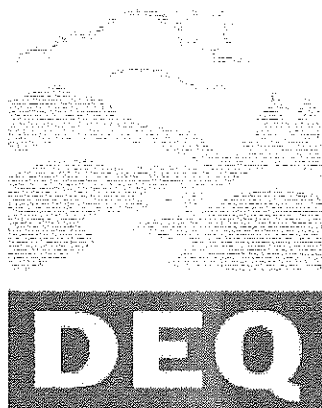


10/27/1978

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of
Environmental
Quality

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(Tentative Agenda)

ENVIRONMENTAL QUALITY COMMISSION MEETING
October 27, 1978

Hearing Room D
State Capitol Building
Salem, Oregon

- A. Minutes of the August 25, 1978 and September 22, 1978 EQC meetings.
- B. Monthly Activity Report for September 1978.
- 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.

9:30 am D. DEQ v. Ladd Henderson, SS-CR-77-136.

- E. Clatsop Plains - City of Gearhart, Modification to Subsurface Sewage System Moratorium, OAR 340-71-020(7).
- F. Bonneville Power Administration (BPA) McLoughlin Substation - Adoption of Memorandum of Agreement in conformance with DEQ noise regulations.
- G. Noise Control Rules - Consideration of adoption of proposed amendments to Noise Control Regulations for new automobiles and light trucks, OAR 340-35-025.
- H. Medford-Ashland AQMA - Proposed adoption of particulate and volatile organic compounds (VOC) offset rules for the Medford-Ashland Air Quality Maintenance Area (AQMA).
- I. Field Burning Regulations - Authorization for public hearing to receive testimony on field burning acreage limitations and other possible changes to the Department's Field Burning Rules for the 1979-80 field burning seasons.

10:00 am J. Weyerhaeuser Corporation - Request from Weyerhaeuser Corporation for a change in the General Emission Standards for Particulate Matter, OAR 340-21-015 Visible Air Contaminant Limitations, and OAR 340-21-020, Fuel Burning Equipment Limitations, to exempt salt emissions in coastal areas.

10:30 am K. Teledyne Wah Chang Albany - National Pollutant Discharge Elimination System (NPDES) permit issuance.

L. Indirect Source Program - Status Report.

Because of uncertain time spans involved, the Commission reserves the right to deal with any item at any time in the meeting, except items D, J and K. 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) and lunch in the Blue Room at the Capitol Building.

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

October 27, 1978

On Friday, October 27, 1978, the one hundred second meeting of the Oregon Environmental Quality Commission convened in Hearing Room B of the State Capitol Building in Salem, Oregon.

Present were Commission Members: Mr. Joe B. Richards, Chairman, Dr. Grace S. Phinney, Vice-Chairman; and Mr. Ronald M. Somers. Commission members Jacklyn L. Hallock and Albert H. Densmore were 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 AUGUST 25, 1978 MEETING

It was MOVED by Commissioner Somers, seconded by Commissioner Densmore and carried unanimously that the August 25, 1978 minutes be approved.

AGENDA ITEM B - MONTHLY ACTIVITY REPORT FOR SEPTEMBER 1978

It was MOVED by Commissioner Somers, seconded by Commissioner Phinney and carried unanimously that the Monthly Activity Report for September 1978 be approved.

AGENDA ITEM C - TAX CREDIT APPLICATIONS

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

1. Issue Pollution Control Facility Certificates to applications T-998, T-1007, T-1012, T-1013, T-1015, T-1016, T-1019, T-1020, T-1021, T-1024, T-1025 and T-1029.
2. Be informed of the Director's intent to issue Preliminary Certification for Tax Credit Relief to Apollo Metals Finishing, Inc., and Teledyne Wah Chang Albany.

AGENDA ITEM E - CLATSOP PLAINS - CITY OF GEARHART, MODIFICATION TO SUBSURFACE SEWAGE MORATORIUM, OAR 340-71-020(7)

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

1. Enter findings that:

- a. Failure to act would result in serious prejudice to the public interest or the interest of the parties concerned in that the City of Gearhart has at its own expense completed a study. While the plan was not acceptable to the Department, the City has requested an interim modification of the subsurface sewage moratorium which is acceptable. Development in the City of Gearhart will continue to be held up unless a modification to the moratorium is made. The City asserts that its citizens generally will be affected and beneficially affected by the temporary rule and subsequent permanent amendment to OAR 340-71-020(7).
 - b. The proposed temporary rule amendment will continue to prevent unacceptable degradation of groundwater while allowing such development as at present appears to be compatible with preserving the quality of the groundwater or surface waters.
 - c. At the time the Clatsop County study presently underway and the proposed 208 study are completed and a comprehensive plan and appropriate zoning are accomplished, further review will be appropriate.
2. Adopt the attached temporary rule amendment to OAR 340-71-020 to take effect upon prompt filing with the Secretary of State pursuant to ORS 183.355 for a period of not longer than 120 days.
 3. Authorize the hearing officer to proceed with the appropriate hearings for permanent rule amendment to OAR 340-71-020. The hearing officer's report to the EQC will be scheduled for the January 1979 EQC meeting.

AGENDA ITEM F - BONNEVILLE POWER ADMINISTRATION (BPA) McLOUGHLIN SUBSTATION - ADOPTION OF MEMORANDUM OF AGREEMENT IN CONFORMANCE WITH DEQ NOISE REGULATIONS

Commissioner Sommers noted that this was a carefully thought-out agreement, and MOVED the Director's recommendation to enter into a Consent Agreement with BPA to comply with OAR 340-35-035(1)(f), Table J, be approved. The Motion was seconded by Commissioner Phinney and carried unanimously.

Commissioner Phinney suggested that the wording in paragraph 2 of the Findings of Fact in the Agreement be changed as follows:

2. "The transformers...are a noise source which [are] is in excess of the sound pressure levels..."

AGENDA ITEM G - CONSIDERATION OF ADOPTION OF PROPOSED AMENDMENTS TO NOISE CONTROL REGULATIONS FOR NEW AUTOMOBILES AND LIGHT TRUCKS, OAR 340-35-025

After some discussion among Commission members, Mr. John Hector of the Department's Noise Section, and Mr. Bruce Gregg of General Motors, action on this matter was deferred until the Commission's November 17, 1978 meeting because of the importance of the matter and because two members of the Commission were absent.

