORTH 42ND STREET	K	12/22/78	1/12/79	PROV APP	21
3	MILWAUKIE	OTTO'S ADDITION	K	12/22/78	1/11/79	PROV APP	20
34	USA	O'MARA PARK	K	12/22/78	1/12/79	PROV APP	21
34	USA	MAYO COURT	K	12/22/78	1/12/79	PROV APP	21
34	USA	LYNN BUERER SEWER	K	12/22/78	1/12/79	PROV APP	21
9	REDMOND	UMATILLA VILLA	K	12/22/78	1/17/79	PROV APP	26
30	PENDLETON	SE THIRD STREET	K	12/22/78	1/18/79	PROV APP	27
26	GRESHAM	HOOD CENTER APTS	J	12/29/78	1/16/79	PROV APP	18
26	GRESHAM	PFEIFER ADD	J	12/22/78	1/16/79	PROV APP	25
3	SANDY	HIGHVIEW	J	12/22/78	1/16/79	PROV APP	25
15	BCVSA	SOUTH OF A AVENUE	J	12/22/78	1/16/79	PROV APP	25
15	MEDFORD	SHADOW COURT PROFESSIONAL P	J	12/20/78	1/16/79	PROV APP	27
30	HERMISTON	COMPREHENSIVE PLAN ADD	K	11/21/78	1/02/79	PROV APP	42
	UNI SHR AGCY	GALLO'S VINYARD	K	1/24/79	1/31/79	PROV APP	07

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality
(Reporting Unit)

January 1979
(Month and Year)

PLAN ACTIONS COMPLETED - 77, cont'd

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
INDUSTRIAL WASTE SOURCES (11)			
Jackson	Boise Cascade - White City Fill Log Pond	6-2-78	Approved
Coos	Coquille Custom Slaughter Coquille, Slaughter house Waste Water Treatment	10-4-78	Approved
Marion	Eugene Water & Electric Board Recycle Filter Back	10-11-78	Concept Approved
Lane	Bohemia, Inc - Eugene Particleboard Waste Water Recirculation	10-16-78	Approved
Douglas	Mt. Mazama Plywood - Sutherlin, Upgrade Waste Water Controls	11-2-78	Approved
Lincoln	City of Newport, Water Treatment Plant Recirculation System	12-12-78	Approved
Marion	David J. Beilenberg - Silverton Animal Waste	12-28-78	Approved
Coos	Chuck's Seafood - Charleston Waste Water Screening	1-3-79	Approved
Multnomah	N.W. Natural Gas - Portland Storm Run Off Collection	1-3-79	Approved
Clackamas	Apollo Metal Finishing - Portland Rinse Water Treatment	1-18-79	Approved
Washington	Dant & Russel, Inc. - North Plains Drainage Control	1-23-79	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality
(Reporting Unit)

January 1979
(Month and Year)

SUMMARY OF WATER PERMIT ACTIONS

	Permit Actions Received				Permit Actions Completed				Permit Actions Pending	Sources Under Permits		Sources Reqr'd Permits		
	Month		Fis. Yr.		Month		Fis. Yr.			* **	* **	* **	* **	
	*	**	*	**	*	**	*	**						
<u>Municipal</u>														
New	0	1	4	4	0	0	1	3	2	3				
Existing	0	0	0	1	0	0	0	0	0	1				
Renewals	3	4	35	7	2	1	20	8	52	6				
Modifications	2	0	11	0	0	0	5	0	10	1				
Total	5	6	50	12	2	1	26	11	64	11	244	83	246	87
<u>Industrial</u>														
New	1	2	13	9	1	1	12	16	8	2				
Existing	1	0	0	0	0	0	7	0	4	0				
Renewals	5	0	40	13	10	6	55	22	47	2				
Modifications	0	0	2	3	1	0	6	3	3	0				
Total	7	2	55	25	12	7	80	41	62	3	402	128	414	130
<u>Agricultural (Hatcheries, Dairies, etc.)</u>														
New	0	0	2	7	0	1	4	6	0	0				
Existing	0	0	0	0	0	0	0	0	0	0				
Renewals	0	0	0	0	0	0	0	1	2	0				
Modifications	0	0	0	0	0	0	0	0	0	0				
Total	0	0	2	7	0	1	4	7	2	0	62	21	62	21
<u>GRAND TOTALS</u>	12	8	107	44	14	9	110	59	128	14	708	232	722	238

* NPDES Permits
** State Permits

Two State Permits Cancelled

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality
(Reporting Unit)

January 1979
(Month and Year)

PERMIT ACTIONS COMPLETED (23)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Clackamas	UMCO Inc. or Union Mills Poultry Processing	1-12-79	State Permit Renewed
Tillamook	City of Tillamook Sewage Disposal	1-12-79	NPDES Permit Renewed
Yamhill	Champion Building Products Willamina - Veneer	1-12-79	NPDES Permit Renewed
Douglas	Woolley Enterprises Sawmill	1-12-79	NPDES Permit Renewed
Coos	Standard Oil Co. Petroleum Products	1-12-79	NPDES Permit Renewed
Coos	Keith Lucas Gold Mining	1-25-79	State Permit Renewed
Josephine	Jack & Betty McCain Placer Mine	1-25-79	State Permit Renewed
Douglas	Joseph A. Barnes Placer Mine	1-25-79	State Permit Renewed
Hood River	Luhr Jensen & Sons Inc. Metal Plating	1-25-79	State Permit Issued
Union	Boise Cascade Elgin	1-25-79	State Permit Renewed
Linn	Rem Metals Corp. Metals Plant	1-25-79	State Permit Renewed
Lane	City of Lowell Sewage Disposal	1-29-79	NPDES Permit Renewed
Clackamas	Harris Stud Mill Wood Products	1-31-79	NPDES Permit Renewed
Clackamas	Olaf M. Oja Lumber Wood Products	1-31-79	NPDES Permit Renewed

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality
(Reporting Unit)

January 1979
(Month and Year)

PERMIT ACTIONS COMPLETED - 23, cont'd

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Jackson	Boise Cascade Medford - Wood Products	1-31-79	NPDES Permit Renewed
Linn	Frank Lumber Co. Wood Products	1-31-79	NPDES Permit Renewed
Linn	North Santiam Plywood Plywood Plant	1-31-79	NPDES Permit Renewed
Multnomah	Union Carbide Corp. Metals Division	1-31-79	NPDES Permit Renewed
Multnomah	West Coast Adhesives Portland	1-31-79	NPDES Permit Issued
Polk	Oregon Fruit Products Fruit Processing	1-31-79	NPDES Permit Renewed
Polk	Boise Cascade Valsetz Add.#1	1-31-79	NPDES Permit Modified
Clackamas	Serban Lake Farms Animal Waste	1-31-79	State Permit Issued
Linn	Curtis Trent dba Pioneer Villa Restaurant	1-31-79	State Permit Renewed
Lane	Deerhorn Enterprises Hog Farm	1-16-79	State Permit Cancelled
Yamhill	Hewlett Packard Co. Metal Plating	1-16-79	State Permit Cancelled

MONTHLY ACTIVITY REPORT

Solid Waste Division

January, 1979

(Reporting Unit)

(Month and Year)

PLAN ACTIONS COMPLETED (3)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Wasco	Northern Wasco County Landfill Existing Sanitary Landfill Operational Plan Amendment	01/08/79	Conditional Approval
Clackamas	LaVelle - King Road Existing Demolition Landfill Expansion Plan	01/25/79	Withdrawn
Curry	Port Orford Existing Modified Landfill Operational Plan	01/31/79	Conditional Approval

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

January, 1979
(Month and Year)

SUMMARY OF SOLID AND HAZARDOUS WASTE PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sites Under Permits	Sites Reqr'g Permits
	Month	Fis.Yr.	Month	Fis.Yr.			
<u>General Refuse</u>							
New		2		2	1		
Existing			1	2	14 (*13)		
Renewals	12	27	1	13	18		
Modifications	2	9	2	11	3		
Total	14	38	4	28	36	169	171
<u>Demolition</u>							
New			1	1			
Existing		1					
Renewals	1	1	1	1	1		
Modifications	5	7	1	2	5		
Total	6	9	3	4	6	23	23
<u>Industrial</u>							
New		7		9	1		
Existing	1	1		1	1 (*)		
Renewals	4	11	1	15	6		
Modifications		1	1	3			
Total	5	20	2	28	8	97	98
<u>Sludge Disposal</u>							
New		1		1	1 (*)		
Existing	1	1			1 (*)		
Renewals			1	3			
Modifications			1	1			
Total	1	2	2	5	2	11	11
<u>Hazardous Waste</u>							
New							
Authorizations	9	105	12	105			
Renewals							
Modifications							
Total	9	105	12	105	0	1	1
<u>GRAND TOTALS</u>	<u>35</u>	<u>174</u>	<u>23</u>	<u>170</u>	<u>52</u>	<u>301</u>	<u>304</u>

*Sixteen (16) sites operating under temporary permits until regular permits are issued.

MONTHLY ACTIVITY REPORT

Solid Waste Division

January, 1979

(Reporting Unit)

(Month and Year)

PERMIT ACTIONS COMPLETED (11)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
<u>General Refuse Facilities</u> (4)			
Douglas	Roseburg Landfill Existing facility	1/03/79	Permit renewed
Harney	Sod House Landfill Existing facility	1/25/79	Permit issued
Lincoln	North Lincoln Landfill Existing facility	1/31/79	Permit amended
Lincoln	Waldport-Yachats Landfill Existing facility	1/31/79	Permit amended
<u>Demolition Waste Facilities</u> (3)			
Coos	Doyle Williams Landfill Existing facility	1/02/79	Letter authorization issued
Jackson	Corps of Engineers Lost Creek Lake New landfill	1/08/79	Letter authorization issued
Clackamas	King Rd. Landfill Proposed expansion	1/25/79	Application withdrawn
<u>Industrial Waste Facilities</u> (2)			
Coos	Brookings Plywood Landfill Existing facility	1/23/79	Permit amended
Klamath	Weyerhaeuser, Bly Landfill expansion	1/23/79	Permit renewed
<u>Sludge Disposal Facilities</u> (2)			
Klamath	Six Bit Prairie Existing sludge lagoon	1/09/79	Permit amended
Lincoln	T & L Sludge Lagoon Existing facility	1/23/79	Permit renewed

MONTHLY ACTIVITY REPORT

Solid Waste

January, 1979

(Reporting Unit)

(Month and Year)

HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

Date	Type	Source	Quantity	
			Present	Future
<u>Disposal Requests Granted (12)</u>				
<u>Oregon (1)</u>				
8	Spent etching acid solution	Metal casting	6 drums	None
<u>Washington (9)</u>				
2	PCB filled transformers	Aircraft Co.	7 units	Periodic
4	Potliners consisting of CaF ₂ , NaF, AlF ₃ , C, etc.	Primary Al Smelting Plant	400 tons	400 tons/month
10	Unusable paper dye product	Chemical Co.	4 drums	None
10	Aluminum slag consisting of Al ₂ O ₃ , Cr ₂ O ₃ , CuO, etc.	Secondary Al smelting plant	3,000 tons	600 tons/month
24	Unmarketable stains and finishes products	Paint manufacturer	65 drums	180 drums/year
26	PCB capacitors	Chemical Co.	46 Units	None
26	PCB waste	Federal Agency	2 capacitors, 9 transformers, and 1 drum of contaminated rags, articles, etc.	None
31	Obsolete laboratory Chemicals	Research laboratory	6 drums	5 drums/year
31	PCB capacitor	P.U.D.	1 unit	None
<u>California (1)</u>				
2	PCB contaminated rags, articles, etc.	Paper mill	1 drum	None
- 17 -				
<u>Idaho (1)</u>				
26	PCB capacitors	Chemical Co.	2 units	None

<u>TOTALS</u>	<u>LAST</u>	<u>PRESENT</u>
Settlement Action	16	20
Preliminary Issues	16	12
Discovery	3	3
To be Scheduled	2	3
To be Rescheduled	1	0
Set for Hearing	0	0
Briefing	1	1
Decision Due	5	4
Decision Out	3	3
Appeal to Commission	4	5
Appeal to Court	1	1
Transcript	1	1
Finished	4	2
	<u>56</u>	<u>55</u>

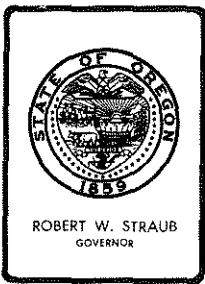
KEY

ACD Air Contaminant Discharge Permit
AQ Air Quality
AQ-SNCR-76-178 A violation involving air quality occurring in the Salem/North Coast Region in the year 1976; the 178th enforcement action in that region for the year.
Cor Cordes
CR Central Region
Dec Date The date of either a proposed decision of a hearing officer or a decision by the Commission.
\$ Civil Penalty Amount
ER Eastern Region
Fld Brn Field burning incident
Hrngs The Hearings Section
Hrng Rfrl The date when the enforcement and compliance unit requests the hearings unit to schedule a hearing.
Hrng Rqst The date the agency receives a request for hearing.
LQ Land Quality
MCS McSwain
MWV The Mid-Willamette Valley Region
NP Noise Pollution
NPDES National Pollutant Discharge Elimination System wastewater discharge permit
P At the beginning of a case number means litigation over a permit or its conditions.
PR Portland Region
PNCR Portland/North Coast Region
Prtys All parties involved
Rem Order Remedial Action Order
Resp Code The source of the next expected activity on the case.
SNCR Salem/North Coast Region (now MWV)
SSD Subsurface Sewage Disposal
SWR Southwest Region
T At the beginning of a case number means litigation over a tax credit matter.
Trancr Transcript being made.
Underlined Different status or new case since last contested case log.

January 1979

DEQ/EQC Contested Case Log

<u>Pet/Resp</u> <u>Name</u>	<u>Hrng</u> <u>Rqst</u>	<u>Hrng</u> <u>Rfrl</u>	<u>DEQ or</u> <u>Atty</u>	<u>Hrng</u> <u>Offcr</u>	<u>Hrng</u> <u>Date</u>	<u>Resp</u> <u>Code</u>	<u>Dec</u> <u>Date</u>	<u>Case</u> <u>Type & No.</u>	<u>Case</u> <u>Status</u>
Davis et al	5/75	575	Atty	McS	5/76	Resp	6/78	12 SSD Permits	Appeal to Court
Paulson	5/76	5/75	Atty	McS		Resp		1 SSD Permit	Settlement Action
Trent	5/75	5/75	Atty	McS		Resp		1 SSD Permit	Settlement Action
Faydrex, Inc.	5/75	5/75	Atty	McS	11/77	Transc		64 SSD Permits	Transcript Prepared
Johns et al	5/75	5/75	Atty	McS		All		3 SSD Permits	Preliminary Issues
Laharty	1/76	1/66	Atty	McS	9/76	Resp	1/77	Rem Order SSD	Appeal to Comm
PGE (Harborton)	2/76	2/76	Atty	McS		Hrngrs		ACD Permit Denial	Preliminary Issues
Ellsworth	10/76	10/76	Atty	McS		Resp		\$10,000 WQ-PR-76-196	Settlement Action
Ellsworth	10/76	10/76	Atty	McS		Resp		WQ-PR-ENF-76-48	Settlement Action
Silbernagel	10/76	10/77	Atty	Cor		Resp		AQ-MWR-76-202 \$400	Discovery
Jensen	11/76	11/76	Atty	Cor	12/77	Prtys	6/78	\$1500 Fld Brn AQ-SNCR-76-232	Settlement Action
Mignot	11/76	11/76	DEQ	McS	2/77	Resp	2/77	\$400 SW-SWR-288-76	Appeal to Comm
Perry	12/76	12/76	DEQ	Cor	1/78	Hrngrs		Rem Order SS-SWR-253-76	Decision Out
Jones	4/77	7/77	DEQ	Cor	6/9/78	Hrngrs		SSD Permit SS-SWR-77-57	Decision Due
Sundown et al	5/77	6/77	Atty	McS		Prtys		\$11,000 Total WQ Viol SNCR	Settlement Action
Wright	5/77	5/77	Atty	McS		Dept		\$250 SS-MWR-77-99	Appeal to Comm
Henderson	6/77	7/77	Atty	Cor	1/77	Resp		Rem Order SS-CR-77-136	Decision Out
Magness	7/77	7/77	DEQ	Cor	11/77	Hrngrs		\$1150 Total SS-SWR-77-142	Decision Due
Southern Pacific Trans	7/77	7/77	Atty	Cor		Prtys		\$500 NP-SNCR-77-154	Preliminary Issues
Suniga	7/77	7/77	Atty	Lmb	10/77	Hrngrs		\$500 AQ-SNCR-77-143	Appeal to Comm
Sun-Studs	8/77	9/77	DEQ	McS		Resp		\$388-WQ-SWR-77-152	Finished
Taylor, D.	8/77	10/77	DEQ	McS	4/78	Dept		\$250 SS-PR-77-188	Settlement Action
Brookshire	9/77	9/77	Atty	McS	4/19/78	Hrngrs		\$1000 AQ-SNCR-76-178 Fld Brn	Decision Out
Grants Pass Irrig	9/77	9/77	Atty	McS		Prtys		\$10,000 WQ-SWR-77-195	Discovery
Pohll	9/77	12/77	Atty	Cor	3/30/78	Hrngrs		SSD Permit App	Decision Due
Califf	10/77	10/77	DEQ	Cor	4/26/78	Prtys		Rem Order SS-PR-77-225	Settlement Action
McClincy	10/77	12/77	Atty	McS		Resp		SSD Permit Denial	Preliminary Issues
Zorich	10/77	10/77	Atty	Cor		Prtys		\$100 NP-SNCR-173	Settlement Action
Powell	11/77	11/77	Atty	Cor		Hrngrs		\$10,000 Fld Brn AQ-MWR-77-241	Preliminary Issues
Wah Chang	12/77	12/77	Atty	McS		Prtys		ACD Permit Conditions	Settlement Action
Barrett & Sons, Inc.	12/77		DEQ			Dept		\$500 WQ-PR-77-307	Settlement Action
Carl F. Jensen/ Carl F. Jensen/ Elmer Klopfenstien	12/77	1/78	Atty	McS		Prtys		\$18,600 AQ-MWR-77-321 Fld Brn	Settlement Action
Steckley	12/77	12/77	DEQ	McS	6/9/78	Atty		\$1200 AQ-SNCR-77-320 Fld Brn	Settlement Action
Wah Chang	1/78	2/78	Atty	Cor		Prtys		\$200 AQ-MWR-77-298 Fld Brn	Appeal to Comm
Gray	2/78	3/78	DEQ			Dept		\$5500 WQ-MWR-77-334	Settlement Action
Haskins	3/78	3/78	DEQ			Dept		\$250 SS-PR-78-12	Settlement Action
Haskins	3/78	3/78	Atty			Dept		\$5000 AQ-PR-77-315	Preliminary Issues
Hawkins Timber	3/78	3/78	Atty			Dept		\$5000 AQ-PR-77-314	Preliminary Issues
Knight	3/78		DEQ			Dept		\$500-SS-SWR-78-33	Settlement Action
Wah Chang	4/78	4/78	Atty	McS		Prtys		NPDES Permit	Preliminary Issues
Wah Chang	11/78	12/78	Atty	McS		Resp		P-WQ-WVR-78-07	Preliminary Issues
Stimpson	5/78		Atty	McS		Dept		Tax Credit Cert. T-AQ-PR-78-01	To be Scheduled
Vogt	6/78	6/78	DEQ	Cor	11/8/78	Dept		SSD Permit	Briefings
Hogue	7/78		Atty			Dept		P-SS-SWR-78	Preliminary Issues
B & M	8/78	8/78	DEQ	Cor	11/1/78	Hrngrs		SSD Lincense	Decision Due
St. Helens	7/78		Atty	McS		Dept		P-WQ-NWR-78-03	Settlement Action
Champion	8/78	8/78	DEQ			Resp		P-WQ-CR-78-04	Settlement Action
Welch	10/78	10/78	Atty			Prtys		P-SS-CR-78-134	Settlement Action
Carter	10/78		DEQ		12/21/78	Resp		\$50 AQ-WVR-78-140	Settlement Action
Louisiana-Pacific	9/78	10/78	DEQ			DEQ		\$1500 AQ-SWR-78-97	Preliminary Issues
Louisiana-Pacific	9/78	10/78	DEQ			DEQ		\$2000 AQ-SWR-78-122	Preliminary Issues
Hood River	11/78		DEQ	McS		Prtys		\$1650 WQ-CR-78-142	To be Scheduled
Reeve	10/78		Atty			Dept		P-SS-CR-78-132 & 133	Discovery
Bierly	12/78	12/78	DEQ			Prtys		\$700 AQ-WVR-78-144	Settlement Action
Georgia-Pacific	1/79	1/78	Atty			Prtys		\$1525 AQ-NWR-78-159	To be Scheduled



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. C, February 23, 1979, EQC Meeting

TAX CREDIT APPLICATIONS

Director's Recommendation

It is recommended that the Commission take action on the attached three requests as follows:

1. Issue Pollution Control Facility Certificates to applications T-1034 (Willamette Industries, Inc.) and T-1040 (Tektronix, Inc.).
2. Reissue Pollution Control Facility Certificates 659, 726 and 941 to reflect change of ownership from Georgia-Pacific Corporation to Husky Industries, Inc.

Michael Downs
for
WILLIAM H. YOUNG

MJDowns:cs
229-6485
2/8/79
Attachments



Contains
Recycled
Materials

Proposed February 1979 Totals:

Air Quality	\$	-0-
Water Quality		1,467
Solid Waste		<u>311,621</u>
	\$	313,088

Calendar Year Totals to Date
(Excluding February 1979 Totals)

Air Quality	\$	279,319
Water Quality		70,785
Solid Waste		<u>113,294</u>
	\$	463,598

Total Certificates Awarded (monetary values)
Since Beginning of Program (excluding February 1979 totals)

Air Quality	\$118,967,038
Water Quality	97,951,391
Solid Waste	<u>46,598,451</u>
	\$263,316,880

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

1. Applicant

Willamette Industries, Inc.
P.O. Box 128
Sweet Home, Oregon 97386

The applicant owns and operates a lumber and plywood mill at Sweet Home, Oregon. Application was made for tax credit for solid waste pollution control facility.

2. Description of Claimed Facility

The facility claimed in this application consists of 248,750 square feet of asphalt paving over the plant scaling and sorting yard.

Request for Preliminary Certification for Tax Credit was made August 7, 1978 and approved August 15, 1978. Construction was initiated on the claimed facility August 1978, completed September, 1978, and the facility was placed into operation September 1978.

Facility Cost: \$311,612.21 (Accountant's certification was provided).

3. Evaluation of Application

Prior to the paving of the Willamette Industries plant log yard over 12,000 cubic yards per year of log yard residue (dirt, rock, bark, and scrap) was landfilled. The log yard was dusty and muddy, and considerable amounts of rock had to be used to provide all weather trafficability. The paving eliminated the mud problem, dust emissions and landfill disposal of solid waste. The clean recoverable portion of the waste (bark and wood scraps) is now picked up off the yard and processed into hog fuel. The following is a cost saving analysis for the claimed facility as prepared by Willamette Industries, Inc.:

A. Annual Cost Savings

1. Annual Rock Replacement	\$16,900.00
2. Annual Cleanup Cost	45,200.00
3. Annual Equipment Maintenance	<u>18,500.00</u>
Total	\$80,600.00

B. Annual Cost of Paving

1. Interest Expense 10 years at 10% (average)	\$16,711.00
2. Pavement Maintenance 20¢ per sq. yd.	6,150.00
3. Property Tax	6,080.00
4. Depreciation 10 years straight line	<u>30,383.00</u>
Total	\$59,324.00

Pre-tax Savings (cost savings - cost of paving)	21,276.00
Corporation Income Taxes at 50%	<u>10,638.00</u>
NET AFTER TAX SAVINGS	\$10,638.00

Value of the recovered bark is approximately \$36,000.00 annually (value of hog fuel, \$3.00 per cu. yd.).

The claimed facility eliminated generation of 12,000 cubic yards per year of solid waste, mud problems, dust emissions, and substantially reduced the need for new landfill sites. Considering that the value of the recovered bark is greater than the annual operational savings, it appears that the substantial purpose for the construction of the claimed facility was pollution control and utilization of solid wastes.

4. Summation

- A. Facility was constructed after receiving approval to construct and preliminary certification issued pursuant to ORS 468.175.
- B. Facility was under construction on or after January 1, 1973 as required by ORS 468.165 (1) (c).
- C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing solid waste.
- D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 459 and the rules adopted under that chapter.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$311,612.21 with 100 percent allocated to pollution control be issued for the facility claimed in Tax Credit Application Number T-1034.

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Tektronix, Inc.
Box 500
Beaverton, Oregon 97077

The applicant owns and operates a complex, manufacturing electronic equipment such as oscilloscopes, information display and television products.

Application was made for tax credit for water pollution control facility.

2. Description of Claimed Facility

The claimed facility consists of a spectrophotometer, Turner model 350, with Instafill and Cell Assembly.

The function of the instrument is to detect chromium in the effluent quickly, as opposed to grab sampling and laboratory delays. It is installed at their industrial waste treatment plant.

Request for Preliminary Certification for Tax Credit was made. The request was approved 9/13/76. Construction was initiated on the claimed facility on 9/13/76, completed and placed into operation in September of 1977.

Facility Cost: \$1,467.75. (Cost statements were provided.)

3. Evaluation

The applicant claims to have been able to maintain chromium levels in the discharge to less than permit limits. The use of the claimed facility, they claim, has been useful to this end. Staff substantiates this claim.

4. Summation

- A. Facility was constructed after receiving approval to construct and Preliminary Certification issued pursuant to ORS 468.175.
- B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165 (1) (a).
- C. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing water pollution.
- D. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. Applicant claims 100% of costs allocable to pollution control.

Tax Relief Application Review Report, T-1040
January 24, 1979
Page 2

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1040, such Certificate to bear the actual cost of \$1,467.75 with 80% or more allocable to pollution control.

C. K. Ashbaker /pw
229-5325
January 24, 1979

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

REQUEST FOR AMENDMENT OF POLLUTION CONTROL FACILITY CERTIFICATES

CERTIFICATES ISSUED TO:

Georgia-Pacific Corporation
Suite 200
2310 Parklake Drive, N.E.
Atlanta, Georgia 30345

AMENDED CERTIFICATES TO BE ISSUED TO:

Husky Industries, Inc.
62 Perimeter East
Atlanta, Georgia 30346

Certificates 659 and 726 were issued for air pollution control facilities. Certificate 941 was issued for a solid waste facility.

DISCUSSION

On April 30, 1976, the Environmental Quality Commission issued Pollution Control Facility Certificate 659 to Georgia-Pacific in the amount of \$92,915 for a Doyle-type wet scrubber. On October 15, 1976, the EQC issued Certificate 726 to Georgia-Pacific in the amount of \$1,156,836 for a hearth furnace, steam boiler and related equipment. On November 17, 1978 the EQC issued Certificate 941 to Georgia-Pacific in the amount of \$829,545 for a wood waste material dryer.

By letter of December 20, 1978, Georgia-Pacific advised the Department that the above-mentioned assets had been sold to Husky Industries, Inc. (see attached letter). By letter of December 21, 1978, Husky Industries notified the Department of their purchase of those facilities (see attached letter).

SUMMATION

Pursuant to ORS 317.072, Certificates 659, 726 and 941 should be amended to reflect Husky Industries, Inc. as the new owner of the certified facilities.

DIRECTOR'S RECOMMENDATION

Revoke and reissue Pollution Control Facility Certificates 659, 726 and 941 to Husky Industries, Inc. These reissued certificates only to be eligible for tax credit relief for the time remaining from the date of their first issuance.

MJDowns:cs
229-6485
2/9/79
Attachments

Georgia-Pacific Corporation



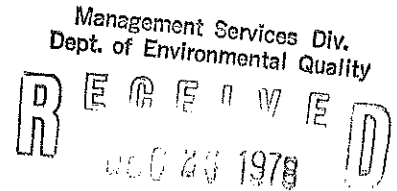
Legal Department
900 S. W. Fifth Avenue
Portland, Oregon 97204
Telephone (503) 222-5561

FRANK G. BREUER
Vice President and
General Counsel

GEORGE H. BRUSTAD
THOMAS E. WITHYCOMBE
A. THOMAS NIEBERGALL
KENNETH M. McCAW, JR.
DENNIS M. CHORBA
RALPH M. DAVISSON
GLEN R. KUYKENDALL
LINDSAY D. STEWART
WILLIAM E. CRAIG
KEITH T. BORMAN
J. DAVID PETERSEN
LYNN T. NAGASAKO
Attorneys

December 20, 1978

Environmental Quality Commission
P. O. Box 1760
Portland, Oregon 97207



Subject: Georgia-Pacific Corporation
Certificate Nos. 659 and 726

Gentlemen:

Please be advised that Georgia-Pacific Corporation has sold the assets of its charcoal briquet plant in White City, Oregon, including the assets to which the subject certificates pertain. The new owner of the certificates is Husky Industries, Inc., 62 Perimeter Center East, N. E., Atlanta, Georgia 30346.

If you need any additional information, please contact the undersigned.

Very truly yours,

Ralph M. Davison

RMD/pc

cc: Mr. Horace H. Sibley

HUSKY INDUSTRIES

Inc.



62 PERIMETER CENTER EAST / ATLANTA, GEORGIA 30346 / TELEPHONE (404) 393-1430

December 21, 1978

Carol A. Splettstaszer
Department of Environmental Quality
522 S. W. 5th Avenue
P. O. Box 1760
Portland, Oregon 97207

Dear Ms. Splettstaszer:

This is to advise you that Husky Industries, Inc. purchased the Charcoal Briquet manufacturing facilities, located at White City, Oregon on December 4, 1978, from Georgia-Pacific Corporation.

Husky Industries understands that your department has issued Environmental Quality Certificates #726 and #659, covering some of these facilities and respectfully request that the owner of record be changed to reflect the new owner. Further, we are attaching copy of Tax Relief Application filed with your office and also, request that owner of record on the application be changed to reflect the new owners.

If you require further information concerning this request, please contact me.

Very truly yours,

HUSKY INDUSTRIES, INC.

A. R. Sperry
Vice President - Treasurer

ARS/ftj

Attachment

cc: H. Sibley
F. A. Skirvin

Date of Issue 4/30/76

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Application No. T-700

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To: Georgia Pacific Corp. 900 SW Fifth Ave. Portland, Oregon 97204	As: Owner	Location of Pollution Control Facility: 7890 Agate Road White City, Oregon Jackson County
Description of Pollution Control Facility: Doyle-type wet scrubber used as a secondary control device to clean air contaminants from the stack of a hogged wood waste boiler.		
Date Pollution Control Facility was completed and placed in operation: 12/19/74; 01/07/75		
Actual Cost of Pollution Control Facility: \$ 92,915.00		
Percent of actual cost properly allocable to pollution control: Eighty (80) percent or more. (Replaces Cert. No. 624 which is hereby revoked, because the facility was purchased from Olson-Lawyer Timber on 1/31/76.) Change of ownership effective 1/31/76.		

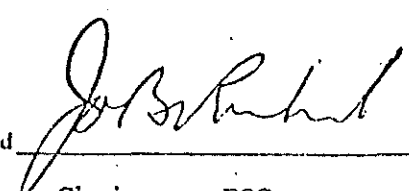
In accordance with the provisions of ORS 449.605 et seq., it is hereby certified that the facility described herein and in the application referenced above is a "pollution control facility" within the definition of ORS 449.605 and that the facility was erected, constructed, or installed on or after January 1, 1967, and on or before December 31, 1978, and is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air or water pollution, and that the facility is necessary to satisfy the intents and purposes of ORS Chapter 449 and regulations thereunder.

Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing air pollution.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

*Now ORS Chapt. 468.155 et seq.

Signed



Chairman, EQC

Approved by the Environmental Quality Commission

on the 30th day of April 19 76

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 726

Date of Issue 10/15/76

Application No. T-255

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To: Georgia Pacific Corporation, 900 S.W. Fifth Portland, Oregon 97204	Location of Pollution Control Facility: 7890 Agate Road White City, Oregon
As: <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Owner	
Description of Pollution Control Facility: Nichols Herreschoff Multiple Hearth Furnace, ducting to boiler, Wyatt Kipper high pressure steam boiler. (Revocation of Certificate #656 and issue new certificate to include accounting error reported by Georgia Pacific.)	
Type of Pollution Control Facility: <input checked="" type="checkbox"/> Air <input type="checkbox"/> Water <input type="checkbox"/> Solid Waste	
Date Pollution Control Facility was completed: 1971 Placed into operation: 1971	
Actual Cost of Pollution Control Facility: \$ 1,156,836	
Percent of actual cost properly allocable to pollution control: 100%	

In accordance with the provisions of ORS 468.155 et seq., it is hereby certified that the facility described herein and in the application referenced above is a "Pollution Control Facility" within the definition of ORS 468.155 and that the air and water or solid waste facility was erected, constructed or installed on or after January 1, 1967, or January 1, 1973 respectively, and on or before December 31, 1980, and is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air, water or solid waste pollution, and that the facility is necessary to satisfy the intents and purposes of ORS Chapters 459, 468 and the regulations thereunder.

Therefore, this Pollution Control facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

Signed 

Title Chairman

Approved by the Environmental Quality Commission on
the 15th day of October, 1976

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 941

Date of Issue 11/17/78

Application No. T-972

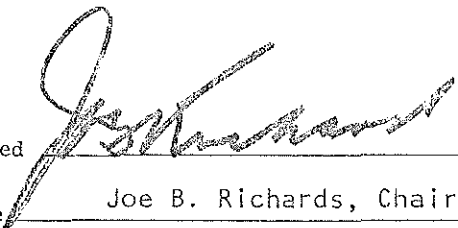
POLLUTION CONTROL FACILITY CERTIFICATE

Issued To: Georgia-Pacific Corporation Suite 200 2310 Parklake Drive, N.E. Atlanta, Georgia 30345	Location of Pollution Control Facility: White City Jackson County, Oregon
As: <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Owner	
Description of Pollution Control Facility: <p style="text-align: center;">Waste wood material dryer</p>	
Type of Pollution Control Facility: <input type="checkbox"/> Air <input type="checkbox"/> Noise <input type="checkbox"/> Water <input checked="" type="checkbox"/> Solid Waste	
Date Pollution Control Facility was completed: <u>1/31/77</u> Placed into operation: <u>3/1/77</u>	
Actual Cost of Pollution Control Facility: \$ <u>829,545.76</u>	
Percent of actual cost properly allocable to pollution control: <p style="text-align: center;">100%</p>	

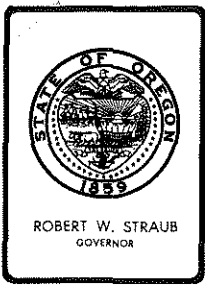
In accordance with the provisions of ORS 468.155 et seq., it is hereby certified that the facility described herein and in the application referenced above is a "Pollution Control Facility" within the definition of ORS 468.155 and that the air or water facility was constructed on or after January 1, 1967, the solid waste facility was under construction on or after January 1, 1973, or the noise facility was constructed on or after January 1, 1977, and the facility is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air, water, noise or solid waste pollution, and that the facility is necessary to satisfy the intents and purposes of ORS Chapter 459, 467 or 468 and the regulations adopted thereunder.

Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.


 Signed _____
 Title Joe B. Richards, Chairman

Approved by the Environmental Quality Commission on
 the 17th day of November, 19 78



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Addendum No. 1, Agenda Item No. C, February 23, 1979, EQC Meeting

TAX CREDIT APPLICATIONS

Director's Recommendation

Be informed of the Director's intention to issue Preliminary Certification for Tax Credit to the Stimson Lumber Company for their bark dryer (see attached review report).

Michael Pows
for
WILLIAM H. YOUNG

MJDowns:cs
229-6485
2/9/79
Attachment



Contains
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State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
Preliminary Certification for Tax Credit Review Report

1. Applicant

Stimson Lumber Company
P.O. Box 68
Forest Grove, Oregon 97116

The applicant owns and operates a lumber and veneer manufacturing mill at Scoggins Valley, Oregon.

Application was made for tax credit for an air pollution control facility.

2. Description of Claimed Facility

The facility described in NC application No. 1066 is a hog fuel bark dryer designed to reduce the moisture content of the fuel by using waste heat from the boiler stack gases. The facilities described in NC application Nos. 1067 and 1068 are two hog fuel boilers, each designed to produce 53,000 lbs/hr of steam.

The facilities were completed and placed into operation in January, 1979.

The estimated cost of the bark dryer is \$150,000. The estimated costs of the hog fuel boilers are \$250,000 and \$200,000, of which \$50,000 is allocated to pollution control for each of the boilers.

3. Evaluation of Applications

Stimson Lumber Company submitted requests for Preliminary Certification for Tax Credit for two hog fuel boilers and a bark dryer on January 10, 1978. These requests were reviewed by the Department and it was recommended to the EQC that the requests be denied. The EQC voted to deny preliminary certification of the bark dryer at the February 24, 1978 meeting (Attachment 1). The two hog fuel boilers were denied preliminary certification at the April 28, 1978 meeting (Attachment 2). The Company has requested hearings on both of these denials.

Since the requests were denied the Company has employed a consultant, Mr. Dave Junge of Corvallis, to explain the impact of the projects on the reduction of air pollutants and to show the importance of the components of the system in reducing air pollution.

After receiving the report by Mr. Junge, the Department reviewed the denials of preliminary certification and information submitted. In regard to the hog fuel boilers the Department has arrived at the same conclusion as presented and approved at the April 28, 1978 EQC meeting; that they were not installed for a substantial purpose to prevent, control or reduce air pollution. The Department is of the opinion that specified pollution control components of the new boilers such as the

monitoring equipment that is included in the project could be granted preliminary certification if these items were requested separately.

With regard to the bark dryer, the Department, after reviewing the report written by Mr. Junge, has concluded that the bark dryer could be found to be installed for a substantial purpose to reduce air pollution and should be given preliminary certification for tax credit. The reason for this is that the bark dryer reduces the concentration of the particulate emissions from the hog fuel boiler as well as the total amount of emissions. The reduction in particulate concentration has been documented by Robert C. Johnson of Energy Systems Engineering, Inc. of Kent, Washington. He found that by reducing fuel moisture from 63% to 52%, the concentration of particulate emissions was reduced by 43%. The reason for this reduction is that better combustion of the fuel occurs.

The Stimson dryer is designed to reduce fuel moisture from 55% to 50%. Therefore, taking into account the emissions from the dryer, a particulate concentration reduction of approximately 14% should occur. The dryer would also reduce total emissions, since the boilers would use less fuel. It is estimated that the total reduction in particulate would be approximately 21%.

Since the dryer does save energy, it is anticipated that when Stimson Lumber Co. submits its final tax credit application, 100% could not be allocated to air pollution control.

4. Summation

1. The denial of the Request for Preliminary Certification for Tax Credit for the two hog fuel boilers should be upheld for the following reasons:
 - a. A substantial purpose for construction of the facilities is not the prevention, control or reduction of air pollution.
 - b. The Department has determined that the erection, construction or installation does not comply with the applicable provisions of ORS Chapters 454, 459, 467 or 468 and the applicable rules or standards adopted pursuant thereto.
2. The bark dryer reduces the concentration of particulate emissions by an estimated 14% in addition to the emission reduction that occurs due to reduced fuel use. Therefore, it is concluded that the dryer was installed for a substantial purpose to reduce air pollution as is required by ORS Chapter 468, and it should be granted Preliminary Certification for Tax Credit.

5. Director's Recommendation

Based upon the summation, it is recommended that Preliminary Certification for Tax Credit be granted to the Stimson Lumber Company bark dryer.

WILLIAM H. YOUNG

Charles R. Clinton:mkw
229-6955
February 9, 1979
Attachments (2)

1. Preliminary Certification for Tax Relief Review Report for a hog fuel dryer at Stimson Lumber Company
2. Preliminary Certification for Tax Relief Review Report for two hog fuel boilers at Stimson Lumber Company

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

ATTACHMENT 1

Preliminary Certification for Tax Relief Review Report

1. Applicant

Stimson Lumber Company
P. O. Box 68
Forest Grove, Oregon 97116

The applicant owns and operates a lumber and veneer manufacturing mill at Scoggins Valley, Oregon.

Application was made for preliminary certification for air pollution control facility.

2. Description of Claimed Facility:

The facility described in this application is a hog fuel dryer designed to reduce the moisture content of the fuel by using waste heat from the boiler stack gases.

It is estimated the facility will be placed in operation August 1, 1978.

The estimated cost of the facility is \$150,000.

3. Evaluation of Application

The facility consists of a rotary dryer, exhaust gas cyclone, induced draft fan and associated air ducts and hog fuel conveyors. The facility would utilize waste heat from the boiler stacks to drive off free moisture from the fuel and thereby reduce fuel usage and improve the overall energy efficiency of the power boilers. A small increase in particulate emissions is expected from the dryer, however this should be offset some by reduced emissions from the boilers because of lowered fuel firing rates.

4. Summation

- A. A substantial purpose for construction of the facility is not for prevention, control or reduction of air, water or noise pollution or solid waste.
- B. The Department has determined that the erection, construction or installation does not comply with the applicable provisions of ORS Chapter 454, 459, 467 or 468 and the applicable rules or standards adopted pursuant thereto.

5. Director's Recommendation

It is recommended that the Commission issue an order denying the applicant's request for Preliminary Certification.

Steven C. Carter:cs
229-5297
2/17/78

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

ATTACHMENT 2

Preliminary Certification for Tax Relief Review Report

1. Applicant

Stimson Lumber Company
P. O. Box 68
Forest Grove, Oregon 97116

The applicant owns and operates a lumber and veneer manufacturing mill at Scoggins Valley, Oregon.

Applications were made for preliminary certification for air pollution control facilities.

2. Description of Claimed Facility

The facilities described in these applications are two hog fuel power boilers designed to produce 53,000 lbs/hr of steam each.

It is estimated the facility will be placed in operation August 1, 1978.

The estimated cost of the facilities are \$250,000 and \$200,000 of which \$50,000 is allocated to pollution control for each of the power boilers.

3. Evaluation of Application

The proposed boilers will replace two existing hog fuel boilers which have a combined rating of 75,000 lbs/hr. The existing boilers were source tested in mid 1976 and determined to be in compliance with Department emission standards. The proposed boilers will have a combined rating of 106,000 lbs/hr. The multiclone serving the existing boilers will be used to control emissions from the proposed boilers. No other pollution control equipment is included in this proposal. Particulate emissions will not change significantly from existing levels.

The applicant indicated that since the boilers will be operated below rated capacities, fewer particulates will be released because less particulates will leave the fuel piles and combustion will be more complete due to longer residence times. They conclude therefore that the boilers will serve in part as pollution control facilities. The Department does not concur with this rationale.

The Department concludes that the applicant will expand its steam production capacity even though they may not use it without either significantly decreasing or increasing its emissions. Therefore, in the absence of any pollution control benefits, preliminary certification as a pollution control facility is not warranted.

4. Summation

- A. A substantial purpose for construction of the facility is not for prevention, control or reduction of air, water or noise pollution or solid waste.
- B. The Department has determined that the erection, construction or installation does not comply with the applicable provisions of ORS Chapter 454, 459, 467 or 468 and the applicable rules or standards adopted pursuant thereto.

5. Director's Recommendation

It is recommended that the Commission issue an order denying the applicant's request for Preliminary Certification.

Stephen C. Carter:as
229-5297
4/17/77

CRC
TRB
BBG

February 16, 1979

Mr. Bud Keeney, Plant Manager
Stimson Lumber Company
Post Office Box 68
Forest Grove, Oregon 97116

Re: AQ - Stimson Lumber Company
File No. 34-2066, NC 1066, PR-100A
Washington County

Dear Mr. Keeney:

After our meeting of December 11, 1978 the Department reviewed the report by Dave Junge that you submitted and the other items which have been submitted in conjunction with the request for Preliminary Certification for Tax Credit of the two hog fuel boilers and the bark dryer. The Department has determined from this review that the hog fuel boilers cannot be granted preliminary certification for tax credit. The reason is, as we have previously indicated, that a substantial purpose of the facility is not for pollution control. It is the Department's determination that the substantial purpose for installing these hog fuel boilers was to conserve energy and to provide flexibility in operation. As a result of the energy conservation the emission of pollutants is reduced.

If requests for preliminary certification for tax credit were submitted for specified pollution control components of the new boilers such as the opacity monitors, oxygen monitors and the television monitors, the Department would consider granting preliminary certification for them.

The Department has determined that the bark dryer should be granted preliminary certification for tax credit since it reduces the concentration of particulate emissions in addition to reducing total particulate emissions through reduced fuel requirements. This determination would have to be approved by the Environmental Quality Commission at their February 23, 1979 meeting which will be held in Room 602 of the Multnomah County Courthouse, 1021 S. W. 4th, Portland. Enclosed you will find a staff report that has been prepared for this meeting.

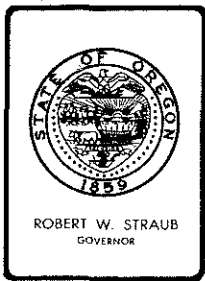
If you have any questions, please feel free to call Mr. Charles R. Clinton at 229-6955.

Sincerely,

Robert E. Gilbert
Manager
Northwest Region

CRC/mb
Enclosure

cc: Air Quality Division, DEQ
Department of Justice, General Counsel Division
Attn: Frank Ostrander



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. D, February 23, 1979, EQC Meeting

Authorization for Public Hearing on Procedural Rule
Revision Proposals: Contested Cases

BACKGROUND

An objective of the Hearings Section has been to review procedural rules and suggest changes in the light of contested case experiences. The enforcement group, the Justice Department, and Agency Management have participated.

An attempt to refine the rules governing civil penalty amounts must await further study.

SUMMATION

1. ORS 468.020, 468.120(1)(b)(2), 468.125 and 183.341(2) provide statutory authority for these amendments.
2. The proposed amendments to OAR 340-11-116 are to clarify who may obtain and/or issue subpoenas and who may modify or withdraw one, how to serve it, and who pays the fees.
3. The proposed amendments to OAR 340-11-132 are intended to remove the present provision for simultaneous filing of exceptions and argument by all parties.
4. The proposed amendments to OAR 340-12-040 adds intentional violations, unauthorized deposition of sewage or solid waste, and unauthorized installation of subsurface sewage disposal systems to the list of violations for which the imposition of a civil penalty does not have to be preceded by a five-day notice.

DIRECTOR'S RECOMMENDATION

Based upon the Summation, it is recommended the Commission authorize one or more public hearings to be held for public comment on the proposed rules.

Michael Downs
for
WILLIAM H. YOUNG

MJDowns:cs
229-6485
2/13/79
Attachment (1)

* NOTICE OF PUBLIC HEARING *

The Oregon Department of Environmental Quality (DEQ) is proposing to revise its rules regarding enforcement and contested case procedures. A public hearing on this matter will be held in Room 511 of the DEQ offices located at 522 S.W. Fifth (Yeon Building) in Portland, Oregon, at 2:00 p.m., on Tuesday, June 5, 1979.

WHAT IS THE DEQ PROPOSING?

Interested parties should request copies of the draft rule revisions. Some of the highlights are:

- *** Clarification of the procedures in obtaining, issuing, and serving subpoenas in a contested case proceeding.
- *** Clarification of the procedures by which a party to a contested case proceeding may appeal the decision.
- *** The addition of intentional violations, unauthorized deposition of sewage or solid waste, and unauthorized installation of subsurface sewage disposal systems to the list of violations for which a civil penalty may be imposed without the DEQ first serving a five-day warning notice on the violator.

WHO IS AFFECTED?

Persons, or attorneys representing clients, that may be involved in a contested case proceeding with the DEQ.

HOW TO SUBMIT YOUR INFORMATION:

Written comments should be sent to the Department of Environmental Quality, Hearings Section, P.O. Box 1760, Portland, Oregon 97207, and should be received by June 4, 1979.

Oral and written comments may be offered at the public hearing.

WHERE TO OBTAIN ADDITIONAL INFORMATION:

Copies of the draft rule may be obtained from:

Department of Environmental Quality
Hearing Section
P.O. Box 1760
Portland, Oregon 97207
(503) 229-5829

WHAT IS THE NEXT STEP?

The proposed rule revisions along with the Hearing Officers' recommendations from the testimony presented at the public hearing will be presented to the Environmental Quality Commission on June 29, 1979, for final consideration.

SECTION _____

(Note: Material proposed to be deleted is shown in brackets
[]; material proposed to be added is underlined)

Subpoenas [~~and~~ Depositions]

340-11-116 [Subpoenas and Depositions shall be as provided
by ORS 183.425, 183.440, and 468.120 and shall be preceded
by a showing of good cause, general relevance, and reasonable
scope with regard to the evidence sought. Such showing may
be by affidavit based on knowledge and belief. Subpoenas
and Depositions may be modified or withdrawn for good cause
shown.]

(1) Any party to a contested case, upon request shall be
issued subpoenas to compel the attendance of witnesses and
the production of books, records and documents.

(2) The party requesting the subpoena shall be responsible for serving the subpoena and tendering the fees and mileage to the witness.

(3) Subpoenas authorized by this section may be served by the party or any person over 18 years of age.

(4) Witnesses who are subpoenaed shall receive the same fees and mileage as in civil actions in the circuit court.

(5) Subpoenas may be issued by

(a) A hearing officer, or

(b) The Chairman of the Commission or

(c) The attorney of record of the party requesting the subpoena.

(6) A person present in a hearing room before a hearing officer during the conduct of a contested case hearing may be required, by order of the hearing officer, to testify in the same manner as if he were in attendance before the hearing officer upon a subpoena.

(7) Pursuant to a request by a subpoenaed witness a hearing officer or the Chairman of the Commission may modify or withdraw a subpoena upon good cause being shown therefor.

(8) Nothing in this section shall preclude the possibility

of making informal arrangements for the production of witnesses
or documents, or both.

Statutory Authority: ORS 468.020, 468.120(1)(b), (2)

183.341(2)

Hist: Filed and Eff. 9-13-76 as DEQ 122

Comment:

There is needed clarification concerning who may obtain and/or issue subpoenas and who may modify or withdraw one, how to serve it, and who pays the fees.

SECTION _____

"340-11-132 Appeal of [Presiding] Hearing Officer's [Officers' Proposed Order in Hearing Before Commission] Final Order.

(1) Hearing Officer's Final Order

In a contested case [before the Commission,] if a majority of the members of the Commission have not heard the case or considered the record, the [Presiding] Hearing Officer shall prepare a written [proposed order] Hearing Officer's Final Order including findings of fact and conclusions of law. [Copies] The original of the [proposed order] Hearing Officer's Final Order shall be filed with the Commission, and copies shall be served upon the parties in accordance with section 340-11-097 (regarding service of written notice).

(2) Hearing Officer Reconsideration or Rehearing;

Commencement of Appeal to the Commission

(a) [The parties shall have] The Hearing Officer's Final Order shall be the final order of the Commission unless within [fourteen (14)] 20 days from the date of mailing, or if not mailed then from the date of personal service, [in which to]

any of the parties or any ~~three or more~~ members of the Commission [file] files with the Commission and [serve] serves upon [the other parties] each party a [request that the Commission review the proposed order] Petition to the Hearing Officer for Reconsideration or Rehearing or a Notice of Appeal to the Commission. A proof of service thereof shall also be filed, but failure to file a proof of service shall not be a ground for dismissal of the petition or notice.

(b) If the Hearing Officer does not otherwise act, a timely served and filed Petition to the Hearing Officer for Reconsideration or Rehearing shall be deemed denied on the 20th day following the date the petition was filed, and in such a case, the Notice of Appeal to the Commission shall be served and filed within 20 days only following such date. If the Hearing Officer denies such a petition within 20 days of its filing then the Commission and parties shall have 20 days from the date of denial to serve and file a Notice of Appeal to the Commission pursuant to subparagraph (a) of this subsection (2). The grant or denial of such petition within 20 days of filing of the petition shall be made in writing and shall be filed with the Commission in order to be effective. It shall be deemed effective as of the date of filing. It shall also be served upon the parties. It need not state any grounds therefor.

(c) The timely filing and service of a Notice of

Appeal to the Commission is a jurisdictional requirement for the commencement of an appeal to the Commission and cannot be waived; a Petition to the Hearing Officer for Reconsideration or Rehearing or a Notice of Appeal to the Commission which is filed or served late shall not be considered and shall not affect the validity of the Hearing Officer's Final Order which shall remain in full force and effect.

[(3) Unless a timely request for Commission review is filed with the Commission, or unless within the same time the Commission, upon the motion of its Chairman or a majority of the members, decides to review it, the proposed order of the Presiding Officer shall become the final order of the Commission.]

(3) Automatic Stay Of Hearing Officer's Final Order

(a) The timely filing and service of a Petition to the Hearing Officer for Reconsideration or Rehearing shall automatically stay the effect of the Hearing Officer's Final Order until the petition is denied or the Hearing Officer's Final Order is modified or reissued.

(b) The timely filing and service of a sufficient Notice of Appeal to the Commission shall automatically stay the effect of the Hearing Officer's Final Order.

(4) Contents of Petition to Hearing Officer for Reconsideration or Rehearing - A Petition to the Hearing Officer for

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Reconsideration or Rehearing shall be in writing and shall state the grounds and arguments therefor.

(5) Contents of Notice of Appeal to the Commission

A Notice of Appeal to the Commission shall be in writing and need only state the party's or ³~~three or more~~ Commissioners' intent that the Commission review the Hearing Officer's Final Order.

[(4)] (6) Procedure on Appeal (a) Appellant's Exceptions and Brief - [If the Commission review is invoked, then the parties] The Appellant (appealing party) shall [be given] within [thirty] 30 days from the date of service or filing of his Notice of Appeal to the Commission, whichever is later, [mailing or personal service of the Presiding Officer's proposed order, or such further time as the Director or Commission may allow, to] file with the Commission and serve upon [the other parties] each other party written exceptions [and arguments to the proposed order.] , brief and proof of service. Such exceptions [and arguments] shall specify those findings and conclusions objected to and reasoning, and shall include proposed alternative findings of fact, conclusions of law, and order [and shall include] with specific references to those portions of the record upon which the party relies. In any case where more than one party timely serves and files a Notice of Appeal to the Commission the first filed shall be considered to be the appeal and the second the cross appeal. *Matters not raised before the hearing officer, except for cause shown, shall not be considered.*

(b) Appellee's Brief - Each party so served with exceptions and brief shall then have 30 days from the date of service or filing, whichever is later, in which to file with the Commission and serve upon each other party an answering brief and proof of service.

(c) Reply Brief - Except as provided in (6)(d) below, each party served with an answering brief shall have 20 days from the date of service or filing, whichever is later, in which to file with the Commission and serve upon each other party a reply brief and proof of service.

(d) Cross Appeals - Should any party entitled to file an answering brief so elect, he may also cross appeal to the Commission the Hearing Officer's Final Order by filing with the Commission and serving upon each other party in addition to an answering brief a Notice of Cross Appeal, exceptions (described above at (6)(a)), a brief on cross appeal and proof of service, all within the same time allowed for an answering brief. The appellant-cross appellee shall then have 30 days in which to serve and file his reply brief, cross answering brief and proof of service. There shall be no cross reply brief without leave of the Chairman or the Hearing Officer. [As to any findings of fact made by the Presiding Officer, the Commission may make an identical finding without any further consideration of the record. Further, the Commission may make a finding identical to that proposed by all parties other than the agency without any

change proposed
by McSwain

- further consideration of the record.]

[Auth. note: see (6)(j) below]

(e) Briefing on Commission Invoked Review - Where one
[three] or more members of the Commission commence an appeal
to the Commission pursuant to subsection (2)(a) above, and
where no party to the case has timely served and filed a
Notice of Appeal to the Commission, the Chairman shall prompt-
ly notify the parties of the issues that the Commission desires
the parties to brief and of the schedule for filing and serving
briefs. The parties shall limit their briefs to those issues.
Where three or more members of the Commission have commenced
an appeal to the Commission and a party has also timely
commenced such a proceeding, briefing shall follow the
schedule set forth in subparagraphs (a), (b), (c), (d),
(f) and (i) of this subsection (6).

(f) Extensions - The Chairman or a Hearing Officer,
upon request, may extend any of the time limits contained
in this subsection (6). Each extension shall be made
in writing and be served upon each party. Any request for
an extension may be granted or denied in whole or in part.

(g) Failure to Prosecute - The Commission may dismiss
any appeal (or cross appeal) if the appellant (or cross
appellant) fails to timely file and serve any exceptions or
brief required by these rules.

[(5)] (h) Oral Argument - Following the expiration
of the time allowed the parties to present exceptions and [ar-

guments] briefs, the Chairman may at his discretion schedule the [matter] appeal for oral argument before the Commission.

[(6)] (i) Commission Review Prior to Completion of Briefing - [Notwithstanding whether the procedures set out in subsection (1) through (5) of this section have been completed,] Following the timely service and filing of a sufficient Notice of Appeal to the Commission a majority of the members of the Commission may at any time personally consider the whole record or appropriate portions thereof and issue a final order based thereon notwithstanding the fact that the procedures set out in subparagraphs (a) through (h) of this subsection (6) have not been completed.

[(7)] (j) Scope of Review - In [reviewing] an appeal to the Commission of a [proposed order prepared by a Presiding Officer,] Hearing Officer's Final Order, the Commission may, based upon the record made before the [Presiding] Hearing Officer or appropriate portions thereof, substitute its judgment for that of the [Presiding] Hearing Officer in making any particular finding of fact, conclusion of law, or order. As to any finding of fact made by the Hearing Officer the Commission may make an identical finding without any further consideration of the record.

[(8)] (k) Additional Evidence - In [reviewing] an appeal to the Commission of a [proposed order prepared by a Presiding Officer,] Hearing Officer's Final Order, the Commission may take additional evidence. Requests to present additional

evidence shall be submitted by motion and shall be supported by [an affidavit] a statement specifying the reason for the failure to present it at the hearing before the [Presiding] Hearing Officer. If the Commission grants the motion, or so decides of its own motion it may hear the additional evidence itself or remand to a [Presiding] Hearing Officer upon such conditions as it deems just.

Statutory Authority: ORS 468.020 and 183.341(2)

Hist: Filed 9-6-74 as DEQ 78, Eff. 9-25-74

Amended by DEQ 115, Filed and Eff. 7-6-76"

COMMENT

The intent here is to remove the present provision for simultaneous filing of exceptions and argument by all parties who wish to do so. The parties requesting review must file them. Those not requesting review initially have two new options. The first is to respond to the exceptions and arguments of others after having seen them, rather than trying to anticipate them. The second is to elect to request review and propose an alternative order in light of the fact that an adversary has done so. Some litigants might choose not to seek review unless an adversary does so. Under the present rule they must seek review if they even suspect an adversary will or their opportunity goes out the window. Under the proposal, all parties will have an opportunity to respond to the exceptions and arguments of others so as to fully inform the Commission regarding the respective positions of each of the parties involved. The time limitations can be enlarged by the Commission or the presiding officer. The current rule results in many requests to the Director for extensions and places the Director in the center of controversies between his own counsel and opposing litigants. It hasn't proven comfortable to administer.

SECTION _____

"340-12-040 Notice of Violation (1) Except as provided in subsection (3) of this section, prior to the assessment of any civil penalty the Department shall serve a [written notice] Notice of [violation] Violation upon the respondent. Service shall be in accordance with section 340-11-097.

(2) A [notice] Notice of [violation] Violation shall be in writing, specify the violation and state that the Department will assess a civil penalty if the violation continues or occurs after five days following [service] receipt of the notice.

(3)(a) [Written notice] A Notice of Violation shall not be required where the respondent has otherwise received actual notice of the violation not less than five days prior to the violation for which a penalty is assessed.

(b) No advance notice, written or actual, shall be required where:

(i) the act or omission constituting the violation is intentional;

(ii) the violation consists of disposing of solid waste or sewage at an unauthorized disposal site;

(iii) the violation consists of constructing a sewage disposal system without the department's permit;

(iv) [where] the water pollution, air pollution, or air contamination source would normally not be in existence for five days[,]; or

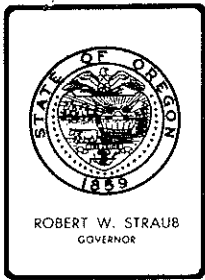
(v) [where] the water pollution, air pollution or air contamination source might leave or be removed from the jurisdiction of the department.

Statutory Authority: ORS 468.020, 468.125, 183.341(2)

Hist: Filed 9-6-74 as DEQ 78, Eff. 9-25-74"

COMMENT

1977 Oregon Laws, Chapter 317, Section 3 amended ORS 468.125 by adding intentional violations, unauthorized deposition of sewage or solid waste, and unauthorized installation of subsurface sewage disposal systems to the list of violations for which the imposition of a civil penalty does not have to be preceded by a five-day notice. The present rule does not reflect this amendment and requires the Department to give notice where it was required by the old statute. It will allow the Department to proceed with the full latitude allowed by the statute.



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item No. E, February 23, 1979 Environmental Quality Commission meeting.

Authorization to Conduct a Public Hearing on the Matter of Whether to Modify the Order Prohibiting or Limiting Installation of Subsurface Sewage Disposal Systems Within the River Road-Santa Clara Area, Lane County.

Background

1. The Commission initiated a public hearing at its March 31, 1978 meeting in Eugene on the question of imposing a moratorium on the issuance of construction permits for new subsurface sewage disposal systems and favorable reports of site suitability in the River Road-Santa Clara area of Lane County.
2. The hearing was continued so Department staff could more thoroughly address factors required by statute for rulemaking.
3. At its April 28, 1978 meeting, the Commission heard the Department's completed staff report. Based on that report and testimony the Commission adopted an amendment to Oregon Administrative Rules 340-71-020 which approved the subject moratorium and caused initiation of a detailed groundwater study by Lane County. The April 28 staff report is Exhibit 1, attached.
4. Today's agenda item is in response to Director's Recommendation #4 in the April 28 report, which required a status report regarding the River Road-Santa Clara Groundwater Analysis sponsored by Lane Council of Governments and Lane County Department of Environmental Management.
5. An EPA grant was awarded and study design was completed, sampling stations established (including existing well conversion, well drilling, and surface site). Water quality sampling began on October 23, 1978 and development of a computer based hydrology model is proceeding as scheduled. Some data is now available. The study schedule, Exhibit 2, is attached.



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Evaluation

1. Facts collected to date are presented in this section. Those listed below are extracted from study progress reports.
2. Most soils in the study area can readily accept septic tank effluent. Many of the soils accept effluent so efficiently that limited treatment occurs for some constituents.
3. Of the 40-inch annual precipitation, 13 inches reaches the water table, and the balance is runoff, evaporation and/or transpiration. Precipitation is the major recharge to the shallow aquifer. Additional recharge is provided by groundwater underflow (generally from the south) and from imported domestic water via water districts.
4. About 30 percent of the aquifer recharge (1.1 billion gallons) is from household use and resulting septic tank effluent disposal of the imported water. Although high density areas use imported domestic water, the northerly downgradient area depends on groundwater as a sole source for domestic supply.
5. Nitrate is the focus of the study because it is an effective tracer in groundwater movement. Nitrate is also significant because of the EPA 10 mg/l nitrate-nitrogen primary drinking water limit. The study estimates nitrate-nitrogen sources to the subject aquifer as follows:
 - a. precipitation and water supply background 1%
 - b. dwelling unit fertilizer 8%
 - c. septic tank effluent 91%
 - d. agricultural and "other" sources: not quantified
6. Based on the above and making certain assumptions about dispersion and dilution attenuation, the study predicts steady state, i.e., long term, nitrate-nitrogen concentrations in the groundwater ranging from 3.7 to 13.9 mg/l. This is shown in Exhibit 3, attached. Background nitrate-nitrogen concentrations have been measured from 0.0 to 0.86 mg/l.
7. Department staff has examined the limited nitrate-nitrogen data available (October, November, December, 1978). Concentrations range from trace to 26.2 mg/l with values most frequently from 5 to 9 mg/l in the highly developed areas. This compares favorably with the above predictions. A visual reference is provided in the following Exhibits:

- a. Exhibit 4: Study area map showing sampling locations, a maximum concentration isopleth (solid line) and a reference baseline (dashed line).
 - b. Exhibit 5: Using the maximum nitrate-nitrogen concentration isopleth, nitrate-nitrogen concentrations as a function of an east-west distance from the isopleth are plotted. This plot illustrates the nature of decreasing nitrate concentrations as a function of distance from the isopleth.
 - c. Exhibit 6: Using an arbitrary baseline through the study area, this plot illustrates the maximum nitrate-nitrogen concentrations measured through December, 1978. The average maximum is about 7 mg/l.
8. Further evaluation is difficult at this time, since limited data is available.

Summation

1. The River Road-Santa Clara area represents a potential groundwater contamination problem resulting from subsurface sewage disposal systems in a densely developed residential community. This problem is of particular concern to the downgradient sole source domestic aquifer.
2. The prediction of elevated nitrate-nitrogen levels in areas of concentrated septic tank development is supported by the limited analytical data, and is in reasonable agreement with predicted ranges (Exhibit 3).
3. Many nitrate-nitrogen concentrations even now approach the EPA 10 mg/l primary drinking water standard, and a few exceed it. Early implications are for further increments above background levels with time and growth.
4. Based on the Lane County Board of Commissioners' request and public testimony, the Environmental Quality Commission amended Oregon Administrative Rules Chapter 340, Section 71-020 by prohibiting or limiting installation of subsurface sewage disposal systems within the River Road-Santa Clara area.
5. The moratorium should remain in effect at least until more complete study results are available. It is essential that the study be completed so that impacts of future development on groundwater can be accurately predicted and controlled.

Current data is insufficient to make reliable quantitative nitrate-nitrogen predictions within and downgradient from the study area, but will be sufficient upon completion of the study.

Director's Recommendation

Based on the Summation, the Director recommends that:

1. The River Road-Santa Clara moratorium under Oregon Administrative Rule 340-71-020 be continued until March 1980, at which time sufficient data and analysis will be available to predict groundwater quality, including a relationship to growth.
2. The Department staff be directed to continue working with staff of the Metropolitan Wastewater Management Commission, Lane County, the cities of Eugene and Springfield, and the Lane County Local Government Boundary Commission to obtain development and implementation of a plan for preventing and reducing groundwater pollution in the River Road-Santa Clara area.
3. A public hearing be authorized and the Department staff be directed to provide the Commission with recommendations by March 1980 on whether to modify the "Order Prohibiting or Limiting Installation of Sub-surface Sewage Disposal Systems within the River Road-Santa Clara Area, Lane County."

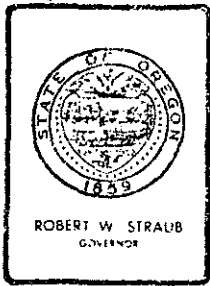
Michael Downs
for

WILLIAM H. YOUNG

John E. Borden: wjr
378-8240
February 9, 1979

Attachments: (6)

1. Exhibit 1: Agenda Item F, April 28, 1978 EQC meeting.
2. Exhibit 2: River Road-Santa Clara Study Schedule.
3. Exhibit 3: Theoretical NO₃-N Concentration in Ground Water, River Road-Santa Clara.
4. Exhibit 4: Map of River Road-Santa Clara area showing concentration levels.
5. Exhibit 5: River Road-Santa Clara nitrate concentration vs. distance to peak concentration isopleth.
6. Exhibit 6: River Road-Santa Clara nitrate concentration vs. baseline.



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. F, April 28, 1978, EQC Meeting

Continuation of Public Hearing on Proposed Order Prohibiting
or Limiting Installation of Subsurface Sewage Disposal Systems
Within the River Road - Santa Clara Area, Lane County

Background

The Commission initiated a public hearing at its March 31, 1978 meeting in Eugene on the question of imposing a moratorium on the issuance of construction permits for new subsurface disposal systems and favorable reports of site suitability in the River Road - Santa Clara area of Lane County. The hearing was continued to this meeting. The Department's staff report of March 31, 1978 failed to specifically address, in order, those factors required by statute, to be considered by the Commission whenever a moratorium is imposed. Each of those eleven (11) statutory factors is addressed below under evaluation.

Statement of Need for Rule Making

1. Oregon Revised Statutes (ORS) 454.625 requires the Commission to adopt such rules as it considers necessary for the purpose of carrying out ORS 454.605 to 454.745.

Orders limiting or prohibiting construction of subsurface sewage systems under ORS 454.685 are imposed by the Commission through adoption of an amendment or Oregon Administrative Rules (OAR) 340-71-020.

2. A resolution received from Lane County Board of Commissioners requests imposition of a moratorium to prevent further degradation of groundwater pending a resolution of the problem.

The Department's evaluation (discussed below) supports conclusion that a problem exists and that a moratorium is the only apparent way to prevent further degradation while a plan for resolving the problem is being developed.



3. Document relied upon in considering the need for the proposed rule is:

Santa Clara - River Road
Groundwater Contamination Evaluation 1978
By: Environmental Geology & Groundwater
H. Randy Sweet
Consulting Geologist/Hydrogeologist

Evaluation

"Order Limiting or Prohibiting Construction"

Factors to be considered, in accordance with ORS 454.685(2) are as follows:

(A) Present and projected density of population

The present population of the River Road - Santa Clara area is approximately 27,500. By the year 2000 the population is projected to reach 40,000.

(B) Size of building lots

The residential parcel size in the area north of Beltline Road indicates 58 percent of the parcels to be 10,000 square feet or less, 33 percent of the parcels to be between 10,000 and 20,000 square feet in size, and 8 percent to be larger than 20,000 square feet.

In the area south of Beltline Road, 52 percent of the parcels are 10,000 square feet or less in size, 40 percent are between 10,000 and 20,000 square feet in size, and 7 percent are greater than 20,000 square feet in size.

(C) Topography

The area topography is virtually flat (0 - 3% slope) with several filled river meander channels cutting through the area oriented to the north - northwest.

(D) Porosity and Permeability of the Soils

The soils dominant in the area have moderate to high permeability in the upper profile of 36 to 48 inches from the ground surface. Absorbency is good, with silty clay loam textures with good pore size and distribution. Some areas have restrictive silty clays occurring at 36 to 48 inches from the ground surface. In these areas the soils may be somewhat restrictive to water movement.

Throughout the area, gravel beds occur at depths ranging from 3 to 9 feet from the ground surface. These gravel strata vary from clay cemented gravels to very clean, rapidly permeable material.

On the west and north sides of the area, restrictive clays occur at 12 to 30 inches from the ground surface. Water perches on the ground surface in these areas.

(E) Any geological formations which may adversely affect the disposal of sewage effluent by subsurface means

Highly porous and permeable substrata materials, a seasonably high and locally recharged groundwater table, and excessively to moderately well-drained soils (including clean gravels), adversely effect the suitability of the River Road - Santa Clara area for the installation of high density subsurface sewage disposal systems.

The area is underlain by geologically recent, unconsolidated, valley-filled alluvium that consists primarily of discontinuous layers and lenses of porous and permeable sands and gravel with minor amounts of silt and clay.

These deposits are part of the Willamette River Valley alluvial aquifer that is the primary source of groundwater for industrial, domestic, and agricultural uses in the Willamette Valley Region.

(F) Ground and surface water conditions and variations therein from time to time

A major source of recharge to this groundwater system is the infiltration and downward percolation of precipitation that falls directly on the valley floor. As a result, the water table beneath the River Road - Santa Clara area fluctuates in response to seasonal variations in precipitation, with the late winter-early spring water table rising to within 5 to 10 feet of land surface. This recharge is enhanced by moderately well to excessively drained soils that offer little impedance to the downward percolation of soil moisture.

Once in the groundwater flow system, water beneath the River Road - Santa Clara area moves generally northward toward downgradient discharge points such as wells, streams, rivers, and other surface water bodies. There is a direct hydraulic connection between surface and groundwater in the River Road - Santa Clara area. The nature of the connection (the discharging of groundwater to surface water bodies, or the infiltration of surface water into the groundwater system) is dependent on site specific characteristics and/or seasonal variations in ground and/or surface water levels.

Surface water drainage is not well defined, and is limited to the old river meander channels in the area. Some of the more western and northern channels have been excavated to improve flow conditions. (Amazon Flat Creek Project Flood Control). Some of the channel flows are intercepting perched water tables and the upper surface of the regional water table.

(G) Climatic conditions

"Typical" climate conditions of the River Road - Santa Clara (Eugene Area) produce mild wet winters and warm dry summer seasons. Seasonal changes in rainfall are gradual with about 50% of total annual precipitation falling in the months of November to January. The "average" rainfall is about 42 inches per year.

Temperature norms range from mean daily maximums of 63° F and a minimum of 43° F.

Relative to evaporation potential, most authorities agree that, normally, annual precipitation exceeds annual evaporation.

(H) Present and projected availability of water from unpolluted sources

Presently, water supply to the River Road - Santa Clara area is provided through two water districts which purchase water from the Eugene Water and Electric Board.

Water supplies north and northwest of the River Road - Santa Clara are taken directly from the underlying flow system in the River Road - Santa Clara area.

Numerous shallow wells exist in the subject area with usage predominately for irrigation purposes. However, it is possible that some wells may, or are being used, as potable water supplies.

(I) Type of, and proximity to, existing domestic water supply sources

Water supply to the River Road - Santa Clara area is provided through two water districts which purchase water from the Eugene Water and Electric Board. The River Road Water District is located south of Beltline Road with the Santa Clara Water District serving northerly of Beltline Road.

(J) Type of, and proximity to, existing surface waters

The River Road - Santa Clara area is bordered on the eastern boundry by the Willamette River and its meanders.

Spring Creek, which flows all or most of the year, has its origin from spring action in the mid-eastern portion of the area. Spring Creek is located east of River Road and west of the Willamette River and flows in a northerly direction to discharge into the Willamette River.

Numerous small surface drainage ways (intermittent streams) are located in the western portion of the area and flow in the northwest direction along with the total net water flow systems. These intermittent drainage ways originate as rainfall and discharge to lower land, ultimately flowing into the Long Tom and Fern Ridge Reservoir systems.

(K) Capacity of existing subsurface sewage disposal systems

Estimated subsurface sewage discharge:

3 million gal/day (1.1 billion gal/yr.); individual septic tank-
drainfield systems
in addition to
.2 million gallons per day from Lynnbrook subdivision lagoon
3.2 million gallons per day TOTAL

Approximately: 30% of toal annual aquifer recharge within
the area*

(* from Table 8, page 24, H. Randy Sweet
Report)

Other points to consider*

(A) Due to natural development and structure of the soils in the River Road - Santa Clara area, the local groundwater aquifer is particularly susceptible to contamination.

(B) About 30 percent of the shallow aquifer recharge in River Road -Santa Clara may be attributed to water imported for domestic use. Most of this water is discharged (wasted) as sewage into the ground.

(C) On-site disposal of sanitary wastes is the major source of nitrogen (and eventually nitrate-nitrogen) to the shallow alluvial aquifer in the River Road - Santa Clara area.

(D) Areas downgradient from the River Road - Santa Clara area are now, and are projected to be, solely dependent upon groundwater for domestic supply. Therefore, assurance of a long-term potable water supply must be considered in any continuing or future evaluation of groundwater quality in the River Road - Santa Clara area.

(E) The significance of NO₃-N in drinking water has been discussed for many years. It is supposed that excessive nitrate ingestion in infants and/or nursing mothers may result in methemoglobinemia (blue babies). Other recent studies have questioned this relationship. However, the fact remains that the Environmental Protection Agency Drinking Water Standards prohibit the use of water for drinking purposes when the nitrate-nitrogen (NO₃-N) concentration is in excess of 10 mg/l.

The following individuals will be available for additional testimony or to respond to questions:

Mr. Roy Burns, Director
Lane County Water Pollution Control Division

Mr. Kent Mathiot, Hydrogeologist
State Water Resources Department

Mr. Larry Lowenkron, Engineer
Eugene Branch Office, DEQ

Long-Range Solution To Problem

Because much of the River Road - Santa Clara area is already developed at urban-level densities, the ultimate solution to the identified groundwater contamination problem is the installation of sanitary sewers. Even now the design of new sewage treatment facilities for the Eugene-Springfield area, including capacity for the River Road -Santa Clara area, is underway.

The present service for the new facilities is essentially coterminous with the city limits of Eugene and Springfield. The Southern Pacific railroad and a few residences located along the interceptors between the cities and their sewage treatment plants receive sewage services even though they are currently outside of the Cities.

Since design is now underway for an improved system, and funding is available from the EPA Construction Grant Program, now would be an opportune time to look towards areawide sewerage services. This would require a method of bringing the unincorporated areas either into the County Service District or forming a separate entity contracting for sewage services with the other entities.

ORS 454.685 provides, in part, that whenever the Environmental Quality Commission finds that the construction of subsurface sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction. The order shall issue only after public hearing for which more than 30 days notice is given.

Such order would issue in the form of an amendment to OAR 340-71-020 by adding a new subsection (9) as shown on Attachment "A".

Summation

1. Lane County Board of Commissioners has requested imposition of a moratorium on new subsurface sewage system construction permits and favorable reports of site suitability within the River Road - Santa Clara area.
2. ORS 454.685 provides that whenever the Commission finds that the construction of subsurface sewage disposal systems should be limited or prohibited in an area, it shall issue an order limiting or prohibiting such construction. The order shall be issued only after public hearing for which more than 30 days notice is given.
3. Proper notice was given and published within the affected area.
4. Testimony was received at a public hearing by the Commission on March 31, 1978 in Eugene. That hearing was continued to this date to receive additional testimony.
5. Factors required by statute (ORS 454.685) to be considered by the Commission in imposing a moratorium have been addressed in the "evaluation" section of this report.
6. Evidence indicates probable groundwater pollution in the River Road - Santa Clara area and areas down gradient. There is a likelihood of increased pollution if subsurface disposal of sewage is expanded.
7. A moratorium is the only apparent way to temporarily stop increase of pollution pending development of a plan for prevention and reduction of groundwater pollution.

Director's Recommendation (restated with revisions)

1. Impose a moratorium on issuance of construction permits for new subsurface sewage disposal systems and favorable reports of site suitability in the River Road - Santa Clara area of Lane County by adopting the proposed amendment to OAR 340-71-020 as shown in Attachment "A".
2. Impose a moratorium on approval of any pending new, or modified sewage disposal facility which would use subsurface injection.
3. Direct Department staff to work with the staffs of the Metropolitan Wastewater Management Commission, Lane County, the Cities of Eugene and Springfield, and the Lane County Local Government Boundary Commission to obtain development and implementation of a plan for preventing and reducing groundwater pollution in the River Road - Santa Clara area.
4. Direct Department staff to provide the Commission with a status report within the six months period proposed by the Lane County Board of Commissioners regarding investigation progress.

WILLIAM H. YOUNG

John Borden:aes
378-8240
April 18, 1978

Attachments: "A" Proposed Amendment to OAR 340-71-020
"B" Map, Proposed River Road - Santa Clara Moratorium Area

PROPOSED

Amend Oregon Administrative Rules 340-71-020 by adding a new subsection (9) to read as follows:

"(9) Pursuant to ORS 454.685, neither the Director nor his authorized representatives shall issue either permits for new sewage disposal facility which would use subsurface injection, or construction permits or favorable reports of evaluation of site suitability for new subsurface sewage disposal systems, within the boundaries of the following described geographic area of the State:

The area generally known as River Road-Santa Clara, and defined by the Boundary submitted by the Board of County Commissioners for Lane which is bounded on the South by the City of Eugene, on the West by the Southern Pacific Railroad, on the North by Beacon Drive, and on the East by the Willamette River, and containing all or portions of T-16S, R-4W, Sections 33, 34, 35, 36, T-17S, R-4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, and T-17S, R-1E, Sections 6, 7, 18, Willamette Meridian."

MEMORANDUM

lane county



TO Environmental Quality Commission
FROM Roy L. Burns, Director - Water Pollution Control Division
SUBJECT Request for Establishment of a Moratorium DATE April 24, 1978
on Subsurface Sewage Disposal Systems in
the River Road/Santa Clara Area, Lane County, Oregon

On February 22, 1978 the Lane County Board of Commissioners approved Resolution No. 78-2-22-3 which requests that you "...place a moratorium upon the issuance of construction permits and favorable reports of evaluation of site suitability for new subsurface sewage disposal systems within the boundaries of River Road - Santa Clara, Oregon...". The Board further resolved to aggressively pursue a solution to the waste disposal needs of the area, and to re-assess the situation after six months to ascertain whether or not the moratorium should be continued.

At your commission hearing regarding the matter, conducted on March 31, 1978 at Harris Hall in Eugene, Oregon, additional information was requested in support of the County request of both EQC staff and Lane County.

Attached for your information is a Lane County report that summarizes the River Road - Santa Clara status and County position.

The County's position is:

1. Substantial portions of the River Road - Santa Clara area are already developed at urban-level residential densities and continuation of such development patterns may be expected in the future in the absence of limits on development.
2. Urban services, including sewers, must be provided in areas where extensive development to urban-level densities is occurring.
3. While available ground water quality information may not demonstrate that a public health hazard presently exists, it certainly provides sufficient evidence that effluent from subsurface sewage disposal systems is entering the ground water in the River Road - Santa Clara area and is degrading the water quality.
4. Continued development in the River Road - Santa Clara area utilizing subsurface sewage disposal systems, will increase the extent of degradation of the ground water.
5. A moratorium on the issuance of construction permits and favorable reports of evaluation of site suitability for new subsurface sewage disposal systems is warranted as a result of factors existing in the River Road - Santa Clara area.

Page 2
Memo to EQC
April 24, 1978

- 6) Issuance of subsurface sewage disposal systems in compliance with existing EQC regulations and in accordance with adopted comprehensive plans in the River Road - Santa Clara area will not protect the shallow aquifer from degradation.

Requested Action:

- 1) Adopt the requested moratorium.
- 2) Direct DEQ staff to assist in defining the extent of ground water degradation.
- 3) Direct DEQ staff to assist the County and River Road - Santa Clara citizens in solving sewerage needs.

RLB:dk1

STAFF REPORT
RIVER ROAD - SANTA CLARA AREA
LANE COUNTY, OREGON

HISTORY

The River Road - Santa Clara area is located north of the City of Eugene and is generally bounded on the South by the City, on the West by the Southern Pacific Railroad, on the North by Beacon Drive, and on the East by the Willamette River. The area contains approximately 7,000 acres of which just over one-half (3,550 acres) has been developed for residential/commercial uses and attendant roads and streets.

Significant development and population growth in the River Road - Santa Clara area began in the 1940's and 1950's and reached a peak in the 1960's. Between 1940 and 1976 the estimated population of the area increased from approximately 3,000 to 27,500. The current estimate of dwelling unit equivalents in the area is approximately 8,500 and essentially all of the population in the area disposes of sewage wastes through individual subsurface sewage disposal systems.

For several years now, public health officials have been expressing concerns that the extensive, dense development of the River Road - Santa Clara area might be causing contamination of the shallow ground water in the area. Specifically, the concerns have been related to the large number and density of subsurface sewage disposal systems in use in the area and to the possibility that certain pollutants from the septic tank effluent could be significantly contaminating the ground water. Several reports addressing various aspects of the ground water situation in the area have been published, as follows:

1. A.M. Piper, 1942: The Eugene area was included in this early reconnaissance level investigation of geology and ground water in the Willamette Valley.
2. R.G. Dickinson, 1972: The ground water quality in the River Road - Santa Clara area was evaluated in this detailed study. This study specifically indicated that the widespread use of subsurface sewage disposal systems in the area was resulting in contamination of the ground water.
3. F.J. Frank, 1973: The ground water situation in the Eugene-Springfield area was discussed in this report. Although the evaluation was primarily intended as an aid in future development of ground water supplies, it did indicate that subsurface sewage disposal activities in the River Road - Santa Clara area could result in contamination of the ground water.

4. 208 Update, 1977: As part of the '208' Wastewater Management Project administered by the Lane Council of Governments (L-COG) an attempt was made to re-establish the monitoring well network used by Dickinson (1972). Although wells at sites approximating those used by Dickinson were located and monitored, the test results were inconclusive as a result of the drought conditions prevalent during the 1976-77 winter.
5. H.R. Sweet, 1978: This report presents an evaluation of the relationship between ground water quality in the River Road - Santa Clara area and the use of subsurface sewage disposal systems based upon a detailed review of previous monitoring results. The conclusions reached during this evaluation will be discussed later in this report.

Land use and sewerage planning activities within the Eugene-Springfield metropolitan area have long anticipated that the River Road - Santa Clara area would ultimately receive sewer service. For almost 30 years now, the provision of sewer service to the area has been a central issue in numerous sewerage studies, including a 1950 regional study by CH₂M, a 1970 regional study by CH₂M, another 1970 study by DMJM, and 1975 and 1977 regional studies by CH₂M HILL. In 1972, residents of the Santa Clara area even tried to establish a Sanitary District, but were unsuccessful when their request for approval was denied by the Lane County Local Government Boundary Commission. An adopted facility plan involving a regional sewerage system with capacity for serving the River Road - Santa Clara area is now being implemented for the Eugene - Springfield metropolitan area.

DEMOGRAPHY

The population and development density of the River Road - Santa Clara area is already unique for unincorporated areas within Lane County. Since the area contains a substantial amount of presently vacant land, it may logically be concluded that the population and development density will continue to increase in the absence of any limits on development. Following is a brief summary of information describing the existing and projected 1990 characteristics of the area assuming development is permitted to continue:

<u>PARAMETER</u>	<u>ESTIMATED EXISTING</u>	<u>PROJECTED 1990</u>
Land Area (acres)	7,060	7,060
Population (# people)	27,500	32,500
Equivalent Dwelling Units (#DU)	8,500	10,050
Development Density (# people/acre)	3.9	4.6
Development Density (#DU/acre)	1.2	1.4

Property sizes in the River Road - Santa Clara area vary from very small lots (less than 5,000 square feet) to parcels of over 100 acres. Over one-half (55.3%) of the properties in the area are smaller than 10,000 square feet, and more than one-third (36.7%) are between 10,000 and 20,000 square feet in size. Less than 10% of the properties in the area contain in excess of 20,000 square feet.

Most of the soils in the River Road - Santa Clara area can readily accept septic tank effluent. However, subsurface sewage disposal of sewage in the well-drained soils can result in rapid movement and inadequate treatment of septic tank effluent as it percolates from the disposal system to the shallow underlying alluvial aquifer. This shallow ground water is widely used by residents of the area, primarily for yard irrigation. Essentially all River Road - Santa Clara residents utilize imported water supplied through water districts serving the area for potable purposes.

LOCAL GOVERNMENTAL ACTIONS

- As a result of concerns related to the impact of intensive development in the River Road - Santa Clara area on the shallow ground water, the Lane County Board of Commissioners have taken a number of increasingly severe actions to limit unrestrained land development in the area. Following is a summary list of these actions:

1. High Waste Load Prohibition: Preventing approval of multiple family residential and other developments which would generate high waste loads, except when sewer service is available.
2. Moratorium on Major Subdivision: Preventing approval of new major subdivisions (4 or more lots) in the River Road - Santa Clara area effective June 9, 1971.
3. EQC Moratorium Request: If approved, would essentially stop development in the River Road - Santa Clara area. This request is being considered at this meeting.
4. Partition and Re-Zoning Moratorium: Preventing the creation of additional parcels and increased density through zone changes in the River Road - Santa Clara area. Lane County took this action to supplement the requested EQC action discussed in #3 above, to limit speculative permit applications pending a decision on the moratorium question.

While recognizing the potential ground water contamination problem in the River Road - Santa Clara area and taking the discussed steps to alleviate it, the Board of Commissioners still recognizes the need to more fully address the problems of the area. To this end, the Board recently created a Task Force of the area residents to provide guidance on the waste disposal matter and other issues of concern to the area. In addition, the Board has recently asked the Lane Council of Governments to seek a Section 208 Water Quality Management Grant from the U.S. Environmental Protection Agency for a detailed ground water study in the River Road - Santa Clara area.

H.R. SWEET'S GROUND-WATER EVALUATION

Lane County recently hired H. Randy Sweet, a consulting ground-water geologist, to evaluate available existing information pertaining to the ground water quality in the River Road - Santa Clara area and its relationship to development in the area. In his report, dated February 28, 1978, Mr. Sweet concludes that:

1. A highly permeable and productive aquifer underlies the study area and this shallow aquifer is readily accessible for development as well as surface contaminants.
2. Disposal of sanitary wastes via on-site disposal systems is the primary source of nitrogen in the study area, and as the population increases, a proportional increase in $\text{NO}_3\text{-N}$ can be expected.
3. Theoretical and measured $\text{NO}_3\text{-N}$ concentrations have been shown to locally exceed E.P.A. primary drinking water standards.
4. Area-wide verification and/or calibration of ground water flow model is not possible given the paucity of available acceptable data.
5. Quantification of the extent of $\text{NO}_3\text{-N}$ contamination in the study and down-gradient areas require an improved data base.

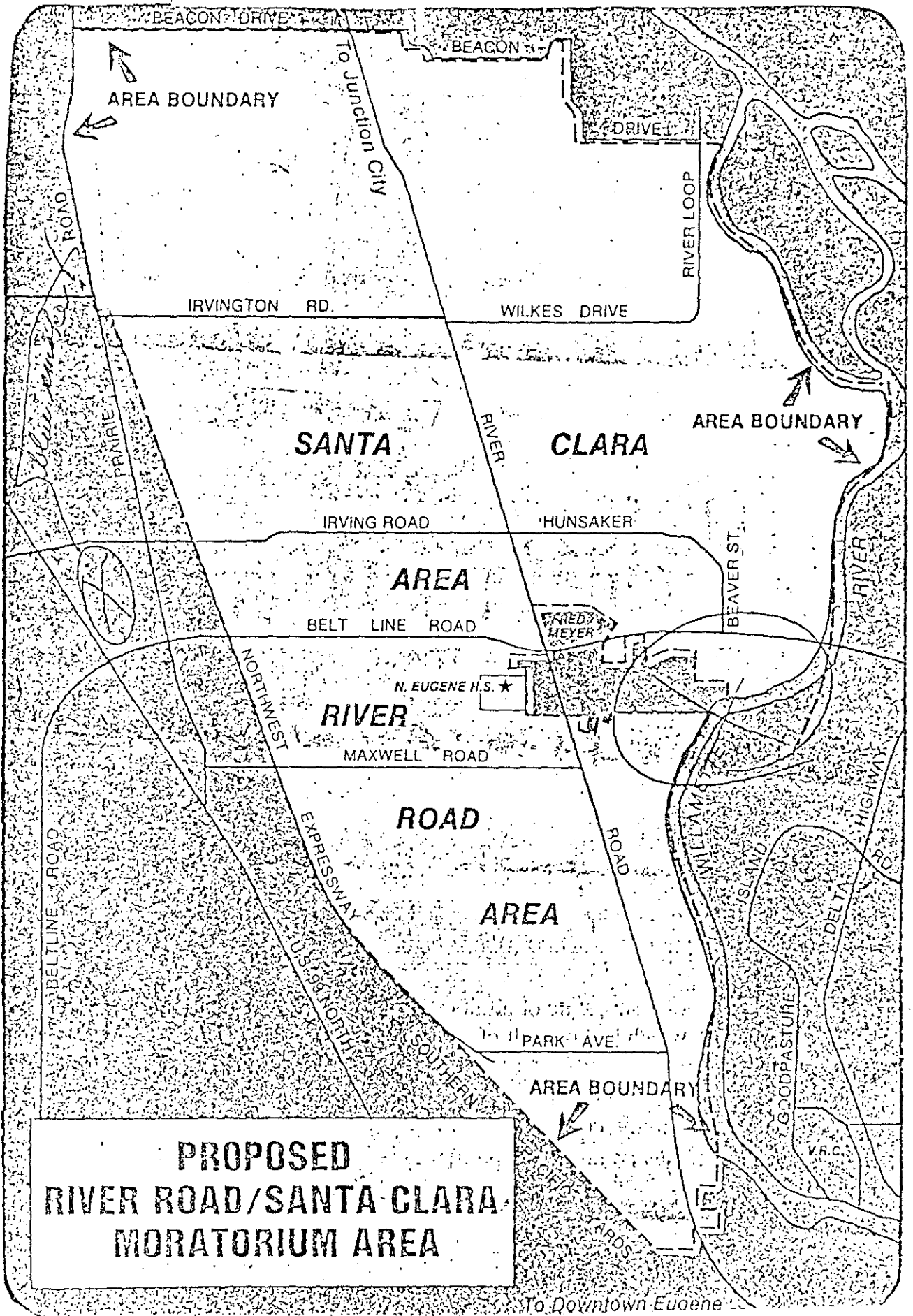
COUNTY POSITION

In summary, Lane County's position on the River Road - Santa Clara area may be stated by the following brief comments:

1. Substantial portions of the River Road - Santa Clara area are already developed at urban-level residential densities and continuation of such development patterns may be expected in the future in the absence of limits on development.
2. Urban services, including sewers, must be provided in areas where extensive development to urban-level densities is occurring.
3. While available ground water quality information may not demonstrate that a public health hazard presently exists, it certainly provides sufficient evidence that effluent from subsurface sewage disposal systems is entering the ground water in the River Road - Santa Clara area and is degrading the water quality.

4. Issuance of subsurface sewage disposal systems in compliance with existing E.Q.C. regulations and in accordance with adopted comprehensive plans in the River Road - Santa Clara area will not protect the shallow aquifer from degradation.
5. Continued development in the River Road - Santa Clara area utilizing subsurface sewage disposal systems will increase the extent of degradation of the ground water.
6. A moratorium on the issuance of construction permits and favorable reports of evaluation of site suitability for new subsurface sewage disposal systems is warranted as a result of the factors previously discussed.

GCS:dk1



STUDY SCHEDULE

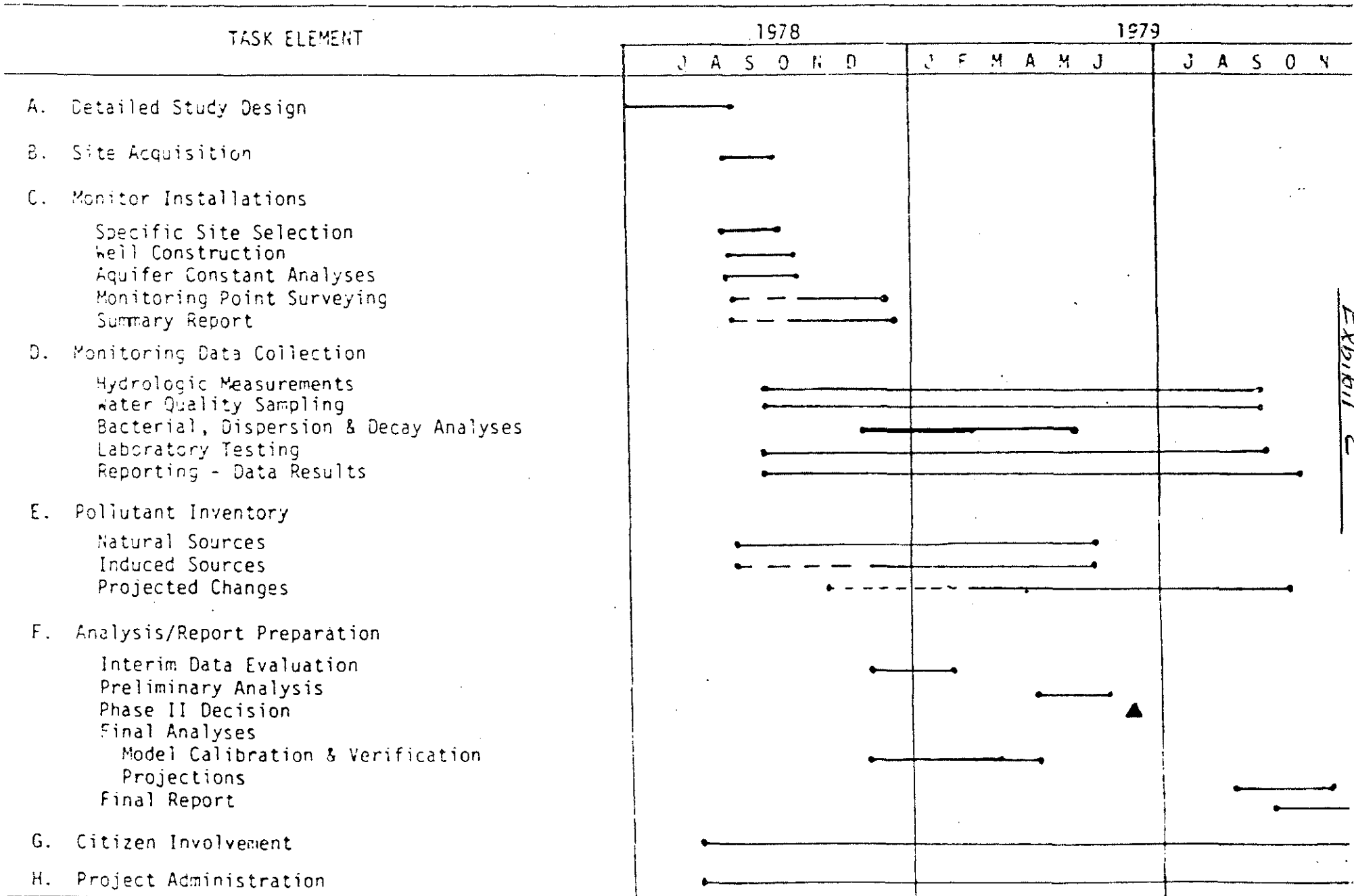


Exhibit 2

THEORETICAL NO₃-N CONCENTRATION IN
GROUND WATER, RIVER ROAD-SANTA CLARA

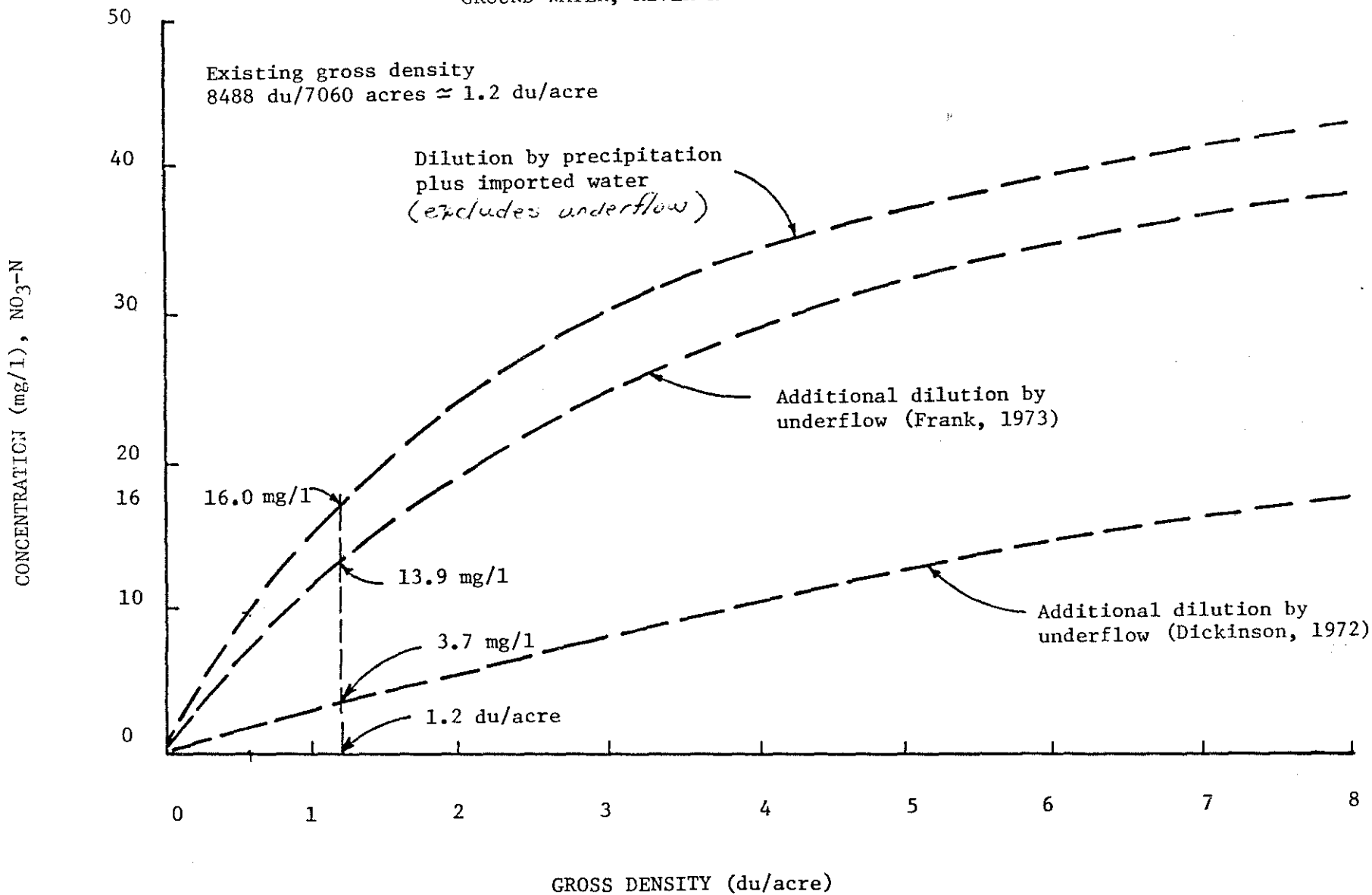


Exhibit 3

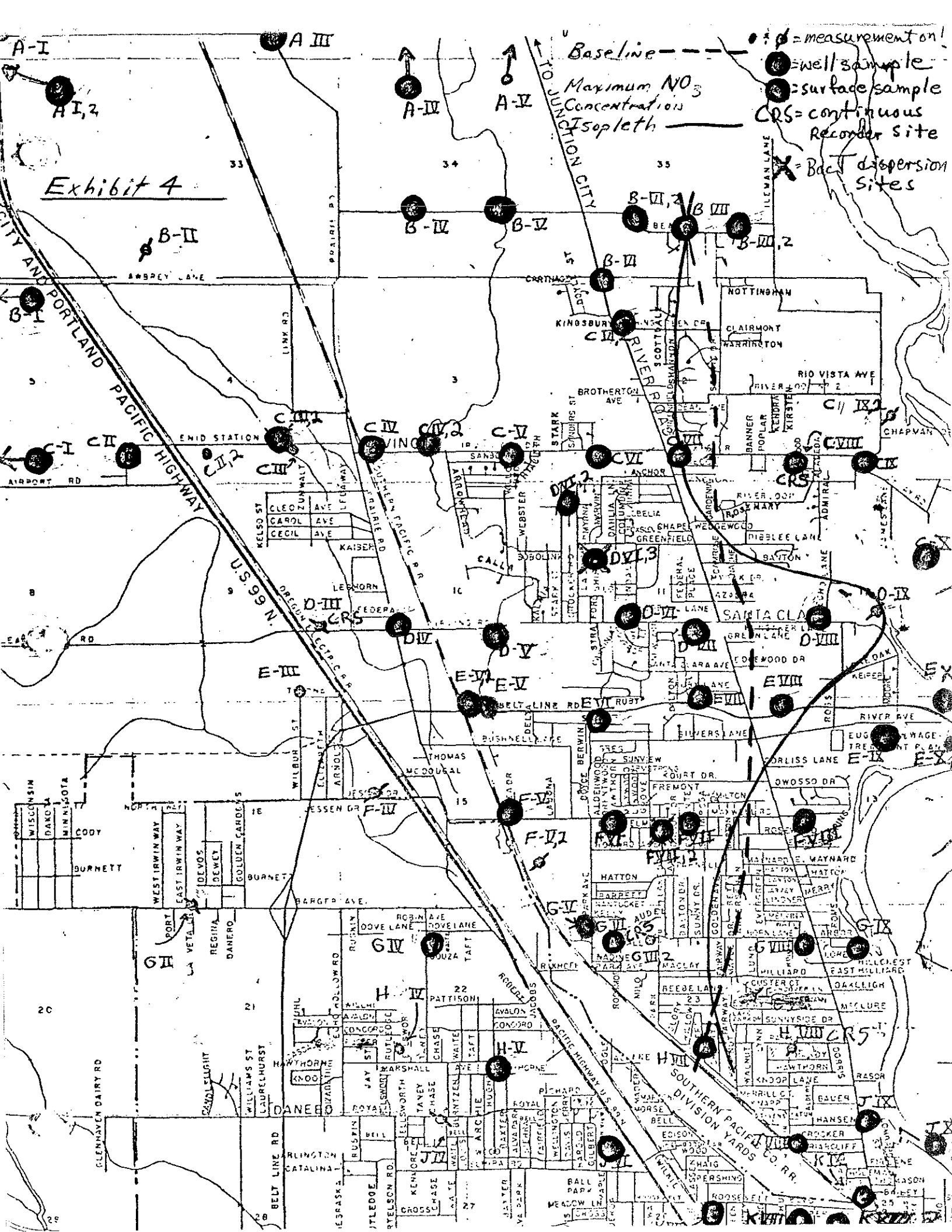


Exhibit 4

Baseline - - - - -
 Maximum NO₃ Concentration Isopleth ———
 • = measurement on well sample
 • = surface sample
 CRS = continuous Recorder site
 X = Back dispersion sites

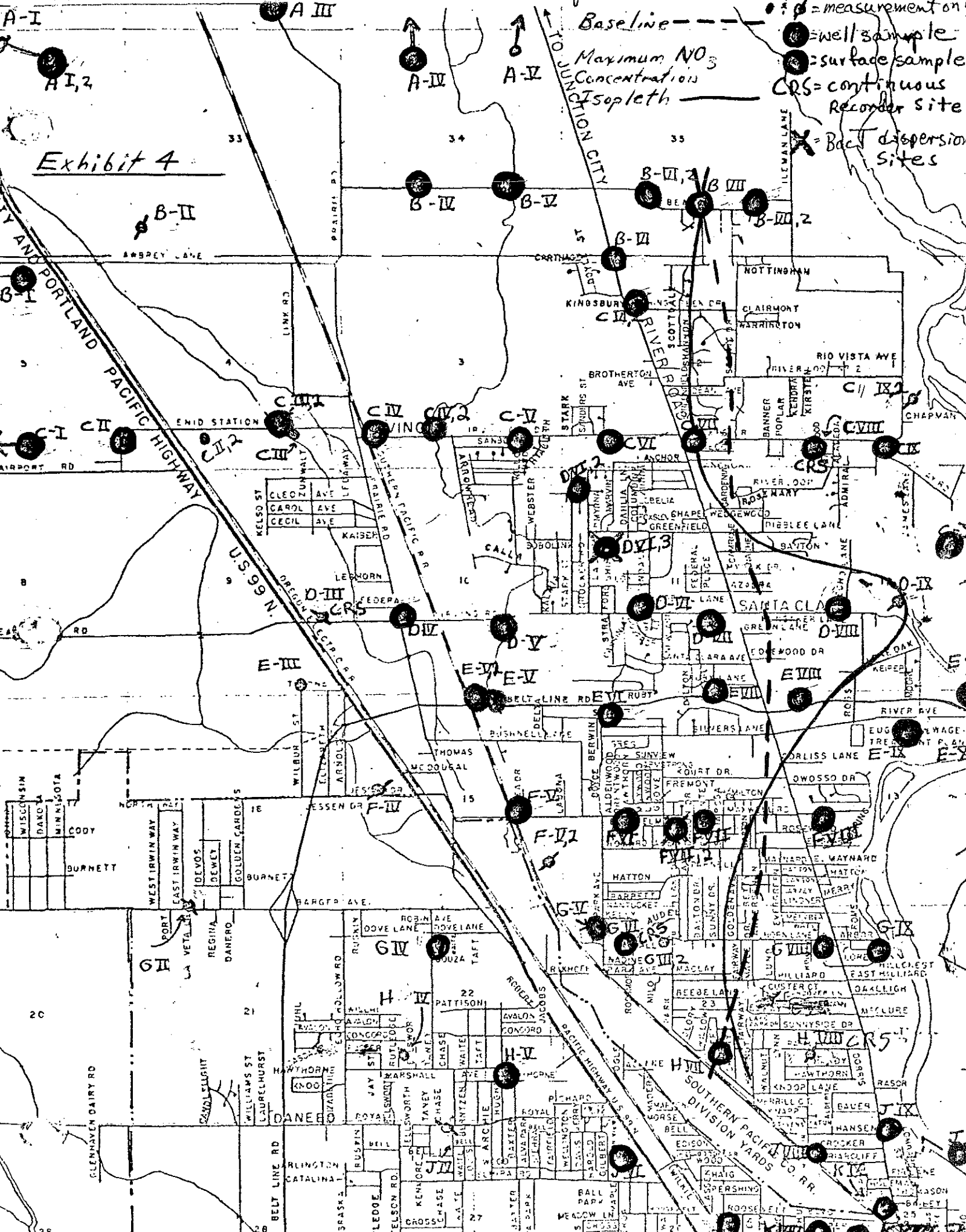


Exhibit 5

River Road - Santa Clara
Nitrate concentration vs. (Dashed curve)
Distance to peak concentration
isopleth (i.e. East or West)

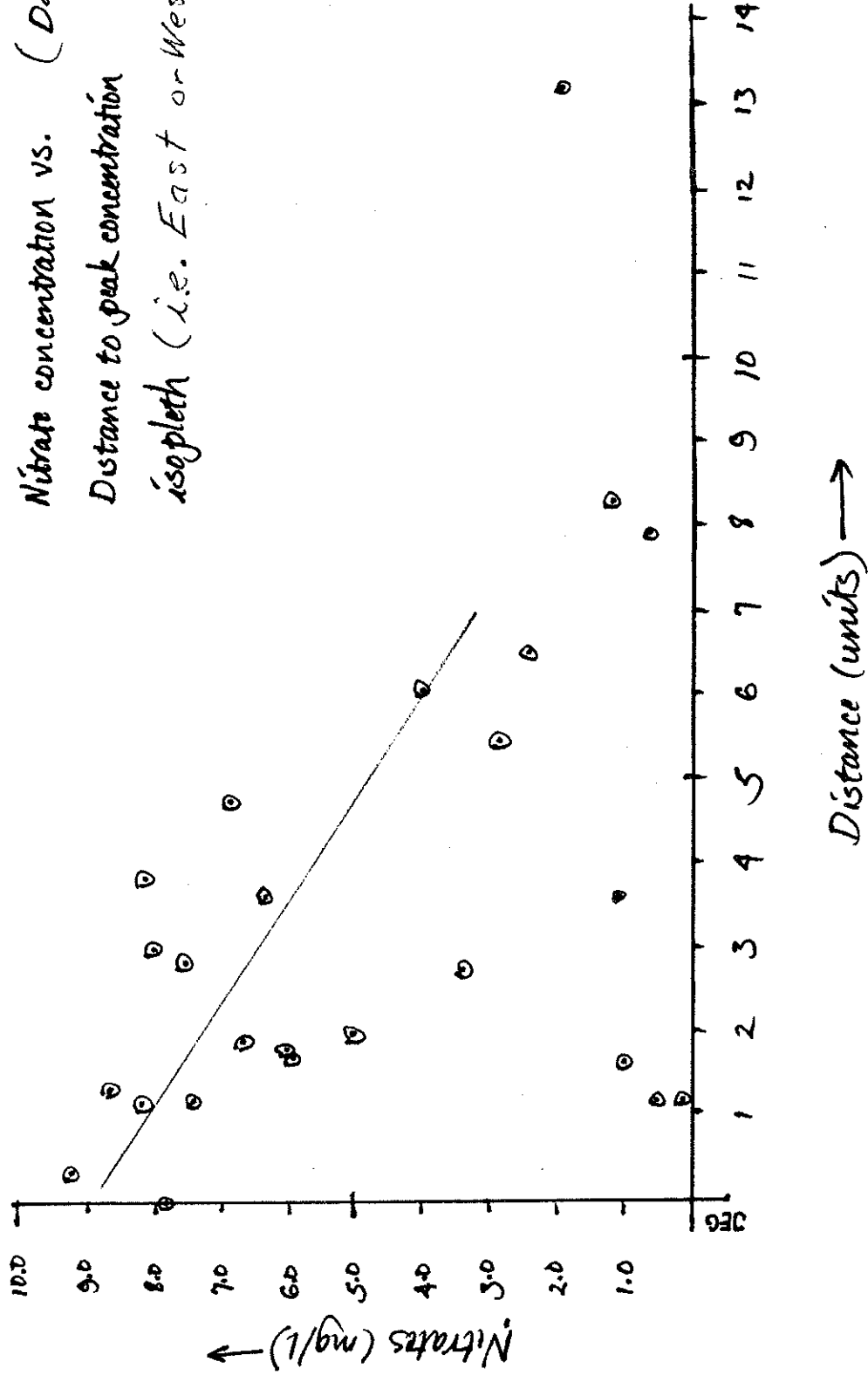
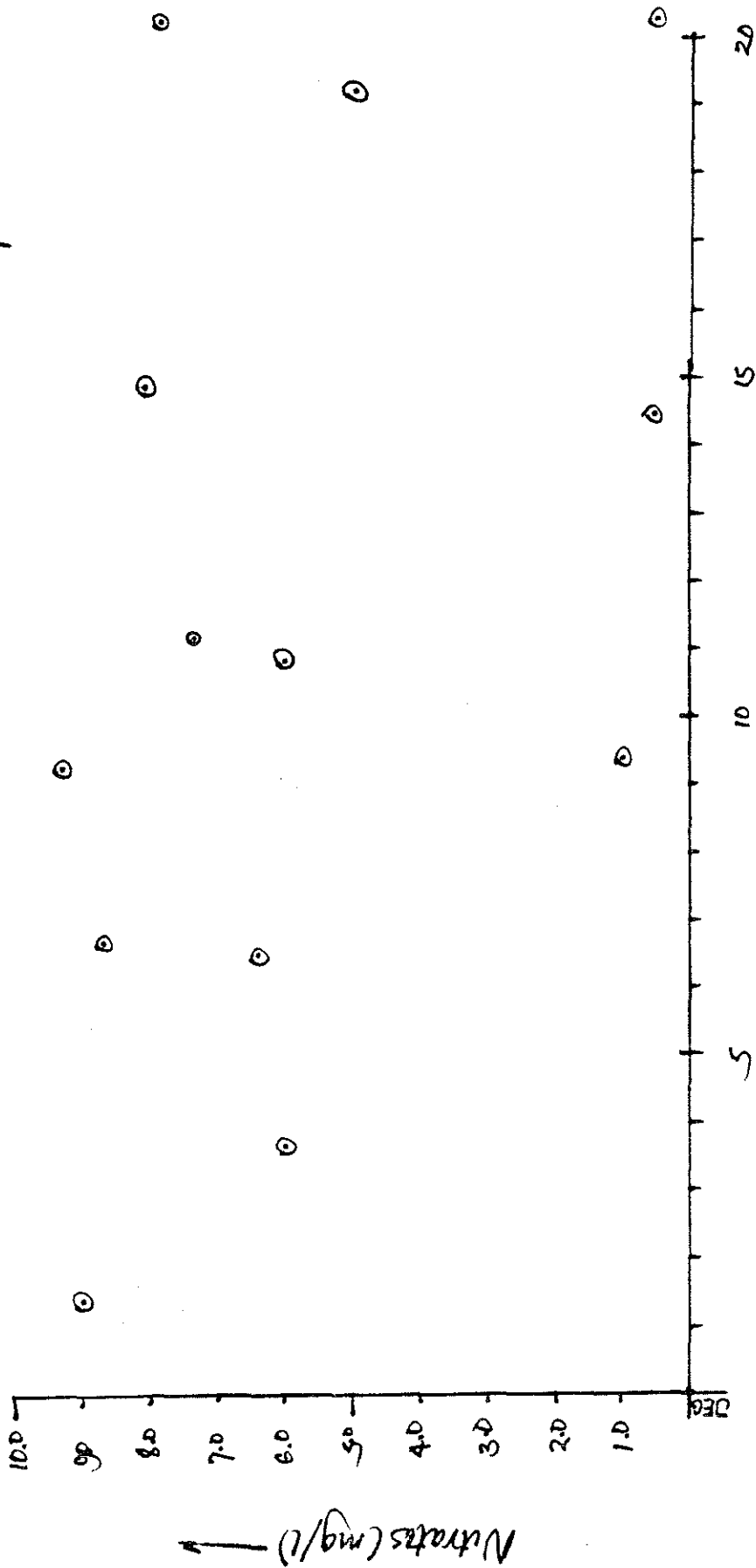


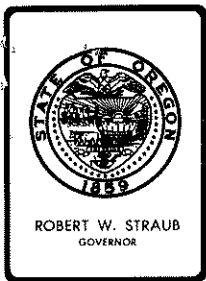
Exhibit 6

River Road-Santa Clara
Nitrate Concentration vs.
Baseline (distance from)



South End of Study Area

North End of Study Area



Environmental Quality Commission

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F , February 23, 1979 EQC Meeting

Indirect Source Rules - Request for Authorization to Hold a Public Hearing Regarding Proposed Rules Amendments (OAR 340-20-100 through OAR 340-20-135)

Background

Administration and effectiveness of the present Indirect Source (I/S) program has become increasingly questionable in view of: a) the impracticality of denying construction of projects which otherwise meet all land use requirements, and b) concerns by developers that review criteria are not clearly defined.

In order to respond to those criticisms of the I/S program, the EQC has previously directed the Department to prepare for public hearing a Rules change which would require all projects that would have a significant impact in areas projected to exceed air quality standards after 1982 to apply all reasonable mitigating measures. If projects meet these requirements they would be approved. Proposed significant impact criteria for carbon monoxide (CO) and Total Suspended Particulate (TSP) are shown below:

<u>Pollutant</u>	<u>Significant Impact Criteria</u>
CO	0.5 mg/m ³ (8 hour average)
TSP	1 ug/m ³ (annual average)
	5 ug/m ³ (24 hour average)

The proposed modification to the I/S Rules is shown in Attachment 1.



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Under the existing Rules and proposed Rules change the cumulative effect of many approved projects could be a violation of air quality standards after the clean air act deadline of standards attainment by 31, December 1982. As an alternative to the above outlined I/S Rules change, the Department could require local jurisdictions to develop Parking and Traffic Circulation Plans (P&TCP's) in areas projected to exceed air quality standards after December 31, 1982, and suspend at least until then the I/S parking permit program in those areas. A reasonable time to expect plans to be completed would be July 1982. This alternative is shown in Attachment 2.

Evaluation

1. The I/S Rules change shown in Attachment 1 (Alternative 1) would result in the approval of nearly all projects, provided that all reasonable mitigation measures were incorporated. It would not address the cumulative air quality impacts of many projects.
2. The I/S Rules change shown in Attachment 2 (Alternative 2) would require local jurisdictions to develop Parking and Traffic Circulation Plans (P&TCP's) which would address the long term cumulative impact of many projects in identified problem areas. The I/S permit program could be reinstated after plan development, if necessary, as a plan enforcement mechanism.
3. While the change in the Federal Ozone standard and projections of carbon monoxide air quality will lessen the need for P&TCP's in many areas for these pollutants, recent evidence indicates that transportation sources contribute significantly to regional particulate air quality problems, and their regulation through means of P&TCP's appears needed.
4. Because of Jackson County's documented transportation related air quality problems, the Department proposes in Attachment 2 to apply the 20,000 ADT rather than 50,000 ADT review criterion for new or modified highway projects in Jackson County.
5. Deletion of the present I/S review engineer's position in the Department's recommended 79-81 Biennial Budget and the unavailability of other planning staff due to SIP extension requests threatens to hamper implementation of either of the alternative Rules changes shown in Attachments 1 and 2.
6. On a priority basis, the most beneficial course of action would be to put available staff to work on the development of P&TCP's, which would address long term transportation-air quality related problems, than for the Department to spend time processing parking permits and trying to control air quality problems on a case by case basis.

Summation

1. Administration and effectiveness of the present Indirect Source (I/S) program has become increasingly questionable in view of a) the impracticality of denying construction of projects which otherwise meet all land use requirements, and b) concerns by developers that review criteria are not clearly defined.
2. The EQC has previously directed the Department to prepare for public hearing a Rules change which would result in approval of all parking projects even if their impact is projected to exceed specific air quality criteria, provided they incorporate all reasonable mitigating measures.
3. An alternative to the potential Rules change cited in 2 is to require parking and circulation plans in areas projected to exceed air quality standards after December 31, 1982 and suspend the I/S parking permit program in those areas at least until then.
4. While the change in the Federal Ozone Standard and projections of carbon monoxide air quality will lessen the need for parking and circulation plans in many areas for these pollutants, recent evidence indicates that transportation sources are a much greater cause of regional particulate air quality problems, and their regulation through parking and circulation plans appears needed.
5. Because of Jackson County's documented transportation related air quality problems, the Department proposes in Attachment 2 to apply the 20,000 ADT rather than 50,000 ADT review criterion for new or modified Highway projects in Jackson County.
6. Deletion of the present Indirect Source review engineer's position in the Department's 79-81 Biennial Budget threatens to hamper implementation of either of the two alternatives cited in 2 and 3.
7. On a priority basis it would be more beneficial to put available staff to work on the parking and circulation plan development to address long term transportation-air quality related problems, than for the Department to spend time processing parking permits and trying to control air quality problems on a case by case basis.

Environmental Quality Commission
February 23, 1979
Page 4

Recommendation

Based upon the summation, the Director recommends that the EQC authorize the Department to proceed to public hearing before a public hearings officer on modification to the I/S Rules under Alternative 2 (Attachment 2).

WILLIAM H. YOUNG
Director

JFKowalczyk:nlb
229-6459
February 9, 1979
Attachments (2)

Proposed Amendments to OAR 340-20-130

Issuance or Denial of Indirect Source Construction Permits

(5) For Highways and Airports, [An] an Indirect Source Construction Permit may be denied if:

(a) The Indirect Source will cause or contribute to a violation of the Clean Air Act Implementation Plan for Oregon.

(b) The Indirect Source will cause or contribute to a delay in the attainment of or cause or contribute to a violation of any state ambient air quality standard [.] and cause the following incremental impacts:

(A) Carbon Monoxide: The Indirect Source will cause a greater than 0.50 mg/m³ 8 hour average incremental concentration above the 8 hour average carbon monoxide standard after December 31, 1982;

(B) Total Suspended Particulate (TSP): The Indirect Source will cause either a greater than 1.0 ug/m³ annual average incremental concentration or 5.0 ug/m³ 24 hour average incremental concentration above the respective TSP secondary standards after December 31, 1982.

(c) The Indirect Source causes or contributes to any violation of any State Ambient Air Quality Standard by any other Indirect Source or system of Indirect Sources [.] and causes the increments in OAR 340-20-130 (5) (b) (A)-(B) to be exceeded.

(d) The applicable requirements for an Indirect Source Construction Permit application [s] are not met.

(6) For Parking Facilities and other Indirect Sources with Associated Parking where the Indirect Source will cause or contribute to a violation of any State Ambient Air Quality Standard after December 31, 1982 and will cause an incremental impact greater than specified under OAR 340-20-130 (5) (b) (A)-(B), the Indirect Source Construction Permit may be denied if:

(a) The Indirect Source fails to submit an Indirect Source Emission Control Program which either incorporates all reasonable mitigating measures or incorporates those measures that will reduce the impact below the above referenced increments.

[(6)] (7) Any Owner or operator of an Indirect Source operating without a permit required by this rule, or operating in violation of any of the conditions of an issued permit shall be subject to civil penalties and injunctions.

[(7)] (8) Nothing in this section shall preclude a Regional Authority authorized under section 340-20-105 from setting the permit conditions for areas within its jurisdiction at levels more stringent than those detailed in sections 340-20-100 through 340-20-135.

[(8)] (9) If the Department shall deny, revoke, or modify an Indirect Source Construction Permit, it shall issue an order setting forth its reasons in essential detail.

[(9)] (10) An Indirect Source Construction Permit shall be applied for at least 90 days in advance of the anticipated start of construction.

Statutory Authority: ORS 468.020 and 468.320

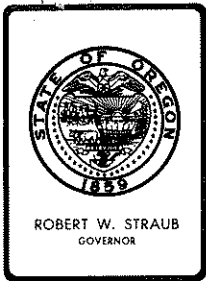
Hist: Filed 12-5-74 as DEQ 81, Eff. 12-25-74
Amended 3-11-75 by DEQ 86, Eff. 4-11-75
Amended by DEQ 110 (Temp),
Filed and Eff. 3-17-76 through 7-14-76
Amended by DEQ 118, Filed and Eff. 8-11-76

Attachment 2

Proposed Amendment to OAR 340-20-120

340-20-120 Establishment of an Approved Parking and Traffic Circulation Plan(s) by a City, County, or Regional Government or Regional Planning Agency.

(10) Upon the Commissions's concurrence of the Department's findings relative to the need for establishing a Parking and Traffic Circulation Plan, the Department or Regional Authority shall suspend, until January 1, 1983, the requirements of OAR 340-20-115 (1) - (2) for Parking Facilities or other Indirect Sources with Associated Parking locating within the P&TCP geographic area.



Environmental Quality Commission

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. G, February 23, 1979, EQC Meeting

Request for Authorization to Conduct a Public Hearing for
Proposed Amendments to Rules for Open Burning
(OAR 340-23-025 through 23-050)

BACKGROUND

Open burning of domestic waste has been permitted within certain areas of the Willamette Valley Open Burning Control Area on a twice yearly basis. This burning is permitted for approximately five weeks in the Spring and eight weeks in the Fall and was permitted to allow citizens to dispose of wood, needle and leaf material generated at their place of residence.

Under OAR 340-23-045 (6), this authorized open burning program is scheduled to expire July 1, 1979. The Department had anticipated, in establishing the initial July, 1 1979, date, that alternative methods for disposal of these domestic wastes would have been developed. This is not believed to be the case.

Alternatives to open burning of this type of material are: composting, chipping or removal to a landfill.

Composting is a viable alternative for some citizens who have a need for composted material and an area large enough to hold this material.

Chipping of branches and twigs is an alternative although not a viable one for most citizens. Purchase prices of a domestic sized chipper are from \$350 - \$2,000. Rental rates are approximately \$12 - \$18 for a minimum four hour period. Rental of this equipment necessitates the means for towing or hauling to the place of residence. Chippers are noisy and can be dangerous when children are present or are used by inexperienced operators. Chippers cannot dispose of leaves or grass clippings.

Landfilling, normally requires the use of a pickup truck or similar vehicle to which many citizens do not have access. The two sanitary landfills in the Portland area are expected to be full in 1980 and 1982 without the addition of this material.



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The Department proposes to:

- (1) Have citizen advisory committees consider the problem in their respective areas and make recommendations. Comments have been received from the Portland Air Quality Maintenance Area Citizens Advisory Committee (Attachment I). These comments will become part of the record at the proposed public hearing.
- (2) The Solid Waste Division has agreed to address the matter of alternative solutions with specific objectives and a time schedule--designed to investigate potentially viable alternatives and either develop these or conclude that alternatives are not practicable within a specific time frame.
- (3) Implement a much better public relations program so citizens may have a better understanding of the problem, the air quality impacts, cleaner burning procedures, and current and potential alternatives.

Proposed rule revisions include:

- (1) To allow a continuation of Spring and Fall domestic open burning in those portions of Multnomah, Clackamas, Columbia and Washington counties, where such burning would be otherwise prohibited, until December 31, 1980.
- (2) To allow a continuation of Spring and Fall domestic open burning of Benton, Linn, Marion, Polk and Yamhill counties until July 1, 1982.
- (3) To extend the permissible burning period; commencing on the third Tuesday in April through the fifteenth of June and the fourth Tuesday in October through the fifteenth of December. This additional time would allow a greater flexibility in permitted burning days.
- (4) Removing the coastal area of Lane County from the definition and current inclusion in the Willamette Valley Open Burning Control Area. (The Lane Regional Air Pollution Authority is in agreement with this proposed change.)
- (5) Including "Wet or green vegetation" in prohibited open burning activities.

SUMMATION

Under existing rules, domestic open burning in the Willamette Valley Open Burning Control Area will be prohibited after July 1, 1979 unless the current rule is modified.

The Department proposes the following changes to the open burning regulations:

- (1) To allow a continuation of domestic open burning in the Portland Metropolitan Area through 1980.
- (2) To allow a continuation of domestic open burning in all other areas of the Willamette Valley (except the city of Eugene, where burning is prohibited by city ordinance), until July 1, 1982.
- (3) To allow domestic open burning, commencing on the third Tuesday in April through the fifteenth of June and the fourth Tuesday in October through the fifteenth of December.
- (4) To remove from the Willamette Valley Open Burning Control Area, that portion of Lane County west of the Coast Mountain Range summit.
- (5) To include "wet or green vegetation" in prohibited open burning activities.

DIRECTOR'S RECOMMENDATION

Based upon the summation, the Director recommends that a public hearing before a hearings officer be authorized for 7:00 p.m. on Wednesday, March 21, 1979, in Room 602 Multnomah County Courthouse, 1021 S.W. Fourth Avenue, Portland, Oregon for the purpose of accepting public testimony on the proposed rule changes.



WILLIAM H. YOUNG

EJ Weathersbee:jl
229-5397
February 15, 1979

Attachment I - Letter from Portland AQMA
Attachment II - Draft Rules

February 9, 1979

Mr. William H. Young
Oregon Department of Environmental Quality
522 SW Fifth Avenue
Portland, Oregon 97204

Dear Mr. Young:

The Portland AQMA Advisory Committee is concerned about the continuous delay of the open burning ban. Domestic rubbish burning was prohibited in urban areas in July of 1970. Yet 9 years have passed, and residents, even in densely populated areas, are being allowed by DEQ to burn their yard trimmings. Attached is a history of the initial action by CWAPA and the variances which have been granted approximately every two years.

The reason for the first variance granted in 1971 as well as the subsequent ones is that solid waste alternatives have not been developed. Therefore, people have continued the habit of burning which is the quickest and cheapest means of disposal.

It is recognized that outdoor burning adversely affects health and visibility.

Our recommendations to you are these:

1. That the DEQ coordinate an effort among the MSD and local jurisdictions to provide alternatives to open burning.
2. That the DEQ not wait until landfill and large-scale burning options become available.
3. That the alternatives of chipping and composting be implemented wherever possible. Chips and compost are valuable resources as mulch or landfill cover.
4. That the DEQ consider limiting the variance to rural areas where the disposal options are fewer.
5. That the DEQ accompany the final phase-out of open burning with a major public information effort aimed at educating the public about the impact of burning and the alternative disposal methods.

Other committees have developed positive programs to handle yard trimmings so that the public does not feel the need to burn. We would like you to investigate these programs and to give them full consideration prior to further extensions. Attached is a sheet outlining some of the programs we have heard about.

Mr. William H. Young
Page 2

We would like to see a plan of action which can be implemented within a specific time frame. We plan to discuss this matter again at our February 27 meeting and would appreciate your comments at that time.

Respectfully,

A handwritten signature in cursive script that reads "Steve Lockwood". The signature is written in black ink and is positioned above the typed name and title.

Steve Lockwood, Chairman
Portland AQMA Advisory Committee

mg

cc: Mayor Neil Goldschmidt, City of Portland
Commissioner Connie McCready, City of Portland
Rick Gustafson, Metropolitan Service District
Joe Richards, EQC
Grace Phinney, EQC
Ronald Somers, EQC
Jackie Hallock, EQC
Al Densmore, EQC

ALTERNATIVES OF BACKYARD BURNING

Portland. Cloudburst, a local garbage company, had a CETA grant to determine what to do with compostable materials. One idea of theirs was to buy a shredder mounted on a trailer which would be taken through a community each month to shred people's yard trimmings. Norwood, Village in Bellevue, Washington does this.

The City of Portland already has a leaf pick-up program and a Christmas tree chipping program. These could be expanded to include limbs and branches.

Gladstone pays its hauling company to pick up people's yard trimmings.

Eugene passed an ordinance against backyard burning in 1970. Vern Adkison of Lane Regional Air Pollution Authority says there has been close cooperation between air quality and solid waste personnel. They have made it convenient for people to haul trimmings by establishing drop boxes; they have kept up with landfills; and they have a new transfer station planned. At the time of the burning ban, chipping companies were encouraged so that people can hire them to do big jobs. Private chippers are often shared within neighborhoods. The city has a good leaf pick-up service and gives these away to people with gardens. The county has initiated a composting project which will begin this spring. (Lane Regional is ready to extend their burning ban, but is having a hard time getting Springfield to go along because Portland and Salem aren't doing anything.)

Berkeley began a composing leaf banking program in 1976. Plant debris from parks and private individuals is delivered to a composting site on city property not far from the landfill. Citizens pay a nominal fee and get a voucher to obtain finished compost. The material is ground by a Tub grinder hammermill into a fine mulch and is then windrowed.

Nashville collects yard trimmings from residences. It shreds and composts the material on a field. It uses the compost as a soil conditioner in parks.

Old Westbury, New York in 1971 began making wood chips, as well as leaves, available to residents. People may leave limbs and branches no longer than four feet near the roads. The city collects and shreds them.

Many cities require people with brush to deliver it to a certain site at the landfill. Public works people shred it and spray it over the landfill. The advantage is that this saves money for landfill cover. Jerry Powell, a Portland recycling consultant and chairman of the Solid Waste Advisory Committee, says he doesn't know why Portland isn't doing this with the debris from the storm.

HISTORY OF THE OPEN BURNING BAN IN THE NORTHWEST REGION

A phase-out of open burning was begun by the Columbia-Willamette Air Pollution Authority in 1968.

- July 1968 No outside rubbish burning by industrial or commercial sources or apartments.
- July 1969 No large land clearing debris burning in suburbs surrounding Portland. This was extended to an area as far as Forest Grove, Gresham, Canby, and St. Helens by January 1970.
- July 1970 No domestic rubbish burning in urban areas. Washington County was given a variance until January 1971 to allow development of solid waste sites. All rural fire districts of the four counties were to be in compliance by January 1972. (Lane Regional and Mid-Willamette Air Pollution Authorities instituted the same ban.)

The last phase of the ban aroused some resistance. Many people on both sides of the issue began to express their opinions on backyard burning. A March 1971 CWAPA staff report stated that compliance was good, but the prohibition had caused solid waste problems, particularly for those with large acreages. It suggested that if the Board felt it necessary it could grant a variance to allow households to burn wood, needle or leaf materials in April and May. But it also stated its position:

"It is the staff opinion, open burning must be eliminated to achieve desirable air quality and that continued open burning is not an acceptable solution to the solid waste problem . . . the staff cannot justify any permanent modifications in the existing open burning rules."

A bill was introduced in the legislature to permit individuals to burn wood and leaves from their own residences until 1975.

Because of the controversy, CWAPA's Advisory Committee agreed to hold four public hearings in August 1971. They heard from the public that there was no organized means of disposing of yard trimmings. The problem was mainly in rural and suburban areas. People in populated areas seemed to be in favor of no burning. The committee recommended that CWAPA allow spring and fall burning for a limited time. The committee also expressed frustration because no one was doing anything about solid waste and agreed to meet with the appropriate agencies to encourage solutions.

Variances continued to be granted:

- 1972 CWAPA agreed to continue to allow twice a year burning with a cutoff date of January 1975.
- 1975 DEQ requested an extension to July 1977.
- 1977 DEQ requested an extension to July 1979.
- 1979 DEQ will request an extension to 1981.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 23

Rules for Open Burning

[ED NOTE: Administrative Order DEQ 37 repealed previous rules 340-23-005 through 340-23-021 (consisting of AP 4, filed 3-12-59; and applicable portions of SA 16, filed 2-13-62).]

340-23-005 [Filed 2-15-72 as DEQ 37, Eff. 3-1-72
Repealed by DEQ 123, Filed and Eff. 10-20-76]

340-23-010 [Filed 2-15-72 as DEQ 37, 3-1-72
Repealed by DEQ 123, Filed and Eff. 10-20-76]

340-23-015 [Filed 2-15-72 as DEQ 37, Eff. 3-1-76
Repealed by DEQ 123, Filed and Eff. 10-21-76]

340-23-020 [Filed 2-15-72 as DEQ 37, Eff. 3-1-72
Repealed by DEQ 123, Filed and Eff. 10-20-76]

Policy

340-23-025 In order to restore and maintain the quality of the air resources of the state in a condition as free from air pollution as is practicable, consistent with the overall public welfare of the state, it is the policy of the Environmental Quality Commission: to eliminate open burning disposal practices where alternative disposal

methods are feasible and practicable; to encourage the development of alternative disposal methods; to emphasize resource recovery; to regulate specified types of open burning; to encourage utilization of the highest and best practicable burning methods to minimize emissions where other disposal practices are not feasible; and to require specific programs and timetables for compliance with these rules.

Statutory Authority: ORS 468.020, 468.295, and 468.310

Hist: Filed and Eff. 10-20-76 as DEQ 123

Definitions

340-23-030 As used in these rules unless otherwise required by context:

(1) "Commercial Waste" means combustible waste which is generated by any activity of wholesale or retail commercial offices or facilities, or by industrial, governmental, institutional, or charitable organization offices and facilities, or by housing facilities with more than four living units including, but not limited to, apartments, hotels, motels, dormitories, and mobile home parks, but does not include any waste which is defined as industrial waste under subsection (9) of this section or which is prohibited in section 340-23-040(7).

(2) "Commission" means the Environmental Quality Commission.

(3) "Construction and Demolition Waste" means combustible waste which is generated by the removal of debris, logs, trees, brush, or demolition material from any site in preparation for land improvement or a construction project; any waste occurring as the result of a construction project; or any waste resulting from the complete or partial destruction of any man-made structures such as houses, apartments, commercial buildings, or industrial buildings.

(4) "Department" means the Department of Environmental Quality.

(5) "Director" means the Director of the Department of Environmental Quality or his delegated representative pursuant to ORS 468.045(3).

(6) "Domestic Waste" means combustible household waste, other than wet garbage, such as paper, cardboard, leaves, yard clippings, wood, or similar materials generated in a dwelling housing four (4) families or less, or on the real property on which the dwelling is situated.

(7) "Fire Hazard" means the presence or accumulation of combustible material of such nature and in sufficient quantity that its continued existence constitutes an imminent and substantial danger to life, property, public welfare, or to adjacent lands.

(8) "Forced-air Pit Incineration" means any method or device by which burning of waste is done in a subsurface pit or above ground enclosure with combustion air supplied under positive draft or air

curtain, and controlled in such a manner as to optimize combustion efficiency and minimize the emission of air contaminants.

(9) "Industrial Waste" means combustible waste produced as the direct result of any manufacturing or industrial process.

(10) "Open Burning" means conducted in such a manner that combustion air and combustion products may not be effectively controlled including, but not limited to, burning conducted in open outdoor fires, burn barrels, and backyard incinerators.

(11) "Open Burning Control Area" means an area established to control specific open burning practices or to maintain specific open burning standards which may be more stringent than those established for other areas of the state including, but not limited to, the following areas:

(a) All areas within incorporated cities having a population of four thousand (4,000) or more within three (3) miles of the corporate limits of any such city.

(b) The Coos Bay Open Burning Control Area, as generally depicted on Attachment 1, and as defined as follows: Beginning at a point approximately 4-1/2 miles WNW of the City of North Bend, Coos County, at the intersection of the north boundary of T25S, R13E and the coast line of the Pacific Ocean; Thence east to the NE corner of T26S, R12E; thence south to the SE corner of T26S, R12E; thence west to the intersection of the south boundary of T26S, R14W and the

coastline of the Pacific Ocean; thence northerly and easterly along the coastline of the Pacific Ocean to its intersection with the north boundary of T25S, R13E, the point of beginning.

(c) The Rogue Basin Open Burning Control Area, as generally depicted on Attachment 2, and as defined as follows: Beginning at a point approximately 4-1/2 miles NE of the City of Shady Cove, Jackson County at the NE corner of T34S, R1W, Willamette Meridian; thence south along the Willamette Meridian to the SW corner of T37S, R1W; thence East to the NE corner of T38S, R1E; thence South to the SE corner of T38S, R1E; thence East to the NE corner of T39S, R2E thence South to the SE corner of T39S, R2E; thence West to the SW corner of T39S, R1E; thence NW along a line to the NW corner of T39S, R1W; thence West to the SW corner of T38S, R2W; thence North to the SW corner of T36S, R2W; thence West to the SW corner of T36S, R4W; thence South to the SE corner of T37S, R5W; thence West to the SW corner of T37S, R6W; thence North to the NW corner of T36S, R6W; thence East to the SW corner of T35S, R1W; thence North to the NW corner of T34S, R1W; thence East to the point of beginning.

(d) The Umpqua Basin Open Burning Control Area, as generally depicted on Attachment 3, and as defined as follows: Beginning at a point approximately 4 miles WNW of the City of Oakland, Douglas County, at the NE corner of T25S, R5W, Willamette Meridian; thence South to the SE corner of T25S, R5W; thence East to the NE corner

of T26S, R4W; thence South to the SE corner of T27S, R4W; thence West to the SE corner of T27S, R5W; thence South to the SE corner of T30S, R5W; thence West to the SW corner of T30S, R6W; thence north to the NW corner of T29S, R6W; thence West to the SW corner of T28S, R7W thence North to the NW corner of T27S, R7W; thence East to the NE corner of T27S, R7W; thence North to the NW corner of T26, R6W; thence East to the NE corner of T26, R6W; thence North to the NW corner of T25S, R5W; thence East to the point of beginning.

(e) The Willamette Valley Open Burning Control Area, defined as follows: All of Benton, Clackamas, Columbia, [Lane], Linn, Marion, Multnomah, Polk, Washington, Yamhill and that portion of Lane County east of Range 7 West.

(12) "Person" means any individual, corporation, association, firm, partnership, joint stock company, public or municipal corporation, political subdivision, the state and any agency thereof, and the federal government and any agency thereof.

(13) "Population" means the annual population estimate of incorporated cities within the State of Oregon issued by the Center for Population Research and Census, Portland State University, Portland, Oregon.

(14) "Regional Authority" means the Lane Regional Air Pollution Authority.

(15) "Waste" means any useless or discarded materials.

Statutory Authority: ORS 468.020, 468.295, and 468.310

Hist: Filed and Eff. 10-20-76 as DEQ 123

Exceptions, Statewide

340-23-035 The provisions of these rules shall not apply to:

(1) Fires set for traditional recreational purposes and traditional ceremonial occasions for which a fire is appropriate provided that no waste materials which may emit dense smoke or noxious odors as prohibited in section 340-22-040(7) are included as any part of the fuel used for such fires.

(2) Any barbecue equipment not used for commercial or fund raising purposes, nor to any barbecue equipment used for commercial or fund raising purposes for no more than two periods in any calendar year, each such period not to exceed two consecutive weeks, in any single area.

(3) Fires set or allowed by any public agency when such fire is set or allowed to be set in the performance of its official duty for the purpose of weed abatement, instruction of employes in the methods of fire fighting, or for prevention or elimination of a fire hazard, and which are necessary in the opinion of the public agency responsible for such fires.

(4) Open burning as a part of agricultural operations which is regulated in part by OAR Chapter 340, Division 26, **Agricultural Operations**.

(5) Open burning on forest land permitted under the Smoke Management Plan filed pursuant to ORS 477.515.

(6) Fires set pursuant to permit for the purpose of instruction of employees of private industrial concerns in methods of fire fighting, or for civil defense instruction.

Statutory Authority: ORS 468.020, 468.295, and 468.310

Hist: Filed and Eff. 10-20-76 and DEQ 123

General Requirements and Prohibitions

340-23-040 (1) No person shall cause or allow to be initiated or maintained any open burning which is prohibited by any rule of the Commission.

(2) Open burning in violation of any rule of the Commission shall be promptly extinguished by the person in attendance or person responsible when notified to extinguish the fire by either the Department, or by any other appropriate public official.

(3) Any person who owns or controls, including the tenant of, property on which open burning occurs or who has caused or allowed such open burning to be initiated or maintained shall be considered the person responsible for the open burning.

(4) Open fires allowed by these rules shall be constantly attended by a responsible person until extinguished.

(5) All combustible material to be open burned shall be dried to the extent practicable to prevent emissions of excessive smoke.

(6) All combustible material to be open burned shall be stacked or windrowed in such a manner as to eliminate dirt, rocks, and other non-combustible material, to promote efficient burning. Equipment and tools shall be available to periodically re-stack the burning material to insure that combustion is essentially completed and that smoldering fires are prevented.

(7) Open burning of any waste materials which normally emit dense smoke, noxious odors, or which may tend to create a public nuisance such as, but not limited to, household garbage, wet or green vegetation, plastics, wire insulation, auto bodies, asphalt, waste petroleum products, rubber products, animal remains, and animal or vegetable wastes resulting from the handling, preparation, cooking, or service of food is prohibited.

(8) If the Department determines that open burning allowed by these rules may cause or is causing a public nuisance, the Department may require that the burning be terminated or that auxiliary combustion equipment or combustion promoting materials to be used to insure complete combustion and elimination of the nuisance. Auxiliary combustion equipment required under this subsection may

include, but is not limited to, fans or air curtain incinerators. Combustion promoting materials may include, but are not limited to, propane, diesel oil, or jellied diesel.

(9) No open burning shall be initiated in any part of the state on any day or at any time when the Department advises fire permit issuing agencies that open burning is not allowed in that part of the state because of adverse meteorological or air quality conditions.

(10) No open burning shall be initiated in any area of the state in which an air pollution alert, warning, or emergency has been declared pursuant to OAR Chapter 340, Sections 340-27-010 and 340-27-025(2), and is then in effect. Any open burning in progress at the time of such declaration shall be promptly extinguished by the person in attendance or person responsible when notified of the declaration by either the Department or any other appropriate public official.

(11) Open burning authorized by these rules does not exempt or excuse any person from liability for, consequences, damages, or injuries resulting from such burning, nor does it exempt any person from complying with applicable laws, ordinances, or regulations of other governmental agencies having jurisdiction.

(12) Forced-air pit incineration may be approved as an alternative to open burning prohibited by these rules, provided that the following conditions shall be met:

(a) The person requesting approval of forced air pit incineration shall demonstrate to the satisfaction of the Department or Regional Authority that no feasible or practicable alternative to forced-air pit incineration exists.

(b) The forced-air pit incineration facility shall be designed, installed, and operated in such a manner that visible emissions do not exceed forty percent (40%) opacity for more than three (3) minutes out of any one (1) hour of operation following the initial thirty (30) minute startup period.

(c) The person requesting approval of a forced-air pit incineration facility shall obtain an Air Contaminant Discharge Permit, if required therefor, and the person shall be granted an approval of the facility only after a Notice of Construction and Application for Approval is submitted pursuant to OAR Chapter 340, Sections 340-20-020 through 340-20-030. Statutory Authority: ORS 468.020, 468.295, and 468.310

Hist: Filed and Eff. 10-20-76 as DEQ 123

Requirements and Prohibitions by Area

340-23-045 (1) Lane County: The rules and regulations of the Lane Regional Air Pollution Authority shall apply to all open burning conducted in Lane County, provided that the provisions of such rules and regulations shall be no less stringent than the provisions of these rules.

(2) Solid Waste Disposal: Open burning at solid waste disposal sites is prohibited statewide except as authorized by a Solid Waste Permit issued as provided in OAR Chapter 340, Sections 340-61-005 through 340-61-085.

(3) Commercial Waste: Open burning of commercial waste is prohibited within open burning control areas except as may be provided in subsection [7] (8) of this section.

(4) Industrial Waste: Open burning of industrial waste is prohibited statewide except as may be provided in subsection [7] (8) of this section.

(5) Construction and Demolition Waste: Except as may be provided in subsection [7] (8) of this section, open burning of construction and demolition waste, including non-agricultural land clearing debris, is prohibited as follows:

(a) Within all open burning control areas in Baker, Benton, Clatsop, Coos, Crook, Deschutes, Douglas, Hood River, Jackson, Josephine, Klamath, Lincoln, Linn, Malheur, Marion, Polk, Tillamook, Umatilla, Union, Wasco, and Yamhill counties.

(b) In Multnomah County west of the Sandy River.

(c) In Washington County in all areas within rural fire protection districts, including the areas of incorporated cities within or surrounded by said districts.

(d) In Columbia and Clackamas counties within control areas established as:

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

(B) Any area in or within six (6) miles of the boundary of any city of 45,000 or more population.

(C) Any area between areas established by this rule where the boundaries are separated by three (3) miles or less.

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

(6) Domestic Waste: Open burning of domestic wastes is prohibited in the Willamette Valley Open Burning Control Area, except such burning is permitted [~~until July 1, 1979~~] until December 31, 1980:

(a) In Columbia County excluding the area within the Scappoose Rural Fire Protection District.

(b) In the Timber and Tri-City Rural Fire Protection District and in all areas, outside of rural fire protection districts in Washington County.

(c) In the following rural fire protection districts of Clackamas County:

- (A) Clarkes Rural Fire Protection District.
- (B) Estacada Rural Fire Protection District No. 69.
- (C) Colton-Springwater Rural Fire Protection District.
- (D) Molalla Rural Fire Protection District.
- (E) Hoodland Rural Fire Protection District.
- (F) Monitor Rural Fire Protection District.
- (G) Scotts Mills Rural Fire Protection District.
- (H) Aurora Rural Fire Protection District.
- (I) All portions of the Clackamas-Marion Fire Protection

District within Clackamas County.

(d) In Multnomah County east of the Sandy River.

(e) In all other parts of Multnomah, Washington, Clackamas and Columbia counties, for the burning of wood, needle and leaf materials from trees, shrubs or plants from yard clean-up on the property at which one resides, during the period [~~commeneing-with-the-last-Friday in-October-and-terminating-at-sunset-on-the-third-Sunday-in-December, and-the-period-commeneing-the-second-Friday-in-April-and-terminating at-sunset-on-the-third-Sunday-in-May.~~] commencing on the third Tuesday in April and terminating at sunset on the fifteenth of June and commencing on the fourth Tuesday in October and terminating at sunset on the fifteenth of December.

(7) Domestic Waste: Open burning of domestic wastes is prohibited in the Willamette Valley Open Burning Control Area, except such burning is permitted until July 1, 1982:

(a) In the counties of Benton, Linn, Marion, Polk and Yamhill for wood, needle and leaf materials from trees, shrubs or plants from yard cleanup on the property at which one resides, during the period commencing on the third Tuesday in April and terminating at sunset on the fifteenth of June and commencing on the fourth Tuesday in October and terminating at sunset on the fifteenth of December.

[f] (b) In Lane County, in accordance with the Rules and Regulations of the Lane Regional Air Pollution Authority.

[g] (c) Domestic open burning is allowed under this section only between 7:30 a.m. and sunset on days when the Department has advised fire permit issuing agencies that open burning is allowed.

[7] (8) Open Burning Allowed by Letter Permit: Burning of commercial, industrial and construction and demolition waste on a singly occurring or infrequent basis may be allowed by a letter permit issued by the Department, provided that the following conditions are met:

(a) No practicable alternative method for disposal of the waste is available.

(b) Application for disposal of the waste by burning is made in writing to the Department, listing the quantity and type of waste to be burned, and all efforts which have been made to dispose of the waste by other means.

(c) The Department shall evaluate all such requests for open burning taking into account reasonable efforts to use alternative means of disposal, the condition of the particular airshed where the burning will occur, other emission sources in the vicinity of the requested open burning, remoteness of the site and methods to be used to insure complete and efficient combustion of the waste material.

(d) If the Department is satisfied that reasonable alternative disposal methods are not available, and that significant degradation of air quality will not occur as the result of allowing the open burning to be accomplished, the Department may issue a letter permit to allow the burning to take place. The duration and date of effectiveness of the letter permit shall be specific to the individual request for authorization of open burning, and the letter permit shall contain conditions so as to insure that the burning is accomplished in the most efficient manner and over the shortest time period attainable.

(e) Within the boundaries of Clackamas, Columbia, Multnomah, and Washington counties, such letter permits shall be issued only for the purpose of disposal of waste resulting from emergency

occurrences including, but not limited to, floods, windstorms, or oil spills, provided that such waste cannot be disposed of by any other reasonable means.

(f) Failure to conduct open burning according to the conditions of the letter permit, or any open burning in excess of that allowed by the letter permit shall cause the permit to be immediately terminated as provided in OAR 340-14-045(2) and shall be cause for assessment of civil penalties as provided in OAR 340-12-030, 340-12-035, 340-12-040(3)(b), 340-12-045, and 340-12-050(3), or for other enforcement action by the Department.

Statutory Authority: ORS 468.020, 468.295, and 468.310

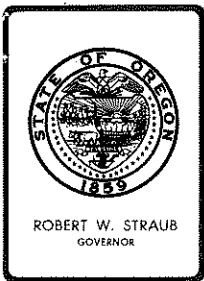
Hist: Filed and Eff. 10-20-76 as DEQ 123

Records and Reports

340-23-050 As required by ORS 478.960(7), fire permit issuing agencies shall maintain records of open burning permits and the conditions thereof, and shall submit such records or summaries thereof to the Commission as may be required. Forms for any reports required under this section shall be provided by the Department.

Statutory Authority: ORS 468.020, 468.295, and 468.310

Hist: Filed and Eff. 10-20-76 as DEQ 123



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. 1, February 23, 1979

Requests by Clatsop County for Extension of Variances from Rules Prohibiting Open Burning Dumps, OAR 340-61-040(2)(c).

Background

At the September 23, 1977, EQC meeting, staff presented variance requests from Clatsop County (Agenda Item No. H, attached) to allow for continued open burning at (3) solid waste disposal sites. At the time of the request it was the opinion of staff that (18) months would be sufficient time to correct immediate site deficiencies and initiate a sound solid waste program.

Evaluation

Clatsop county Board of Commissioners on behalf of private operators at Seaside and Cannon Beach Disposal Sites and the County at the Elsie Disposal Site have requested 12 to 18 months variances commencing March 1, 1979.

Clatsop County has spent the major portion of the (18) month variance period attempting to locate a suitable landfill site. Some time was lost because of the possible reactivation of the composting project which Clatsop and Tillamook Counties had expected to solve their solid waste disposal problems.

A solid waste disposal landfill search committee has been very active. A consulting geologist was hired to assist in locating and engineering a regional landfill site. Two potential sites were found. One site (Clifton Rd.) is available for purchase, but due to the long distance from the major volumes of solid waste, other alternate sites were sought. The other potential site is owned by Bonneville Power Administration. This site is the best landfill site both from its central location and environmental considerations. Recent discussions with BPA officials, however, indicate a lengthy procedure to attempt purchase of the property. Purchase proceedings could take up to two years. The projected two-year delay in acquisition of the BPA site is unacceptable to the County and the Department. Other alternatives are being discussed with the County.



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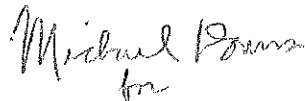
Summation

1. Because of technical and land purchase difficulties, previously adopted time schedules for phase out of open burning solid waste disposal sites have not been met.
2. Strict compliance with OAR 340-61-040(2)(c) would result in substantial curtailment or closing of the 3 disposal sites in Clatsop County.
3. No alternative facility or alternative method of solid waste management is currently available in Clatsop County.

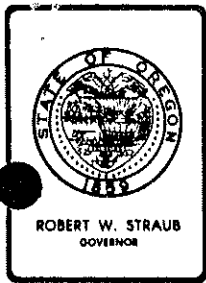
Director's Recommendation

Based upon the findings in the Summation, the Director recommends that:

1. Variances be granted to expire on March 1, 1980 for Seaside, Cannon Beach and Elsie landfills in Clatsop County.
2. Disposal sites be closed prior to expiration date of variance if a practical alternative method of disposal is available.
3. The EQC find the variance requests meet the intent of ORS 459.225(3)(c) in that strict compliance would result in closing of the disposal sites and no alternative facility or alternative method of solid waste management is available.


for
WILLIAM H. YOUNG

C.H.Gray
229-5288
2/13/79
Attachment



Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. H, September 23, 1977, EQC Meeting

Requests By Coastal Cities and Counties for Extensions of Variances
from Rules Prohibiting Open Burning Dumps, OAR 340-61-040(2)(c).

Background

At the September 26, 1975, EQC meeting staff presented variance requests from five coastal counties (Agenda Item No. G, attached) to allow for continued open burning at 11 solid waste disposal sites. At the time of the request it was the opinion of staff that two years would be sufficient time to correct immediate site deficiencies and at least initiate a sound solid waste program in all coastal counties.

Varying degrees of upgrading and/or progress has been made by each county. However, it appears that none of the counties can meet the October 1, 1977, variance expiration date with an implemented environmentally acceptable solid waste program.

Requests for variance extension have been received from the following:

Clatsop County. Clatsop County Board of Commissioners on behalf of private operators at Seaside and Cannon Beach Disposal Sites and the county at the Elsie Disposal Site have requested an 18 month variance commencing October 1, 1977. (Because of limited area at the Elsie Site, burning is necessary for volume reduction.)

All sites have been upgraded and are operated as near compliance with regulations as possible. Clatsop County has spent the major portion of the two year variance period working with Tillamook County toward implementation of a composting system (private industry). Service districts were formed in each county (Clatsop County by an election with approximately a five-to-one margin) and intergovernmental agreements were consummated. Due to various economic reasons private industry was unable to bid on the project and both counties are left without a disposal system. The county has reactivated a landfill search committee and adopted a time schedule for selection of a site.



Contains
Recycled

Tillamook County. Tillamook County through the Public Works Department has requested a 19 month extension (to May 1, 1979) for Manzanita, Pacific City, and Tillamook Disposal Sites.

Tillamook County has participated in the composting project described above and has made improvements at the Tillamook Site. The advisory committee is now addressing options available to the county. The county has set a December 1, 1977, date for final decision.

Lincoln County. By resolution Lincoln County Commissioners in behalf of private operators have requested a nine (9) month extension to the variance for North Lincoln and Waldport.

Lincoln County voters approved a \$650,000 bond issue for solid waste disposal. However Lincoln County private operators have made agreements with private operators in Benton County for the transfer of Lincoln County solid waste to Coffin Butte Sanitary Landfill (Corvallis). Final intergovernmental agreements and conditional use changes on the site are pending thus the extension request.

Curry County. Curry County Commissioners have requested a one (1) year extension for the county operated Brookings and Nesika Beach (Gold Beach) Disposal sites.

During the two year period Curry County has upgraded the Port Orford Disposal Site. The county anticipated an energy recovery plant in the Coos Bay area after completion of the Coos-Curry Solid Waste Plan and Phase I of the Port of Umpqua plan. As the project has not evolved, Curry County has by resolution withdrawn from the Coos-Curry Solid Waste Planning Council and has contracted with Oregon Sanitary Service Institute for a secondary study. Curry County has pledged immediate action toward implementation upon completion of this study (January 1978).

Cities of Myrtle Point and Powers (Coos County). Requests have been received from the Cities of Myrtle Point and Powers to extend the variance for a period of two years. Both cities have agreed to develop source separation projects to reduce the volume of solid waste entering the disposal sites.

Coos County has closed the Fairview Disposal Site and has upgraded operation at Joe Ney (Coos Bay) and Bandon Disposal Sites. The Bandon site is available for use by cities and private industry if they can get there. The county to date has chosen to not proceed with apparently feasible energy recovery projects and has not developed an alternative county-wide solid waste management plan.

Evaluation

The variance requests involve variance from the Department's Solid Waste Management regulations OAR 340 61-040(2)(c) which prohibits open burning or open dumps of putrescible solid wastes. Under air quality Administrative Rules adopted October 1976, all open burning considerations are now made under the Solid Waste Disposal Permit.

Clatsop and Tillamook Counties, supported by the Department have spent most of the two year period negotiating with and preparing for transfer to the private industry composting plant. It has been quite recent that the project stalled out and they are actively resuming the search for alternatives.

Lincoln County voters passed the \$650,000 Bond Election to finance construction of an in-county processing facility. Capital and operational costs would have exceeded \$11 per ton. Private collectors in negotiation with private operators in Benton County have found that they can transfer for approximately \$7 per ton. A conditional use change is needed on the Coffin Butte (Corvallis) Sanitary Landfill before they can receive Lincoln County solid waste. The public hearing for this change is scheduled for November. The Department has supported this project as it will in all probability, speed the realization of a planned resource recovery plant in the Corvallis area.

Curry County relied on Coos County to take the lead in further study and implementation of our energy recovery system to serve the coast from Reedsport south. Since it appeared to them that the facility would not be constructed they have, with Department support, contracted for a study to provide at least interim acceptable facilities for Brookings and Gold Beach.

The Cities of Myrtle Point and Powers (in Coos County) have pledged to attempt recycling activities to minimize open burning. However, there is no recognized county-wide plan for implementing an acceptable long-term solution which an extension of their variances will lead toward.

It is the staff's opinion that with the exception of Coos County, the programs presented in support of variance requests on September 26, 1975, have been diligently pursued. The Coos County situation could be considered further and in more detail at the EQC meeting scheduled for October 1977 in Coos Bay.

Summation

1. Because of technical and political difficulties previously adopted time schedules for phase out of coastal open burning solid waste disposal sites have not been met.
2. Clatsop and Tillamook Counties have reactivated their solid waste committees to seek an alternate solution to the composting project. Even if the composting project is successful, construction time is such that a variance is needed.
3. Lincoln County is finalizing negotiations to transfer all solid waste to Benton County.
4. Curry County has contracted for a second phase study to be completed by early 1978 and is committed to follow through with implementation.
5. Coos County has upgraded the two remaining county operated disposal sites, providing free disposal at each. However, no recognized county-wide plan is in effect which will assist the Cities of Myrtle Point and Powers to a final closure of their open burning sites.

6. It is the opinion of the staff that approval of the variances as requested is necessary to facilitate transition to an acceptable solid waste program.
7. To approve the variance requests the EQC must make a finding that the facilities meet the requirements of the statutes in that strict compliance would result in closing of the facilities and no alternative facility or alternative method is yet available.

Director's Recommendation

It is the Director's recommendation that:

1. Variances be granted to expire as dated below for each specific county:

Clatsop County (Seaside, Cannon Beach, Elsie), March 1, 1979
Tillamook County (Manzanita, Pacific City, Tillamook), May 1, 1979
Lincoln County (North Lincoln, Waldport), July 1, 1978
Curry County (Brookings, Nesika Beach), October 1, 1978
2. Variances be granted for Myrtle Point and Powers (Coos County) to expire December 1, 1977, and that Coos County solid waste program be considered as a separate item during the October 1977 EQC meeting (to be held in Coos Bay).
3. Disposal sites to be closed prior to expiration date of variance if a practical alternative method of disposal is available.
4. The EQC find that the variance requests meet the intent of ORS 459.225(3)(c) in that strict compliance would result in closing of the disposal sites and no alternative facility or alternative method of solid waste management is available.

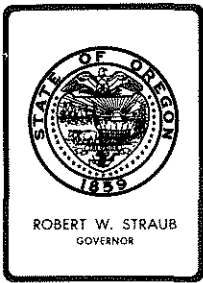
Bill

WILLIAM H. YOUNG

RLBrown/kz
229-5913
9/8/77

Attachment (1)

Agenda Item No. G, September 26, 1975, EQC Meeting



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item J, February 23, 1979 EQC Meeting. City of Gearhart - Request for Permanent Amendment of Clatsop Plains Subsurface Sewage System Installation Moratorium (OAR 340-71-020(7))

Background

Please see the background materials in the attached Hearing Report (Attachment 1).

Statement of Need for Rulemaking

1. ORS 454.625 is relied upon in adopting the proposed amendment(s).
2. On April 1, 1977 the EQC adopted OAR 340-71-020(7). The intent of this section was to protect and preserve the quality of the groundwater. Amendments to this section have occurred on October 21, 1977, March 31, 1978, June 30, 1978, October 27, 1978 and November 17, 1978. In particular, the EQC at its October 27, 1978 meeting adopted temporary rule amendments which allow construction of new subsurface sewage disposal systems in the City of Gearhart up to a maximum of 57 single family equivalent units. There is a need for permanent adoption of the rule to permit the City of Gearhart to implement its land-use decisions without endangering waters of the state.
3. Principally prepared by the Agency and/or relied upon in considering the need for and in preparing the rule are the reports of the staff and the hearings records before the Commission and pertaining to the subsurface sewage rules in the "Clatsop Plains" area in the Commission's meetings of April 1, 1977, October 21, 1977, March 31, 1978, June 30, 1978 and October 27, 1978.

Evaluation

With regard to the temporary rule (Attachment A of the Hearing Officer's report), testimony offered was all in favor. It is, therefore, deemed appropriate to adopt it as a permanent rule.

Summation

Requisite public notice, public participation, filing with legislative counsel, statement of need preparation and Land Use coordination notice



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approved density figure for areas of Clatsop Plains no longer under the moratorium (one acre/family density).

A public hearing on the issue of making the temporary rule permanent was authorized by the Commission, held in Gearhart on February 8, 1979 and is the subject of this hearing report.

SUMMARY The hearing, after requisite public notice, was commenced at 7:30 p.m. on February 8, 1979 in the Gearhart City Hall in Gearhart, Oregon. Present were some 20 persons. Technical questions and other environmental concerns were dealt with informally and off the record. Formal testimony was offered by the following three witnesses:

Mr. William Berg of Gearhart spoke in favor of adopting the temporary rule as a permanent rule. He stated that the City was having no problems with the procedure agreed to with the County for septic tank permit issuance.

Mrs. Doris Ferguson of Gearhart spoke in favor of permanent adoption of the rule.

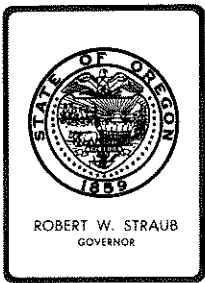
Mr. Leo Sayles, chairman of the Gearhart Planning Commission, testified in favor of adopting a permanent rule. Mr. Sayles represented the Planning Commission in this matter.

RECOMMENDATION Your Hearing Officer recommends permanent adoption of the rule.

Respectfully submitted,

Donald L. Bramhall
Hearing Officer

DLB:mkw
Attachment



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Hearing Officer

Subject: Hearing Report; City of Gearhart - Request for Permanent Amendment of Clatsop Plains Subsurface Sewage System Installation Moratorium (OAR 340-71-020(7))

CAUTION A general discussion of the proposed amendments follows. The discussion is in terms more general than the proposals are worded. Reading the discussion is not a substitute for carefully reading the proposed amendments if you are likely to be affected by them.

BACKGROUND In April of 1977, after a public hearing in Seaside, the Commission adopted a rule which prohibited permission for new or expanded on-site subsurface sewage disposal systems (usually septic tank-drainfield facilities) in the area of Clatsop County generally known as Clatsop Plains. This area (whose exact political bounds are specifically set forth in the rule) is characterized by sand dunes of great depth and 30 to 40 percent voids through which a potentially invaluable groundwater supply can be found at varying depths from the surface of the land. This water supply (aquifer) is, from what measurements are presently available, subject to increasing infiltration of nitrates with increasing use of conventional on-site disposal methods. The presence of nitrates in domestic water supplies is the subject of a federal drinking water standard of ten parts per million. The potential development in the Clatsop Plains Area was found to constitute a significant risk of contamination. With its adoption of the rule the Commission stated its intention to consider such alternatives as might later be proposed by local government or in the light of further information regarding the risk of contamination.

In late 1977 the Commission modified the rule, at the request of Clatsop County, to allow development not to exceed one acre/family density equivalent of sewage treatment in certain unincorporated areas covered by the original prohibition. The rule was modified again in June of 1978 to allow for one acre density development of systems to serve planned unit developments under the Unit Ownership law. At its October 27, 1978 meeting the EQC adopted temporary rule amendments which allowed construction of new subsurface sewage disposal systems in the City of Gearhart up to a maximum of 57 single family equivalent units. This change coincided with the currently



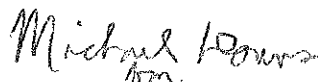
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procedures have been undertaken to facilitate the adoption of the temporary rule as a permanent rule. It is appropriate to adopt the rule.

Director's Recommendation

It is the Director's recommendation that, based on the summation above, the Commission take action as follows:

1. Adopt as a permanent rule Attachment A of the Hearing Report, such rule to be filed with Legislative Counsel and the Secretary of State before its expiration as a temporary rule.
2. Adopt as its final Statement of Need for Rulemaking the Statement of Need incorporated in this report, such statement to be filed with the rule as set forth above.


WILLIAM H. YOUNG

DLB:mkw
842-6637
February 9, 1979

- Attachment (1)
1. Hearing Officer's Report

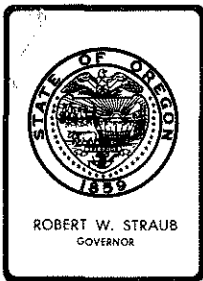
OAR 340-71-020 (7)(a)(H):

(H) The cities of Gearhart, Hammond and Warrenton except as described in subsection (g).

OAR 340-71-020 (7)(g):

(g) Pursuant to ORS 454.695, the Director and his authorized representative shall issue construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability, in accordance with Oregon Administrative Rules, Chapter 340, Division 7 under the following conditions:

(A) In the City of Gearhart a maximum of 57 single family equivalent units shall be permitted on subsurface sewage disposal systems. The subsurface sewage disposal permits or reports shall be issued in accordance with procedures developed by the City of Gearhart and the Department of Environmental Quality.



Environmental Quality Commission

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. K, February 28, 1979, EQC Meeting

City of Seaside, Proposed Amendment to Stipulation and Final Order, Number WQ-SNCR-77-159.

Background

The City of Seaside has been unable to meet the time schedule set forth in its Stipulation and Final Order No. WQ-SNCR-77-159 as amended by the Environmental Quality Commission at its December 12, 1978 meeting (attachment No. 1).

By a letter dated January 11, 1979 (Exhibit A, attachment No. 2), the City has submitted a compliance schedule for completing the facilities plan and Step II grant application by June 1, 1979.

Summation

1. Amendment No. 2 to Stipulation and Final Order No. WQ-SNCR-77-159 required the City to submit a completed facilities plan and Step II grant application by February 15, 1979.
2. The City has been unable to meet that deadline as the Department has asked the City to look at additional methods of treatment which do not include advance waste treatment processes.
3. To allow time to complete and submit the facilities plan and Step II grant application, the City has submitted a revised compliance schedule and has requested an extension until June 1, 1979.

Directors Recommendation

Based upon the summation, it is recommended that the Commission approve Amendment No. 3 (attachment No. 2) to Stipulation and Final Order No. WQ-SNCR-77-159, DEQ v. City of Seaside.


WILLIAM H. YOUNG

Fred Bolton:vh
229-5373
February 7, 1979
Attachments (#1 and #2)
cc: City of Seaside
Strahm Engineering



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BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL)	AMENDMENT NO. 2 TO STIPULATION
QUALITY of the)	AND FINAL ORDER
STATE OF OREGON)	No. WQ-SNCR-77-159
)	
Department.)	
)	
vs.)	
)	
CITY OF SEASIDE)	
)	
Respondent.)	

WHEREAS the Commission finds the facts to be as follows:

1. The City of Seaside ("Respondent") did not submit a proper and complete facility plan report and Step II grant application by November 1, 1978, in violation of Stipulation and Final Order No. WQ-SNCR-77-159.
2. Respondent has requested an extension of time (Exhibit A) to comply with the Commission's Order and has acted in good faith in trying to comply with that Order.

NOW THEREFORE, it is hereby ordered that the date in Paragraph A(1)(a) of Stipulation and Final Order No. WQ-SNCR-77-159 is amended to February 15, 1979.

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date: DEC 20 1978

By William H. Young
 William H. Young, Director
 Department of Environmental Quality
 Pursuant to OAR 340-11-136(1)

5505 S.E. Milwaukie Avenue
P.O. Box 02201
Portland, Oregon 97202
(503) 234-0721
TWX: 910-464-8042

Combines
Stevens, Thompson & Runyan, Inc.
and
A.A. Mathews, Inc.

PT-S10-02-01

November 13, 1978

Dept. of Environmental Quality
RECEIVED
NOV 14 1978

NORTHWEST REGION

Mr. Robert Gilbert
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Bob:

On behalf of our client, the City of Seaside, we are requesting an additional extension to the compliance date for submitting a completed sewage treatment Facilities Plan and Step II grant application.

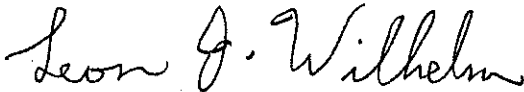
We plan to submit to you a preliminary draft of both our Facilities Plan and Sewer System Evaluation Survey (SSES) reports for your review and comments on about December 15th, prior to the public hearing. We would then have the formal public hearing on the Facilities Plan shortly after the first of the year.

Assuming that the public hearing is held early in January 1979 and allowing an additional month for finalizing the Facilities Plan and SSES reports would mean that we would submit an approved Facilities Plan, SSES, and Step II grant application by February 15, 1979.

We feel that the above schedule is more realistic than the initial schedule we submitted in our letter, dated August 28, 1978, and is justified in view of the complexities of the project and the eventual costs that will be required to upgrade and expand Seaside's sewerage facilities.

Sincerely,

STRAAM Engineers, Inc.



Leon J. Wilhelm, P.E.
Engineer

LJW:cag

cc: Steve Desmond
Burton Lowe

TRD

5505 S.E. Milwaukie Avenue
P.O. Box 02201
Portland, Oregon 97202
(503) 234-0721
TWX: 910-464-8042

Combines
Stevens, Thompson & Runyan, Inc.
and
A.A. Mathews, Inc.

PT-S10-02-01

January 11, 1979

Mr. William Gildow
Department of Environmental Quality
Yeon Building, Second Floor
522 Fifth Avenue
Portland, Oregon 97204

Dept. of Environmental Quality

RECEIVED
JAN 23 1979

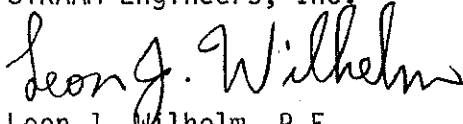
NORTHWEST REGION

Dear Mr. Gildow:

Per your request, we are submitting the following revised schedule for completion of the Seaside Facility Plan and Step II Grant Application for your approval. As the attached schedule indicates, on behalf of our client, the City of Seaside, we are requesting an extension of the previously approved compliance date of February 15, 1979, to a new compliance date of June 1, 1979. We wish to reaffirm that we are making every possible effort to expeditiously complete the Facilities Plan and Step II Grant Application.

Sincerely,

STRAAM Engineers, Inc.



Leon J. Wilhelm, P.E.
Engineer

Enclosure

cc: Robert Gilbert
Burton Lowe

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JAN 15 1979

WATER QUALITY CONTROL

SCHEDULE TO COMPLETE SEASIDE FACILITIES PLAN

AND

STEP II GRANT APPLICATION

State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 15 1979

WATER QUALITY CONTROL

1. Print draft copies of facility plan - February 15
2. Advertise public hearing - February 15
3. Hold public hearing - March 15
4. Receive written comments from public hearing and insert comments as Appendix to report - March 30
5. Print final copies of report - April 15
6. Submit report and form for A-95 Review - April 15
7. Complete Land Use Questionnaire - April 30
8. Complete A-95 Review - May 15
9. Complete Engineering Agreement for Step II Design - May 15
10. Submit Facility Plan and Step II Grant Application - June 1

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY)	
OF THE STATE OF OREGON)	AMENDMENT NO. 3 TO STIPULATION
)	AND FINAL ORDER
Department,)	No. WQ-SNCR-77-159
)	
vs.)	
)	
CITY OF SEASIDE)	
)	
Respondent.)	

WHEREAS the Commission finds the facts to be as follows:

1. The City of Seaside ("Respondent") did not submit a proper and complete facility plan report and Step II grant application by February 15, 1979, in violation of Stipulation and Final Order No. WQ-SNCR-77-159.
2. Respondent has requested an extension of time (Exhibit A) to comply with the Commission's Order and has acted in good faith in trying to comply with that Order.

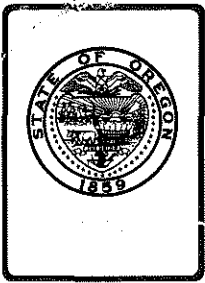
NOW THEREFORE, it is hereby ordered that the date in Paragraph A(1)(a) of Stipulation and Final Order No. WQ-SNCR-77-159 is amended to June 1, 1979.

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date: _____

By _____
 William H. Young, Director
 Department of Environmental Quality
 Pursuant to OAR 340-11-136(1)



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. L, February 23, 1979, EQC Meeting

Request for Approval of a Stipulated Consent Order for
Champion Building Products Wet Hardboard Plant at Dee,
Oregon

Background

Champion International Corporation, Champion Building Products Division owns and operates a wet hardboard manufacturing plant at Dee, Oregon in Hood River County. The plant produces approximately 100 tons per day of hardboard. A conventional biological wastewater treatment system was installed in 1970. Treated wastewater is discharged into the East Fork Hood River.

In December 1977, a flood washed away a portion of the dike on the sludge storage pond, discharging a portion of the sludge into the river. The sludge storage pond receives sludge from the final settling pond. The final settling pond settles out bacterial solids created in the treatment process. Without the sludge storage pond, the final settling pond cannot be cleaned regularly and permit effluent limitations cannot be met.

A permit was granted by the Division of State Lands to replace the dike, but the permit contained such restrictions that company felt it would be impractical to comply. As a result, the company investigated other alternatives of bacterial solid removal and disposal. The most practical alternative appears to be a dissolved air flotation unit and mechanical sludge dewatering unit (the exact type of dewatering unit has not yet been determined). These units would replace the existing final settling pond and sludge storage pond.