AGENDA ITEM D - DEQ v. LADD HENDERSON, SS-CR-77-136

Mr. Ladd Henderson, protested the manner in which this matter was being handled on the following points:

1. The action being taken to withdraw the Hearing Officer's final order and modify it after the respondents' left the hearing room at the last meeting.

2. Mr. Cordes' letter of September 25, 1978 stated,

"The Commission's concern was on your behalf and they directed the staff and Department's counsel to review the matter and prepare a modified proposed remedial action order. Particularly with respect to broadening or extending the time frame for compliance."

Mr. Henderson said that upon reviewing tapes of the last meeting, he noted that the matter was not discussed in the meeting and could only conclude that this was decided during a Commission break.

3. The respondents were also told by Mr. Cordes in his letter of September 25, 1978 that,

"It is my understanding that neither party will be allowed to present further oral or written argument."

Mr. Henderson said that the Final Order stated "the parties were given adequate notice and were given an opportunity to be heard." He continued that he had received the Final Order only 41 hours before the meeting and did not feel he had adequate time to prepare.

4. Mr. Henderson said he was not an attorney and was unable to represent anyone but himself in these proceedings. Mr. Larry Henderson, co-respondent, he continued, was not sent a copy of the Final Order or the Department's memorandum in support of its proposed form of Final Order. Therefore, he said, the parties had not been provided adequate notice.

Mr. Henderson said he believed the proposed modification of the Order was against state statute 454.635. Mr. Henderson read this rule to the Commission and cited instances where he felt the statute had been violated. He continued that the Commission could only affirm or reverse the order and could not modify it.

Chairman Richards said he understood Mr. Henderson's main objection to the order was that the original order required the Hendersons to either obtain a permit or abandon the system, whereas the order now before the Commission gave only the alternative of abandoning the system. Mr. Henderson said the original order asked that they have the system pumped in order to comply. He said they could not abandon a system that was not installed, so by the proposed order they were being required to construct a system without a permit in order to abandon it. Chairman Richards said that if the Commission were to adopt

an order following Mr. Cordes original order, which would require either obtaining a permit or abandoning the system, then the objection to that part of the order would be taken care of. Mr. Henderson agreed.

Chairman Richards said it was unfortunate that the Hendersons left the last meeting before action had been completed. He said that it was only called to the Commission's attention at the break that action had not been completed, but no discussion took place.

Director Young advised the Commission that he had had a meeting with both Mr. Ladd Henderson and Mr. Larry Henderson the evening before the meeting, and Mr. Robb Haskins. He said that the matter had been discussed at some length without any conclusion, whether some different solution should be pursued in this matter.

Mr. Ray Underwood, Department of Justice, said he did not agree with Mr. Henderson that the Commission did not have the authority to modify the order. He said that in doing so the Commission may wish to go back to the original proposal of the Hearing Officer to include the alternative.

Chairman Richards said he would prefer the Order be drawn along the original order of the Department and give Mr. Henderson a certain length of time to either obtain a permit or abandon the system.

At the end of the Commission meeting the Commission returned to this matter. It was noted that the Messrs. Henderson had left the meeting.

Mr. Peter McSwain, EQC Hearing Officer, said it was his understanding that the Hearing Officer in this matter affirmed the Department's remedial action order. He said the two questions were, would the Hendersons test a modification which relaxed the original Departmental order; and there was nothing in the subsurface sewage disposal system definitions that included "or portion thereof" and the statute would have to be reverted to. The statute, he said, referred to "a portion thereof" a system.

Mr. Undersood said he would leave in the reference to "a portion thereof" if Hearing Officer Cordes had that in his original proposed order. He said there had been some question as to whether they were referring to a whole system or only part of one, and they wanted to be sure to cover either way.

It was MOVED by Commissioner Somers, seconded by Commissioner Phinney and carried unanimously that the Final Order be approved incorporating as Attachment A the following language:

It is hereby FURTHER ORDERED that Respondents shall forever cease and desist from using Respondents' illegally constructed subsurface sewage disposal system or portion thereof unless, within twenty (20) days of the date of this order, Respondents apply for and obtain a valid subsurface sewage disposal system installation permit to retain such system or portion thereof. Should Respondents fail to apply for or obtain such valid permit or fail to timely request a hearing on any denial of such application as may be filed with the appropriate fee with the Department of Environmental Quality, then Respondents shall, within twenty (20) days of the date of this Order abandon that system pursuant to OAR 340-71-018(2)(d) and in the manner set forth in OAR 340-71-018(4) in that Respondents shall not allow any septic tank to remain in the ground unless it (a) is substantially free of sludge and (b) is filled with clean, bank-run gravel or other material approved by the Director or his authorized representative.

AGENDA ITEM J - REQUEST FROM WEYERHAEUSER CORPORATION FOR A CHANGE IN THE GENERAL EMISSION STANDARDS FOR PARTICULATE MATTER, OAR 340-21-015, VISIBLE AIR CONTAMINANT LIMITATIONS, AND OAR 340-21-020, FUEL BURNING EQUIPMENT LIMITATIONS, TO EXEMPT SALT EMISSIONS IN COASTAL AREAS

Mr. Frederic Skirvin, DEQ Air Quality Division, said that the hog fuel boilers at Weyerhaeuser Company's sawmill and plywood plant in Coos Bay did not currently comply with general emission standards for particulate, grain loading or opacity, partly because of some control equipment problems and partly due to salt in the fuel because of the storage and handling of logs in Coos Bay. He said the Department was asking for authorization to hold a public hearing on this matter after an informational hearing, both hearings to be in the Coos Bay area.

It was MOVED by Commissioner Somers, seconded by Commissioner Phinney and carried unanimously that the Department be authorized to hold a public hearing in the Coos Bay area for the rule change, should the information received as a result of the public informational hearing support Weyerhaeuser's request for a rule change.