Evaluation

The company cannot meet its permit limits with its facilities as they now exist. The company has proposed to enter into a stipulated consent order with the Department (see Attachment A). During the period covered by the order, the company would install necessary pollution control facilities.



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Recycled
Materials

Also, the company would agree to meet interim effluent limits which the Department believes will not adversely impact water quality and will adequately protect recognized beneficial uses. These interim effluent limits are slightly higher than permit limits imposed upon the company prior to implementation of federal standards. When these effluent limits were met, the Department witnessed no adverse impact upon water quality.


The one complicating factor in this matter is that the EPA has withdrawn its effluent standards for the wet hardboard industry for reevaluation. As a result, the EPA must reestablish these standards. This could result in higher standards than were used in the previous permit. While the company has agreed to meet the previous limits during the summer, they believe the limits may be overly restrictive during cold weather months. As a result, the company has proposed the stipulated consent order to extend into 1981 to allow them to monitor their treatment capabilities during the 1980-81 winter. The consent order would expire at the same time the current permit expires. The Department would consider the company's winter data and the new EPA standards (they should be known then) when drafting the new permit.

Summation

The wastewater treatment facilities at Champion Building Products-Dee Plant have been damaged by flooding of the East Fork Hood River. Because of the damage, the company has been unable to meet permit limits. Champion Building Products has proposed a stipulated consent order which, if approved by the Commission, would allow them to exceed the permit limits while they install pollution control equipment. The new equipment should be preferable to the old facilities because it will no longer be susceptible to flood damage. Interim effluent limits should not adversely affect water quality. No daily penalty is proposed during the duration of the consent order. Data submitted by the company shows the plant is operating at a deficit.

Director's Recommendation

Based on the Summation, it is the Director's recommendation that the Environmental Quality Commission approve the Stipulated Consent Order for the Champion Building Products Dee Plant. It is also recommended that the Commission direct the Department to impose necessary penalties for failure to comply with the Order.


for
WILLIAM H. YOUNG

Richard J. Nichols:dmc
382-6446
February 7, 1979

1 BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

2 OF THE STATE OF OREGON

3	DEPARTMENT OF ENVIRONMENTAL)	STIPULATION AND FINAL
	QUALITY,)	ORDER
4	of the STATE OF OREGON,)	No. WQ-CR-78-164
)	Hood River County
5	Department,)	
	v.)	
6)	
7	CHAMPION BUILDING PRODUCTS OF)	
	CHAMPION INTERNATIONAL CORPORATION,)	
8	a New York corporation,)	
)	
9	Respondent.)	

10 WHEREAS

11 1. On or about July 17, 1978, the Department of Environmental Quality
12 ("Department") issued National Pollutant Discharge Elimination System
13 ("NPDES") Waste Discharge Permit Number 2791-J ("Permit") to Champion
14 Building Products of Champion International Corporation
15 ("Respondent"), a New York corporation. The Permit authorized
16 Respondent to construct, install, modify or operate waste water
17 treatment, control and disposal facilities at Respondent's hardboard
18 plant located at Dee, Oregon, and discharge adequately treated waste
19 waters therefrom into East Fork Hood River in conformance with the
20 requirements, limitations and conditions set forth therein. The
21 Permit expires on June 30, 1981.

22 2. Condition 1 of Schedule A of the Permit does not allow Respondent
23 to exceed the following waste discharge limitations:

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Loadings

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<u>Parameter</u>	<u>Monthly Avg.</u>		<u>Daily Max.</u>	
	<u>kg/day</u>	<u>(lb/day)</u>	<u>kgs</u>	<u>(lbs)</u>
BOD-5	236	(520)	708	(1560)
Suspended Solids	500	(1100)	1500	(3300)

Other Parameters Limitations
pH Within the range of 6.0 - 8.5

3. In December 1977, flooding of the Hood River severely damaged part of Respondent's waste water treatment system. By letter of July 10, 1978, incorporated herein as "Exhibit A," Respondent reported its results of evaluating various alternatives to repair or modify the existing treatment system. Respondent determined that the most feasible alternative was to modify the existing treatment system and therefore requested either a modification of its NPDES Permit or to enter into a stipulated consent order to provide for a period of time to obtain approval, purchase and install additional process waste water treatment facilities.

4. Respondent proposes to comply with the effluent limitations specified in Condition 1 of Schedule A of the Permit by installing additional process waste water treatment facilities. Respondent has not completed construction and has not commenced operation thereof.

5. Respondent is presently capable of treating its effluent so as to meet the following waste discharge limitations, measured as specified in the Permit:

///
///
///

Loadings

<u>Parameter</u>	<u>Monthly Avg.</u>	<u>Daily Max.</u>
June 1 to Oct. 31		
BOD-5	1200 lbs/day	3600 lbs
Suspended Solids	3500 lbs/day	6600 lbs
Nov. 1 to May 31	Phase I Interim Winter Effluent Limitations	
BOD-5	2000 lbs/day	4000 lbs
Suspended Solids	4400 lbs/day	6600 lbs

Other Parameters

Limitations

pH Within the range of 5.0 - 8.5

6. After June 1, 1980 the Respondent will be capable of treating its effluent so as to meet the following waste discharge limitations:
- a. Between June 1, 1980-October 31, 1980 and June 1-June 30, 1981, Condition 1 of Schedule A of the Permit as set forth in Paragraph 2 of this Stipulation and Final Order.
 - b. Phase II Interim Winter Effluent Limitations Nov. 1, 1980-May 31, 1981:

Loadings

<u>Parameter</u>	<u>Monthly Avg.</u>		<u>Daily Max.</u>	
	<u>kg/day</u>	<u>(lbs/day)</u>	<u>kgs</u>	<u>(lbs)</u>
BOD-5	455	(1000)	910	(2000)
Suspended Solids	1000	(2200)	1500	(3300)

Other Parameters

Limitations

pH Within the range of 6.0 - 8.5

7. The Department and Respondent ("Parties") recognize and admit that:

///

1 a. Until additional waste water treatment facilities are completed
2 and put into full operation, Respondent will violate the effluent
3 limitations set forth in Paragraph 2 above the vast majority,
4 if not all, of the time that any effluent is discharged.

5 b. Respondent has committed violations of its previous NPDES Permit
6 Number 1809-J and its current Permit. Those violations were
7 disclosed in Respondent's waste discharge monitoring reports,
8 covering the period from April 1, 1978 through the date which
9 the order below is signed by the Environmental Quality Commission
10 ("Commission").

11 8. The Parties acknowledge that the removal efficiency for BOD-5 in the
12 Respondent's aeration lagoon is dependent on ambient temperature and
13 as such during the winter months the effectiveness of the Respondent's
14 aeration system can be significantly reduced.

15 9. The Parties recognize that there is insufficient information at this
16 time to adequately predict what impact the winter months could have
17 on the effectiveness of the additional treatment system's ability
18 to comply with Condition 1 of Schedule A of the Permit.

19 10. The Parties agree that between now and time for renewal of the
20 Respondent's NPDES Permit an effort will be made to accomplish the
21 following:

22 a. A study of the impact ambient temperature has on the Respondent's
23 waste water treatment system.

24 b. A determination, based on the findings of the above study, whether
25 separate, specific winter numbers for BOD-5 and Suspended Solids
26 are justified.

- 1 11. The parties also recognize that the Commission has the power to impose
2 a civil penalty and to issue an abatement order for any such
3 violation. Therefore, pursuant to ORS 183.415(4), the Parties wish
4 to resolve those violations in advance by stipulated final order
5 requiring certain action, and waiving certain legal rights to notices,
6 answers, hearings and judicial review on these matters.
- 7 12. The Parties intend to limit the violations which this stipulated final
8 order will settle to all those violations specified in Paragraph 7
9 above, occurring through June 30, 1981, the date that the Permit
10 expires.
- 11 13. This stipulated final order is not intended to settle any violation
12 of any effluent limitation set forth in Paragraphs 5 and 6 above.
13 Furthermore, this stipulated final order is not intended to limit,
14 in any way, the Department's right to proceed against Respondent
15 in any forum for any past or future violation not expressly settled
16 herein.
- 17 14. Now Therefore, in consideration of the mutual covenants and agreements
18 of the Parties hereto, it is stipulated and agreed that:
- 19 I. The Commission shall issue a final order:
- 20 A. Requiring Respondent to comply with the following schedule:
- 21 1. Submit quarterly reports on the progress of installing
22 additional waste water treatment facilities.
- 23 2. Complete construction and installation of additional
24 waste water treatment facilities by January 1, 1980.
- 25 B. Requiring Respondent to meet the interim effluent
26

1 limitations set forth in Paragraph 5 above until May 31,
2 1980.

3 C. Requiring Respondent to meet the interim effluent
4 limitations set forth in Paragraph 6 above from June 1,
5 1980 until June 30, 1981.

6 D. Requiring Respondent to comply with all the terms, schedules
7 and conditions of the Permit, except those modified by
8 Paragraphs I-A, I-B, and I-C above.

9 II. Regarding the violations set forth in Paragraph 7 above, which are
10 expressly settled herein, the Parties hereby waive any and all of
11 their rights under United States and Oregon constitutions, statutes
12 and administrative rules and regulations to any and all notices,
13 hearings, judicial review, and to service of a copy of the final
14 order herein.

15 III. Respondent acknowledges that it has actual notice of the contents
16 and requirements of this stipulated final order and that failure
17 to fulfill any of the requirements hereof would constitute a
18 violation of this stipulated order and could subject Respondent to
19 liability for civil penalties in the amount of not less than \$50
20 nor more than \$10,000 for each day of violation. Therefore, should
21 Respondent commit any violation of this stipulated order, Respondent
22 hereby waives any rights it may then have to any and all ORS
23 468.125(1) advance notices prior to the assessment of civil penalties
24 for any and all such violations.

25 ///

26 ///

DEPARTMENT OF ENVIRONMENTAL QUALITY

WILLIAM H. YOUNG
Director

RESPONDENT

Richard J. Davis

(Name RICHARD J. DAVIS)
(Title OPERATIONS MGR.)

FINAL ORDER

Harry A. Bartels

(Name Harry A. Bartels)
(Title Mgr. Western Environmental Affairs)

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Maianne L. Christensen
1-15-83

Date Joe B. Richards, Chairman

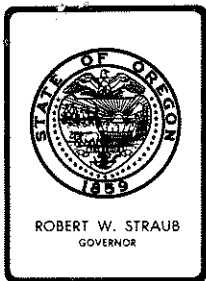
Date Al Densmore, Member

Date Grace S. Phinney, Member

Date Ronald M. Somers, Member

Date Jacklyn L. Hallock, Member

24 ///
25 ///
26 ///



Environmental Quality Commission

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. M, February 23, 1979, EQC Meeting
Request for Approval of a Stipulated Consent Order
for the City of LaGrande

Background

The City of LaGrande's wastewater treatment lagoons are not capable of achieving secondary treatment of domestic sewage. The City has been violating the effluent limitations of its NPDES Waste Discharge Permit and will continue to violate those limitations until modifications to the sewerage system are completed. The Department and City now wish to resolve those violations through a stipulated final order.

Summation

1. The proposed Stipulation and Final Order No. WQ-ER-77-26 (Attachment 1) provides interim effluent limitations the City can reasonably achieve with its existing treatment facilities until the time that upgrading is completed.
2. When the proposed Order was originally drafted, final plans and a Step III grant application had not been submitted. Therefore, the construction schedule was based on a future, at that time unknown, date which a Step III grant offer would be made to the City by the Environmental Protection Agency (EPA).
3. The City has submitted final plans and a Step III grant application to the Department.

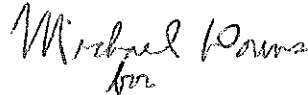


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Materials

4. EPA made a Step III grant offer to the City on December 18, 1978.
The applicable compliance dates of the proposed Order are now:
- A (1) b. Begin construction by April 18, 1979.
 - c. Submit a progress report by January 18, 1980.
 - d. Complete construction by October 18, 1980.
 - e. Demonstrate compliance with the final effluent limitations of the Permit by December 18, 1980.

Director's Recommendation

Based upon the Summation, it is recommended that the Commission approve Stipulation and Final Order No. WQ-ER-77-260, DEQ v. City of LaGrande, Union County.



WILLIAM H. YOUNG
Director

Fred M. Bolton:eve
229-5372
2/6/79

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY,
 of the STATE OF OREGON,

Department,

v.

CITY OF LA GRANDE,

Respondent.

) STIPULATION AND
) FINAL ORDER
) WQ-ER-77-260
) UNION COUNTY

*rec'd
 PRO
 1-11-79*

WHEREAS

1. The Department of Environmental Quality ("Department") will soon issue National Pollutant Discharge Elimination System Waste Discharge Permit ("Permit") Number 2734-J (to be assigned upon issuance of the Permit) to CITY OF LA GRANDE ("Respondent") pursuant to Oregon Revised Statutes ("ORS") 468.740 and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500. The Permit authorizes the Respondent to construct, install, modify or operate waste water treatment, control and disposal facilities and discharge adequately treated waste waters into waters of the State in conformance with the requirements, limitations and conditions set forth in the Permit. The Permit expires on December 31, 1982.

Condition 1 of Schedule A of the Permit does not allow Respondent to exceed the following waste discharge limitations after the Permit issuance date:

Parameter	Average Effluent Concentrations		Monthly Average		Weekly Average		Daily Maximum
	Monthly	Weekly	kg/day	(lb/day)	kg/day	(lb/day)	kg (lbs)
Jun 1 - Oct 31:							
BOD	30mg/l	45mg/l	170	(375)	256	(563)	340 (750)
TSS	30mg/l	45mg/l	170	(375)	256	(563)	340 (750)
Nov 1 - May 31:							
BOD	30mg/l	45mg/l	170	(375)	256	(563)	340 (750)
TSS	30mg/l	45mg/l	170	(375)	256	(563)	340 (750)

3. Respondent proposes to comply with all the above effluent limitations of its Permit by constructing and operating a new or modified waste water treatment facility. Respondent has not completed construction and has not commenced operation thereof.

4. Respondent presently is capable of treating its effluent so as to meet the following effluent limitations, measured as specified in the Permit:

Parameter	Average Effluent Concentrations		Effluent Loadings			
	Monthly	Weekly	Monthly Average	Weekly Average	Daily Maximum	
	kg/day	(lb/day)	kg/day	(lb/day)	kg	(lbs)
Jun 1 - Oct 31:						
BOD	45mg/l	60mg/l	375	(826)	499	(1100)
TSS	60mg/l	75mg/l	499	(1100)	625	(1376)
Nov 1 - May 31:						
BOD	45mg/l	60mg/l	375	(826)	499	(1100)
TSS	60mg/l	75mg/l	499	(1100)	625	(1376)

5. The Department and Respondent recognize and admit that:

a. Until the proposed new or modified waste water treatment facility is completed and put into full operation, Respondent will:

(1) Violate the effluent limitations set forth in

Paragraph 2 above the vast majority, if not all, of the time that any effluent is discharged.

(2) Violate the water quality standards of the Grande

Ronde Basin as Respondent is unable to consistently achieve 85 percent removal of biochemical oxygen demand ("BOD") and total suspended solids ("TSS").

(Oregon Administrative Rules ("OAR") Section 340-

41-735(1)(b) requires a minimum of secondary treatment of sewage wastes. OAR Section 340-41-006(16)(a)

1 defines secondary treatment as the minimum level
2 of treatment mandated by EPA regulations pursuant
3 to Public Law 92-500. Those EPA regulations require
4 85% removal of BOD and TSS.)

5 b. Respondent has committed violations of its NPDES
6 Permit No. 1663-J and related statutes and regula-
7 tions. Those violations have been disclosed in
8 Respondent's waste discharge monitoring reports to
9 the Department, covering the period from July 22,
10 1974 through the date which the order below is issued
11 by the Environmental Quality Commission.

12 6. The Department and Respondent also recognize that the Environmental
13 Quality Commission has the power to impose a civil penalty and to issue an
14 abatement order for any such violation. Therefore, pursuant to ORS 183.415(4),
15 the Department and Respondent wish to resolve those violations in advance by
16 stipulated final order requiring certain action, and waiving certain legal rights
17 to notices, answers, hearings and judicial review on these matters.

18 7. The Department and Respondent intend to limit the violations which this
19 stipulated final order will settle to all those violations specified in Paragraph
20 5 above, occurring through (a) the date that compliance with all effluent limita-
21 tions is required, as specified in Paragraph A(1) below, or (b) the date upon
22 which the Permit is presently scheduled to expire, whichever first occurs.

23 8. This stipulated final order is not intended to settle any violation of
24 any effluent limitations set forth in Paragraph 4 above. Furthermore, this
25 stipulated final order is not intended to limit, in any way, the Department's
26 right to proceed against Respondent in any forum for any past or future violation

1 not expressly settled herein.

2 NOW THEREFORE, it is stipulated and agreed that:

3 A. The Environmental Quality Commission shall issue a final order:

4 (1) Requiring Respondent to comply with the following schedule:

5 a. Submit complete and biddable final plans and specifi-
6 cations and a proper and complete Step III grant appli-
7 cation by July 31, 1978.

8 b. Begin construction within four (4) months of Step III
9 grant offer.

10 c. Submit a progress report within thirteen (13) months of
11 Step III grant offer.

12 d. Complete construction within twenty-two (22) months of
13 Step III grant offer.

14 e. Demonstrate compliance with the final effluent limitations
15 specified in Schedule A of the Permit within sixty (60)
16 days of completing construction.

17 (2) Requiring Respondent to meet the interim effluent limitations set
18 forth in Paragraph 4 above until the date set in the schedule in Paragraph A(1)
19 above for achieving compliance with the final effluent limitations.

20 (3) Requiring Respondent to comply with all the terms, conditions and
21 schedules of the Permit, except those modified by Paragraphs A(1) and (2) above.

22 B. Regarding the violations set forth in Paragraph 5 above, which are
23 expressly settled herein, the parties hereby waive any and all of their rights
24 under United States and Oregon Constitutions, statutes and administrative rules
25 and regulations to any and all notices, hearings, judicial review, and to service
26 of a copy of the final order herein.

1 C. Respondent acknowledges that it has actual notice of the contents and
2 requirements of this stipulated and final order and that failure to fulfill any
3 of the requirements hereof would constitute a violation of this stipulated final
4 order. Therefore, should Respondent commit any violation of this stipulated
5 final order, Respondent hereby waives any rights it might then have to any and all
6 ORS 468.125(1) advance notices prior to the assessment of civil penalties for any
7 and all such violations. However, Respondent does not waive its rights to any and
8 all ORS 468.135(1) notices of assessment of civil penalty for any and all violations
9 of this stipulated final order.

10 DEPARTMENT OF ENVIRONMENTAL QUALITY

11
12 Date: _____

By _____
WILLIAM H. YOUNG
Director

13
14 RESPONDENT

15
16 Date: January 10, 1979

By Max C. Thompson
Name Max C. Thompson
Title City Manager

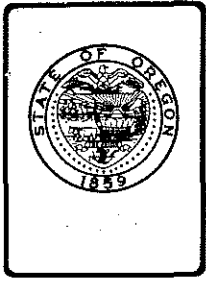
17
18 FINAL ORDER

19 IT IS SO ORDERED:

20 ENVIRONMENTAL QUALITY COMMISSION

21
22 Date: _____

By _____
WILLIAM H. YOUNG, Director
Department of Environmental Quality
Pursuant to OAR 340-11-136(1)



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. N, February 23, 1979, EQC Meeting

Request by Sunrise Village-Bend for a Variance to
Subsurface Sewage Disposal Rule OAR 340-71-020(4)

Background

Sunrise Village is a proposed planned unit development near Bend, Oregon. It is outside the City of Bend, but inside the Bend Urban Growth Boundary. At its last meeting, the Environmental Quality Commission ruled upon the subsurface sewage disposal requirements imposed upon Sunrise Village by the Department. (Note: Attachment A is the staff report concerning Sunrise Village for the January EQC meeting.) The Commission approved the disposal requirements as stated in the Director's Recommendation except that it deleted one sentence. The requirements as approved by the Commission are:

1. Detailed plans and specifications for the proposed sewerage system are approved by this Department.
2. A municipality, as defined by ORS 454.010(3), must control the proposed sewerage system. (This may be achieved by an agreement with the City of Bend to operate and maintain the system or by formation of a county service district, or sanitary district.)
3. We must have a statement from Deschutes County indicating that they have tested your proposal in regard to the Statewide Land Use Goals and found it compatible.

In a letter dated February 5, 1979 (Attachment B), to the Environmental Quality Commission and Mr. William H. Young, Sunrise Village has now requested that it not be required to have a municipality control the sewerage system that would serve its proposed development.

Evaluation

OAR 340-71-020(4) requires a municipality to control a subsurface sewage disposal system serving more than one lot or parcel. This regulation was in effect prior to the Sunrise Village proposal and Sunrise Village was aware of it. The Commission may grant a variance from this rule as provided in ORS 454.657, which states:

"454.657 Variance; conditions; hearing. After hearing the Environmental Quality Commission may grant to applicants for permits required under ORS 454.655 specific variances from the particular requirements of any rule or standard pertaining to subsurface sewage disposal systems for such period of time and upon such conditions as it may consider necessary to protect the public health and welfare and to protect the waters of the state, as defined in ORS 468.700. The commission shall grant such specific variance only where after hearing it finds that strict compliance with the rule or standard is inappropriate for cause or because special physical conditions render strict compliance unreasonable, burdensome or impractical."

The Department considered a sewer agreement with the City as the best form of municipal control. Such agreement would assure no obstacle to orderly implementation of the Bend master sewerage plan. We discouraged formation of a sanitary district because history has shown such districts to be obstacles. A city agreement would assure compatibility with Oregon's Statewide Land Use Goals and was supported by the Department of Land Conservation and Development (DLCD). Though the Department required a city agreement and discouraged formation of a sanitary district, Sunrise Village was not legally prevented from forming a sanitary district.

Following the Commission's review of this matter at the November meeting, Sunrise Village requested DLCD to review the requirement for a city agreement as it pertained to their development. Upon review, DLCD determined that a city agreement was appropriate, but, because of previous county approvals, the Sunrise Village matter should be settled locally. Accordingly, the Department revised its requirements for Sunrise Village. (These requirements were listed in last month's Commission staff report concerning Sunrise Village which is Attachment A. Note that Attachment A also includes correspondence between DEQ and DLCD.)

When the Department informed Sunrise Village of the revised requirements (the requirements are stated in a letter from W. H. Young dated January 9, 1979 and is included in Attachment A), we pointed out that, from the Department's view, a city agreement was still most desirable, and that we intended to encourage the County not to form a sanitary district until all reasonable attempts to reach agreement with the City have been exhausted. Following the Commission's January meeting, the Department informed the City of Bend and Deschutes County of the EQC's action. We discussed the 'pros and cons' of a sanitary district inside the Bend Urban Growth Boundary and possible alternatives to a sanitary district.

We also made it very clear that should the County form a sanitary district for Sunrise Village, the Department would approve the sewerage system plans and the development would be free to proceed as far as we were concerned.

For the Commission's information, a portion of the Sunrise Village is inside Bend's sewer service boundary. This boundary was defined in design Memorandum 6 which was an update of the original facilities plan and was prepared by the City of Bend's consultant in the Fall of 1977. Deschutes County and the City of Bend have proposed that the sewer service boundary be extended to include all of Sunrise Village.

While the City of Bend was originally not interested in providing sewer service to Sunrise Village, the Department believes the City has for several months been willing to negotiate an agreement. At the time of this report, the City was also negotiating to acquire the private water system that would serve Sunrise Village. Based upon this information and our belief that the City is willing to enter into an agreement, a city sewer agreement between Sunrise Village and the City of Bend must still be considered a viable alternative.

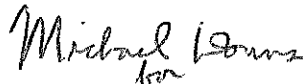
Sunrise Village has stated their proposed incorporated home owners association with \$25,000 performance bond and subdivision improvement and maintenance agreement with Deschutes County will provide the Department with adequate assurance of proper operation and maintenance. Our review does not convince us that such an arrangement is equivalent to a municipality in terms of the ability to generate needed cash for operation and maintenance. Further, the County maintenance agreement proposed by Sunrise Village does not appear to provide an avenue for the Department to force the County to provide operation and maintenance of the sewerage system in event the homeowners association fails to meet its obligations.

Summation

The Commission may grant a variance to OAR 340-71-020(4). However, the Department believes a sewer agreement between the City of Bend and Sunrise Village is the most desirable form of municipal control. Sunrise Village was aware of the need for municipal control and was discouraged, but not prevented from forming a sanitary district. The City of Bend has expressed to Department staff a willingness to enter into a sewer agreement. Formation of a sanitary district is also possible. The homeowners association proposed by Sunrise Village, even with a \$25,000 performance bond and a proposed County maintenance agreement, is not equivalent to a municipality as defined by ORS 454.010(3).

Director's Recommendation

Based upon the summation, it is recommended that the request by Sunrise Village for a variance from subsurface sewage disposal system rule OAR 340-71-020(4) be denied.

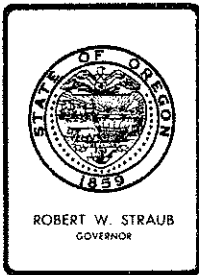

WILLIAM H. YOUNG

Richard J. Nichols:dmc/ak

382-6446

February 12, 1979

Attachments A and B



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
 From: Director
 Subject: Agenda Item P, January 26, 1979, EQC Meeting

Sunrise Village, Bend - Reconsideration of Appeal of Subsurface Sewage Disposal Requirements

Background

At the November 17, 1978, Environmental Quality Commission (EQC) meeting in Eugene, Sunrise Village, Bend, a proposed planned unit development, presented an appeal of a subsurface sewage disposal requirement imposed by the Department. (Staff report for this appeal is Attachment A.) Sunrise Village appealed the Department's requirement that a sewer agreement be entered into with the City of Bend. This requirement was deemed necessary by the staff to assure compliance with Goal 11 of the Statewide Land Use Goals.

The Commission suggested that Sunrise Village request the matter be continued until the next Commission meeting. During this period, Sunrise Village would meet with Department staff to work out an arrangement agreeable to both parties. If an arrangement could not be reached, the matter would be reconsidered by the Commission. Sunrise Village accepted the suggestion.

Since the November Commission meeting, the staff has met with Sunrise Village several times. In addition, Sunrise Village has appealed the Department's interpretation of Goal 11 to the Department of Land Conservation and Development (DLCD). DLCD responded to the appeal (see Attachment B, letter from DLCD dated 12-19-78) by stating that the Department of Environmental Quality was acting appropriately by requiring a sewer agreement with the city. However, because local planning actions had been completed by Deschutes County, DLCD determined that the matter should be settled by local government. In a follow-up letter dated December 27, 1978 (see Attachment C), DLCD clarified its December 19, 1978, letter by stating that the city must agree to any action taken by the Department in regard to Sunrise Village.

Based upon DLCD's responses, the Department reconsidered its position and, in a January 9, 1979, letter to Sunrise Village (see Attachment D), agreed to approve their proposal if the following requirements were met:



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1. Detailed plans and specifications for the proposed sewerage system are approved by this Department.
2. A municipality, as defined by ORS 454.010(3), must control the proposed sewerage system. This may be achieved by an agreement with City of Bend to operate and maintain the system or by formation of a County Service District, or Sanitary District. Frankly, we prefer the agreement with the City, but will accept a County Service District or Sanitary District, preferring the service district.
3. We must have a statement from Deschutes County indicating that they have tested your proposal in regard to the State-wide Land Use Goals and found it compatible. This statement must have the concurrence of the City of Bend. Should the City refuse to concur or otherwise object to either the formation of a special district (if that is your choice of municipality) or the County's Statement of Compatibility, we will be unable to approve your proposal.

Sunrise Village agrees to these conditions except it does not accept the Department's position that allows the City of Bend to have a part in approving their proposal.

Evaluation

The Department feels that our original requirement for a sewer agreement with the City of Bend was generally appropriate as evidenced by letters from DLCD, the first dated July 31, 1978 (see Attachment E), and the second dated December 19, 1978 (Attachment B). However, in considering this requirement as it relates to Sunrise Village, DLCD appears to feel that it may not be appropriate and should be a local decision. DLCD does say that the City of Bend may object to whatever action the Department takes in regard to Sunrise Village (see Attachment C). It should also be noted that the Department's Program for Coordination (Attachment F) with LCDC requires that the Department not take any action that would impact land use unless the appropriate planning jurisdiction(s) provide a Statement of Compatibility with Oregon's Statewide Land Use Goals. The appropriate planning jurisdiction(s) when outside city limits but inside the Urban Growth Boundary includes the city. We, therefore, believe it would be inappropriate for DEQ to approve the Sunrise Village proposal should the City of Bend object either to the formation of a special sewerage district or to Deschutes County's Compatibility Statement.

Summation

Sunrise Village of Bend has submitted a proposal for a community sewage collection and disposal system to serve a planned unit development located inside Bend

Urban Growth Boundary. The development would not be served by the Bend sewer system now under construction, but it could be served when a sewer is extended out to the area.

The Department would approve the proposal if the following conditions are met:

1. The sewage disposal facility would be under the control of a municipality.

OAR 340-71-030(4) states:

"Multiple Service. Where a water-carried subsurface or alternative sewage disposal system will serve more than one (1) lot or parcel, such a system shall be under the control of a municipality as defined in ORS 454.010(3)."

2. The plans and specifications for the proposed sewage disposal facility are submitted to the Department for review and, in the review, the Department finds that:
 - a. System is properly designed and meets applicable rules.
 - b. Assurance of proper operation and maintenance is evident so that a health hazard and water pollution will not be created.
3. The Department finds that applicable land use planning requirements will not be violated (OAR 340-71-015(6).)

The Department believes that to comply with the third condition, we must have a Statement of Compatibility with Statewide Land Use Goals from Deschutes County. For the Compatibility Statement to be valid it must have City concurrence. This requirement is consistent with the Department's Program for Coordination with LCDC (Attachment F) and is supported by a letter from LCDC (Attachment C).

Director's Recommendation

Based upon the summation, it is recommended that the Environmental Quality Commission direct the Department to not permit a community sewage disposal system for Sunrise Village unless the following conditions are met:

1. Detailed plans and specifications for the proposed sewerage system are approved by this Department.
2. A municipality, as defined by ORS 454.010(3), must control the proposed sewerage system. (This may be achieved by an agreement with the City of Bend to operate and maintain the system or by formation of a county service district, or sanitary district.)

Environmental Quality Commission
January 1979 Meeting
Page 4

3. We must have a statement from Deschutes County indicating that they have tested your proposal in regard to the Statewide Land Use Goals and found it compatible. This statement must have the concurrence of the City of Bend.

The Commission should also instruct the staff to continue to work with Sunrise Village, the City of Bend, and Deschutes County to achieve these conditions.

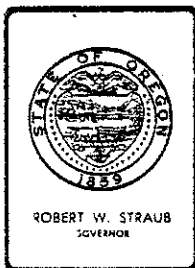


WILLIAM H. YOUNG

Richard J. Nichols:ahc
382-6446
January 11, 1979
Enclosures -

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NOV 15 1978

Attachment #A



Environmental Quality Commission BEND DISTRICT OFFICE

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. M, November 17, 1978, EQC Meeting

Appeal of Subsurface Disposal Requirement by Sunrise
Village - Bend

Background

On May 26, 1978, the Department received a proposal from Sunrise Village for a planned unit development to be located in the southwest corner of the Bend Urban Growth Boundary along Century Drive. The proposal called for a portion of the development (about 120 units) to be served by a community sewage collection and disposal system. The disposal system would consist of a septic tank, dose tank and drainfield.

The Department responded to the proposal by stating we would consider issuance of a permit for the disposal system as long as the system was interim and ultimate connection to the Bend regional sewage system was assured. We requested that Sunrise Village provide the Department with a signed sewer agreement between the City of Bend and the developer stating that the system would be connected to the regional sewer system when available.

The City and Sunrise Village have been unable to come to agreement. The City did not want to enter into a sewer agreement because they were unsure if they would be able to provide a sewer to the area. In addition, if the City provided sewer service, the development would have to annex. The City wanted to be sure that, if they were to annex the development, it would meet City standards.

To satisfy their concerns, the City offered the following terms for a sewer agreement.

1. Sunrise Village would build a sewer interceptor to Phase I of the Bend sewer project.
2. Sunrise Village would annex to the City when requested.



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3. Sunrise Village would build their water system to City specification and would turn it over to the City at annexation.
4. The development would comply with all City development standards and would be inspected by the City during construction.
5. The City would operate and maintain the interim sewage disposal system until Phase I of the Bend sewer project was ready for operation.

Sunrise Village was unable to agree to these terms. As a result, they have been unable to satisfy the Department's requirement that their sewage disposal system be ultimately connected to the Bend sewer system.

Recently, the City of Bend has offered a sewer agreement to the C.J. John Shopping Center, another proposed development in the Bend Urban Growth Area. This agreement contained the following major components:

1. The developer would give the City \$20,000 to develop a sewer plan for a segment of the UGB. The plan would investigate alternatives for interim disposal systems as well as the location of the final sewers. The plan would take three months to complete.
2. The City would guarantee sewer service to the developer so that construction of the development could start as soon as practicable. The developer would install the interim system designated by the plan. The City would operate and maintain the interim system until ultimate connection to the Bend sewer system occurred. No specific date for ultimate connection would be set.

Evaluation

The Department believes that any community sewage disposal system to be constructed inside the Bend Urban Growth Boundary should be a part of the regional sewerage plan and should be ultimately connected to the Bend regional sewer system. This belief is based on the following:

1. Only the Bend regional sewer system will be able to provide reliable long-term, effective sewer service. We doubt that a homeowner's association as proposed by Sunrise or a sanitary district can provide this assurance of service.
2. We are unsure that large subsurface disposal systems will function reliably over the long term (30 to 40 + years). We, therefore, believe that they should only be considered as interim systems.

3. The state and federal governments have invested many millions of dollars to provide the Bend area with a sewage collection and treatment system. We believe use of the system should be encouraged. We do not believe we should allow small community sewage disposal systems to proliferate in the Bend Urban Growth Area when a more desirable alternative will be available soon.

The Department also believes that the requirement for ultimate connection to the Bend sewer system is not unreasonable. The sewer agreement with C.E. John, recently proposed by the City of Bend, could also be applied to Sunrise Village. The city's agreement should not place an unreasonable burden upon Sunrise Village.

Summation

Sunrise Village of Bend has submitted a proposal for a community sewage collection and disposal system to serve a planned unit development located inside the Bend Urban Growth Boundary. The development would not be served by the Bend sewer system now under construction, but it could be served when a sewer is extended out to the area.

The Department would approve the proposal if the following conditions are met:

1. The sewage disposal facility would be under the control of a municipality.

OAR 340-71-030(4) states:

"Multiple Service. Where a water-carried subsurface or alternative sewage disposal system will serve more than one (1) lot or parcel, such a system shall be under the control of a municipality as defined in ORS 454.010(3)."

2. The plans and specifications for the proposed sewage disposal facility are submitted to the Department for review and, in the review, the Department finds that:
 - a. System is properly designed and meets applicable rules.
 - b. Assurance of proper operation and maintenance is evident so that a health hazard and water pollution will not be created.
3. The Department finds that applicable land-use planning requirements will not be violated. (OAR 340-71-015(6).)

The Department has required that Sunrise Village enter into a sewer agreement with the City of Bend to assure ultimate connection to the Bend regional system. We believe connection is necessary to assure reliable, long-term, effective sewage disposal. We are not confident that large subsurface disposal systems will perform effectively for the long term. The city has the staff and equipment to assure proper maintenance and operation of city's sewerage facilities. We do not believe Sunrise Village will be able to provide the same level of maintenance and operation.

Currently the Sunrise Village proposal does not meet Goal 11 of Statewide Planning Goals and Guidelines. Goal 11 calls for the coordinated development of public facilities with all other urban facilities and services.

Goal 11, Guideline A, Section 5 states:

"A public facility or service should not be provided in an urbanizable area unless there is provision for the coordinated development of all the other urban facilities and services appropriate to that area."

By requiring an agreement between proposed developments inside the Urban Growth Boundary and the city, the Department is assured that Statewide Planning Goal 11 will be achieved.

The City of Bend has recently proposed a sewer agreement to C.E. John for sewer service to a development also inside the UGB, but outside the service area of Phase 1 of the Bend sewer project. We believe a similar agreement could be utilized to resolve our concerns with the proposed sewage system for Sunrise Village.

Director's Recommendation

Based upon the summation, it is recommended that the Environmental Quality Commission direct the Department to not permit a community sewage disposal system for Sunrise Village unless such system is a part of the overall regional sewerage plan and would be connected to the Bend regional sewerage system at some future time. The Commission should also direct the Department staff to work with the City of Bend and Sunrise Village to reach agreement for ultimate connection of the sewage system to the regional system.

Bill
WILLIAM H. YOUNG

Richard J. Nichols:dmc
382-6446
November 1, 1978
Enclosures

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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BEND DISTRICT OFFICE 2151 N. E. FIRST STREET, BEND, OREGON 97701

October 30, 1978

City of Bend
City Hall
P. O. Box 431
Bend, Oregon 97701

Attention: Mr. Art Johnson

Re: Sunrise Village

Sir:

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Water Quality Division
Dept. of Environmental Quality

I am writing you on behalf of the Mammoth Lakes Corporation, developers of Sunrise Village. As you are probably aware, our project has been stymied since June of this year due to the Department of Environmental Quality's insisting we obtain a sewer agreement with the city and our being unable to comply in particular with two of the cities stipulations for said agreement. Specifically, we haven't any water to deed the city as although we have contributed \$60,000. in development costs, M.R.S. owns the well and reservoir and is unwilling to relinquish them. It is also prohibitively expensive for Sunrise Village on its own to construct a dry line sewer collection system and extend an interceptor line to meet the Phase I sewer system.

Two recent events have occurred which may offer a solution to our dilemma. We respectfully request you consider their application to our case. They are as follows.

1. The city of Bend, Brooks Resources and C. E. John Construction Company are near to completing a sewer agreement of a kind the Department of Environmental Quality thinks might have application to our case.
2. Our water delivery system is to be built to city standards and M.R.S. has agreed to allow us to disconnect at any time and deed the delivery system to the city.

Please be assured it is our every intention to cooperate to the best of our ability with all concerned to the end that our development is both an asset and source of pride to the Bend community. However, excepting for some help from the city we are faced with deviating from our plan and downgrading the project by putting everything on septic tanks.

City of Bend
October 30, 1978
Page Two

Your efforts and concerns are much appreciated. I am at the disposal of you and your staff as the need may be.

Very truly yours,

Tim Ward

Tim Ward
Vice President
Mammoth Lakes Corporation

CC: Richard J. Nichols
Bill Smith



State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

RECEIVED

To: *why* Bill Young via Fred *and others* Tolton
From: Dick Nichols, Central Region
Subject: S - Bend
Deschutes County

Date: October 26, 1978

The City of Bend made a giant stride towards extension of the Bend sewer project into the Phase II area. The sewer committee at their morning meeting offered the following proposal to C. E. John:

1. C. E. John would provide \$20,000 to the City to conduct a sewer study of the northern segment of the Phase II area. This study would determine not only the ultimate plan for sewerage of the area, but would also determine interim disposal methods to be used until final sewers are installed.
2. So that C. E. John could proceed with their project, the City would agree to provide the company with sewer service when the shopping center was completed and ready for business. This sewer service would consist of an interim disposal system (as determined by the above plan) which would be operated and maintained by the City of Bend until connection is made to the Bend sewerage system. The City would commit to connecting the interim system to the Bend sewer project at some future date. This date would not be specified.

I told the committee that we found this approach acceptable. I based this decision on the following:

1. The interim disposal system will be a part of the over-all sewer plan for the Bend urban growth area.
2. With the City of Bend operating and maintaining the system, we can be assured the interim system will be ultimately connected to the Bend project and that the interim system will be properly constructed, operated and maintained.

I believe this covers our basic concerns with development and sewage disposal in the Bend area.

Though disposal wells could be considered as an interim disposal system, the City of Bend and C. E. John recognize that disposal wells are not an option for the C. E. John site because of the relatively shallow water table in the area. Disposal wells could be considered for those areas in the Northern segment of Phase II, which are not over the shallow water table. The City recognizes that disposal wells are

currently prohibited outside the Bend city limits and that only the EQC could change this. I think the City also recognizes that the EQC would not approve extension of the disposal well boundary into Phase II unless the City showed the wells would be phased out by a scheduled date.

Hopefully, this approach to the sewers in the Phase II area of Bend is acceptable to you. I propose to handle other development projects in a similar manner.

In C. E. John's case, I intend to follow-up on the City's proposal in the following manner:

1. Upon receipt of a letter from the City of Bend stating that they will provide C. E. John with sewer service, that they will operate and maintain the interim disposal system until it is connected to the Bend System and that the City commits itself to ultimate phase-out of the interim system, I will inform the county that the Department has no objection to issuance of a building permit to C. E. John. We would allow issuance of the building permit conditioned on the following:
 - a. Operation of the shopping center would not start until an approved, interim disposal system was installed.
 - b. The plans for the interim system shall be approved in writing by DEQ. A copy of the sewer agreement between C. E. John and the City of Bend must be submitted with the plans.
 - c. If the interim system is an on-site septic tank and drainfield, the system would have to be owned by the City of Bend and would be operated by a letter permit from DEQ. Any other interim system whether disposal well, package STP, or whatever, would require a WPCF permit issued to the City of Bend.

RJN:sm

cc: Harold Sawyer, Water Quality

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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OCT 25 1978

BEND DISTRICT OFFICE



2151 N. E. FIRST STREET, BEND, OREGON 97701

October 25, 1978

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
OCT 27 1978

Department of Environmental Quality
2150 Studio Road
Bend, Oregon 97701

WATER QUALITY CONTROL

Attention: Richard J. Nichols, Regional D.E.Q. Manager

Dear Mr. Nichols:

On October 12, 1978 you telephonically informed me of your decision to hold to the position of requiring Sunrise Village to obtain an agreement with the city of Bend for a future sewage connection before you would approve our planned community sewer system.

Your stated reasons, as I understood them, were that the Department of Environmental Quality has a large investment in the Bend regional sewer system and Sunrise Village should be a part of it because in being so it would likely induce the orderly development of potential downstream projects and avoid the risks and management problems over the long term with respect to the reliability of a community sewer system. In view of your decision I hereby formally request an appeal at the earliest possible time with the Environmental Quality Commission.

It is our contention as supported by the text of Ross Mathers letter of September 27, 1978 that there is legal, moral, and practical justification for exempting us from the city sewer agreement policy due to the policies being implemented subsequent to our accomplishing in good faith and at considerable expense of time and money, an environmentally sensitive development plan based on and evolving around a sewage disposal method originally recommended by Mr. Borden of your office.

October 25, 1978

Page Two

Furthermore, insisting we obtain the city sewer agreement is counter productive in that we are unable to meet the cities requirements of giving them the water system as we don't own it or funding (which the city recognizes would not be justifiable even for them) a sewer interceptor line nearly two miles to the Bend phase one sewer system for a maximum 121 single family residential homes within a 233 acre development. Therefore, we would have no alternatives to abandoning our plan, a high standard community sewer system and to the detriment of the environment and all concerned; put everything on individual septic tanks. We also disagree that Sunrise Villages being on the city system is integral to the systems orderly development in that no one is upstream from us and as a negative by product, high downstream density would be encouraged. Lastly, ours is to be a community association with the resources, management and enforcement powers to indefinitely operate and maintain a community sewer system or until, which time it was clearly right and feasible for us to be on the city system.

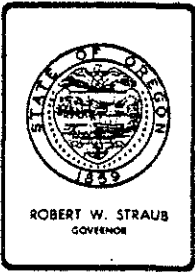
Your earliest attention to this matter is appreciated. Please advise us of any developments as they might concern us.

Sincerely,

Tim Ward

Tim Ward

TW/sb



WQ

Department of Environmental Quality

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-

October 17, 1978

Sunrise Village
2151 N. E. First Street
Bend, Oregon 97701

SSSD - Sunrise Village
Deschutes County

Attention: Mr. Ross Mather, President

Gentlemen:

We have reviewed your letter of September 27, 1978. We have also conferred with Mr. Tim Ward of your company.

I believe that our staff understands your position in this matter. However, we still cannot approve your plans for a community sewage disposal system until we can be assured that it will ultimately become part of the regional sewerage system at a scheduled date.

Considerable funds are being invested to supply the Bend area with a regional sewerage system. Large developments in that area must plan to use this method for sewage disposal. The Department feels that a large drainfield is not the best sewage disposal alternative over the long term. We need to be assured that our approvals of disposal methods are not faced with problems in the future. Ultimate connection to regional sewerage system will provide this assurance.

If you need additional assistance on this matter, please call Mr. Dick Nichols (382-6446) in our Bend office.

Sincerely,

William H. Young

William H. Young
Director

hk

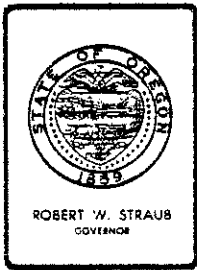
cc: Central Region Office, Bend
Water Quality Division, Portland
Deschutes County Planning Dept.
Deschutes County Sanitarian Dept.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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OCT 19 1978

WATER QUALITY CONTROL



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Department of Environmental Quality
CENTRAL REGION

2150 N.E. STUDIO ROAD, BEND, OREGON 97701 PHONE (503) 382-6446

October 9, 1978

Deschutes County Planning Commission 5 - Bend
Courthouse Annex, Room 102 Proposed Holiday Inn--
Bend, OR 97701 Hollidome

Gentlemen:

We have not received notice from Deschutes County on the proposed zone change for the proposed Holiday Inn - Hollidome complex on Highway 20 near Cooley Road. However, we have been contacted by interested citizens who have given us some information on the proposed project.

Based on admittedly scant information, we submit the following comments:

1. We have not been informed on how sewage from the complex will be disposed of. We know that the complex is outside the urban growth boundary and, consequently, sewer service to this area by the City of Bend sewerage system is not even being contemplated at this time.

We believe a large complex, such as this one, should be located to take advantage of the new Bend sewer project. Before we will consider an interim sewage disposal system for the proposed complex, we will have to be shown that the interim system is a part of the overall sewerage plans for the Bend area and that it would be phased out and connected to the Bend system by a known specified date. Because the only area assured to have future sewer service is that contained in the Phase I area of the Bend sewer project, currently we will only approve those interim systems that will be phased out with the completion of Phase I.

2. The complex would be located over a known perched water table that serves as a source of domestic water. Use of disposal wells to dispose of surface runoff from the complex may impact the quality of the water in this perched water table.



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Recycled
Materials

Deschutes County Planning Commission
October 9, 1978
Page Two

3. If the parking lot exceeds 1000 lots, an indirect air contaminant discharge permit must be applied for prior to construction.

Sincerely,

Richard J. Nichols
Regional Manager

RJN:dmc

cc:Water Quality Division
:Fred Bolton



2151 N. E. FIRST STREET, BEND, OREGON 97701

September 27, 1978

State of Oregon
Department of Environmental Quality
522 SW Fifth Street
P. O. Box 1760
Portland, Oregon 97207

Attention: William H. Young, Director
Fred Bolton, Regional Operations Administrator

Re: Sunrise Village
Dechutes County

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

OCT 2 1978

OFFICE OF THE DIRECTOR

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

OCT 19 1978

WATER QUALITY CONTROL

Gentlemen:

The purpose of this letter is to document certain information relative to the planning, development and environmental preservation of the 233 acres comprising the above referenced project. As the owner of this property I feel that there was a very important sequence of events that transpired prior to the Departments decision to require that developments using community waste treatment facilities have an agreement with the city to accommodate future sewer connection. Following is a documentation of these events that I urge you to consider:

1. In early 1976 I had the opportunity to purchase the subject property located two miles from the Bend city limits and bordered by the Deschutes River. Since I felt it first necessary to evaluate the development possibilities for the property, I then negotiated an option to purchase.
2. In February of 1977 I brought a potential investor, Mr. Martin West, to Bend. We met with Lorin Morgan and Jim Morrison of the Deschutes County Planning Staff. We were informed that the property was located within the growth boundary and was shown as a Development Alternative on the Bend Area General Plan. The Comprehensive Plan did not discourage a Planned Development that would provide the full service facilities required for an urban development. We were further advised that the ultimate authority as to our method of sewage disposal was the Department of Environmental Quality.

3. At the same time (February, 1977) we visited John E. Borden, Regional Manager of the Department of Environmental Quality. I informed him that it was our plan to provide a community waste treatment facility for the project. We discussed various methods and it was Mr. Borden's opinion that the Department would prefer a central common septic tank and drain field system. This type of system has been employed in other Bend urban developments. This concept would also provide a collector system that would facilitate a connection to Century Drive should the City of Bend decide to extend its facilities at some future undetermined date.

4. Through substantial reliance on the above information and advice, Mr West and I decided to purchase the property and proceed with master planning. Upon the recommendation of Mr. Bill Smith, president of Brooks Resources, in April of 1977 we engaged the professional land planning firm of Hall Goodhue and Haisley to develop a Master Plan. George Cook Engineering was also retained as was the legal firm of Gray, Fancher, Holmes and Hurley.

5. On May 11, 1977 the Deschutes County Planning Commission approved our request to change the zoning from A-1 Exclusive Agriculture to PD, Planned Development. The Master Plan indicating a community waste treatment facility was incorporated into the approval.

6. On October 3, 1977 we exercised our option and concluded the land purchase at a price of \$524,700.00.

7. On December 13, 1977, Preliminary Plat #389, Phase I of Sunrise Village, was approved at a public hearing before the Deschutes County Hearing Officer. On April 18, 1978, Preliminary Plat #415, Phase II, was approved in a similar manner. On June 22, 1978, Preliminary Plat #444, Phase III, was approved. All three plats, involving approximately 200 residential lots, were engineered and designed according to the approved Master Plan which included a private sewer system to serve the smaller lots.

8. In the winter of 1977-78 site work was commenced and roads were graded according to the approved plan. Work on a joint community water system was started including well drilling and the installation of a 500,000 gallon storage tank. The system is now operational. To date, in addition to the land cost, in excess of \$220,000 has been paid out by the developers and an additional \$600,000 has been committed. All of this was done in good faith and through complete reliance by the developer that the recommended method of sewage disposal would receive the approval of the Department of Environmental Quality.

9. In January of 1978 engineering was started on the Final Plat of Phase I, the River Bluff Section. All lot boundaries for the 82 lots were surveyed and monuments were set. In the spring, Mr. Dave Williams of George Cook Engineering accompanied Mr. Bob Free of the Department of Environmental Quality on an inspection of the proposed location of the community sewage treatment facilities. Mr Free concurred that soil conditions were suitable for installation of the proposed system. In July when the Final Plat was ready for recording we were advised that the Department of Environmental Quality would not approve the Final Plat until the development had an agreement with the city to accommodate a future sewage connection.

10. On January 27, 1978 the Final Plat for the River Bluff Section of Sunrise Village was signed by the Deschutes County Board of Commissioners and was recorded. An agreement was executed by the developers and the commissioners in which the developers agreed not to commence construction of the community sewage system until plans for the system have been approved by the Department of Environmental Quality.

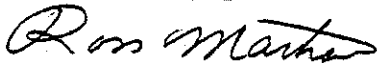
11. On July 26, 1978 we received staff recommendations from the Bend City Sewer Committee setting forth certain conditions that would have to be met before the city would grant an agreement. It is estimated that the cost to satisfy these conditions would amount to in excess of \$1,500,000. On August 4 I had a lengthy conversation with one of the members of the city sewer committee. It was his opinion that the best solution for all concerned would occur if the Department would alter its position of requiring an agreement with the city.

12. During August and September we have conducted extensive soil tests on the property and have attempted to redesign the plat so that each lot could accommodate an individual septic tank and drain field. The conclusions are not only not feasible for the development but potentially could have a disastrous impact on the natural environment. The removal of thousands of trees would be necessitated to accommodate the drain fields. In contrast, the community drain field was planned for an open, treeless area that was to be converted to a green meadow through the presence of underground drain fields.

In summary, we earnestly request that you consider this appeal and allow Sunrise Village to proceed in its original concept which we have proven has priority over recent Department decisions. We have offered to post any necessary financial

guarantees to assure the continued maintenance and operation of the facility. Not only will the environment be forever preserved but a workable system for central sewage collection would be provided for the future benefit of the community and the Department of Environmental Quality. Untimely duplication costs would be avoided. The city sewer system which apparently does not have sufficient capacity for existing high density areas would not be further burdened by having to provide services to a distant, low density community that lies on the edge of the urban growth boundary and is not an integral part of the city's annexation plans regarding the continuity of sewer services

Very truly yours,

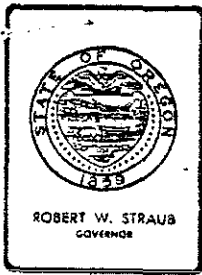


Ross Mather
President, Sunrise Village

CC: Richard J. Nichols
John E. Borden
Gray, Fancher, Holmes and Hurley

Exhibits attached:

- 1) Master Plan and Summary as approved with zone change.
- 2) Notification of zone change approval.
- 3) Staff recommendations for Phase I.
- 4) Hearing Officers decision on Phase I.
- 5) Hearing Officers decision on Phase II.
- 6) Hearing Officers decision on Phase III.
- 7) Subdivision Agreement.
- 8) Agreement with Commissioners.
- 9) City Sewer Committee Staff Recommendations.
- 10) August 24 article from Bend Bulletin.



Department of Environmental Quality
CENTRAL REGION

2150 N.E. STUDIO ROAD, BEND, OREGON 97701 PHONE (503) 382-6446

August 9, 1978

Mr. John Glover
Deschutes County Health Department
Courthouse Annex
Bend, OR 97701

S - Bend
S - Bend Phase II

Dear Mr. Glover:

In July 1978, the City of Bend signed a contract for construction of the first segment of the Bend sewerage system. The Department considers this as the start of construction. Therefore, the sewage disposal well boundary for the City of Bend is expanded in accordance with the letter signed by William Y. Young, Director of DEQ, on May 16, 1978.

To assure that proposed developments meet the requirements of our May 16, 1978 letter and to facilitate DEQ county review, the following procedure should be used:

1. For developments with dry sewers that would be served by interim, individual septic tanks and drill holes.
 - a. The developer will submit the following information to the Bend office of DEQ:
 1. Proof that the development is inside the current Bend city limits or in the process of annexing;
 2. Proof that the development would be served by Phase I of the Bend sewerage system and would be activated concurrently with the rest of the city system;
 3. Proof that a sewer service agreement has been signed between the developer and the City of Bend;
 4. DEQ would review and approve dry sewer lines prior to construction of sewer. If this has already been done, the developer will submit proof that the plans have been approved by DEQ.
 - b. This office will then issue a letter to Deschutes County stating that the development qualifies to be served by disposal well.



Contains
Recycled
Materials

Mr. John Glover
August 9, 1978
Page Two

- c. The county then evaluates each lot to determine if a drainfield (with or without replacement area at county's discretion) can be installed, or whether it must be served by disposal well. Permits would be issued as appropriate. Also, at this same time, the county can sign off on the real estate disclosure and forward to the DEQ Bend office for our sign-off.

- II. For developments that would be served by a community septic tank and disposal well.

Our rules (OAR 340-71-020(4)) state that sewage disposal systems for multiple lots must be under the control of a municipality, as defined by ORS 454.010(3). Consequently, since these developments can only qualify for our disposal well agreement by being in the City of Bend or in the process of annexing to Bend, the only way for us to approve a community system is if the City of Bend will assume responsibility. If and when they do this, DEQ, the city and county will work out the details for approving such proposals.

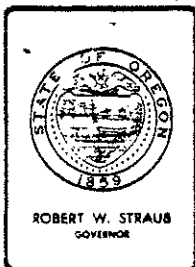
If you have questions or comments on this matter, please call me.

Sincerely,

Richard J. Nichols
Regional Manager

RJN:dmc

cc:City of Bend - John Hossick
:Deschutes County - Bill Monroe
:Water Quality Division
:Fred Bolton, Regional Operations
:Bob Free



Environmental Quality Commission

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F, November 18, 1977, EQC Meeting

Public Sewerage Considerations Within Bend Urban Growth Boundary

Background

1. Since the early 1900s, central Oregonians have been disposing septic tank effluent down lava fissures and dry wells (sewage disposal wells) rather than using conventional drainfields. This practice prompted a study of disposal well practices in 1968 by FWPCA. FWPCA (predecessor to the EPA) concluded that continued discharges of septic tank wastes to disposal wells pose a potential threat to groundwater quality. Accordingly, the EQC adopted regulations on May 13, 1969 to phase out disposal wells for inadequately treated wastes. Exhibit A illustrates the general concepts.
2. The concept of the regulations was to phase out existing sewage disposal wells in rural areas by January 1, 1975, but to allow new wells in populated areas where an acceptable sewerage construction program had been approved by DEQ. The latter areas would be classed by DEQ as "permit authorized areas" within which DEQ (or a county Health Department) could issue temporary disposal well permits. After January 1, 1980, no new disposal wells would be permitted in the "authorized" areas, and existing wells at that time would be sealed and abandoned.
3. To qualify as a permit authorized area, applicants had to agree to sewerage construction thus:
 - a. Hire consulting engineer by July 1, 1969
 - b. Submit preliminary engineering report by January 1, 1971
 - c. Start construction by August 1, 1971
 - d. Complete construction by January 1, 1980
 - e. Submit annual reports to DEQ which show reasonable progress
4. Madras, Culver, Metolius, Redmond, and Bend were designated permit authorized areas. The status today of each is as follows:

- a. Madras--city sewerage system complete in 1976--urban area sewerage planning (Step I) in progress
- b. Metolius--system complete 1975
- c. Culver--sewerage system complete 1976
- d. Redmond--system under construction--about 40% complete
- e. Bend--Sewerage Planning (Step I) complete within Urban Growth Boundary (UGB). Final design (Step II) underway within current city limits (Phase I), but not within the UGB outside the city limits (Phase 2). There is no design or sewerage construction proposal pending for the Phase 2 area at this time.

5. Overall, Bend's sewerage project has been beset with delays since 1969. To date, the following sewerage planning has occurred:

- a. Report on a Preliminary Study of a Sewage Collection and Treatment Facilities--CH2M 1967 (sewage treatment plant serving about 10% of Bend constructed in 1970)
- b. Report on Cost Updating of a Proposed Sewerage System for Bend, Oregon--Clark & Groff 1972
- c. Preliminary Design and Final Plans for East Pilot Butte Interceptor Sewer--Clark & Groff and city staff 1972-1974 (not built)
- d. Study of the Feasibility of Accepting Privy Vault Wastes at the Bend Treatment Plant--Clark & Groff 1973 (built)
- e. Preliminary Report Sewerage Study (for the City of Bend)--Century West, paid for by Brooks Resources 1974
- f. Sewerage Facilities Plan, City of Bend, Oregon--Stevens, Thompson & Runyan, Inc. and Tenneson Engineering Corp. 1976--approved by DEQ and EPA
- g. Supplemental Environmental Impact Assessment Draft, 23 September 1977--BECON
- h. Step II underway for Phase I of ST&R plan

6. All the central Oregon sewerage projects have been complicated by rock excavation and local financing difficulties, but each community has overcome these obstacles. Bend overwhelmingly passed a \$9,000,000 bond issue. Bend experienced some additional time delays due to:

- a. Analysis of experimental vacuum and pressure sewer systems
- b. Excessive cost discussions before accurate cost estimates were actually pinned down.

Indeed, cost estimate inaccuracy is largely responsible for Bend's decision to return to the E-Board for more hardship funding, but that is covered under a separate Commission agenda item.

7. Because Bend's annual reports showed progress towards sewerage construction (although behind schedule) DEQ has renewed their permit authorized status for sewage disposal wells each year through present.

8. Believing sewerage construction to be in the offing, DEQ authorized several dry sewer projects with "interim" drainfield and disposal well facilities. The facilities plan addresses the entire urban area, but due to cost projections it soon became clear that an immediate project was likely only inside the city limits. Unfortunately, most current subdivision activity (and homesite construction) is actually occurring within the Urban Growth Boundary (UGB), but outside Bend city limits. The Phase I sewerage project will not serve construction outside the city limits.

9. DEQ recognized this dilemma as early as 1973, and began tentative negotiations with city and county officials (staffs and commissions) to jointly participate in sewerage planning and construction within the UGB. Although the city and county both endorsed the facilities plan on October 6, 1976. Deschutes County has not implemented any of its recommendations.

The facilities plan includes an adopted Urban Growth Boundary (UGB) which influenced the plan. A quotation from the facilities plan describes the relation of the City of Bend General Plan to sewerage service:

"Since 1970 rapid population growth in the Bend area has occurred mostly in Deschutes County rather than the City. Population growth within the City has occurred mainly because of annexation policies.

"Flexibility has been a major objective in establishing the plan and it has provided for alternate population densities in outlying areas to accommodate future growth trends which are difficult to anticipate at this time. The major determining factor for higher densities will be the provision for sewerage. It is important to recognize that proper land use planning should precede sewerage planning. The plan would provide a north-south center strip of industrial and commercial activities with varying types of residential activities extending from this central core. The greatest population densities would be located in the central area with lower densities toward the outer edges of the urban area."

10. Much of the growth outside the city, but inside the UGB (i.e. the Phase 2 area) actually has occurred with little or no regard for how sewerage connections would be made except as inadvertently regulated by DEQ by "indirect" planning strategies. Examples are shown in Exhibit B. The City of Bend is powerless to implement planning decisions outside their city limits.

11. By 1976, the interface conflict and Phase 2 growth without sewers was obviously serious. DEQ continued meetings with city and county officials. The city was becoming conspicuously concerned about their possible "inheritance." Thus on June 1, 1977 and July 5, 1977, DEQ was successful in conducting joint sewerage policy planning sessions among City-County-DEQ.

At the July 5, 1977 meeting, it seemed appropriate to turn initiative for further meetings over to local officials since planning is a local function. Deschutes County requested a follow-up meeting on September 12, 1977. At that meeting with the County Commission DEQ volunteered that it was unable to justify continued sewerage "concessions" in the Phase 2 area, since no sewerage implementing authority, such as a County Service District, was operational there. The concept of a septic tank moratorium to halt conflicts with the sewerage plan was discussed.

A joint City-County urban planning commission concept was proposed (Exhibit C), but Deschutes County felt that to be a premature move. Instead, a joint committee to study differing building standards between city and county was established (Exhibit D). Intensive development continued in the Phase 2 area without sewerage services, except for Choctaw Village Sanitary District.

Bend changed its annexation policy after forming a citizens' group to study subdivision standards (Exhibit E).

12. Unlike many urban growth areas, Deschutes County planning ordinances permit development at low (up to 5 acre lot sizes) as well as high densities within the UGB. This aggravates sewerage construction by permitting "leap-frogging" densities. For example, on a given radius from Bend you might encounter 1000 feet of 1/3 acre lots, then 1000 feet of 2-1/2 acre lots, then 2000 feet of 1/2 acre lots, etc. The net result is expensive ultimate sewerage service to urban densities not immediately adjacent to Bend's existing urban densities.

13. The key item lacking is local coordination such as a City Utility Board, a County Service District, or some form of equivalent control.

Evaluation

1. Sewerage construction in Bend proper (Phase 1) will not likely be complete and available at the city limits until at least 1981.
2. At least 230 sewage disposal wells exist in the Phase 2 area which are not now scheduled for phase out by a sewerage system although the facilities plan shows how that could be done.
3. There are not many alternatives for sewage disposal in the Phase 2 area other than dry or wet community sewers due to:
 - a. Unavailability of a municipal sewerage system
 - b. Disposal wells not permitted per Oregon Administrative Rules (OAR) 340-44-005 through 44-045
 - c. Shallow soils often prevent drainfield construction
 - d. Package sewage treatment plants are not viable unless they have a large number of service connections

- e. Experimental septic systems are costly, and encourage low density
- f. Alternate systems usually turn out to be big and costly drainfields

Thus, through Geographic Region Rule A which allows drainfield construction in shallower soils in central Oregon, DEQ has actually aggravated the planning and sewerage construction costs by allowing these systems which, in turn, encourage low density development.

4. DEQ has documented 28 surfacing sewage failures in the Craven Road-Cessna Drive area adjacent to Bend, which generally have no alternative for repair other than a regional sewerage system. The city is unwilling to annex because the water system does not meet city specifications, and the county has discussed an LID. But nothing has happened. DEQ attended several local meetings to develop interest in annexation, LID's or a County Service District with no success. The sewage continues to surface.

5. DEQ is pressured daily for sewage disposal well repair permits within the UGB. Short of vacation of the premises, drillhole repairs are the only immediate option (although illegal), since a regional sewerage system is not available and drainfields are usually not possible due to small lot sizes and/or shallow soils. Authorization of such repairs actually undermines support for regional sewerage construction since the problem is moved out of sight but not solved by such repairs.

6. DEQ is pressured daily to approve compromise subsurface systems within the UGB for many subdivisions. In so far as has been possible, DEQ has agreed to complex terms to facilitate sewerage planning, allow interim facilities, not aggravate densities, and to prevent high denial rates. Unfortunately, lacking regional sewerage systems, the "interim" facilities become "permanent"--they are not designed to function permanently, and usually do not.

7. Since federal construction grants were projected based on regional sewerage facilities, there is risk of losing such funding if the Phase 2 area is developed without a sewerage system.

Summation

1. The UGB was adopted by the City of Bend and the Deschutes County Commission on June 2, 1976. The facilities plan was adopted by City of Bend and Deschutes County Commission on October 6, 1976, and is the approved sewerage services component within the UGB. The Oregon Department of Land Conservation and Development has not yet adopted the UGB.

2. Since there is no implementing mechanism or authority for sewerage services within the UGB and outside the Bend city limits, DEQ has been unable to develop guidelines consistent with the facilities plan which do not aggravate sewerage construction in that area.

3. Thus a question exists as to whether DEQ and its contract agent, Deschutes County Health Department, can continue septic tank approvals in the Phase 2 area when such approvals are or may be in conflict with local plan elements. To what extent are DEQ actions controlled by planning laws is a key question.

4. Possible DEQ alternatives range as follows:

- a. No action--continue septic tank and drainfield approvals/denials without regard to local planning.
- b. Obtain a written program from the Deschutes County Commission which shows how DEQ and the Commission can work together to insure that Phase 2 sewerage construction occurs in accordance with the approved facilities plan and its amendments, which show proposed trunk sewer locations. The program shall diagram an implementation strategy which addresses:
 - 1) Who will plan collector sewers;
 - 2) When sewerage facilities will be constructed;
 - 3) How sewerage facilities will be financed;
 - 4) Who will implement planning, design and construction;
 - 5) How development will be handled in the interim to insure that it does not impair implementation.
- c. Restrict subsurface sewage disposal systems in the Phase 2 area until at least one of the following occurs:
 - 1) Deschutes County forms a County Service District to design and construct sewerage facilities in the Phase 2 area to accommodate any county approvals in the UGB; or
 - 2) An equivalent public body is formed to regulate these activities in accordance with regional sewerage planning.

Director's Recommendation

1. The Director recommends that the Commission direct the staff to work with the Deschutes County Commission to obtain a written agreement outlining how DEQ and the County Commission can work together to solve the problems discussed in this report, and further direct the staff to schedule a public hearing on November 29, 1977 in Bend to take testimony on the proposed working agreement between DEQ and the County and on other alternative causes of action the EQC could pursue.

Agenda Item No. F
November 18, 1977
Page 7

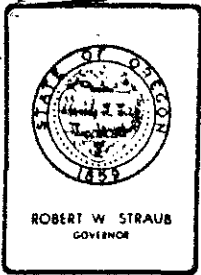
2. The Director recommends no further action at this time, but suggests that the Commission consider findings from the November 29 hearing at its next meeting.

Bill

WILLIAM H. YOUNG

John E. Borden
382-6446
11/2/77

Attachments: A through F



Department of Land Conservation and Development

1175 COURT STREET N.E., SALEM, OREGON 97310 PHONE (503) 378-4926

December 19, 1978

Tim Ward, Vice President
Sunrise Village
2151 N.E. First
Bend, OR 97701

Dear Mr. Ward:

This letter is in response to your letter of December 5, 1978 about Sunrise Village.

It is my understanding that you want the Department of Land Conservation and Development's opinion on whether or not there is anything the Land Conservation and Development Commission (LCDC) can do to assist you in receiving final approval from DEQ for the sewage system for your development that is located just west of Bend.

As I have explained to you in conversations with you and with Mr. Richard Nichols, Regional Manager with the Department of Environmental Quality (DEQ), there are two problems that need to be discussed. Is the method that DEQ is using for permitting sewage treatment facilities inside an Urban Growth Boundary consistent with Statewide Planning Goals?; and, is there anything LCDC can do regarding the development of Sunrise Village?

With regard to the first question, I believe that DEQ is properly interpreting the Statewide Planning Goals when they require developments inside an Urban Growth Boundary to have an agreement with the City to connect to their sewer system. The basis for this interpretation is that Goal 11 states that public facilities are required to serve urban and urbanizable areas. Urbanizable lands are defined as those lands within an Urban Growth Boundary (UGB). When a UGB is delineated, such as the one around Bend, then the City is committing itself to provide public facilities services to the area at some point in the future. In a case, such as that of Bend, where a regional facility is being developed, it is logical that developments be required at some point to connect to the facility. Otherwise, there could be a regional facility surrounded by a large number of private systems inside a UGB, which would not only be illogical but costly to all of the taxpayers of the area.

Tim Ward
Sunrise Village

-2-

December 19, 1978

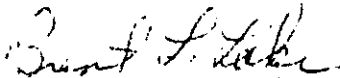
Specifically regarding Sunrise Village, I believe that since all local and statewide planning actions have been completed by Deschutes County, this matter is a local decision. As you are aware, one of the conditions placed upon your development by Deschutes County was "that plans for those lots to be served by a community sewage system shall be submitted to DEQ and approved prior to commencing construction." Because of this condition and the actions of the County, I feel this matter should be settled by local government.

In the last paragraph of your December 5 letter, you stated that your letter was to be considered an appeal to the Commission. ORS 197.300 sets out what can be appealed to the Commission and the time frame for doing so. The matter you raised needed to be appealed 60 days after the Deschutes County action on your development.

I will forward copies of the letters you have sent to me along with this letter to the Director of the Department of Land Conservation and Development recommending that he send copies to the Commission.

If I can be of any assistance to you, please feel free to contact me at any time.

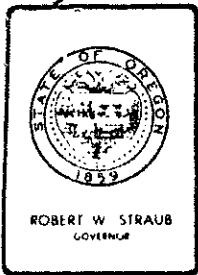
Sincerely,



Brent L. Lake
Field Representative

BLL:cm

cc: Richard Nichols
W. J. Kvarsten
John Hossick
William Monroe



Attachment C

cc: Fred
-Belton

Department of Land Conservation and Development

1175 COURT STREET N.E., SALEM, OREGON 97310 PHONE (503) 378-4926

Brent L. Lake, Field Representative
1012 N.W. Wall, Suite 203
Bend, Oregon 97701

December 27, 1978

State of Oregon
DEPARTMENT OF ENVIRONMENT & QUALITY

RECEIVED
DEC 29 1978

Tim Ward, Vice-President
Sunrise Village
2151 N.E. First Street
Bend, Oregon 97701

BEND DISTRICT OFFICE

Dear Tim:

I am concerned with the way you interpreted my letter of December 19, 1978 when you wrote to William Young of D.E.Q. on December 22, 1978.

In my letter I stated that I believe the D.E.Q. is proper in requiring developments inside an Urban Growth Boundary (UGB) to have an agreement with city for a sewage facility. Even if D.E.Q. allowed Sunrise Village to develop a private sewer district, I feel the city must agree to that approach for sewage disposal.

In your letter of December 22, you went on to say the L.C.D.C. would not challenge your development. This is correct for I believe that if L.C.D.C. or its Department was to contest your development it would have been when the county gave its approval. However this does not preclude a governmental body from filing an appeal under ORS 197.300 (1)(c) to L.C.D.C. For example, if D.E.Q. approved a private sewer district for your development, it would be possible for a governmental unit to file an appeal to L.C.D.C. within sixty days appealing the action taken by D.E.Q.

Tim Ward, Vice President
Sunrise Village
December 27, 1978
Page Two

I hope this clarifies my position on this matter. If I can be of any assistance please feel free to contact me.

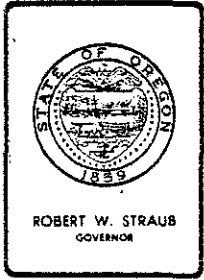
Sincerely, ORIGINAL SIGNED BY

BRENT LAKE
Brent L. Lake
Field Representative

BLL/l dg

cc: William Young
W. J. Kvarsten
Richard Nichols
John Hossick

Attachment D



Department of Environmental Quality

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229- 5395

January 9, 1979

Sunrise Village
2151 N. E. First St.
Bend, OR 97701

Re: SSSD - Sunrise Village
Deschutes County

Gentlemen:

We have reviewed your letter of December 22, 1978 and related letters from Mr. Brent Lake, LCDC, concerning your proposed Sunrise Village Development. Based in part on LCDC's comment that the local and statewide planning actions have been completed and the matter should be settled by local government, we will approve your proposal, provided the following requirements are met:

1. Detailed plans and specifications for the proposed sewerage system are approved by this Department. (Note: I believe our staff completed review of the plans and has forwarded them to our Bend office for final approval.)
2. A municipality, as defined by ORS 454.010(3), must control the proposed sewerage system. This may be achieved by an agreement with the City of Bend to operate and maintain the system or by formation of a county service district, or sanitary district. Frankly, we prefer the agreement with the City, but will accept a county service district or sanitary district, preferring the service district.
3. We must have a statement from Deschutes County indicating that they have tested your proposal in regard to the Statewide Land Use Goals and found it compatible. This statement must have the concurrence of the City of Bend. Should the City refuse to concur or otherwise object to either the formation of a special district (if that is your choice of municipality) or the County's statement of compatibility, we will be unable to approve your proposal.

For the record, we need to note that the Department believes its requirement for an understanding with the City of Bend is appropriate. We believe that such agreement is necessary to assure compliance with Goal 11 of the Statewide Land Use Goals. We also believe that we have preeminence concerning Goal 11 as it relates to the adequacy of sewerage facilities and are not obligated to approve any system if we feel it is in conflict with our interpretation of Goal 11. In this



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Sunrise Village
January 9, 1979
Page 2

case, the statement of compatibility from the County, concurred in by the City, adequately addresses our concern, when coupled with our review and approval for on-site sewage treatment.

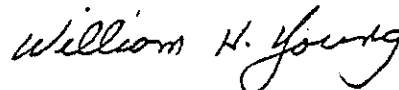
Any other similar proposals inside the Urban Growth Boundary will require concurrence of both the County and the City. In addition, the Department will test other proposals in regard to Goals 6 and 11. If a proposal, in our opinion, does not comply with Goals 6 or 11, we will not accept the proposal.

We wish to stress that a sewer agreement with the City of Bend is most desirable from our point of view. We intend to encourage the County not to form a sanitary district until all reasonable attempts to reach agreement with the City have been exhausted.

We presume that, based upon this letter, you do not wish to reappear before the Environmental Quality Commission. If this is true, please inform us promptly. You may continue the matter to a later Commission meeting, if you desire.

If you have questions, please contact Mr. Dick Nichols in Bend at 382-6446.

Sincerely,



WILLIAM H. YOUNG
Director

RJN:ak

cc: Mr. Clay Shepard, Deschutes County
Mr. Art Johnson, City of Bend
Mr. Brent Lake, LCDC
Central Region Office - DEQ
Regional Operations - DEQ

Attachment E

File
L.Q. - LCDC
cc: SSB - Sunrise Village
cc: S-Bend Phase II

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
DEC 14 1978

July 31, 1978

BEND DISTRICT OFFICE

Richard J. Nichols
Regional Manager, Central Region
Department of Environmental Quality
2150 NE Studio Road
Bend, OR 97701

Dear Dick,

As you know, Brent forwarded your June 29 letter to me for response. I appreciate your raising the issues expressed in your letter and commend you for your concern about applying Goal 11.

Although DEQ's state agency coordination program has not yet been approved, the reasons are not related to Goal 11 application. We believe DEQ's draft program adequately addresses Goal 11. Therefore, we support your efforts to implement that policy prior to program approval. At this time it appears that the program will be approved at the September Commission meeting in Bend.

A recent Attorney General's decision on the relationship of school facilities and Goal 11 support your viewpoint. In essence, the Attorney General states that provision of the service must be jointly agreed to before the land use action can be approved. While the schools don't have to be built prior to approval, a joint city/county/school district agreement must be in effect. We believe that the school case is analogous to the sewer situation you have described.

In summary, Dick, when you review specific actions it is important to evaluate them for consistency with future urban development within the Bend UGB. We believe that the city sign-off is warranted, as you suggested.

Richard J. Nichols

2

July 31, 1978

If you have any questions, please don't hesitate to contact me. Again, we appreciate your efforts to apply Goal 11 and the other statewide planning goals during your project reviews.

Sincerely,

Nancy R. Tuor
Program Division Manager

NRT:db

cc: Bob Jackman, DEQ
Brent Lake, DLCD

REVISED September 28, 1978

APPROVED October 20, 1978, by LCDC

(with no further revisions)

DEPARTMENT OF ENVIRONMENTAL QUALITY
PROGRAM FOR COORDINATION WITH
LAND CONSERVATION AND DEVELOPMENT COMMISSION

1.0 Introduction

The Department of Environmental Quality's (DEQ) program for coordination with the Land Conservation and Development Commission (LCDC) has been prepared to meet the requirements of ORS Chapter 197, particularly ORS 197.180 (2), and the LCDC Administrative Rule on state agency coordination programs adopted December 9, 1977.

These requirements, termed Key Elements in the rule, are titled:

1. List of agency rules and programs affecting land use.
2. Program for cooperation with and technical assistance to local governments.
3. Program for assuring conformance with the goals and compatibility with comprehensive plans.
4. Program for coordination with other governmental agencies and bodies.

The Department's program presented here includes a "How to Handbook." The Department of Land Conservation and Development (DLCD) previously agreed with this concept of a coordination program complemented by a handbook as meeting the intent of LCDC requirements.

The handbook has been prepared to guide both writers and reviewers of local comprehensive land use plans in how to incorporate the Department's pollution control programs into the local plan. The handbook includes an introduction and sections for air quality, water quality, solid waste management, and noise control. Section formats vary somewhat depending upon the writers' perspective on program needs and the best way to communicate with writers and reviewers of local plans. Items relating to all four LCDC "key elements" are included.

The Department's program for coordination addresses the four key elements in the sequence of LCDC's rule. Some information is presented in appendices, including major portions in DEQ's handbook for local government.

2.0 The Key Elements of DEQ's Coordination Program

2.1 List of Agency Rules and Programs Affecting Land use.

The Department's handbook lists and summarizes DEQ statutes, rules, programs and actions affecting land use, and those not affecting land use.

2.2 Program for Cooperation with and Technical Assistance to Local Governments.

2.2.A Participation in Development of Comprehensive Plans: Compliance Schedules.

Department resources are clearly insufficient to adequately participate in development of all local comprehensive plans. The Department will work with local governments to do the following things by way of participation. This participation will be undertaken to the extent current resources can safely be diverted from other basic agency responsibilities:

- 1) DEQ has identified and included in its 1979-81 biennial budget request the additional manpower and support costs needed to provide an adequate level of local coordination as described in this program.
- 2) The Department developed and forwarded a copy to DLCD of a list of cities, counties, and appropriate special districts in whose area DEQ has problems with air or water quality, solid waste, or noise conditions.
- 3) DEQ headquarters has written each city, county, and special district listed in 2) advising them that DEQ has problems with noise, solid waste, or air or water quality conditions in their area. They were advised that these should be addressed, if not already done so, in their local comprehensive plan and supporting documents before they submit these items for LCDC Acknowledgment of Compliance. They were also told:
 - a) To expect a follow-up call from DEQ's region or branch office;
 - b) If they don't hear from DEQ by the time they need our input, they

should call our region or branch office first;

- c) They may request through the region or branch office technical data DEQ has available.
- 4) The appropriate region or branch has been asked to initiate contact, through the local DLCD coordinator, with the local jurisdictions listed in 2), starting with those scheduled first for LCDC Acknowledge of Compliance. Arrangements will be made by DEQ regions and branches to review the draft plan, supporting documents and compliance schedule, and talk with local planners, if not already done. Needed compliance schedule revisions will be negotiated. Copies of local compliance schedules have been distributed to DEQ regional offices. We intend to review each local schedule, as they become available, for conflicts between when they expect help and when we can give help. Appropriate changes will be proposed.

If DEQ needs a "take home" copy of the plan during the review, we will tell local officials that DLCD considers this a necessary cost under the LCDC planning assistance grant to local government. This is discussed in more detail below under 6).

We will check for adequate reference to the problem, its correction if known, and then DEQ's other programs. This is to prevent any "surprises" from DEQ to the city or county at Acknowledgment of Compliance time.

If DEQ has time to contact the other "non-problem" jurisdictions to schedule plan document review for adequacy of reference to DEQ programs prior to their planned request for LCDC Acknowledgment, we will do so.

The priority of our working with local jurisdictions will be determined by the following:

- a) DEQ's list of local problems;
 - b) The scheduled local request for LCDC Acknowledgment of Compliance;
 - c) The LCDC approved comprehensive planning compliance schedule.
- 5) During local plan development , the Department expects local planners to initiate requests with DEQ regions and branches for assistance and review of preliminary plan drafts with as much advance notice as possible. Once agreement between DEQ and local planners is reached on the tasks and timing for DEQ involvement under the local compliance schedule, the Department will commit to that time. We will appreciate the assistance of the local coordinators and field representatives in scheduling our visits to neighboring jurisdictions, particularly in areas remote from our offices. We would prefer to schedule some of these sessions in our own offices.

In pursuing the process of negotiating our involvement under the local compliance schedule, we will attempt to coincide timing of our work with neighboring jurisdictions to facilitate trip planning and workload management.

- 6) The following program by which DEQ reviews and comments on local comprehensive plans and ordinances will continue to be implemented. This is to assure that the Department programs affecting land use have been considered and accommodated in these local documents as they are developed.
- a) DEQ region and branch liaisons review and comment on how completely the plans address DEQ programs affecting land use. They frequently request the assistance of the local planner, local coordinator, and field representative in finding the appropriate references in the plans.
 - b) DEQ region comments are then forwarded to headquarters where program

division liaisons review them to assure consistency with DEQ policy.

- c) Region and headquarters remarks are compiled and adjusted for consistency by the Management Services Division, which then routes the official DEQ response to the local jurisdiction or DLCDC, depending on whether the review was initiated directly by the local jurisdiction or DLCDC. We use the same process for both.

The DEQ staff listed in Appendix 1 are designated as land use liaisons to assist development and review of local comprehensive plans.

With present manpower, DEQ needs at least six (6) weeks for internal review of local comprehensive plans. The complexity of DEQ programs prevents us from authorizing direct region comment to local governments without headquarters' concurrence.

We need a copy of the local plan for internal review during the review period if we are to do our job with current staff in less than the six to eight week period. If provided a plan copy with the review request we will attempt to reduce review time to under four weeks.

Since July, DLCDC has forwarded the local comprehensive plan and implementing ordinances with each pre-Acknowledgment review request. This has really helped and is greatly appreciated. However, for other reviews, plans are often not available except in Salem or the particular city or county. This poses a real hardship for DEQ's larger regions encompassing eastern Oregon's 18 counties. The one or two region land use liaisons have real problems seeing, let alone reviewing local plans during local business hours due to long travel

times between jurisdictions.

2.2.B Provision of Technical Assistance to Local Governments.

The following, in addition to that covered under 2.2.A above, comprises DEQ's program for provision of technical assistance (information and services) to local governments to aid development of comprehensive plans.

1) Information from DEQ:

- a) The handbook lists information which is available upon request.
- b) The Department can provide other information on request on specific items not contained in the publications referred to in the handbook.
- c) Informational reports and other items such as those listed in the handbook will routinely be mailed as soon as they are available to those on our mailing lists including each DLCDC field representative, the DLCDC Director, the DLCDC coordinator for DEQ, and each local planning coordinator. The Department expects the local coordinator to advise the cities and counties he has a copy for review. Additional copies may be requested from DEQ headquarters or regions, but budget constraints preclude us from routinely sending a copy to each city and county in Oregon.
- d) Other items will be provided upon request, insofar as is possible, or may be examined at DEQ offices.
- e) Prior to DEQ adoption, notice of proposed non-site specific items such as area-wide plans, grants, programs, criteria, rules, and other appropriate items affecting local comprehensive plans, including those scheduled for hearing, will be sent by the appropriate headquarters division or public affairs office to all affected local governments,

state, and federal agencies as much in advance as possible, but with at least the minimum notice required by law. Local governing bodies, planning, public works, environmental health agencies, local coordinators, the appropriate LCDC recognized city and county committees for citizen involvement, DLCD field representatives and Director, and other on our lists will be routinely advised.

2) DEQ assistance:

- a) Requests for technical assistance should be made to the land use liaisons identified in Appendix 1.
- b) DEQ program, region, and public affairs staff are available on a limited basis to brief or hold discussions with local planners and citizen groups. Where appropriate, local officials will be invited to accompany DEQ staff on field investigations to promote mutual understanding.
- c) Requests for DEQ assistance should be initiated by local government or citizens' groups or committees, 45 days before it is needed. This will facilitate efficient workload planning, whether or not agreement has previously been reached between DEQ and a local government on the tasks involving DEQ and the timing under a local compliance schedule. The Department hopes that local coordinators will help us centralize in location and time, any requested briefings or work with neighboring local planners and citizen groups, as much as is possible and feasible.

The Department will keep local government regularly and promptly informed of any pertinent local situations which we find may require DEQ assistance.

2.3 Program for Assuring Conformance with the Goals and Compatibility with Comprehensive Plans.

DEQ has identified and included in its 1979-81 biennial budget request the additional manpower and support costs needed to provide an adequate level of coordination as described in this program.

2.3.A Review of Current DEQ Programs and Rules.

- 1) The Department has initially reviewed its programs listed in the handbook for conformance and potential conflicts with LCDC's Statewide Planning Goals.
- 2) By January 1, 1979, DEQ will review its rules listed in the handbook for goal conformance.

Upon a finding by DEQ that any program or rule is not in conformance, revision consideration will promptly begin. The Department is apt to sometimes need DLCD's mediation of differences between state agencies regarding conformance of DEQ programs and rules with LCDC goals.

2.3.B Review of DEQ Actions Affecting Land Use.

The Department is responsible for programs and actions related primarily to LCDC Goals 6 (Air, Water and Land Resources Quality) and 11 (Public Facilities and Services) to the limit of our statutory authority in serving as the Oregon environmental quality agency. Department implementation of environmental quality programs may from time to time present apparent conflicts with other LCDC goals. DEQ understands that all 19 LCDC goals must be considered by local governments and overall goal conformance and comprehensive plan compatibility assessment developed by the appropriate local government in considering any proposed project or program. It is clearly beyond DEQ's authority and expertise

to make such overall assessment.

The Department will always be available to assist local governments with information they may need on matters under DEQ's authority and will join with other state agencies, including DLCDC, and federal and local agencies in any necessary mediations.

The following states the Department's proposed processes to assure that its actions conform with the Statewide Planning Goals and are compatible with local comprehensive plans. As presented here they propose to apply to all DEQ actions affecting land use.

The Department feels that the processes described below are consistent with the intent of the statewide planning statutes (SB 10, SB 100, and SB 570) to place the responsibility for coordinated comprehensive planning at the local level. These processes help to accomplish that by putting the determinations of compatibility with local plans and conformance with Statewide Planning Goals at the local level.

1) Site Specific Actions:

The Department intends to develop administrative rules for all site specific actions on new or expansion projects affecting land use. These rules will require a "statement of compatibility" with the acknowledged local comprehensive plan and zoning requirements or the LCDC goals from the appropriate jurisdiction. This statement would have to accompany applications for DEQ permits and construction or funding approvals on new or expansion projects.

- a) The process would work as follows: when an applicant submits an application to DEQ it either will be accompanied by a "statement of compatibility," or evidence from the appropriate local jurisdic-

tion that the applicant has applied for such a statement before we accept the application as complete for processing. The local statement must indicate the compatibility of the proposed project under ORS, Chapter 197 with the Statewide Planning Goals or LCDC acknowledged local comprehensive plan and ordinances. The notification will include the date when the statement is due, within the time limits set by Administrative Rule or other authority for processing that category of action, unless an extension is granted.