PUBLIC FORUM

Ms. Madelyn Rogers, Coos Bay, appeared before the Commission in regard to a septic tank approval problem. Ms. Rogers said they had recently purchased property in the Coos Bay area which had an existing septic tank and at the time they were told there was a grandfather clause that would allow them to use the septic tank. She said that they subsequently applied for a permit to reactivate the septic tank and were notified that the permit was denied because they were 300 feet from the sewer line. She said that actually they were more than 300 feet. It would cost, Ms. Rogers continued, approximately \$20,000 for them to hook up to the sewer because there was no one in the area to share the hook-up costs.

Chairman Richards explained that there was a procedure to be followed by persons that were dissatisfied with a ruling made in the field. He said that he sympathized with Ms. Rogers' problem, but there was no way the Commission could respond at this time. Chairman Richards directed members of the staff present at the meeting to work with Ms. Rogers on this problem.

AGENDA ITEM K - TELEDYNE WAH CHANG ALBANY - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUANCE

Mr. Ted Groszkiewicz, DEQ Willamette Valley Region Office, explained the following three changes in the staff report and permit.

1. Page 3 of the permit, Schedule A, the levels on the last two lines should read as follows:

Parameters	Monthly Average		Daily Maximum	
	kg/day	(lb/day)	kg/day	(lb/day)
Methylisobutyl Ketone	45	(120)	108	(240)
TSS	163	(360)	326	(720)

2. Page 6 of the permit, Schedule B, Condition 2, the note should read:

"When stream flows . . . monitoring can be reduced to monthly."

3. Page 10 of the permit, Schedule D, (c) add wording as follows:

(c) "It is the primary responsibility . . . to eliminate or reduce the likelihood of the recurrence of upsets."

It was MOVED by Commissioner Somers that the Director's recommendation to approve the proposed expansion along with the increased discharges during high stream flow periods be approved with the modifications outlined by Mr. Groszkiewicz. The motion was seconded by Commissioner Phinney.

In response to Commissioner Somers, Mr. Groszkiewicz said that the reason discharge had been held to Truax Creek instead of changed to the Willamette River was because of the frequency of upset conditions and the attendant toxicity problems.

Mr. Tom Nelson, Teledyne Wah Chang Albany, testified that the major issue that remained to be resolved was the discharge limits for various chemical parameters, and the proposed upset condition. He said that they were capable of maintaining Department-proposed limits only during periods of optimum operation, therefore, he said they continued to request that an upset condition be included in order to appropriately account for those occasions when the system was not operating under optimum conditions. Also, Mr. Nelson continued, there was a need to address operator error not due to negligence of the permittee and suggested that wording be included that the upset could not have been prevented by reasonable means.

Mr. Nelson said it appeared from the staff report that all parameters were being designated as best practicable treatment standards (BPT). He said they did not understand how the ammonium nitrate standard could be claimed as the outcome of BPT. He said that they had not seen any arguments which were supportive of the proposed limits.

Chairman Richards asked if it was an accurate statement that the Company could only meet standards under optimum conditions. Mr. Groszkiewicz replied that the original EPA report which set BPT asked for an efficiency in ammonia removal of 99.2%. As a result of considerable effort on the Company's part, he said, they had increased the efficiency to greater than that percentage and over the past four to five months they had been in compliance outside of upset conditions.

In response to Chairman Richards, Mr. Groszkiewicz said that they had used the EPA standard for ammonia and the thiocyanate standard was arrived at in negotiations with the Company and taking into consideration the systems the Company had in place to control thiocyanate in the discharge.

Originally, Mr. Groszkiewicz said, the Department drafted an upset condition at the Company's request. The wording in the proposed permit, he said, came about following an Attorney General's opinion. Director Young said that the viewpoint of the Attorney General's office was that no upset condition be included in the permit. He said there was a court case which indicated EPA might be bound to include an upset condition in permits and EPA has been pursuing the drafting of upset condition language. He said the agreement under which the Department issued NPDES permits did allow the state to issue a permit that is more stringent than one which would be issued by EPA. Director Young said he had concluded that an upset condition might make more manageable the Company's activities and the Department's ability to deal with them. He said the language before the Commission was the preferred language on upset conditions.

Chairman Richards stated he was in favor of putting an upset condition in the permit, but he wanted a time limit of a year to 18 months on it so that the Commission could look at it and see how it was working. This would be a different time limit than the whole permit, he said.

Director Young indicated that the proposed permit had been submitted to EPA and they found the present language acceptable.

Ms. Susan Smith, Oregon Environmental Council, testified that since the public hearing the proposed permit had changed significantly. Ms. Smith reminded the Commission that the Federal Water Pollution Control Act set the goal that discharge to navigable waters be eliminated by 1985. She felt that requiring the Company to plan did not guarantee that they would act upon those plans. OEC was concerned, she said that the present proposed permit would permit discharges into Truax Creek and did not set a deadline for meeting water quality standards. Ms. Smith said the OEC believed this was a violation of Federal law.

Ms. Smith said they opposed the upset condition because it left too much enforcement to the discretion of DEQ. Ms. Smith said the OEC felt that if the present proposed permit were issued it would result in the permanent destruction of Truax Creek and possible degradation of the Willamette River.

In response to discussions, it was MOVED by Commissioner Somers, seconded by Commissioner Phinney and carried unanimously that the proposed permit be amended as follows:

Page 2, Schedule A, note 1) - The second sentence beginning with "This method is permitted . . ." will end with the word "claimed." and the rest of that sentence will be deleted.

Page 3, Schedule A, Note 2 - same as above.

After some discussion among Commission members, Director Young said the ammonia standard was one that EPA arrived at through analysis on the

the plant site. He said EPA indicated this standard represented best practicable treatment for that plant. Mr. Young continued that he did not think EPA would approve a permit with a higher ammonia standard. He continued that, if the Commission wished to raise the ammonia standard, he recommended they go with what the Company recommended and remove the upset condition. He said he would not recommend both raising the effluent limitations and keeping the upset condition.

It was MOVED by Commissioner Somers, seconded by Commissioner Phinney and carried with Chairman Richards dissenting that item 6, Schedule A, on page 4 of the permit be amended to read as follows:

6. The effluent limitations in Condition 3 of this schedule shall apply only after written approval for an increase in production to sixty thousand (60,000) pounds per day of total oxide has been received from Director and monthly production has actually exceeded fifty thousand (50,000) pounds per day of total oxide:
 - a. The permittee is operating under a current noncontested NPDES permit.
 - b. Compliance with effluent limitation contained in this permit for a period of four consecutive months.

The Commission then voted on the main MOTION as amended, stated previously. The motion passed unanimously.

AGENDA ITEM 1 - AUTHORIZATION FOR PUBLIC HEARING TO RECEIVE TESTIMONY ON FIELD BURNING ACREAGE LIMITATIONS AND OTHER POSSIBLE CHANGES TO THE DEPARTMENT'S FIELD BURNING RULES FOR THE 1979-80 FIELD BURNING SEASONS.

It was MOVED by Commissioner Somers, seconded by Commissioner Phinney, and carried unanimously that a public hearing on proposed 1979-80 field burning rules be authorized.

AGENDA ITEM L - INDIRECT SOURCE PROGRAM - STATUS REPORT

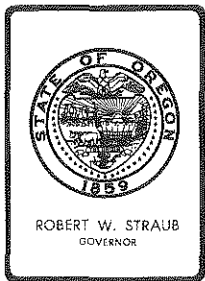
Chairman Richards noted that there was no one present who wished to testify on this matter.

It was MOVED by Commissioner Somers, seconded by Commissioner Phinney, and carried unanimously that the Director's recommendation that the present administrative policy on indirect sources be continued and that any future changes, other than those arising from the proposed Settlement Agreement be pursued through rule hearing after January 1, 1979, be approved.

There being no further business, the meeting was adjourned.

Respectfully submitted,


Carol A. Spletstaszer
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, October 27, 1978, EQC Meeting

September Program Activity Report

Discussion

Attached is the September 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 an 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
for
WILLIAM H. YOUNG

M. Downs:ahc
229-6485
10-26-78



Contains
Recycled
Materials

DEPARTMENT OF ENVIRONMENTAL QUALITY

Monthly Activity Report

September, 1978

Month

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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

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

September, 1978
(Month and Year)

SUMMARY OF PLAN ACTIONS

	Plans Received		Plans Approved		Plans Disapproved		Plans Pending
	<u>Month</u>	<u>Fis.Yr.</u>	<u>Month</u>	<u>Fis.Yr.</u>	<u>Month</u>	<u>Fis.Yr.</u>	
<u>Air</u>							
Direct Sources	<u>12</u>	<u>55</u>	<u>15</u>	<u>61</u>		<u>2</u>	<u>36</u>
Total	<u>12</u>	<u>55</u>	<u>15</u>	<u>61</u>		<u>2</u>	<u>36</u>
<u>Water</u>							
Municipal	<u>114</u>	<u>420</u>	<u>87</u>	<u>402</u>			<u>81</u>
Industrial	<u>7</u>	<u>38</u>	<u>4</u>	<u>31</u>			<u>28</u>
Total	<u>121</u>	<u>458</u>	<u>91</u>	<u>433</u>			<u>109</u>
<u>Solid Waste</u>							
General Refuse	<u>2</u>	<u>7</u>	<u>2</u>	<u>6</u>	<u>1</u>	<u>2</u>	<u>6</u>
Demolition		<u>2</u>					<u>2</u>
Industrial	<u>5</u>	<u>8</u>	<u>5</u>	<u>11</u>			<u>4</u>
Sludge	<u>1</u>	<u>1</u>		<u>1</u>			<u>1</u>
Total	<u>8</u>	<u>18</u>	<u>7</u>	<u>18</u>	<u>1</u>	<u>2</u>	<u>13</u>
<u>Hazardous Wastes</u>							
 <u>GRAND TOTAL</u>	 <u>141</u>	 <u>531</u>	 <u>113</u>	 <u>512</u>	 <u>1</u>	 <u>4</u>	 <u>158</u>

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

September, 1978
(Month and Year)

PLAN ACTIONS COMPLETED (15)

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

Multnomah (NC 1146)	Continental Can Catalytic fume burner	8/29/78	Approved
Union (NC 1185)	Del Monte Baghouse	8/28/78	Approved
Jackson (NC 1201)	Rogue Valley Plywood Hogged fuel furnace	7/28/78	Approved
Multnomah (NC 1205)	Steinfeld's Products Co. Food processing plant	9/18/78	Approved
Multnomah (NC 1210)	Miracle Auto Painting Paint spray booth	8/29/78	Approved
Lane (NC 1214)	Clear Fir Products Replace baghouse	8/3/78	Withdrawn
Linn (NC 1218)	D & B Recycling Inc. Incinerator	9/78	Application returned to sender
Washington (NC 1224)	Tektronix, Inc. Baghouse	8/29/78	Approved
Multnomah (NC 1226)	Rich Manufacturing Co. of Oregon Shot blasting & grinding equipment	9/18/78	Approved
Lane (NC 1228)	The Kingsford Co. Fines collection system	9/5/78	Approved (Tax Credit Only)

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

September, 1978
(Month and Year)

PLAN ACTIONS COMPLETED (15, cont'd)

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	* * * *
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DIRECT STATIONARY SOURCES (cont.)

Clackamas (NC 1233)	Potters Industries Inc. Glass bead manufacture	8/24/78	Approved
Linn (NC 1236)	Wilamette Seed & Grain Fertilizer Blending	9/5/78	Approved
Linn (NC 1237)	Teledyne Wah Chang Control equipment for three burn pots	9/5/78	Approved
Linn (NC 1239)	Bend Willamette Corp. Vacuum sweeper truck	9/11/78	Approved
Klamath (NC 1242)	Weyerhaeuser Lumber sander, hardboard plant	9/11/78	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

September 1978
(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	Fis.Yr.	Month	Fis.Yr.			
<u>Direct Sources</u>							
New	4	16	0	5	31		
Existing	1	17	1	14	31		
Renewals	0	10	3	8	77		
Modifications	3	21	4	14	26		
Total	8	64	8	41	165	1,849	1,915
<u>Indirect Sources</u>							
New	3	9	8	14	10		
Existing	-	-	-	-	-		
Renewals	-	-	-	-	-		
Modifications	0	2	0	2	0		
Total	3	11	8	16	10	100	
<u>GRAND TOTALS</u>	11	75	16	57	175		