- (1) If we receive an affirmative local statement of compatibility, DEQ will rely on it as evidence that there has been a determination of compatibility with the statewide goals or LCDC acknowledged local comprehensive plan and ordinances. If the Department determines it should take the action, the local statement of compatibility will be referenced in the public notice and draft permit for review, in the approved final permit, or in the appropriate document issued by DEQ for other actions, depending upon when the statement was received. The Department will indicate that it has tested the proposed action for conformance with Department statutes, regulations & policies, and the relevant provisions of LCDC Goals 6 and 11 (in which the Department declares preeminence in judgment for DEQ programs) and finds it compatible. DEQ will also state that its action does not convey a finding on compatibility with the Statewide Planning Goals or the acknowledged comprehensive plan and implementing ordinances, including the applicable zoning classification. It is the Department's position that those findings are the responsibility of

the local government(s) having comprehensive planning and implementing jurisdiction.

- (2) If we do not receive a local statement within the time specified, and the Department has determined it should take the action then it shall do so while informing the applicant and the local government of jurisdiction that:¹
- (a) DEQ's action (e.g., issuance of a permit) is not a finding of compatibility with the statewide planning goals or the acknowledged comprehensive plan; and
 - (b) the applicant must receive a land use approval from the affected local government.

However, if the applicant is the jurisdiction responsible for the local statement the application will not be processed until the statement of compatibility is received.

- (3) If we receive a negative statement of compatibility from the appropriate local government indicating that the project is currently not compatible with the acknowledged plan and ordinances or the goals because it needs a zone change or variance or other modification, we will notify the applicant that the action applied for cannot be taken or be allowed to stand by DEQ. If the action is a permit it cannot issue or if already issued conditionally, it will be suspended or revoked. The notification will state that DEQ expects the applicant to work with the local jurisdiction

¹ Experience with this rule may indicate that a substantial number of "conditional" permits are issued. If management of the resource base is affected, further rule-making may be needed.

to obtain such modifications and return to DEQ when the issues are resolved and the local jurisdiction has made a statement of compatibility.

- b) For any site specific action on new or expansion projects affecting land use:
 - (1) Where more than one local jurisdiction has planning authority over a specific site, we will expect statements of compatibility from each of these jurisdictions (e.g., city, county, and regional planning jurisdictions).
 - (2) The Department recognizes its right to petition LCDC for a compatibility determination and statement where:
 - (a) a city or county negative compatibility determination and statement or no statement at all has been issued on a proposal needed to meet DEQ program requirements (e.g., sewage treatment plant modifications) or where a negative determination by a local jurisdiction is in a goal area under DEQ jurisdiction by statute;
 - (b) a proposal appears to have major impact requiring a state determination of compatibility in addition to the local statement.

2) Non-Site Specific Actions

- a) The Department has implemented the following process for assuring that DEQ non-site specific actions conform with LCDC goals and are compatible with the local comprehensive plan.

Prior to DEQ action, notice of proposed non-site specific items such as area-wide plans, grants, programs, criteria, rules, and

other appropriate items affecting local comprehensive plans, including those scheduled for hearing, will be sent by the appropriate headquarters division to affected local governments, state and federal agencies as much in advance as possible, but with at least the minimum notice required by law. Local governing bodies, planning, public works, environmental health agencies, local coordinators, the appropriate LCDC recognized city and county committees for citizen involvement, DLCD field representatives and Director, and others on our lists will routinely be advised essentially as they are now.

The notice will indicate that the Department:

- (1) Has found that the proposed action appears to conform to LCDC Goals 6 and 11 (in which the Department declares preeminence in judgment for DEQ programs) and upon consideration does not appear to conflict with the other goals, which are beyond DEQ's expertise;
 - (2) Invites public comment;
 - (3) Requests that local, state and federal agencies review the proposed action and comment on possible conflicts with their programs and LCDC goals within their expertise and jurisdiction;
 - (4) Intends to ask DLCD to mediate apparent goal conflicts resulting from (2) and (3);
 - (5) Intends to take the proposed action in a specified period after due consideration of all comments absent apparent conflicts resulting from (2) and (3) or upon the conclusion of mediation discussed in (4).
- b) From time to time DEQ will initiate incorporation of new and developing programs into the local planning process. New and developing

Department programs include noise control, non-point source water quality ("208"), prevention of significant deterioration of air quality ("PSD"), and increased emphasis on local resource recovery of solid wastes.

Usually, we will work (in coordination with DLCDC) with local planners to develop needed amendments to local plans with plenty of lead time. If there is insufficient time to work in these elements with a particular local government prior to LCDC acknowledgment, DEQ will target toward the two year local revision cycle.

Once the Department's program is sufficiently developed to incorporate locally, we will attempt to answer local requests for work sessions. On occasion we may initiate a request for local plan revision if local conditions necessitate such action.

2.4 Program for Coordination with Other Governmental Agencies and Bodies.

The Department's program for coordination of DEQ actions with affected state and federal agencies and special districts includes the following:

- a) Provision of information and call for comment on DEQ plans, programs, and actions affecting land use as described above in 2.2.B 1) e) and in 2.3.
- b) DEQ reaction to information and calls for comment from other agencies, including notices from the Executive Department, Intergovernmental Relations Division's "A-95" state clearinghouse and "One-Stop Permit" coordination center.

The Department in its program rule development, framework planning and site specific actions, such as permits, routinely works with the state and federal agencies listed in Appendix 2. DEQ also has a close ongoing relationship with

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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BEND DISTRICT OFFICE



2151 N. E. FIRST STREET, BEND, OREGON 97701

February 5, 1979

State of Oregon
Environmental Quality Commission
522 SW Fifth Street
P. O. Box 1760
Portland, Oregon 97207

Attention: The Commission and DEQ Director, William H. Young

Re: Sunrise Village
Deschutes County

Dear Commissioners:

On January 26, 1979 your honorable commission unanimously approved Sunrise Village's community sewer system provided the systems compatibility with Statewide Land Use Goals has been tested by the County, its design is approved by DEQ, and it is maintained and operated by a municipality.

These requirements appeared to be satisfactory to us as from the onset of our development we have recognized and respected the fundamental purposes they served and have strived to meet their ends.

Regretfully, we have just come to realize several problems associated with the forming of a sanitation district as a means to complying with the municipality requirement. These problems are as follows.

1. We hadn't expected regional DEQ manager, Mr. Dick Nichols, would work in opposition to EQC's rulings by continuing to encourage Deschutes County and the City of Bend to resist the formation of a district so as to cause us to acquiesce to his persistent position of having a sewer agreement with the City.
2. The City of Bend apparently dosen't favor special districts out of fear the districts will grow in size and compete with the City for State and Federal dollars.
3. Were it not for Mr. Nichol's position regarding a sewer agreement with the City (a position not supported by the commission)

Environmental Quality Commission

January 5, 1979

P. Tso

The marketing of our development would not have been delayed since January 26, 1978. As it is, we've incurred great expense and a tightening market without any cash flow. An additional 100 plus days delay in marketing while a sanitation district is being formed would cause us further, more serious financial hardship.

It would now appear that at the January 26, 1979 hearing the Commission touched upon a satisfactory solution to these problems when it referenced the alternative to a municipality of our posting a \$25,000. bond. The provisions of ORS 454.425 bolstered by our incorporated homeowners association with the resources, management and enforcement powers would equal if not exceed the same force and effect of a sanitation district while enabling us to make needed sales and dispensing with the Cities fears relative to special districts. Furthermore, we have a planned unit development subdivision improvement and maintenance agreement with Deschutes County which is a condition and covenant running with the land and binding upon the property wherein the County may perform by enforceable lien the improvement, maintenance and upkeep of the development should we fail to do so.

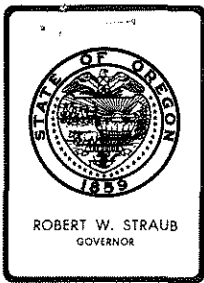
For these reasons we respectfully request our community sewer system be approved subject to the conditions set forth on January 26, 1979 with the exception of substituting the provisions of ORS 454.425 augmented by our homeowners association in place of the municipality requirement. In the event the system is acquired or its operation and maintenance is assumed by the County, City or a special district, the homeowners association will relinquish its responsibility for the system.

We are most grateful for your thoughtful consideration of our matter and hope it can be decided upon at or before your February hearing.

Very truly yours,

Tim Ward
Vice President, Sunrise Village

CC: Ross Mather
Marty West
Gray, Fancher, Holmes and Hurley



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. 0, February 23, 1979, EQC Meeting

Staff Report - Discussion of Proposed Noise Control Regulations for Airports

Background

Oregon Revised Statutes 467.030 states "the Environmental Quality Commission shall adopt rules relating to the control of levels of noise emitted into the environment of this state and including the following:

- (a) Categories of noise emission sources, including the categories of motor vehicles and aircraft."

On October 27, 1978, the Department received a petition from the Oregon Environmental Council and members of the public as co-petitioners, to amend existing noise rules. The petition would have amended OAR Chapter 340 Section 35 by applying standards established for industrial and commercial noise sources to noise generated by the operation of airports. This matter was brought before the Commission at the November 17, 1978, meeting in Eugene. After input from staff, the proprietor of Portland International Airport and the petitioner, the Commission decided that this item should be reconsidered at the December 15th EQC meeting.

The December 15, 1978, EQC meeting was held in Portland. The report discussed the roles of federal, state and local governments in aviation noise abatement. The Director's Recommendation contained in the staff report recommended that the petition be denied, primarily because the regulation of noise from airports is not well suited to the type of regulatory scheme used on more typical industrial and commercial noise sources. The report further recommended that a noise abatement program be developed for Portland International Airport over a six-month period to be brought to the Commission for approval. X After receiving testimony from the petitioners, the Port of Portland and others, the Commission denied the Oregon Environmental Council petition (and another, similar, petition presented to the Department December 13, 1978,) and directed staff to develop proposed airport noise rules for the Commission's consideration.

Evaluation

The airport problem results primarily from the introduction of jets into the air carrier fleet in the early 1960's, encroachment upon the airport by noise



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sensitive uses, and airport expansion and operational increases and changes. Studies have shown that the severity of airport noise complaints is principally associated with a combination of the following factors:

- (a) Magnitude and duration of the noise from aircraft operations;
- (b) Number of aircraft operations; and
- (c) Time of occurrence (daytime or night).

Most complaints cite interference with speech communication and sleep disturbance. Studies conducted on noise caused speech interference provide substantial evidence of a relationship between the noise level and interference with speech communication. Less information is available from the results of sleep and physiological studies, however evidence does conclude there is a causal relationship between the noise level and the disturbance.

To identify, evaluate, and eventually reduce airport noise impacts, it is necessary to quantify the noise problem. This proposal establishes a procedure for defining a noise impact area surrounding an individual airport. The criterion utilized to define the boundary of the noise impact area is based on studies of community reaction to noise, and noise interference with speech and sleep.

A fundamental philosophy underlying the procedures in this proposal is that the noise quantity be measurable by relatively simple means. The proposal utilizes the A-weighted noise level, which is a preferred tool for airport, as well as other source, noise measurement. The criterion is a single A-weighted decibel level representing an annual average day, and is expressed as a day-night noise level descriptor, L_{dn} , which weights nighttime events more heavily. One may argue that an averaged descriptor, which is based on a 24-hour time period, and averaged over 12 months, is not representative of "real world" noise impacts. The Department believes that an "annual average day" formulation is warranted, however, since (1) predicted public reaction to noise correlates well with average daily levels, and (2) data requirements for analysis by specific time periods during the day and throughout the year would quickly become so large as to render such a scheme unmanageable.

The Department believes 55 dBA - L_{dn} is a reasonable criterion for persons residing in urban residential areas where houses are of typical Oregon construction and may have windows partially open. It has been selected with reference to speech and sleep interference and community reaction. Figures 1 and 2, taken from an EPA document, indicate the response of people impacted by aircraft noise. Figure 1 relates to sleep interference and Figure 2 shows the effect of aircraft noise on speech communication and other factors. Note that at a day-night airport noise level of 55 dBA (L_{dn}) outside, approximately 45 percent of the impacted people are awakened and 45 percent suffer speech interference.

The proposed airport noise control rule would require all air carrier airports to determine the extent of noise impacts within the criterion boundary and,

if needed, develop an airport noise abatement program. (Air carrier airports presently include Eugene, Klamath Falls, Medford, North Bend, Pendleton, Portland International, Redmond and Salem.)

Non-air carrier airports notified by the Director must initiate noise impact evaluation and an airport noise abatement program. Only those smaller airports that the Director identifies as causing noise impacts would need to conduct a noise study. New airports would, prior to construction, demonstrate their compatibility with the community and develop a plan to maintain compatibility.

The noise criterion defined by the draft rule may be exceeded under circumstances determined by the Commission, and any mitigation measures would be required only to the extent the Commission found to be necessary and practicable.

Copies of the draft proposed noise control regulations for airports have been forwarded to the proprietors of the larger Oregon airports, signers of the October 27th and December 13th petitions, and other concerned parties. The Department distributed these copies with a cover letter soliciting timely comments, and expressing the willingness of staff to meet with those who wished to discuss the rule draft.

Summation

Drawing from the background and evaluation presented in this report and from the reports on the same subject presented to the Commission at the November 17, 1978, and December 15, 1978, EQC meetings, the following facts and conclusions are offered:

1. The Commission is provided specific authority to adopt rules to control aircraft noise under ORS 467.030.
2. The Commission has directed staff to develop proposed rules for their consideration.
3. The rule draft would require an airport noise abatement program for those air carrier airports with noise sensitive property exposed to noise levels exceeding 55 dBA - L_{dn} .
4. Non-air carrier airports would only need noise abatement programs if they are identified by the Director as causing noise impacts.
5. Airport noise abatement programs would primarily focus on airport operational measures to mitigate existing noise levels, however a program would also evaluate the effect of aircraft noise emission regulations and land use controls.
6. Subject to any federal preemption, the Commission may approve any airport noise abatement program that it determines to be necessary and practicable.

Director's Recommendation

Based upon the summation above, it is recommended that the Commission authorize the Department to undertake discussions and hold informational hearings with affected parties and return within 90 days with recommendation for action.

Michael Downs
for
WILLIAM H. YOUNG

John Hector:dro
2/13/79

Attachments

1. Figures 1 and 2
2. Proposed Airport Noise Control Rules

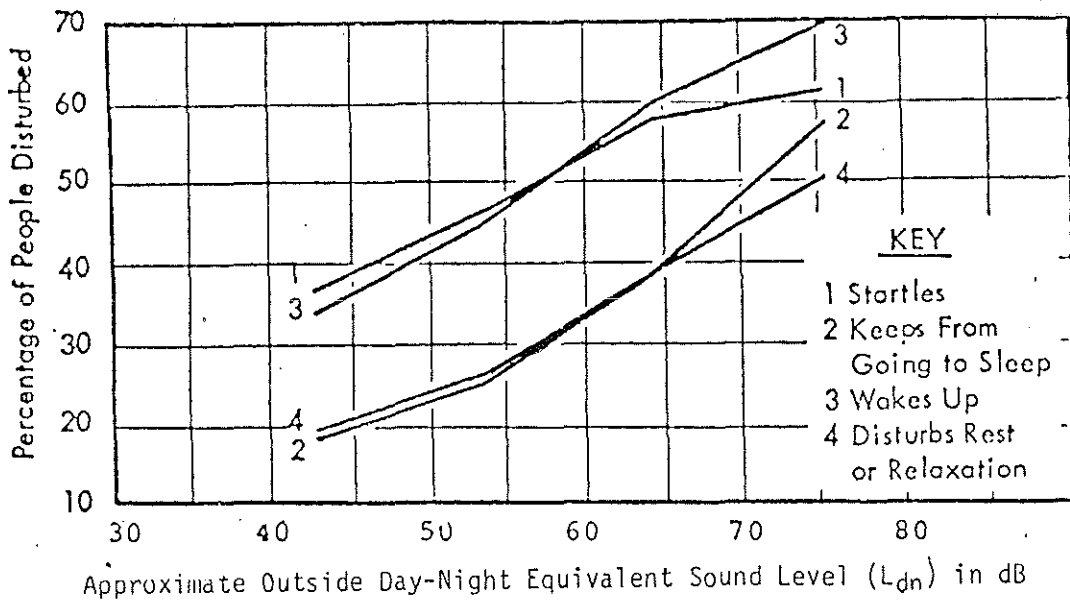


Figure 1. Percentage of People Disturbed by Aircraft Noise for Various Types of Reasons Concerned With Rest And Sleep

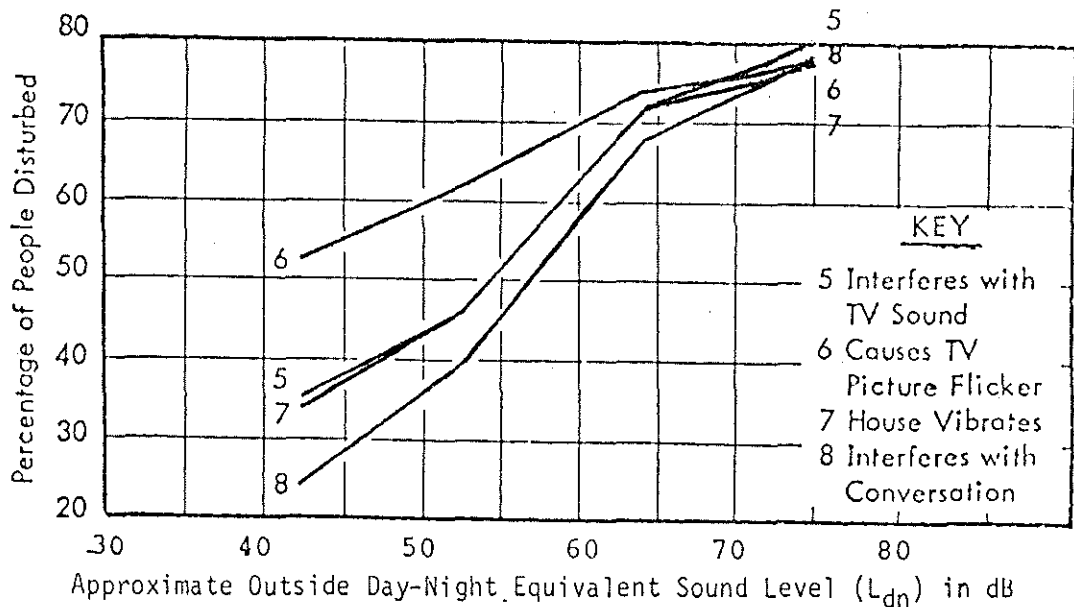


Figure 2. Percentage of People Disturbed by Aircraft Noise for Various Types of Reasons Concerned with Domestic Factors

Department of Environmental Quality
Proposed Noise Control Regulations for Airports
Chapter 340, Oregon Administrative Rules

January 22, 1979

35-015 Definitions. As used in this Division:

- (1) "Air Carrier Airport" means any airport that serves air carriers holding Certificates of Public Convenience and Necessity issued by the Civil Aeronautic Board.
- (2) "Airport Master Plan" means any planning effort conducted by the airport proprietor to establish long-term development plans for the airport.
- (3) "Airport Noise Abatement Program" means a Commission-approved plan designed to achieve noise compatibility between an airport and its environs.
- (4) "Airport Proprietor" means the person who holds legal title to an existing or proposed airport.
- (5) "Annual Average Day-Night Airport Noise Level" means the average, on an energy basis, of the daily Day-Night Airport Noise Level over a 12-month period.
- (6) "Class I Property" means schools, hospitals and nursing homes.
- (7) "Class II Property" means residential uses.
- (8) "Class III Property" means churches, libraries and transient lodging.

- (9) "Class IV Property" means those uses that are not noise sensitive, including those recreational, industrial, and commercial uses not included as Class I, II, or III property.
- (10) "Commission" means the Environmental Quality Commission.
- (11) "Day-Night Airport Noise Level" means the equivalent A-weighted sound level during a 24-hour time period, with a 10 decibel penalty applied to the level measured during the nighttime hours of 10 p.m. to 7 a.m. The mathematical definition is:

$$L_{dn}(\text{Airport}) = 10 \log \frac{1}{24} \left[15 \left(10^{L_d/10} \right) + 9 \cdot 10 \left(\frac{L_n + 10}{10} \right) \right]$$

where

$$L_d = L_{eq} \text{ for the daytime (7 a.m. to 10 p.m.)}$$

$$L_n = L_{eq} \text{ for the nighttime (10 p.m. to 7 a.m.)}$$

$$L_{eq} = \text{Equivalent noise level of the airport.}$$

- (12) "Department" means the Department of Environmental Quality.
- (13) "Director" means the Director of the Department.

- (14) "Equivalent Noise Level (L_{eq})" means the equivalent steady state sound level in A-weighted decibels for a stated period of time which contains the same acoustic energy as the actual time-varying sound level for the same period of time. The mathematical definition is:

$$L_{eq} = 10 \log \left[\frac{1}{t_2 - t_1} \int_{t_1}^{t_2} \frac{P(t)^2}{P_0^2} dt \right]$$

where

t_1 and t_2 are the two time points defining the period

$P(t)$ is the time-varying sound pressure

P_0 is a reference pressure taken as 20 micropascals

- (15) "New Airport" means any airport for which installation or construction commenced after January 1, 1980.
- (16) "Noise Impact Boundary" means the locus of points around any airport for which the annual average day-night airport noise level is equal to the airport noise criterion.
- (17) "Noise Sensitive Property" means real property on, or in, which people normally sleep, or on which exist facilities normally used by people as schools, churches, or public libraries. Property used in industrial or agricultural activities is not defined to be Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.
- (18) "Sound Transmission Loss" means the average difference in A-weighted decibels between aircraft noise levels in free space outside the Noise

Sensitive Property and the corresponding noise levels in rooms on the exposed sides of the structure.

35-045 Noise Control Regulations for Airports

- (1) Statement of Purpose. The Commission finds that noise pollution caused by Oregon airports may threaten the public health and welfare of citizens residing in the vicinity of airports. To mitigate airport noise impacts a coordinated statewide program is desirable to ensure that effective Airport Noise Abatement Programs are developed and implemented. An abatement program shall include measures to prevent the creation of new noise impacts or the expansion of existing noise impacts to the extent necessary and practicable. Each abatement program shall primarily focus on airport operational measures to prevent increased, and to lessen existing, noise levels. The program shall also include the effects of aircraft noise emission regulations and land use control. It is therefore necessary that abatement programs be developed with the cooperation of federal, state and local governments to ensure that all potential noise abatement measures are fully evaluated. These rules are designed to cause the airport proprietor, aircraft operator, local governments, pilots and the Department cooperatively to prevent and diminish noise. These rules accomplish these ends by encouraging compatible land uses and controlling and reducing the noise in communities in the vicinity of airports.

- (2) Airport Noise Criterion. The criterion for airport noise impacting Class I, Class II, or III Property is an Annual Average Day-Night Airport Noise Level of 55 dBA.

(3) Airport Noise Abatement Program and Methodology.

- (a) Any New Airport shall have an Airport Noise Abatement Program. Any existing airport which has Noise Sensitive Property within its airport Noise Impact Boundary may be required to have an Airport Noise Abatement Program.
- (b) The proprietor of any proposed New Airport shall, prior to construction or operation, submit a proposed Airport Noise Abatement Program for Commission approval.
- (c) The proprietor of an existing airport whose airport Noise Impact Boundary includes Noise Sensitive Property or may include Noise Sensitive Property because of proposed physical or operational changes shall submit a proposed Airport Noise Abatement Program for Commission approval within 12 months of notification, in writing, by the Director. The Director shall give such notification when he has reasonable cause to believe that an abatement program is necessary to protect the health, safety, and welfare of the public.
- (d) The Airport Noise Abatement Program shall consist of the following elements unless written exception is given by the Department:
 - (A) A map of the airport and its environs, identifying:
 - (i) Projected airport Noise Impact Boundaries under current proposed operational noise control measures and at periods of five, ten, and twenty years into the future.

- (ii) All existing Noise Sensitive Property within the airport Noise Impact Boundary.
 - (iii) Present zoning and comprehensive land use plan permitted uses.
- (B) An airport operational plan designed to reduce airport noise impacts at Noise Sensitive Property to the Airport Noise Criterion to the greatest extent practicable including:
- (i) An evaluation of the noise impact of projections for numbers of flight operations and aircraft noise emission source controls at five, ten and twenty year periods into the future;
 - (ii) Evaluation of corrective actions to mitigate impacts to existing noise sensitive uses.
 - (iii) An evaluation of the effectiveness of the following noise abatement options by estimating potential reductions in the airport Noise Impact Boundary and numbers of Noise Sensitive Properties impacted within the boundary, incorporating such options to the fullest extent practicable into any proposed Airport Noise Abatement Program:
 - (a) Takeoff and landing noise abatement procedures such as thrust reduction or maximum climb on takeoff;
 - (b) Preferential and priority runway use systems;
 - (c) Modifications in approach and departure flight tracks.

- (d) Rotational runway use systems;
- (e) Higher glide slope angles and glide slope intercept altitudes on approach;
- (f) Displaced runway thresholds;
- (g) Limitations on the operation of a particular type or class of aircraft, such as prohibiting the use of aircraft which do not meet the certification noise limits of Federal Aviation Regulation Part 36;
- (h) Limitations on operations at certain hours of the day;
- (i) Limiting the number of operations per day or year;
- (j) Establishment of landing fees based on aircraft noise emission characteristics or time of day.
- (k) Rescheduling of operations by aircraft type or time of day;
- (l) Shifting operations to neighboring airports;
- (m) Location of engine run-up areas;
- (n) Times when engine run-up for maintenance can be done;
- (o) Acquisition of noise suppressing equipment and construction of physical barriers for the purpose of reducing aircraft noise impact;

- (p) Development of new runways or extended runways that would shift noise away from populated areas or reduce the noise impact within the Airport Noise Impact Boundary.

- (c) A land use and development control plan to protect the area within the airport Noise Impact Boundary from encroachment by non-compatible noise sensitive uses and to resolve conflicts with existing unprotected noise sensitive uses within the boundary. Affected local governments shall have an opportunity to participate in the development of the plan, and any written comments offered by an affected local government shall be made available to the Commission. Appropriate actions under the plan may include:
 - (i) changes in land use through non-noise sensitive zoning,

 - (ii) influencing land use through the programming of public improvement projects,

 - (iii) purchase assurance programs,

 - (iv) voluntary relocation programs,

 - (v) soundproofing programs,

 - (vi) purchase of land for airport use,

 - (vii) purchase of land for airport related uses,

- (viii) purchase of land for non-noise sensitive public use,
 - (ix) purchase of land for compatible resale,
 - (x) noise impact disclosure to purchaser.
- (D) The proprietor shall use good faith efforts to obtain such concurrence or approval for any portions of the proposed Airport Noise Abatement Program for which the airport proprietor believes that Federal Aviation Administration concurrence or approval is required. Documentation of such efforts and a written statement from FAA containing its response shall be made available to the Commission.
- (E) Each Airport Noise Abatement Program approval shall expire five (5) years from the date of Commission approval. The program shall be revised and submitted for Commission consideration no later than six (6) months prior to the expiration of the previous program. If the Director determines that circumstances warrant a program update, the Airport Proprietor shall submit a revised program within twelve (12) months of written notification. Each program revision is subject to all requirements of this rule.
- (4) Airport Noise Impact Boundary
- (a) New Airports. Prior to the construction or operation of any New Airport, the Airport Proprietor shall submit and receive Department approval of an analysis, using applicable acoustical calculation techniques, to estimate the airport Noise Impact Boundary using the airport noise criterion.

- (b) Existing, Non-Air Carrier Airports. Within twelve months of receipt of written notification from the Director, the proprietor of any existing non-air carrier airport shall determine and submit for Department approval, the airport Noise Impact Boundary using the airport noise criterion. The airport Noise Impact Boundary shall be determined using (1) applicable acoustical calculation techniques, (2) actual field measurements or (3) both of the above, at the Director's discretion.
- (c) Existing Air Carrier Airports. Within twelve months of the adoption of this rule, the proprietor of any existing Air Carrier Airport shall determine and submit for Department approval, the airport Noise Impact Boundary using the airport noise criterion. The airport Noise Impact Boundary shall be determined using (1) applicable acoustical calculation techniques, (2) actual field measurements or (3) both of the above, at the Director's discretion.
- (d) Airport Master Planning. Any non-air carrier airport that has obtained funding to develop an Airport Master Plan shall include in that planning effort an analysis of the airport Noise Impact Boundary using the airport noise criterion and submit the analysis for Department approval.
- (5) Noise Sensitive Use Deviations. The airport noise criterion is designed to provide adequate protection of noise sensitive uses based upon out-of-doors airport noise levels. The following noise sensitive use classes and acoustical treatment measures may adequately protect interior activities. Certain noise sensitive use classes may be acceptable within the airport Noise Impact Boundary provided that all necessary and practicable measures are taken as determined by the Commission to protect noise sensitive activities.

- (a) Existing Class III Property at Annual Average Day-Night Airport Noise Levels between L_{dn} 70 to 75 dBA with a minimum of 30 dBA sound transmission loss and between 65 to 70 with a minimum of 25 dBA sound transmission loss. At impacts below L_{dn} 65 dBA no extraordinary treatment is needed.

- (b) Existing Class II Property at Annual Average Day-Night Airport Noise Levels between L_{dn} 60 to 65 dBA with a minimum of 25 dBA sound transmission loss. At impacts below L_{dn} 60 dBA no extraordinary treatment is needed.

- (c) Existing Class I Property at Annual Average Day-Night Airport Noise Levels between L_{dn} 60 to 65 dBA with a minimum of 25 dBA sound transmission loss and between L_{dn} 55 to 60 dBA with a minimum of 20 dBA sound transmission loss.

- (d) New Class III Property at Annual Average Day-Night Airport Noise Levels between L_{dn} 70 to 75 dBA with a minimum of 30 dBA sound transmission loss, between L_{dn} 65 to 70 dBA with a minimum of 25 dBA sound transmission loss. Below L_{dn} 65 dBA no extraordinary treatment is needed.

- (e) New Class II Property at Annual Average Day-Night Airport Noise Levels between L_{dn} 60 to 65 dBA with a minimum of 25 dBA sound transmission loss and between L_{dn} 55 to 60 dBA with a minimum of 20 dBA sound transmission loss.

- (f) New Class I Property at Annual Average Day-Night Airport Noise Levels between L_{dn} 60 to 65 dBA with a minimum of 25 dBA sound transmission

loss and between L_{dn} 55 to 60 dBA with a minimum of 20 dBA sound transmission loss.

(6) Airport Noise Monitoring

(a) Determination of airport noise impact may be determined or verified through field sound measurements.

(b) Measurement points shall be located at Noise Sensitive Property near the airport. Locations shall be selected in a manner so that non-airport noise sources will not significantly contribute to the Day-Night Airport Noise Level.

(c) An intermittent monitoring schedule shall be designed that will allow a realistic statistical sample of the Annual Average Day-Night Airport Noise Level to be taken at any location within the airport Noise Impact Boundary. As a minimum, the schedule shall specify that measurements be taken continuously for 24-hour periods during four 7-day sample periods throughout the year, chosen such that for each sample, each day of the week is represented, the four seasons of the year are represented, and the results account for the effect of annual proportion of runway utilization.

(d) Sound measurements shall also conform to the requirements and procedures set forth in Sound Measurement Procedures Manual (NPCS-1) and Requirements for Sound Measuring Instruments and Personnel (NPCS-2).

(7) Exceptions. Upon written request from the Airport Proprietor the

Department may authorize exceptions to this rule pursuant to Section 35-010 for:

- (a) unusual or infrequent events,
- (b) noise sensitive property owned or controlled by the airport,
- (c) noise sensitive property located on land zoned exclusively for industrial or commercial use.



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

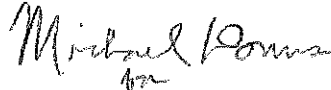
From: Director

Subject: Agenda Item No. P, February 23, 1979, EQC Meeting

Motor Vehicle Inspection - Report on Motor Vehicle
Emission Inspection Program, 1977-1978

The Motor Vehicle Emission Inspection Program began mandatory operation July 1975. On January 14, 1977, the Commission adopted a report for submission to the 1977 Oregon Legislature on the effectiveness of the motor vehicle inspection program.

Attached is a report prepared by the Department for your consideration. The purpose of the report is to update the Commission on the activities of the Motor Vehicle Inspection Program during 1977 and 1978.


WILLIAM H. YOUNG

William P. Jasper/dc
229-5081
February 8, 1979
Attachment: Report on Motor Vehicle
Emission Inspection Program
1977-1978



Contains
Recycled
Materials

State of Oregon
Environmental Quality Commission

Report on Motor Vehicle
Emission Inspection Program
1977-1978

February 1979

Prepared By
Department of Environmental Quality
Vehicle Inspection Program

TABLE OF CONTENTS

Summary Report

Background and Legislative History	1
Inspection Program in Oregon	2
Reduction of Motor Vehicle Emissions	2
Population and Traffic Trends	4
Contractor Operation of the Inspection Program	4
Status of other Inspection Maintenance Programs	4
Conclusion	5

Appendices

A. Summary of Legislative and Administrative Policy	
B. Program Operations	
C. Fleet Self-Inspection Program	
D. Motor Vehicle Emissions	
E. Heavy Duty Truck Emissions	
F. Emission Reductions from Repaired Vehicles	
G. EPA's Portland Study Project	
H. Air Quality Analysis	
I. Population and Traffic Trends	
J. Contractor Operation of the Inspection Program	
K. Repair Costs Associated with the Inspection Program	
L. Status of other Inspection Maintenance Programs	
M. References	

REPORT ON MOTOR VEHICLE EMISSION INSPECTION PROGRAM

1977-1978

Background and Legislative History

Motor vehicles are a source of air pollution in the United States, as well as in many other industrialized countries of the world. The major air pollutants produced by motor vehicles are carbon monoxide, hydrocarbon gases, and oxides of nitrogen. Particulate matter, including lead compounds, and sulfur oxides are also produced. In many urban areas the buildups in the concentrations and the reactions in the atmosphere of these motor vehicle produced air pollutants have given rise to public health concerns.

As a result of recognition of a national motor vehicle pollution problem, Congress enacted the 1965 Clean Air Act Amendments. This action initiated a Federal motor vehicle pollution control program which applied the 1966 California auto emission standards nationally in 1968. This 1965 Act did not produce the results Congress intended. Subsequently, the Clean Air Act Amendments of 1970 was enacted.

The Clean Air Act Amendments of 1970 established a national air quality control program with specified goals, objectives, and time schedules. New motor vehicle emission standards were promulgated. The states were required to submit implementation plans that outlined how these national goals and objectives were to be met within the state and within the specified time schedule.

Oregon's Implementation Plan was originally submitted by the Governor in 1972. This was followed in 1973 by the Transportation Control Strategy which specified in greater detail the methodology chosen by the State to control automotive caused air pollutants. The State's plan relied upon a combination of control measures at various governmental levels to obtain compliance with the national standards. These control measures included traffic flow improvements in the city, a parking/traffic circulation plan, significant mass transit improvements, an annual motor vehicle emission control inspection program, and the federal new vehicle emission control program. The State's plan has not yet met its objective. This is primarily due to delays in the federal new vehicle program and enactment by the state legislature of a biennial inspection program rather than the projected annual program.

The Clean Air Act Amendments of 1977 extend the time schedule for compliance with national ambient air standards to 1982. If a state implements all reasonable control measures--including a schedule for a motor vehicle inspection/maintenance program--and is still unable to project compliance with the national standards, then an extension of the time schedule until as late as 1987 is possible. A summary of federal and state motor vehicle emission control legislative and administrative action is contained in Appendix A.

Oregon Inspection Program Operations

Since July 1, 1975, the Department of Environmental Quality has operated a motor vehicle emission inspection program within the boundaries of the Metropolitan Service District which includes the City of Portland. These boundaries are legislatively set and specify those which were in existence as of March 14, 1974. By state law, vehicles registered within these boundaries must comply with the emission control standards and obtain a Certificate of Compliance prior to registration renewals. Certain vehicle classes are exempt from this requirement by statute. The certificates are available only from the Department operated inspection centers. A \$5 fee, which totally supports the program operations, is charged for issuance of a certificate.

Passenger car and light truck registrations in Oregon are valid for a two-year period. Consequently certification for emission control purposes is required every other year for these vehicles. Trucks which operate with standard truck license plates are required to be certified annually since their registration period does not exceed one year. Government licensed vehicles, which have a continuous license period with no renewal necessary, are required to be emission certified annually.

To conduct the vehicle emission inspection and maintenance program seven test centers operate in the Portland metropolitan area. During this last year over 577,000 emission tests were conducted. Table 1 summarizes the testing activity during 1977 and 1978 and Figure 1 shows the testing volume on a monthly basis for 1977 and 1978. The dramatic change in testing activity over this period is due to Oregon's biennial registration system. Inspector staff size is fluctuated to respond to these work load changes. An overall pass rate of 60% was maintained or exceeded during this period. A general discussion of the inspection program operation is contained in Appendix B. To compliment the State's inspection efforts, private motor vehicle fleets of 100 or more vehicles and publicly owned fleets of 50 or more vehicles can qualify for self-inspection status. A discussion of the fleet self-inspection program is contained in Appendix C.

Reduction of Motor Vehicle Emissions

The measure of the effectiveness of any inspection/maintenance program is the reduction of the emissions from the vehicles subject to inspection, how well the emissions are maintained at the reduced level, and the effect on air quality.

The bulk of the data available for analysis comes from recording the emission levels from the cars and trucks that are inspected. A more detailed discussion of the idle emission data is contained in Appendix D. Aside from determining pass/fail rates, many inferences can be drawn. But the main comparison is by means of comparing the characteristics of the current population with those of past populations. Idle emission reductions for the passenger vehicle population were maintained below the levels achieved in 1976 for carbon monoxide, about a 25% reduction. Idle emissions for hydrocarbons, also measured

an 8% reduction compared to 1976, but a difference in the characteristics of the emission distribution indicates that a change may be taking place. This change, which can potentially affect both carbon monoxide and hydrocarbon emissions, appears to be due to two prime factors. 1) The older vehicles, and over half of the vehicles statewide may have mileages in excess of 50,000 miles, are displaying signs of engine wear and deterioration of emission control which can significantly increase their emission output. This also can have an adverse affect on vehicle performance and fuel economy. The solution for these vehicles is to repair the cause of the problem. The cost of repair falls upon the vehicle owner. The cost of repair information, Appendix K, indicates that the average repair costs are still low, over 60% reported costs are lower than \$10. And 2) the emission reduction potential of some new cars is not being achieved. The poor performance of some of these newer cars is due in part to overall system designs and to maladjustment or tampering with the emission control systems. Emission reductions from repaired vehicles, Appendix F, are impressive, up to 60% measured at idle. The disturbing aspect is that many emission controlled cars, on the initial inspection, exhibit emissions indicative of lack of proper maintenance.

The program coverage was extended to heavy duty trucks late in 1977. Appendix E discusses the results of the heavy duty truck testing program. The emission reduction potential from heavy duty trucks is sizeable (estimated 12% CO and 42% HC), and it is achieved in the congested urban areas.

The Environmental Protection Agency has been conducting an extensive study of Oregon's I/M program. One major aspect of this study is the deterioration of emissions from cars subject to Portland's population compared to those in Eugene where there is no I/M program. EPA has recently released a report, included in Appendix G, which includes the results of the study through last November. Additionally, Figures 2 and 3 show the Portland test fleet compared to the Eugene control group for a 9 month study period. Data from that study indicates that 1975 - 1977 Portland cars after the inspection compared to Eugene cars on a mass emissions basis (using the federal test procedure) were up to 44% cleaner for carbon monoxide and up to 31% cleaner for hydrocarbons. After six months the HC and CO emission reductions for the entire fleet were 27% and 32% for the newer cars, and 8% and 10% for the older cars.

The effect on air quality is the final test. Appendix H, discusses the effects on air quality of the State's transportation control strategy, which includes the inspection program. The data indicates that the national carbon monoxide health standards are projected to be achieved at the Portland Continuous Air Monitoring station considerably earlier than is possible with no program. However, the analysis is also showing that even with our present program, violations will be occurring on some of the area's streets through 1987. But without inspection/maintenance, the non-compliance would be more wide spread. Achievement of national health standards for oxidants are projected at 1983 with the I/M program. Precise predictions for the biennial program are not available due to the complexity of the modeling techniques and the lack of hard data on emission characteristics

of cars in their second year after inspection. Ambient data for Portland shows decreases in carbon monoxide violations and indicates some stabilization for oxidants. Data from other cities in the Willamette Valley indicates increasing trends for these pollutants since 1974. The relative reduction attributable to the I/M program for controlling carbon monoxide and hydrocarbons is estimated at approximately 20% carbon monoxide and 15% hydrocarbons.

Portland Metropolitan Area Population and Traffic Trends

In previous reports to the Commission, population and traffic trend projections for the Portland metropolitan area were made. Appendix I updates these previous studies. In general, population and traffic volume have continued to grow in the tri-county Portland area.

The annual working population growth rate in Clackamas and Washington counties has averaged between 6% and 8% for a number of years. Multnomah County working population, on the other hand, has changed only slightly during this same time.

Traffic volume in the metropolitan area has increased over 36% in the last three of four years. Area traffic trends have changed over the past years indicating a growing industrialization in what was once the bedroom communities. From the traffic count data on main roads in and out of the Metropolitan Service District, it is estimated that less than 14% of the passenger vehicles operating within the MSD would be from outside the vehicle inspection area. Almost one-half of these out-of-area vehicles are from Clark County, Washington.

In the May 1978 primary, the people approved a major restructuring, including the boundaries, of the Metropolitan Service District. In Appendix I, it is estimated that adoption of these new boundaries would result in the inclusion of additional urbanized area, but that the number of vehicles which would require inspection would be reduced slightly.

Contractor Operation of the Inspection Program

ORS 468.377 directed the Commission to evaluate private contractor operation of the inspection program. Appendix J, presents the Commission's findings which concluded that given the current statutory nature of the inspection program, there would not be a savings to the public, increased efficiency, nor would program quality be maintained. The Commission did direct an additional review of the private contractor operation following the 1979 Legislative session.

Status of Other Inspection Maintenance Programs

Mandatory emission inspection programs are in operation in six states: Arizona, California, Nevada, New Jersey, Oregon, and Rhode Island. Voluntary inspection programs are operational in about a dozen additional states. A total of

40 states are designated as having non-attainment areas for motor vehicle related pollutants within their boundaries. I/M is under study in these states as one element that may be necessary to achieve the clean air goals by December 31, 1982. Appendix L outlines the programs currently in operation and lists those states which are studying I/M.

Conclusion

The Clean Air Act and its amendments have established a national air quality control program with specified goals, objectives, and time schedules. Oregon's Clean Air Act Implementation Plan includes a motor vehicle emission inspection program in the Portland metropolitan area as an important element in controlling Oregon's motor vehicle related air pollution. This inspection program began operation in July, 1975.

On a fleet basis, new motor vehicles, certified by the manufacturer as meeting the federal new vehicle emission standards have not been meeting the emission standards when maintained and operated by the general consumer. The purpose of an inspection/maintenance program is to reduce the emissions from individual vehicles by promoting improvement in the maintenance performed. Both idle emission distribution studies and federal test cycle data show emission reductions occurring as a result of the inspection program operation. This is most clearly shown in the data comparing emissions from Portland area catalyst equipped vehicles to the emissions from similar vehicles in Eugene where an inspection program is not operated.

With the current biennial inspection program operating and the other ongoing control measures, compliance with the ambient air carbon monoxide standard is projected to occur between 1981 and 1987. With the current biennial program operation, the other ongoing control measures, and the addition of the volatile organic compound (VOC) program, compliance with the national oxidant standard is currently projected to be achieved during 1982.

Oregon's inspection/maintenance program has been demonstrated to be effective in reducing the individual motor vehicle's emissions, in maintaining those emission reductions, and contributing to the overall effort of meeting national clean air goals.

Table 1

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
VEHICLE INSPECTION PROGRAM

Activity Summary for January 1977 - December 1978

EMISSION INSPECTION TESTS	761,287
OVERALL PERCENTAGE PASS	61%
COMPLIANCE CERTIFICATES ISSUED	451,978

Emission Inspection Tests

Pass Emission Test	461,332	=	61%
Tests Failed for Carbon Monoxide (CO)	132,035	=	17%
Tests Failed for Hydrocarbons (HC)	65,365	=	8%
Tests Failed for Both HC & CO	38,421	=	5%
Tests Failed for Emission Equipment Disconnects	23,221	=	3%
Tests Failed for Other Causes (i.e., smoke, dilution, idle RPM)	40,913	=	5%

Pre-Emission Control Vehicle Tests

Number of Tests	172,645	=	22% of all Tests
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Emission Controlled Vehicle Tests

Number of Tests	588,642	=	78% of all Tests
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OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

1977 - 1978 INSPECTION/MAINTENANCE TEST PROGRAM ACTIVITY

Figure 1

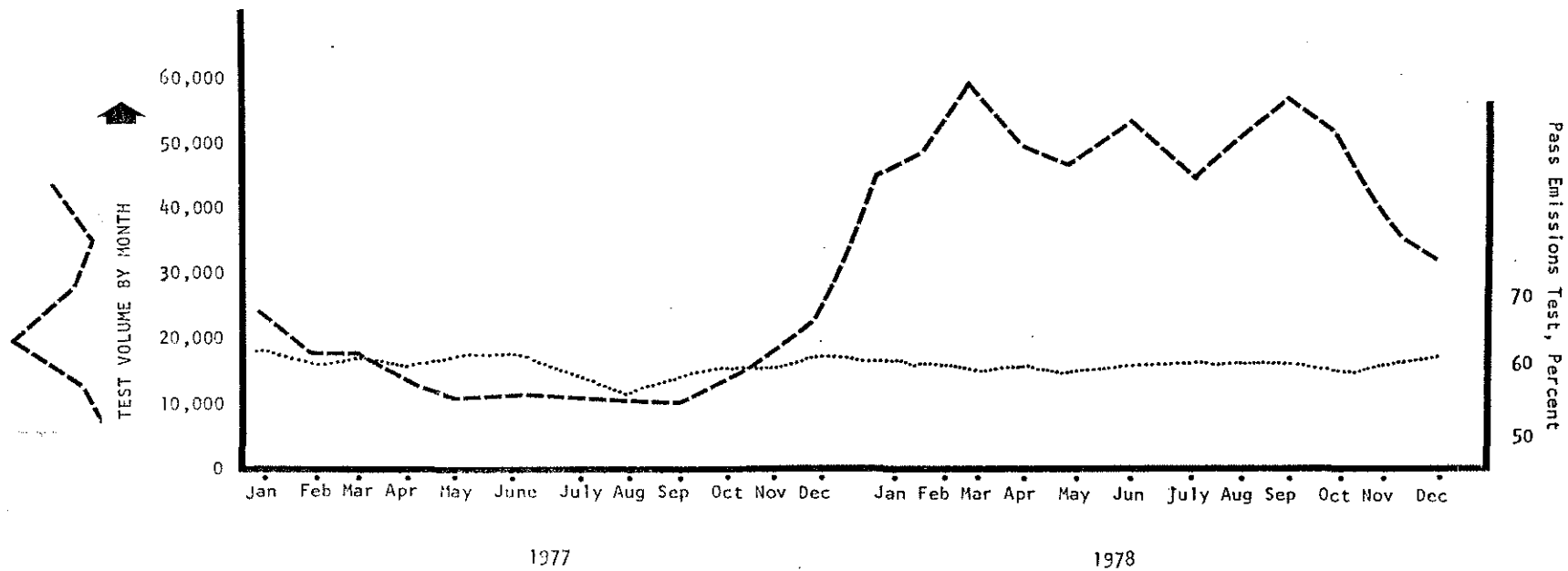
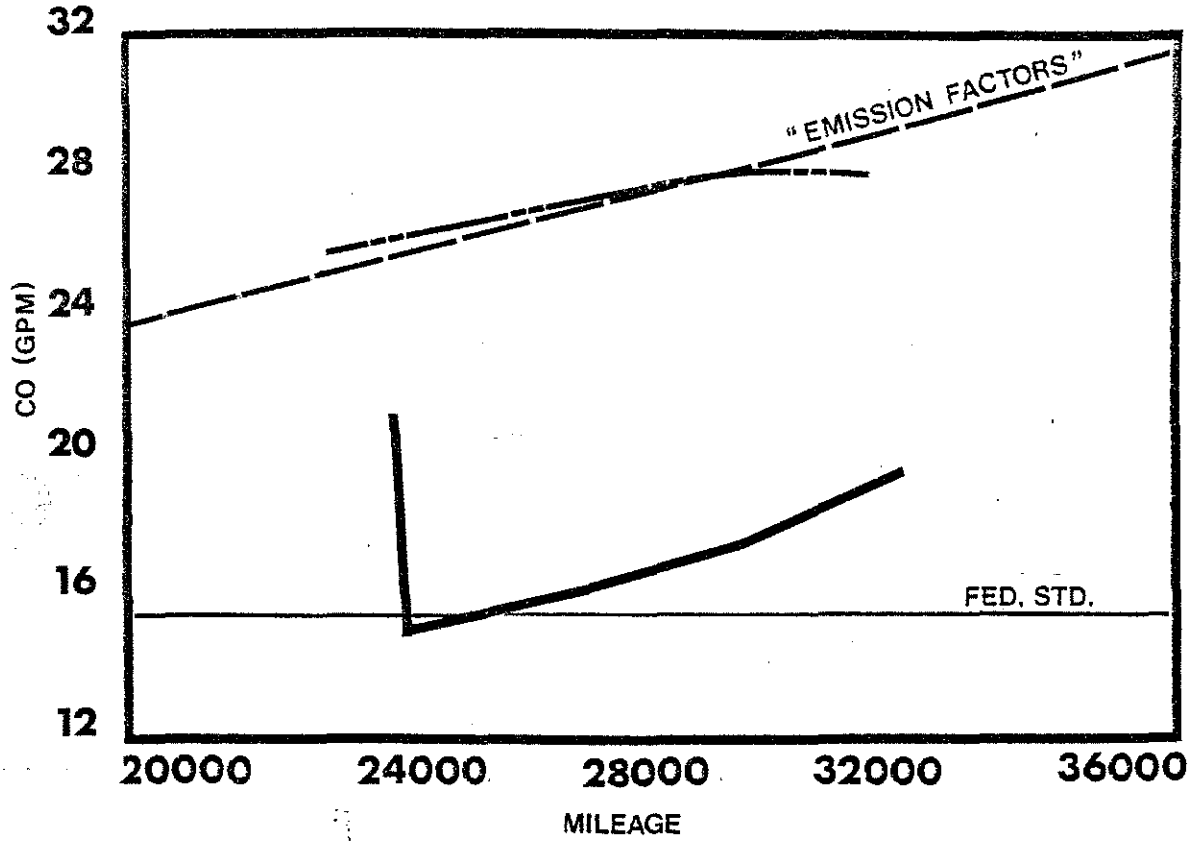


FIGURE 2

COMPARISON OF PORTLAND (I/M) TO EUGENE (No. I/M)
CARBON MONOXIDE

From FEDERAL TEST PROCEDURE 1975-77 Model Year Cars

FTP CO VS MILEAGE (VEHICLES WITH THREE QUARTERLIES)

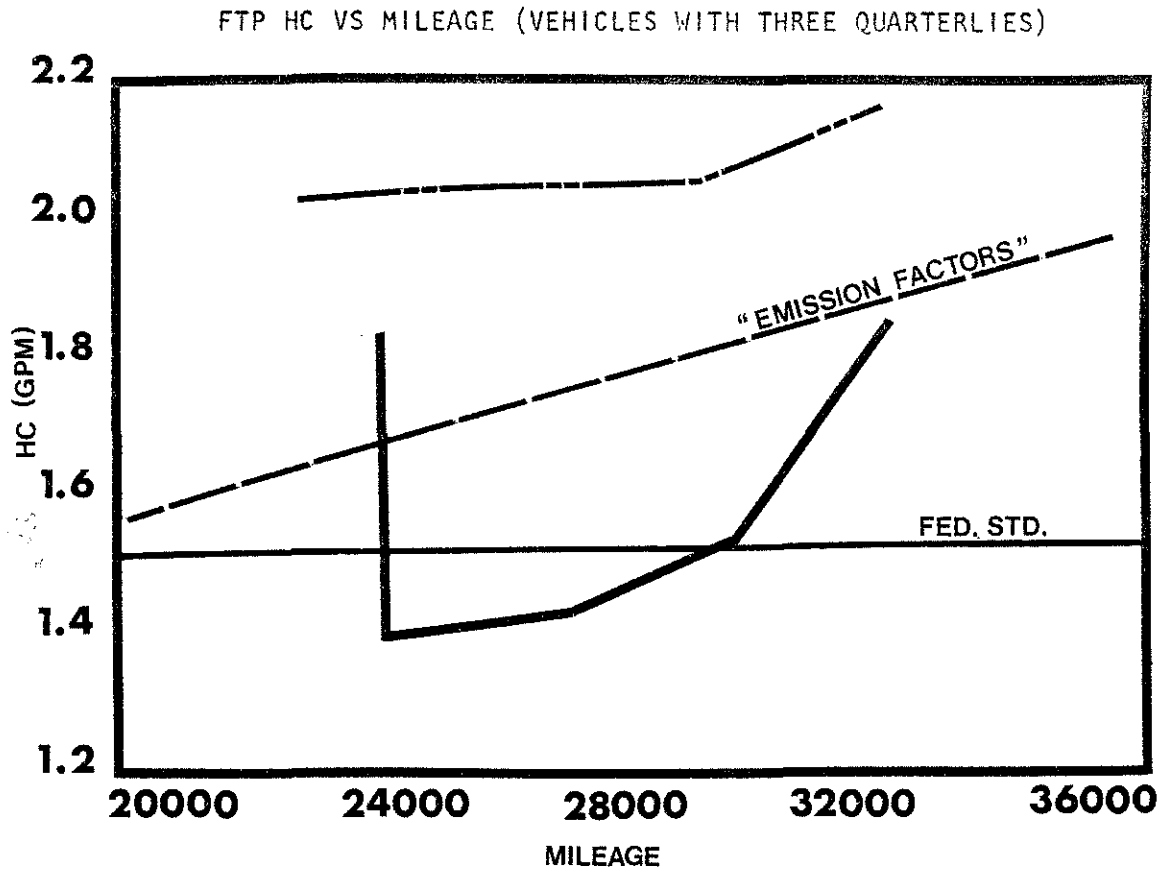


← 9 MONTHS →

————— PORTLAND
COMPOSITE
- - - - - EUGENE

FIGURE 3
COMPARISON OF PORTLAND (I/M) to EUGENE (No I/M)
HYDROCARBONS
(GRAMS PER MILE)

From FEDERAL TEST PROCEDURE 1975-77 Model Year Cars



← 9 MONTHS →

— PORTLAND COMPOSITE
- - - EUGENE

APPENDIX A

A SUMMARY OF LEGISLATIVE AND ADMINISTRATIVE ACTIONS

FEDERAL LEGISLATION

CLEAN AIR ACT OF 1965

Title II ("Motor Vehicle Air Pollution Control Act") empowers HEW to establish emission standards for sale in California beginning with model year 1966.

CLEAN AIR ACT OF 1967

Establish emission standards for pollutants from new motor vehicles manufactured for sales in remaining 49 states beginning with model year 1968. Emissions regulated by HEW were crankcase emissions (HC), fuel evaporative emission (HC), and exhaust emissions (CO and HC).

CLEAN AIR ACT OF 1970

Directs EPA to manage the national control of air pollution by developing Interstate Air Quality Agencies or Commissions, Air Quality Control Regions, establishing national primary and secondary air quality standards and requiring each state to submit implementation plans. Specifies 90% reduction in exhaust emissions of CO and HC from allowable 1970 levels by the 1975 model year and 90% reduction in NO_x emissions from average measured 1971 levels by the 1976 model year. Required manufacturers to warrant emission control equipment for 5 years or 50,000 miles; subjects certain persons to a civil penalty of not more than \$10,000 for tampering.

CLEAN AIR ACT OF 1970,
AS AMENDED, JUNE 1974

Requires EPA to comply with provisions of Energy Supply and Environmental Coordination Act of 1974.

CLEAN AIR ACT
AS AMENDED, AUG. 1977

Requires States to rewrite State Implementation Plans. Ties compliance with National Clean Air Goals to federal monies. Modifies compliance schedule for automobile exhaust emissions. Modifies mandated manufacturers emission performance warranty to 2 years, 24,000 miles. Requires States to implement all practicable control strategies. Allows States, under certain circumstances, to adopt California's emission standards for new cars.

Prohibits tampering of emission control systems by any person engaged in the business of repairing, servicing, leasing, selling, or trading motor vehicles or operating a motor vehicle fleet.

SUMMARY
FEDERAL GOVERNMENT AGENCIES' ACTIVITIES

March 30, 1966

The initial Federal motor vehicle emission standards became applicable with the 1968 models. The standards and procedures were similar to those which had been employed by California and required specified control of exhaust hydrocarbons and carbon monoxide from light-duty vehicles and one hundred percent control of crankcase emissions from gasoline-fueled cars, buses, and trucks. The term light-duty vehicle refers to self-propelled vehicles designed for street or highway use, which weigh less than 6,000 pounds and carry no more than twelve passengers.

June 4, 1968

Revised Federal standards were published which require more stringent control of hydrocarbons and carbon monoxide from light-duty vehicles, of evaporative emissions from fuel tanks and carburetors of light-duty vehicles, of exhaust hydrocarbons, and carbon monoxide emissions from gasoline-fueled engines for heavy-duty vehicles, and of smoke emissions from diesel engines for heavy-duty vehicles. The fuel evaporative emission standards became fully effective with model year 1971. The other standards applied to 1970 model year vehicles and engines.

July, 1970

The Federal Government adopted a Constant Volume Sample or CVS procedure, during which the vehicle is run through a test cycle designed to simulate urban driving. The characteristics of the standard test drive were based on an elaborate study of Los Angeles traffic patterns in 1965. All emissions from ignition key-on after a 12-hour storage period to the end of the test cycle are collected and analyzed. EPA further refined the test procedure by later including both a cold start (after a 12-hour storage) and a hot start (after a 10-minute wait) and the computation of a weight average as a basis for 1975 and 1976 numerical standards. These changes, as well as certain minor modifications in analytical techniques, were intended to make test results more representative of emissions from in-use vehicles.

- November 10, 1970 Standards were published applicable to 1972 model light and heavy-duty vehicles and heavy-duty engines.
- April 30, 1971 National primary and secondary ambient air quality standards were published in final rulemaking, including standards for hydrocarbons, carbon monoxide and oxides of nitrogen. Also, the State of California was granted the first of several waivers of Federal preemption for motor vehicle emission standards more stringent than those currently in effect by Federal regulations.
- May, 1971 Three contracts were awarded to provide prototype cars for government testing and evaluation under the Federal Clean Car Incentive Program.
- June 18, 1971 The Low-Emission Vehicle Certification Board held its initial meeting and approved procedural regulations concerning preferential purchasing of low-emission vehicles for use in government fleets.
- June 29, 1971 The first Federal standards were issued requiring control of oxides of nitrogen emissions and prescribing measurement techniques for this pollutant applicable to 1973 model light-duty motor vehicles. Also, standards were promulgated to prescribe the 1975 exhaust hydrocarbon and carbon monoxide emission requirements and 1976 oxides of nitrogen emission requirement applicable to light-duty vehicles. In addition, modifications in test and analytical procedures were included.
- December 15, 1972 EPA ordered six motor vehicle manufacturers to eliminate certain emission control system disabling devices from their 1973 automobiles produced after specified dates.
- January 10, 1973 Fuel regulations were promulgated to insure that lead-free gasoline would be available by July 1, 1974 to owners of automobiles equipped with catalytic converters. Also, regulations were promulgated requiring the amount of lead in gasoline to be reduced to an average of 1.25 grams per gallon by January 1, 1978.

April 11, 1973

EPA suspended for 1 year the statutory 1975 model year light-duty vehicle emission standards for hydrocarbons (HC) and carbon monoxide (CO) and established interim standards.

July 20, 1973

EPA suspended for 1 year the statutory 1976 model year emission standards for nitrogen oxides (NO_x) and established interim standards.^x The 1976 standards are applicable to light-duty vehicles and engines manufactured during or after model year 1976.

August 7, 1973

Regulations for the control of exhaust pollutants from diesel-powered light-duty passenger vehicles to be effective with the 1975 model year were promulgated. These vehicles were now required to meet the same emission standards that were applicable to gasoline-fueled light-duty vehicles. Also, regulations for the control of emissions from light-duty gasoline-fueled trucks, effective with the 1975 model year were promulgated. (A light-duty truck is defined as any motor vehicle weighing 6,000 pounds or less, which is designed primarily for transporting property, or is a derivative of such a vehicle, or has special features enabling off-street operation). This action was in response to the U.S. Court of Appeals' decision regarding emission standards for 1975 model year light-duty vehicles (International Harvester Company vs. Ruckelshaus, D.C. Cir. No. 72-1517, February 10, 1973) in which the court ordered EPA to remove light-duty trucks from the light-duty vehicle category. The new emission standards for light-duty trucks were significantly more stringent than the 1974 standards, but were slightly less stringent than the interim 1975 standards for light-duty vehicles.

January, 1974

EPA published the first of yearly fuel consumption results in a booklet for consumer use.

January 27, 1974

EPA promulgated regulations designed to accomplish three main purposes: (1) to clarify certain requirements pertaining to vehicle emissions certification, and provide that certification may be denied (or revoked) on account of a failure to comply with such requirements; (2) to clarify that the Administrator would not certify any vehicle employing Auxiliary Emission

Control Devices which have been determined by the Administrator to be "defeat devices;" and (3) to provide that once the regulations are in effect, production vehicles which do not conform in all material respects to the same design specifications that applied to a certification vehicle would not be covered by the Certificate of Conformity.

June 25, 1974

Under the Recall Program, EPA tested in-use vehicles and announced that four manufacturers of certain 1972 model year vehicles appeared to be in violation of Federal air pollution emission standards.

September 4, 1974

Regulations were promulgated which provided for the exclusion and exemption from emission standards for certain motor vehicles and motor vehicle engines.

October 15, 1974

EPA and the Federal Energy Administration (FEA) published a notice of Voluntary Fuel Economy Labeling for 1975 model year vehicles.

October 22, 1974

EPA published the final rulemaking concerning the control of emissions from light-duty powered trucks.

November 18, 1974

EPA promulgated regulations which required manufacturers to certify new motor vehicles designed for initial sale at high altitude to comply with emission standards at those altitudes. These amendments are applicable to light-duty gasoline-fueled vehicles, light duty diesel vehicles, and light-duty trucks beginning with the 1977 model year.

November 21, 1974

EPA promulgated regulations for the emissions control of 1976 and later model year light-duty diesel powered trucks.

December 23, 1974

EPA promulgated regulations governing the recall of motor vehicles and motor vehicle engines which failed to conform to emission standards for their useful life.

May 30, 1975

EPA promulgated regulations to establish the certification procedures for 1977 model year light-duty diesel powered trucks offered for sale in high altitude regions.

- June 5, 1975 EPA established standards for 1976 model year light-duty vehicles and light-duty trucks and emission standards for 1977 and later model year light-duty vehicles, light-duty trucks and diesel-powered light-duty trucks.
- June 23, 1975 EPA promulgated regulations to deny importation, except as a bonded entry, to all vehicles certified with a catalyst which were driven outside the United States, Canada, and Mexico unless the vehicles were included in an internal control program.
- February 6, 1976 EPA announced it was considering amendments to increase in the upper weight limit for 1978 and later model year light-duty trucks from 6,000 to 8,500 pounds gross vehicle weight (GVWR). Also proposed was a reduction of the current light-duty truck emission standards which would represent more than a 10% reduction from the present limits for current light-duty trucks, and more than a 67% reduction for vehicles to be added to the class.
- May 11, 1976 EPA published proposed revised regulations for 1979 and later model year heavy-duty gasoline-fueled and diesel engines.
- July 20, 1976 EPA promulgated regulations establishing a testing program for new automobiles coming off the assembly line in order to insure that these vehicles conform to the pollution control requirements of the Clean Air Act.
- November 3, 1976 EPA published an advance notice that it was considering the development and promulgation of regulations to provide general clarification concerning the coverage of Section 207(a) of the Clean Air Act (the emission control production warranty) for light-duty vehicles and light-duty trucks. In EPA's view, this was necessary because the Section 207(a) warranty has not developed into an effective remedy for the consumer, despite its presence since the 1972 model year.
- November 10, 1976 EPA promulgated regulations which require manufacturers of 1977 and later model year automobiles and light-duty trucks to label each vehicle with fuel economy information.

November 16, 1976 EPA issues advanced notice of rulemaking regarding the Emission Control warranties for light duty cars and trucks.

December 28, 1976 EPA issues the revised the light duty truck regulation for 1979 and later model year vehicles. The revisions increase the weight on light duty trucks from 6,000 lbs to 8,500 lbs gross.

January 5, 1977 EPA issues regulation for the emission certification and test procedures for new motorcycles.

April 20, 1977 EPA issues final rule on the sale on the high altitude vehicles.

May 2, 1977 Proposed EPA estimates of emission reduction achievable through inspection and maintenance of light duty vehicle, motorcycles, and light duty trucks are made. (Appendix N)

May 19, 1977 EPA issues final rule on regulation of fuels and fuel additives. The rule clarifies EPA's regulation for phased reduction of lead additives in motor gasoline and does not preempt state or local governments' from controlling other aspects of fuel and additives used in motor gasolines.

May 25, 1977 EPA issues emission control system performance regulations and proposed rule for the short test cycle establishment. Issues the procedures and tests that will invoke section 207B of CAA.

June 6, 1977 EPA issues fuel economy and emission testing procedures for 1978 and later model vehicles. The EPA proposes several changes to it's fuel economy labeling regulations.

June 8, 1977 EPA issues certification test results for 1977 model year.

June 28, 1977 Republication of the 1977, 1978, and 1979 model year vehicle certification regulations. One aspect of this publication was the inclusion of the motorcycle test proceedure.

August 10, 1977 EPA issues notice of interim final rulemaking on regulations which established evaluation criteria and test procedures for evaluating fuel economy improvement claims per retrofit devices.

August 11, 1977 EPA issues final light duty vehicle exhaust emission standards for 1978 model year.

August 25, 1977 EPA issues notice of availability that procedures for measuring exhaust sulphuric acid content are available.

August 29, 1977 EPA issues notice to the public that emission control system performance warranty regulation public work shops are available and sets dates. One of the meetings held September 30th, was in Portland.

October 21, 1977 EPA issues notice of proposed rulemaking changes to the emission test procedures. Such revisions to the testing procedures would allow for certification testing within any range of engine adjustment available.

January 6, 1978 EPA issues a notice of intent to propose regulation to include new motorcycles and in the selective enforcement auditing procedures.

February 2, 1978 EPA issued rulemaking for the selective enforcement auditing procedures.

June 7, 1978 EPA issues notice of hearing for the MMT waiver request. The outcome of this hearing was that MMT the fuel additive methylcyclopentadienyl manganese tricarbonyl was banned.

June 22, 1978 EPA issues correction notice on a final rulemaking early in the year requiring fuel economy labeling procedures for 1979 and later model year vehicles.

July 20, 1978 EPA issues some miscellaneous amendments and corrections regarding the fuel economy regulations.

August 24, 1978 EPA issues a final rule for the evaporated emission regulation for light duty vehicles and trucks, applicable with the 1981 model year.

August 29, 1978 EPA issues notice of proposed rulemaking which announces a set of regulations for testing fuels and fuel additives.

September 5, 1978

EPA issues the final rule on the fuel economy calculation and test procedures for 1979 and later model light trucks.

January 29, 1979

EPA issues a change in the ambient oxidant health standard from 0.08 ppm to 0.12 ppm.

SUMMARY
OREGON LEGISLATIVE ACTION

- 1969 Adopted legislation which prohibited the removal or rendering inoperative of factory-installed pollution control equipment.
- 1971 Legislation was adopted which directed the Department of Environmental Quality to develop a periodic Motor Vehicle Emission Inspection Program.
- 1973 Assembly reviewed Motor Vehicle Emission Control Inspection proposals, but adjourned without providing budget for a mandatory program.
- Emergency Board authorized the Department to implement a voluntary pilot program using \$1,000,000 in funds appropriated during the regular session.
- 1974 During the Special Session, action was taken to provide for an increase of inspection fees to \$5.00; restricted the program to within the Metropolitan Service District; required annual emission control inspection; and set the start up date as July 1, 1975.
- 1975 Legislative Assembly again reviewed the implementation of the program and at the end of the session changed the laws so that an inspection would be required only every other year with vehicle license renewal as of July 1, 1975.
- Emergency Board approved a revised budget reflecting the reduced fee income resulting from bi-annual inspection of vehicles.
- 1976 Speaker of House of Representatives assigned a five member Task Force on Auto Emission Control to review the program and forward recommendations.

1977

Legislation was adopted requiring publicly owned vehicles to comply with emission inspection regulations; exempted "fix load" vehicles and vehicles operating in interstate commerce from inspection requirements; directed EQC to determine most cost effective method of conducting inspection; and enacted legislation prohibiting visible emissions from motor vehicles operating on the public roads, setting limitations and establishing penalty.

SUMMARY
ENVIRONMENTAL QUALITY COMMISSION ACTION

March 30, 1970	Adopted motor vehicle visible emission regulation.
October 25, 1972	Approved the projected inspection/maintenance program after reviewing a comprehensive staff report.
March 2, 1973	Held public hearings to designate those Oregon counties in which the vehicle inspection program would be instituted.
March 21, 1973	Designated Clackamas, Columbia, Multnomah and Washington counties and set an effective starting date for the program of January 1, 1974.
May 29, 1973	Adopted the Portland Transportation Control Strategy as an Amendment to Oregon's Implementation Plan (Clean Air Act).
November 26, 1973	Commission authorized the deletion of Columbia County from the inspection program requirements and to extend the effective date of the program to May 31, 1974.
January 25, 1974	Adopted criteria for Certification of Motor Vehicle Control Systems which precluded the use of retrofit devices.
December 20, 1974	Gave authorization for Public Hearings to adopt Motor Vehicle Inspection Program Criteria.
March 28, 1975	Adopted proposed Motor Vehicle Emission Control Inspection Test Criteria, Methods and Standards.

June 25, 1976	Adopted Emergency Rules Extending Enforcement Tolerance for the Motor Vehicle Inspection Program through June 30, 1977.
August 27, 1976	Repealed the Emergency Rules adopted June 25, 1976 and adopted Revisions to OAR Chapter 340, Sections 24-320 through 24-330 pertaining to Motor Vehicle Inspection Standards.
January 14, 1977	Transmitted report to legislature on Motor Vehicle Emission Inspection Program.
February 25, 1977	Authorization for Public Hearing for proposed heavy-duty truck inspection criteria.
April 1, 1977	Authorization for Public Hearing for proposed revisions to light-duty inspection criteria.
May 27, 1977	Adopted inspection criteria for heavy-duty trucks.
June 24, 1977	Adopted inspection criteria revisions for light-duty vehicles.
November 18, 1977	Authorized Public Hearing for testing procedures for publicly owned vehicles.
February 24, 1978	Adopted procedures for testing publicly owned vehicles.
April 28, 1978	Authorized Public Hearing for revisions to inspection criteria.
June 30, 1978	Adopted revisions to motor vehicle inspection criteria.
September 22, 1978	Conducted Public Hearing and adopted minor revision to inspection criteria.
September 22, 1978	Received status report on contractor vs. state operation of inspection program and issued finding.

Appendix B

PROGRAM OPERATIONS

Inspection Requirements

ORS 481.190 provides that all motor vehicles registered within the boundaries, existing on March 13, 1974, of the Metropolitan Service District, which includes the City of Portland, comply with emission criteria established by the Environmental Quality Commission in order to register or renew the motor vehicle registration. The passenger car registrations, which constitute the bulk of the inspection workload, are on a biennial registration renewal system, while heavy duty vehicles are renewed on an annual basis. During the last quarter of 1977, heavy duty gasoline trucks began being certified as meeting emission control standards. The addition of the heavy duty trucks increased the testing workload by approximately 18,000 inspections at the Department's testing facilities.

Rules and procedures for the inspection of publicly owned vehicles became effective July, 1978. These vehicles are tested in the same manner as privately owned vehicles except Oregon Law requires they be tested annually. This monthly testing schedule is based upon the final digit of the license number.

Inspection Activities

To accomplish this task of inspecting approximately 600,000 vehicles during the biennium, the Department of Environmental Quality operates a motor vehicle emission inspection program in the Portland Metropolitan Area. There are seven stations with two lanes each and a mobile unit to service the test area. The general locations of these stations are in Southeast Portland, Northeast Portland, Northwest Portland, Milwaukie, Gresham, Tigard, and Hillsboro.

With the biennial cycle, the motor vehicle passenger car registrations, and the emission inspections, are not spread evenly throughout the two year cycle. They are concentrated more in the "even" years (1978) than the "odd" years (1977). This is shown in Figure B-1 which is a graph of the monthly testing activity during 1977 and 1978.

During the first six months of 1977, the testing volume remained at the anticipated reduced level at the four permanent stations and the two permanently assigned mobile units. These stations, operating Tuesday through Saturday, were staffed with as few as 15 inspectors. In July 1977, the enforcement tolerance on emission control equipment disconnects expired. This resulted in about a 4% reduction in the overall pass rate.

As the testing volume began to increase, in the fall of 1977, vacant inspector positions and one field supervisor position was filled. Testing station hours were also expanded to Monday through Saturday from 9:00 a.m. to 7:00 p.m., and the unassigned mobile unit was also placed into service at various locations throughout the metropolitan area.

Between July, 1977 and December, 1978, 664,036 light duty vehicles and 19,910 heavy duty vehicle inspections were conducted at the Department's facilities. In this period over 400,000 Certificate of Compliance were issued.

At the beginning of December, 1978, the testing operations were again reduced to a Tuesday through Saturday schedule. Due to not filling every inspector position as it became vacant throughout the year, only 12 inspectors were layed off. Only 30 inspector staff positions are expected to be filled during the remainder of the fiscal year.

Customer Service

The program's goals call for a continued effort, within budgetary restraints, to improve the level of public service while achieving the clean air goals. Efforts to improve customer service have centered in four major areas.

A. Sufficient and Accessible inspeciton facilities.

The inspection program's permanent facilities, with the exception of the Southeast Powell station, are all leased facilities. The Powell station, on Highway Division right-of-way for the I-205 project, was built by the Department during the voluntary inspection program in 1974. Leasing of property has been effective, except for the Southwest Portland - Tigard - Beaverton area, in providing suitable and accessible facilities. Station operating hours provide for evening and Saturday testing.

The permanently assigned mobile unit in Tigard was located inside the Family Drive-In Theatre in September, 1977. At the same time the Hillsboro facility was upgraded and relocated on vacant City of Hillsboro property. A larger and more accessible site was obtained in Northwest Portland in December, 1977. This facility is also utilized as a staging area for the mobile units; a maintenance and repair shop for the program's testing equipment; training center for inspector classes and service industry seminars; and as offices for the program's operations staff. A permanently assigned mobile unit was located in Northeast Portland in March, 1978, thereby providing the public with up to 8 testing locations.

B. Customer waiting time.

Customer waiting times at the stations have been closely monitored. This was done to find out which locations were experiencing the longest customer delays so that changes in operations could be considered in an effort to reduce that level of customer inconvenience. During the fall of 1977, average waiting times at all stations were about five minutes or less. As the workload

increased during 1978 waiting times increased but not to the levels experienced in 1976. Waiting times at Powell, the busiest in the system, averaged about 15 minutes during 1978 compared to 25 minutes for 1976.

The Tigard station since its move to the Family Drive-In Theatre, has increased in testing volume to beyond the capacity of the facility. Overall, however, the average waiting times experienced by the Program's customers have been reduced during 1978 compared to 1976. Figure B-2 dramatizes the uneven nature of the inspection workload, especially during the holiday periods and at the "end of the month."

C. Training and Information availability

A total of 2240 hours were devoted to training newly employed inspectors. This program's inspector training program, for both state inspectors and fleet inspectors, has been accepted for accreditation by Clackamas Community College. The semester credit awarded is dependent upon the amount of training hours received.

Twenty-eight separate emission control testing training seminars have been presented by the program's staff for 455 representatives of the automotive service industry. These seminars have been conducted at various locations including community colleges, high schools, auto manufacturers, oil company training centers, parts distributor's facilities, and the program's training center.

The frequency of the Information Bulletin, a fact sheet on the inspection program for the auto service industry, has been increased. The Bulletin continues to provide a useful mechanism for disseminating information about the program and associated emission control matters to the over 1400 recipients.

D. Testing equipment quality control

Maintenance activities and increased calibration checks of the program's equipment have been geared to maximizing the system accuracy. Variations in emission measurements at the stations have generally been within the design limits of the testing equipment. A recent investigative report by the Willamette Week newspaper concluded that only significant variations from test to test, or station to station, were due to the state-of-tune of the vehicle, waiting times, or other variables outside of the program's control, rather than the accuracy or repeatability of the station's test equipment.

Figure B-1

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

1977 - 1978 INSPECTION/MAINTENANCE TEST PROGRAM ACTIVITY

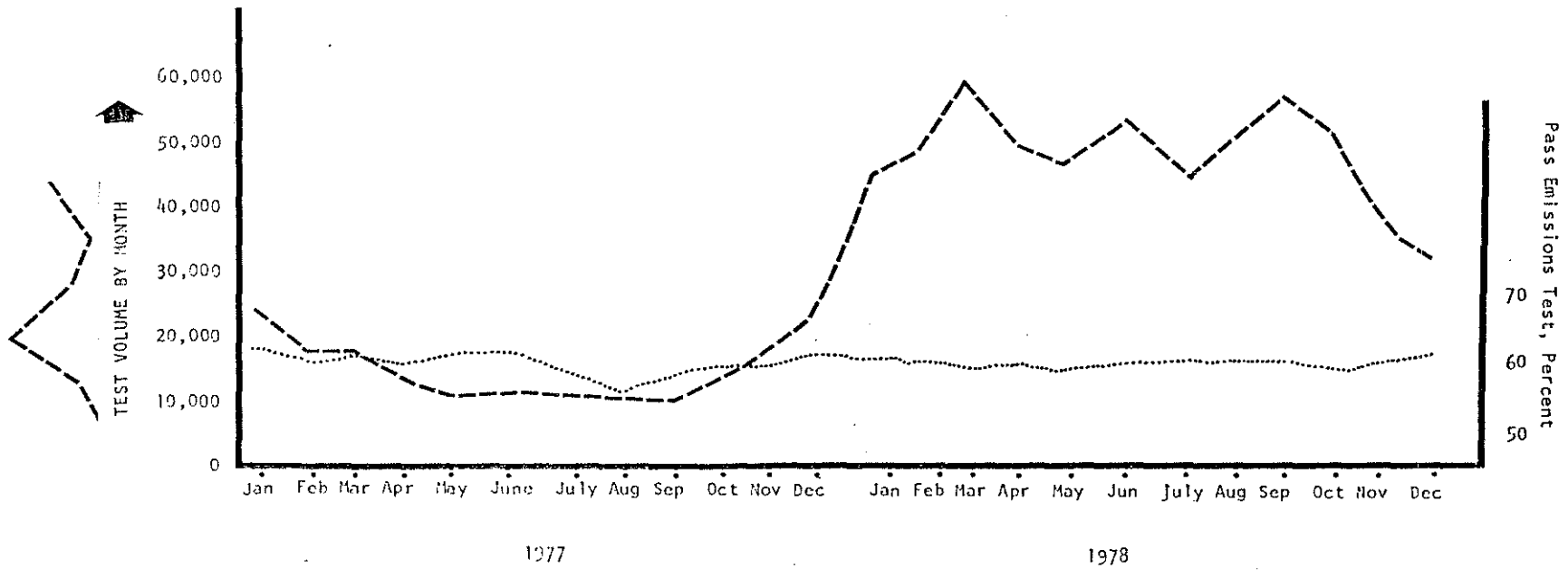


Figure B-2

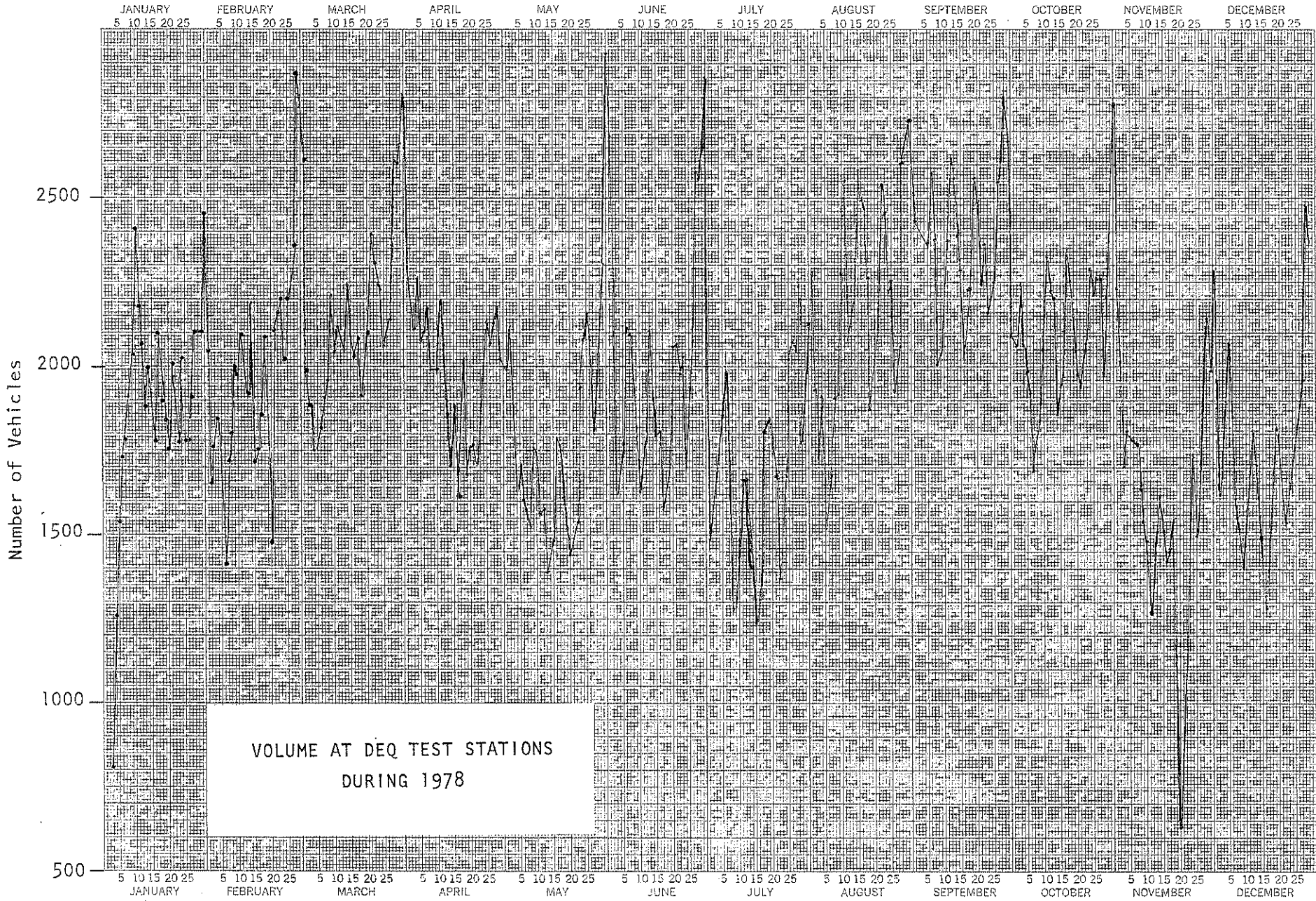


Table B-1

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
VEHICLE INSPECTION PROGRAM

Activity Summary for January 1977 - December 1978

EMISSION INSPECTION TESTS	761,287
OVERALL PERCENTAGE PASS	61%
COMPLIANCE CERTIFICATES ISSUED	451,978

Emission Inspection Tests

Pass Emission Test	461,332	=	61%
Tests Failed for Carbon Monoxide (CO)	132,035	=	17%
Tests Failed for Hydrocarbons (HC)	65,365	=	8%
Tests Failed for Both HC & CO	38,421	=	5%
Tests Failed for Emission Equipment Disconnects	23,221	=	3%
Tests Failed for Other Causes (i.e., smoke, dilution, idle RPM)	40,913	=	5%

Pre-Emission Control Vehicle Tests

Number of Tests	172,645	=	22% of all Tests
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Emission Controlled Vehicle Tests

Number of Tests	588,642	=	78% of all Tests
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Appendix C

Fleet Inspection Program

The inspection program allows two avenues for compliance with the emission certification requirement: DEQ inspection stations or Fleet self inspection. Since program start up, self-inspection has been a testing option for large motor vehicle fleets. To qualify as a fleet there are certain criteria that must be met. These include having a minimum fleet size, bonding requirements, and compliance with other administrative procedures. By 1976, fourteen fleets were licensed for self-inspection. During this last biennium 21 new fleets joined the program, bringing the total to 35. The list of licensed fleets are shown in Tables 1 and 2. Significant changes that affected the fleet inspection program in the past two year were:

- 1) the addition of heavy duty truck testing
- 2) the addition of publicly owned vehicle testing

Heavy duty truck testing began in the fall of 1977 with the EQC's adoption of standards and procedures for this class of vehicles. Four additional large trucking fleets have been licensed for self-inspection since that time. The majority of the larger truck fleets have not applied for licensing because of the small amount of vehicles that would be involved.

The other significant action affecting fleet operations was the inclusion of publicly owned vehicles in the testing regime. During the hearings held in January, 1978, testimony was received requesting publicly owned vehicle fleets be allowed to be licensed with a minimum of 50 rather than 100 vehicles. This modification to the rules was adopted by the EQC and as a partial result, the number of governmental fleets increased, primarily due to school districts and some of the smaller cities taking advantage of this method of certification. Publicly owned vehicle fleets now account for about 65% of our total fleet inspection activity. Another provision provided the opportunity for smaller governmental units to contract with other governmental bodies for this service. Oak Lodge Sanitary District, the City of Gladstone, and Wolf Creek Water District have used this option.

The fleet inspection program for both commercial and governmental fleets allows for the inspection outside of DEQ test lanes of about 10,000 motor vehicles or slightly less than the 2% of the total vehicles in the MSD area. Tables 1 and 2 summarizes the activity of these fleets. The provision allows the individual fleet flexibility in their operational requirements and improves the usefulness of both their and our existing resources. In most fleet operations, the inspection has become the final stage of the regularly scheduled maintenance. Fleets are checked approximately quarterly for quality and audit control. During the check, the equipment calibration and procedures are verified, and documents reviewed. Findings from these checks show that the fleets are complying with the regulations.

Commercial fleets account for about 35% of the total fleet volume, while governmental fleets have the remaining 65%. Fleet self-inspection tends to benefit both the fleet well as the inspection program operation. During the last biennium, this option has been expanded to allow for increased numbers of governmental fleets and for heavy duty vehicle testing.

TABLE 1
Licensed Commercial Fleet Self Inspection Activity

	Inspectors	Vehicles(a)	Certificates Issued							Total Certificates 1977-1978	
			1977	Jan-Jun 1978	Jul 1978	Aug 1978	Sep 1978	Oct 1978	Nov 1978		Dec 1978
Mobile Chef, Inc.	2	150	8	32	11	5			34	90	
General Telephone	2	400	62	116		10		33	31	252	
N.W. Natural Gas	4	250	1	112		40		7	82	242	
Portland General Electric	13	400	281	255		123	10	23	3	83	778
Pacific N.W. Bell Telephone	10	850	75	251		59		93	65	113	656
United Parcel Service	1	165		120							120
Pacific Power and Light	2	150		5		5		4		6	20
United Buses, Inc.	2	115		44							44
Carnation Company	1	110									--
Columbia Bus Company	1	225				147			33	33	213
Pacific Coca-Cola Company	2	125							18		18
School Bus Services, Inc.	3	200								16	16
Consolidated Freightways	2	100								48	48
Portland Bottling Company	1	105									--
Totals		3345									2497

(a) = Estimated number of vehicles that must be certified.