Number of
Pending Permits

Comments

17	To be drafted by Northwest Region Office
12	To be drafted by Willamette Valley Region Office
35	To be drafted by Southwest Region Office
0	To be drafted by Central Region Office
0	To be drafted by Eastern Region Office
8	To be drafted by Program Operations
3	To be drafted by Program Planning & Development
<u>75</u>	
15	Permits awaiting next public notice
<u>75</u>	Permits awaiting end of 30-day public notice period
<u>90</u>	Permits pending

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

<u>Air Quality Division</u>		<u>September 1978</u>	
<u>(Reporting Unit)</u>		<u>(Month and Year)</u>	
<u>PERMIT ACTIONS COMPLETED</u> (16)			
* * * * * *	* County * * * * *	* Name of Source/Project /Site and Type of Same * * * * *	* Date of Action * * * * *

Direct Stationary Sources

Clackamas	Publishers Paper 03-1850 (Renewal)	8/21/78	Permit Issued
Clackamas	*Eagle Foundry 03-2631 (Modification)	8/16/78	Addendum Issued
Clatsop	Crown Zellerbach 04-0004 (Renewal)	8/21/78	Permit Issued
Deschutes	*Russell Industries 09-0031 (Modification)	8/17/78	Permit Issued
Douglas	International Paper 10-0036 (Modification)	8@178	Permit Issued
Jackson	Medford High School 15-0112 (Existing)	8/22/78	Permit Issued
Lane	Weyerhaeuser 20-8850 (Renewal)	8/21/78	Permit Issued
Linn	Halsey Pulp Co. 22-3501 (Modification)	8/21/78	Permit issued

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

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(Month and Year)

PERMIT ACTIONS COMPLETED (16, cont'd)

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

Washington	N. Tigard Int.- S. Tigard Int. Pacific Hwy.(I-5) Highway widening. File No. 37-6025.	9/29/78	Final Permit Issued
Washington	Tualatin Valley Highway File No. 34-8023	9/8/78	Final Permit Issued
Washington	Beaverton Shopping Center 398 Spaces File No. 34-8013	9/12/78	Final Permit Issued
Douglas	Roseburg Valley Mall 1154 spaces File No. 10-8018	9/8/78	Final Permit Issued
Washington	Lincoln Center Ph. 1 & 11 110 spaces File No. 34-8019	9/11/78	Final Permit Issued
Washington	Greenway Town Center 430 spaces File NO. 34-8022	9/5/78	Final Permit Issued
Multnomah	Johns River Center 381 spaces File NO. 26-8024	9/18/78	Final Permit Issued
Marion	North Park Plaza Shopping Center 552 spaces File No. 24-8025	9/20/78	Final Permit Issued

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Water Quality - SWC Section
(Reporting Unit)

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PLAN ACTIONS COMPLETED (91)

Engineer	County	Name of Source/Project/Site & Type of Same		Rec'd	Date of Action	Action	Time to Complete Action
		<u>Municipal Sources -87</u>					
40	06	COOS BAY	LAKESHORE DRIVE	J081778	090578	PROV APP	19
		LAKE OSWEGO	TERRACE ROAD FORCE MAIN REV.	V090578	090578	PROV APP	00
26	PORTLAND		SW 47TH AVE & SW DOLEH	K083178	090678	PROV APP	20
53	02	CORVALLIS	THE CANNERY - AS BUILTS	K082878	090678	PROV APP	9
23	ONTARIO		SPRINGBROOK ADDITION	K082178	090678	PROV APP	16
14	15	EAGLE POINT	SARAH PARK SUBDIVISION	J080778	090678	PROV APP	30
	15	EAGLE POINT	BARTLETT SUBD	K082878	090778	PROV APP	10
	20	SPRINGFIELD	MP 609	K082878	090778	PROV APP	10
	20	SPRINGFIELD	THURSTON MEADOWS	K082878	090778	PROV APP	10
	20	SPRINGFIELD	SOUTH HILLS NORTH	K082878	090778	PROV APP	10
	20	SPRINGFIELD	SOUTH HILLS	K082878	090778	PROV APP	10
62	24	SALEM	CANDYFLOWER	J082978	090778	PROV APP	9
	34	HILLSBORO	ALISSA PARK	J081778	090778	PROV APP	21
	34	HILLSBORO	SQUIRE BROOK	J081778	090778	PROV APP	21
	34	HILLSBORO	NORWALK PARK	J081778	090778	PROV APP	21
62	24	SALEM	SIENNA EST	J083178	090778	PROV APP	7
27	24	SALEM	MCKAY ADDITION	J082478	090778	PROV APP	14
	21	NEWPORT	NE GOLF COURSE DRIVE	J082178	090778	PROV APP	17
	15	RCVSA	VILAS RD	J082178	090778	PROV APP	17
46	15	BCVSA	INLAND VILLAGE SUBD REVISED	J082578	090778	PROV APP	13
	21	LINCOLN CITY	FAGLET ADDITION	K082978	090878	PROV APP	10
	21	LINCOLN CITY	NORWICH'S FIRST AD	K082978	090878	PROV APP	10
		PORTLAND	SE TAGGART S 7TH	K090178	090878	PROV APP	7
	26	GRESHAM	VADALEN ACRES	J082178	091378	PROV APP	23
13	15	RCVSA	SUBURBAN SUBD	J082978	091378	PROV APP	15
		SWEET HOME	ASHBROOK ESTATES	J090578	091378	PROV APP	8
11	10	SUTHERLIN	KNOLLS ESTATES-PHASE 2	K082178	091478	PROV APP	24
	14	ODELL	WHITESSELL EST	K082978	091478	PROV APP	16
	26	PORTLAND	SW 45 & SW CORONADO	K082978	091478	PROV APP	16
		EUGENE	TAHSILI SUBD	K090178	091578	PROV APP	14
		GREEN S.D.	HILLSVIEW SUBD-STELLA ST	K090678	091578	PROV APP	9
		SPRINGFIELD	TRICKEY PROJ.	K090178	091578	PROV APP	14
83	18	RONANZA	GRANDVIEW ADDITION	K083178	091578	PROV APP	15
		LAGRANGE	VAN NFSA SUBD	K083178	091578	PROV APP	15
77		USA	ON THE GREEN II-V	K082978	091578	PROV APP	17
	34	USA	NW 143RD AVE LID	K083178	091578	PROV APP	15
25	03	CCSD #1	WILES ADDITION	K082878	091578	PROV APP	18
		GREEN SAN	STELLA ST	K090678	091578	PROV APP	9
61		SPRINGFIELD	RODDY PROJ.	K090178	091578	PROV APP	14
		SPRINGFIELD	DUCK	K090578	091578	PROV APP	10
		SPRINGFIELD	B & R ESTATES	K090578	091578	PROV APP	10
26		USA	BRONSON CRK TRUNK	K090178	091778	PROV APP	16
	3	CCSD #1	WESTWELLOW SUBD	J081578	091778	PROV APP	23
		LEBANON	WADE ADD REV.	K090678	091878	PROV APP	12
14		LAKE OSWEGO	CERVANTES & JEFFERSON	K090178	091878	PROV APP	17
		OAK LODGE	BOGGS ADDITION	J091178	091878	PROV APP	7
		SOUTH SUBURBAN	LAT D-X LAT D-56-9E	K091178	091878	PROV APP	7
		USA ROCK CR	TOKOLA APART COMPLEX	K091178	091878	PROV APP	7
63		SILFTZ	TFAGUE	K090678	091878	PROV APP	12
		LEBANON	KARI REV.	K090678	091878	PROV APP	12
49		NEWBERG	TERRACE LANE	J090678	091878	PROV APP	12
		NO ROSEBURG	NEWTON CRK TERR	K090678	091878	PROV APP	12
40		CORVALLIS	RIVERGREEN	K090678	091878	PROV APP	12