TABLE 2 -
Licensed Governmental Fleet Self Inspection Activity

	Inspectors	Vehicles (a)	Certificates Issued							Total Certificates 1977-1978	
			1977	Jan-Jun 1978	Jul 1978	Aug 1978	Sep 1978	Oct 1978	Nov 1978		Dec 1978
U.S. General Services Admin.	2	700	12	12		7	39		24		94
U.S. Postal Service	4	800							122		122
State of Oregon General Services Division	8	700			21	55	10	25	15		126
State of Oregon Highway Division	1	250						7		16	23
Clackamas County	5										
Clackamas County	2	200		22		36	21	27	9		115
Multnomah County	1	400	7	14		75	6	33			135
Washington County	2	150	5	4		17	15	10		8	59
City of Milwaukie	1	50							3		3
City of Lake Oswego	2	80					9		7		16
City of Oregon City	2	55							23		41
City of Portland	7	1100	8	40		143	21	51	71	65	399
City of West Linn	2	50							13		13
Port of Portland	2	100							10		10
Tri-Met Trans. Dist.	1	55				6			8		14
N. Clackamas School Dist #12	2	160						10		6	16
Beaverton School Dist. #48	2	150				17		30			47
Lake Oswego School Dist. #27	1	50							14		14
Oregon City School Dist.	1	60									0
Parkrose School Dist.	1	55								6	6
Portland School Dist #1	2	225				25	10	25		24	42
Washington County Fire District #1	3	50						17			17

1354

(a) = Estimated number of vehicles that must be certified.

Appendix D
AUTO EMISSIONS FROM MOTOR VEHICLES

Currently about 90% of all passenger cars manufactured throughout the world are designed so as to meet an emission control standard. Over 27 countries have enacted legislation restricting emission levels from automobiles. Automobiles as well as light and heavy duty trucks, manufactured for sale in the United States must be certified as meeting national emission standards.

The U.S. Federal emission standards for new automobiles and light trucks require that vehicles be tested throughout their specified mode of operation. This mode of operation is designed to represent an urban driving pattern, including engine studies under both cool and hot conditions. In addition to this driving cycle, which requires about 25 minutes to complete, the certification vehicles also undergo a 50,000 mile durability test cycle. The purpose of the durability cycle is to insure that the designs selected by the manufacturer will in fact, when the vehicle is properly maintained, keep emission levels within standards as the vehicle ages. The Federal emission standards specify the maximum weight of pollutant allowed to be emitted during the testing procedure regardless of the vehicle size or design characteristics. Consequently, the methods to meet the emission standards used by the manufacturers vary considerably. Quite clearly, pre-production, prototype models of vehicles are used in this certification procedure.

When the actual production vehicles of these certified models are new, they generally meet or exceed compliance with the pollution standards.

As the vehicle accumulates miles, there is a gradual deterioration which proper maintenance is usually able to offset. When, however, there are system malfunctions which are not observed or corrected during the normal maintenance, the rate of deterioration may increase. As the vehicle accumulates miles through owner use, deterioration and wear begins to take its toll, emission levels begin to rise; and if wear and component failures occur, normal periodic maintenance may not be sufficient to offset the increasing emissions, declining fuel economy, or declining performance.

The Department of Environmental Quality has continued to monitor the emissions from cars and trucks that participate in the inspection. This data is one element for the comparison, monitoring, and measuring the effectiveness of the inspection program in general and the individual vehicles' pollution control effectiveness. The data that the DEQ auto inspection program has accumulated over the past several years can be divided into three groups.

1. Background or baseline data (1974)
2. First inspection cycle data (1976)
3. Second inspection cycle data (1978)

The baseline data was obtained during the voluntary inspection period, 1974. That data indicated the general idle emission distributions of Portland area vehicles before the inspection program started. Data reviewed during the first inspection cycle 1976, showed emission decreases from the baseline study. Data from 1978, the second inspection cycle shows the characteristics of today's vehicle population.

The data for both the baseline and the 1976 cycle was adjusted only to include through 1975 model year cars. The 1978 data includes through 1978 model year vehicles, three additional years of catalyst controlled vehicles. Figure A shows the idle emission distribution for carbon monoxide for the three observation periods. There was a 25% reduction between 1974 and 1976. Overall there has been an additional 25% reduction in idle CO emissions for 1978 compared to 1976. Figure B shows the idle emissions for CO for a popular auto make. Displayed in figure B are the 1975 through 1978 model year cars idle CO emissions as tested during 1976, 1977, and 1978. As can be seen, when initially new, most of these cars displayed low emissions. But as vehicle age has increased, the emission levels from many of these cars has increased to a much higher level. Figure C shows that the 1970 model of the same car as Figure B, has been able to maintain relatively the same emission distribution for CO.

A similar picture appears when examining hydrocarbon distributions. Figure D shows idle emission distributions for hydrocarbons for these three observation periods. Between 1974 and 1976 there was a 30% reduction observed. Overall there has been an additional 8% reduction, but as can be seen there appears to have been a change in the characteristic shape of the distribution curve. Figure E shows the idle hydrocarbon for the same popular make. Again, in each successive year of testing, a portion of the population has tended to increase its emissions. Figure F, the 1970 model, shows a loss in hydrocarbon control compared to the last inspection cycle, even though during the last cycle it maintained similar levels for CO.

Figures G and H present data from EPA's Portland Study Project discussed in Appendix G. These figures indicate substantial differences in emissions between the Portland and Eugene study fleets. One can also observe a portion of the gradual deterioration in emissions that occurs in all cars and trucks over time. There are two general reasons for the observed deterioration of the cars in the Portland data, and one can apply the effects to Eugene cars or to cars in general. One reason is due to the general effects of vehicle deterioration - the general degradation due to normal wear and tear. Average west coast mileage accumulation averages about 12,000 to 15,000 miles per year. Based upon these mileage accumulations, the mileage range estimates per model year are made:

<u>MODEL YEAR</u>	<u>MILEAGE RANGE</u>
pre - '68 (12 yrs)	144,000 - 180,000 mi.
'68 - '69 (10 yrs)	120,000 - 150,000 mi.
'70 - '71 (8 yrs)	96,000 - 150,000 mi.
'72 - '74 (6 yrs)	72,000 - 90,000 mi.
'75 (4 yrs)	48,000 - 60,000 mi.
'76 (3 yrs)	36,000 - 45,000 mi.
'77 (2 yrs)	24,000 - 30,000 mi.

Based upon motor vehicle registration data, and the above mileage range estimates more than 50% of the registered motor vehicles in the state, fall into age categories where the vehicle mileage accumulation should be in excess of 100,000 miles. 100,000 miles is often listed as a measure of the "useful" life of an automobile.

It has been stated that new motor vehicles will be the answer to the motor vehicle pollution problems. There have been, however, extensions and modifications to the auto emission standards, and more modifications can probably be predicted for the future. Couple the probability of less stringent than initially projected control, with the facts of long lasting vehicles and a real question of how long will the effectiveness of new motor vehicle control last. Remember figures B and E showed the emission deterioration from new technology cars. Average vehicle mileage accumulation for 1975 model year new technology cars should now be between 48,000 - 60,000 miles.

The deterioration of these new cars is a function of many things, just as it is for earlier model cars. Carburetion, ignition, and other systems can become out of adjustment. 1975 was the first year that catalytic converters were installed. These units can also fail with time. A recent study "Emissions from Catalyst Cars Beyond 50,000 miles and the Implication for the Federal Motor Vehicle Control Program" (SAE paper #780027) has indicated emissions from vehicles with failed converters can effectively triple to quadruple the vehicles' emissions over its lifetime.

Failures of this type of pollution control system as well as many others do not normally exhibit any symptoms to the motorist. Inspection of these cars is virtually the only method of determining the effectiveness of their emission control systems.

The second reason for this deterioration can be laid to tampering with the emission control systems. Emission equipment inspection was incorporated into the inspection program in 1977. Currently approximately 4% of the vehicles are turned away from the inspection lanes because of tampered, malfunctioning, or missing pollution control equipment. The DEQ tampering inspection, however, concentrates on the more obvious pieces of equipment, such as air pumps and catalysts, and other items readily visible under the hood of an average car. In a recently released nationwide

study, however, the incidence of malfunctioning or tampered emission control equipment was much higher than 4%. Readily visible items were observed at about the same rate as observed in the state inspection lanes. More hidden items, such as the EGR systems, had either failed or were disabled in over 18% of the cars in that survey. Idle emission data gathered during the study showed significantly higher idle emission levels from the noted vehicles than the "good" cars.

The above data indicates the emissions inspection program is effective in maintaining good emission control from the area's motor vehicles. It further shows that as vehicle age increase, the need still exists to identify high emitting vehicles even with the newest level of emission control technology.

TABLE I
POPULATION MEAN IDLE EMISSIONS

MY	Portland Before Maintenance	Portland After Maintenance	Eugene
75-77 CO%	1.13	0.23	1.29
75-77 HC ppm	164	73	157
72-74 CO%	1.70	0.77	2.85
72-74 HC ppm	225	150	202

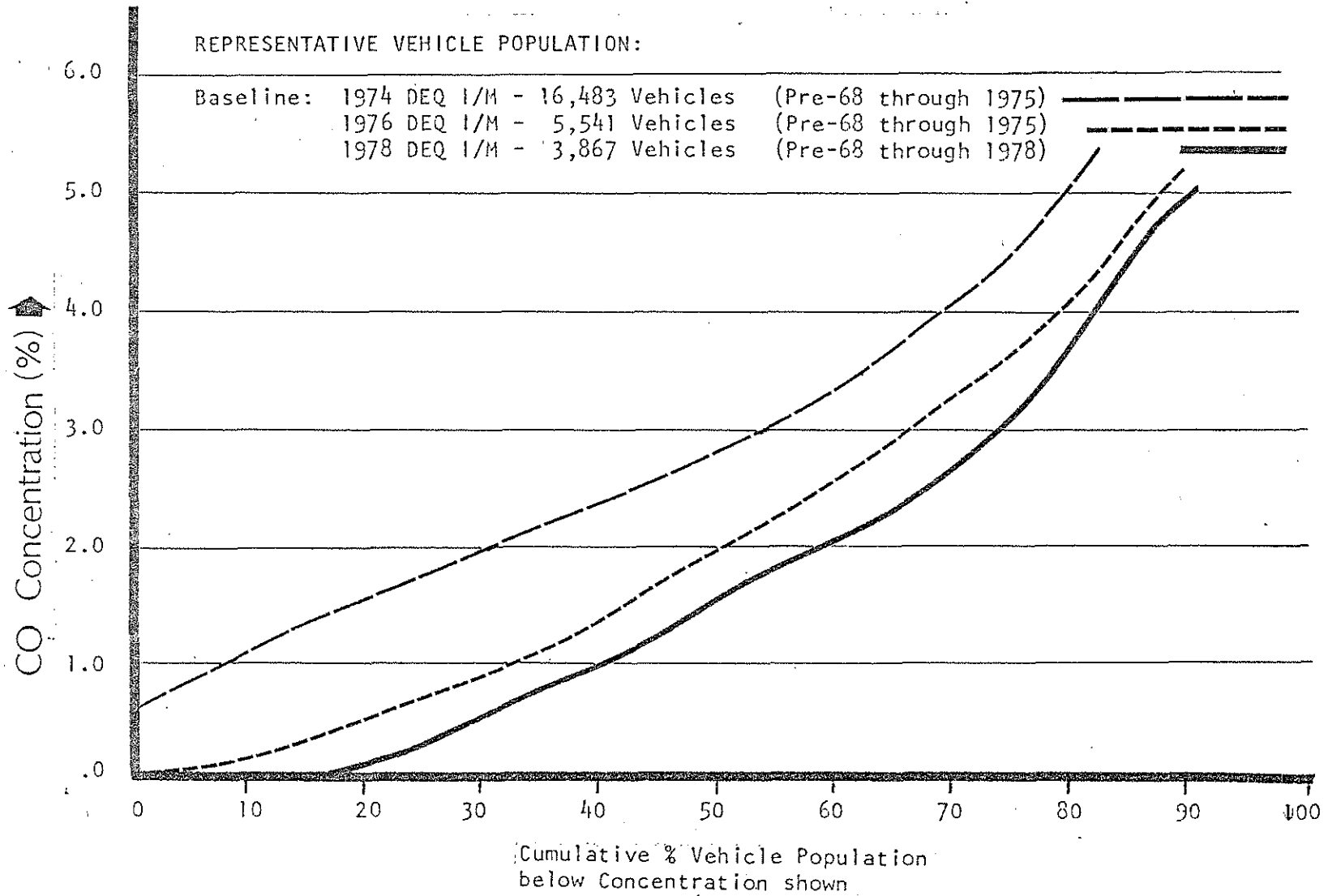
TABLE II
POPULATION MEAN FTP EMISSIONS (Grams per mile)

MY	Portland Before Maintenance	Portland After Maintenance	Eugene
75-77 CO	21.04	13.76	25.17
75-77 HC	1.82	1.34	1.86
75-77 NO _x	2.54	2.54	2.72
72-74 CO	39.96	33.62	46.52
72-74 HC	3.45	2.92	3.35
72-74 NO _x	3.36	3.37	3.93

FIGURE A

DEPARTMENT OF ENVIRONMENTAL QUALITY
Vehicle Inspection Program

Composite Carbon Monoxide
Idle Emission Distribution



DEPARTMENT OF ENVIRONMENTAL QUALITY

Vehicle Inspection Program

Carbon Monoxide Idle Emission Distributions for a Popular Vehicle Make

BARS SHOW PERCENT OF POPULATION BELOW CONCENTRATION TESTED IN 1976

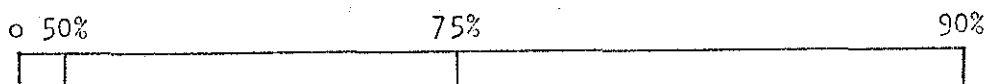


1975 Model Yr.

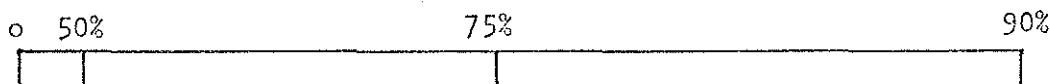


1976 Model Yr.

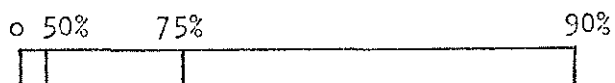
TESTED IN 1977



1975 Model Yr.

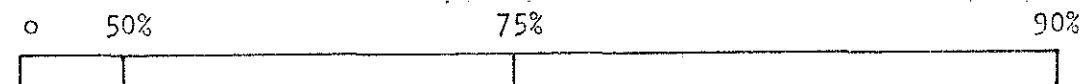


1976 Model Yr.

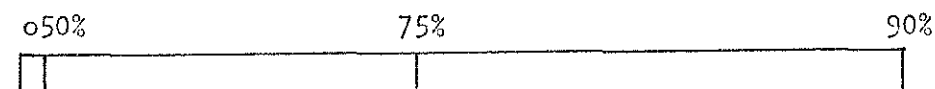


1977 Model Yr.

TESTED IN 1978



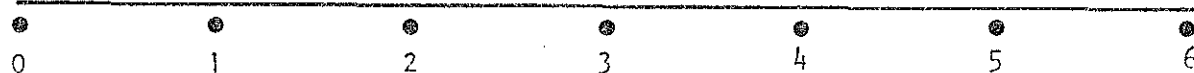
1975 - 76 Model Yr. Combined



1977 Model Yr.



1978 Model Yr.



Carbon Monoxide Concentration (%)



DEPARTMENT OF ENVIRONMENTAL QUALITY
Vehicle Inspection Program

Carbon Monoxide Emission Distribution Changes

1970 POPULAR VEHICLE MAKE

FIGURE C

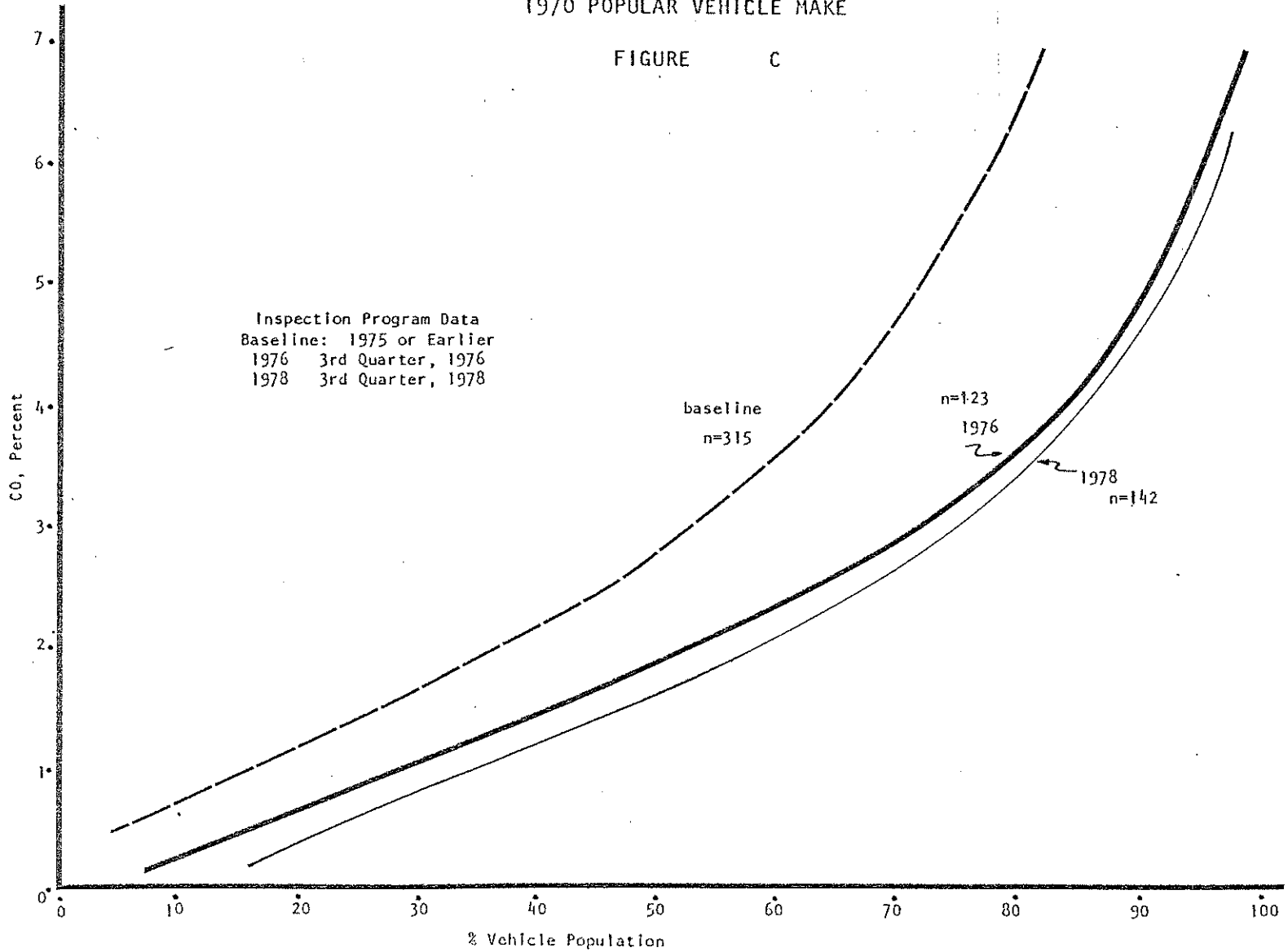
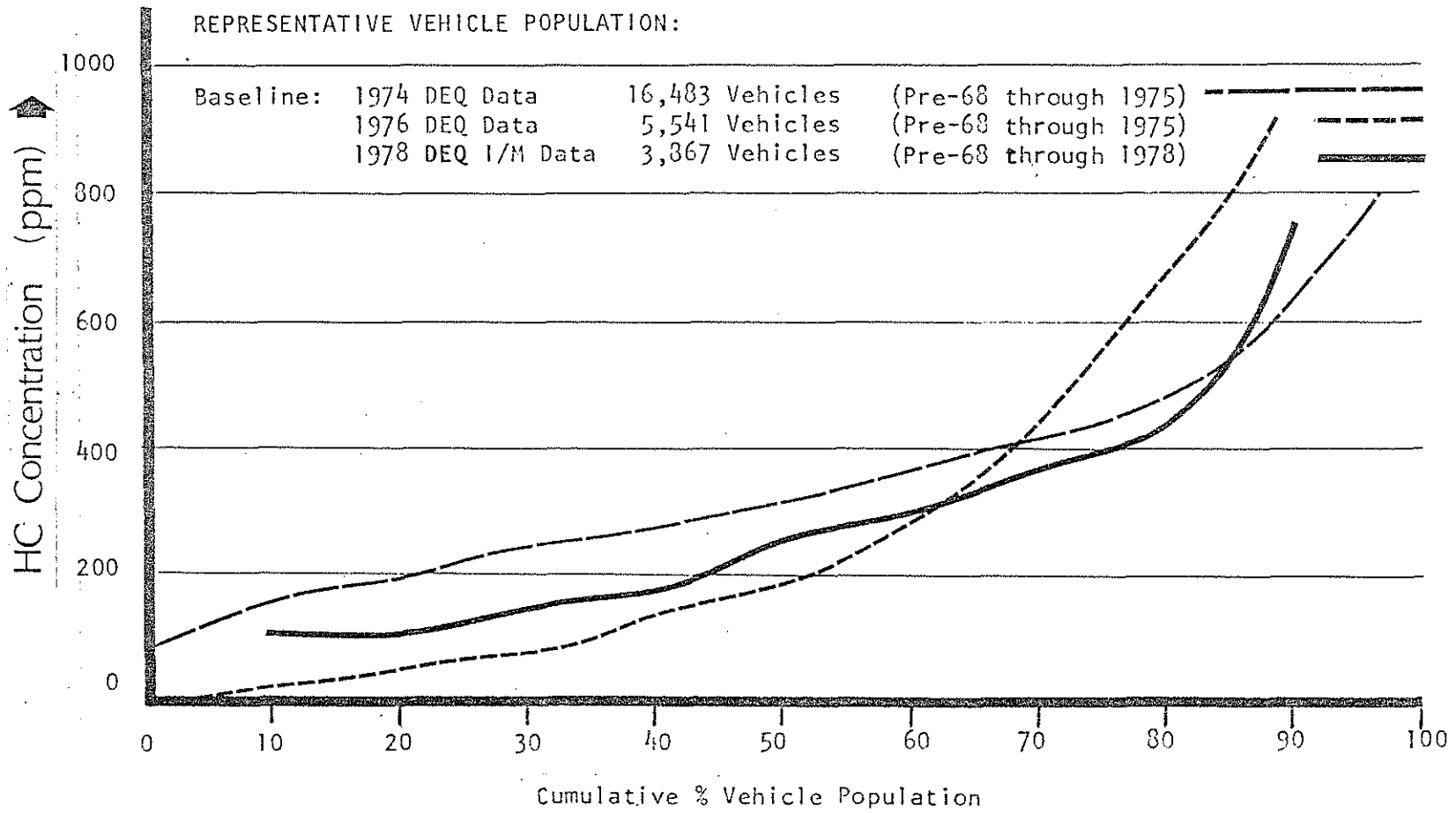


FIGURE D

DEPARTMENT OF ENVIRONMENTAL QUALITY
Vehicle Inspection Program

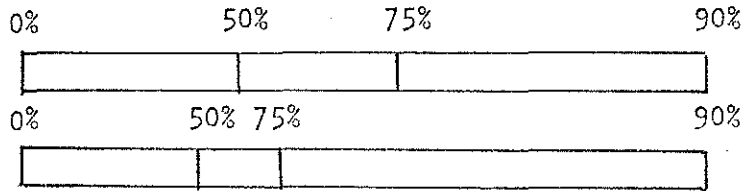
Composite Hydrocarbon
Idle Emission Distribution



DEPARTMENT OF ENVIRONMENTAL QUALITY
Vehicle Inspection Program

Exhaust Hydrocarbons Idle Emission Distributions for a
Popular Vehicle Make

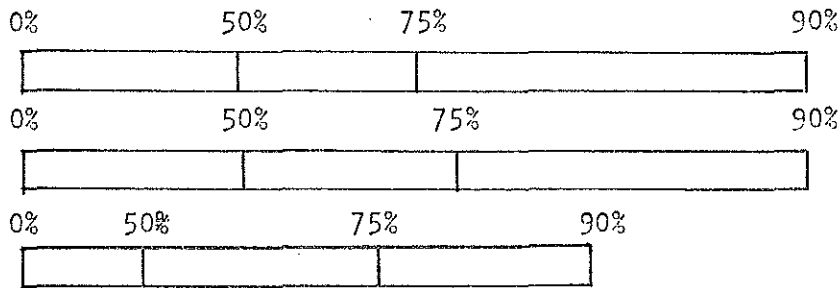
**BARS SHOW PERCENT OF POPULATION BELOW CONCENTRATION
TESTED IN 1976**



1975 Model Yr.

1976 Model Yr.

TESTED IN 1977

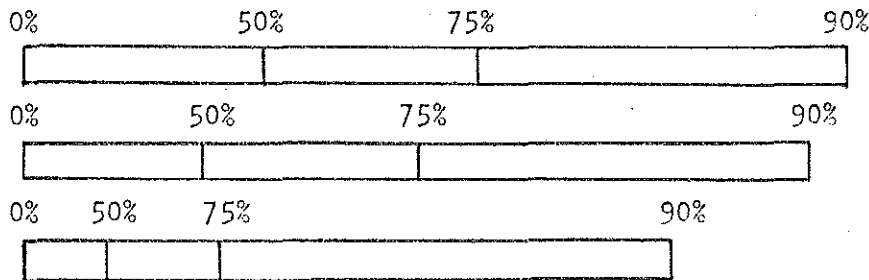


1975 Model Yr.

1976 Model Yr.

1977 Model Yr.

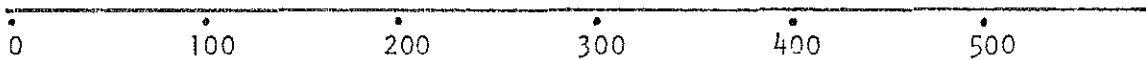
TESTED IN 1978



1975 - 76 Model
Yr. Combined

1977 Model Yr.

1978 Model Yr.



Hydrocarbon Concentration (ppm) ➔

DEPARTMENT OF ENVIRONMENTAL QUALITY
Vehicle Inspection Program

Hydrocarbon Emission Distribution Changes

1970 POPULAR VEHICLE MAKE

FIGURE F

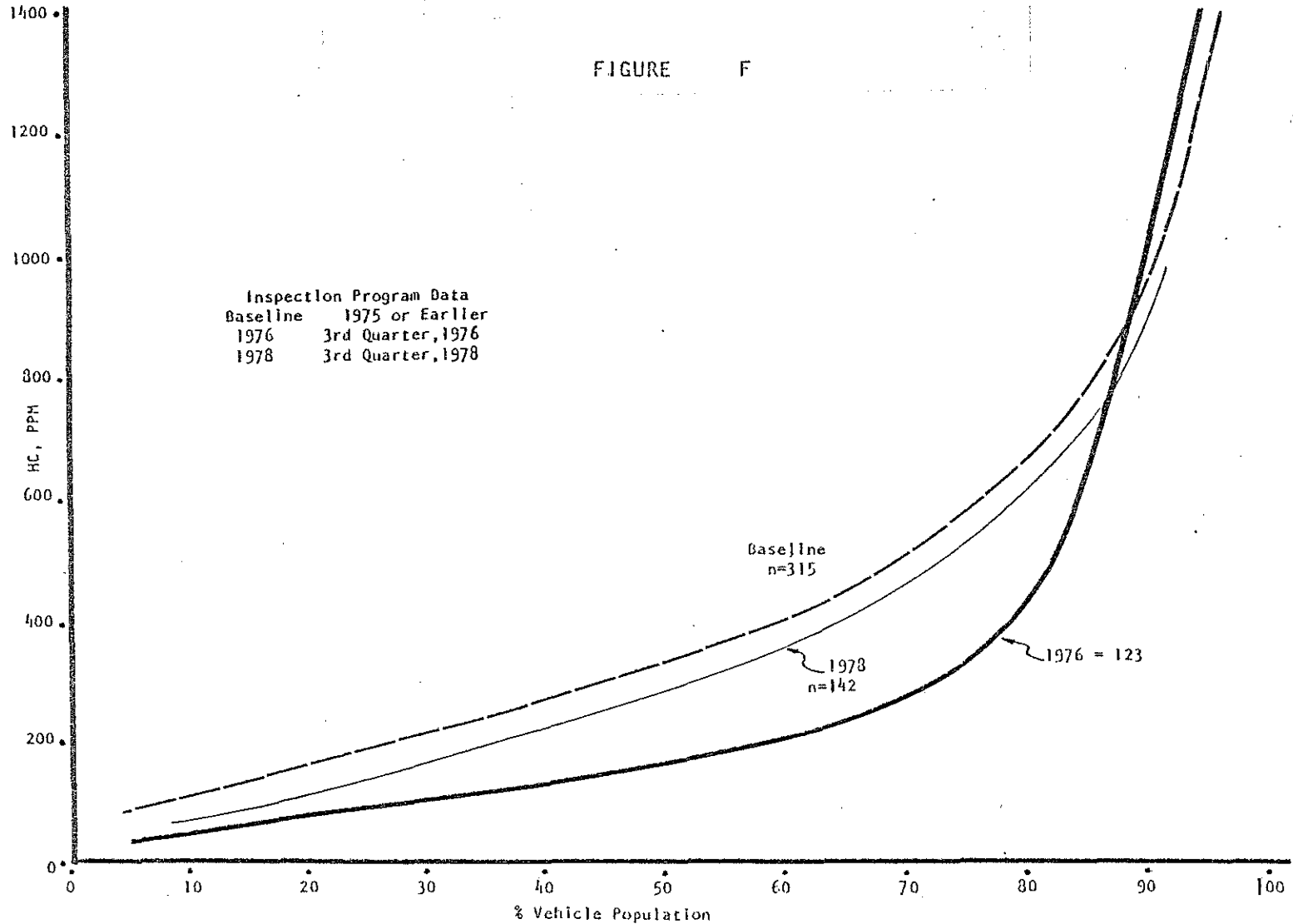
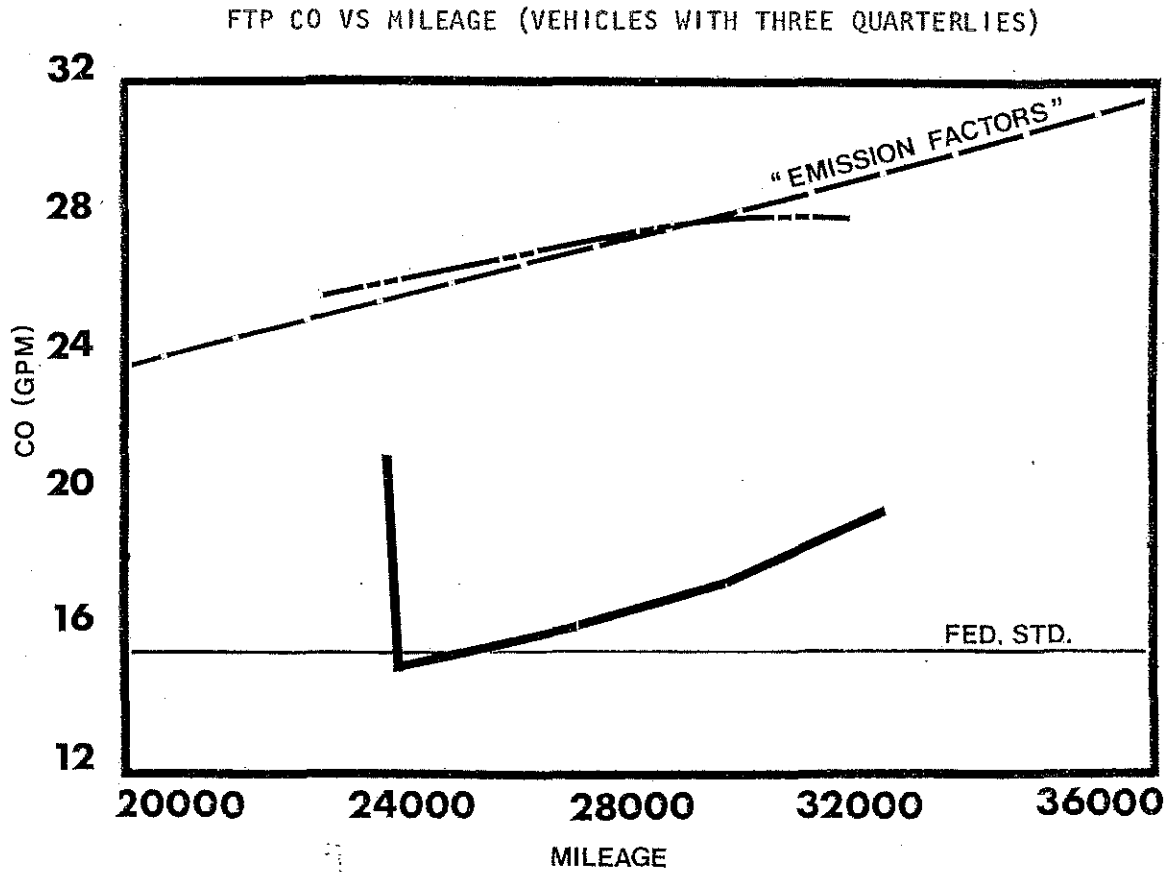


FIGURE G

COMPARISON OF PORTLAND (I/M) TO EUGENE (No I/M)
CARBON MONOXIDE

From FEDERAL TEST PROCEDURE 1975-77 Model Year Cars

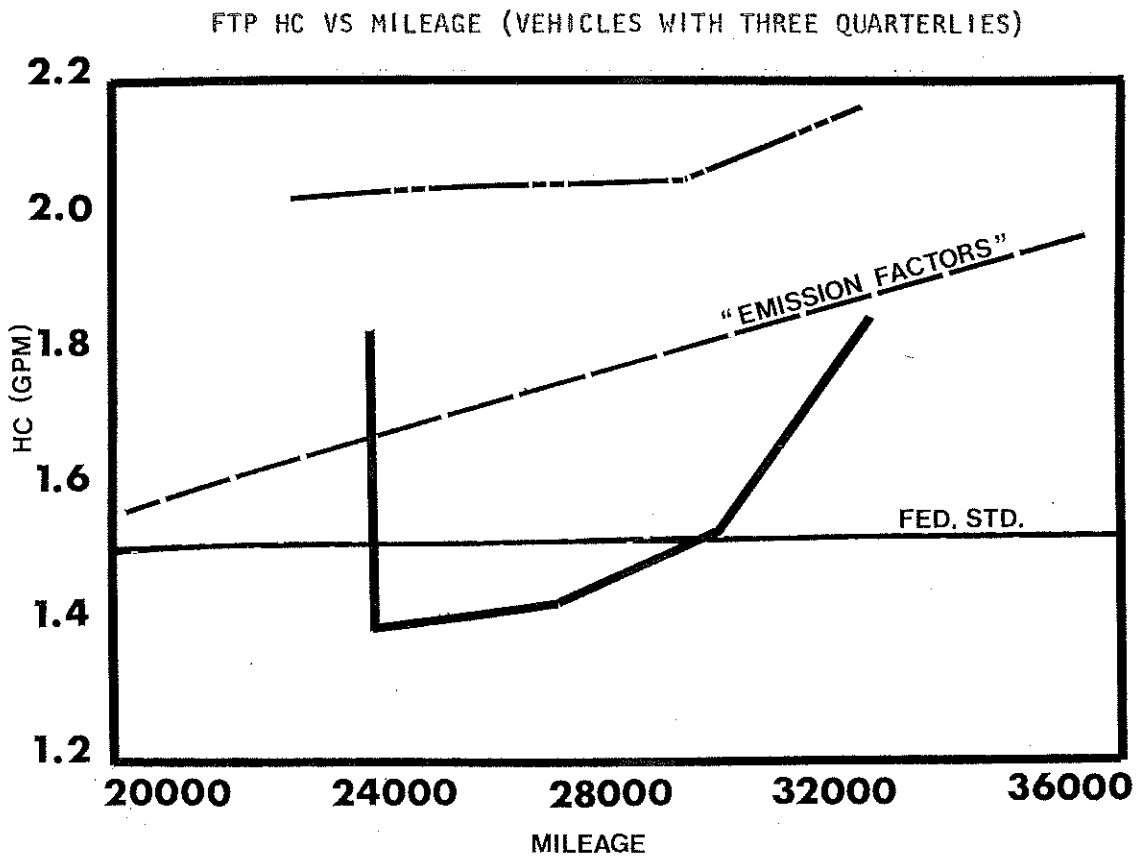


← 9 MONTHS →

— PORTLAND
COMPOSITE
- - - EUGENE

FIGURE H
 COMPARISON OF PORTLAND (I/M) to EUGENE (No I/M)
 HYDROCARBONS
 (GRAMS PER MILE)

From FEDERAL TEST PROCEDURE 1975-77 Model Year Cars



← 9 MONTHS →

————— PORTLAND
 COMPOSITE

- - - - - EUGENE

Appendix E
HEAVY DUTY VEHICLE TESTING

Emission control testing and certification of heavy duty gasoline powered vehicles began near the end of 1977. Heavy duty vehicles are defined as motor vehicles having a combined manufacturer vehicle and maximum load rating to be carried therein of more than 3855 kilograms (8,500 pounds). Basically, the definition of light duty vehicles includes 3/4 ton pickups and vans--larger vehicles are in the heavy duty class.

Most heavy duty vehicles that need to be certified are trucks with "T" license plates. These "T" license plates must be renewed at least every year. Thus, the heavy duty vehicle emission testing program is an annual inspection program.

Legislatively exempt from the emission certification requirement are both light and heavy duty farm licensed vehicles, an unusual class of licensed vehicles called "fixed-load" vehicles (a common example is tractor mounted air compressors), and vehicles licensed under reciprocity agreements with one or more other states (interstate commerce trucks and buses).

Diesel powered heavy duty vehicles are not required to be emission certified for license renewal. The majority of such vehicles are licensed under reciprocity agreements with other states, and as such would be statutorily exempt from a certification requirement even if specific

emission testing standards were adopted. At present, the only effective emission test for heavy duty diesel powered vehicles appears to be one which loads the engine. This would require expensive dynamometer equipment at testing stations. Since a typical high emission heavy duty diesel powered vehicle emits excessive smoke under load, the most effective emission control program for these vehicles is to enforce Oregon's "smoky vehicle" laws on the highways. Such citations would result in corrective maintenance and reduced emissions from these vehicles.

During the development of the heavy duty gasoline powered vehicle emission regulation, it was estimated that approximately 10,000 trucks would be inspected at the state operated test lanes. During 1978, over 11,000 such heavy duty trucks were certified for compliance with emission standards in the DEQ Centers.

The test method used for the emission check of heavy duty trucks is slightly different than for passenger cars. It is classified as a two stage idle test, that is, it is necessary to pass both the idle and the raised idle portion of the test. During 1978, the overall pass rate for heavy duty trucks averaged just under 60%. A summary of the truck testing results are shown in Table I. Overall failure rates are relatively consistent within the three heavy duty vehicle classes (pre-70, 70-74, 74 and later). Carbon monoxide related failures, both at idle and the raised idle portion of the inspection test accounted for just over half of the failures. Excessive Hydrocarbon emissions accounted for about 40% of the failures.

Emission equipment disconnects, as observed in the inspection lanes, was only about 1% for trucks as compared to 4% for passenger cars. The remaining failures were for miscellaneous causes such as high idle speed and vehicle smoke.

At the time heavy duty vehicle standards were adopted, it was estimated that mass emission reductions of 12% for CO and 42% for HC at a 35% rejection rate would be achieved. These emission reductions were based upon studies conducted by New York City. Further documentation was presented in the Department's Staff report to the Commission on February 25, 1977. The heavy trucks subject to the inspection represents about 2-3% of the total metropolitan area vehicle population. Airshed emission reductions from these inspected trucks alone are estimated to be in the range of 0.2 - 0.4% for CO and 0.8 - 1.3% for HC.

In the case of CO, the actual emission reduction benefits achieved in the congested, high pollution areas from the heavy duty vehicle program would be greater than that indicated by the airshed reductions. This, of course, results from the relatively high useage rate of heavy duty vehicles in these areas.

Emission characteristics from heavy duty gasoline powered trucks are shown in Figures E-1 and E-2. Figure E-1 shows the carbon monoxide curve with graphical presentation for the three levels of emission control levels in heavy duty trucks. Figure E-2 shows the same for hydrocarbons.

Emission control for heavy duty trucks has been implemented on a different schedule than for passenger cars. The reason for the different schedules is that heavy trucks are used for the purposes of work or the transportation of property, while passenger cars are used primarily for the transportation of people. The federal emission standards reflect this difference in that the heavy duty standards are expressed in terms of grams of pollutant per brake horsepower-hour (mass per work). Light duty motor vehicles are measured against a standard expressed in terms of grams of pollutant per vehicle mile. Two levels of pollution control for heavy duty trucks has been established. The first level covered 1970 - 1973 model year trucks. The current level covers 1974 and later trucks. A third level is scheduled to be implemented in the 1980 model year. It is of note that the idle emission distributions for the three groupings of heavy duty trucks (pre-control, first level, and second level) are approaching the ranges for the equivalent control in passenger cars.

Table 1

DEPARTMENT OF ENVIRONMENTAL QUALITY
VEHICLE INSPECTION PROGRAM

Heavy Duty Gasoline Vehicle Test Summary
December 1977 - December 1978

EMISSION INSPECTION TESTS	19,835
OVERALL PERCENTAGE PASS	58.3%

Pre-1970 Trucks (8,670)

Pass Emission Test	55.3%
Tests Failed for Carbon Monoxide (CO)	11.2%
Tests Failed for Hydrocarbons (HC)	14.0%
Tests Failed for Both HC & CO	5.1%
Tests Failed for CO @ 2500 rpm	11.2%
Tests Failed for Other Causes	3.2%

1970-1973 Trucks (5,606)

Pass Emission Test	59.5%
Tests Failed for Carbon Monoxide (CO)	14.2%
Tests Failed for Hydrocarbons (HC)	10.3%
Tests Failed for Both HC and CO	4.0%
Tests Failed for CO @ 2500 rpm	6.0%
Tests Failed for Emission Equipment Disconnects	3.5%
Tests Failed for Other Causes	2.5%

1974 and Later Trucks (5,559)

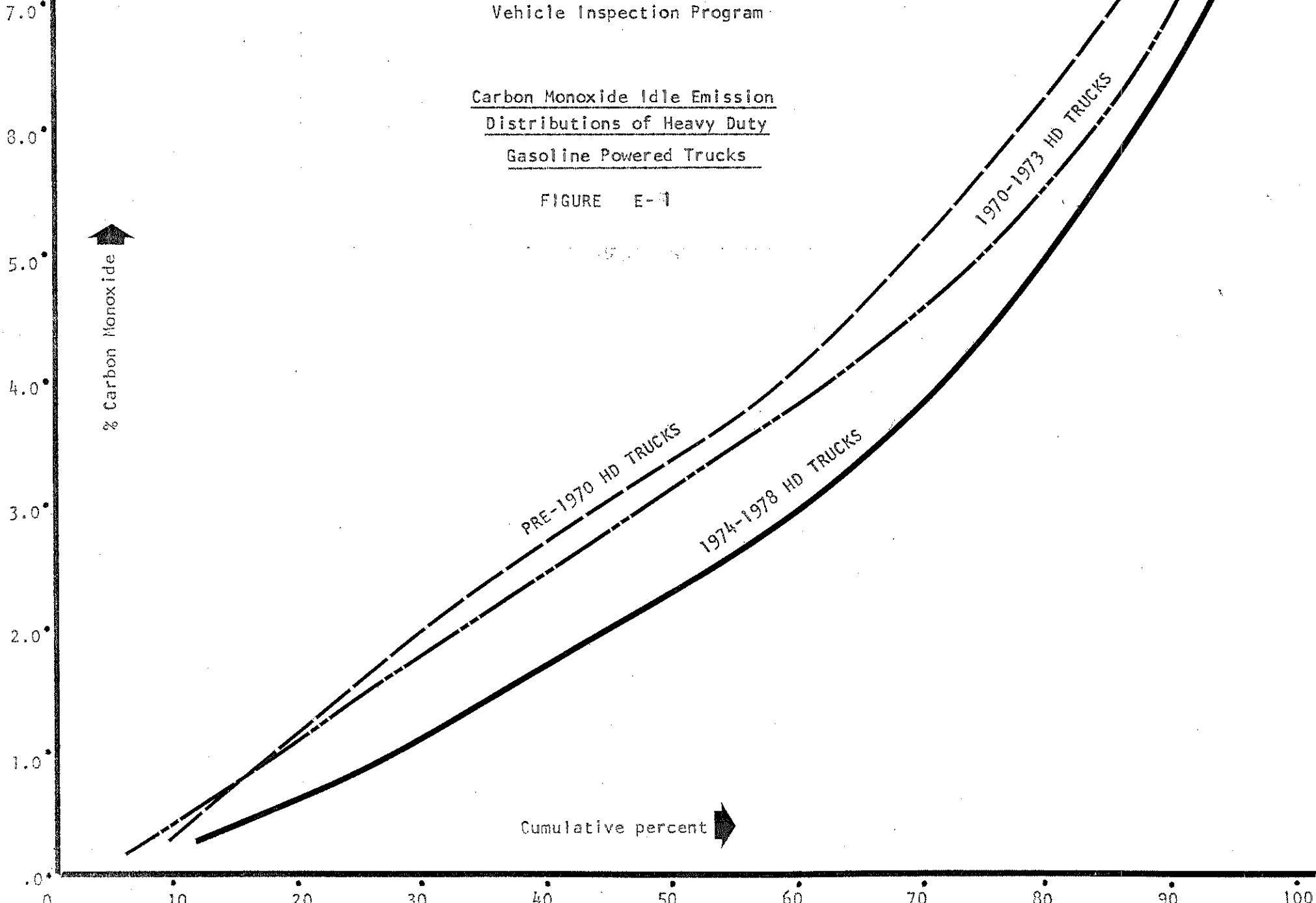
Pass Emission Test	62.0%
Tests Failed for Carbon Monoxide (CO)	14.5%
Tests Failed for Hydrocarbons (HC)	13.9%
Tests Failed for Both HC and CO	3.7%
Tests Failed for CO @ 2500 rpm	2.5%
Tests Failed for Emission Equipment Disconnects	1.6%
Tests Failed for Other Causes	1.8%

DEPARTMENT OF ENVIRONMENTAL QUALITY

Vehicle Inspection Program

Carbon Monoxide Idle Emission
Distributions of Heavy Duty
Gasoline Powered Trucks

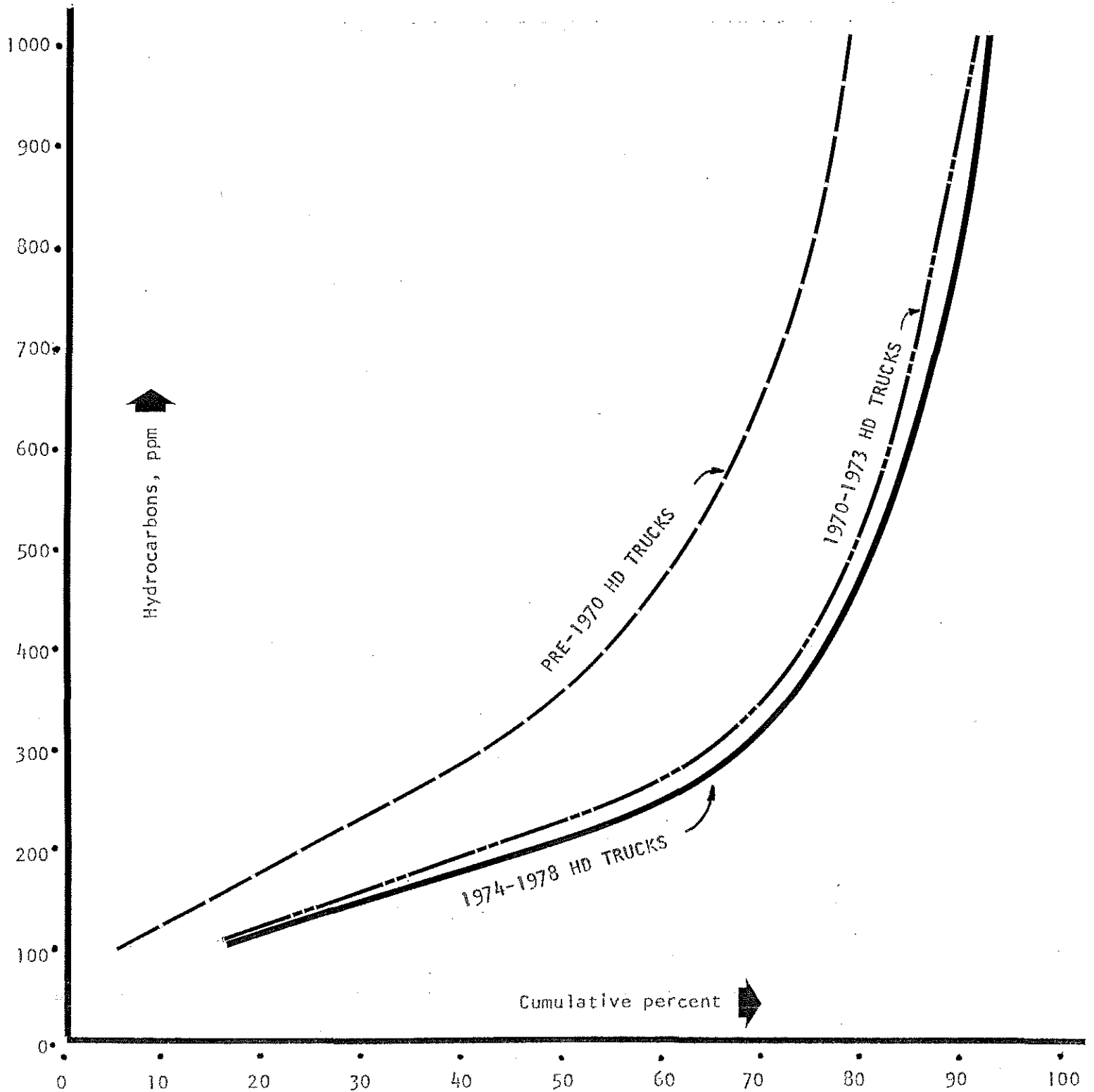
FIGURE E-1



DEPARTMENT OF ENVIRONMENTAL QUALITY
Vehicle Inspection Program

Hydrocarbon Idle Emission Distribution
of Heavy Duty gasoline powered trucks

FIGURE E-2



APPENDIX F

EMISSION REDUCTIONS FROM REPAIRED VEHICLES

Within the greater Portland area, 96% of all carbon monoxide emissions and 66% of all hydrocarbon emissions are estimated to come from motor vehicles. This is illustrated in Figure F-1. In turn, these emissions have contributed to violations of the Federal health standards for ambient concentrations of carbon monoxide and oxidants. The purpose of Portland's inspection/maintenance program is to reduce emissions of carbon monoxide and hydrocarbons by promoting improved vehicle maintenance.

Emission reductions due to inspection/maintenance have been shown by at least four independent sources. These include:

- A) Oregon idle emission data comparing pass/fail results.
- B) EPA dynamometer emission data from the EPA Portland Project.
- C) An independent study of areas without inspection/maintenance by Champion Spark Plug Company of "Car Maintenance Around the World."
- D) Data from other programs.

A discussion of these sources is as follows:

A) Oregon Idle Emission Data (Pass/Fail Results)

During 1978, a study was made of the idle emission from some 2100 vehicles which initially failed the DEQ clean air test. The idle emission distributions from these vehicles were compared before and after passing the test.

Figures F-2 and F-3 show cumulative distributions of carbon monoxide and hydrocarbon emissions respectively. Each graph shows vehicles which initially failed the idle test and those same vehicles retests after maintenance. Average idle emission reductions from this data is summarized as follows:

Average Idle Emission Reductions
From Repaired Vehicles (DEQ results)

<u>Model Year</u>	<u>Average Carbon Monoxide Idle Emission Reduction</u>	<u>Average Hydrocarbon Idle Emission Reduction</u>
Pre - 1968	50% decrease	54% decrease
1968 - 1971	60% decrease	54% decrease
1972 - 1974	70% decrease	62% decrease
1975 - 1978	76% decrease	71% decrease
Overall	64% decrease	60% decrease

The largest idle emission reductions occurred with the newest class of vehicles (1975 - 1978) where the catalyst technology predominates. Emission reductions from this group are important because the catalyst technology will eventually predominate the entire vehicle population. The catalytic converter was designed to produce substantially lower emissions. Improper maintenance of these vehicles reduces their effectiveness in emission control. Figures F-2 and F-3 show emission reductions achievable for this 1975 - 1978 vehicle class. Other studies have indicated that improper maintenance of catalyst equipped vehicles may reduce the life expectancy and efficiency of these devices.

Although substantial emission reductions are shown for these repaired vehicles, there is a disturbing observation. The curves representing the failed vehicles for both carbon monoxide and hydrocarbons are remarkably similar in all emission controlled classes (1968 and later). This indicates that improperly maintained vehicles lose most of the emission reduction potentials of their designs. It also indicates that even the most advanced emission control technologies currently available can revert to being no better than the earliest levels of pollution control.

B) EPA Portland Project

During the last two years, EPA has been conducting a special study of vehicles in the cities of Portland and Eugene. This study is discussed in Appendix G.

Preliminary data from this study shows the following reductions in mass emissions for vehicles which were repaired after failing the DEQ clean air test:

Average Mass Emission Reductions From Repaired Vehicles (EPA results)

<u>Model Year</u>	<u>Average Carbon Monoxide Mass Emission Reduction</u>	<u>Average Hydrocarbons Mass Emission Reduction</u>
Pre - 75 (pre catalyst)	33% decrease	12% decrease
75 - 78 (catalyst)	32% decrease	30% decrease

Differences between DEQ and EPA emission reductions are due to the test methods. The EPA study is still in progress and is measuring the effects of emission deterioration. Preliminary data shows that these emission reductions are being maintained.

C) Champion Spark Plug Company

Champion Spark Plug Company did an independent survey of car maintenance around the world. It involved 13,609 vehicles from the USA, Europe, Canada, and Mexico. In their study, when Champion performed maintenance, they found that American cars had idle emission reductions between 45% and 56%. At the same time fuel economy improved from 3 to 11%. In all countries, Champion found that from 78% to 94% of vehicles tested had at least one maintenance deficiency that adversely affects fuel economy, emissions, or performance. In spite of the needed maintenance, Champion found that 90 to 95% of the vehicle owners were satisfied with their vehicle's performance. Worldwide, between 4.6 and 19.3% of the population were found to be "gross emitters." That is, emissions were so high that they could not be measured because the readings were all above the scale of the test instruments. Their conclusion was "that more attention to the car and maintenance of the vehicles worldwide will bring greater benefits in energy savings, cleaner air and driver satisfaction."

D) Data from other programs

Emission reductions have also been reported by emission inspection programs located in other parts of the country. Although the actual percent reductions may differ due to different stringency levels (failure rates) as well as different methods of reporting data, proper maintenance is consistently shown to reduce emissions. Examples from these other areas are:

New Jersey

New Jersey has the longest operating emission inspection program in the country. Between 1974 and 1977, they are reporting a 26% reduction in ambient carbon monoxide concentrations.

Arizona

Arizona is reporting average idle emission reductions of 25% for carbon monoxide and 41% for hydrocarbons. These figures were derived by comparing 1977 idle emission data with data from their voluntary period.

Virginia

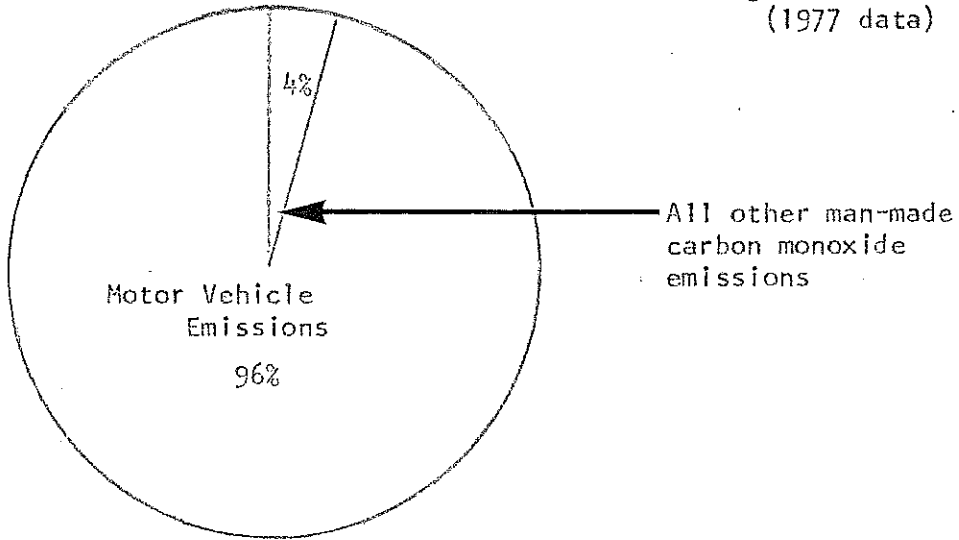
A voluntary program in Virginia is reporting potential idle emission reductions of 63% for carbon monoxide and 43% for hydrocarbons. This is based on a comparison of idle emissions from failed vehicles before and after maintenance.

An overall conclusion of the various studies shows that emissions can be significantly reduced by improved maintenance due to inspection/maintenance programs. Further, improper maintenance can seriously reduce benefits obtained by improved automobile new car emission control technology. As was pointed out in one of the studies, this needed maintenance may be neglected because owners are often not aware of their vehicles' emission problems.

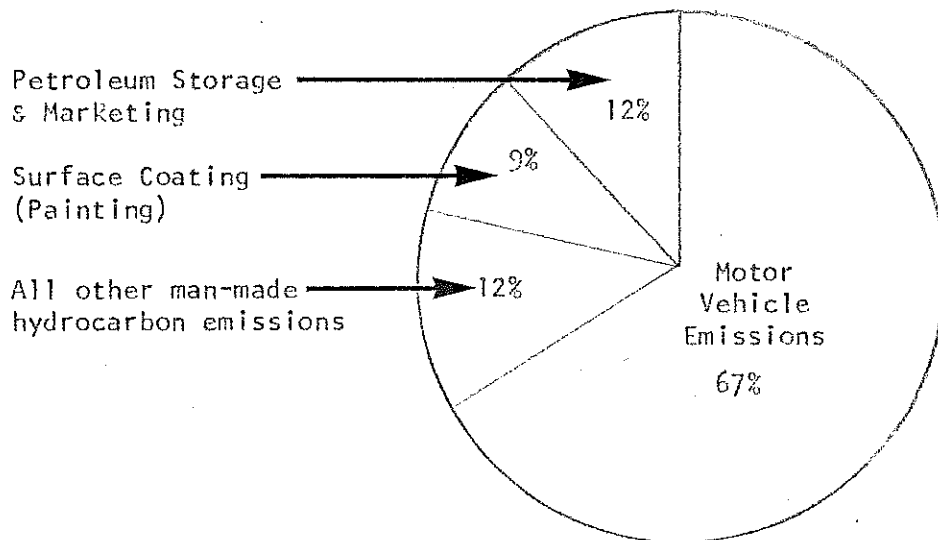
Figure F-1

The relative contribution of motor vehicle emissions to total anthropogenic emissions in the greater Portland area* (1977 data)

Carbon Monoxide



Hydrocarbons



*Multnomah, Clackamas, and Washington Counties

Figure F-2 Cumulative Distribution of Carbon Monoxide Idle Emissions of the Same Vehicles Which Initially Failed the Inspection and Returned After Maintenance

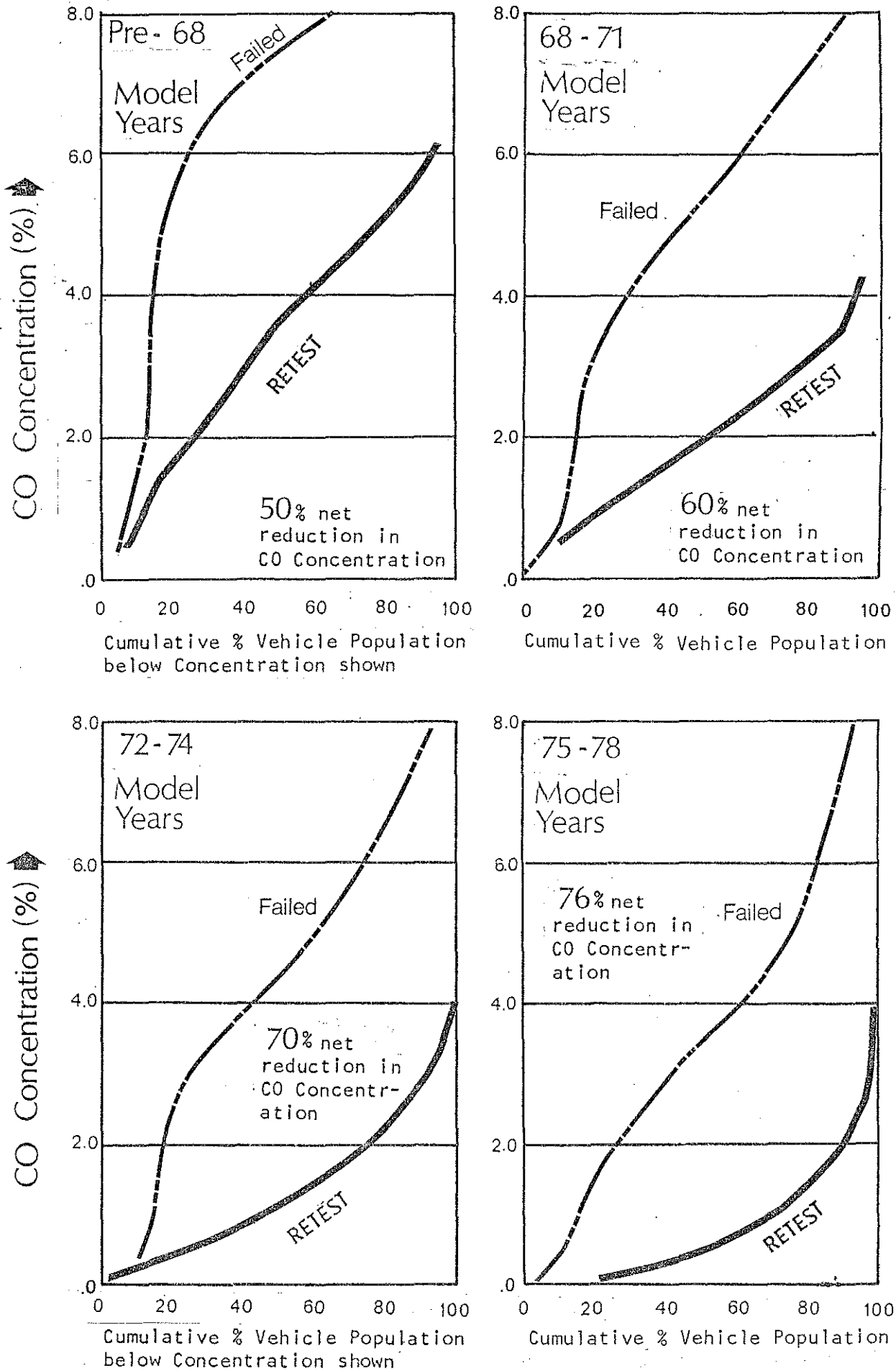
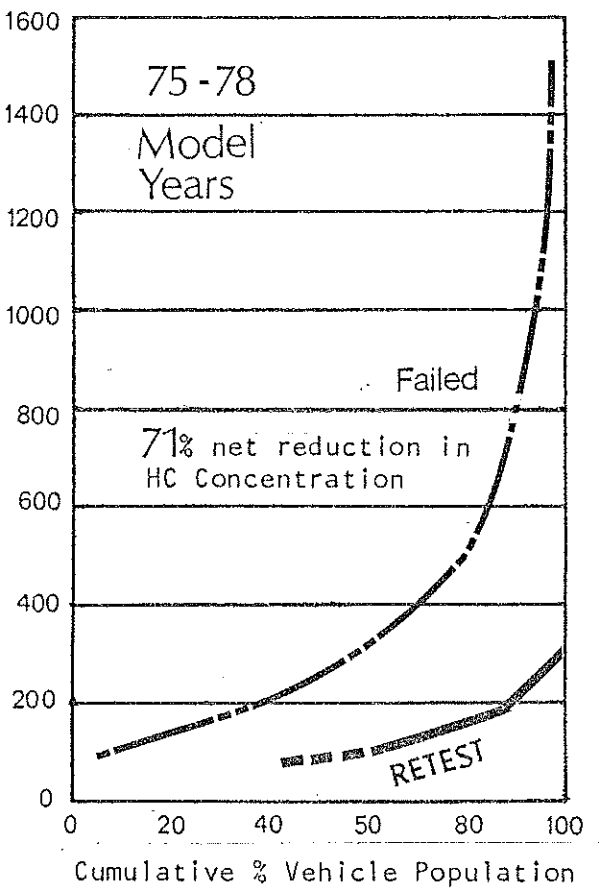
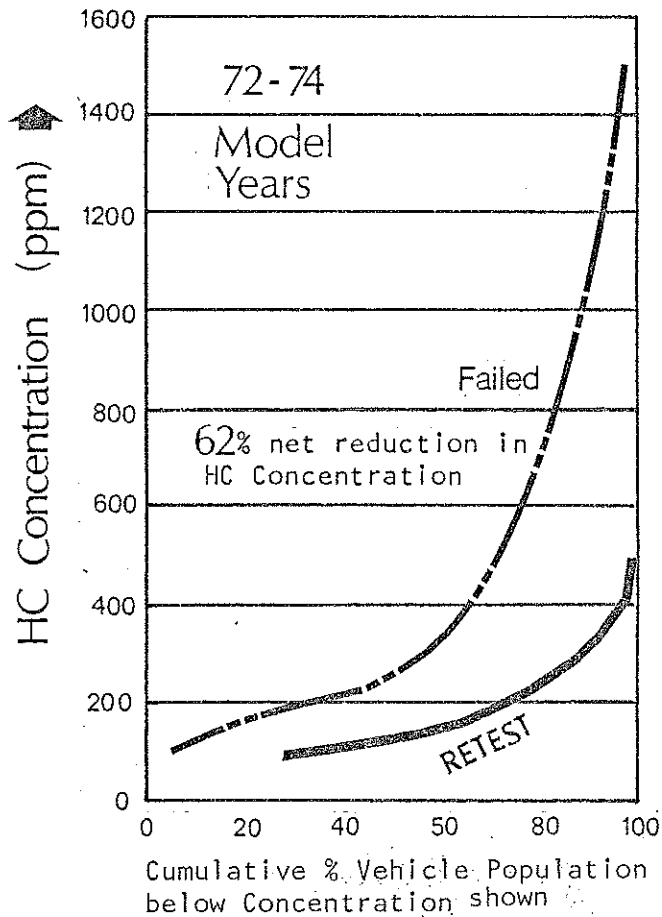
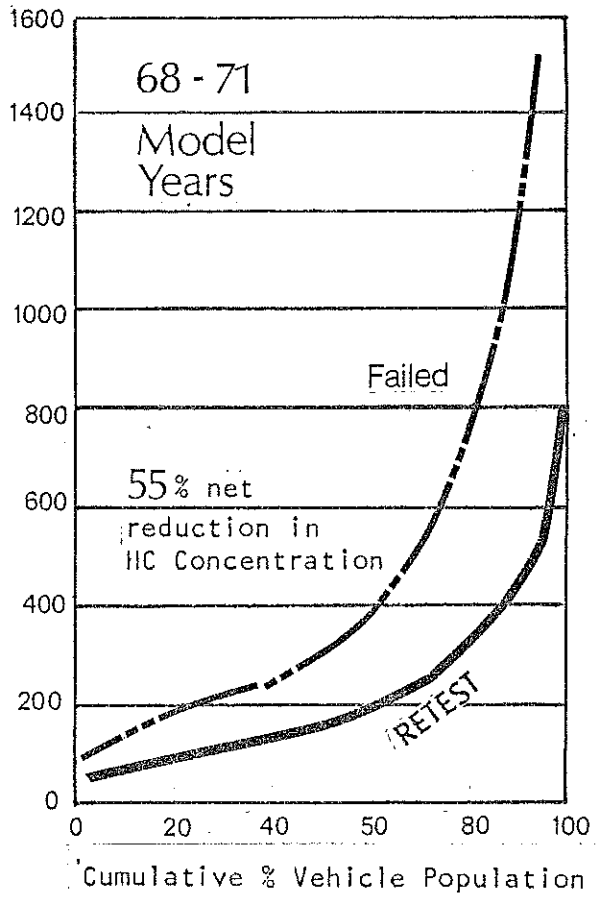
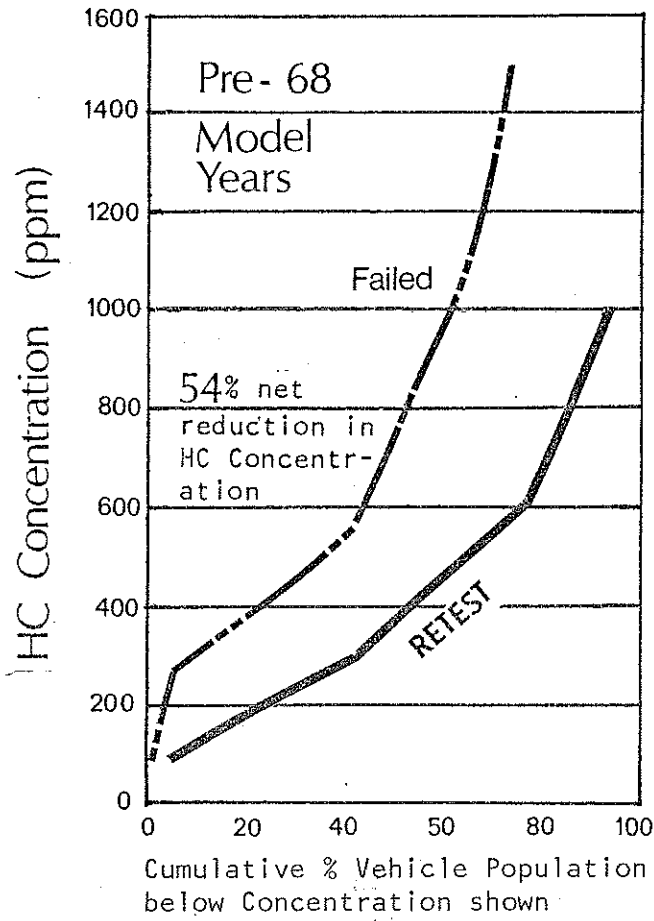


Figure F-3 Cumulative Distribution of Hydrocarbon Idle Emissions of the Same Vehicles Which Initially Failed the Inspection and Returned After Maintenance



Appendix G

EPA Portland Study Project

The Environmental Protection Agency has been conducting a study project in the Portland metropolitan area to determine the correlation with the short test cycles and the federal test procedure and to monitor the effectiveness of the Portland Inspection/Maintenance Program. The EPA Study was finalized in late 1976 and testing started in 1977. The federal project consisted of two elements, the first element being the correlation between the different short cycle tests and the federal test procedure. The second element consisted of documentation of the effectiveness of inspection maintenance programs, (i.e., the Portland Program and the emission control deterioration over one year's period). The scope of that study has been expanded. To date the federal government has issued two preliminary reports on the project. The first preliminary report, released some time back, showed a good indication of correlation, but insufficient data to document any deterioration. The second report has just been released and is included in this Appendix.

During the course of the DEQ's participation in the test study, (1977 - 1978) three of our inspection personnel were assigned to conduct the special tests to help determine the correlation that would exist between two facilities, the DEQ test lane, and the Hamilton Test Systems laboratory, which is under contract to EPA.

In a separate contract with EPA, with the Department, a test center was outfitted with all of the special test equipment, such as chassis dynamometers, constant volume samplers, and special exhaust gas analysers, necessary to conduct all of EPA's proposed short tests.

During that time, the DEQ inspection personnel conducted over 2500 short cycle tests. The findings to date from this study indicate that DEQ's short test is effective in identifying high polluting vehicles, that the program is effective in reducing emissions as compared to the control group, and that emission reductions are substantial for carbon monoxide and hydrocarbons.

**Portland Study Interim Analysis:
Observations on Six Months of Vehicle Operation**

January 1979

**Inspection/Maintenance Staff
Emission Control Technology Division
Office of Mobile Source Air Pollution Control
Office of Air, Noise, and Radiation
United States Environmental Protection Agency**

Introduction

Through the cooperation of the Oregon Department of Environmental Quality (DEQ) and the contracted services of Hamilton Test Systems (HTS), EPA is currently conducting the Portland Study, a large scale vehicle testing program designed to study Oregon's motor vehicle inspection program. The primary goal of the study is to quantify the costs and effectiveness of an ongoing "real life" inspection and maintenance (I/M) program.

Due to the great demand for information on inspection and maintenance programs, the following report is being prepared as data are still being collected in the Portland Study. In a series of interim reports, results from this study will be made available as soon as possible. The analyses in this report are based upon data which were complete, edited, and verified as of September 14, 1978 when they were placed on magnetic tape in final form. Inquiries may be addressed to Janet Becker (313-668-4351).

Summary

The main objectives of the Portland Study are as follows:

1. To determine the ability of an actual I/M inspection test to correctly identify high emitting cars; i.e., cars which need remedial maintenance;
2. To determine emission reductions achieved following maintenance on so-identified cars, with maintenance performed by mechanics in the field;
3. To determine the duration of emission reduction when compared to non-I/M situation;
4. To determine the cost of maintenance for I/M vs. non-I/M situation;
5. To determine the energy impact.

Preliminary conclusions regarding each of these objectives are listed below.

1. Exhaust emission levels as measured by the complete Federal Test Procedure of vehicles which failed the Oregon inspection test are much higher than for vehicles which passed. For catalyst-equipped, 1975 through 1977 model year vehicles, failing cars emitted 2.18 times as much hydrocarbons and 2.96 times as much carbon monoxide as passing cars. For 1972 through 1974 model year vehicles, failing cars emitted 1.40 times as much hydrocarbons and 1.73 times as much carbon monoxide.

2. Following maintenance, HC and CO FTP emissions of the failed 1975-77 model year vehicles* were reduced 47% and 54% and emissions of the failed 1972-74 model year cars were reduced 34% and 33%, respectively. For the fleet (including both passed and failed cars), HC and CO emission reductions were 26% and 35% for the newer cars and 15% and 16% for the older cars. Maintenance did not affect NOx emission levels.

3. Averaged over six months, HC and CO emission reductions** for the entire fleet were 27% and 32% for the newer cars, and 8% and 10% for the older cars.

4. The average cost of repair was \$24 for the newer cars and \$35 for the older cars. Fifty percent of all failed cars had repair costs of \$14 or less. Ninety percent of all cars had repair costs of \$70 or less. There is currently no quantitative comparison between maintenance costs which would normally have been incurred and those which were incurred specifically due to I/M. However, such a comparison would reduce the net cost of I/M to the vehicle owner.

5. The Portland Study shows on the average no fuel economy gain or loss due to I/M maintenance performed on failed cars.

Program Design

In the Portland Study design, two basic study areas have been defined. The first area, designated Element I, addresses the question of the "correlatability" of short emissions test procedures with the Federal Test Procedure (FTP). For Element I, some 2,000, 1975-77 model year light-duty vehicles are included in the study. They are tested according to three short emission tests plus the FTP at the HTS laboratory, and also are subjected to the Oregon State inspection test at an Oregon State inspection lane. In addition, state personnel performed the two loaded short tests on many of these vehicles.

The second study area, designated Element II, addresses questions relating to the effectiveness and the cost of inspection and maintenance as an in-use vehicle emission control strategy. This sample includes approximately 600 light-duty vehicles. Approximately 400 of the Element II vehicles were recruited from the Portland area, where I/M is required. The other 200 were recruited from Eugene, Oregon, where I/M is not required. Most of the remainder of this status report focuses on the Element II vehicles.

*Includes only those failed vehicles which have been tested through six months. These reductions are slightly different from those given on page 4 for all failed vehicles.

**These estimates are based on a comparison of 1) the Portland fleet's emissions as they would be expected to deteriorate without I/M, with 2) the Portland fleet's emissions as measured in this program initially and over the six months following inspection and maintenance.

Table 1 describes the sample of vehicles in Element II in more detail. Vehicles are divided into two main groups: 1972-74 and 1975-77 model year vehicles. Emission control technologies are thus generally separated into pre-catalyst and catalyst, respectively. Within each main group, vehicles were subject to the same federal exhaust emission standards for FTP HC and CO. The pertinent standards are given in Table 2a. Table 2b provides the applicable Oregon state inspection test (idle) standards for Element II vehicles. Vehicles from Eugene, Oregon, are intended to serve as a "control group" in the sense that I/M is not required of these cars and they have been selected to match the Portland vehicles with respect to model year, engine cubic inch displacement (CID), and model type.

All vehicles in Element II are subjected to several short emission tests, a diagnostic inspection, the FTP, and the Highway Fuel Economy Test (HFET). If a Portland area vehicle fails the state test, it returns following maintenance and is retested according to the 1975 FTP, the hot start FTP, the HFET, and the idle test to determine the immediate effect of maintenance. Information on the type and cost of maintenance performed and on diagnostics is also collected.

All vehicles in Element II are retested at approximately 3-month intervals during the following year to obtain information on FTP emission deterioration, idle emission deterioration, fuel economy deterioration, and information on diagnostics and voluntary owner maintenance.

Following vehicle testing, data packets containing test-related information such as strip charts, calibrations, etc., are manually reviewed by EPA personnel assigned to Portland. When EPA approves the data packets, the complete sets of data are placed onto computer files and are computer-checked for reasonableness. Once this checking/editing procedure is completed, the data are transferred onto magnetic tape for data analysis. Analysis is carried out in Ann Arbor by the Inspection and Maintenance Staff of the Emission Control Technology Division.

Preliminaries to the Analysis

This analysis is being prepared based upon data available from the Portland Study as of September 14, 1978. At that time there were 1001 Element I test sequences and 1907 Element II test sequences available. The distribution of the Element II test sequences is given in Table 3 by vehicle group and test sequence type. Since the study is incomplete, estimates and tentative conclusions are subject to revision pending further analysis.

In the estimates which follow an attempt has been made where appropriate to weight the sample of vehicles in the study to make it representative of the population of vehicles in the Portland tri-county area. It was possible to devise such a weighting scheme for the 1975-77 model year vehicles, and this weighting scheme has generally been applied. Presently, sufficient information is not available to perform this weighting for 1972-74 model year vehicles.

Immediate Effects of Maintenance

The immediate effects of I/M on idle HC and CO, FTP HC, CO, and NOx, and urban and highway fuel economy are indicated in Tables 4 and 5. The idle measurements are the minimum of the two curb idle measurements at the HTS lab. Results for 1975-77 model year vehicles have been weighted in an effort to better reflect the experience of the Portland fleet of 1975-77 cars. Results for the 1972-74 model year vehicles are unweighted sample means.

Table 4 gives the best current evaluation of immediate I/M effectiveness in Portland. It is seen that initial HC and CO emission reductions are substantial for failed 1975-77 vehicles: there is a 44% reduction in FTP HC and a 53% reduction in FTP CO after maintenance. Fleetwide average urban fuel economy improves slightly, highway fuel economy decreases slightly, and NOx increases slightly though none of these changes is very different from zero. The mean emission levels after maintenance for the failed population are only slightly above the appropriate federal exhaust emission standards (1.5 grams per mile (gpm) HC, 15.0 gpm CO). Per inspected 1975-77 model year vehicle (including both passed and failed cars), there is a 25% reduction in FTP HC and a 35% reduction in FTP CO after maintenance.

As indicated in Table 5 and the following summary tables, reductions of FTP HC and CO for 1972-74 model year failed cars in the Portland Study sample following maintenance are 25% and 38%, respectively. Fleetwide reductions (considering both passed and failed cars) are 13% and 22%, respectively. (Fleetwide estimates represent sample averages; no weights have been applied for the 1972-74 model year cars.) As with the 1975-77 cars, fleetwide average fuel economy and NOx emissions do not appear to be significantly affected by I/M maintenance.

Fuel Economy Results and FTP Emissions Before and After Maintenance					
	1972-74 Model Year Cars (Sample Means)				
	HC (GPM)	CO (GPM)	NOx (GPM)	City F.E. (MPG)	Highway F.E. (MPG)
Before	4.04	55.3	3.15	14.41	20.79
After	3.02	34.4	3.26	14.62	20.65
Percent Change	-25%	-38%	+3%	+1.5%	-.7%

Fuel Economy Results and FTP Emissions Before and After Maintenance

	1975-77 Model Year Failed Cars (Weighted Means)				
	HC (GPM)	CO (GPM)	NOx (GPM)	City F.E. (MPG)	Highway F.E. (MPG)
Before	2.87	40.9	2.32	16.42	23.37
After	1.60	19.4	2.37	16.59	23.03
Percent Change	-44%	-53%	+2%	+1.0%	-1.5%

Ongoing Effects of I/M

As seen above, I/M is initially effective in reducing FTP HC and CO emissions as observed immediately after maintenance. Of extreme importance is whether the emission levels remain below levels which would be experienced in the absence of I/M. A major question is whether cars involved in an I/M program have emissions which deteriorate faster than they would without I/M. This topic is being addressed in the Portland Study by retesting the Element II vehicles during the year following the initial test. All Element II vehicles are returned to the HTS lab for retesting at quarterly intervals.

As seen in Table 3, the current data set contains first quarterly results for most vehicles in the study and second quarterly results for well over half the vehicles while very few third quarterly results are present. As a preliminary application of this data to the question of deterioration over time, data were considered for those vehicles which had completed testing through the second quarterly retest.

The effects of I/M on HC and CO emission levels for 1975-77 model year vehicles over time can be seen in Figures 1-4. The figures indicate that after maintenance on the failed Portland vehicles, the composite means drop significantly below the Eugene (without I/M) mean emission levels for HC and CO for both idle and FTP results. Following the initial reductions these emissions appear to deteriorate along roughly parallel paths thus preserving significant emission reductions at least through the second quarterly retest.

Table 6 presents the weighted mean odometer readings, emission levels and fuel economies for the 1975-77 model year vehicle Portland population from which Figures 1-4 were derived. These estimates represent the experience of vehicles through about six months from the time of a passed state inspection test. The estimates are based upon all Element II vehicles in the Portland Study which have completed the first two quarterly test sequences. The results in Table 6 for the initial and retest after maintenance test sequences are generally similar to those seen in Table 4, even though Table 4 was based upon a greater number of vehicles--all those which had completed initial and retest after maintenance sequences.

Table 7 gives absolute changes (in gpm) and deterioration rates in gpm per 10,000 miles for estimated mean FTP emissions for 1975-77 vehicles through the second quarterly retest. For both HC and CO, the lower deterioration rates for passed vehicles and higher rates for failed vehicles yield a composite rate which is lower than that for Eugene vehicles. This indicates that, at least through the second quarter, the initial reductions due to I/M are well-sustained. EPA's best nationwide estimates of emission deterioration rates, based on EPA's surveillance data, are labeled "predicted" and are presented here for comparison.

Table 8 presents sample mean odometer readings, emission levels, and fuel economies for 1972-74 model year vehicles at test points through approximately six months. Figures 5 and 6 present the FTP HC and CO information graphically. Table 9 presents deterioration rates (gpm per 10,000 miles) calculated from the results in Table 8. Preliminary indications are that, although substantial emission reductions due to maintenance are occurring, fleet average hydrocarbon deterioration is large for the 1972-74 model year cars in the months following maintenance. Much of the relatively rapid HC deterioration appears to be due to ignition system problems. Further investigations relating to this issue including a review of more detailed information on individual vehicles and application of an appropriate weighting scheme to make the 1972-74 model year car sample more representative of the Portland population are currently being planned.

Maintenance

Cost of maintenance information was requested on every failed Element II vehicle following passage of the DEQ test. For the 1975-77 model year cars, the sample average repair cost was \$24.46. The average repair cost weighted to represent the Portland population was \$23.35. The following table provides percentiles of cost which may be read as, for example, 50% of the sampled 1972-77 model year vehicles had maintenance costs of \$14 or less, and 90% had costs of \$70 or less.

<u>Model Years</u>	<u>Sample Mean</u>	<u>Percentiles</u>			
		<u>25</u>	<u>50</u>	<u>75</u>	<u>90</u>
1972-74	\$34.97	\$5	\$11	\$41	\$78
1975-77	\$24.46	\$7	\$14	\$37	\$59
1972-77	\$29.47	\$6	\$14	\$38	\$70

It should be noted that the median (50 percentile) cost of maintenance in the sample is far below the mean cost of maintenance. This phenomenon is further illustrated in Figure 7 which indicates frequencies of maintenance costs. The implication of these results is that cost of maintenance is skewed heavily to the low end and a relatively small number of high costs are bringing up the mean. For the earlier model year vehicles, there were five extreme examples which had extensive tune-ups. For example, a \$260 repair included a muffler replacement and a \$333 repair included replacement of the camshaft. In these and other less extreme cases, repairs not necessary to pass the DEQ test may be inflating average cost of repair for I/M failure. The median might therefore be a more appropriate measure for estimating repair costs which are due to I/M.

Review of the maintenance data indicates that the majority of cars in the Portland Study required only minor tune-up work to pass the state inspection test. Carburetor work in the form of repair, adjustment, or replacement was indicated on a large proportion of the vehicles (88% of the earlier and 90% of the later model year vehicles). Cost data indicate that most of the carburetor work was adjustment. In addition to carburetor work, spark plugs, choke, air filter, idle speed, timing, and dwell were common maintenance items. Although higher cost parts and repairs were observed they were infrequent. These costs undoubtedly include some costs which would have been incurred for routine maintenance, even in the non-I/M situation. A breakdown of "routine maintenance" costs vs. I/M-related maintenance costs will be attempted for a subsequent report.

It is seen in Table 10 that nearly half of the newer cars had maintenance performed at auto dealer service departments while for older cars the most frequent maintenance facility was independent repair garage. Preliminary analyses have not established any effects of where the maintenance was done on emission reductions.

As an indicator of the use of diagnostic information supplied to mechanics, Table 11 indicates the frequency of maintenance items for vehicles which fail the state inspection test for HC only, for CO only, and for both. These results indicate that certain adjustments are performed on most vehicles regardless of the pollutant(s) failed. Carburetor adjustment is an obvious example. However, "spark timing control devices" are repaired, replaced, or adjusted approximately two or three times more frequently for HC only failures than for CO only failures.

Tables 12 and 13 present mean emissions and fuel economies on pollutant-specific failure for 1972-74 and 1975-77 Element II vehicles. Before and after maintenance results are given in addition to percent reductions. In general, repairs to a vehicle failing only one pollutant do not provide large FTP emission reductions on the other pollutant. The exception is for 1975-77 model year vehicles failing only on idle CO, where a 29% reduction in FTP HC occurs after maintenance. This result is expected since the correct idle mixture setting increases the catalyst's efficiency thus reducing emissions of both pollutants. This suggests

that an area with only an oxidant problem will benefit from implementing an I/M program with both HC and CO cutpoints. This possibility is currently receiving further evaluation.

SIT Efficiency in Identifying FTP Failures

Overall it appears that the Oregon state test is doing a good job of identifying those vehicles which are high polluters and are in need of remedial maintenance. The table below indicates how well the Oregon State test is doing.

Oregon State Test's Ability to Detect High Emitters (As Measured Relative to the Federal Test Procedure) 1972-77 Model Year Portland Vehicles		
	<u>1972-74 Models</u>	<u>1975-77 Models</u>
Passed Cars:	Avg. FTP HC = 2.92	Avg. FTP HC = 1.20
	Avg. FTP CO = 32.07	Avg. FTP CO = 12.92
	Avg. FTP NOx= 3.45	Avg. FTP NOx= 2.40
Failed Cars:	Avg. FTP HC = 4.09	Avg. FTP HC = 2.63
	Avg. FTP CO = 55.53	Avg. FTP CO = 38.18
	Avg. FTP NOX= 3.16	Avg. FTP NOX= 2.40

Fast Deterioration

As suggested by Figures 3, 4, 5, and 6, some of the vehicles in the Portland Element II fleet appear to be deteriorating relatively rapidly following maintenance. The phenomenon of rapid deterioration following passage of the state inspection test was therefore investigated for the whole sample (both passed and failed cars). As an initial investigation into this phenomenon, Portland area vehicles in the data base were identified as being possible "fast deteriorators" if their FTP or HFET emissions had doubled from the time when the state inspection test was passed until the first quarterly retest. Following the screening procedure, all pertinent information available for these vehicles including emission tests, engine diagnostics, and maintenance records was studied in an effort to determine the reasons for the apparent deterioration. A summary of the findings regarding probable causes is presented in Table 14. The majority (15 out of 26 1972-74 model year vehicles and 13 out of 20 1975-77 model year vehicles) appeared to have experienced some carburetor adjustment between the two test points. Of the earlier model year vehicles, 9 appeared to have spark plug or spark plug wire failure as the likely cause for deterioration. For many of these vehicles, driveability problems were observed at the test following the passed SIT which were not observed at the first quarterly retest. This suggests that driveability problems following certain I/M-related repairs may be encouraging subsequent readjustments, thus decreasing I/M's potential effectiveness. Whether the poor driveability is a result of the vehicle design or improper engine parameter adjustment is yet to be determined.