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Water Quality - SWC Section
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PLAN ACTIONS COMPLETED (91, cont'd)

Engineer	County	Name of Source/Project/Site & Type of Same		Rec'd	Date of		Action	Time to Complete Action
					Action	Action		
		<u>Municipal Sources - Continued</u>						
		PORTLAND	SW JEFFERSON & SW MONTG.	K090578	091878	PROV	APP	13
		USA	DELLWOOD & HNTGN TK	K090878	092578	PROV	APP	17
		MC MINNVILLE	SHANTI-COURT	K090678	092578	PROV	APP	19
		SALEM SD	MONROE AVE	J091278	092578	PROV	APP	13
		USA	DIANA ERICKSON	K091278	092578	PROV	APP	13
		USA	HART MEADOWS	K091278	092578	PROV	APP	13
		MYRTLE CREEK	LONDRELAND SUBDIV. REV.	K090678	092578	PROV	APP	19
62		SALEM	FOXHAVEN	J090878	092678	PROV	APP	18
15		SALEM	SS IND PARK	J090678	092678	PROV	APP	22
		SALEM	LOTS ON 35TH	J092078	092678	PROV	APP	6
		SALEM	HOOD ADDITION	J091278	092678	PROV	APP	19
20	26	TROUTDALE	BLUEBIRD PLACE	J082978	092678	PROV	APP	29
		JEFFERSON	GRICE ACRES	J090578	092678	PROV	APP	21
		ONTARIO	LEM DEV CO	K090878	092778	PROV	APP	19
		EUGENE	CAPRI	K091878	092778	PROV	APP	9
		RENO	TAMARACK PARK SUBD	K090578	092778	PROV	APP	22
		SALEM	BECKENRIDGE HEIGHTS NO 2	J091178	092878	PROV	APP	17
		TROUTDALE	SUNRIDGE	K091178	092878	PROV	APP	17
		SWEET HOME	EXTENSION NEAR 18TH	K091178	092878	PROV	APP	17
		EUGENE	WHITE PINE RIDGE	K091178	092878	PROV	APP	17
		FOREST GROVE	GREEN GABLES	J091178	092878	PROV	APP	17
		BROOKINGS	EXT THIRD STR	J090878	092878	PROV	APP	20
14		CENTRAL POINT	STONECREEK SUBD	J090678	092878	PROV	APP	22
		USA	SCHRAAM MFRG TIGARD	K091978	092878	PROV	APP	9
		SPRINGFIELD	SOUTH 71 ST	K091478	092878	PROV	APP	14
		CCSD	SCOTTS TREE SUBD	K091478	092878	PROV	APP	14
		LAKE OSWEGO	MOUNTAIN VILLAGE II	K091278	092878	PROV	APP	16
		NTCSA	DENNIS DILL	J090178	092878	PROV	APP	27
		OAK LODGE SD	GEORGE ACRES	K092678	092878	PROV	APP	2
29		GARIBALDI	MILL MARINA	J082878	092878	PROV	APP	31
51	15	MEDFORD	EVERGREEN FEDERAL	J082878	092878	PROV	APP	31
34		TUALATIN	MERIDIAN ROAD IMPROVEMENTS	J082878	092878	PROV	APP	31
		YACHTS	SCHMUNKS ADDITION SHELL ST	K091178	092978	PROV	APP	18
		MYRTLE POINT	APPLE HILL	K091878	092978	PROV	APP	11

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Water Quality
(Reporting Unit)September 1978
(Month and Year)PLAN ACTIONS COMPLETED (91, cont'd)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
<u>INDUSTRIAL WASTE SOURCES (4)</u>			
Marion	Hazenburg Dairy - St. Paul Storage Lagoon	9-14-78	Approved
Coos	Lakeside Water Treatment Plant Lakeside, Filter Backwash Recirculation	9-14-78	Approved
Multnomah	Steinfelds Products Co. Portland, pH Control & Brine Recovery	9-18-78	Approved
Marion	Arie Jongeneel Dairy Mt. Angel, Manure Solids Separation & Lagoon	9-19-78	Approved

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MONTHLY ACTIVITY REPORT

Water Quality
(Reporting Unit)

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SUMMARY OF WATER PERMIT ACTIONS