Table 1

Description of Element II Vehicle Groups

<u>Group Description</u>	<u>Number of Vehicles</u>
1. Portland area 1972-74 model year vehicles which passed the state inspection test,	100
2. Portland area 1975-77 model year vehicles which passed the state inspection test,	100
3. Portland area 1972-74 model year vehicles which failed the state inspection test,	100
4. Portland area 1975-77 model year vehicles which failed the state inspection test,	100
5. Eugene, Oregon 1972-74 model year vehicles,	100
6. Eugene, Oregon 1975-77 model year vehicles.	100
TOTAL ELEMENT II VEHICLES	600

Table 2a

Federal Exhaust Emission Standards Applicable to Element II Vehicles

<u>Model Year</u>	<u>Procedure</u>	<u>Certification Standards (gpm)</u>		
		<u>HC</u>	<u>CO</u>	<u>NOx</u>
1972	72 FTP*	3.4(3.0)	39.0(34.0)	-
1973-1974	72 FTP*	3.4(3.0)	39.0(34.0)	3.0(3.1)
1975-1976	75 FTP	1.5	15.0	3.1
1977	75 FTP	1.5	15.0	2.0

Table 2b

Ranges in Oregon State Inspection Idle Test Standards
Applicable to Element II Vehicles

<u>Model Year</u>	<u>State Idle Standards</u>	
	<u>HC</u>	<u>CO</u>
1972-74	400-500 ppm	2.0-4.0%
1975-77	225-300 ppm	1.0-3.5%

*The 1972 FTP, which consists of bags 1 and 2 of the 75 FTP, was used to determine whether a 1972-74 model year vehicle was correctly passed or failed since these vehicles were certified when new on the basis of the 72 FTP. However, FTP emission results for all vehicles are presented as 1975 FTP results. For comparison, the estimated equivalent 75 FTP standards are provided in parentheses.

Table 3

Number of Test Sequences Completed by Element II Vehicles
(as of 14 September 1978)

	<u>Initial</u>	<u>Retest After Maintenance</u>	<u>First Quarterly</u>	<u>Second Quarterly</u>	<u>Third Quarterly*</u>
Portland, Model Years 72-74, passed	111	-	103	85	20
Portland, Model Years 75-77, passed	112	-	109	83	17
Portland, Model Years 72-74, failed	102	92	88	54	7
Portland, Model Years 75-77, failed	114	99	93	74	2
Eugene, Model Years 72-74	111	-	93	59	0
Eugene, Model Years 75-77	109	-	95	75	0

*Third quarterly results have not been included in this report.

Table 4

Immediate Effects of Maintenance*
1975-77 Model Year Cars

	Portland Pass	-----Portland Fall-----			-----Portland Composite-----			-----Eugene-----		
		Initial	After Maintenance	% Change	Initial	After Maintenance	% Change	Initial	% Difference*** (Eugene to Portland, initial)	% Difference*** (Eugene to Portland, after maintenance)
Odometer (Miles)	23,508	24,583	25,455	3.5	23,880	24,182	1.3	23,053	3.6	4.9
Idle HC** (PPM)	69	325	80	-75.4	158	72	-54.4	150	5.3	-52.0
Idle CO** (%)	0.24	3.09	0.17	-94.5	1.23	0.22	-82.1	1.34	-8.2	-83.6
FTP HC (GPM)	1.16	2.87	1.60	-44.3	1.75	1.31	-25.1	1.90	-7.9	-31.1
FTP CO (GPM)	11.23	40.87	19.36	-52.6	21.49	14.04	-34.7	25.16	-14.6	-44.2
FTP NOx (GPM)	2.56	2.32	2.37	2.2	2.48	2.49	0.4	2.75	-9.8	-9.5
Urban Fuel Economy (MPG)	17.72	16.42	16.59	1.0	17.27	17.33	0.3	17.28	-0.1	0.3
Highway Fuel Economy (MPG)	25.25	23.37	23.03	-1.5	24.60	24.48	-0.5	24.77	-0.7	-1.2

*All numbers have been weighted to give best estimates for the Portland tri-county vehicle population. Eugene vehicles do not undergo I/M but are matched to the Portland sample and weighted to represent the Portland population in the absence of I/M.

**Based on measurements taken at the contractor's lab. The lower of the two curb idle measurements was used as the idle level for each car.

*** $100 \times (\text{Portland Composite Average} - \text{Eugene Average}) / (\text{Eugene Average})$ where the Portland Composite Average is Initial or After Maintenance, respectively.

Table 5

Immediate Effects of Maintenance*
1972-74 Model Year Cars

	Portland Pass	-----Portland Fail-----			-----Total Portland Sample-----			-----Eugene-----		
		Initial	After Maintenance	% Change	Initial	After Maintenance	% Change	Initial	% Difference*** (Eugene to Portland, initial)	% Difference (Eugene to Portland, after maintenance)
Odometer (Miles)	53,833	55,234	55,970	1.3	54,486	54,801	0.6	54,630	-0.3	0.3
Idle HCC** (PPM)	148	328	189	-42.4	230	167	-27.4	209	10.0	-20.1
Idle CO** (%)	0.88	3.20	0.72	-77.5	1.93	0.81	-58.0	2.77	-30.3	-70.8
FTP HC (GPM)	2.93	4.04	3.02	-25.2	3.43	2.97	-13.4	3.60	-4.7	-17.5
FTP CO (GPM)	32.08	55.30	34.41	-37.8	42.60	33.41	-22.2	48.25	-11.7	-31.3
FTP NOx (GPM)	3.46	3.15	3.26	3.5	3.32	3.37	1.5	3.63	-8.5	-7.2
Urban Fuel Economy (MPG)	14.14	14.41	14.62	1.5	14.26	14.36	0.7	14.44	-1.2	-0.6
Highway Fuel Economy (MPG)	20.42	20.79	20.65	-0.7	20.59	20.52	-0.3	21.11	-2.5	-2.8

*All numbers are sample averages i.e., the sample has not been weighted to represent the Portland population.

**Based on measurements taken at the contractor's lab. The lower of the two curb idle measurements was used as the idle level for each car.

*** $100 \times (\text{Total Portland Sample Average} - \text{Eugene Average}) / (\text{Eugene Average})$ where Total Portland Sample Average is Initial or After Maintenance, respectively.

Table 6

Ongoing Effects of I/M*
1975-77 Model Year Cars

	Portland Pass			Portland Fail				Portland Composite				Eugene		
	Initial	First Quarterly	Second Quarterly	Initial	After Maintenance	First Quarterly	Second Quarterly	Initial	After Maintenance	First Quarterly	Second Quarterly	Initial	First Quarterly	Second Quarterly
Odometer (Miles)	22004	25408	28174	24470	25144	27795	30708	22830	23055	26207	29022	22748	26222	29494
Idle HC** (PPM)	70	90	114	351	80	153	166	164	73	111	131	157	178	185
Idle CO** (3)	0.26	0.34	0.47	3.40	0.16	0.76	1.11	1.31	0.23	0.48	0.68	1.29	1.55	1.52
FTP HC (GPM)	1.20	1.19	1.27	3.04	1.62	1.77	1.76	1.82	1.34	1.38	1.43	1.86	1.96	2.04
FTP CO (GPM)	10.48	10.66	12.41	42.00	20.26	23.01	23.79	21.04	13.76	14.80	16.22	25.17	26.37	28.49
FTP NOx (GPM)	2.62	2.76	2.60	2.39	2.37	2.37	2.37	2.54	2.54	2.63	2.52	2.72	2.69	2.47
Urban Fuel Economy (MPG)	18.03	17.74	18.16	16.30	16.34	16.60	16.68	17.45	17.46	17.36	16.65 17.66	17.26	17.26	17.47
Highway Fuel Economy (MPG)	25.71	24.86	25.93	23.23	22.68	23.03	23.34	24.87	24.70	24.25	25.06	24.94	24.45	24.93

*All numbers have been weighted to give best estimates for the Portland tri-county vehicle population. Eugene vehicles do not undergo I/M but are matched to the Portland sample and weighted to represent the Portland population in the absence of I/M. "Initial" and "After Maintenance" numbers differ from Table 4 because Table 6 includes only vehicles which have completed the second quarterly retest.

**Based on measurements taken at the contractor's lab. The lower of the two curb idle measurements was used as the idle level for each car.

Table 7

FTP Emission Changes Through the First Six Months after Inspection
 (1975-77 Model Year Vehicles Weighted to Reflect the Portland Fleet)

	<u>Increase from Initial* Test To Second Quarterly</u>				<u>Change per 10,000 Miles</u>		
	<u>Odometer</u>	<u>FTP HC</u>	<u>FTP CO</u>	<u>FTP NOx</u>	<u>FTP HC</u>	<u>FTP CO</u>	<u>FTP NOx</u>
Portland Pass	6170	.07	1.93	-.02	.11	3.13	-.03
Portland Fail	5564	.14	3.53	0.00	.25	6.34	0.0
Portland Composite	5967	.09	2.46	-.02	.15	4.12	-.03
Eugene	6746	.18	3.32	-.25	.27	4.92	-.37
				<u>Predicted**</u>	.23	2.8	.08

*Test after maintenance for failed vehicles.

**MOBILE1 estimates of I/M benefit are based on the use of equal with and without I/M deterioration rates given by the predicted rates in this table for 1975-77 model year cars.

Table 8
Ongoing Effects of I/M*
1972-74 Model Year Cars

	Portland Pass			Portland Fail				Portland Total Sample				Eugene		
	Initial	First Quarterly	Second Quarterly	Initial	After Maintenance	First Quarterly	Second Quarterly	Initial	After Maintenance	First Quarterly	Second Quarterly	Initial	First Quarterly	Second Quarterly
Odometer (Miles)	53657	56153	58281	54837	55453	57647	59849	54115	54355	56733	58890	50510	53302	56064
Idle HC** (PPM)	148	165	207	346	153	220	293	225	150	187	240	202	254	235
Idle CO** (%)	0.94	1.43	1.49	2.91	0.51	1.59	1.86	1.70	0.77	1.49	1.63	2.85	2.32	2.61
FTP HC (GPM)	3.11	3.27	3.29	3.99	2.62	3.41	4.13	3.45	2.92	3.32	3.62	3.35	3.12	3.10
FTP CO (GPM)	34.18	37.02	37.63	49.06	32.73	41.26	40.61	39.96	33.62	38.67	38.79	46.52	39.56	42.58
FTP NOx (GPM)	3.43	3.53	3.51	3.26	3.28	3.41	3.26	3.36	3.37	3.45	3.41	3.93	3.94	3.65
Urban Fuel Economy (MPG)	14.27	14.04	14.28	15.13	15.22	14.81	15.08	14.59	14.64	14.33	14.53	13.95	14.20	14.07
Highway Fuel Economy (MPG)	20.62	20.09	20.69	21.81	21.50	21.91	21.50	21.07	20.96	20.50	21.00	20.35	20.26	20.47

*All numbers are sample averages, i.e., not weighted to reflect the Portland fleet. "Initial" and "After Maintenance" numbers differ from Table 5 because Table 8 includes only vehicles which have completed the second quarterly retest.

**Based on measurements taken at the contractor's lab. The lower of the two curb idle measurements was used as the idle level for each car.

Table 9

FTP Emission Changes Through the First Six Months after Inspection
(1972-74 Model Year Vehicles, Unweighted)

	<u>Increase from Initial Test*</u> <u>To Second Quarterly</u>			<u>Change per 10,000 Miles</u>			
	<u>Odometer</u>	<u>FTP HC</u>	<u>FTP CO</u>	<u>FTP NOx</u>	<u>FTP HC</u>	<u>FTP CO</u>	<u>FTP NOx</u>
Portland Pass	4624	.18	3.45	.08	.39	7.46	.17
Portland Fail	4396	1.51	7.88	-.02	3.43	17.93	-.05
Portland Composite	4535	.70	5.17	.04	1.54	11.40	.09
Eugene	5554	-.25	-3.54	-.28	-.45	-6.37	-.50
				<u>Predicted**</u>	.53	6.15	0.00

*Test after maintenance for failed vehicles.

**MOBILE1 estimates of I/M benefit are based on the use of equal with and without I/M deterioration rates given by the predicted rates in this table for 1972-74 model year cars.

Table 10

Repairs Performed on Vehicles Failing the State Inspection Test

	Model Year <u>1972-74 Vehicles</u>	Model Year <u>1975-77 Vehicles</u>
<u>Total Number of Cars</u>	92	99
Were the following items repaired, replaced, or adjusted? (yes)		
Spark Plugs	34	34
Spark Plug Wires	14	27
Points and Condensor	29	11
Distributor Cap and Rotor	17	10
Spark Timing Control Devices	13	20
Carburetor	81	89
Choke	46	35
Intake System	5	7
Air Filter	30	38
Engine Oil	20	17
Idle Speed	46	70
Timing	46	65
Dwell	39	9
Air Injection System	5	6
EGR System	6	5
PCV System	6	4
Valves	7	2
Maintenance was performed by:		
Auto Dealer Service Department	17	48
Independent Repair Garage	38	21
Service Station	16	18
Owner	19	12
Other	1	0
No Maintenance	1	0

Table 11

Repairs Performed on Vehicles Failing the State Inspection Test (SIT)
(by pollutant failed)

Model Years	SIT CO Failure*		SIT HC Failure*		Both HC and CO Failure	
	1972-74	1975-77	1972-74	1975-77	1972-74	1975-77
<u>Total Number Cars</u>	<u>64</u>	<u>34</u>	<u>8</u>	<u>13</u>	<u>9</u>	<u>43</u>
Were the following items repaired, replaced, or adjusted? (yes)						
Spark Plugs	22 (34.4)**	8 (23.5)	4 (50.0)	6 (46.2)	3 (33.3)	16 (37.2)
Spark Plug Wires	8 (12.5)	7 (20.6)	2 (25.0)	5 (38.5)	2 (22.2)	11 (25.6)
Points and Condensors	20 (31.3)	4 (11.8)	2 (25.0)	2 (15.4)	3 (33.3)	2 (4.7)
Distributor Cap and Rotor	13 (20.3)	3 (8.8)	1 (12.5)	1 (7.7)	2 (22.2)	2 (4.7)
Spark Timing Control Devices	8 (12.5)	5 (14.7)	3 (37.5)	3 (23.1)	1 (11.1)	10 (23.3)
Carburetor	59 (92.2)	32 (94.1)	8 (100.0)	11 (84.6)	8 (88.9)	39 (90.7)
Choke	34 (53.1)	8 (23.5)	5 (62.5)	5 (38.5)	3 (33.3)	21 (48.8)
Intake System	2 (3.1)	1 (2.9)	1 (12.5)	1 (7.7)	0 (0.0)	4 (9.3)
Air Filter	20 (31.3)	11 (32.4)	3 (37.5)	4 (30.8)	4 (44.4)	20 (46.5)
Engine Oil	14 (21.9)	4 (11.8)	2 (25.0)	2 (15.4)	1 (11.1)	8 (18.6)
Idle Speed	32 (50.0)	21 (61.8)	4 (50.0)	12 (92.3)	5 (55.6)	30 (69.8)
Timing	33 (51.6)	22 (64.7)	4 (50.0)	9 (69.2)	5 (55.6)	30 (69.8)
Dwell	29 (45.3)	3 (8.8)	2 (25.0)	1 (7.7)	4 (44.4)	4 (9.3)
Air Injection System	4 (6.3)	3 (8.8)	0 (0.0)	0 (0.0)	0 (0.0)	3 (7.0)
EGR System	3 (4.7)	0 (0.0)	2 (25.0)	2 (15.4)	0 (0.0)	2 (4.7)
PCV System	4 (6.3)	0 (0.0)	1 (12.5)	0 (0.0)	0 (0.0)	3 (7.0)
Valves	5 (7.8)	0 (0.0)	1 (12.5)	2 (15.4)	0 (0.0)	0 (0.0)
Maintenance Was performed by:						
Auto Dealer Service Department	15 (23.4)	18 (52.9)	1 (12.5)	8 (61.5)	0 (0.0)	19 (44.2)
Independent Repair Garage	26 (40.6)	7 (20.6)	4 (50.0)	2 (15.4)	4 (44.4)	10 (23.3)
Service Station	12 (18.8)	7 (20.6)	1 (12.5)	1 (7.7)	3 (33.3)	9 (20.9)
Owner	11 (17.2)	2 (5.9)	2 (25.0)	2 (15.4)	1 (11.1)	5 (11.6)

*Exclusive, i.e., includes vehicles which failed one and not the other of idle HC and idle CO.

**Numbers in parentheses are percent of column total.

Table 12

Sample Mean Emissions for 1972-74 Model Year Vehicles**
(By Pollutant Failure)

	<u>Idle CO Failure* (64 Vehicles)</u>			<u>Idle HC Failure* (8 Vehicles)</u>			<u>Fail Both HC and CO (9 Vehicles)</u>		
	<u>Before Maintenance</u>	<u>After Maintenance</u>	<u>% Reduction</u>	<u>Before Maintenance</u>	<u>After Maintenance</u>	<u>% Reduction</u>	<u>Before Maintenance</u>	<u>After Maintenance</u>	<u>% Reduction</u>
Idle HC	210.47	189.38	10.0	1187.50	181.25	84.7	912.78	287.78	68.7
Idle CO	3.63	.75	79.3	.66	.22	66.7	5.99	.68	88.6
FTP HC	3.47	3.22	7.2	4.50	2.70	40.0	9.73	3.00	69.2
FTP CO	57.45	36.75	36.0	32.58	30.62	6.0	94.45	35.06	62.9
FTP NOx	3.12	3.18	-1.9	3.28	3.11	5.2	3.03	3.92	-29.4
Urban FE	14.57	14.63	-.4	13.73	14.10	-2.7	13.09	14.32	-9.4
Highway FE	21.03	20.75	1.3	19.81	20.13	-1.6	18.92	19.31	-2.1

*Exclusive, i.e. includes vehicles which failed one and not the other of idle HC and idle CO.

**The values have not been weighted to better reflect the Portland fleet.

Table 13

Mean Emissions for 1975-77 Model Year Vehicles**
(By Pollutant Failure)

	<u>Idle CO Failure* (34 Vehicles)</u>			<u>Idle HC Failure* (13 Vehicles)</u>			<u>Fail Both HC and CO (43 Vehicles)</u>		
	<u>Before Maintenance</u>	<u>After Maintenance</u>	<u>% Reduction</u>	<u>Before Maintenance</u>	<u>After Maintenance</u>	<u>% Reduction</u>	<u>Before Maintenance</u>	<u>After Maintenance</u>	<u>% Reduction</u>
Idle HC	172.06	77.94	54.7	310.00	127.69	58.8	476.23	91.98	80.70
Idle CO	2.39	.30	87.4	.09	.02	77.8	4.83	.22	95.4
FTP HC	2.07	1.47	29.0	2.10	1.43	31.9	3.44	1.54	55.2
FTP CO	33.86	17.84	47.3	13.58	14.40	-6.0	50.16	19.54	61.0
FTP NOx	2.72	2.96	-8.8	2.31	2.47	-6.9	2.16	2.12	1.9
Urban FE	15.74	15.86	-.8	13.89	13.26	4.5	15.17	15.20	-0.2
Highway FE	22.45	22.25	.9	19.43	19.02	2.1	21.24	20.62	2.9

*Exclusive, i.e., includes vehicles which failed one and not the other of idle HC and idle CO.

**These values have not been weighted to better reflect the Portland fleet.

Table 14

Frequency of Fast Deteriorators and Likely Causes*

	<u>1972-74 Model Year Vehicles</u>	<u>1975-77 Model Year Vehicles</u>
Total Identified in Sample	26	20
Carburetor Out of Adjustment	15	13
Distributor Malfunction	0	3
Choke Operation Failure	2	1
Spark Plug Failure	9	1
EGR Disabled	2	1
Unknown	0	3

*For some vehicles more than one likely cause was indicated.

Figure 1

Ongoing Effects: 1975-77 Model Year
Portland Population Estimated Means

IDLE HC VS. MILEAGE (VEHICLES WITH TWO QUARTERLIES)

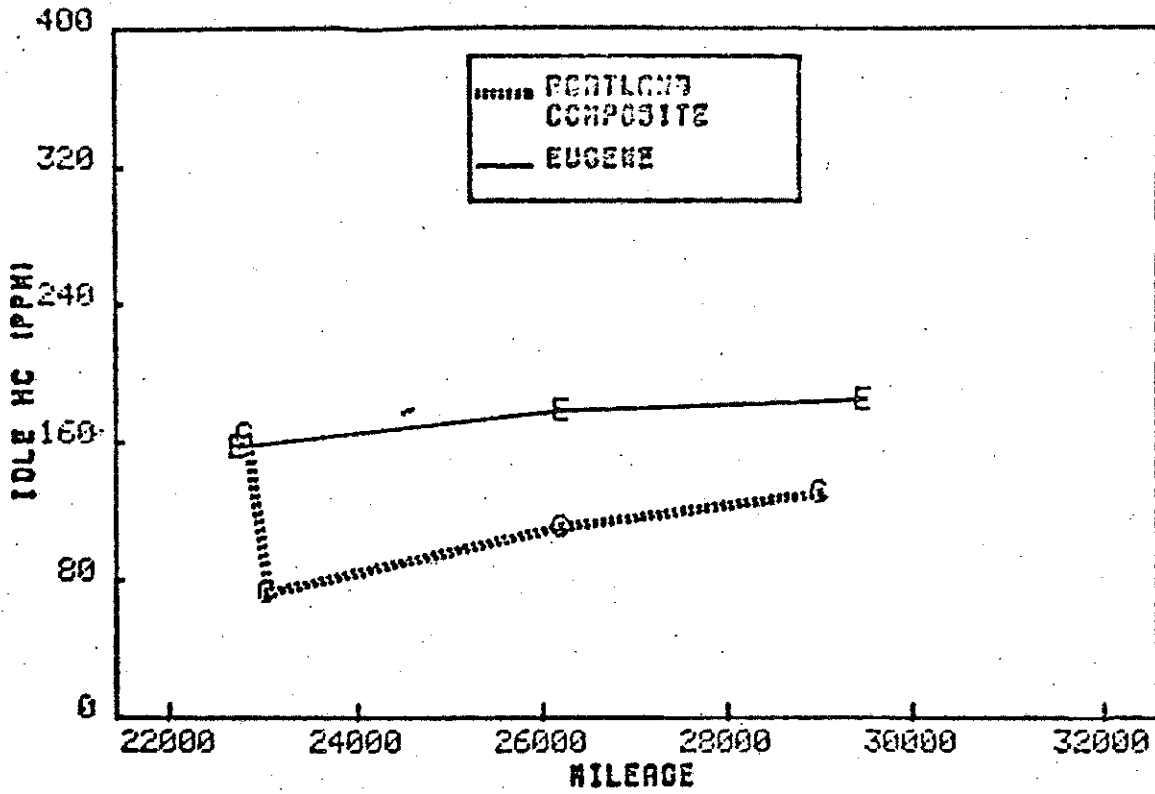


Figure 2

Ongoing Effects: 1975-77 Model Year
Portland Population Estimated Means

IDLE CO VS. MILEAGE (VEHICLES WITH TWO QUARTERLIES)

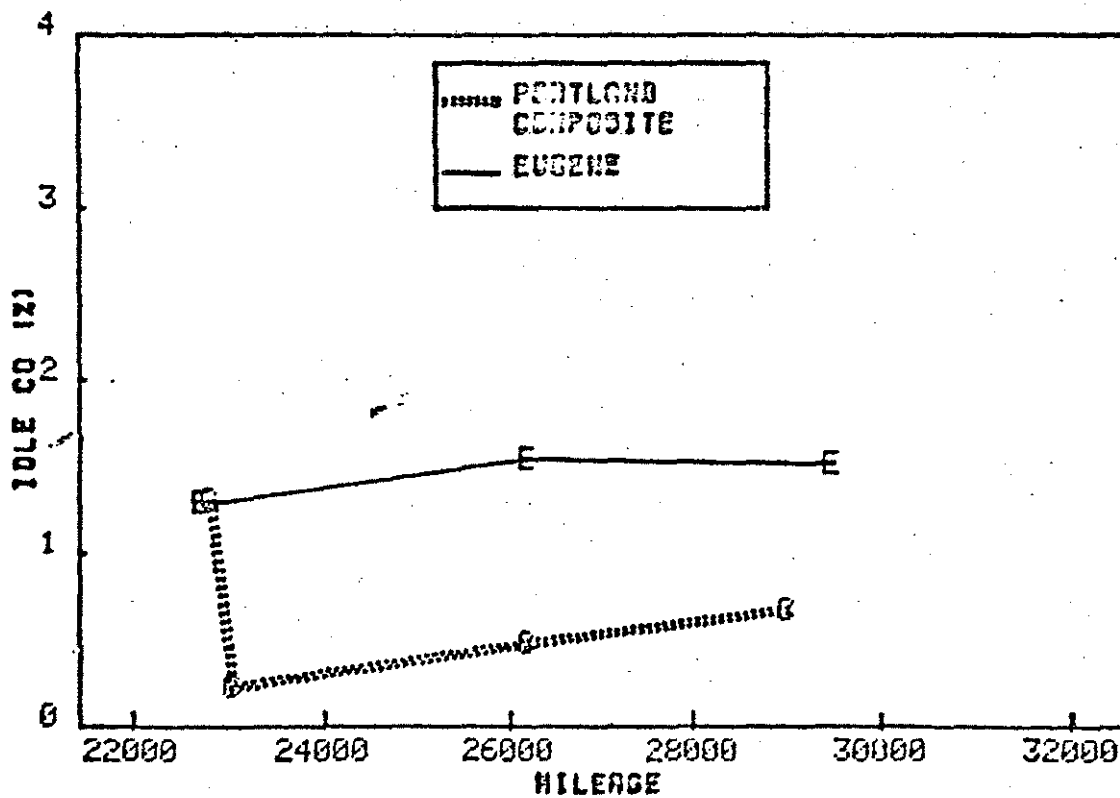


Figure 3

Ongoing Effects: 1975-77 Model Year
Portland Population Estimated Means

FTP HC VS. MILEAGE (VEHICLES WITH TWO QUARTERLIES)

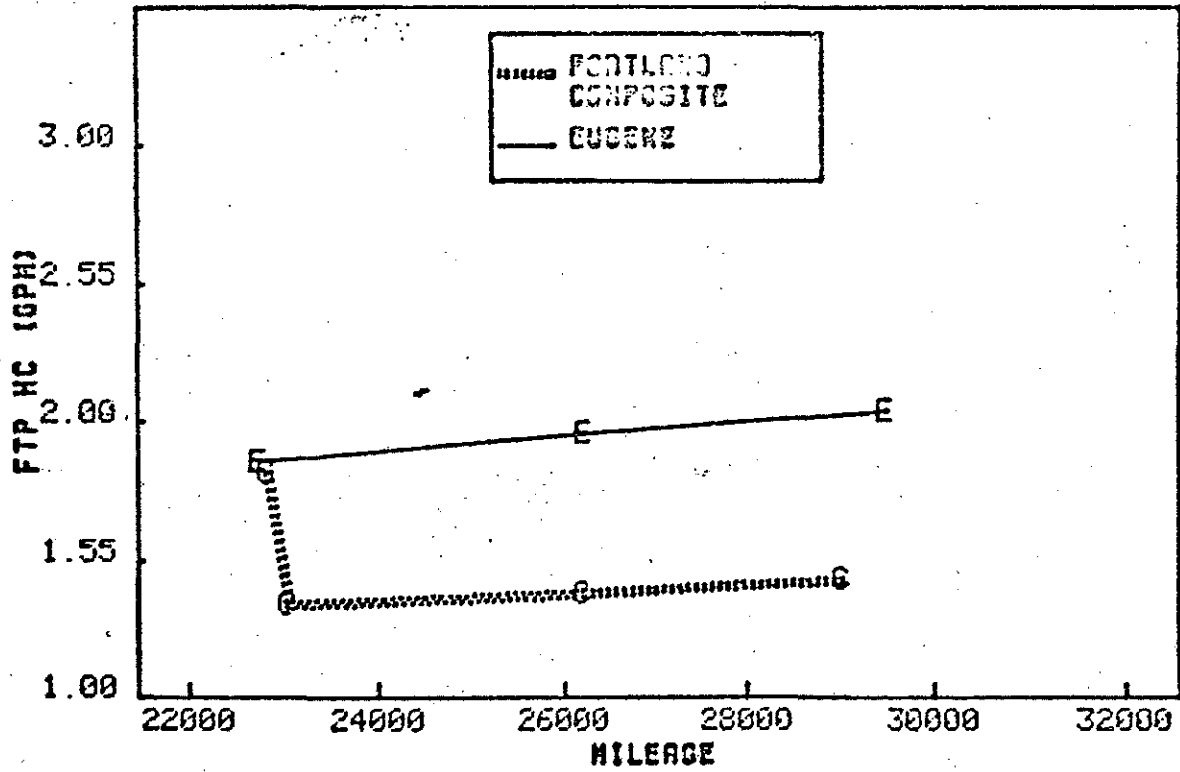


Figure 4

Ongoing Effects: 1975-77 Model Year
Portland Population Estimated Means

FTP CO VS. MILEAGE (VEHICLES WITH TWO QUARTERLIES)

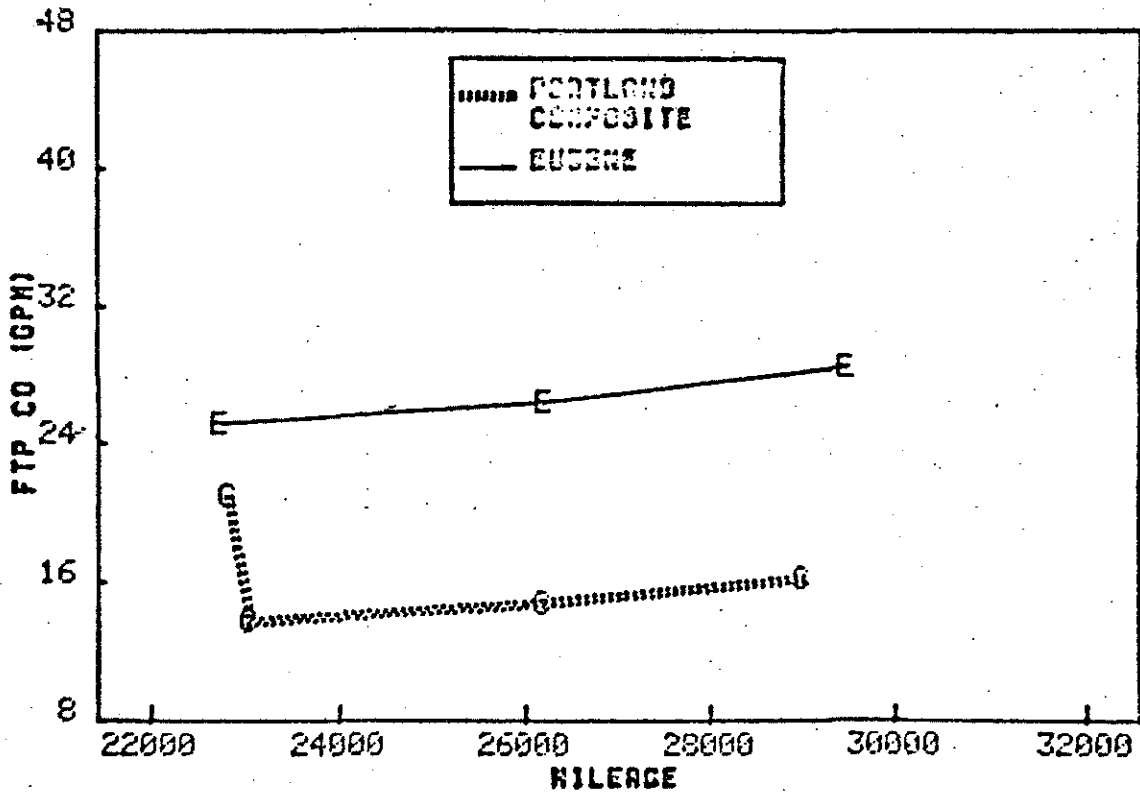


Figure 5

Ongoing Effects: 1972-74 Model Year Sample Means

FTP HC VS. MILEAGE (VEHICLES WITH TWO QUARTERLIES)

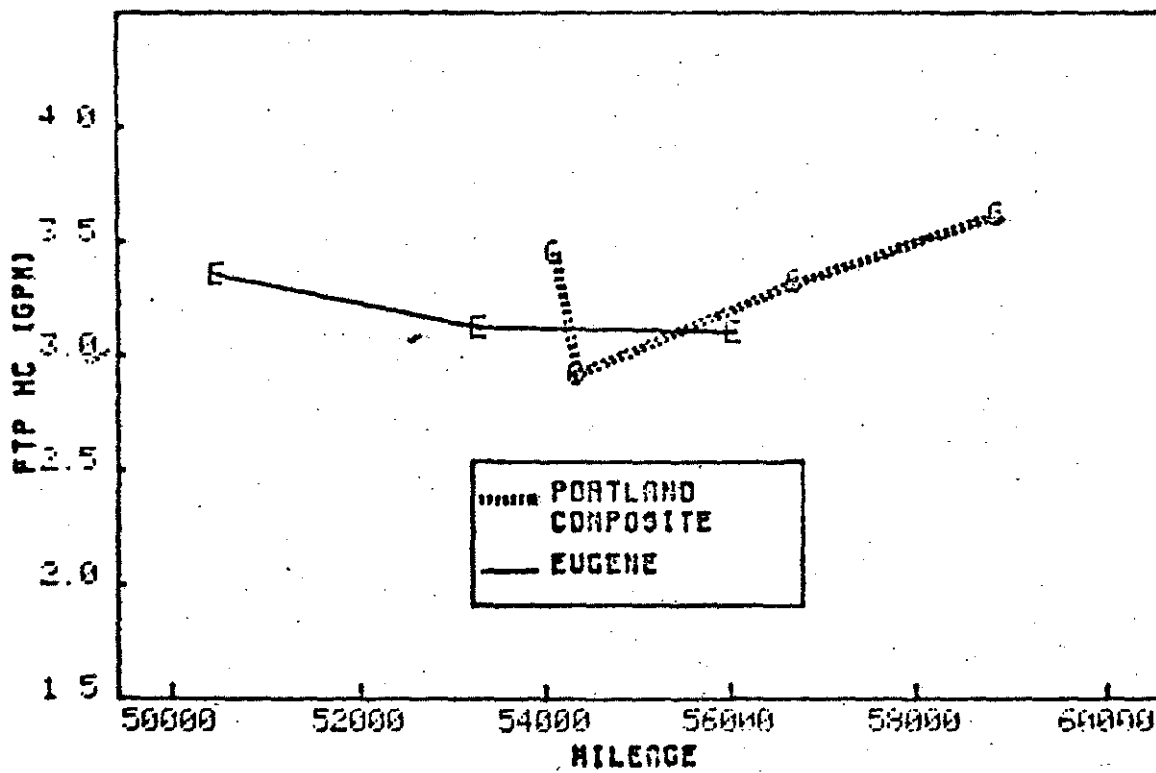
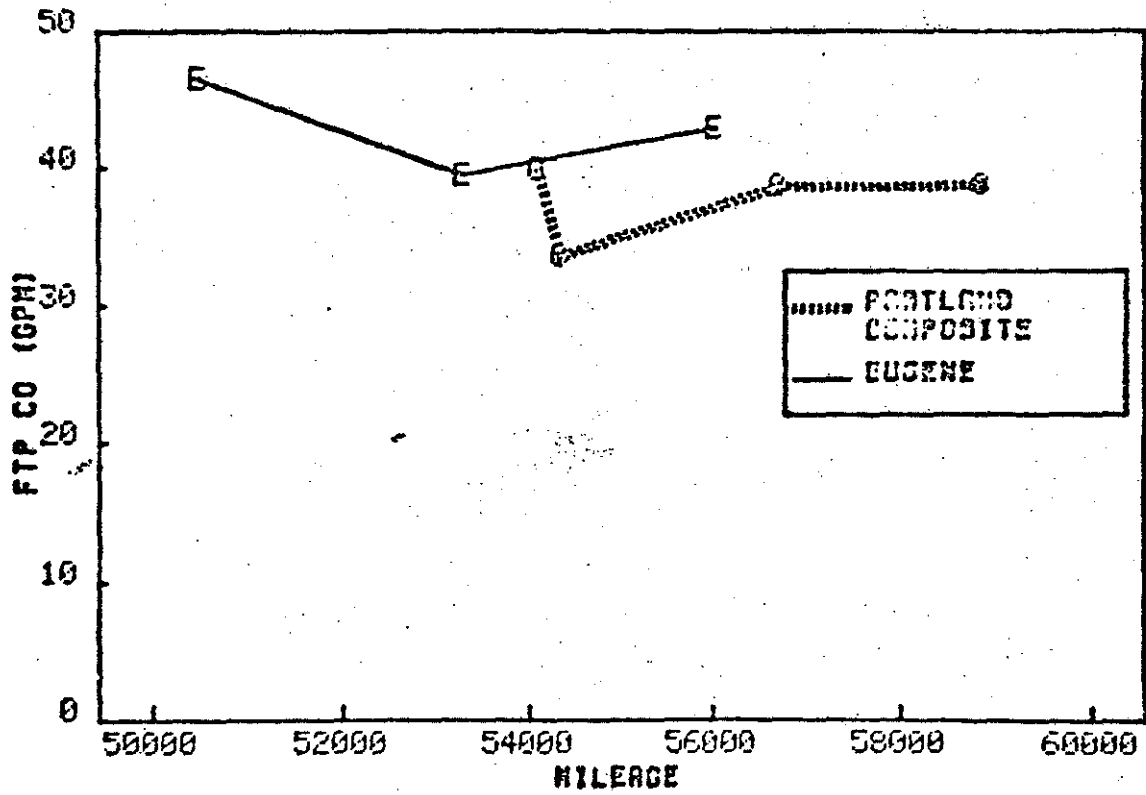


Figure 6

Ongoing Effects: 1972-74 Model Year Sample Means

FTP CO VS. MILEAGE (VEHICLES WITH TWO QUARTERLIES)



Appendix H

AIR QUALITY TRENDS

Background

Carbon monoxide and photochemical oxidants (primarily ozone) are two important contaminants which are related to motor vehicle emissions. Carbon monoxide has been and remains the most abundant air contaminant emitted in the Portland airshed. Motor vehicles are the predominant source of carbon monoxide emissions contributing 96 percent (796,300 tons per year) of the total carbon monoxide emissions in 1977 in the Portland AQMA area.

The Federal and State carbon monoxide health standard of 10 mg/m^3 - 8 hour average was exceeded 88 days in 1970 at the Burnside monitoring station in downtown Portland. The worst day recorded that year had a maximum 8 hour average of 20.8 mg/m^3 .

In contrast to carbon monoxide which usually shows health standard violations close to high emission areas, oxidants are more of a regional problem. Health standard violations are usually more wide spread and often occur away from the emission source. In 1975, a monitoring station was placed south of Oregon City at Carus which drew attention to the extent of the problem. Since that time, average hourly oxidant concentrations as high as 0.23 ppm have been measured. This is well above the present oxidant standard (0.12 ppm).

In response to The Federal Clean Air Act of 1970, the State of Oregon developed a Transportation Control Strategy (TCS) to meet the carbon monoxide and oxidant standards in the Portland area by May 1975 (later extended to May 31, 1976). These strategies were oriented towards motor vehicles as they represent the majority of the emissions that lead to these violations. The City of Portland and the Department of Environmental Quality developed such a strategy which was submitted to the Environmental Protection Agency (EPA) by the Governor on April 13, 1973 and subsequently approved.

The transportation control strategy consisted of the four major elements:

1. New Motor Vehicle Program -- Federal responsibility
2. Inspection/Maintenance (I/M) Program -- State responsibility
3. Mass Transit Improvements -- Tri-Met responsibility
4. Traffic Flow and Circulation Improvements -- Local Government responsibility

All of these elements have been implemented and their effectiveness was reported on in 1976. In 1977 Congress amended the Clean Air Act and set new timetables for meeting clean air goals. Recently, EPA has adopted a major change in the ambient health standards for oxidants.

As a result of this strategy, carbon monoxide emissions as well as the number of carbon monoxide health standard violation days have decreased in the Portland downtown area.

However, violations of the federal health standards are still occurring for both carbon monoxide and oxidants. Earlier projections had indicated that these violations would decrease more rapidly than what is now being observed. This may be due to federal delays in the new car program, the implementation of biennial rather than annual inspection/maintenance, and rapid growth in the area.

Implementation

When the federal government introduced the new car program, the aim was to reduce the individual auto pollutants by 90%. By reducing these individual sources, the aggregate emissions would then be reduced. However, even with the first pollution controls, their in-use effectiveness was not up to expectations. As Congress passed the Clean Air Act of 1970, and the State's inherited the job of its implementation, the facts available showed that the federal new car program was not adequate to achieve our nation's air quality goals within most of the US major cities.

The cars and trucks of the late 60's and early 70's were produced with designs that started on the first steps toward cleaner vehicles. Oregon proposed a vehicle emission inspection/maintenance program to reinforce the potential benefits of these new designed automobiles. Coupled with these programs, additional transportation strategies were proposed to maximize these benefits, especially for our congested urban areas. Congested urban areas, though not always limited to downtown, are often areas where carbon monoxide standards are exceeded. In Oregon, downtown Portland is the only area that has a full transportation control strategy in effect.

But the step between the numerous sources, in this case automobiles, and ambient air quality is complicated. Analyzing the trends in various areas requires the recognition of regional and local differences; primarily meteorology, sensor placement, and traffic, as well as the existence of an I/M program.

The importance of meteorology is quite apparent. For carbon monoxide, the highest concentrations are measured during the fall and winter periods. It is during these seasons that atmospheric inversions are usually strongest and most frequent. At the same time, temperatures are colder and carbon monoxide emissions are higher from their primary source, motor vehicles. Conversely, photochemical oxidants reach their highest concentrations during the summer months. Oxidants are not directly emitted by motor vehicles, but are formed in the presence of sunlight from hydrocarbons and oxides of nitrogen, the other regulated pollutants from

motor vehicles. Meteorology can affect these different pollutants causing higher concentrations (and often health standard violations) during different times of the year.

One of the analyses used in this section is a comparison of air quality trends between Portland, Salem, and Eugene. This gives one way of qualitatively evaluating inspection/maintenance and the total transportation control strategy. These cities are usually under the influence of the same large-scale meteorological patterns, though differences also exist that complicate comparisons.

A comparison of one local difference is shown in Figure 1. Average wind speeds, Figure 1, are different for each city. High speeds, however, tend to occur at the same time in all three cities. The same is true of low speeds. There would also tend to be local differences in other factors such as inversion heights, wind direction, atmospheric stability, and precipitation. Variations in regional traffic are shown in Figure 2. In this figure, areawide traffic trends indicate increases in all three cities. This is an important consideration when comparing air quality trends. But again, local differences complicate comparisons. Receptor location, that is the location where the air quality data is gathered, can also affect the absolute values of the air quality data. Because of these local variations, qualitative as well as quantitative analysis developed by modeling techniques, is advisable. Additionally trends over long periods of time are more important than short-term variations.

Carbon Monoxide Trends

Carbon monoxide health standard violations are usually the result of high traffic volumes and congested traffic combined with poor meteorology. The central business district (CBD) is a major area of concern in Portland, as are CBD's in any other city.

Figure 3 shows the effectiveness of the Portland Transportation Control Strategy (TCS) in reducing carbon monoxide emissions near the Portland CAMS (Continuous Air Monitoring Station) which is on West Burnside in the CBD. Inspection/maintenance is an important element of this strategy in reducing emissions. In comparing this emission reduction curve with the measured carbon monoxide health standard violations in Figure 4, similar variations may be noted in both curves. Carbon monoxide air quality has improved substantially since 1970 in line with reduced emissions.

Another way of evaluating TCS including inspection/maintenance benefits is to compare long term carbon monoxide concentrations at Portland with cities that do not have inspection/maintenance. Figures 5A through 5C compare long term carbon monoxide trends at the two Portland monitoring stations with those at Salem. These figures show that the long term carbon monoxide concentrations, since 1974, have increased in Salem. During the same period the average carbon monoxide concentrations at two Portland

FIGURE 1: A comparison of average wind speeds at the Portland, Salem, and Eugene airports by year.

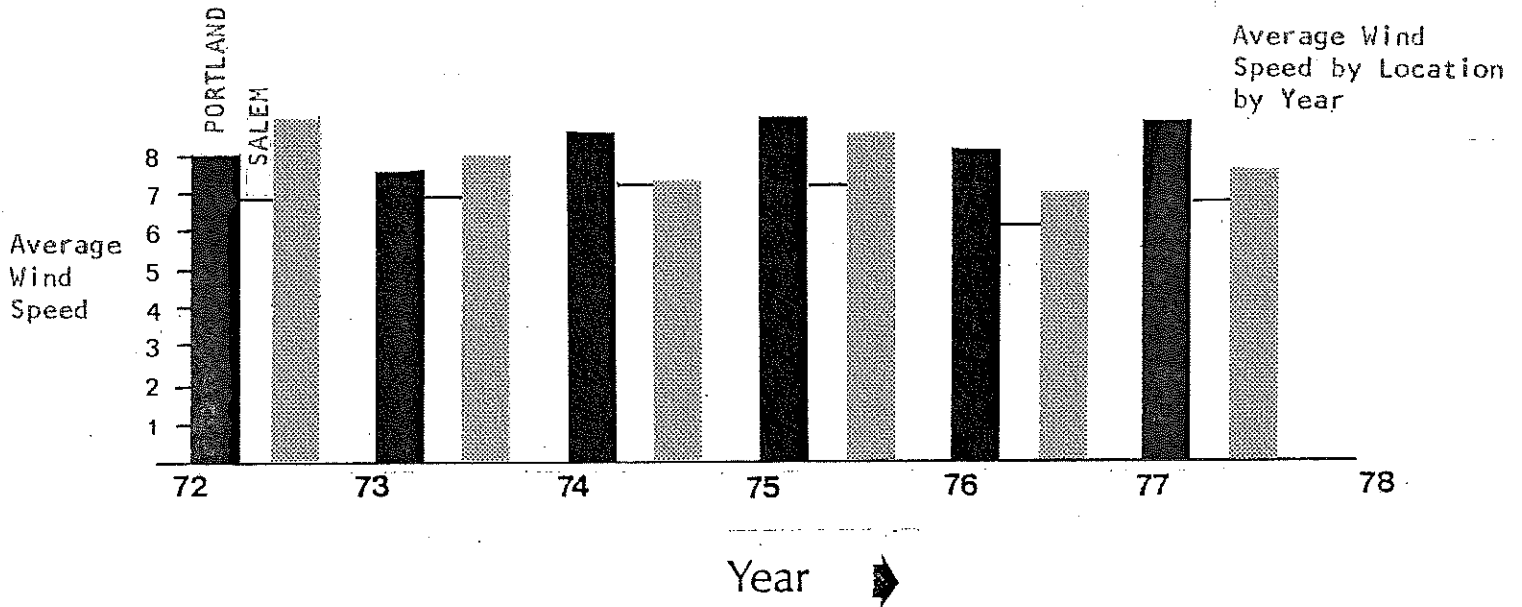
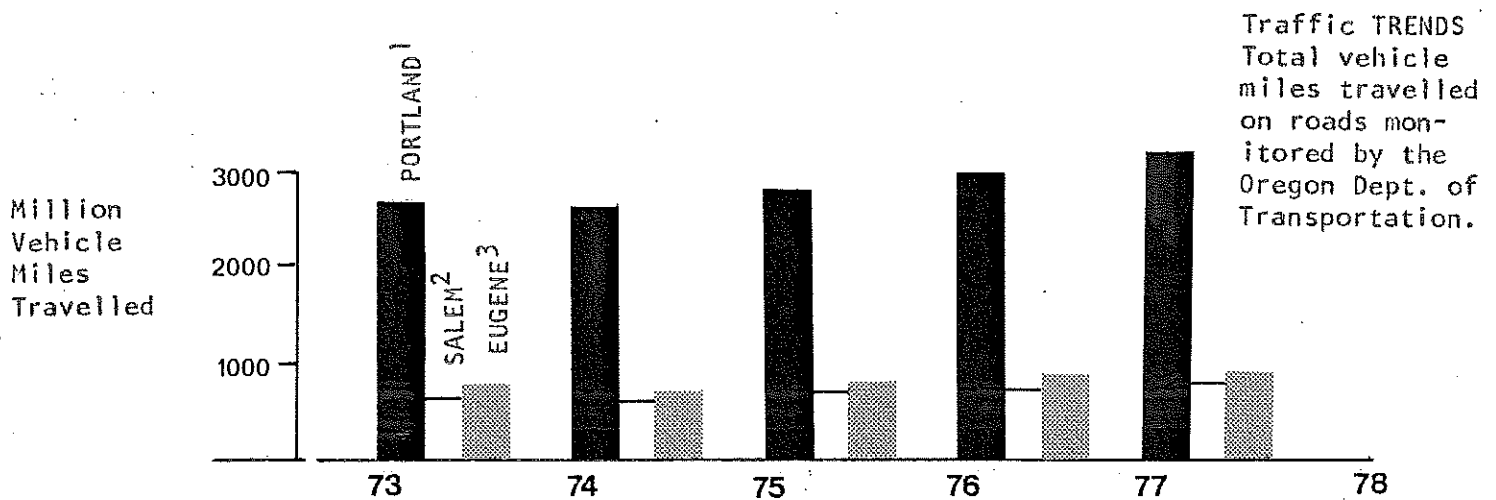


FIGURE 2: A comparison of regional traffic trends in Portland, Salem, and Eugene. After a traffic volume decrease in 1974, traffic has been on a steady increase in three areas.



¹Total Traffic in Multnomah, Clackamas, and Washington Counties.

²Marion County

³Lane County

Year →

FIGURE 3

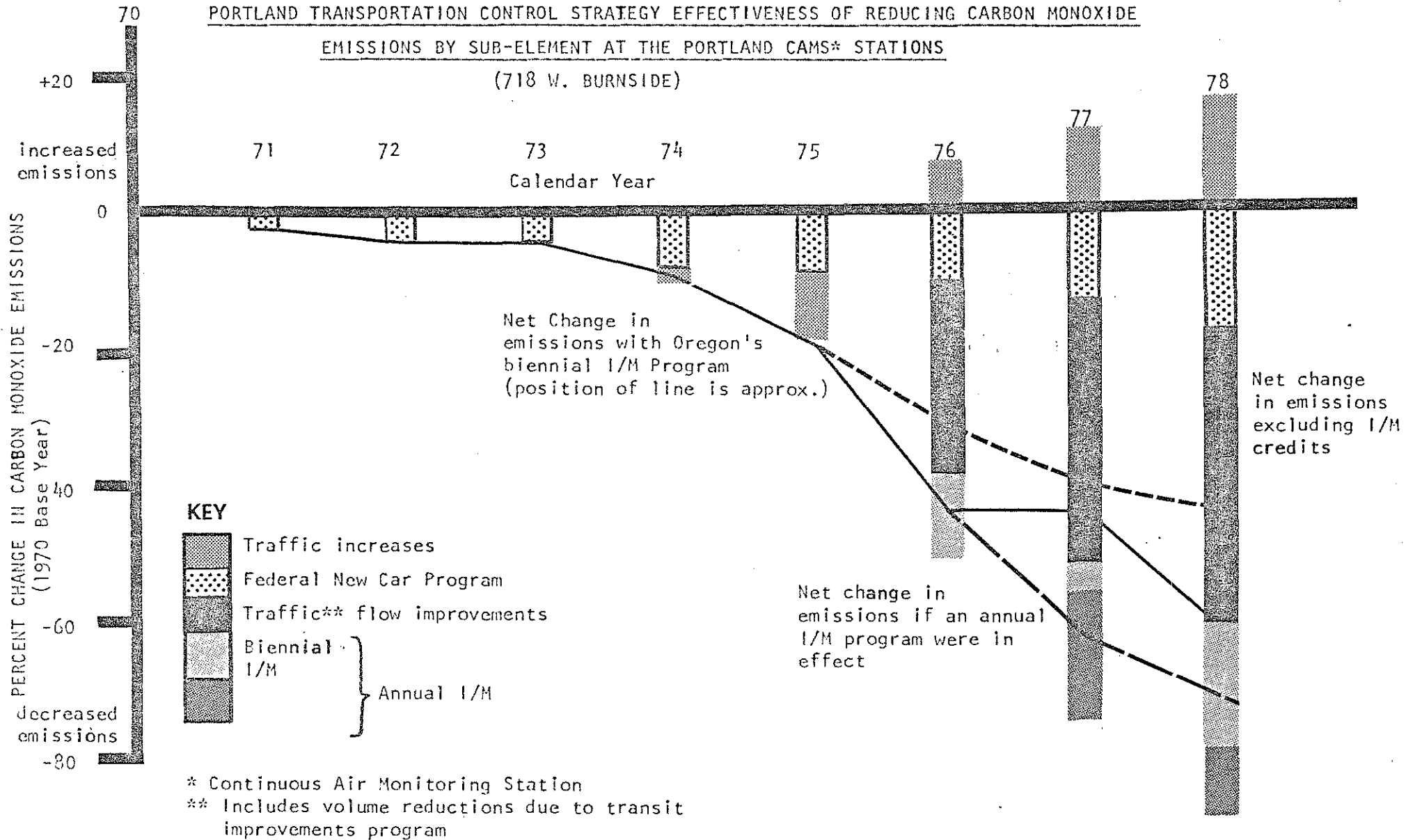


FIGURE 4

A COMPARISON OF CARBON MONOXIDE EMISSION REDUCTIONS
AND DAYS OF VIOLATION AT THE PORTLAND CAMS STATION

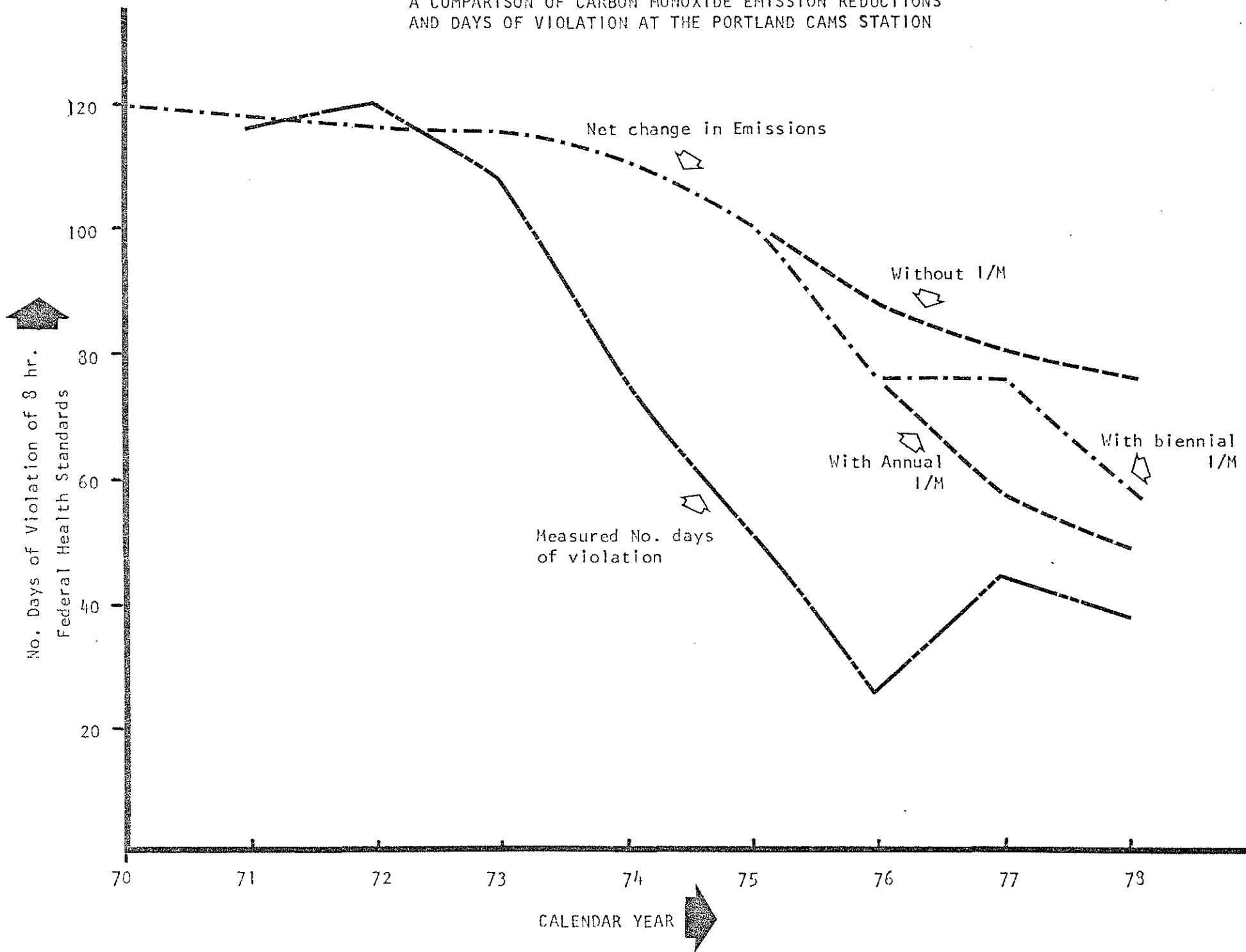


FIGURE 5A

PORTLAND CAMS
(718 W. Burnside)

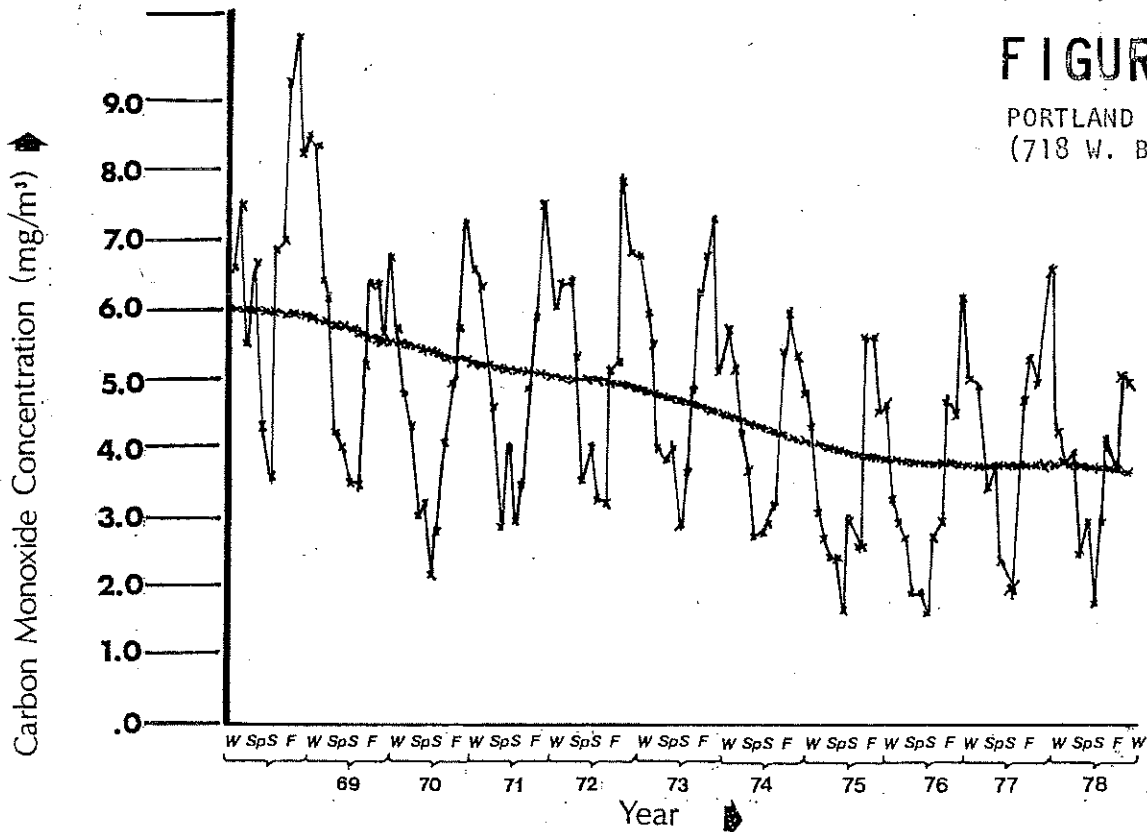


FIGURE 5: A comparison of long term ambient Carbon Monoxide Concentrations at Portland and Salem. While Salem (Fig. 5C) shows a general increasing trend in concentrations since 1975, Portland Receptor Concentrations (Figs. 5A and 5B) remain relatively constant.

x = Monthly average
* = Long term trend

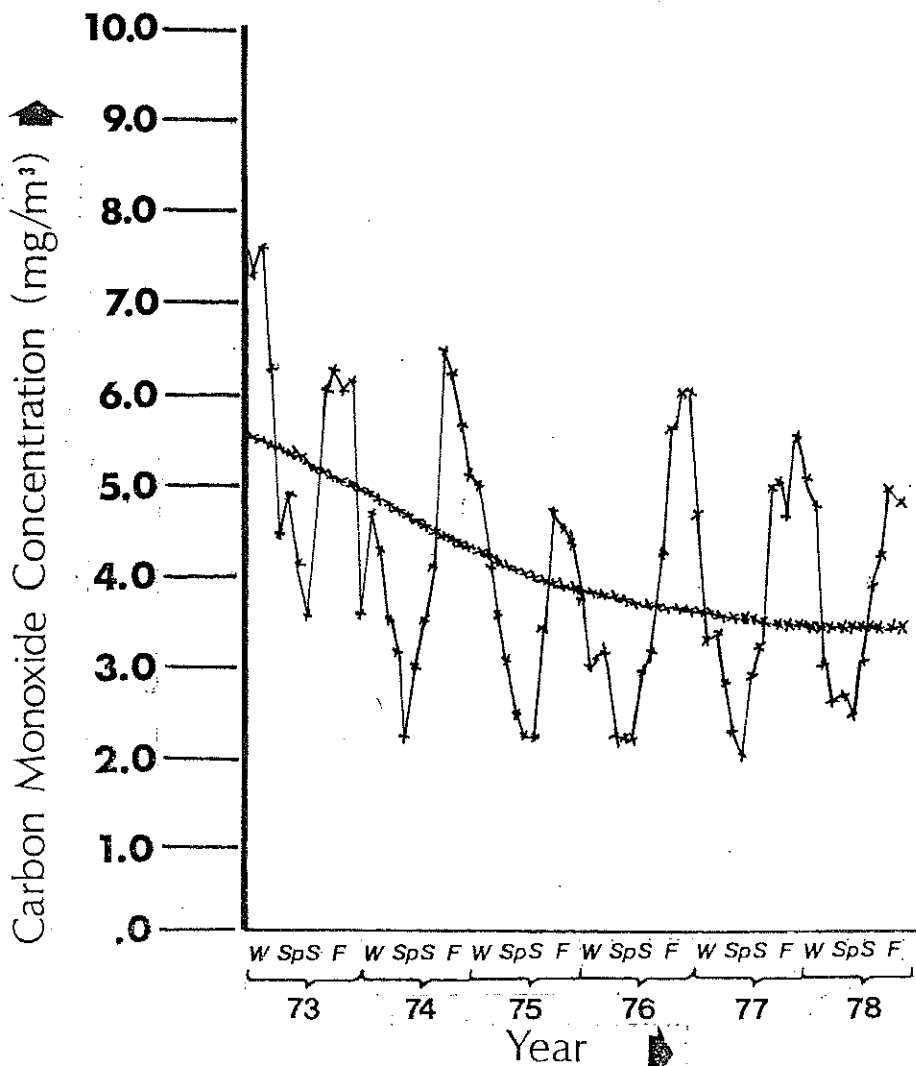
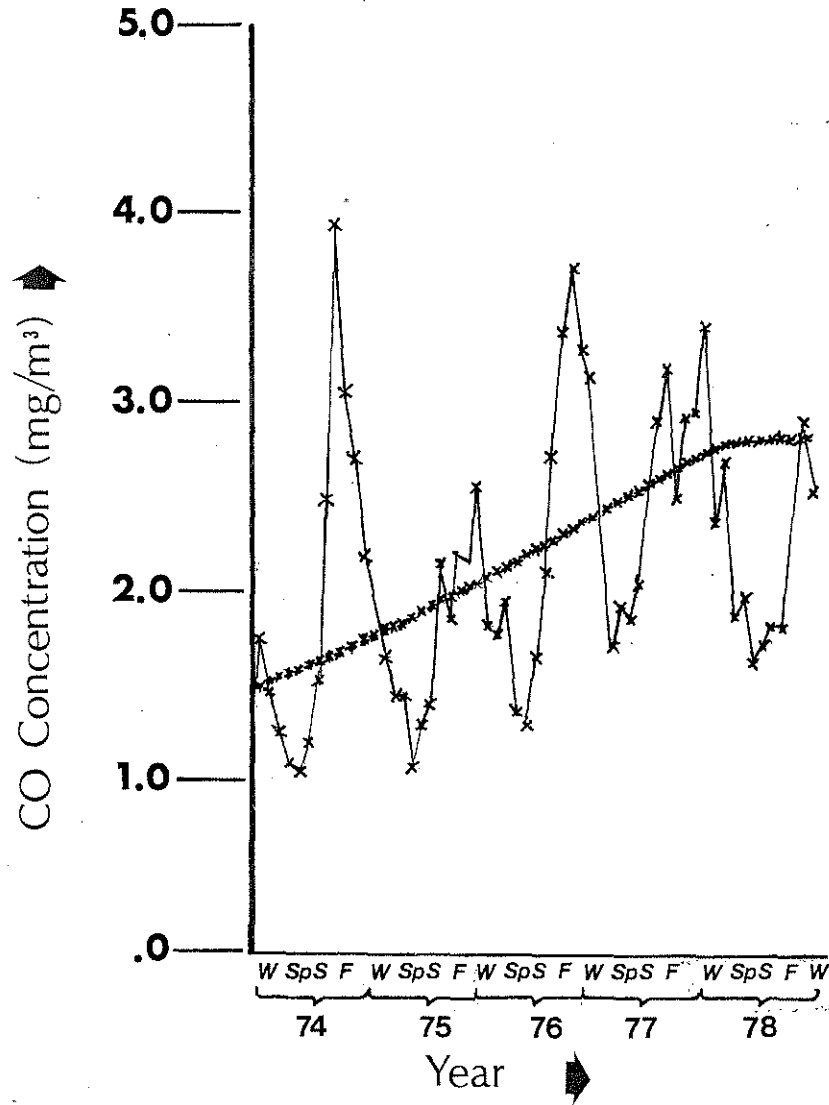


FIGURE 5B

PORTLAND HOLLYWOOD DIST.
(4112 N.E. Sandy Blvd.)

FIGURE 5C

SALEM (Center and Liberty)



area monitoring stations have remained relatively constant. During this time regional traffic has increased in both cities and Portland's Transportation Control Strategy, including I/M, has been implemented.

As inspection/maintenance as well as other parts of TCS began in Portland during 1975, the programs have been instrumental in preventing increased average carbon monoxide concentrations. At the same time, violations of the carbon monoxide health standard have decreased. Recent comparisons of data from Seattle, where a TCS without I/M was implemented, also supports this finding.

Future carbon monoxide air quality projections for Portland CAMS are shown in figure 6. This figure is based on EPA motor vehicle emission factor data and average traffic projections in the Portland central business district. Three projections are shown, one for no inspection/maintenance program, one for an annual program, and one for Portland's biennial program. Of the three curves, the one for Portland's biennial program is the least accurate. This is because meaningful emissions benefit data is not available for the full two-year period following inspection/maintenance. With inspection/maintenance, compliance will be achieved at Portland CAMS substantially sooner than it would with no program. The latest air quality analysis shows that some streets in the Portland area may be in violation of federal carbon monoxide ambient health standards through 1987. This is in spite of benefits from TCS including inspection/maintenance. But without inspection/maintenance, these areas would be much larger.

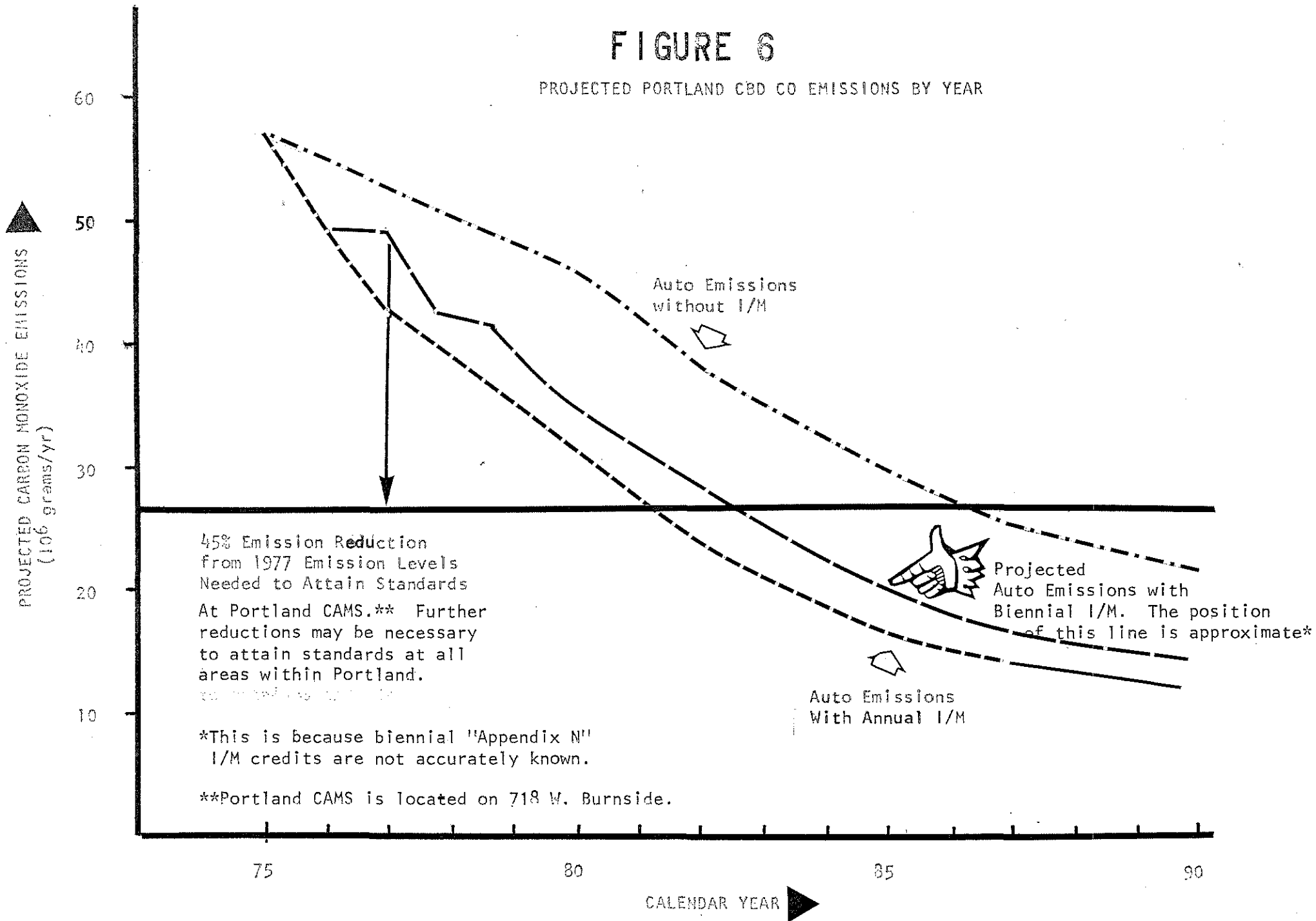
The 1977 amendments to the Clean Air Act require the states to be in compliance with the federal carbon monoxide health standard by 1983. However, these amendments provide for a possible extension of this date to as late as December 31, 1987. However, states must demonstrate that compliance is not possible before December 31, 1982, despite the implementation of all reasonably available measures (including inspection/maintenance).

Hydrocarbons and Oxidant Formation

Photochemical oxidants result primarily from a relatively slow series of chemical reactions between oxidant precursor compounds in the presence of sunlight. The precursors are organic compounds (eg. hydrocarbons) and nitrogen oxides, primarily emitted from motor vehicles and stationary sources. Recent studies have shown that oxidants and their precursor compounds have been transported anywhere from 5 to greater than 50 miles downwind of urban areas. Department data indicates that maximum oxidant concentrations generally occur anywhere from 13 to 30 miles from downtown Portland. It is believed the major precursor emission sources causing oxidant violations south of the City of Portland are motor vehicles and stationary sources, eg. bulk fuel storage and transfer operations, located in the greater Portland Metropolitan area including the urbanized Vancouver, Washington area.

FIGURE 6

PROJECTED PORTLAND CBD CO EMISSIONS BY YEAR



The former Federal oxidant health standard of 160 ug/m^3 , 1 hour maximum was exceeded 7 times in 1970 within downtown Portland. The worst day that year reached a level of 294 ug/m^3 . This standard was exceeded on 14 days in 1971. However, data collected at the Carus monitoring station (about 7 miles south of Oregon City) which began operation in 1975, indicates that the oxidant problem is greater than anticipated. In 1977, there were 42 violations of that standard at the Carus monitoring station.

The Environmental Protection Agency (EPA) has recently adopted a major change in the ambient health standards for oxidants. This health standard has been relaxed from 0.08 ppm (which equals 160 ug/m^3) to 0.12 ppm (235 ug/m^3) measured as ozone, the most abundant product of photochemical oxidation. These new oxidant standards will still show the area around Portland (primarily Milwaukie and Carus) as being in noncompliance. Currently, Eugene is the only metropolitan area within the state that will change from a noncompliance to a compliance status because of the new health standards.

The reduction of hydrocarbon emissions is a major concern for reducing oxidant violation days. In Portland, these emissions are being reduced from two strategies. Motor vehicle emissions are being regulated by the Portland Transportation Control Strategy. However, oxidants are a regional problem. Traffic flow improvements which mainly concern the CBD are not a major contributor to area wide emission reductions. Thus the main portions of the Transportation Control Strategy for reducing these emissions are inspection/maintenance and the federal new car program. Another control strategy involves hydrocarbon evaporative emissions. These emissions result from sources such as petroleum transportation and marketing, from surface coating (painting), dry cleaning, printing, and other miscellaneous operations. A rule was adopted by the Environmental Quality Commission during 1978 to reduce future emissions from these sources. A summary of the impact of these two control strategies is shown in Figure 7.

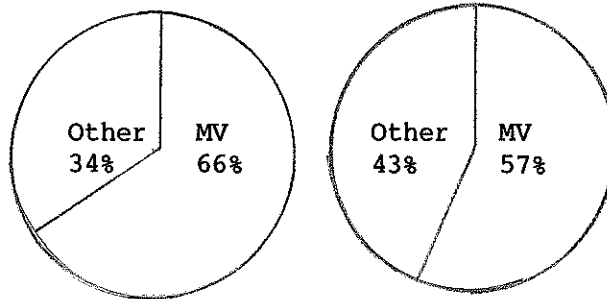
Figure 7

Hydrocarbon Emissions Inventory

Portland-Vancouver Interstate Air Quality Maintenance Area

Estimated Hydrocarbon Emissions (tons/year)

<u>Source</u>	<u>1977</u>	<u>1982</u>	
Motor Vehicles	72,403	38,569*	
Other Transportation	3,534	3,978	
Petroleum Storage & Marketing	13,175	6,660**	
Surface Coating	10,348	8,520**	
Industrial Processes	632	701	
Miscellaneous	9,118	9,325**	
	<u>109,270</u>	<u>67,753</u>	38% expected decrease 1977-1982



* Includes reductions from biennial vehicle I/M as well as from the Federal New Car Program.

** Includes reductions expected from the Volatile Organic Compound rules.

This figure shows that a considerable reduction is expected in these emissions. However, as motor vehicle emissions are reduced, the non-transportation related emissions become more important.

Long term hydrocarbon ambient trends have shown increases during the period 1973 to 1978 at the two hydrocarbon monitoring stations within the Willamette Valley, Portland and Eugene. The following table illustrates ambient hydrocarbon trends in Portland and Eugene.

Ambient Hydrocarbon Concentrations

In Portland and Eugene

Annual Geometric Mean Hydrocarbon Concentrations

<u>Station</u>	<u>1973</u>	<u>1977</u>	<u>Percent Change</u>
Portland	1179 ug/m ³	1456 ug/m ³	+ 23%
Eugene	658	1395	+ 112%

Portland and Eugene have roughly comparable hydrocarbon emissions inventories. While the magnitude of emissions is different, the contribution from motor vehicles is about the same. Both cities have transportation control strategies; however, Portland currently has a more comprehensive program than Eugene. Also, inspection/maintenance is not a part of the transportation control strategy in Eugene. During 1973 to 1977, Eugene hydrocarbon ambient concentrations have grown at a faster rate than in Portland.

With the new federal health standards for oxidants, Portland will still be in non-attainment status. This is because violations of the new standard occur downwind of the Portland area. These are usually measured at the Carus monitoring site. Oxidants are formed most rapidly under sunshine and warm temperatures. In Portland, this usually results during summer north wind conditions. This explains why oxidant health standard violations usually occur to the south of town.

The dependence of oxidant formation on temperature is illustrated by comparing Figure 8 with Figure 9. In Figure 8, average cooling degree days by year are shown. These are a measure of annual air conditioning requirements. Figure 9 compares the number of days per year where ozone concentrations exceeded 160 micrograms per cubic meter (the former federal health standard). A comparison of these two figures show that temperature is an important variable to consider when reviewing oxidant data. For example, the year 1976 was unusually cool and reflects the lower ozone concentrations observed.

In Milwaukie and downtown Portland, the number of days exceeding the former health standard has changed little since I/M began in the Portland area (1975). The limited data at the Carus monitoring site resembles trends being observed at Milwaukie.

Current estimates using the EKMA (Empirical Kinetic Model Analysis) Model show that a 30% decrease in hydrocarbon emissions from 1977 levels is needed to attain oxidant standards at the Carus site. This is based on the new federal oxidant health standard of 0.12 ppm ozone.

FIGURE 8: Average WILLAMETTE VALLEY Cooling Days (Base 65 degrees)

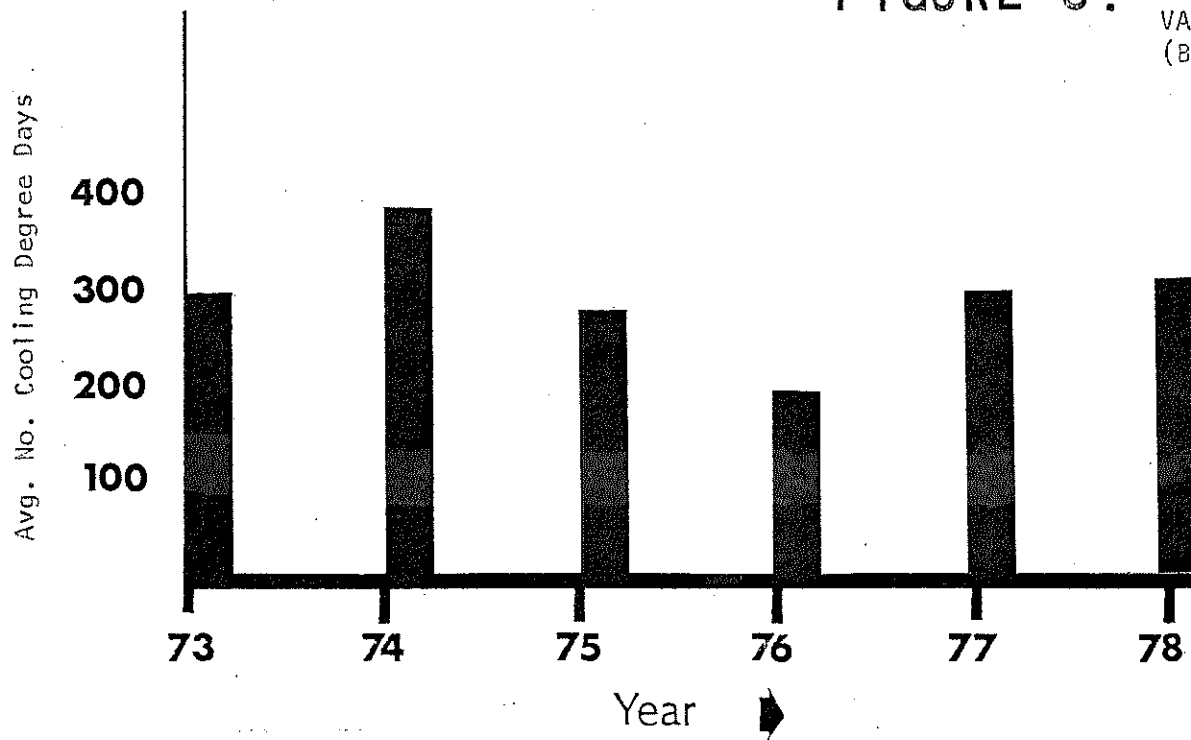


FIGURE 9A:

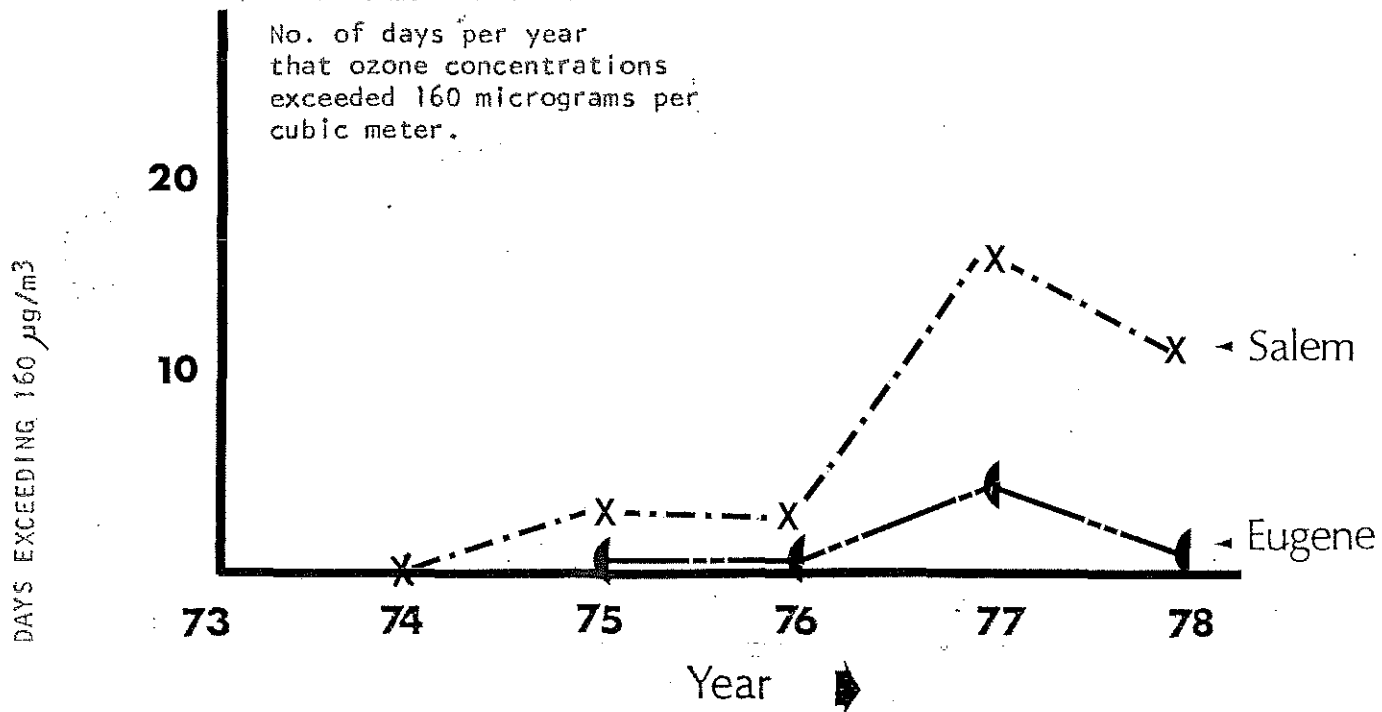
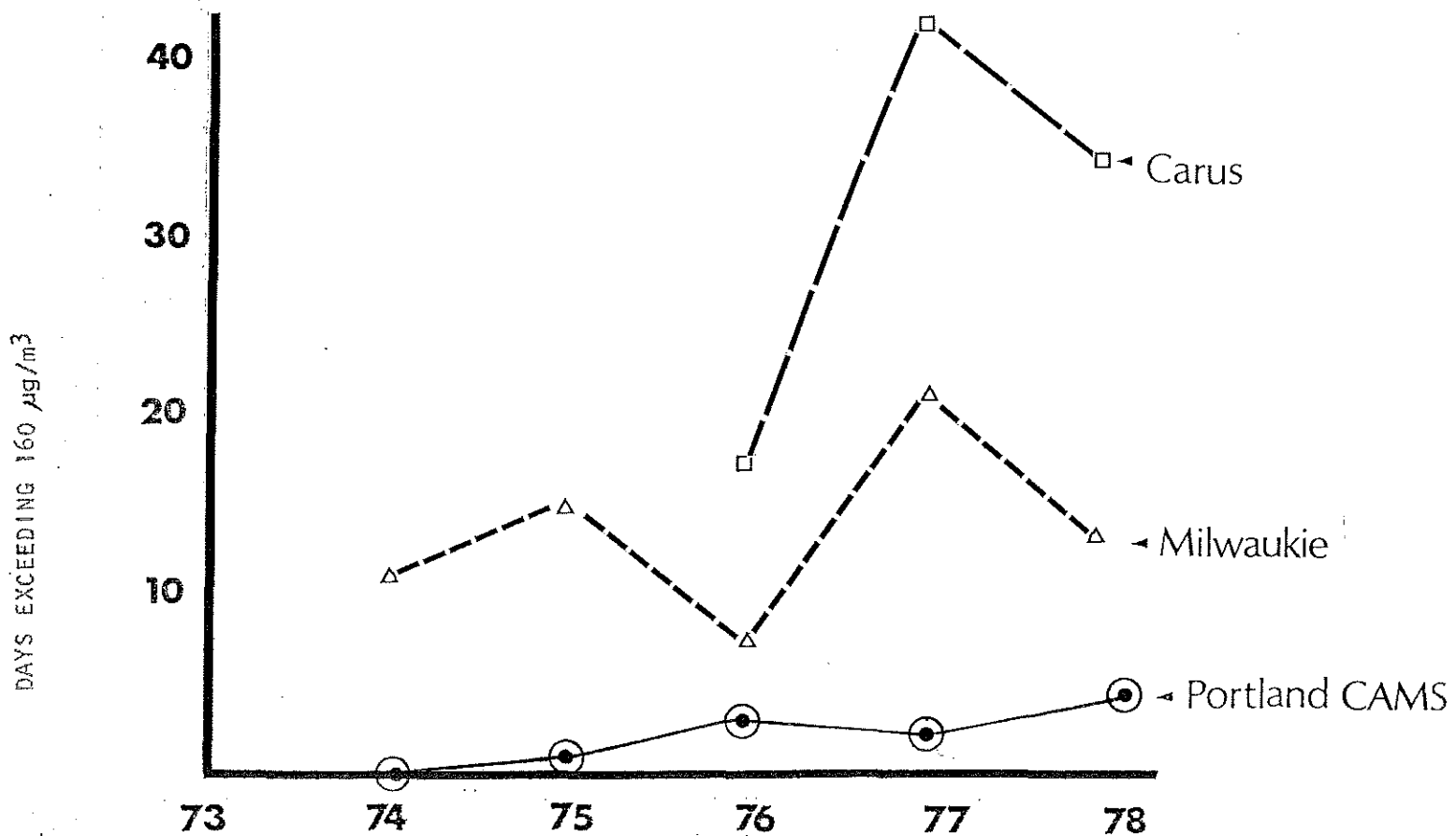


FIGURE 9B



With the hydrocarbon emissions reductions expected due to inspection/maintenance, the Federal new car program, and the volatile organic compound rules, a 38% decrease is expected to be achieved by the end of 1982.

Although this model projects compliance by 1983, there are complicating variables which may underestimate this compliance date. Besides traffic trends, long-term emission characteristics of newer cars are not well known. There is some indication that these emissions may be higher than expected. This problem is addressed in Appendices D and F. However, without inspection/maintenance, compliance with the new national health standards would not be possible.

Summary

The 1977 Amendments to the Clean Air Act require compliance with the federal health standards for both carbon monoxide and oxidants by December 31, 1982. They also provide for a possible extension to as late as December 31, 1987. However, any extension requires the states to demonstrate that compliance is not possible before December 31, 1982 despite the implementation of all reasonably available control measures (including inspection/maintenance). The Federal government has recently relaxed their health standards for the maximum hourly ambient oxidant concentrations. Even with this change, (from 0.08 ppm to 0.12 ppm oxidant concentration measured as ozone,) Portland will still be in violation of oxidant standards.

Carbon monoxide and photochemical oxidants (measured as ozone) are the two pollutants which are primarily related to motor vehicle emissions. The Portland Transportation Control Strategy, of which inspection/maintenance is an important element, has been instrumental in reducing carbon monoxide health standard violation days and in preventing increased oxidant health standard violation days. For carbon monoxide, a close relationship was shown between motor vehicle emission reductions and the number of violation days of the federal health standards.

A current air quality analysis of the relationship between carbon monoxide emissions and ambient concentrations indicates that a 45% emission reduction from 1977 levels is required to meet the Federal carbon monoxide health standard at the Portland CAMS. However, the latest air quality analysis is showing that a larger emission reduction will be needed to meet these standards in all parts of the metropolitan area. Even with TCS (including the present inspection/maintenance program) it appears that some streets in the area will still be in violation of carbon monoxide ambient standards in 1987. Without inspection/maintenance, this would be a much larger problem.

The main thrust of the control strategy to reduce oxidant violations involves reducing hydrocarbon emissions. These are an important precursor in oxidant formation. Between 1977 and 1982, approximately a 38% decrease in hydrocarbon emissions is expected from inspection/maintenance, the federal new car program and the new volatile organic compound rules. This is greater than the EKMA model prediction of the hydrocarbon emission reduction that is necessary to attain compliance with the new federal oxidant health standard. Although variables exist which could cause oxidant compliance to be achieved sometime after 1982, this compliance would not be possible without an inspection/maintenance program.

APPENDIX I

Population Growth and Traffic Pattern Trends

In 1974, the Oregon Legislature established the boundaries for the vehicle inspection program. The legislatively set program area is the boundaries, existing on March 13, 1974, of the Metropolitan Service District (MSD), formed under ORS Chapter 268 and including the City of Portland. Vehicles registered within the MSD are subject to DEQ's clean air test.

The Portland Metropolitan Area has grown both in population and in traffic volume. This section reviews trends in traffic patterns as they relate to the inspection program coverage.

Population

The MSD covers portions of Multnomah, Washington, and Clackamas counties. While population information is available for the individual counties, it is not readily available for the MSD itself. Probably the best indicator of working population, including Clark County, Washington residents within the Metropolitan area, is information from Oregon Department of Revenue, income tax filings by county. This is summarized in Table 1.

Table 1

Oregon State Income Tax Filings

<u>County</u>	<u>1969 Returns</u>	<u>1974 Returns</u>	<u>1976 Returns</u>	<u>(1969-76) Growth/Yr.</u>
Multnomah	223,257 (65%)	232,400 (58%)	229,500 (55%)	0.4%
Washington	52,511 (16%)	74,600 (19%)	81,700 (20%)	7.9%
Clackamas	55,871 (16%)	75,800 (19%)	81,500 (20%)	6.5%
Clark Co., Washington	<u>12,804 (4%)</u>	<u>17,900 (5%)</u>	<u>19,600 (5%)</u>	7.6%
Total	344,450	400,700	412,300	

This table shows that the area's growth has been occurring in the three counties which surround Multnomah County. Further, the growth has been at about the same rate in these surrounding counties, with Washington County showing a small lead. Multnomah County, on the other hand, has shown little growth, and most recently a slight decline. As compared to the greater Metropolitan area, Multnomah County population has decreased from 65% to 55% of the total population. Thus, population is increasing within the area but not evenly throughout the area. The growth is occurring in the suburbs as opposed to the central Metropolitan area.

Vehicle Registration

Table 2 shows passenger car registration figures for the ten Oregon counties with highest passenger vehicle registrations. As expected, the counties associated with the Portland Metropolitan Area are at the top

of the list. Lane County is also high on the list, but includes the State's second largest metropolitan area.

In general, growths have occurred in both vehicle registrations and in population with the exception of Multnomah County. However, vehicle registrations have been growing at a rate of over twice that of population growths. Again, the highest growth rates (both in population and vehicle registrations) are occurring in Clackamas and Washington Counties. On the other hand, Multnomah County, the State's most populous, shows no population growth but still shows some growth in vehicle registrations.

Table 2

<u>County</u>	<u>Estimated 1978*</u> <u>Passenger Car</u> <u>Registrations</u>	<u>Growth</u> <u>since</u> <u>1970</u>	<u>Estimated</u> <u>1978**</u> <u>Population</u>	<u>Growth</u> <u>since</u> <u>1970</u>
1. Multnomah (Portland)	393,315	19%	549,000	-1%
2. Lane (Eugene)	207,981	62%	262,300	+23%
3. Clackamas (Portland/ Oregon City)	179,339	100%	220,000	+32%
4. Washington (Portland/ Beaverton)	160,733	83%	215,800	+36%
5. Marion (Salem)	147,948	64%	187,300	+24%
6. Jackson (Medford)	106,233	79%	124,500	+32%
7. Douglas (Roseburg)	74,465	68%	85,700	+19%
8. Linn (Albany)	69,859	61%	88,300	+23%
9. Klamath (Klamath Falls)	50,729	56%	58,700	+17%
10. Coos (Coos Bay)	50,413	49%	63,200	+12%

*Data from the Oregon Motor Vehicles Division.

**Data from Portland State University (Center for Population Research and Census).

Morning Traffic Trends

Figure 1 shows the average morning traffic into and out of Portland for June 1978. Besides showing total vehicle counts, it shows the growth in traffic counts which has occurred since 1970, and the number of Oregon vs. out-of-state vehicles.

Traffic counts show substantial increases over the eight year period at almost all locations. The largest increases have occurred in the northern part of Interstate 5 and at the Vista Ridge Tunnel (Highway 26). A rather interesting situation is that traffic out-of-town during the morning rush hour at these two locations has increased substantially more than traffic into town. At the Interstate Bridge, morning commuter traffic out-of-town is now almost as great as it is into town. This indicates a changing pattern with Oregon workers now being attracted into Washington. Also, shopping malls exist on both sides of the Interstate Bridge bringing shoppers both ways.

The growth of the Tualatin Valley area has resulted in substantial increases (averaging 112%) in traffic through the Vista Ridge Tunnel. Although traffic counts show a definite towards-town pattern, traffic counts out-of-town have increased by a whopping 138%.

The Banfield Freeway, with the highest traffic counts of the area towards town, shows a relatively small growth rate. This is because peak traffic volumes have approached the freeway's capacity.

Traffic across the Morrison bridge is the only regular monitoring location which shows a decrease (11-14%) over the eight-year period. Traffic Control Strategies (TCS) have been in effect in the downtown area and this may be an indicator of some success for that program.

As expected, the largest amount of out-of-state traffic comes in over the Interstate bridge. Some 8500 out-of-state vehicles come in over the bridge during that morning period, and only 500 continue on the I-5 freeway south of town. The 8000 net out-of-state vehicles, while representing a good share of the freeway traffic, only represents about 1% of the three-county vehicle population.

Cross Boundary Traffic

A. Multnomah County

Figure 2 shows 1978 average daily traffic on major roads across the Multnomah County boundaries. Although traffic counts have increased since 1970, the relative share of traffic coming in from abutting counties has remained about the same. The largest number of vehicles (29% each) enter from Clackamas and Washington counties. This is closely followed by Clark County, Washington which contributes 25% of the cross-boundary traffic.

However, not all of the Clark County traffic comes from out-of-state, nor does it all represent commuter traffic from Clark County. It should be noted that the interstate bridge traffic also includes Oregon vehicles commuting into Washington and other through traffic on the interstate system. Columbia and Hood River counties each contribute 3% of the boundary crossing traffic.

B. Current Vehicle Inspection Boundaries

The current vehicle inspection boundaries were legislatively established as the Metropolitan Service District (MSD) boundaries as existing on March 13, 1974. This area is shown in figure 3. Figure 3 also shows the 1978 average daily traffic (ADT) across those boundaries. During 1977, there was an average of 207,300 ADT on the main roads in and out of the MSD. Assuming a worst case condition that all of this traffic is registered outside the MSD, then 14% of the passenger vehicles operating within the MSD would be from outside the vehicle inspection area.

Of these vehicles from outside the area, most travel on I-5. On the north, traffic through Clark County, Washington accounts for almost half of the cross traffic. On the south, I-5 accounts for an additional 23%. Clackamas and Washington counties each contribute about 10% while Columbia and Hood River counties account for the remainder.

The Department did an additional study of Oregon license plates observed in parking lots within the Portland area to gauge out of area impact. This study showed that about 12% of the Oregon vehicles were from outside the area.

In comparing average traffic across MSD boundaries vs. Multnomah county boundaries (figures 3 and 2), it can be seen that there is considerably less traffic through the larger MSD area. Traffic counts crossing Multnomah County lines are about twice that crossing MSD boundaries.

C. New vs. Old MSD Boundaries

Recently the MSD boundaries were reorganized to an area which includes a smaller area of Washington County and a larger area of Clackamas County. This area is shown in figure 4.

Should the Legislature adopt the new MSD boundaries for the inspection program area, there would be a small net loss in program coverage. It is projected that there would be a net increase of some 8400 ADT (or 4%) of the total cross-traffic through the area. The majority of this increased cross-traffic results from a smaller area of Washington County being included. On the positive side, the new boundaries would give increased coverage on the southern and eastern portions. These areas include several new suburban communities.

Summary

Both population and traffic counts have increased substantially since 1970. However, traffic counts have grown at a rate at least twice the rate of population growth. Further, this growth is mainly occurring in the suburban areas. The one area where traffic has decreased is in the central business district (as measured by traffic over the Morrison bridge).

Currently, it is estimated that on the order of 14% of the vehicles operating within the MSD area come from outside the area. Should the new MSD boundaries (outlined in ORS Chapter 665) be adopted for inspection boundaries, it is estimated that there would be a slight decrease in program coverage. This would result mainly from smaller areas of Washington County and northwest Multnomah County being covered. Growth has been occurring throughout the suburban area, both for living and working. Strategies that are only aimed at downtown will not address the needs of the expanding areas.

FIGURE 1

FLOW OF VEHICLES ON THE PORTLAND FREEWAY SYSTEM FROM 6 AM - 11 AM JUNE, 1978

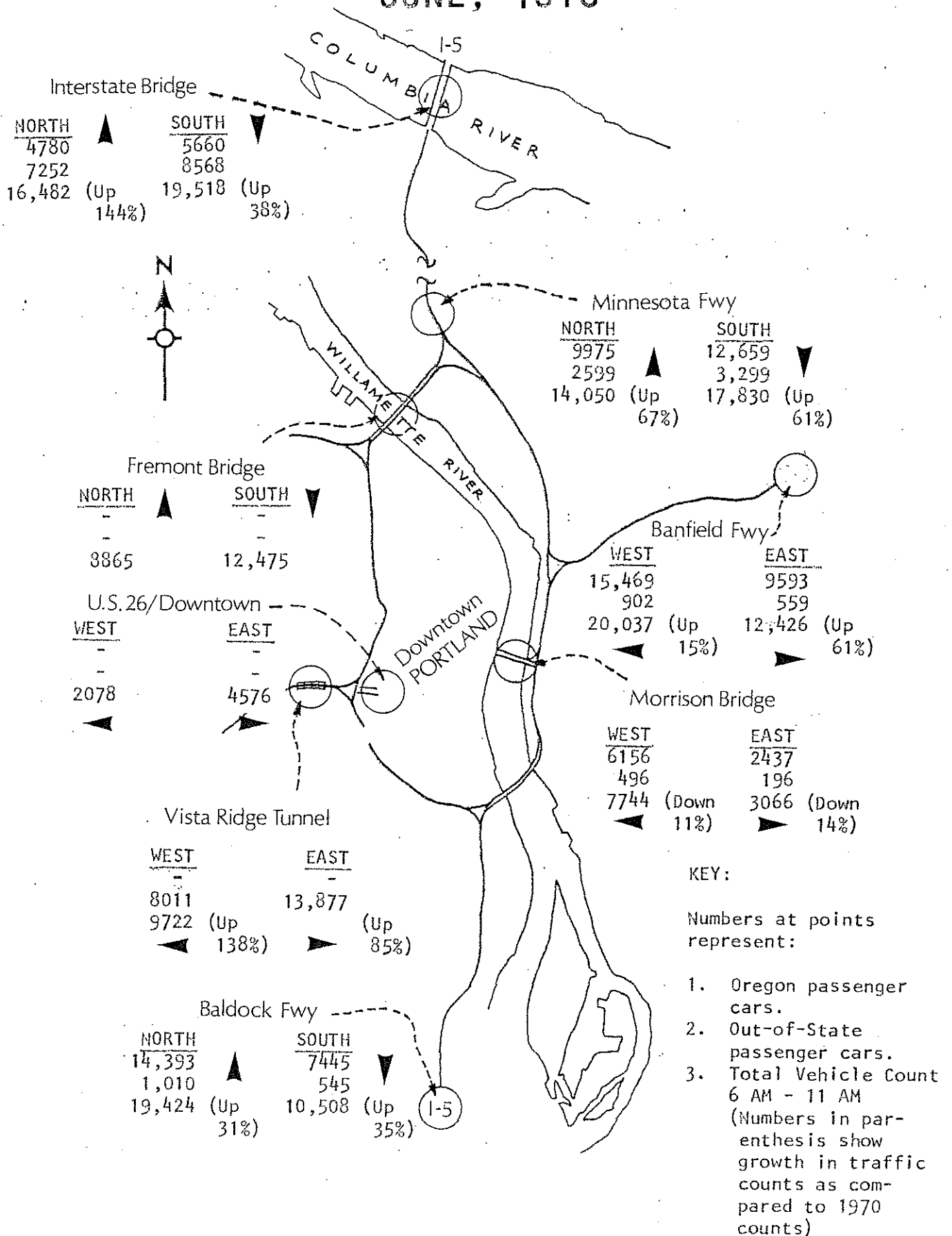
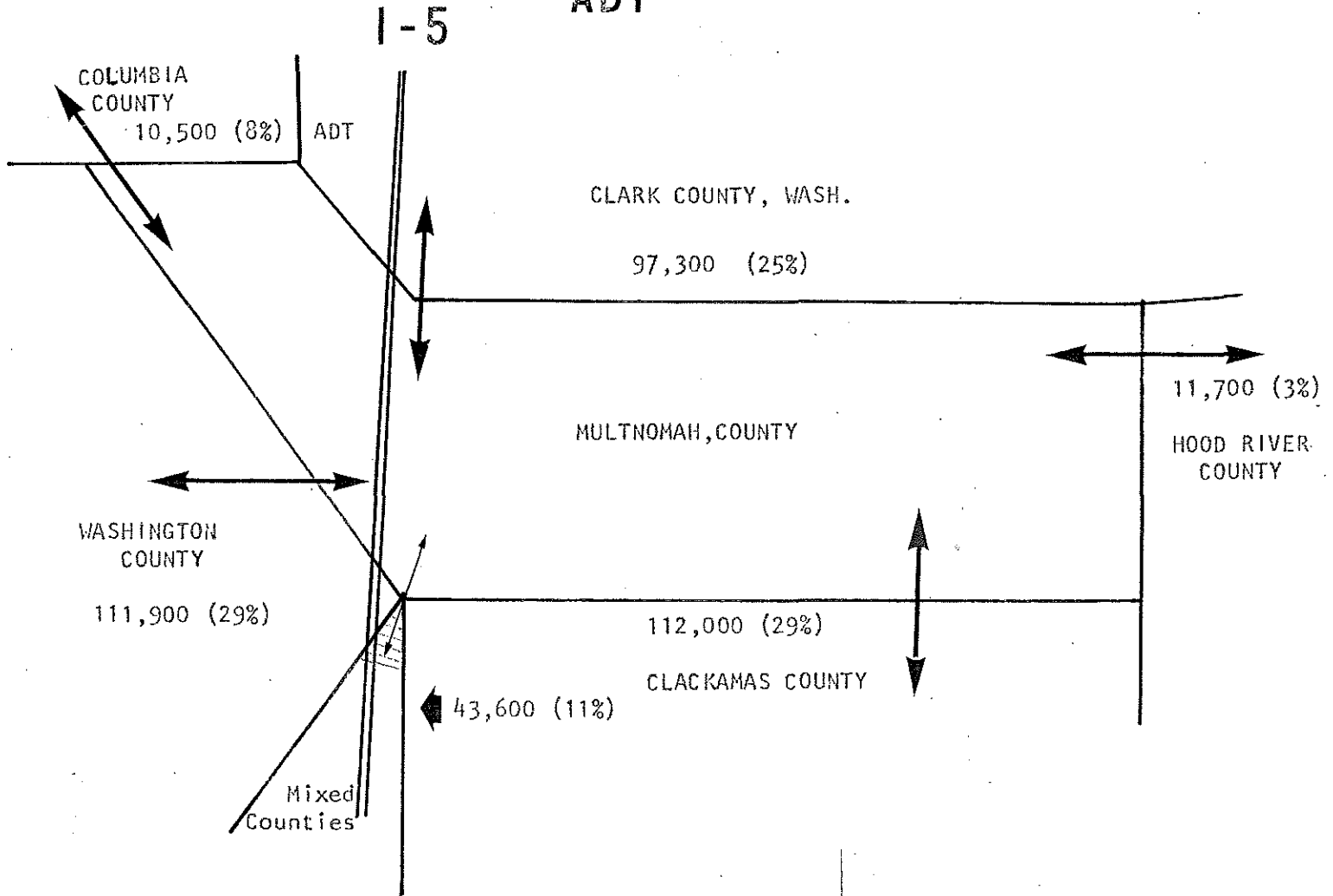


FIGURE 2

AVERAGE DAILY TRAFFIC*ACROSS THE MULTNOMAH COUNTY BOUNDARIES

*ADT

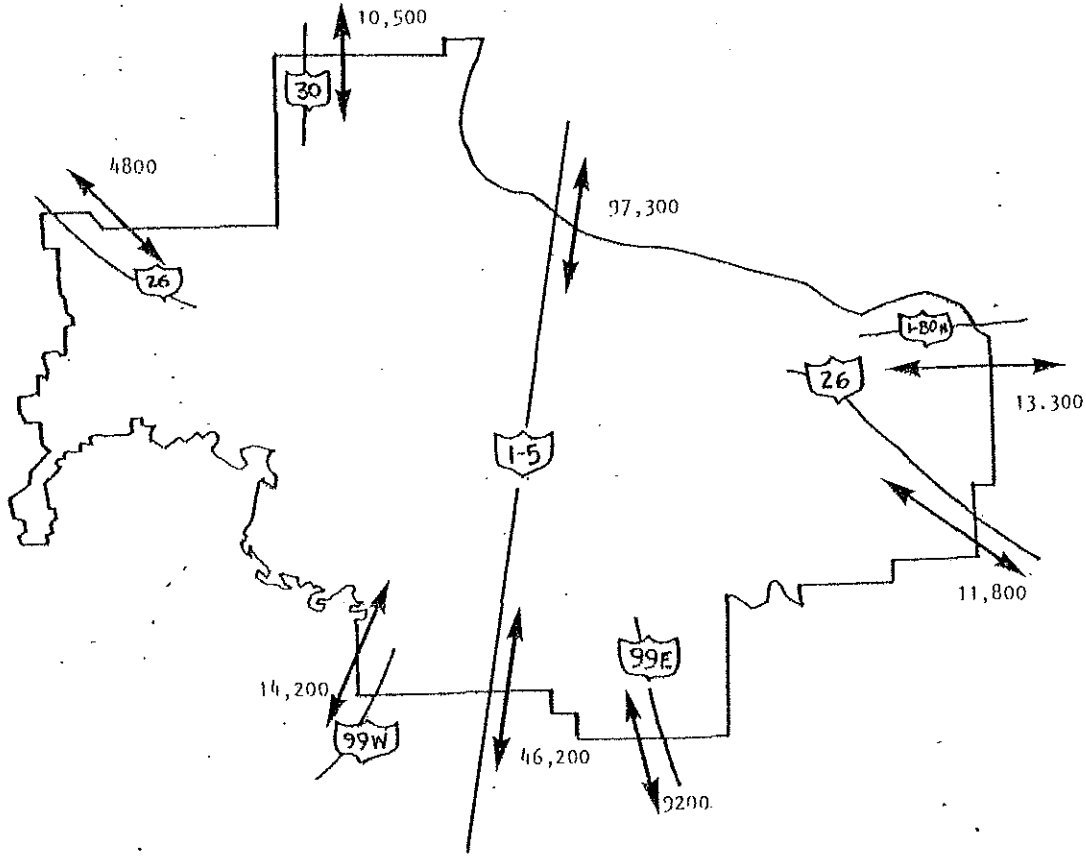


<u>ABUTTING COUNTIES</u>	<u>1970</u>	<u>1975</u>	<u>1977</u>	
Clackamas	31%	28%	29%	(112,000 ADT)
Columbia	3%	3%	3%	(10,500 ADT)
Hood River	3%	3%	3%	(11,700 ADT)
Washington	29%	30%	29%	(111,900 ADT)
Clark CO., Washington	23%	25%	25%	(97,300 ADT)
Mixed Counties	<u>11%</u>	<u>10%</u>	<u>11%</u>	<u>(43,600 ADT)</u>
SUM	100%	100%	100%	(387,000 ADT)

FIGURE 3

AVERAGE DAILY TRAFFIC* ACROSS CURRENT VEHICLE INSPECTION BOUNDARIES

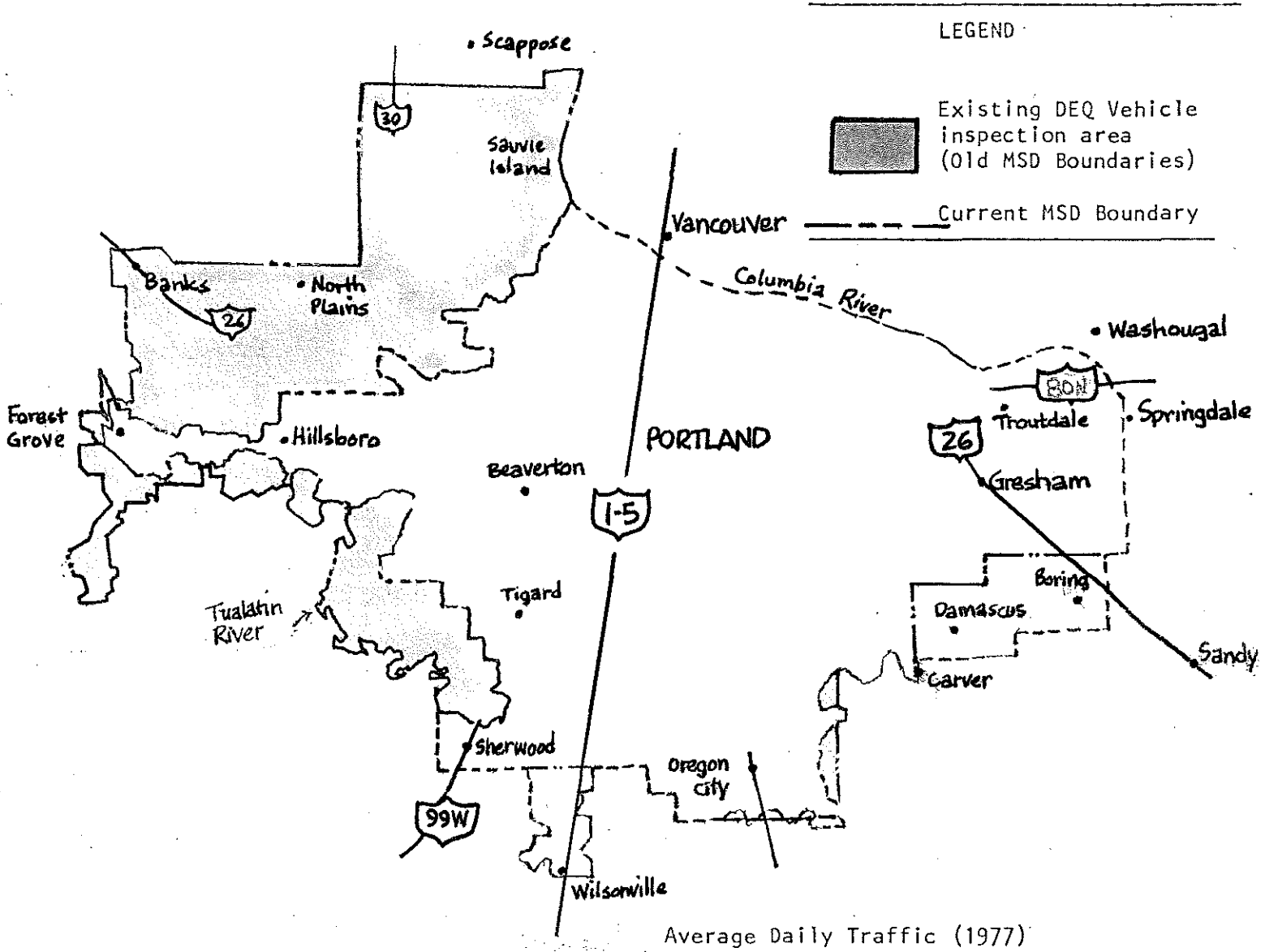
*ADT



Average Daily Traffic

	1975	1977		
I-5/INTERSTATE BRIDGE	87,300	97,300	Clark Co., Wash.	47%
I-80N	11,900	13,300	Hood River Co.	6%
U.S. 26/East MSD Border	10,600	11,800	} Clackamas	10%
U.S. 99E/South MSD Border	8,500	9,200		
I-5/South MSD Border	37,000	46,200	Mixed Counties	23%
U.S. 99W/South MSD Border	12,500	14,200	} Washington Co.	9%
U.S. 26/West MSD Border	4,450	4,800		
U.S. 30/North MSD Border	9,000	10,500	Columbia Co.	5%
SUM	181,250	207,300		100%

TRAFFIC IN AND OUT OF OLD VS. NEW MSD BOUNDARIES



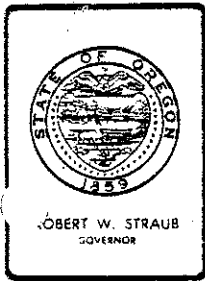
Average Daily Traffic (1977)

	Old Boundaries	New Boundaries	Difference
I-5/Interstate Bridge	97,300	97,300	0
I-80N (East Boundary)	13,300	13,300	0
U.S. 26 (East Boundary)	11,800	12,500	+700
U.S. 99E (South Boundary)	9,200	9,200	0
I-5 (South Boundary)	46,200	43,400	-2800
U.S. 99W (South Boundary)	14,200	14,200	0
U.S. 26 (West Boundary)	4,800	11,600	+6800
U.S. 30 (North Boundary)	10,500	14,200	+3700
SUM	207,300	215,700	Net +8400

APPENDIX J

Private Contractor Operation of Inspection Maintenance Program.

During the last Legislative session, ORS 468.377 was amended to require the Commission make a determination of the most cost effective method of conducting the inspection program, and if the finding were such, provide for the contracting of the inspection service to private industry. At its September Commission meeting, the Environmental Quality Commission made a determination that given the statutory structure of the program, i.e., biennial nature, and the other statutory restraints, that there would be increased costs to the public if the inspection program were franchised to private enterprise at this time. That Commission report is included in this appendix. It should be noted that pending the 1979 Legislative session the contractor vs. State options will again be reviewed.



Environmental Quality Commission

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MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. M, September 22, 1978, EQC Meeting

Status Report Contractor Operation v.s. State Operation
of the Motor Vehicle Emission Testing Program.

Background

The Environmental Quality Commission through the Department of Environmental Quality has the responsibility of conducting a motor vehicle emission inspection program in the greater Portland metropolitan area. This activity is part of the State's Implementation plan required by the Clean Air Act. In developing the current inspection program, one of the options considered was that of having a private contractor or a franchise operator operate the program for the State.

In 1972 the Department's Motor Vehicle technical advisory committee concluded that state owned and operated inspection stations would be the most practical and effective inspection system, but added that the option of allowing state owned inspection stations to be privately operated under strict state supervision, or franchise inspection stations, should be further considered. During and immediately after that time there was little interest from the private sector, for private contractor operation as the whole area of Inspection and Maintenance (I/M) Programs was new and undeveloped. Additionally, current legislation clearly optioned private garage testing which the Commission rejected for a variety of reasons.

As the Department implemented and developed the inspection program there was no change in this perception. So when the Commission adopted the inspection program rules in 1975, the State became the operator of the program.

On July 1, 1975 the mandatory phase of Oregon's I/M program began. The requirements for compliance were tied to vehicle registration, and thus testing and compliance for autos was required every two years in conjunction with license renewals.

In 1976 the Speaker of the Oregon House appointed a task force to study the effects and operation of the Department's inspection program. The task force concluded that the inspection program was a reasonable control for automotive air pollution in the Portland metropolitan area. The task force also concluded that the private contractor operation was an alternative to the State's operation.



Contains
Recycled
Materials

In the Commission's Report on the inspection program to the 1977 Legislature, the Commission concluded that private contractor operation was a viable alternative to the State's operation. ORS 468.377 (HB2298), attached as Appendix A, requires the Commission to determine the most cost effective method of conducting the motor vehicle emission inspection program. This act provides that upon finding that savings to the public and increased efficiency would result and that the quality of the program would adequately be maintained, the Commission may contract with the private sector for the operation of the inspection program.

The Legislature has left to the Commission the determination of the methodology of the inspection program and has directed the Commission to evaluate a private contractor operation. The Legislature has reserved to itself, however, the maximum allowed inspection fee, the testing frequency, the inspection area boundaries, and all of the other statutory structure within which the program must operate.

For the purposes of this analysis no conjecture as to Legislative action will be made. There are too many variables such as annual program operation, boundary re-evaluation, fee structure and other non-attainment areas to attempt to estimate the various scenarios.

Based upon ORS 468.377 there are two options for the Commission's consideration:

State Operated System

Private Contractor

ORS 468.377 (HB2298) established the following criteria for evaluation:

Savings to the Public.

Increased Efficiency.

Quality be adequately maintained.

Evaluation

In evaluating the major alternatives, state operation and private contractor operation, it is necessary to determine the various benefits and liabilities that accrue from each system. For the purposes of this presentation it is assumed that there are no differences in air quality benefits between approaches and that all existing statutory restraints remain. A listing of the major benefits and liabilities for the two options will be made and will include a brief discussion of the various items.

STATE OPERATION

With the current state operated system, the following are listed as benefits:

It is an existing and established program.

It is State operated and there is no service industry conflict.

There is a sound technical application of a solution to the problem.

There is no general fund expenditure.

The program has flexibility.

As an existing and established I/M program, the program is operating and doing its job. The citizens in the area (the Portland area MSD) know that it is required, where the stations are, and are aware of what is expected. As the program is operated by the state, there is a definite line drawn between the testing and compliance and the automotive service industry.

While there were some start up costs for the voluntary program, the program is currently self supporting through the fees received. Only those citizens who live in the affected area pay fees which support the testing and compliance efforts. There are no monies appropriated from the State's general fund and as such, the program does not affect the overall tax structure.

While considering the alternatives, program flexibility is a benefit to consider. This flexibility has allowed the Department to participate in various federal studies such as the EPA Portland Project, a survey on the use of unleaded fuel, changes in operating schedule to provide improved service to the public, and the ability to reduce service when the demand drops, as it does because of Oregon's biennial registration. The internal flexibility also allows us to monitor our own quality control and expand internal studies.

With the current state operated system, the following are listed as liabilities:

It is another state bureaucracy.

Program appearance is compromised to keep costs within budget.

Public relations promotions are limited.

The program operates with limited resources.

A discussion of the appearance of government and bureaucracy could, especially in this time of extreme tax consciousness, go on indefinitely. However, as a government agency, the Department must operate its inspection program within the laws, rules, regulation and procedures of the State. Hiring, firing and layoffs are done under very specific procedures. Purchasing of equipment and supplies are all done under the guidelines and requirements of Dept. of General Services (DGS). The leasing of facilities (all DEQ test stations, except Powell St., are privately owned and on the tax rolls) again falls under very specific procedures from DGS. The above are procedural limitations that affect state government operation. But just the perception of the bureaucracy by the public itself is often a liability.

Operational and cost considerations have resulted in a compromise solution to facilities appearance. This is listed as a liability because impressive facilities often have a tendency to set the motorist at ease. However, one consultant who recently visited Portland to study our program, stated that she was impressed with our "imaginative and thorough utilization of existing facilities and resources".

Public relations is the one area where a state operated system could be said to be deficient. State government historically has relied upon the news media and public service announcements to convey information to the public. Philosophically government tries to provide adequate information to its citizens for them to make a decision. Contrasting this, a private sector is in the position to "sell" or "merchandise" its product or service and therefore can advertise and sell the program to an extent that may not be appropriate for the State.

The program as constituted operates within limited resources. The program is funded only by the fees received. There is no additional funding by the Legislature. With the State's biennial budget process, all expenditures are planned for the two year budget period. This budget is approved by the Legislature.

PRIVATE CONTRACTOR OPERATION

Private Contractor operation of the state mandated inspection program has been implemented in Arizona and California. Arizona's program has been in operation for several years. California's program is scheduled to commence January 1, 1979. In a private contractor operation, the state contracts to the private sector for the total operation of the inspection program to state specifications. The following would be a listing of the major benefits of a contractor operation:

Less inconvenience to the motorist.

Potentially improved diagnostics.

Automated test equipment.

Better geographic coverage.

Potentially better or more uniform appearing facilities.

Better merchandising of program.

Reduced State Budget.

Non-government jobs.

A private contractor as part of a final contract might be able to improve service over the State operation through more and better locations, improved hours and staffing, and automated equipment. These items would need to be detailed in the contract so that the overall effect would be to improve the test-motorist interface and bring about less inconvenience and better service to the motorist while the same time of meeting air pollution goals.

The automation of the test procedure and data collection and analysis has many desirable aspects. There is no indication that the overall test time would be reduced. Automation would, however, totally structure the test and the pass-fail decision would be removed from the inspection personnel and be made by machine. This would remove the concern that an individual inspector could personally bias a test result. The implementation and degree of automation would be specified in the contract and could materially affect contract cost.

A private contractor should be able to provide better geographic coverage of an area than the State. The contractor, having contractual obligations to fulfill, being guaranteed of a long term operation, and having amortization as a tool, would be able to set up in areas that are currently outside of the existing financial capability of the State. This would be true for some areas currently in the program boundaries and other areas should program boundaries change. The station density and geographic coverage would be part of the contract.

A potential benefit that would result from a private contractor operation would be a more uniform appearance of the testing facilities and better geographic coverage of the area. Judging from existing contractor programs (Arizona and California), facilities appearances would be improved. In each of these states, the contractor undertook a major capital program in terms of facilities construction. Design criteria and station locations would need to be part of the contract specifications and may affect the total cost.

Increased public awareness and understanding of program objectives may result from private contractor operation of the state's I/M program. Here the private contractor can draw on resources usually unavailable to the state. The private contractor would be in the position to merchandise this service and increase public awareness and understanding of the purpose of the program. The degree of advertising, public relations, and promotions could be part of the contract between a private firm and the State.

A major benefit would be the reduction in State budget. This would not necessarily affect Oregon's General Fund, since the program is currently operating on fee income (dedicated funds). It would reduce this dedicated fund and thus the overall State budget since the State would no longer be collecting the fees, administering the program, hiring the inspectors and caring for the facilities. The State would derive some income from a contractor operated I/M program. The monies derived would be subject to the final contract negotiations, and would have to be sufficient to cover the State's surveillance costs so as not to require any general fund support.

As currently constituted, the program if operated by a contractor would provide for the elimination of some 15-70 government jobs. The number varies because of the biennial nature of the program. Arizona's totally automated lanes require about 2½ persons per lane for a computer controlled dynamometer test. Currently, Oregon averages about 2½ persons per lane over the year for a manual idle test. The contractor operation would provide for an approximately equivalent number of jobs in the private sector.

The following would be the liabilities or disadvantages of the contractor operation.

- Lack of flexibility due to contract terms.
- Change in program format.
- Fixed contract length.
- Fee structure.
- Expansion of system.
- State staff audit team.
- Potentially increased costs to cover profit.
- Increased testing lanes and queuing without additional facilities.

Here the discussion turns to supposition based upon a preliminary proposal submitted by a potential contractor, Hamilton Test Systems. While the Proposal is dated, the basics in that proposal point out some of the advantages and disadvantages of a private contractor operation. The document is attached as Appendix B.

Once a contract is signed with a private contractor, the contract becomes the performance document. Any required change in performance due to Commission action, Legislative mandate, or operation requirements would require contract modification and contract renegotiation. Each contract modification potentially could affect the cost of the contract.

Changing the program operation from a state operation to one operated by a private contractor could promote an adverse reaction from the public. The terms and transition would have to be detailed in the contract. Sufficient public information would need to be disseminated to adequately inform the public of the changes in operator, the reasons for the change, and any other procedural changes that might occur as a result of private contractor.

A contract would be entered into between the State and a private contractor. Should the Legislature decide to abolish the program or cancel the contract, for whatever reason, there would be buy-out costs unless the contract were to run its full term. Arizona's contract is for five years. Associated close out costs would be a function of the contract.

The current fee structure allows for a \$5 charge. Current Department practice interprets this as \$5 charge for each certificate of compliance issued. While Department projections indicate that we may have to change that policy and charge for testing as opposed to certificates only, a charge per test is currently the method of funding existing contractor inspection programs. In Arizona the fee structure is \$5 fee which includes one free retest. In California the inspection fee is estimated at \$13.00 per certificate with free retests.

With the contractor operation there would be the requirement of the State audit team. While a variation of this is being done in the existing regime, it would be necessary to continue on a more formalized and structured basis an audit of quality control. The limits and extent of this audit of the contractor would be detailed in any contract. Also included in a contract would be details covering contractor payment schedules, testing rates, and performance levels.

If the program were contracted to the private sector and assuming costs remained the same or cost reductions over current practices were implemented, the private sector requires a return on its investment. As a measure of the magnitude of that profit the PUC currently provides for a "fair" return on investment for the major public utilities. The contracting of the program to a private contractor could be considered similar to the establishment of a public utility.

Appendix B was provided to the State and is based upon biennial operation. Biennial operation versus annual operation is a legislative option. Unless a contract specifies geographic coverage and test lane density, a contractor could consolidate existing operations and provide more centrally located higher volume testing facilities. This would have the disadvantage of providing longer distances and more inconvenience to the public. This matter, however, would be one of prime concern during contract negotiation.

The evaluation has listed some of the various benefits and liabilities of the state operated and private contractor inspection programs. These pluses and minuses all have varying impact on the operation of the inspection program. The purpose in analyzing these various items and trying to put them into perspective is to provide the Commission information to determine whether the alternatives to state operation of the inspection program are available and feasible within the existing statutory restraints on the program. It can be argued that the only way

to actually determine the costs associated with various options to the Commission is to draft and issue a request for proposal (RFP) or other document which will detail all specifications. But because of the statutory limitations of the program, a preliminary evaluation as to the feasibility of implementing a program change is all that is presented.

If the Commission were to recommend the implementation of a private contractor operated inspection system, it would set into operation a complex system of specification, evaluation, selection, negotiation, and implementation. During this period, the Department would need the assistance of lawyers, accountants, and financial evaluators that currently are not on Department staff. One approach that should be considered would be to have the assistance of the Public Utilities Commissioner's staff. In implementing the private contractor approach the state is in essence creating a privately operated public utility. The offices of the PUC are among the more capable of various state agencies in interfacing with this section of the private sector to judge whether adequate service is being provided, whether fees and profits are reasonable, and whether contract terms are fair to the people and the state.

ORS 468.377(HB 2298) provides three criteria for the comparisons of state versus contractor operation of the inspection program. Any change must provide a savings to the public, provide increased efficiency, and quality must be adequately maintained.

1) Savings to the Public.

The inspection program is funded through fees received and does not rely on general fund monies for its operation. With the current \$5 fee structure it would be necessary to split the monies received to cover the contractor's expenses and the cost of the State's surveillance or to rely on general fund support. In the report attached as Appendix B, Hamilton Test Systems outlined a \$4.50/.50 split on inspection fees; \$4.50 to the contractor and \$0.50 to the State. This fee split was propositioned on taking over our current inspection system and automating the process. No additional changes or services were to be provided. The \$4.50/.50 figure is two years old and has not been re-estimated to provide for inflation. If the program were to be taken over by a private contractor there would be no fee reduction and if there was to be no additional support from the general fund, the \$0.50 would need to supply all of the Department's inspection program surveillance of the contractor and other related staff activities.

For the almost half million cars registered in the Metropolitan Service District area, that \$0.50 per car fee would provide a budget of approximately \$125,000 per year for contractor program surveillance and the other air quality areas related to motor vehicle pollution control. That dollar amount without a supplement does not appear to be adequate for the surveillance and other activities. It would be necessary to raise the fee to cover costs or to obtain support from the general fund.

2) Increased Efficiency.

The inspection program currently is operating with a capacity of 14 lanes. In the proposal, dated as it is, Hamilton Test Systems proposed, at the current fee structure, to take over the existing system and to automate it. Any program improvement or change in program directions would require specifications in the contract possibly affecting either or both performance and cost.

3) Quality be Maintained.

The degree to which the quality of the program operation would be maintained is a function of the contract specification and the surveillance and ability to document contractor performance. The state with the \$0.50 per car income cannot adequately guarantee and document that quality will be maintained.

SUMMATION

The evaluation listed and discussed the alternatives of contractor and state operation of the Department's motor vehicle emission inspection program. Hard dollar figures on cost differences between the two programs are not available without the issuance and evaluation of a request for proposal (RFP). The actual level of interest from the private sector to take over Oregon's inspection program can not be known without the issuance of an RFP. The costs for the preparation and evaluation of a RFP can be significant.

The 1979 Legislature will be meeting soon and may consider significant changes in program operation affecting annual inspections, program boundaries, and other related inspection program legislation. Changes in these areas could significantly affect the viability of a contractor operation of the inspection program. However, given the indicators that exist today and within the limits of the statutory structure of the program, the following conclusions are made.

1. Savings to the Public.

There is no indicator that the costs to the public, as measured by the fee charged, would be reduced through the contracting of the inspection program to the private sector. There would, however, be a reduction in State Budget. Supplemental appropriations from the general fund to the Department may also be required if the program were to be contracted.

2. Increased Efficiency.

Efficiency of program operations should not materially change with a private contractor operation of the inspection program. All details, however, of any program operations would be subject to the contract negotiation.

3. Quality be Maintained.

With an estimated fee split of \$4.50/.50 between the contractor and the state, there does not appear to be adequate revenue to fully document that the quality of the program would be maintained.

Director's Recommendation

Having found the foregoing facts to be true, I recommend that the Commission enter a finding on the matter of private contractor operation in comparison to state operation of the I/M program that given the indicators available and within the current statutory structure of the inspection program ~~there is, 1) little indication that there would be a savings to the public, 2) that the Department would have inadequate resources to monitor the maintenance of program quality, 3) that there would be no deterioration of program efficiency, 4) that the costs involved in the issuance and evaluation of an RFP are not justified at this time because of statutory limitations on program operation, 5) that the concept of a contractor operation is still a viable alternative to state operation, 6) and that following the 1979 legislative session, the Department shall reevaluate for the Commission's consideration the alternative of a private contractor operation of the motor vehicle emission inspection program.~~

There is indication that there would be some increased cost to the public.

Bill

WILLIAM H. YOUNG

William P. Jasper:jo/dc
229-6235
9/6/78

Appendix A (ORS 468.377)

Appendix B (Attached to Commission copies only. A copy of this document is available for review at the Department Offices and at this Commission meeting.)

Appendix A

ORS 468.377 Cost effective inspection program; contracts with private firms for inspection. The commission shall determine the most cost effective method of conducting a motor vehicle pollution control system inspection program as required by ORS 468.375. Upon finding that savings to the public and increased efficiency would result and the quality of the program would be adequately maintained, the commission may contract with a private individual, partnership or corporation authorized to do business in the State of Oregon, for the performance of tests or other services associated with conducting a motor vehicle pollution control system inspection program.

Appendix K

REPAIR COSTS ASSOCIATED WITH THE INSPECTION PROGRAM

The purpose of operating a vehicle emission inspection program is to protect the public health and welfare from the effects of automotive caused air pollution by inducing improved vehicular maintenance. The inspection standards and emission test provides a means of measuring the individual motor vehicle's contribution to the total air pollution problem. The maintenance is the means of bringing the vehicle into compliance with emission standards. The retest provides the measure of the effectiveness of that maintenance.

To monitor the costs associated with that maintenance, a questionnaire has been incorporated into the non-compliance form that is given the motorist failing the inspection test. When returning for the retest, many motorists provide information on the maintenance and the associated costs. It is these costs that are reported as the average repair costs.

The costs that are shared by all motorists are the inspection fee and the time necessary to have the inspection performed. The inspection fee is \$5.00 and currently is paid only once, when a certificate is issued. The time spent by an individual will vary on the particular location and time of the month that is chosen. Travel time can vary between individuals depending upon their locations and their choice of test stations. Department goals are to have sufficient locations so that all stations are within 5 miles of most locations. Waiting time averages about 15 minutes. However, should the individual desire to wait until the last day of the month or choose to wait in a very long line, excessive waiting times may be experienced.

The \$5.00 fee charged is a concern of some citizens, for when it is compared to Oregon's license fee structure, \$20.00/biennium, it appears large. Yet the inspection fee is in keeping with fees charged by other I/M programs. The driving times are usually not considered significant cost items by most persons. Waiting times can be a different matter, since any irritation ususally increases with waiting time, though most individuals do not equate it as a cost.

Table K-1 summarizes cost of repair information supplied by motorists who initially failed the inspection test. The retest pass rate averages better than 80%. These reported repair costs are lower than costs reported by other inspection programs, Table K-2. But these costs ranges are in keeping with costs monitored in EPA's Portland Study Program. In Arizona and New Jersey, I/M standards provide for more lienient test standards. As a result, vehicles failing those standards have a higher probability of having more serious engine problems and as a result require more costly repairs. While similiar vehicles exist here, often times many of the vehicles failed in the Oregon program have only minor problems, and as a result the overall severity of the repairs is not as great. This is somewhat borne out by noting that over 60% of the reported repair items were for adjustments, rather than for items which would indicate parts replacement. The costs factors indicate significant number of repairs for under \$10.00. Estimated average cost of repair is running between

\$15.00 and \$25.00. Only about 4% of the motorists are reporting repair costs in excess of \$75.00. Reported costs of repair have changed only slightly from past surveys. In the past, the average costs of repair have been in the range of \$18 to \$23.

The costs data indicate that the repair costs continue to be consistent with past surveys. This indicates that there has been no change in the cost for motorists to comply with the maintenance requirement. (Maintenance is still the smallest portion of the operating expense for the motorists.)

TABLE K-1

Oregon Repair Costs
(July - October 1978)

Repairs and Adjustments Performed for Retest

A/F Mixture Adjustment	41.7%
Idle Speed Adjustment	18.0%
Air Cleaner Replacement	6.8%
Choke Repair	2.4%
Carburetion Repair	9.5%
Dwell/Timing Adjustment	7.1%
Spark Plug Replacement	5.3%
Spark Plug Wire Replacement	2.1%
Distributor Repair	2.6%
Vacuum Hose Replacement	1.7%
Other Adjustments or Repairs	4.4%

Passing Retest After Repair 83.3%

Reported Cost of Repair

0 - \$5	39.0%
\$5.01 - \$10.00	35.5%
\$10.01 - \$20.00	12.8%
\$20.01 - \$30.00	3.1%
\$30.01 - \$50.00	2.9%
\$50.01 - \$75.00	2.1%
Over \$75.00	4.1%

TABLE K-2
Repair Cost Reported
by Other Inspection/Maintenance Program

New Jersey

Less than \$10	29.7%
\$10 - \$25	26.4%
\$25 - \$50	22.1%
\$50 - \$100	16.1%
over \$100	5.6%

N = 16,000

Average repair cost = \$32.40

Median - 50% of repairs cost less than \$20

65% of repairs costs less than the average

Arizona

Less than \$5	27%
\$5 - \$10	17%
\$10 - \$25	24%
\$25 - \$50	20%
\$50 - \$100	19%
over \$100	2%

N = 2,000

Average Repair Cost = \$23.40

Median - 50% of repairs costs less than \$15

64% of repair costs less than average

Appendix I

MOTOR VEHICLE INSPECTION/MAINTENANCE PROGRAM OPERATIONS
OUTSIDE OF OREGON

Motor Vehicle inspection/maintenance programs are operating in many areas throughout the United States. I/M is under study in every state that has ambient air violations related to the automobile. The following is a brief synopsis of the current status of some of these programs.

ARIZONA

The Arizona program began mandatory operation in January, 1976. This program is legislatively restricted to operation in Maricopa County, which contains the Phoenix metropolitan area, and Pima County which contains the Tuscon metropolitan area. All registered motor vehicles, within these two counties must obtain a certificate of compliance in order to renew the vehicle registration. The Arizona program is operated by a private contractor under state supervisions.

CALIFORNIA

The State of California will initiate a mandatory inspection maintenance program March 1, 1979 in the South Coast Air Basin area. This program, initially affecting vehicles at change of ownership, is expected to inspect over 1 million vehicles per year. The program in the SCAB (Los Angeles Area) is being operated by a private contractor, Hamilton Test Systems.

The California program is monitored by the California Bureau of Auto Repair. Inspection standards are set by the California Air Resources Board. The inspection standards adopted by the CARB include the concept of the enforcement tolerance, a feature included in Oregon's inspection standards.

California Air Resources Board staff indicate that inspection/maintenance programs are under study for other non-attinment areas in the State.

CHICAGO

The City of Chicago is operating volentary idle inspection program. This program has been in operation since June 1973. Approximately 20% of the vehicles registered within Chicago are being inspected. Program funding is derived from the City license fee.

CINCINNATI AND HAMILTON COUNTY OHIO

A mandatory inspection program is being operated by the City. Approximately 90% of the registered light duty vehicles in Cincinnati complied with I/M requirements.

COLORADO

Colorado has adopted legislation which requires implementation of I/M in the "front range" (Denver Region) counties by January 1980. It is expected that the program will be operated through the existing private garage

safety inspection program, though this is not firm.

KENTUCKY

Kentucky initialled a voluntary I/M program in December 1977 for the northern portion of the state.

NEVADA

A private garage I/M program for change of ownership started in Clark (Las Vegas) County Nevada in 1974. The program is conducted in licensed private garages. The program has been expanded to Washoe (Reno) County. Annual I/M is scheduled to start in July 1979.

NEW JERSEY

The State of New Jersey continues to operate the largest and oldest inspection/maintenance program in the country. The mandatory idle emission test is incorporated into the State's safety inspection lanes. A statistical analysis of New Jersey air quality data by the University of Wisconsin concluded that the federal new car program and New Jersey's I/M program accounted for a 28% reduction in carbon monoxide as measured by the State's ambient monitoring stations.

NEW YORK

New York State and New York City continue in their testing and study of vehicle emissions. The report on the City's work on I/M for heavy duty trucks is due soon.

PENNSYLVANIA

Pennsylvania is under a court order, pending from a citizen suit, to develop an inspection maintenance program plan by July, 1979. It would appear that either a state operated program or a program incorporating the existing private garage safety inspection will be implemented.

RHODE ISLAND

Rhode Island initiated a mandatory I/M program, January 1979. The program is operating in private garages. Enforcement is by means of a window sticker system.

OTHER STATES

Voluntary inspection programs are operating in Kentucky, Virginia, and Hillsborough County, Florida. In addition voluntary test studies have been conducted in Fairbanks, Alaska, Washington State, and Boise, Idaho. The Department has also received inquiries about the Oregon program from the following states or their consultants They include Kansas, Oklahoma, Nebraska, Illinois, Texas, Minnesota, Wisconsin, Connecticut, Massachusetts, Maryland, Missouri, New Mexico, Illinois, Indiana, and others. Legislators reviewing I/M from the following states have visited the Portland I/M program: Tennessee, Kentucky, Mississippi, South Carolina, Alabama, North Carolina. Table K-1 lists the urbanized areas in the United

States that are designated non-attainment areas for photochemical oxidants carbon monoxide or nitrogen dioxide.

Twenty-seven countries required new motor vehicles to meet emission criteria. In other countries I/M is under study or has been implemented. Some of these countries are Canada, Japan, France, United Kingdom, and Mexico.

Table L-1

X : Designated Nonattainment Areas for Photochemical Oxidants,
Carbon Monoxide, and Nitrogen Dioxide

URBANIZED AREA	OX	CO	NOx
New York, New York-Northeastern NJ	X	X	-
Los Angeles-Long Beach, CA	X	X	X
Chicago, IL-Northwestern, IN	X	X	X
Philadelphia, PA-NJ	X	X	-
Detroit, MI	X	X	-
San Francisco-Oakland, CA	X	X	-
Boston, MA	X	X	-
Washington, DC-MD-VA	X	X	-
Cleveland, OH	X	X	-
St. Louis, MO-IL	X	X	-
Pittsburgh, PA	X	X	-
Minneapolis-St. Paul, MN	X	X	-
Houston, TX	X	-	-
Baltimore, MD	X	X	-
Dallas, TX	X	-	-
Milwaukee, WI	X	X	-
Seattle-Everett, WA	X	X	-
Miami, FL	X	-	-
San Diego, CA	X	X	X
Atlanta GA	X	X	-
Cincinnati, OH-KY	X	X	-
Kansas City, MO-KS	X	X	-
Buffalo, NY	X	X	-
Denver, CO	X	X	X
San Jose, CA	X	X	-
New Orleans, LA	X	-	-
Phoenix, AZ	X	X	-
Portland, OR-WA	X	X	-
Indianapolis, IN	X	X	-
Providence-Pawtucket-Warwick, RI-MA	X	X	-
Columbus, OH	X	X	-
San Antonio, TX	X	-	-
Louisville, KY-IN	X	X	-
Dayton, OH	X	X	-
Fort Worth, TX	X	-	-
Norfolk-Portsmouth, VA	X	-	-
Memphis, TN-MS	X	X	-
Sacramento, CA	X	X	-
Fort Lauderdale-Hollywood, FL	X	X	-
Rochester, NY	X	X	-
San Bernardino-Riverside, CA	X	X	X
Oklahoma City, OK	X	-	-
Birmingham, AL	X	-	-
Akron, OH	X	X	-

	OX	CO	NOx
Jacksonville, FL	X	-	-
Springfield-Chicopee-Holyoke, MA-CT	X	X	-
St. Petersburg, FL	X	-	-
Omaha, NE-IA	X	X	-
Toledo, OH-MI	X	X	-
Albany-Schenectady-Troy, NY	X	X	-
Salt Lake City, UT	X	X	-
Hartford, CT	X	X	-
Nashville-Davidson, TN	X	X	-
Honolulu, HI	-	-	-
Richmond, VA	X	-	-
Bridgeport, CT	X	X	-
Youngstown-Warren, OH	X	X	-
Syracuse, NY	X	X	-
Tulsa, OK	X	X	-
Wilmington, DE-NJ	X	-	-
Tampa, FL	X	-	-
Allentown-Bethlehem-Easton, PA-NJ	X	-	-
Easton, PA-NJ	X	-	-
Grand Rapids, MI	X	-	-
New Haven, CT	X	X	-
El Paso, TX	X	X	-
Tacoma, WA	X	X	-
Flint, MI	X	-	-
Orlando, FL	X	-	-
Wichita, KS	X	X	-
Albuquerque, NM	X	X	-
Tucson, AZ	X	X	-
South Bend, IN-MI	X	-	-
West Palm Beach, FL	X	-	-
Charlotte, NC	X	X	-
Trenton, NJ-PA	X	X	-
Newport News-Hampton, VA	X	-	-
Davenport-Rock Island-Moline, IA-IL	X	-	-
Austin, TX	X	-	-
Fresno, CA	X	X	-
Mobile, AL	X	-	-
Des Moines, IA	X	X	-
Baton Rouge, LA	X	-	-
Worcester, MA	X	X	-
Peoria, IL	X	X	-
Oxnard-Ventura-Thousand Oaks, CA	X	-	-
Canton, OH	X	-	-
Columbia, SC	X	X	-
Harrisburg, PA	X	-	-
Las Vegas, NV	X	X	-
Shreveport, LA	X	-	-
Aurora-Elgin, IL	X	-	-
Spokane, WA	-	X	-
Lansing, MI	X	-	-
Charleston, SC	X	-	-
Fort Wayne, IN	X	-	-
Chattanooga, TN-GA	X	-	-
Wilkes-Barre, PA	X	-	-

Little Rock-North Little Rock, AR
Corpus Christi, TX
Columbus, GA-Al.
Rockford, IL
Madison, WI
Colorado Springs, CO
Scranton, PA
Lawrence-Havarhill, MA-NH

<u>OX</u>	<u>CO</u>	<u>NOx</u>
X	-	-
X	-	-
X	-	-
X	-	-
X	-	-
X	X	X
X	-	-
X	-	-

Appendix M

Reference Material

Arizona Department of Health Services, Tune Up for Less Emissions - It's Working -- Arizona Vehicular Emissions Inspections Programs Operator 1977, April 1978.

Becker, Janet, United States Environmental Protection Agency, Letter to William P. Jasper, January 23, 1979.

Caplan, John D., General Motors Corporation, Smog Chemistry Points the Way to Rational Vehicle Emission Control, SAE Paper 650641, 1965.

Champion Spark Plug Company, Car Maintenance Around The World, 1978.

Cook, Wendell A., NHTSA, Repair Industry Response to Diagnostic Inspection Projects, SAE Paper 780030, 1978.

Fairfax County Health Department, 1978 Addendum to Fairfax County Automobile Emissions Testing Program.

Gibbs, R.E., et.al, New York State Department of Environmental Conservation, A Study of Fifty-Six In-Use Catalyst Vehicles: Emissions and Fuel Economy, SAE Paper 780645, 1978.

Gunderson, J.A. and Resnich, L., Degradation Effects on Motor Vehicle Exhaust Emission, SAE Paper 760366, 1976.

Gullon, A.C., Environment Canada, Exhaust Emission Capabilities of Showroom Cars, SAE Paper 780081, 1978.

Inspection Maintenance Staff, USEPA, Portland Study Interm Analysis: Observations on Six Months of Vehicle Operations, January 1979.

Jasper, William P., Oregon DEQ, An Effective Approach to Vehicle Inspection/Maintenance, Air Pollution Control Association Paper Number 78-2, November 1978.

Kramer, Maury, et.al., Approved Auto Repair Services Program (A Move to Reduce the Trauma of Automobile Repairs) SAE Paper 780278, 1978.

Ledolter, Johannes, et.al., Statistical Analysis of Multiple Time Series Associated with Air Quality Data; New Jersey CO Data, Technical Report Number 529, Department of Statistics, University of Wisconsin-Madison, June 1978.

Mobile Source Enforcement Division, USEPA, Motor Vehicle Tampering Survey 1978, November 1978.

New Jersey, Motor Vehicle Inspection System Study Commissions, 1978.

Oregon Environmental Quality Commission, Review of Report to the Fifty-ninth Legislative Assembly by the Environmental Quality Commission on its Investigation of the Effectiveness of the Motor Vehicle Emissions Program, January 14, 1977.

Oregon Environmental Quality Commission, Agenda Item D, February 27, 1977.

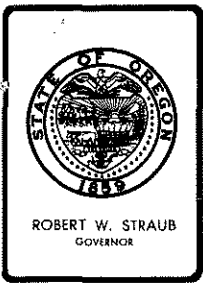
Poston, H.W., and Seliber, Joseph, Chicago's Experience in Vehicle Emission Testing, SAE Paper 760368, 1976.

Suter, Robert E., et.al., Ford Motor Company, Ford Three-way Catalyst and Feedback Fuel Control System, SAE Paper 780203, 1978.

USEPA, Mobile Source Enforcement Division, 1978 Motor Vehicle Tampering Survey, November 1978.

Walsh, Micheal P., and Nussbaum, Barry D., USEPA, Emissions from Catalyst Cars Beyond 50,000 miles and the Implications for the Federal Motor Vehicle Control Program, SAE Paper 780027, 1978.

Washington Department of Ecology, Motor Vehicle Emission Inspection and Maintenance Program Report DOE 79-1, January 1979.



Environmental Quality Commission

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MEMORANDUM

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item No. Q, February 23, 1978, EQC Meeting
Submission of Field Burning Rules to
Environmental Protection Agency

Background

At the November, 1978, public hearing on the adoption of field burning rules the Commission heard testimony with regard to the inclusion of field burning in the Oregon State Implementation Plan (SIP). Seed industry representatives testified in opposition to the regulation of field burning under the SIP primarily because of its minimal effects on federal standards within Air Quality Maintenance Areas (AQMA). In addition, Oregon Seed Council representatives stated that since field burning had not been identified by federal law or administrative rule as a "major stationary source" regulation was not required under the Oregon SIP submittal. Therefore, to submit such regulations to the Environmental Protection Agency (EPA) would be a surrender of state power.

The City of Eugene, while testifying in favor of retention of SIP regulation of field burning, stated that field burning is one of the largest man-made sources of particulate in the state and that successful and economical strategies for controlling impacts from field burning can be applied. City representatives also stated the impact of well-regulated burning on 24-hour Total Suspended Particulate (TSP) concentrations can be substantial, and that though impacts increase with acreage burned, it cannot yet be determined how many acres can be burned without exceeding standards or applicable Prevention of Significant Deterioration (PSD) increments.

Eugene further stated that while it was probably beneficial to minimize the submission of operational rules and procedures to the EPA, sufficient detail must be submitted to insure federal ability to enforce compliance should it become necessary.



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Comments were also offered by the EPA with regard to a field burning SIP submittal. The EPA stated that standards attainment in the Eugene-Springfield AQMA was of immediate concern as well as compliance with PSD regulations. Regarding these issues the EPA made two significant comments:

1. If the SIP is not revised the current SIP limitation of 50,000 acres would still be in effect, a situation which could potentially result in litigation or the necessity to adopt an Interim Strategy prior to the 1979 field burning season.

2. The new regulations would result in a substantial increase in emissions over those allowed by both the current SIP and the 1978 Interim Strategy. Therefore, in the absence of an approvable SIP revision or the demonstration that standards and the PSD increments will not be violated as a result of the proposed regulations, the current 50,000 acre SIP limitation would be enforced.

The staff, in its December report, stated that it believed the EPA would require field burning to be regulated under the SIP because it could contribute to violations of the 24-hour Total Suspended Particulate standard. However, the staff indicated a strong interest in eliminating the SIP revisions due solely to changes in rules affecting operational procedures. The staff proposed to explore the possibilities of a rule submission not incorporating the extensive operational rules in order to minimize further revisions to the SIP.

Also, to eliminate the SIP revisions which result from changes in Oregon's annual acreage limitation, the DEQ staff was interested in submitting the 1979 revision without the limitation. Subsequent changes to the state law with respect to acreage limits would not then automatically cause a conflict between state and federal law. Because of the sensitivity of this particular aspect of field burning regulation, the DEQ proposed to discuss with interested parties acceptable alternative strategies which would remove the acreage limits from the SIP.

With adoption of the Recommendation of the December 15, 1978, Director's Staff Report, the Commission instructed the staff to submit the adopted rules but request that the rules not be acted upon except as they may be later submitted as a part of an overall State Implementation Plan revision package. Such a schedule would allow staff to complete the aforementioned discussions with interested parties and revise the SIP package if necessary.

Evaluation

Discussions were held with City of Eugene, Oregon Seed Council, and Oregon Seed Trade Association representatives to establish a minimum acceptable inclusion of field burning in Oregon's SIP. The staff reviewed with the

parties possible satisfactory strategies, but not necessarily requiring inclusion of an annual acreage limitation as part of the SIP. Unfortunately, no agreement was formulated as a result of these discussions with parties preferring to await the results of 1979 legislative action.

The seed industry continues to argue that because of its generally limited effect on standards that field burning could reasonably be removed from the SIP. Barring exclusion, the seed industry would seek inclusion in a manner analogous to slash burning, that is, a smoke management program description would be included without overall emission limitations.

Eugene representatives maintain that the seed industry should continue to be regulated by the SIP so that federal enforcement of burning is available. The City also supports an acreage limitation based upon perceived beneficial effects of the limitation over the last several years.

Although several regulatory approaches were discussed, those which incorporated acreage limitations in any form were rejected by the seed industry while other approaches were rejected by the City or by both parties.

Without agreement regarding more desirable alternative methods for submitting the SIP revision and because the Oregon Legislature is now considering legislative changes which would prohibit inclusion of field burning in Oregon's SIP, the Department would propose to submit the rules as adopted in December, 1978, and request the EPA consider this proposed program as the basis for a one year control strategy similar to 1978. A finalized SIP revision would be submitted, if appropriate, prior to the 1980 field burning season. Alternatively, to either modify the acreage limitation rule or delete the acreage limitation from a SIP revision submittal, would require additional public hearings (with concomitant time delays) and would elicit objections from the City of Eugene, the Seed Council, or both. In addition, if only a removal of the acreage limitation from the existing rule is considered, it may not be possible to convince the EPA that the Smoke Management Program could prevent standards violations.

Several factors argue in favor of submittal and promulgation of an interim control strategy for field burnig at this time:

1. To submit the adopted rules and request promulgation as a SIP revision now is untimely in light of current legislative deliberations.
2. It is necessary to submit some field burning strategy in order to gain approval by the EPA of the adopted 180,000 acre limitation and other rules prior to the 1979 field burning season. Without approval of this strategy or a revision, a 50,000 acre limitation will remain an active part of Oregon's State Implementation Plan.

In general, the expected EPA response time for approval of a SIP revision is on the order of three to four months. If a similar schedule was for an interim strategy, it is necessary to submit a strategy package no later than early March in order to gain approval prior to the season and avoid operation under the 50,000 acre limit.

3. The submission of the Eugene-Springfield AQMA SIP revision package, the only other SIP package which might affect field burning regulations, may be delayed perhaps as long as 18 months and is not expected to be completed prior to the 1979 field burning season. Coordination of the two SIP revisions can be facilitated if an interim strategy is available for field burning in 1979.

4. The schedule for the final report on field and slash burning impacts, which originally allowed for consideration of report results as part of the field burning SIP revision, has been slipped. Results are not expected prior to April thus not allowing their incorporation in a timely field burning SIP submittal prior to the 1979 season. Submittal of a formal SIP revision, after the 1979 season, would allow consideration of these more complete results.

Summation

Pursuant to the discussions at the December 15, 1978 meeting, the staff has conferred with representatives of the Oregon Seed Council, Oregon Seed Trade Association, and City of Eugene in order to determine the minimum acceptable inclusion of field burning in the Oregon State Implementation Plan (SIP). No mutually acceptable submittal was identified as a result of these discussions with all parties preferring to wait for possible action by the 1979 Oregon Legislature.

Without agreement among interested parties on an alternative submittal and with understanding that the Oregon Legislature is currently considering the prohibition of field burning as an element of Oregon's SIP, the staff believes it is necessary to submit the rules, including the acreage limitation of 180,000 acres previously adopted, as an interim control strategy for field burning and to ask for EPA approval at this time. Delay in submission beyond early March is not expected to allow sufficient time for EPA approval prior to the 1979 field burning season. Without an approved strategy or SIP revision, the existing SIP would remain in effect, thus limiting burning during 1979 to 50,000 acres. The schedule to develop and submit the Eugene-Springfield Air Quality Maintenance Area (AQMA) control strategy and to submit the final report on field and slash burning impact have both been delayed. Thus this information will not be available for incorporation in a timely submission of a field burning SIP revision package as previously believed. Since the Eugene-Springfield AQMA strategy may be delayed beyond the 1979 burning season and the final results regarding field burning impact could be included in a formal SIP revision submittal prior to this season, staff believes that though this information should be included in a formal SIP submittal, postponement of an interim strategy submittal to await this information should not be considered.

Director's Recommendation

Based upon the information set forth in pages one through four of the Director's February 23, 1979, staff report to the Commission, it is recommended that the Environmental Quality Commission instruct the staff to submit the rules previously adopted and set forth in Attachment 1 to the Director's Staff Report of December 15, 1978, to the Environmental Protection Agency and request that these submitted rules be approved as a one year interim strategy for the control of open field burning during 1979.



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February 22, 1979

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State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
FEB 22 1979

OFFICE OF THE DIRECTOR

DEPARTMENT OF ENVIRONMENTAL QUALITY DRAFT
PROPOSED RULE FOR AIRPORT/AIRCRAFT NOISE

The purpose of this letter is to convey our comments on the draft proposed rule for airport/aircraft noise. The basic approach used by DEQ staff in the proposed noise rule is reasonable. However, a number specific questions about public policy and technical aspects of the rule need to be answered. We believe that substantial revision and/or clarification is required before the clear intent of the rule can be considered. These changes are also needed to allow an understanding of what is required if an airport proprietor is to make a good faith effort toward compliance.

The following are the most critical issues. These should be addressed and needed changes made in the proposed rule prior to further consideration:

- o There is no standard in the proposed rule or presently in the state of Oregon for the sound transmission loss of residences, schools or other noise sensitive uses. Without such a standard no homeowner or builder would know if they would be required to provide acoustical treatment under the proposed rule. The responsibility for determination and enforcement of requirements should be identified. DEQ does not have the information available; it is needed.
- o Guidelines developed by the U.S. Department of Housing and Urban Development (HUD), the U.S. Environmental Protection Agency (EPA) and the Federal Aviation Administration are based on an interior noise criterion, whereas the DEQ rule is based on exterior noise

February 22, 1979

levels. The interior noise criterion used by all three federal agencies is Ldn 45dBA. The DEQ rule would achieve an interior level of Ldn 35-40dBA. A 5dBA difference in the interior noise level could mean that acoustical treatment is required in homes at a cost of \$2.60 per square foot according to EPA figures. A 10dBA difference could mean acoustical treatment costs of \$7.40 per square foot in an average home. There is no evidence of the need for Ldn 35-40dBA interior level.

- o The U.S. Department of Housing and Urban Development states that housing in "Ldn 65 and below are Normally Acceptable and are allowable" with no special acoustical treatment. HUD will also approve federal mortgages in housing in higher noise levels. Taken at face value this proposed rule would prohibit housing where HUD indicates a willingness to approve it. Again, at face value the proposed rule could promote conflict with statewide goals and guidelines when noise guidelines are used as the sole criteria for land use.
- o The rule does not identify the of responsibility for implementation of land use measures. Without this, the aims of the rule cannot be achieved. No mechanism is defined to prevent the location of new noise sensitive uses within areas of moderate or severe noise impact.
- o How land use issues are resolved affects the extent of the operational procedures required. Without this clarification, it would make operational abatement impracticable. Some of these operational procedures are under the jurisdiction of the federal government. Clarification of how land use issues are to be resolved is required.
- o The DEQ rule does not distinguish between severity of noise impacts within the Ldn 55 contour. The FAA, HUD and EPA identify the area within the Ldn 65 as the area of "significant" noise impact and the goal for immediate action. Ldn 55 is identified as an area of "moderate" impact and thus the goal for long-term planning.

Further detailed comments are attached relating to these policy issues and technical questions regarding noise monitoring procedures. Documentation and suggested language for modification of the draft rule are also attached. We have discussed our comments informally with DEQ staff; however, none of the changes we have discussed are reflected in the staff report.

February 22, 1979

This rule can provide a mechanism for addressing airport noise impacts. It must, however, consider all aspects of noise abatement and be designed to accomplish its aims. Clarifications of the technical work and Commission direction are necessary before further public discussion would be constructive. Before then it is difficult if not impossible to comment on the real feasibility and benefits of the rule.

We understand that the State Department of Transportation has requested 30 days to allow airports around the state to review and comment on the rule. We support that request.

We believe these issues should be clarified before informational hearings are held and will continue to work with DEQ staff so a proposed rule can be brought before the Commission in 30 days. We would then suggest that informational hearings then be held for a period of 60 days, causing no delay in the schedule proposed in the DEQ staff report.

Clifford Hudsick will represent the Port of Portland and provide testimony and answer questions at your meeting on Friday, February 23, 1979.



E. J. Church
Deputy Executive Director

Attachment

cc: Fred Klalso
Paul Burkett
Lee Camphouse
Robert Brown
Sam Sherer

PL3B-R

PROPOSED RULE FOR AIRPORT/AIRCRAFT NOISE -
DETAILED COMMENTS

The following comments are intended to identify technical problems, suggest alternative language, and to better define the guidelines.

Section 35-015 - Definitions

Page 2

- (15) The following language is suggested: "New Airport means any airport for which installation or construction of a runway commenced after January 1, 1980."

Page 3

- (17) The second sentence of this definition should include "commercial" after "industrial."
- (18) The definition of "Sound Transmission Loss" does not provide enough information to allow for reproducible measurement of sound transmission loss. The DEQ rule then bases required sound transmission loss values on exterior noise levels. We recommend an alternate approach which recognizes interior and exterior noise levels. The procedure used by California and the U.S. Department of Housing and Urban Development (HUD) is to define an interior level to be achieved. HUD standards and California law are based on an interior standard of Ldn 45. The achievement of this interior level is described in terms of "noise reduction level" or "sound transmission loss."

"Sound Transmission Loss" or Noise Reduction Level" means the noise reduction (exterior to interior) sufficient to achieve an Interior Noise Criterion of Ldn 45dB. The noise reduction level of an existing average normal residence, school or hospital in Oregon shall be assumed to be at least 20dBA.

Additional Comments - The State of California Airport Noise Regulation states "the value 20 decibels is assumed to be the noise level reduction of an average normal residence," and the determination of their criterion is based on "residential areas where houses are of typical California construction and may have windows partially open. It has been selected with reference to speech, sleep and community reaction." Similarly, the HUD regulation assumes no special treatment is required for housing where exterior noise levels do not exceed Ldn 65 and assumes a noise reduction level of 20 decibels for normal construction.

The FAA in July 1977 published a detailed analysis of noise reduction in schools and hospitals adjacent to airports. They found that on the average in 90 percent of the schools noise was reduced by 21dB from exterior levels and reduced 29dB in the remaining 10 percent. The average value for hospitals was 23dB.

It is strongly suggested that the State of Oregon certify the sound transmission loss or noise reduction level of homes built according to code in Oregon. Additionally, the state should certify the construction necessary to achieve varying levels (20, 25, 30 dB) of sound transmission loss or noise reduction level.

Section 35-046 - Noise Control Regulations for Airports

Page 4

- (1) The prevention of new noise sensitive uses within existing noise impact areas should be a stated goal of this rule. Changes in operational procedures can never be effective in eliminating noise impacts so long as new residences can be constructed within noise sensitive areas. The Statement of Purpose does not reflect a concern to prevent new noise sensitive uses from occurring.

Recommended Language - Adds to the fourth sentence in the Statement of Purpose--"and to prevent the increase of noise sensitive uses in areas of existing noise impact."

Page 5

- (3) (a) & (c) This section in the Airport Noise Abatement Program and Methodology gives little guidance as to when a noise abatement program is required. The statement of purpose specifies that the aim of airport noise abatement is to prevent creation of new impacts or the expansion of existing impacts. Additional language is suggested consistent with this statement of purpose.

Recommended Language - To be added to Section (a). "Noise Abatement Programs may be required if there is evidence of a substantial increase in noise due to modification of the airport runways to accommodate increased operations."

- (3) (d) (A) (i) The following language is recommended for the description of Noise Abatement Program Elements:

Recommended Language - "Airport Noise Impact Boundaries and corresponding contours at 5dB increments for existing conditions and projected at periods of five, ten and twenty years from the date of request for a noise abatement program. These should be based on forecast aircraft operations, existing operational noise abatement procedures, and those included in adopted federal regulations."

Page 6

- (3) (d) (B) The three steps defined in the term Airport Operational Plan overlap. The recommended changes below are designed to require identification of noise impacts with alternative noise abatement procedures. It then provides a basis for assessing the impact of alternative noise abatement procedures if implemented. Many of the suggested procedures cannot be implemented at some airports, (e.g., priority runway use at an airport with one runway or decreasing the number of commercial operations) and many may not result in any change in the noise impact boundary, (e.g., engine runup noise is not normally used in the calculations of airport noise contours).

Recommended Language:

- (i) An evaluation of the impacts of existing and projected noise contours on existing noise sensitive uses. The noise emission source controls and operational procedures used should be identified.
- (ii) An evaluation of the effectiveness of the following noise abatement options, as appropriate, or other changes in operational procedures appropriate to the airport being studied. The potential changes in the airport Noise Impact Boundary and the net change in the number of Noise Sensitive Properties or other appropriate indicators of the change in noise impact should be evaluated. Options achieving a significant noise reduction may be incorporated to the fullest extent practicable into any proposed Airport Noise Abatement Program.

It is also recommended that the ordering of the items (a) through (p) be listed as in the Department of Transportation Aviation Noise Abatement Policy, November 18, 1976, for ease of analysis and consistency.

Page 8

- (3) (d) (C) The section Land Use Plans does not recognize that local governments have the statutory power to implement land use and zoning controls and thus should have the responsibility for land use plan development. The responsibility of affected local governments in developing and implementing

land use measures must be specified. In addition, land use actions and non-land use actions--building code requirements--must be separated so that responsibilities and procedures can be identified.

Recommended Language - "Affected local governments shall prepare or revise local land use plans to prevent noise sensitive uses within the airport Noise Impact Boundary consistent with the other local land use goals and guidelines established by state laws. Corrective measures for existing noise sensitive uses shall focus on areas of severe (Ldn 75 and higher) or significant (Ldn 65-75) impacts. Actions in areas of moderate impact (Ldn 55-65) should primarily focus on preventive measures.

Affected local governments shall have the responsibility to develop land use plans to prevent the location of new noise sensitive uses within existing noise contours. Appropriate actions may include:"

It is also recommended that the ordering of Items (i) through (x) be listed as in the Department of Transportation Aviation Noise Abatement Policy, November 18, 1976, for ease of analysis and consistency.

Page 9

- (3) (d) (E) The circumstances requiring a program update in this section are not defined. The definition of an "update" as opposed to a "revision" should be clarified particularly since the rule specifies that "Each program revision is subject to all requirements of the rule."

Page 10

- (5) The values for "sound transmission loss" requirements in the section on Noise Sensitive Use Deviations are not consistent with widely accepted interior noise level criteria. A letter from DEQ to the Port dated October 30, 1978, indicated that DEQ staff has identified the criteria for interior noise to be 45dBA. In the recommended language below, the sound transmission loss values proposed by DEQ have been revised to be consistent with this criteria.

The U.S. Environmental Protection Agency "Levels" document, the U.S. Department of Housing and Urban Development rules for noise abatement and control (Part 51 of Title 24 of the CFR) and the California "Airport Noise Regulation" all identify Ldn 45 as the Interior Noise Criterion.

The sound transmission loss values provided by DEQ in the draft rule mean that the interior level to be achieved would be Ldn 34-40dBA. We believe that available data supports Ldn 45dBA interior levels area protective.

We strongly recommend the following language: "Interior Noise Criterion. The criterion for interior noise levels for residences, schools, hospitals, and nursing homes shall be a day-night average sound level of 45dBA." The interior noise criterion is designed to provide adequate protection of noise sensitive uses based upon noise levels and interior noise levels and "sound transmission loss" or "noise reduction levels." The following noise sensitive use classes and acoustical treatment measures may adequately protect interior activities. Certain noise sensitive use classes may be acceptable within the airport Noise Impact Boundary provided that all necessary and practicable measures are taken as determined by the Commission to protect noise sensitive activities.

- (a) No change.
- (b) Existing Class II property at annual average day-night airport noise levels between Ldn 55 to 65 dBA with a minimum of 20 dBA sound transmission loss. At impacts below Ldn 65 dBA no extraordinary treatment is needed.
- (c) Existing Class I property at annual average day-night airport noise levels between Ldn 55 to 65 dBA with a minimum of 20 dBA sound transmission loss.
- (d) No change.
- (e) New Class II property at annual average day-night airport noise levels between Ldn 55 to 65 dBA with a minimum of 20 dBA sound transmission loss.
- (f) New Class I property at annual average day-night airport noise levels between Ldn 55 to 65 dBA with a minimum of 20 dBA sound transmission loss.

Page 12

- (6) Airport Noise Monitoring - In this section the noise monitoring procedure as defined will not provide the data needed to either determine or verify the Noise Impact Boundary. Noise monitoring locations and procedures

change depending on the intended use of the data. Computer model calibration for determining noise contours uses brief measurements of aircraft noise directly under the flight tracks and requires that each airplane be identified. Establishment of contours without modeling, or validation of calculated contours, requires longer purposes such as determining noise at a particular site would require different procedures.

Establishment of noise contours by means of actual field measurements as suggested in Part 4, Airport Noise Impact Boundary, creates two significant problems.

1. The future boundary could not be determined based on monitored data. It must be calculated.
2. Noise measurements at locations appropriate for determination of the Noise Impact Boundary may well reflect greater noise contributions from such sources as cars, trucks, dogs, lawn mowers, etc., than from aircraft. Such measurements would only be valid if a procedure were developed to isolate aircraft noise from other noises. Five to ten decibels difference between the airport Ldn and community Ldn is required in order to determine the boundary by monitoring.

The following language is recommended to be substituted for for (6):

- (a) Calculations of the Noise Impact Boundary and associated contours by computer model may be verified by actual field measurements taken for calibration of the model. Appropriate field measurement sites and techniques for determining aircraft noise directly under the flight track and from sideline positions shall be used.
- (b) Acoustical calculation techniques should conform to methodologies or computer models approved by the Federal Aviation Administration for the calculation of airport/aircraft noise.

Additional Comments - We believe that use of a calibrated model for calculating noise contours is technically correct and the most appropriate use of noise monitoring for achieving the aims of this rule. Use of a calibrated

model such as that used for the Portland International Airport Master Plan provides noise contours with an accuracy of ± 1.5 dBA when compared to long term field measurements as used in California. Use of a computer model or calculated noise contours allows for projection of future noise contours, as required by the rule, and estimation of the change in noise levels which may be achieved by various operational procedures. Noise monitoring alone cannot provide this information.

Page 12

- (7) Exceptions - The exceptions listed for the airport/aircraft noise are not consistent with other DEQ noise regulations. Two additional exceptions are listed below. These are taken directly or paraphrased from Chapter 340, Division 35, of the Oregon Administration Rules - "Noise Control Regulations." Exception (c) in the proposed rule is also amended for consistency and clarify.

Recommended Language:

- (c) "Noise sensitive property owned or controlled by the the person who controls or owns the noise source or noise sensitive property located on land zoned exclusively for industrial or commercial use."
- (d) "New noise sensitive property built within the Noise Impact Boundary of an existing airport."
- (e) "Those [airports] whose [annual average day/night Airport] noise levels at the appropriate measurement point are exceeded by any noise source external to the [airport] in question."

Additional Comments: Community noise levels due to cars, trucks or other sources in urban areas can exceed Ldn 55 at Noise Sensitive Property. When this occurs, complete elimination of all aircraft noise may make no measurable difference in the total noise level at that site.

FEB 23 1979

RIVER ROAD COMMUNITY ORGANIZATION
A Lane County Chartered Community Organization
EXECUTIVE BOARD

931 River Road
EUGENE, OR 97404
689-6155

February 22, 1979

Environmental Quality Commission
Portland, OR

RE: MORATORIUM ON SUB-SURFACE SEWAGE DISPOSAL SYSTEMS
INSTALLATION - RIVER ROAD/SANTA CLARA AREAS

Dear Commissioners:

The River Road Community Organization requests that public hearings be held on the question of the continuation of the moratorium on septic tank installations in the River Road and Santa Clara areas in Lane County.

While it is true that a study of area groundwater is presently underway, with interim results due for release in March, 1979, the Board feels that an informed decision by the Commission as to the necessity of continuing the moratorium cannot be made solely on the basis of DEQ analysis of technical data. There are many social, economic and political questions which are an integral part of any such decision. Those considerations can best be addressed by taking testimony from the persons most directly affected by the moratorium, i.e. landowners, builders and residents of the area.

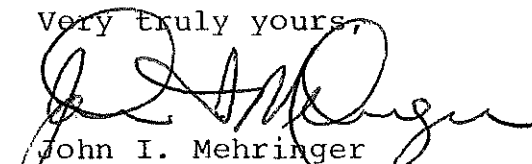
The Board respectfully reminds the Commission that the Lane County Board of Commissioners, in its Resolution # 78-2-22-3, which instigated the moratorium order, resolved the following:

" [This] moratorium shall last only for a six month period"

Finally, we request that any public hearings be held in the River Road or Santa Clara areas, so as to allow access and participation by the maximum number of people desiring to testify. Several suitable facilities for such hearings exist in the area.

Thank you for your consideration of this request.

Very truly yours,



John I. Mehringer
Secretary/Treasurer
River Road Community Organization

February 22, 1979

EGC
Hearing Section

FEB 23 1979

Environmental Quality Commission
of the State of Oregon

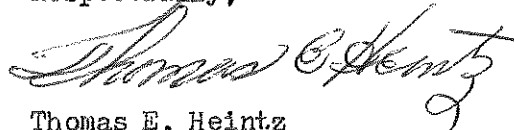
To the Members of the Foresaid Committee:

I wish to complain about you holding a public meeting in Portland on Friday, Feb. 23, 1979. This Moratorium on the River Road/Santa Clara area, matter affects citizens of Lane County. Therefore, it does not pertain to Multnomah County. The input from citizens of River Road/Santa Clara areas, and Public Hearings - meetings should be held at Harris Hall in Eugene, or at North Eugene High School, not the location of Multnomah County.

On late notification, can we have some advance notice (at least two weeks) when you are going to discuss the RR/SC Moratorium? The letter from Roy Burns, Director of Water Pollution Control Division (of Lane County) was dated Feb. 16, 1979 and we received it on Feb. 21, 1979. Now then, I realize that Feb. 16, was on a Friday, and last Monday was a holiday, but surely we should have been notified by phone on Friday. The letter should have been posted out by Friday the same day, not the following Tuesday, Feb. 20, 1979. There is no way under the open meetings law that public board meetings can be arranged, advertized and held in less than 48 hour notice.

Once again, a public meeting, with adiquate notice, should be held on the River Road/Santa Clara Moratorium, and it should be held here in Eugene.

Respectfully,



Thomas E. Heintz
Resident &
Board Member of the River
Road Community Organization

February 22, 1979

Environmental Quality Commission
of the State of Oregon

EQC
Hearing Section

FEB 23 1979

Dear Members of the Board,

It was implied by this board, last spring when you agreed to a Moratorium on the River Road/Santa Clara area, that a public review/hearing would be held in the future on the Moratorium. I was advised by letter less than 48 hours ago of this meeting and that the only input that would be received at this time would be whether to have a public hearing on the moratorium. I trust that since this is the advise to members of the public-that you will allow no other information to be presented at this time, by any department, etc. so as not to be in violation of the public meetings law.

As a Task Force member of the River Road/Santa Clara Task Force, Chairman of the River Road Community Organization, Precinct Committee-person and Resident of the River Road area, supporting the will of the people, I request and insist that it is high time that we have a Public Meeting in an area location convenient to the Citizenry of River Road/Santa Clara, to give input. Commissioners Archie Wienstein, and Vance Freeman (Chairman of the Board and Lane County) also support this request (as do others according to the letters I now hand you). Archie recomends that you consider a public meeting (any day except Tuesday/Wednesday) at Harris Hall, Eugene, Oregon, while Vance Freeman recomends you consider a Public Meeting at North Eugene High School in the River Road/Santa Clara Area. I support and concure with either in hopes of maximum citizen participation.

In regards to a Public Hearing, the citizenry should have adiquate notification, at least of several weeks, and access to all informantion relating to the ajenda items to be discussed. Certainly the Community Organizations should also recieve all available data, information etc., supplied to MWCP, City of Eugene, City of Springfield, EQC, Lane County Boundary Commission, etc. as the Community Organizations of RR/SC are chartered by the County Commissioners to give local input as regards their areas. Further, they should not be caught again in a time/distance/lack of information squeeze in order to do so. That would not be in accordance with the intent of either Federal or State laws regarding public input as regarding governmental decisions.