	Permit Actions Received				Permit Actions Completed				Permit Actions Pending		Sources Under Permits		Sources Reqr'g Permits	
	Month		Fis.Yr.		Month		Fis.Yr.		* **		* **		* **	
	*	**	*	**	*	**	*	**	*	**	*	**	*	**
<u>Municipal</u>														
New	0	1	1	2	1	0	1	0	0	4				
Existing	0	0	0	0	0	0	0	0	0	0				
Renewals	0	0	4	0	0	2	10	5	30	2				
Modifications	0	0	2	0	0	0	1	0	5	1				
Total	0	1	7	2	1	2	12	5	35	7	244	80	244	84
<u>Industrial</u>														
New	3	3	7	4	1	2	4	6	11	4				
Existing	0	0	0	0	0	0	4	0	3	0				
Renewals	2	0	7	3	1	1	16	6	51	8				
Modifications	0	0	2	3	0	2	3	3	6	0				
Total	5	3	16	10	2	5	27	15	71	12	396	123	410	127
<u>Agricultural (Hatcheries, Dairies, etc.)</u>														
New	0	0	2	3	1	0	2	3	2	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	0	1	0	2	4	4	0	60	17	62	17
<u>GRAND TOTALS</u>	5	4	25	12	4	7	41	24	110	19	700	220	716	228

* NPDES Permits

** State Permits

2 State industrial permits to expire without renewal

2 NPDES Agricultural permits to expire without renewal

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Water Quality
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PERMIT ACTIONS COMPLETED (11)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Umatilla	City of Pilot Rock Sewage Disposal	9-11-78	State Permit Renewed
Douglas	City of Yoncalla Water Filtration Plant	9-11-78	State Permit Renewed
Coos	Weyerhaeuser Company Release & Recapture	9-14-78	NPDES Permit Issued
Multnomah	Scenic Fruit Company Sewage Disposal	9-26-78	State Permit Issued
Deschutes	Stage Stop, Inc. Sewage Disposal	9-26-78	State Permit Renewed
Josephine	Irene Stanfield Riveria Mobile Park	9-26-78	NPDES Permit Issued
Coos	Al Pierce Lumber Log Handling	9-26-78	Modification Issued
Douglas	International Paper Co. Log Handling (Gardiner)	9-26-78	Modification Issued
Yamhill	Publishers Paper Newberg	9-28-78	NPDES Permit Renewed
Multnomah	Wacker Siltronic Corp. Electronic Crystals	9-28-78	NPDES Permit Issued
Clackamas	Herman Dallas Gravel Operation	9-29-78	State Permit Issued

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Solid Waste
(Reporting Unit)

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PLAN ACTIONS COMPLETED (8)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Multnomah	MDC - N. Portland Existing Tire Processing Facility & Transfer Station Operational Plan Amendment	9/7/78	Approved
Hood River	Champion International-Neal Creek Existing Industrial Waste Site Operational Plan	9/11/78	Approved
Clackamas	Rossmann's Existing Landfill Leachate Control & Operational Plan	9/11/78	Disapproved
Jackson	John E. Ousterhout New Industrial Waste Site Operational Plan	9/19/78	Letter Authoriza- tion Issued
Multnomah	Cloudburst, Inc. New Experimental Composting Facility Operational Plan	9/19/78	Letter Authoriza- tion Issued
Douglas	Mel Davis Construction New Industrial Waste Site Operational Plan	9/20/78	Letter Authoriza- tion Issued
Douglas	Reedsport Mill Existing Industrial Waste Site Closure Plan	9/22/78	Conditional Approval
Tillamook	Port of Tillamook Existing Industrial Waste Site Operational Plan	9/28/78	Conditional Approval

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Solid Waste
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SUMMARY OF SOLID AND HAZARDOUS WASTE PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sites Under Permits	Sites Reqr'g Permits
	<u>Month</u>	<u>Fis.Yr.</u>	<u>Month</u>	<u>Fis.Yr.</u>			
<u>General Refuse</u>							
New		1		1	1		
Existing					20*		
Renewals	1	9	8	12	5		
Modifications		1	2	3	2		
Total	1	11	10	16	28	180	184
<u>Demolition</u>							
New		1			1		
Existing							
Renewals							
Modifications							
Total	0	1	0	0	1	19	19
<u>Industrial</u>							
New	2	5	3	6	1		
Existing				1			
Renewals	1	4	4	6			
Modifications		1		2			
Total	3	10	7	15	1	105	105
<u>Sludge Disposal</u>							
New							
Existing							
Renewals			1	1	2		
Modifications							
Total	0	0	1	1	2	9	9
<u>Hazardous Waste</u>							
New							
Authorizations	25	54	25	54	0		
Renewals							
Modifications							
Total	25	54	25	54	0	1	1
<u>GRAND TOTALS</u>	29	76	43	86	32	314	318

*Seventeen (17) sites operating under temporary permits until regular permits are issued.

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PERMIT ACTIONS COMPLETED (18)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
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General Refuse Facilities (10)

Lincoln	North Lincoln Disposal Site Existing landfill	9/1/78	Permit amended.
Lincoln	Waldport-Yachats Disposal Site Existing landfill	9/1/78	Permit amended.
Curry	Huntley Park Landfill Existing site (closed)	9/7/78	Renewal application withdrawn.
Lane	Oakridge Landfill Existing facility	9/14/78	Permit renewed.
Gilliam	So. Gilliam Co. Landfill Existing site.	9/19/78	Permit renewed.
Multnomah	Cloudburst Composting Proj. Existing experimental proj.	9/19/78	Letter Authoriz- ation renewed.
Curry	Port Orford Landfill Existing facility.	9/20/78	Permit renewed.
Lane	Low Pass Transfer Station Existing drop box site	9/20/78	Permit renewed.
Lane	Mapleton Transfer Station Existing drop box site	9/20/78	Permit renewed.
Lane	Walton Transfer Station Existing drop box site	9/20/78	Permit renewed.

Demolition Waste Facilities - noneIndustrial Waste Facilities (7)

Jackson	Denman wildlife Area Existing wood waste landfill	9/4/78	Permit renewed.
Jackson	Burrill Lumber Co. New wood waste landfill	9/14/78	Permit issued.