Respectfully Yours,

Vora E. Heintz
Vora E. Heintz

FEB 28 1979

SANTA CLARA COMMUNITY ORGANIZATION

established
1977

February 22, 1979

Environmental Quality Comm. Board
Portland, Oregon

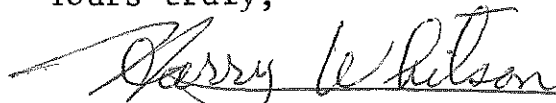
Dear Board members:

The Santa Clara Community Organization wishes to go on record as being in favor of holding a public hearing on the River Road/Santa Clara moritorium. This hearing should be held locally in the area involved, and should have at least two weeks prior publicity.

We feel it is important for the citizens of River Road/Santa Clara to both give input, and gain information on this issue. It is one of extreme importance to the future development of these areas.

Thank you for your time and consideration in this matter.

Yours truly,



Harry Whitson, President



Rey Otto, Secretary

rjo

a local voice in government

FEB 23 1979

468 Durham Av
Eugene, Or. 97404
February 22, 1979

Wora Heintz
1038 Jayne St.
Eugene, Or. 97402

Dear M/S Heintz

Due to such a short notice, I will not be able to attend the DEQ meeting on Friday the 23rd in Portland.

Would you kindly request in my behalf that the DEQ hold a public hearing in Eugene regarding the moratorium in the River Road and Santa Clara areas.

Sincerely,



Rudy Ness -
Member of the Board
Taxpayers Protective Association
of Oregon Inc.

SCHMERER & MEHRINGER

ATTORNEYS AT LAW

SUSAN A. SCHMERER
JOHN I. MEHRINGER

931 RIVER ROAD
EUGENE, OREGON 97404

TELEPHONE
(503) 689-6155

Feb 22, 1979

Environmental Quality Commission
Portland OR

EQC
Hearing Section

FEB 23 1979

Gentlemen:

Please enter my support for holding public hearings on the question of whether the septic tank moratorium should be continued. As a resident and legal professional in the area, I am well aware of the extreme economic consequences of this moratorium.

Any hearings should be held in the River Road or Santa Clara Area

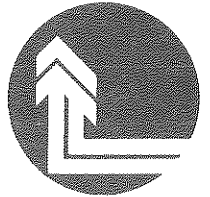
Very truly yours

J. Mehringer

EQC
Hearing Section

FEB 23 1979

lane county



BOARD OF COMMISSIONERS

Vance Freeman
Archie Weinstein
Gerald Rust, Jr.
Otto t'Hooft
Harold Rutherford

February 22, 1979

Environmental Quality Commission
of the State of Oregon

To the Members of the Foresaid Committee:

I, the undersigned Lane County Commissioner, call to your attention that on March 31, 1978, you conducted a hearing in Harris Hall in the Lane County Courthouse wherein a discussion was held on septic tank permits for the River Road/Santa Clara area of Lane County.

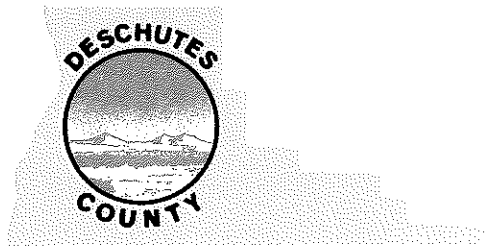
Shortly thereafter, you made a decision placing a moratorium on the septic tank permits in the said River Road/Santa Clara area. It has now been approximately eleven months since you established this moratorium. I believe that as soon as possible your committee should conduct an open public forum and hearing in Eugene in Harris Hall to review the moratorium. A decision should be made based on what has happened in the interim as this moratorium should be lifted.

Personally, as one Commissioner, I believe the moratorium should end as I hereby state in writing you this letter.

Yours very truly,

Archie Weinstein
Lane County Commissioner

AW:rs



N

BOARD OF COMMISSIONERS
BEND, OREGON 97701

Albert A. Young

Clay C. Shepard

Robert C. Paulson

February 21, 1979

Mr. Joe Richards, Chairman
Environmental Quality Commission

Dear Mr. Richards:

The request by Sunrise Village for a variance from D.E.Q.'s regulations requiring municipal control over the service sewage disposal systems does, in our view, go counter to the best development in the Bend Urban Area.

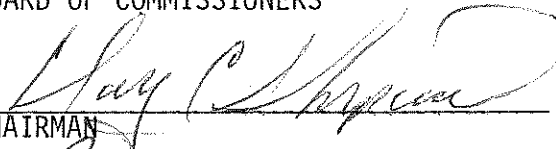
Such a system this near the major sewer system presently being constructed in Bend will duplicate services within a single-service area and will not serve the best interests of the citizens of this community.

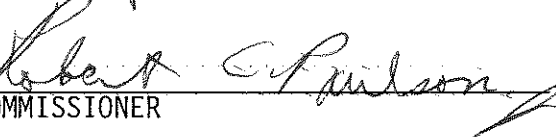
The City of Bend is presently negotiating with the M.R.S. Corporation to take over the water system - a system which is intended to supply the water for Sunrise. If this comes about, the City of Bend will be providing the water for Sunrise, and such a procedure will violate Bend's water policy unless the City sewer service is also to be provided.

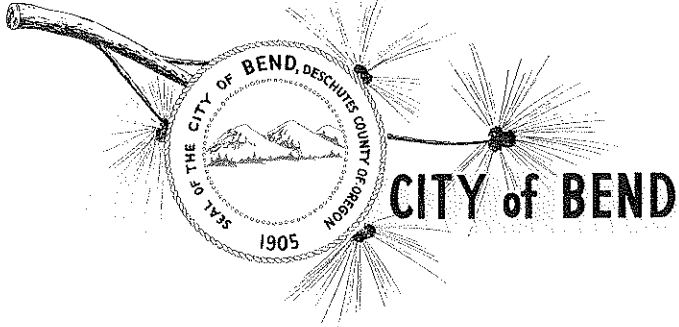
In the interest of the best planning for the Bend Urban Area, it would seem appropriate for Sunrise Village's application to be denied.

Sincerely,

BOARD OF COMMISSIONERS


CHAIRMAN


COMMISSIONER



P.O. BOX 431 • BEND, OREGON 97701 • (503) 382-4211

February 21, 1979

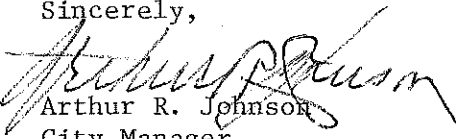
Mr. Joe B. Richards, Chairman
Environmental Quality Commission
P. O. Box 1760
Portland, OR 97202

Re: Agenda Item No. N, Feb. 23, 1979 EQC Meeting
Request by Sunrise Village for a variance to
subsurface sewage disposal rule
OAR 340-71-020(4)

Dear Mr. Richards:

In considering the request for a variance for Sunrise Village Sub-division, the Bend City Commission would like to make it clear that we have negotiated with the developers and desire to work with them. Their sub-division is located within the Bend Urban Growth Boundary and the City Commission believes their property should be included in a regional solution to the sewer problem.

Sincerely,



Arthur R. Johnson
City Manager

ARJ:at

WATER & SEWER COMMITTEE MEETING

Tuesday, January 16, 1979

7:00 a.m. Kopper Kitchen

PRESENT: Dick Carlson, Acting Chairman
Philip Young, Committee Member
Tom Hall, DEQ
Ned Dempsey, BECON
Bob Gladden, "
Walt Lapsely, "
Tim Ward, Sunrise Village
Martin West, " "
Steve Woodruff, Bulletin
Art Johnson, City Manager
Jay Turley, Asst. to City Manager
Jack Donahue, Publ Wks. Director
John Hossick, Planning Director
Tom Gellner, City Engineer

Mayor Dick Carlson called the meeting to order and asked Art Johnson to present the first item of business.

Mr. Johnson introduced a request by Sunrise Village for Water & Sewer Service. Mr. Johnson read a proposed agreement prepared by Sunrise Village for the extension of services. Mr. Johnson indicated that the staff had reviewed the proposed agreement and determined it was not considered a standard agreement. The concerns included off-site improvements and easements, the surcharge, the interim water system and transition method, and the hookup fee.

Tim Ward of Sunrise Village outlined the proposed development to be served which includes 300 units on a community disposal system and 85 lots on individual septic systems. Mr. Ward requested that Sunrise Village pay the sewer surcharge for the units on the community system.

Mr. Johnson explained the hookup fee, the surcharge and the purposes for each. Mr. Johnson indicated that once an agreement is reached and the fees are paid, the City becomes responsible for the maintenance of the disposal system, and eventual extension of the sewer lines.

Mr. Johnson stated that Sunrise is requesting approval for an eventual extension of water service utilizing the Westwood water system on an interim basis. Mr. Johnson indicated that the City should receive clarification on the responsibility for providing off-site easements and the timing of the City assuming responsibility of the system. Jack Donahue stated that the actual lines being installed are up to City standards, however, the proposed interim system would provide sufficient pressure only through the use of pumps. The City system is a gravity feed system and therefore the proposed system is not to City standards. Mr. Donahue indicated an elevated storage tank would be necessary.

Martin West of Sunrise Village indicated that the Westwood system would provide sufficient pressure to meet necessary fire protection flows. Mr. Donahue stated that electric pumps are necessary to provide the pressure. The cost and lack of consistent reliability of pumping are the reasons for elevated storage.

Mayor Dick Carlson said that easements for the water lines should be dedicated to the City at the time development occurs. It should be totally up to the City when the City will take over the system and the agreement should include that capability.

Jack Donahue indicated that the applicant is proposing to pay the surcharge only on the lots using the interim community system. Mr. Donahue stated that the existing policy requires all units within 100 feet of a sewer line to connect to the system. Tom Gellner, City Engineer, stated that approval of this exemption would establish a precedence for similar requests.

Mayor Carlson questioned where the sewer service boundary is located in relation to this proposal. Mr. Carlson indicated that the service boundary should be used in determining whether the surcharge applies. Martin West stated that they initiated the development last June and understood that at that time they were outside the boundary. Ned Dempsey of BECON, stated that funds have been applied for through EPA to study the area. Mr. Dempsey indicated that some flexibility may be possible depending on policies set by the Commission.

Art Johnson stated that the City needs a policy on whether large lots will be served by the sewer system and if a surcharge should be paid. Tom Gellner stated that the past philosophy has been that this is a regional system and the proposal is within the regional area as defined by the Urban Service Boundary. Committee Member Phil Young stated that septic failures could occur, and the DEQ could force annexation and extension of sewer service. If this possibility is not considered during initial development the lines would not be sufficient and no funds would be available to serve the area.

Mayor Carlson indicated that without a Sewer Service Boundary in the area the Urban Service Boundary should be used. Mayor Carlson stated that if you are inside the boundary you should pay. Once a sewer service boundary is established the situation may change.

Martin West questioned what the City is providing Sunrise Village in return for the hookup and surcharge fees. Mr. Johnson stated that the City would assume responsibility for maintenance of the interim system, would extend sewer lines to the development and would reserve capacity at the treatment plant for the development. Mr. Johnson indicated the City would assume complete responsibility for providing and maintaining sewer service.

Mayor Carlson moved to recommend that the surcharge be applied to that area of the development within the Urban Service Boundary. This would apply until such time as the sewer service boundary is established. Mr. Young seconded, motion passed.

Phil Young indicated that the water system proposal still needs to be resolved. Mr. Young pointed out that the City required a similar request by Brooks Resources to build a system which complied with City standards including elevated storage. Mr. Young stated that the Committee should be consistent with requirements. Mr. Young said that no mechanism for financing a reservoir has been established. Mayor Carlson said that the City should review the situation further and would like to discuss it with Brooks Resources. Mayor Carlson indicated that the City needs to be equitable in applying standards and felt that a meeting with Bill Smith of Brooks Resources would be helpful. Mr. Johnson stated he would arrange a meeting. Mr. Johnson indicated the City will prepared proposed service agreements and the water element will be reviewed at the meeting with Brooks Resources.

City Manager Johnson introduced a request to provide service to a proposed North Pilot Butte Medical Center. Mr. Johnson indicated it was the stated intention to provide facilities for 100 doctors, or the equivalent of 67 dwelling units. Mr. Johnson stated that they are requesting an exemption from the moratorium on the basis that they financially participated in the construction of sewer lines in the adjoining Holiday Park Subdivision. Tom Gellner stated that a septic system may be possible and is an alternative that has not been explored.

Mr. Johnson reviewed the 4 criteria for receiving sewer service and stated that this request was not based on any of the criteria. Mr. Johnson stated that the property owners participated in the Holiday Park sewer improvement, however, it was a private agreement between them and Clyde Parcell. The City took no part in the agreement. The existing North Pilot Butte Medical Center is serviced through that system.

Mr. Johnson indicated that there has not been a site plan presented nor any firm development plans. John Hossick indicated the property is presently zoned High Density Residential and could presently be developed at a much higher density than what is currently being discussed. Mr. Hossick felt that committing sewer service to that property may be premature without a specific development plan.

Phil Young stated that an interim system should be considered by the applicant. Mr. Young moved to recommend denial of the request and suggest to the applicant that an interim system be considered. Mayor Carlson seconded the motion - motion passed.

Mr. Johnson presented a draft definition of the Phase I. Ned Dempsey of BECON stated they would like to review the terminology further. Mayor Carlson asked if a line could be drawn based on this definition. Mr. Dempsey indicated that it could be done. Bob Gladden stated a map could become a part of the definition. The Committee felt that a map, attached as an exhibit to the definition, would simplify determining if a particular parcel is in or out of the Phase I area.

Mayor Carlson moved to recommend adoption of the definition. Phil Young seconded.

Mr. Young asked Mr. Dempsey if they could review the definition and present any modifications at the City Commission meeting. Mr. Dempsey indicated they would review the definition and have a recommendation ready at the City Commission meeting. It was agreed to withdraw the motion for adoption.

There being no further business before the Committee, the meeting was adjourned.

Respectfully submitted,

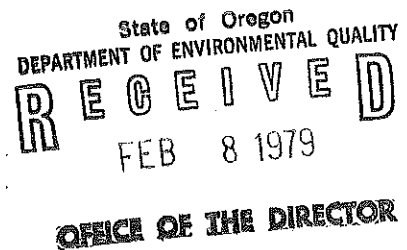
Jay Turley
Jay Turley
Asst. to City Manager



2151 N. E. FIRST STREET, BEND, OREGON 97701

February 5, 1979

State of Oregon
Environmental Quality Commission
522 SW Fifth Street
P. O. Box 1760
Portland, Oregon 97207



Attention: The Commission and DEQ Director, William H. Young

Re: Sunrise Village
Deschutes County

Dear Commissioners:

On January 26, 1979 your honorable commission unanimously approved Sunrise Village's community sewer system provided the systems compatibility with Statewide Land Use Goals has been tested by the County, its design is approved by DEQ, and it is maintained and operated by a municipality.

These requirements appeared to be satisfactory to us as from the onset of our development we have recognized and respected the fundamental purposes they served and have strived to meet their ends.

Regretfully, we have just come to realize several problems associated with the forming of a sanitation district as a means to complying with the municipality requirement. These problems are as follows.

1. We hadn't expected regional DEQ manager, Mr. Dick Nichols, would work in opposition to EQC's rulings by continuing to encourage Deschutes County and the City of Bend to resist the formation of a district so as to cause us to acquiesce to his persistent position of having a sewer agreement with the City.
2. The City of Bend apparently dosen't favor special districts out of fear the districts will grow in size and compete with the City for State and Federal dollars.
3. Were it not for Mr. Nichol's position regarding a sewer agreement with the City (a position not supported by the commission)

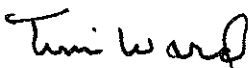
the marketing of our development would not have been delayed since May 26, 1978. As it is, we've incurred great expense and a tightening market without any cash flow. An additional 100 plus days delay in marketing while a sanitation district is being formed would cause us further, more serious financial hardship.

It would now appear that at the January 26, 1979 hearing the Commission touched upon a satisfactory solution to these problems when it referenced the alternative to a municipality of our posting a \$25,000. bond. The provisions of ORS 454.425 bolstered by our incorporated homeowners association with the resources, management and enforcement powers would equal if not exceed the same force and effect of a sanitation district while enabling us to make needed sales and dispensing with the Cities fears relative to special districts. Furthermore, we have a planned unit development subdivision improvement and maintenance agreement with Deschutes County which is a condition and covenant running with the land and binding upon the property wherein the County may perform by enforceable lien the improvement, maintenance and upkeep of the development should we fail to do so.

For these reasons we respectfully request our community sewer system be approved subject to the conditions set forth on January 26, 1979 with the exception of substituting the provisions of ORS 454.425 augmented by our homeowners association in place of the municipality requirement. In the event the system is acquired or its operation and maintenance is assumed by the County, City or a special district, the homeowners association will relinquish its responsibility for the system.

We are most grateful for your thoughtful consideration of our matter and hope it can be decided upon at or before your February hearing.

Very truly yours,



Tim Ward
Vice President, Sunrise Village

CC: Ross Mather
Marty West
Gray, Fancher, Holmes and Hurley



October 17, 1978

OFFICE OF
THE MAYOR
NEIL GOLDSCHMIDT
MAYOR

1220 S. W. FIFTH AVE.
PORTLAND, OR. 97204
503 246-4120

Mr. Bill Young, Director
Department of Environmental Quality
522 Southwest Fifth
P. O. Box 1760
Portland, Oregon 97207

Dear Mr. *Bill* Young:

Attached is a copy of testimony which the City of Portland presented to the Washington State Ecological Commission on October 12, 1978, and a letter which was sent to the Clark County Commission in June, both concerning an inspection maintenance program for Clark County, Washington. An identical letter was sent to the Mayor of Vancouver at the same time.

If you have any thoughts concerning this matter please let us know.

Sincerely,

Neil Goldschmidt
Neil Goldschmidt, Mayor

NG:CK:rg

Attachment

✓ cc: Environmental Quality Commission

Management Services Div.
Dept. of Environmental Quality
RECEIVED
OCT 26 1978



Management Services Div.
Dept. of Environmental Quality

R E C E I V E D
OCT 26 1978

OFFICE OF
THE MAYOR
NEIL GOLDSCHMIDT
MAYOR

1220 S. W. FIFTH AVE.
PORTLAND, OR. 97204
503 248-4120

DR. ARPAD MASLEY, CHAIRMAN
ECOLOGICAL COMMISSION
OLYMPIA, WA. 98504

TESTIMONY PRESENTED TO THE
WASHINGTON STATE ECOLOGICAL COMMISSION
ON OCTOBER 12, 1978

THE STATES OF OREGON AND WASHINGTON SHARE A COMMON AIRSHED. EVEN THOUGH THE CONTROLS WHICH ARE IMPLEMENTED TO MANAGE THIS AIRSHED ARE SEPARATED INTO TWO STATE IMPLEMENTATION PLANS, IT IS EXTREMELY IMPORTANT THAT OUR STATES DEVELOPE THESE CONTROLS IN A COORDINATED AND SUPPORTATIVE MANNER.

TODAY I WOULD LIKE TO SPECIFICALLY ADDRESS THE USE OF AN INSPECTION AND MAINTENANCE PROGRAM FOR MOTER VEHICLES AS AN AIR POLLUTION CONTROL MEASURE IN CLARK COUNTY.

THE OREGON PORTION OF THIS AIR QUALITY MAINTENANCE AREA CURRENTLY HAS A BI-ANNUAL INSPECTION PROGRAM. THE OREGON LEGISLATURE WILL CONSIDER INITIATING AN ANNUAL PROGRAM DURING ITS NEXT SESSION.

THERE ARE THREE REASONS WHICH WE FEEL SUPPORT THE IMPLEMENTATION OF A SIMILAR PROGRAM IN THE CLARK COUNTY PORTION OF THE AIR QUALITY MAINTENANCE AREA. I WOULD LIKE TO HIGHLIGHT EACH OF THESE FOR THE COMMISSION'S CONSIDERATION.

1. THE STATES SHARE A COMMON PROBLEM IN THE AREA OF PHOTOCHEMICAL OXIDANTS FOR WHICH BOTH STATES HAVE BEEN DESIGNATED NON-ATTAINMENT. FIGURES SHOW THAT THE MOTOR VEHICLE IS THE SOURCE OF 68% OF THE HYDROCARBONS AND 56.2% OF THE OXIDES OF NITROGEN WHICH ARE DISCHARGED INTO THE ATMOSPHERE AND, IN THE PRESENCE OF SUNLIGHT, FORM PHOTOCHEMICAL OXIDANTS. PRELIMINARY CALCULATIONS SHOW THAT THE EXISTING INSPECTION PROGRAM IN OREGON HAS

BEEN DIRECTLY RESPONSIBLE FOR A 10% REDUCTION IN HYDROCARBONS.

THESE FIGURES WILL INCREASE SUBSTANTIALLY IF AN ANNUAL INSPECTION PROGRAM IS INITIATED.

2. IN ADDITION TO THE PHOTOCHEMICAL OXIDANT NON-ATTAINMENT DESIGNATION, THE OREGON SIDE OF THE AIRSHED HAS BEEN DESIGNATED AS NON-ATTAINMENT FOR CARBON MONOXIDE. CONGRESS HAS PASSED EMISSION CONTROLS FOR AUTOMOBILES PRODUCED AFTER 1981. EVEN WITH THESE EMISSION FACTORS, THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) HAS DETERMINED THAT THERE WILL BE CARBON MONOXIDE VIOLATIONS THROUGH 1990 ON MOST OF THE MAJOR HIGH DENSITY CORRIDORS IN AND AROUND PORTLAND.

SINCE I-5 NORTH IS ONE OF THE MAJOR CORRIDORS WHICH IS PROJECTED TO BE IN VIOLATION OF THE AIR QUALITY STANDARDS FOR CARBON MONOXIDE THROUGH 1990, A PRIMARY CONCERN FOR THE CITY OF PORTLAND IS THE AMOUNT OF POLLUTION PROVIDED BY CLARK COUNTY VEHICLES AND THE ESTIMATED REDUCION WHICH COULD BE ANTICIPATED THROUGH THE USE OF AN INSPECTION PROGRAM WHICH COVERS THESE VEHICLES.

AN IMMEDIATE CONCERN TO THE CITY IS THE NUMBER OF COMMUTERS WHO WORK AND DRIVE INTO THE PORTLAND AIR QUALITY MAINTENANCE AREA ON A REGULAR BASIS BUT LIVE IN AREAS OUTSIDE OF THE INSPECTION AREA. AT LEAST 15% OF THE CARS CURRENTLY USING THE DOWNTOWN AREA OF PORTLAND ALONE, ARE NOT COVERED BY THE EXISTING PROGRAM.

WHILE IT IS UNKNOWN HOW MANY CLARK COUNTY RESIDENTS WORK IN THE PORTLAND AREA, THE TRAFFIC PROBLEMS RESULTING ON THE I-5 BRIDGE DURING PEAK HOUR TRAFFIC ALONE LEAD US TO BELIEVE THAT THE NUMBER AND IMPACT ON AIR QUALITY IS SUBSTANTIAL.

IN 1977, WE ESTIMATED THERE WERE APPROXIMATELY 192,000 PEOPLE

3

EMPLOYED IN THE CITY. OF THIS TOTAL, 103,000 LIVE IN PORTLAND AND THE REMAINDER IN THE FOUR-COUNTY AREA, INCLUDING CLARK COUNTY, WASHINGTON. SINCE 97% OF ALL COMMUTER TRAFFIC FROM CLARK COUNTY IS AUTO TRAFFIC, WE CONCLUDE THAT THIS IS HAVING AN IMPACT ON THE QUALITY OF THE PORTLAND AIRSHED.

THE CURRENT DEQ INSPECTION PROGRAM HAS CONTRIBUTED SIGNIFICANTLY TO THE CONTROL OF THE CARBON MONOXIDE PROBLEM. SINCE ITS INCEPTION IN 1973, THE INSPECTION PROGRAM HAS PROVIDED AN ESTIMATED 12% REDUCTION IN CARBON MONOXIDE WITHIN DOWNTOWN PORTLAND ALONE, WITH SUBSTANTIAL CITY AND AREA-WIDE REDUCTIONS AS WELL. DEQ ESTIMATES THAT, IN THE LONG-RUN, THE BI-ANNUAL INSPECTION PROGRAM WILL PROVIDE FOR A 16% REDUCTION AND AN ANNUAL PROGRAM WOULD PROVIDE A 40% REDUCTION.

3. THE CLEAN AIR ACT AMENDMENTS WHICH YOU ARE DISCUSSING TODAY, SET DECEMBER 31, 1982 AS THE DATE BY WHICH NATIONAL AMBIENT AIR QUALITY STANDARDS MUST BE MET. IN THE CASE OF PHOTOCHEMICAL OXIDANTS AND CARBON MONOXIDE, A FIVE-YEAR EXTENTION (UNTIL DECEMBER 31, 1987) IS ALLOWABLE IF IT CAN BE DEMONSTRATED THAT IMPLEMENTATION OF ALL REASONABLE CONTROL MEASURES WOULD NOT BRING THE AIRSHED INTO ATTAINMENT BY THE END OF 1982. ONE OF THESE REASONABLE CONTROL MEASURES IS IMPLEMENTATION OF AN ANNUAL INSPECTION PROGRAM.

THIS BRINGS UP THE QUESTION OF WHETHER OR NOT EPA WOULD EXTEND THE DATE FOR AN AIRSHED WHICH DOES NOT HAVE AN INSPECTION PROGRAM WHICH COVERS THE ENTIRE AIRSHED. THIS IS A SERIOUS PROBLEM WHICH COULD AFFECT THE PERFORMANCE OF THE OVER ALL CONTROL STRATEGIES IN THE AREA AND HAVE SUBSTANTIAL IMPLICATIONS FOR BOTH STATES IF STANDARDS ARE NOT MET BY 1982.

BOTH STATES ARE CURRENTLY PURSUING VOLATILE ORGANIC COMPOUND (VOC) CONTROLS WHICH WOULD ASSIST IN HYDROCARBON REDUCTIONS AND THEREFORE PHOTOCHEMICAL OXIDANT REDUCTIONS. THE CITY OF PORTLAND STRONGLY SUPPORTS THE STATE OF WASHINGTON ON THIS EFFORT. HOWEVER, BASED ON THE MAGNITUDE OF THE PROBLEM

AND THE COMMENDABLE RESULTS FROM THE OREGON INSPECTION PROGRAM SO FAR, WE FEEL THAT A VOC PROGRAM ALONE WILL NOT PROVIDE SUFFICIENT CONTROLS.

IN ORDER TO FAIRLY DISTRIBUTE THE RESPONSIBILITY FOR IMPROVING THE QUALITY OF AIR IN THIS AREA TO ALL JURISDICTIONS WHO HAVE A PART IN PRODUCING THE POLLUTION AND TO ASSIST IN MEETING THE NATIONAL AMBIENT AIR QUALITY STANDARDS IN A TIMELY MANNER, THE CITY OF PORTLAND REQUESTS THAT THE ECOLOGICAL COMMISSION CONSIDER A RECOMMENDATION TO THE DIRECTOR OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY WHICH SUPPORTS THE IMPLEMENTATION OF AN INSPECTION PROGRAM IN THE CLARK COUNTY AREA..

THE CITY OF
PORTLAND



OREGON

June 8, 1978

OFFICE OF
THE MAYOR

NEIL GOLDSCHMIDT
MAYOR

1220 S. W. FIFTH AVE.
PORTLAND, OR 97204
503 248-4120

Dean Cole
Chairman of the Board
Clark County Commission
P.O. Box 5000
Vancouver, WA 98663

Dear Mr. Cole:

As we are all aware, in August of 1977 the United States Congress passed clean air act amendments which require areas found to be in non-attainment of National Ambient Air Quality Standards to develop an attainment plan by January of 1979. The Portland Metropolitan area, as well as Clark County, have been designated as non-attainment for various categories of pollutants.

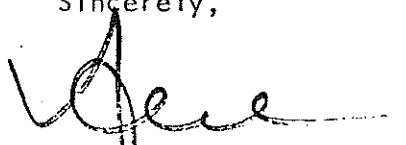
In 1975 the Oregon Legislative Assembly gave authority for the area within the boundaries of the Metropolitan Service District to implement an automobile inspection and maintenance program administered by the State Department of Environmental Quality. At the current time that program is conducted biannually and is designed to reduce the amount of pollutants attributed to the automobile within our air shed. Even with this program the Portland A.Q.M.A., including Clark County, has been designated as a non-attainment area for photo-chemical oxidants. If it is determined that the existing programs will not bring this area into attainment by 1983, the Oregon State Department of Environmental Quality plans to investigate the implementation of an annual inspection program. A commitment to implement an annual program is also necessary in order to qualify for the 5 year extension available for meeting photo-chemical oxidants and carbon monoxide standards. I would be most interested in receiving information from your office as to what plans Clark County has for the consideration of an automobile inspection and maintenance program.

Since a significant amount of the commuter traffic which comes into the Portland area is from Clark County, Washington, we are not able to overlook the pollution this contributes to our existing air quality program. I have asked the Oregon State Department of Environmental Quality to include in their initial Legislative package to the Executive Department, a proposal which would allow for an automobile inspection

and maintenance program of commuter traffic from Clark County, Washington. That, however, is certainly not the best solution to the problem; and if, in fact, you are considering such a program within your own boundaries, I would certainly be interested in knowing about it, and would like the opportunity to discuss it with you.

We all share a common goal of wanting to have our air quality program be successful and allow continued economic development so that the job base of our communities may continue to grow. We believe that this will take the concentrated effort of all parties involved, and that every possible solution should be evaluated. We certainly look forward to working with you on the question of how best to comply with the clean air act amendments.

Sincerely,

A handwritten signature in black ink, appearing to read "Neil Goldschmidt", with a horizontal line extending to the right.

Neil Goldschmidt
MAYOR

NG/mku

cc: Honorable Robert Straub
Governor

Mr. Don Clark, Chairman
Multnomah County Commission

Mr. Bill Young
DEQ

Mr. Denton Kent, Executive Director
CRAG

Commissioner Francis Ivancie
Commissioner Charles Jordan
Commissioner Connie McCready
Commissioner Mildred Schwab

STATEMENT OF THE WESTERN OIL & GAS ASSOCIATION
BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE
STATE OF OREGON
SALEM, OREGON
FEBRUARY 24, 1978

Re: Proposed Regulations For Controlling Air
Contaminant Emissions From Crude Oil Tankers

I am Bob Wrede. I am appearing on behalf of the Western Oil & Gas Association, which is composed of the bulk of the producers, refiners, and marketers of petroleum products in the western United States. Needless to say, regulations such as those currently under consideration by this Commission would have a substantial impact on a vital aspect of the petroleum industry.

Our association supports responsible environmental regulations. By responsible regulations, we mean regulations which demonstrably contribute to achieving a reasonable balance between both socio-economic and environmental needs. We oppose the adoption of the regulations currently before you because we do not believe that adequate consideration has been given to:

1. the environmental benefits which might be gained by their adoption;
2. the socio-economic costs of such regulations; or
3. the operational problems these regulations would create.

In the first place, the memorandum proposing these regulations^{1/} contains nothing to show that these regulations are necessary to the attainment and maintenance of applicable ambient air quality standards or to prevent significant deterioration of air quality in the state of Oregon. Unfortunately, a number of the assertions made in the memorandum are without basis in fact. For example, with respect to the provision limiting the sulfur content of fuel to be burned in crude oil tankers the memorandum states, "Ports in California are limiting the % sulfur in fuel oil burned by vessels. The most stringent rule is the Port of Ventura's, which limits vessels to fuel oil of about 0.5% sulfur." This statement is simply untrue. There is no regulation anywhere in California, of which we are aware, which limits the percentage of sulfur in fuel oil which may be burned by vessels visiting ports in that state. Ventura has no such rule and is not currently actively considering any such rule.

Nor does the memorandum indicate current ambient levels of sulfur oxides in the vicinity of Port Westward or the probable air quality impacts of either the assumed emissions of sulfur oxides from tankers visiting the proposed GATX terminal or the probable beneficial impacts, if any there may be, from limiting those emissions in the fashion proposed. Nor has any consideration been given to the cost of complying with such

^{1/} Memo re Agenda Item K, January 26, 1978, EQC Meeting Crude Oil Tanker Rules - Authorization for Public Hearing, Department of Environmental Quality, January 11, 1978.

regulations other than observing that, "Some tankers have several fuel oil tanks, one of which can be dedicated to low sulfur fuel oil" This obviously implies that other tankers do not have this capability, a fact which would necessitate costly vessel modifications and, as I will discuss later, a fact which raises serious legal problems regarding the authority of any state to regulate instruments of interstate commerce and international trade, or to interfere with the Coast Guard regulation of navigation.

Similarly, the memorandum contains no technical justification for the imposition of limitations on ballasting and inerting crude oil tankers. No indication is given of the current ambient levels of hydrocarbons, or the impact which these regulations might be expected to have on those levels. The sole justification set forth in the memorandum for imposing these requirements is based on the supposition that hydrocarbons emitted as a result of possible ballasting or inerting operations at the terminal, combined with oxides of nitrogen from tankers and trains serving the terminal, and the nearby PGE Beaver turbine power plant, ". . . could drift down wind, be acted upon by sunlight, and cause photochemical oxidant standards to be exceeded." This supposition, however, is unsupported by either data or scientific analysis. The fact is that hydrocarbons, in and of themselves, are not generally considered harmful. It is only in combination with oxides of nitrogen, in the presence of sunlight, that they can--under the

proper circumstances--form photochemical oxidants, sometimes referred to as smog. This process is such a highly complex one that in some cases decreases in the so called precursors, that no reactive hydrocarbons and oxides of nitrogen, may have no effect whatever on the formation of smog and can even increase its formation. Until the environmental implications of the proposed regulations and the cost of complying with them are more fully understood, we do not believe they should be adopted by this Commission.

As I have already suggested, the proposed regulations also pose a significant legal problem. As the Department of Environmental Quality's supporting memorandum observes, both ballasting and inerting are regulated by the Coast Guard. This regulation is an exercise of the Constitutional power of the federal government to regulate navigation. Further, tankers are instruments of interstate commerce and international trade, topics which are also Constitutionally regulated by the federal government.

Because the federal government is charged with regulating, and in fact regulates, both the operation and design of tankers, serious doubts exist as to the power of any state to impose requirements which could conflict with federal regulation in the field.

Without going into boring detail, the supremacy clause of our federal Constitution^{2/} provides that, in any case

^{2/} U.S. Constitution, Article VI, § 2.

where there is a discernible conflict between federal law and just about anything a state does, federal law prevails. Since the Coast Guard already regulates the design and operation of tankers, it is highly doubtful that a state may regulate in a fashion affecting either tanker design, such as a provision necessitating the addition of extra fuel tanks or that a state may regulate tanker operations, such as the proposed requirement that only 25% ballast be allowed in crude tankers within the jurisdiction of the state of Oregon.

To illustrate, the application of this principle in a case now pending before the United States Supreme Court, a United States District Court found that the federal Ports and Waterways Safety Act^{3/} preempted the state of Washington from regulating oil tankers operating in the Puget Sound. Arco v. Evans, U.S. Dist. Ct., W.D. Wash., No. 75-648 (Sept. 1976), probable jurisdiction noted, 97 S.Ct. 1172 (1977). The District Court held:

"The purpose of the original tank vessel act, and of Title II of PWSA was to establish a uniform set of regulations governing the types of ships permitted within coastal waters of the United States and the conditions under which they would be permitted to operate. Balkanization of regulatory authority over this most interstate, even international of transportation systems is foreclosed by the national policy embodied in the PWSA."^{4/}

^{3/} 46 U.S.C.A. § 391a.

^{4/} Memorandum Opinion at p. 3.

By adopting the Ports and Waterways Safety Act Congress expressed a clear intent that uniformity be assured by reserving to the federal government all power to control the design, construction, maintenance and operation of tankers. We believe that principle casts grave doubts on the validity of the regulations before you today.

There are other troublesome ramifications with respect to state efforts to regulate in fields expressly reserved to the federal government by the Constitution, such as treaty preemption, the exclusivity of federal authority over foreign affairs, and the federal power to regulate interstate commerce. Rather than discussing each of those topics in my oral presentation, I have for each of you a copy of a presentation made on behalf of the Western Oil & Gas Association before the California Air Resources Board during the course of their consideration of similar rules for the South Coast Air Basin which goes into those topics in some depth. I commend it to those who wish to delve into these problems in greater detail.

Suffice it to say that our federal system is designed to prevent undue state interference with matters which require a national perspective. It is difficult to imagine a field of regulation in which the national interest in uniformity is greater than the transporting of crude oil in interstate and international commerce. For this reason the federal government has cooperated with the international community by participat-

ing in what is known as the Intergovernmental Maritime Consultative Organization, a body charged, among other things, with promulgating uniform international environmental regulations. Also, it has given the Coast Guard the responsibility of controlling the design, construction, maintenance, and operation of vessels carrying crude oil to protect the country's interests in both safety and preservation of the environment. The answer is clear. International, national and state interests can be best served by uniform regulation. Unilateral state action simply cannot cope with the magnitude of the problem and therefore must give way.

Thirdly, the regulations are operationally unsound. The low sulfur fuel rule presents technical problems the elimination of which may necessitate expensive vessel modifications requiring Coastal Guard approval. The portion of the rule limiting ballasting is unwise. Each vessel has its own stability and maneuvering characteristics. These characteristics must be matched to the local weather conditions in order to determine the amount of ballast the vessel requires for safe navigation. Any rule limiting the amount of ballast a vessel may take could result in an unsafe situation. Finally, we believe there is some confusion regarding inert gas systems. Under normal conditions, vessels will not emit more pollutants than vessels without such systems.

Please understand that our comments are being offered with a constructive purpose. The issues involved are

exceedingly complex. It is this complexity which we believe demands careful justification for any attempts to regulate in this field. Because neither environmental nor legal justification for the proposed regulations has yet been established, we respectfully submit that they should not be adopted at this time.

Thank you for your patient attention. I would be pleased to answer any questions you may have regarding my comments to the best of my ability.

CERTIFICATION FOR TAX CREDITS
ON POLLUTION CONTROL FACILITIES
REPLACEMENT BOILERS AND FUEL DRYER SYSTEM

A REPORT TO
STIMSON LUMBER COMPANY
FOREST GROVE, OREGON

BY
DAVID C. JUNGE, Ph.D.
REGISTERED PROFESSIONAL ENGINEER
CORVALLIS, OREGON

NOVEMBER 13, 1978

SUMMARY AND CONCLUSIONS

Stimson Lumber Company operates a wood processing plant at Forest Grove, Oregon. Faced with two boilers which marginally met the emission limitations of opacity and concentration of particulate matter and which required major repairs for safe operation, they committed the investments required to replace the two boilers. Concern over air pollution from the existing boilers was a major influencing factor in their decision because of their location relative to a major recreational area.

The replacement program also included the installation of a fuel dryer, an air heater, significant modifications to their feedwater treatment system, redesign of the combustion chambers for the boilers, maintenance on particle collection systems, installation of classifier screens, and installation of various instruments to monitor and control the combustion process to limit air pollution emissions. These portions of the program were directed at reducing air pollutant emissions.

The result of the completed facility will be to reduce air pollutant emissions by approximately 103 tons per year. In addition, it will result in energy conservation of Oregon's renewable energy resources equivalent to 50,000 barrels of oil per year.

The total renovation project will cost Stimson Lumber Company approximately \$1,000,000. The company has requested and been denied certification for tax credits on investments of \$250,000 directly related to air pollution reduction. The purpose of this report is to clarify the impact of the overall project on reduction of air pollutants and to show the importance of the components of the system in reducing air pollution.

Oregon Revised Statutes are presented where appropriate to show that the air pollution portion of the facilities complies with the definitions and intent of the Statutes.

TABLE OF CONTENTS

Section	Description	Page
1	Introduction	1
2	Location of the Facilities	2
3	Description of the Wood Fired Boilers and Fuel Dryer System	2
4	Regulations Affecting Boiler Exhaust Gas Emissions	5
5	The Effect of Emission Regulations on Total Annual Boiler Emissions	7
6	Construction and Installation of Equipment to Improve Boiler Efficiency and Reduce Annual Emissions of Air Contaminants	8
7	Construction and Installation of Equipment to Meet Stringent Limitations of Concentration of Air Contaminants and Opacity	12
8	Regulations Pertaining to Pollution Control Facilities Tax Credit	18
	Bibliography	20
	Appendix A - Engineering Calculations	21

LIST OF TABLES

<u>Table No.</u>	<u>Description</u>	<u>Page</u>
1	Comparison of Original Boilers and Replacement Boilers in Terms of Their Rated Capacities and Plant Steam Demand	3
2	Comparison of the Effects of Emission Regulations on Annual Emissions of Particulate From Original and Replacement Boilers	7
3	Summary of the Benefits of the Fuel Dryer System	9
4	Summary of the Benefits of the Air Preheater System	10
5	Summary of the Benefits of the Feedwater Treatment System	11
6	Summary of the Effects of Fuel Dryer, Air Preheater and Feedwater Treatment Systems on Reduction of Air Contaminant Emissions and Energy Conservation	12
7	Summary List of Investments Made by Stimson Lumber Company Which Will Result in Decreased Emissions of Air Contaminant Materials Released to the Atmosphere	17

LIST OF FIGURES

<u>Figure No.</u>	<u>Description</u>	<u>Page</u>
1	Plot of Adiabatic Flame Temperature of Wood Fuels vs. Percent Moisture in the Fuel	4
2	Graphic Illustration of the Reduction in Air Pollutant Emissions Resulting From Replacement Boiler Complex	13

1. INTRODUCTION

On January 10, 1978, the Stimson Lumber Company of Forest Grove, Oregon, submitted a Notice of Intent to Construct and Request for Preliminary Certification for Tax Credit. The Notice and Request were in regard to the planned installation of two new wood fired boilers and a system in which to dry the wood prior to burning it in the boilers. The Notice and Request were submitted to the State of Oregon, Department of Environmental Quality in keeping with the provisions of ORS 468.165 (1977 Replacement Part).

On February 24, 1978, the Environmental Quality Commission (EQC) of the State of Oregon acted to deny the request for Preliminary Certification for Tax Credit for the wood drying system.(1) On April 28, 1978, the EQC acted to deny the request for Preliminary Certification for Tax Credit for the two wood fired boilers.(2)

At the request of Stimson Lumber Company, a study of the facilities was made by an independent Consultant Engineer. The objectives of the study included the following:

- 1) To evaluate the new boiler installation and fuel dryer installation in terms of their impacts upon reduction of air pollutant emissions. Within reasonable limits, to specify the impact of the pertinent components of the systems upon reduction of pollutant emissions.
- 2) To clearly define which of the system components should be considered for tax credits according to the Policy Statement of ORS 468.160.

ORS 468.160 Policy. In the interest of the public peace, health and safety, it is the policy of the State of Oregon to assist in the prevention, control and reduction of air, water and noise pollution and solid waste in this state by providing tax relief with respect to Oregon facilities constructed to accomplish such prevention, control and reduction.

2. LOCATION OF THE FACILITIES

Stimson Lumber Company operates a mill on the outskirts of Forest Grove, Oregon. The mill site is at the base of the Scoggins Valley Dam, a recreational area used for hiking, camping, and related water sports.

3. DESCRIPTION OF THE WOOD FIRED BOILERS AND FUEL DRYER SYSTEM

In early 1978 a program was undertaken by the Company to upgrade its wood combustion facilities. Two existing boilers were to be replaced with new boilers. The existing boilers were marginally sized to meet the steam generation requirements of the mill, particularly under conditions of peak steam demand. During high steam demand periods, the visual emissions from the boiler "smoke stacks" frequently exceeded the allowable levels of opacity. No citations were received by the Company for opacity violations. However, the Company recognized the importance of meeting both present and future emission standards on a continuing basis. Their location adjacent to a recreation area augmented the concern over reduction of pollutant emissions.

Inspection of the boilers indicated that substantial maintenance work was required in order to insure the structural integrity and safe operation of the boilers. Had such maintenance work been carried out, the boilers would still be subject to high opacity levels during periods of peak steam demand due to their size.

Taking these factors into account, the Company decided to replace the boilers with two new units. In making this decision, no consideration was given to increasing the steam demand of the plant site. No production expansions were planned or anticipated.

The two original boilers had a combined maximum steam generating capacity of 81,272 pounds of steam per hour. The replacement boilers have a combined maximum steam generating capacity of 106,000 pounds of steam per hour. (These ratings are based on 100% of rated load).

The average steam demand of the plant site is 60,000 pounds of steam per hour (PPH). Peak steam demand is approximately 100,000 PPH. Thus, the original boilers operated at an average of 74% of their rated capacity. However, peak steam demands required that the boilers operate at 123% of their rated capacity - a substantial overload.

By comparison, the replacement boilers will operate at an average of 57% of their rated capacity. Peak steam demands will require the boilers to operate at 94% of their rated capacity - well within their design capability. This increased capacity was provided to insure that the boiler exhaust gas stream would not exceed the allowable standards of opacity even under conditions of high steam demand, and that it would meet the requirements for concentration of particulate matter. Table 1 summarizes the comparison of steam generating capacity for the old boilers and the new boilers.

	Original Boilers	Replacement Boilers
Combined maximum design steam generating capacity for both boilers (PPH)	81,272	106,000
Annual average plant steam demand (PPH)	60,000	60,000
Average boiler load (% of rated capacity)	74	57
Peak plant steam demand (PPH)	100,000	100,000
Peak boiler load (% of rated capacity)	123	94

Table 1: Comparison of Original Boilers and Replacement Boilers in Terms of Their Rated Capacities and Plant Steam Demand

Both the original boilers and the replacement boilers are of the "Dutch Oven" design. The new boilers are manufactured by Babcock and Wilcox Company. The installation was done by Stimson Lumber Company. More complete information on the specific details of the boilers is on file with the Oregon Dept. of Environmental Quality.

Fuel Dryer System

Wood residue fuels burned in the boilers are generated from a variety of processes on the plant site. The fuel includes sawdust, planer shavings, bark, sanderdust, residue material from a hardboard plant, and yard cleanup material. The moisture content of the fuel is dependent upon the process that generates the fuel and upon seasonal conditions. The fuel is stored outside in a pile where it takes on high moisture levels from rain, particularly during the winter months.

The moisture content of wood fuels has a significant impact on their complete combustion in the boiler. If the moisture level is very high (i.e., if it exceeds 55% on an "as-is" basis), the presence of the water in the combustion chamber significantly lowers the temperature in the combustion chamber. This is indicated below in Figure 1.

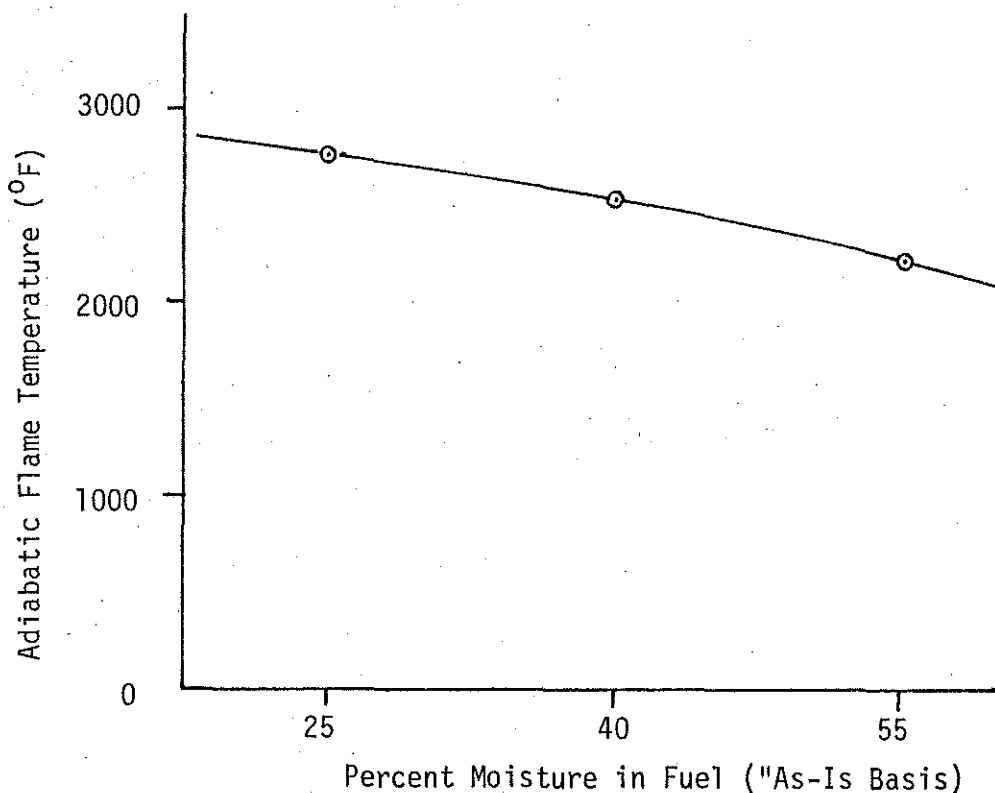


Figure 1: Plot of Adiabatic Flame Temperature of Wood Fuels vs. Percent Moisture in the Fuel - Plot is for 310°F Combustion Air

The reduction of combustion chamber temperatures slows the rate of combustion and may prevent the complete combustion of the wood fuel. This results in formation of air pollutant materials which are emitted from the exhaust gas stack.

If the moisture level exceeds 67% on an "as-is" basis, the fire will be extinguished. Auxiliary fossil fuels must then be used to assist in the combustion process for steam generation.

Operating experience at the plant site indicated that during periods of prolonged rain the moisture levels in the fuel were in excess of 60% and that opacity levels in the exhaust gas stream were frequently in excess of the allowable limits, particularly during periods of peak steam demand. Based on the successful installation of fuel drying systems by other wood products processing plants (3), the Company decided to install a fuel drying system.

In this system, wet fuel is passed through a rotary drum dryer. Heat energy is supplied to the dryer from the high temperature exhaust gases of the boiler. The exhaust gases leaving the dryer are passed through an inertial separator system to remove entrained particulate matter. A fan systems "pulls" the exhaust gases through the dryer and "pushes" them through an exhaust gas stack where they are emitted to the atmosphere.

4. REGULATIONS AFFECTING BOILER EXHAUST GAS EMISSIONS

Chapter 340 of the Oregon Administrative Rules, Sections 21-015 and 21-020 pertain to limitations of opacity and concentration of particulate matter from boilers using wood residue fuels. Under these rules, the original boilers were subject to opacity limitations of 40% and concentration limitations of 0.2 grains per standard dry cubic foot of gas corrected to 12% CO₂.

The replacement boilers are categorized as "new sources" and are subject to opacity limitations of 20% and concentration limitations of 0.1 grains per standard dry cubic foot of gas corrected to 12% CO₂.

- Section 21-015: VISIBLE AIR CONTAMINANT LIMITATIONS. (1) Existing Sources Outside Special Control Areas. No person shall cause, suffer, allow, or permit the emission of any air contaminant into the atmosphere from any existing air contaminant source located outside a Special Control Area for a period or periods aggregating more than 3 minutes in any one hour which is:
- (a) As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, or
 - (b) Equal to or greater than 40% opacity.
- (2) New Sources in All Areas and Existing Sources Within Special Control Areas: No person shall cause, suffer, allow, or permit the emission of any air contaminant into the atmosphere from any new air contaminant source, or from any existing source within a Special Control Area, for a period or periods aggregating more than 3 minutes in any one hour which is:
- (a) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, or
 - (b) Equal to or greater than 20% opacity.
- (3) Exceptions to 21-015 (1) and 21-015 (2).
- (a) Where the presence of uncombined water is the only reason for failure of any emission to meet the requirements of Section 21-015 (1) and 21-015 (2), such sections shall not apply.
 - (b) Existing fuel burning equipment utilizing wood wastes and located within Special Control Areas shall comply with the emission limitations of Subsection 21-015 (1) in lieu of Subsection 21-015 (2).

- Section 21-020: FUEL BURNING EQUIPMENT LIMITATIONS. No person shall cause, suffer, allow, or permit the emission of particulate matter, from any fuel burning equipment in excess of:
- (1) 0.2 grains per standard cubic foot for existing sources; or
 - (2) 0.1 grains per standard cubic foot for new sources.

5. THE EFFECT OF EMISSION REGULATIONS ON TOTAL ANNUAL BOILER EMISSIONS

The original two boilers were tested to determine if they were in compliance with the emission regulations. Tests conducted by the firm Seton, Johnson, and Odell indicated that the boilers were in compliance with the concentration and opacity regulations at the time of testing.

Calculations were made to determine the average annual amount of particulate which would be expected from the original boilers if they just met the 0.2 gr/SDCF concentration limitation. (See Appendix A, Calc. A-1). The calculations indicate that the average annual emission rate from the two boilers would be 191.6 tons of particulate per year.

The replacement boilers, subject to the more restrictive limit of 0.1 gr/SDCF would emit 95.8 tons of particulate per year if operated under conditions similar to the original boilers. The effect of the regulations is summarized in Table 2.

	Original Boilers	Replacement Boilers
Opacity Limitations (%)	40	20
Concentration Limitation (gr/SDCF at 12% CO ₂)	0.2	0.1
Average Annual Emissions of Particulate Matter From Combined Boilers (Tons/Year)*	191.6	95.8

*Assumes that the boilers are operating at identical levels of efficiency and that emissions just meet the required levels.

Table 2: Comparison of the Effects of Emission Regulations on Annual Emissions of Particulate from Original and Replacement Boilers

By undertaking the replacement of the two original boilers instead of making major repairs to those boilers, Stimson Lumber Company committed themselves to meeting stringent emission limitations for both opacity and concentration of particulate matter. This commitment plus increases in overall boiler efficiency will result in reduction of air pollution emissions of approximately 103 tons per year. (See Figure 2, p. 13)

The present emission regulations of the Oregon DEQ do not place limits on the total annual emissions from wood fired boilers - only on the concentration of emissions in the exhaust gas stream. The total annual emissions are directly related to the annual total steam generated and to the thermal efficiency of the boiler complex.

In making design decisions regarding the replacement boilers, the Company did not consider options for increased annual steam generation. However, they did make specific decisions which result in thermal efficiency improvements for the boilers. These efficiency improvements result in reduced annual emissions of particulate matter. Each of the decisions and the resultant decrease in emissions of air pollutants is discussed.

6. CONSTRUCTION AND INSTALLATION OF EQUIPMENT TO IMPROVE BOILER EFFICIENCY AND REDUCE ANNUAL EMISSIONS OF AIR CONTAMINANTS.

Installation of the Fuel Dryer System

The installation of a fuel drying system for any wood fired boiler complex results in the following benefits:

- 1) The use of lower moisture level fuels in the boiler will result in increased temperature levels in the combustion chamber. The increased temperature levels bring about more complete combustion of the wood fuel and, thus, reduce the possibility of generating air contaminant materials in the combustion process.
- 2) Water in the wood fuel requires energy to evaporate. This energy detracts from the available energy for steam production in the boiler. Thus, more wet fuel is required to generate a given amount of steam than would be required if the fuel were dry. For example, if the replacement boilers continued to use wet fuel, it would require an average of 30,082 pounds of wet fuel per hour to meet the average annual steam demand of the plant. By drying the fuel in the dryer system, the fuel requirement is reduced to 25,089 pounds per hour to meet the same steam demand. (See Appendix A, Calc A-2). The fuel dryer, therefore, results in significant energy conservation.

- 3) As noted in (2) above, the fuel dryer installation results in fuel savings of 4993 pounds of fuel per hour (30,082 - 25,089). Since less fuel has to be burned to meet the steam demand, there is less exhaust gas emitted to the atmosphere. Assuming that the exhaust gas particulate concentration is 0.1 gr/SDCF, the reduced emissions of exhaust gas result in reduced total annual emissions of air contaminants equal to 7.0 tons per year.

In summary, the installation of the fuel dryer results in:

- a) More complete combustion of the fuel
- b) Significant energy conservation
- c) Significant reduction of air contaminant emissions.

	Without Fuel Dryer	With Fuel Dryer
Approximate Boiler Thermal Efficiency (%)	62*	65*
Average Annual Fuel Use (Wet Lbs/Hr)	30,082	25,089
Allowable Particulate Emissions (Tons/Yr)	95.8	88.8
Reduction of Pollutant Emissions (Tons/Yr)		7.0
Energy Conservation Annually (Equivalent Barrels of No. 6 Fuel Oil Per Year)		18,095

*Assumes the use of an air preheater for both cases and the use of the feedwater treatment system.

Table 3: Summary of the Benefits of the Fuel Dryer System

Installation of Air Preheaters

Air preheater systems are not commonly used on wood fired boilers. It is estimated that less than 50% of the wood fired boilers in use today are equipped with such systems.(4) The benefits of using air preheaters are well documented, however, and include: 1) Increased thermal efficiency; 2) More complete combustion of the wood fuel; 3) Reduced fuel useage; and 4) Reduced total annual emissions of air contaminants to the atmosphere.

Acknowledging these positive benefits, Stimson Lumber Company decided to install air preheaters on both replacement boilers.** Calculations were made to determine the magnitude of the benefits (See Appendix A, Calc. A-3). The results of the calculations are shown below in Table 4.

	Without Air Preheater	With Air Preheater
Approximate Boiler Thermal Efficiency (%)	57.5*	62*
Average Annual Fuel Use (Wet Lbs/Hr)	34,437	30,082
Allowable Particulate Emissions (Tons/Yr)	103.3	95.8
Reduction of Pollutant Emissions (Tons/Yr)		7.5
Energy Conservation Annually (Equivalent Barrels of No. 6 Fuel Oil Per Year)		15,794

* Assumes that no fuel dryer is present in the complex

Table 4: Summary of the Benefits of the Air Preheater System

Revisions to the Boiler Feedwater System

In their program to upgrade the boiler complex at the plant site, Stimson Lumber Company determined that improvements were warranted to their boiler feedwater treatment system. The original feedwater treatment system resulted in high solids levels in the boiler water and it was necessary to "blow down" a high percentage of the boiler water to prevent plugging in the tubes and drums.

High "blow down" rates had several environmental drawbacks. The water blow out of the drum increased their emissions of contaminated water to the environment both in terms of its solids content and its high temperature. Further, since the water had to be heated and was then blown out of the boiler before it could be used for plant steam requirements, a significant amount of additional fuel was required in the boiler. This, in turn increased total annual emissions of air contaminants from the boiler and reduced boiler thermal efficiency.

** Air preheaters were used on the originally installed boilers but they required substantial updating and repair in order to use them on the replacement boilers.

Thus, the Company installed a new feedwater treatment system to improve the quality of boiler water and reduce the "blow down" rate. The immediate impact of this change was seen in reduced fuel usage. Calculations were made (See Appendix A, Calc. A-4) to determine the impact of this system on air contaminant emissions and energy conservation. The results of these calculations are shown in Table 5.

	Without Feedwater Treatment	With Feedwater Treatment
Approximate Boiler Thermal Efficiency (%)	54.1	62.0
Average Annual Fuel Use (Wet Lbs/Hr)	34,482	30,082
Allowable Particulate Emissions (Tons/Yr)	109.8	95.8
Reduction of Pollutant Emissions (Tons/Yr)		14.0
Energy Conservation Annually (Equivalent Barrels of No. 6 Fuel Oil Per Year)		15,952

*Assumes the use of an air preheater but no fuel dryer

Table 5: Summary of the Benefits of the Feedwater Treatment System

The three systems described above (the fuel dryer, the air preheater, and the feedwater treatment system) are each independent systems which did not have to be included in the plans to replace the original boilers. However, because of their environmental and energy conservation benefits, the Company chose to make the required investments and to include them in their overall program to upgrade the boiler complex at the plant site.

By making this investment, the total annual emissions of air contaminant materials from the boiler complex will be reduced by approximately 28.5 tons per year. The energy conserved annually at the plant site will be equivalent to almost 50,000 barrels of oil.

Note that the Company was not required by present regulations to make either of these three installations. The primary regulatory limitation pertains to the concentration of air contaminant materials. It places no limit on the annual total tonnage of materials which may be emitted from the plant site.

It should also be noted that the energy conservation commitment of the Company will result in substantial reduction in the renewable resource fuels required for steam generation. However, the economic returns of these conservation measures will be only a small fraction of the equivalent cost of 50,000 barrels of No. 6 fuel oil. The combined effects of the three installations upon reduced air contamination and energy conservation are indicated in Table 6 and shown graphically in Figure 2, p. 13.

	Reduced Annual Air Pollution (Tons/Yr)	Energy Conservation (Bbls Oil/Yr)
Fuel Dryer System	7.0	18,095
Air Preheater System	7.5	15,794
Feedwater Treatment System	14.0	15,592
Totals	28.5	49,841

Table 6: Summary of Effects of Fuel Dryer, Air Preheater, and Feedwater Treatment Systems on Reduction of Air Contaminant Emissions and Energy Conservation

7. CONSTRUCTION AND INSTALLATION OF EQUIPMENT TO MEET STRINGENT LIMITATIONS ON CONCENTRATION OF AIR CONTAMINANTS AND OPACITY

As noted on page 7 of this report, by undertaking the installation of two replacement boilers, the Company committed themselves to meeting concentration limits of 0.1 gr/SDCF @ 12% CO₂ and opacity limits of 20%. In order to meet these limits, specific engineering decisions were made to provide the equipment necessary, and to modify existing equipment so that it would perform satisfactorily. Each component of equipment is discussed.

ESTIMATED ANNUAL EMISSIONS OF PARTICULATE AIR CONTAMINANTS (TONS/YEAR)

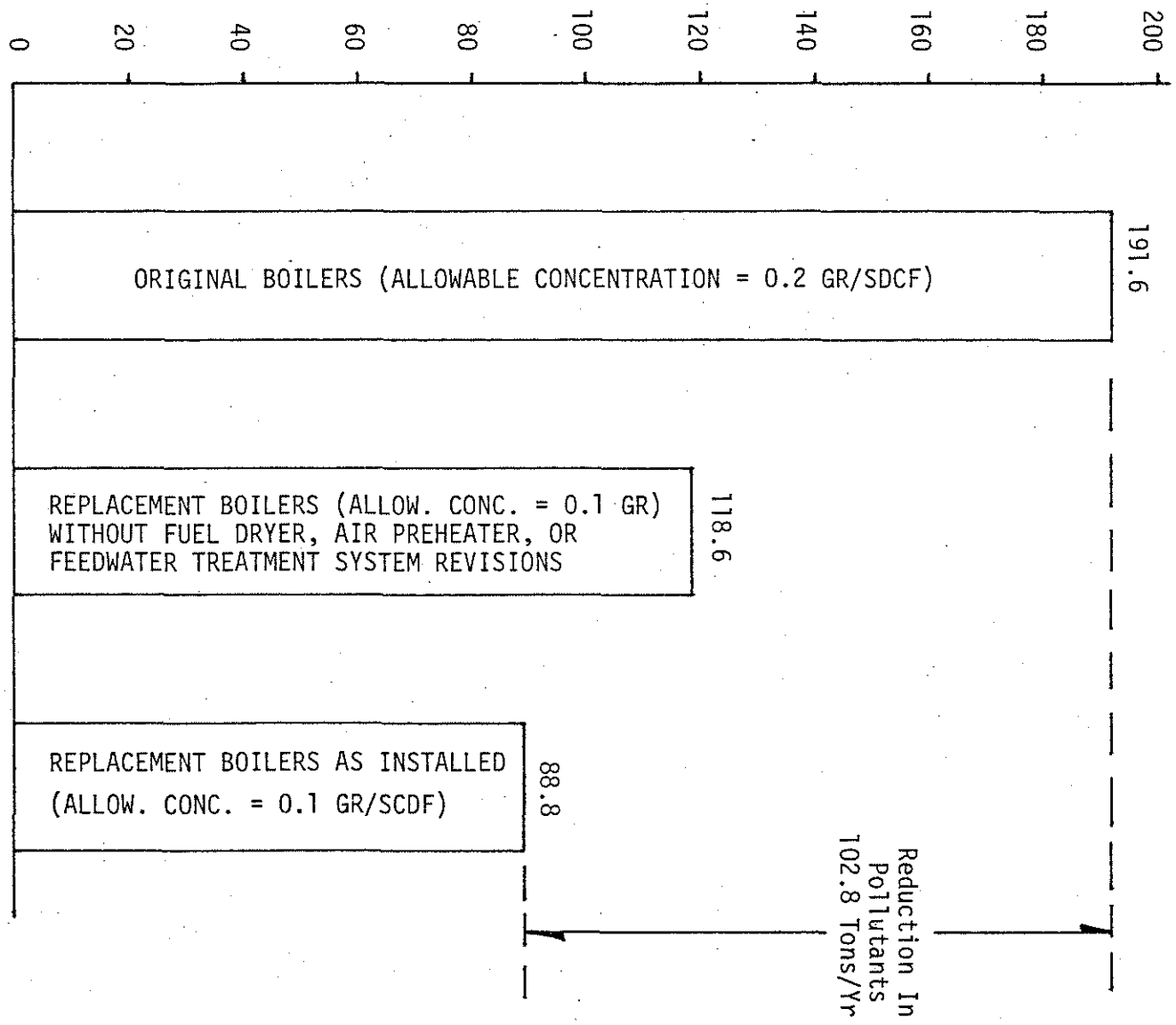


Figure 2: Graphic Illustration of the Reduction in Air Pollutant Emissions Resulting from the Replacement Boiler Complex

Design of the Dutch Ovens

The two replacement boilers are furnished by Babcock and Wilcox. However, only the steam generation part of the boilers is provided by B & W. The combustion portion of the boilers (that area of the boiler complex where the fuel is burned to release its heat energy) is supplied and fabricated by Stimson Lumber Company. The particular design of this section of the boiler is called a "Dutch Oven".

The volume of the Dutch Oven is very important in the design. It must be sufficiently large to maintain relatively low air velocities. High air velocities in the oven will entrain partially burned wood fuel and generate air contaminant materials.

The original two boilers had a combined volume of 7,006 cubic feet in the ovens. The two replacement boilers will have a combined volume of 11,776 cubic feet. The larger volume will reduce the gas velocities to low levels and avoid entrainment of particulate matter in the exhaust gas stream.

It should be noted that a major portion of the cost of a boiler of the Dutch Oven design is in the brickwork required to construct the oven. It would have been more economical to build smaller ovens with higher gas velocities. However, in an effort to insure complete combustion of the wood fuel in the oven, the Company decided to construct ovens with 67% more volume than the original boilers. The added expenditure was principally to insure compliance with the emission regulations.

To further insure complete combustion of the wood fuel, the ovens are equipped with secondary air ports downstream from the primary combustion chamber. The addition of these ports serves no other purpose than to provide combustion in the proper location for complete burning of the fuel. Most Dutch Ovens operating today are not equipped with such ports. However, the Company felt that the investment was warranted in light of the necessity for complete combustion in order to meet the air emissions limitations.

In every wood fired boiler plant, equipment failures occur and often result in upset conditions in the boilers. The Company recognizes that from time to time their fuel handling and drying system will deliver wet fuel to the boilers due to equipment failures. Since wet fuel will result in substantial combustion upsets and will result in high opacity levels in the exhaust stack, the new boilers are equipped with auxiliary oil burners. These can be used during periods of light off and during periods of combustion upsets to raise the temperature of the Dutch Oven rapidly and bring about complete combustion of the wet fuel.

The cost to install and to operate this system is substantial. Its primary purpose is to control emissions of air contaminant materials from the boilers during periods of light off and combustion upsets.

Repairs and Modifications to the Particulate Collection System

Hot gases leaving the boilers are ducted to a multiple cyclone for particulate removal. Two multiple cyclone systems are installed at the plant site. As a part of the boiler replacement program, one of these multiple cyclone systems will undergo complete maintenance service. This will include replacement of bent and warped plates, inspection and replacement of eroded tubes, and inspection and repairs to inlet and outlet ducts. The other multiple cyclone system is only 5 years old, and though inspection is planned, the need for maintenance repairs is not anticipated.

These systems are provided for the sole purpose of removing air contaminant materials from the boiler exhaust gas stream. All expenses incurred in restoring them to good operating condition for use with the replacement boilers and in ducting them to the boilers are justified only in attempting to meet the stringent exhaust gas concentration and opacity requirements.

In the original installation of the multiple cyclone systems, all of the cinders and ash materials collected by the systems were re-injected back into the Dutch Ovens. This served to increase air contaminant emissions

to a limited extent. It also resulted in increased tube erosion in the boilers and in buildup of ash and dirt in the boilers.

To limit the entrainment of air contaminants in the combustion chamber, the multiple cyclone systems were equipped with classifier screens. These screens are placed at the outlet of the solids collection portion of the multiple cyclones and are used to segregate the small fractions of the collected material from the larger size fractions. The small fractions, containing principally inorganic ash, sand, dirt, etc. are used for land fill. The larger size fractions are high in combustible material which is ducted back to the Dutch Oven for complete combustion.

Because one of the primary purposes of installing classifier screens is to reduce air contaminant discharge, a substantial portion of the cost is justified to meet the stringent emission limitations.

Installation of Monitoring Instruments

To comply with the air emission regulations for the replacement boilers, the operator must have instruments to monitor the combustion process and the emissions generated by the process. Without these instruments he cannot properly control the variables affecting the process.

Recognizing the need for such instruments, the Company has invested in Smoke Density Meters for each boiler. These instruments continuously monitor the opacity of the exhaust gas stream and provide information that the operator can use to improve combustion conditions.

In addition, closed circuit TV cameras have been installed to monitor the opacity of the exhaust gas stacks - another information source for the boiler operator's control use.

Finally, the Company will install continuous oxygen analyzers on each boiler to provide the operator with information on the critical fuel:air ratio. By knowing the level of excess air in the combustion chamber, the operator will be enabled to significantly improve his control of the combustion process in the Dutch Ovens.

Each of these monitoring systems is provided to upgrade the capability of the boiler operator to control the combustion process and, thereby, to reduce the formation and entrainment of air contaminant materials in the boiler. The investment in these systems for purchase, installation, and maintenance is substantial and is justified solely for the purpose of meeting the requirements in emissions limitations.

In brief summary of the foregoing, the Company recognizes that control of air contaminants and conservation of our energy resources are important goals. Faced with the two boilers that required major maintenance work and which only marginally complied with opacity limitations, they elected to make major investments to upgrade the boiler complex. In doing so, they committed themselves to meeting much more stringent emission limitations. Major investments were made in the following areas:

-
- 1) Installation of a fuel dryer system
 - 2) Repairs to and installation of an air preheater system
 - 3) Improvements to the feedwater treating system
 - 4) Increased volume in the Dutch Ovens
 - 5) Addition of secondary air ports in the Dutch Ovens
 - 6) Installation of auxiliary fuel oil burning systems
 - 7) Repairs to multiple cyclones
 - 8) Installation of classifying screens
 - 9) Installation of opacity meters
 - 10) Installation of TV monitors
 - 11) Installation of continuous oxygen monitors

Table 7: Summary List of Investments Made by Stimson Lumber Company Which Will Result in Decreased Emissions of Air Contaminant Materials Released to the Atmosphere

The items summarized in Table 7 each play important roles in the reduction of air contaminant emissions from the plant site. Obviously additional substantial investments were made in the complex but not for purposes of limiting air contaminant discharge.

8. REGULATIONS PERTAINING TO POLLUTION CONTROL FACILITIES TAX CREDIT

ORS 468.150 through ORS 468.190 deal with Pollution Control Facilities Tax Credit. ORS 468.155 defines "pollution control facility" to mean ".....any ... structure, installation, machinery, equipment or device, or any addition to, reconstruction of or improvement of .. an existing structure, installation, machinery, equipment or device reasonably used, erected, constructed or installed by any person if a substantial purpose of such use, erection, construction, or installation is the prevention, control or reduction of air, pollution by:

- (b) The elimination of or redesign to eliminate air contaminants or air pollution or air contamination sources

Based on the independent Consultant Engineer's review of the boiler complex at the Stimson Lumber Company plant site, it is apparent that the a substantial purpose of their program to upgrade the boiler complex is the prevention and control of air pollution. If the control of air pollutants from the plant site had not been a substantial purpose in the program, then it would have been economical for the Company to simply rebuild the existing boilers and not make the investment for the fuel dryer, the feedwater treatment system, and all of the other additions to the boiler discussed in this report. However, the Company recognized the need for significant reduction of their air pollutant emissions and committed the required investment to upgrade their facilities.

ORS 468.165 deals with application for certification of pollution control facilities. Under this section, "Any person may apply to the commission for certification under ORS 468.170 of a pollution control facility or facilities or portion thereof erected, constructed or installed by him in Oregon if:

- (a) The substantial purpose of the facility is to utilize material that would otherwise be solid waste as defined by ORS 459.005 by burning or use of materials for their heat content..."

The boiler complex at the mill site is designed to burn waste and residue wood as fuel and to burn it for its heat content. It seems apparent that the facility complies with ORS 468.160 in that regard.

The Company has committed an investment of \$600,000 to the program to upgrade its boiler complex. The job will be complete by January 1, 1979 and will cost in excess of \$1,000,000. Of this amount it seeks tax credit for \$250,000 for pollution control. The result of the installation will be to reduce air pollutant emissions from the plant by approximately 103 tons of particulate matter per year. Further benefits of the investment will be to conserve Oregon's renewable resources by an equivalent of 50,000 barrels of oil annually.

As it is the stated policy of the regulations to "...assist in the ... reduction of air ... pollution by providing tax relief with respect to Oregon facilities constructed to accomplish such ... reduction" and since the facilities which have been included in the request for tax credit certification meet the definitions and requirements, this engineer would urge that the request for certification of tax credit be granted.

BIBLIOGRAPHY

1. Letter from William Young, Director Oregon DEQ to Mr. Keeney, Plant Manager, Stimson Lumber Co., Dated March 2, 1978.
2. Letter from William Young, Director Oregon DEQ to Mr. Keeney, Plant Manager, Stimson Lumber Co., Dated May 2, 1978.
3. Fuel dryers installed by Weyerhaeuser Company at Cosmopolis, WA and Longview, WA.
4. Estimate based on the authors experience in visiting over 60 wood fired boiler installations located in the U.S.
5. Steam, It's Generation and Use, 38th edition published by Babcock and Wilcox Company, page 13-5.
6. Boilers Fired With Wood and Bark Residue. Res. Bul. No. 17, Forest Research Laboratory, Oregon State University, Corvallis, Or. p. 18.

APPENDIX A

CALCULATIONS

Calc. A-1

Determination of annual emissions from original and replacement boilers.

Avg. annual steam demand = 60,000 pph

Assume: 24 hrs/day

360 days/yr

1060 btu input to steam/lb of steam

62% thermal efficiency in both original and replacement boilers

55% avg. fuel moisture (as-is basis)

8800 btu/dry lb of fuel

Heating value of fuel: $8800 \times (1.00 - 0.55) = 3960$

$- 0.55 \times 1000 = -550$

3410 $\frac{\text{btu}}{\text{lb}}$

Fuel use rate = $60,000 \frac{\text{lb}}{\text{hr}} \times 1060 \frac{\text{btu}}{\text{lb}} \times \frac{1}{0.62} \frac{\text{btu}}{\text{btu}_{\text{in}}} \times \frac{\text{lb fuel}}{3410 \text{ btu}_{\text{in}}}$

= 30,082 wet lbs of fuel/hr.

Dry fuel use = $30,082 \times (1. - .55) = 13,537 \frac{\text{dry lbs fuel}}{\text{hr}}$

Exhaust gas = $114.7^* \frac{\text{SDCF} - \text{exhaust gas}}{\text{lb dry fuel @ 50\% excess air}}$

output of particulate matter/yr $\times 13,537 \frac{\text{dry lbs fuel}}{\text{hr}} \times 0.2 \frac{\text{gr}}{\text{SDCF}}$

$\times 24 \frac{\text{hrs}}{\text{day}} \times 360 \frac{\text{days}}{\text{yr}} \times \frac{1}{7000} \frac{\text{lb}}{\text{gr}} \times \frac{1}{2000} \frac{\text{ton}}{\text{lb}}$

= 191.6 $\frac{\text{tons}}{\text{yr}}$ for original boilers

*See Ref. 6 for exhaust gas products per lb of dry fuel burned @ 50% excess air.

The annual output for replacement boilers is $\frac{1}{2}$ the output for original boilers since the allowable concentration for replacement boilers is 0.1 gr/SDCF @ 12% CO₂ and the allowable concentration for original boilers is 0.2 gr/SDCF @ 12% CO₂. Therefore, annual output for replacement boilers is $191.6/2 = 95.8$ tons/yr.

Calc. A-2

Determination of boiler efficiency increase due to dryer fuel.

Original average fuel moisture is estimated to be 55% on as-is basis. The fuel dryer reduces fuel moisture by an estimated 12% according to tests conducted at the mill site. However, not all fuel fed to the boilers goes through the dryer. The author conservatively estimates that the average fuel mix is:

40% dry fuel @ (55 - 12)% moisture
60% wet fuel @ 55% moisture.

The resultant fuel quality will be:

$$0.40 \times (1.00 - 0.55 + 0.12) + 0.60 \times (1.00 - 0.55) = \frac{0.50 \text{ lb dry wood}}{\text{lb wet fuel}}$$

Therefore, "dry" fuel fed to boilers is estimated to have average moisture content = 50%

At 50% moisture, the net lower heating value of the fuel is estimated to be:

$$0.50 \times 8800 = 4400 \text{ btu/dry lb of wood}$$

$$\text{less } 0.50 \times 1000 = \frac{500}{3900} \text{ btu/lb of wood burned.}$$

The use of wood @ 50% moisture content rather than 55% moisture is estimated to increase the boiler efficiency by 3%. Note: This is a conservative estimate. Therefore, with fuel at 50% moisture, boiler efficiency is assumed to be 65%.

Calc. of fuel use with 50% moisture fuel:

$$60,000 \frac{\text{lb stm}}{\text{hr}} \times 1060 \frac{\text{btu}}{\text{lb}} \times \frac{1}{0.65} \frac{\text{btu}_{\text{in}}}{\text{btu}} \times \frac{\text{lb wood}}{3900 \text{ btu}} = 25,089 \frac{\text{lb}}{\text{hr}}$$

Calc. of annual pollutant emissions with 50% moisture fuel @ 0.1 gr/SDCF @ 12% CO₂ (50% excess air).

$$25,089 \frac{\text{lbs}}{\text{hr}} \times 0.50 \frac{\text{lb dry fuel}}{\text{lb wet fuel}} \times 114.7 \frac{\text{SDCF ex. gas}}{\text{lb dry fuel}}$$

$$0.1 \frac{\text{gr}}{\text{SDCF}} \times \frac{1}{7000} \frac{\text{lb}}{\text{gr}} \times \frac{1}{2000} \frac{\text{ton}}{\text{lb}} \times 24 \frac{\text{hrs}}{\text{day}} \times 360 \frac{\text{days}}{\text{yr}} = 88.8 \frac{\text{tons}}{\text{yr}}$$

Determination of energy conserved by using dry fuel:

$$\text{Fuel use rate with 55\% moisture fuel} = 30,082 \frac{\text{lbs}}{\text{hr}}$$

$$\text{Fuel use rate with 50\% moisture fuel} = 25,089 \frac{\text{lbs}}{\text{hr}}$$

$$\text{Difference} = (30,082 - 25,089) = 4993 \frac{\text{lbs wet fuel}}{\text{hr}}$$

The energy savings are:

$$4993 \frac{\text{lb wet fuel}}{\text{hr}} \times 3410 \frac{\text{btu}}{\text{lb wet fuel}} \times 0.62 \frac{\text{btu}_{\text{out}}}{\text{btu}} \times 24 \frac{\text{hr}}{\text{day}} \\ \times 360 \frac{\text{days}}{\text{yr}} = 9.12 \times 10^{10} \frac{\text{btu}}{\text{yr}}$$

The equivalent energy of 1 barrel of No. 6 fuel oil is:

$$42 \frac{\text{gal}}{\text{bbl}} \times 8.0 \frac{\text{lb}}{\text{gal}} \times 18,300 \frac{\text{btu}}{\text{lb}} \times 0.82 \frac{\text{btu}_{\text{out}}}{\text{btu}_{\text{in}}} = 5.04 \times 10^6 \frac{\text{btu}}{\text{bbl}}$$

Therefore, the energy conserved is equivalent to:

$$\frac{9.12 \times 10^{10}}{5.04 \times 10^6} = 18,095 \frac{\text{bbls No. 6 fuel oil}}{\text{yr}}$$

Calc. A-3

This calculation assumes that no fuel dryer is used. Therefore, average annual fuel use = 30,082 lbs of fuel per hr @ 62% thermal efficiency.

The air preheater supplies combustion air at 325° F. From Ref. (5), the increase in boiler efficiency resulting from preheated air @ 325°F compared to ambient air temperature is approximately 4.5%.

Therefore, fuel use without air heater would be:

$$60,000 \frac{\text{lb stm}}{\text{hr}} \times 1060 \frac{\text{btu}}{\text{lb}} \times \frac{1}{(0.62-0.045)} \frac{\text{btu}_{\text{in}}}{\text{btu}} \times \frac{\text{lb wood}}{3410 \text{ btu}} \\ = 32,437 \frac{\text{lb wood}}{\text{hr}}$$

The emission rate from the boilers would be:

$$32,437 \frac{\text{lb wood}}{\text{hr}} \times 0.45 \frac{\text{lb dry wood}}{\text{lb wood}} \times 114.7 \frac{\text{SDCF exh. gas}}{\text{lb dry wood}} \\ \times 0.1 \frac{\text{gr}}{\text{SDCF}} \times \frac{\text{lb}}{7000 \text{ gr}} \times \frac{\text{ton}}{2000 \text{ lb}} \times 24 \frac{\text{hr}}{\text{day}} \times 360 \frac{\text{days}}{\text{yr}} = 103.3 \frac{\text{tons}}{\text{yr}}$$

Calc. A-3 continued

From calculation (A-1), the annual emission rate with an air preheater = 95.8 tons/yr.

Therefore, reduction in annual emissions would be $103.3 - 95.8 = 7.5$ tons/yr.

The energy conserved by using an air preheater = $34,437 - 30,082 = 4,355$ lb of wet wood/hr.

$$4,355 \frac{\text{lb wet wood}}{\text{hr}} \times 3410 \frac{\text{btu}}{\text{lb wet wood}} \times 0.62 \frac{\text{btu}_{\text{out}}}{\text{btu}}$$

$$\times 24 \frac{\text{hrs}}{\text{day}} \times 360 \frac{\text{days}}{\text{yr}} = 7.96 \times 10^{10} \frac{\text{btu}}{\text{yr}}$$

The equivalent energy of 1 bbl of No. 6 fuel oil is 5.04×10^6 $\frac{\text{btu}}{\text{bbl}}$.
(See Calc. A-2)

Therefore, the equivalent energy conserved = $\frac{7.96 \times 10^{10}}{5.04 \times 10^6} = 15,794$ $\frac{\text{bbls.}}{\text{yr}}$.

Calc. A-4

The company reported an immediate drop in the fuel use rate of 1 unit of fuel per hour when the revised feedwater system was installed.

This is equivalent to:

$$1 \frac{\text{unit fuel}}{\text{hr}} \times 200 \frac{\text{ft}^3}{\text{unit}} \times 22 \frac{\text{lbs}}{\text{ft}^3} = 4400 \frac{\text{lbs fuel}}{\text{hr}}$$

The thermal efficiency of the boiler without the revisions to the feedwater system is calculated as:

$$\text{Wood use} = \begin{array}{r} 30,082 \text{ wet lbs/hr} \\ + 4,400 \\ \hline 34,482 \text{ wet lbs/hr} \end{array} \text{ assuming use of wet fuel @ 55\% moisture and the use of an air preheater.}$$

$$\text{Efficiency} = 60,000 \frac{\text{lb stm}}{\text{hr}} \times \frac{1060 \text{ btu}}{\text{lb stm}} \times \frac{\text{hr}}{34,482 \text{ wet lb fuel}}$$

$$\times \frac{\text{wet lb fuel}}{3410 \text{ btu}} = 54.1\%$$

Calc. A-4 continued

The annual emissions of particulate from the system without the feedwater treatment system are calculated as:

$$34,482 \frac{\text{wet lbs wood}}{\text{hr}} \times 0.45 \frac{\text{lb dry wood}}{\text{lb wet wood}} \times 114.7 \frac{\text{SDCF exh}}{\text{lb dry wood}}$$

$$\times 0.1 \frac{\text{gr}}{\text{SDCF}} \times \frac{\text{lb}}{7000 \text{ gr}} \times \frac{\text{ton}}{2000 \text{ lb}} \times 24 \frac{\text{hr}}{\text{day}} \times 360 \frac{\text{days}}{\text{hr}} = 109.8 \frac{\text{tons.}}{\text{hr}}$$

The reduction in annual pollutants =

$$\begin{array}{r} 109.8 \\ - 95.8 \\ \hline 14.0 \text{ tons} \\ \text{yr} \end{array}$$

The energy conserved by the feedwater treatment system =

$$4400 \frac{\text{lb wet wood}}{\text{hr}} \times 3410 \frac{\text{btu}}{\text{lb wet wood}} \times 0.62 \frac{\text{btu}_{\text{out}}}{\text{btu}}$$

$$\times 24 \frac{\text{hr}}{\text{day}} \times 360 \frac{\text{days}}{\text{yr}} = 8.04 \times 10^{10} \frac{\text{btu}}{\text{yr}}$$

The equivalent energy of a barrel of No. 6 fuel oil is $5.04 \times 10^6 \frac{\text{btu}}{\text{bbl}}$
(See Calc. A-2).

Therefore, the energy conserved is equivalent to $\frac{8.04 \times 10^{10}}{5.04 \times 10^6} = 15,952 \frac{\text{bbls}}{\text{yr}}$

Calc. A-5

If the company had elected to forego the fuel dryer, the air preheater, and the improvements to the feedwater treatment system, the fuel would be 55% moisture (average). The additional energy consumed by the boilers would be equivalent to 49,841 bbls of No. 6 fuel oil or:

$$49,841 \times 5.04 \times 10^6 = 2.51 \times 10^{11} \frac{\text{btu}}{\text{yr}}$$

The present steam demand of the plant site on an average annual basis is:

$$60,000 \frac{\text{lb}}{\text{hr}} \times 1060 \frac{\text{btu}}{\text{lb}} \times 24 \frac{\text{hr}}{\text{day}} \times 360 \frac{\text{days}}{\text{yr}} = 5.50 \times 10^{11} \frac{\text{btu.}}{\text{yr}}$$

Calc. A-5 continued

The present boiler efficiency using the fuel dryer, the air preheater and the improved feedwater system is estimated to be 65%. Therefore, the present energy input to the boilers is calculated as:

$$5.50 \times 10^{11} \times \frac{1}{0.65} = 8.46 \times 10^{11}$$

The heat input required without the fuel dryer, the air preheater, and the feedwater treatment system would be:

$$\begin{array}{r} 8.46 \times 10^{11} \\ + 2.51 \times 10^{11} \\ \hline 10.97 \times 10^{11} \text{ btu/yr.} \end{array}$$

Overall boiler efficiency would then be:

$$\frac{5.50 \times 10^{11}}{10.97 \times 10^{11}} = 50.1\%$$

The average fuel use rate would be:

$$\begin{aligned} & 60,000 \frac{\text{lb}}{\text{hr}} \times 1060 \frac{\text{btu}}{\text{lb}} \times \frac{1}{0.501} \frac{\text{btu}_{\text{in}}}{\text{btu}} \times \frac{1 \text{ lb wet wood}}{3410 \text{ btu}_{\text{in}}} \\ & = 37,228 \frac{\text{wet lb wood}}{\text{hr}} \end{aligned}$$

Annual emissions would be:

$$\begin{aligned} & 37,228 \frac{\text{wet lb wood}}{\text{hr}} \times 0.45 \frac{\text{dry lb wood}}{\text{wet lb wood}} \times 114.7 \frac{\text{SDCF}}{\text{lb dry wood}} \\ & \times 0.1 \frac{\text{gr}}{\text{SDCF}} \times \frac{1 \text{ lb}}{7000 \text{ gr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} \times 24 \frac{\text{hr}}{\text{day}} \times 360 \frac{\text{days}}{\text{yr}} = 118.6 \frac{\text{tons}}{\text{yr}} \end{aligned}$$

By using the dryer, heater, and feedwater treatment system, the efficiency is estimated to be 65%. The fuel btu content is 3900 btu/wet lb. The fuel usage is calculated in (A-2) to be 25,089 lbs/hr and annual emissions are calculated (A-2) to be 88.8 tons/yr.

So the combined effect of the systems is to reduce annual emissions by

$$\begin{array}{r} 118.6 \\ - 88.8 \\ \hline 29.8 \text{ tons/yr.} \end{array}$$

This checks reasonably closely with results in Table 6.