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PERMIT ACTIONS COMPLETED (continued)

County	Name of Source/Project/Site and Type of Same	Date of Action	Action
Jackson	Ousterhout Landfill New wood waste site	9/19/78	Letter Authoriz- ation issued.
Douglas	Davis Construction Co. New "drilling mud" disposal site	9/20/78	Letter Authoriz- ation issued.
Lane	Bohemia, Dorena Mill Existing wood waste site	9/20/78	Permit renewed.
Curry	Jerry's Flat Landfill Existing wood waste site	9/21/78	Permit renewed.
Multnomah	Esco, Willbridge Landfill Existing foundry waste site	9/22/78	Permit renewed.
<u>Sludge Disposal Facility (1)</u>			
Linn	Holley Sludge Site Existing disposal site	9/14/78	Permit renewed.

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HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

Date	Type	Source	Waste Description	
			Present	Future
<u>Disposal Requests Granted (22)</u>				
<u>Oregon (20)</u>				
1	PCB capacitors and spill cleanup debris	Electric utility	5 drums	none
5	Spent dichromate solution with mercuric chloride	Hospital	1/2 gal.	none
5	Unwanted lab. chemical (phosgene)	University lab.	1 small Cylinder	none
15	Spent degreasing solvent trichloroethylene	Manufacturer of electrical equipment	25 gals.	none
15	Unwanted DDT pesticide	Private party	5 lbs.	none
18	Obsolete lab. chemicals (Chromic acid, orthotolidine, etc.)	Government agency lab.	small quantities	none
19	Pesticide wastes	Nursery	12 drums	none
19	Various unwanted chemicals (sulfuric acid, nitric acid, caustic soda, etc.)	Private party	Small quantities	none
20	Pesticide waste	City government	Small quantities	none
20	Pesticide wastes	Local government agency	Several drums	none
20	Unwanted pesticides	Local government agency	6 drums	none

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Solid Waste
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HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

Date	Type	Source	Quantity	
			Present	Future
20	Unwanted pesticide	Private party	1 gal.	none
20	Unwanted pesticides	U.S. Forest Service	120 gals.	none
21	Chrome bearing plating sludge	Electroplating	15 drums	15 drums every 3 mos.
21	Unwanted pesticides	U.S. Forest Service	500 gals.	Periodic
21	Unwanted DDT pesticide	Private party	4 lbs.	none
26	PCB spill cleanup debris	Company providing spill cleanup service	1 drum	none
27	Unwanted sodium arsenite	U.S. Gov't. agency	1 drum	none
28	Chrome bearing plating sludge	Electroplating	4 drums	none
28	Unwanted 2,4,5T herbicide	Local Gov't. agency	45 gals.	none
<u>Washington (2)</u>				
6	Old ductings with asbestos insulation	Paper mill	50 bags	none
26	Obsolete lab. chemicals (organic solvents)	School lab.	4 drums	none

<u>TOTALS</u>	<u>LAST</u>	<u>PRESENT</u>
Settlement Action	11	11
Preliminary Issues	17	19
Discovery	4	4
To be Scheduled	1	3
To be Rescheduled	0	0
Set for Hearing	2	3
Briefing	0	0
Decision Due	7	6
Decision Out	2	4
Appeal to Commission	6	6
Appeal to Court	1	1
Transcript	1	1
Finished	<u>1</u>	<u>0</u>
	53	58

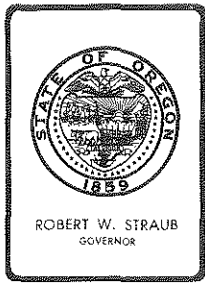
KEY

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
Prty 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.

October 1978

DEQ/EQC Contested Case Log

Pet/Resp Name	Hrng Rqst	Hrng Rfrl	DEQ or Atty	Hrng Offcr	Hrng Date	Resp Code	Dec Date	Case Type & No.	Case Status
Davis et al	5/75	5/75	Atty	McS	5/76	Resp	6/78	12 SSD Permits	Appeal to Court
Paulson	5/75	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	1/76	Atty	McS	9/76	Resp	1/77	Rem Order SSD	Appeal to Comm
PGE (Harborton)	2/76	2/76	Atty	McS		Hrngs		ACD Permit Denial	Preliminary Issues
Taylor, R.	9/76	9/76	Atty	Lmb	12/76	Resp	12/77	\$500 IQ-MWR-76-91	Appeal to Comm
Ellsworth	10/76	10/76	Atty	McS		Dept		\$10,000 WQ-PR-76-196	Preliminary Issues
Ellsworth	10/76	10/76	Atty	McS		Resp		WQ-PR-ENF-76-48	Appeal to Comm
Silbernagel	10/76	10/77	Atty	Cor		Resp		AQ-MWR-76-202 \$400	Discovery
Jensen	11/76	11/76	Atty	Cor	12/77	Resp	6/78	\$1500 Fld Brn AQ-SNCR-76-232	Appeal to Comm
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	Hrngs		Rem Order SS-SWR-253-76	Decision Due
Jones	4/77	7/77	DEQ	Cor	6/9/78	Hrngs		SSD Permit SS-SWR-77-57	Decision Due
Beaver State et al.	5/77	5/77	Atty	Cor	10/77	Resp		\$150 AQ-SNCR-77-84	Decision Out
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	Preliminary Issues
Henderson	6/77	7/77	Atty	Cor	1/77	Resp		Rem Order SS-CR-77-136	Decision Out
Lowe	7/77	7/77	DEQ	Cor		Resp		\$1500 SW-PR-77-103	Settlement Action
Magness	7/77	7/77	DEQ	Cor	11/77	Hrngs		\$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	Hrngs		\$500 AQ-SNCR-77-143	Appeal to Comm
Sun Studs	8/77	9/77	DEQ	McS		Resp		\$300 WQ-SWR-77-152	Settlement Action
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	Hrngs		\$1000 AQ-SNCR-76-178 Fld Brn	Decision Due
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	Hrngs		SSD Permit App	Decision Due
Trussell et al	9/77	9/77	DEQ	Cor	10/77	Resp		\$150 AQ-SNCR-77-185	Decision Out
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		Dept		\$100 NP-SNCR-77-173	Preliminary Issues
Powell	11/77	11/77	Atty	Cor		Prtys		\$10,000 Fld Brn AQ-MWR-77-241	Preliminary Issues
Wah Chang	12/77	12/77	Atty	McS		Dept		ACD Permit Conditions	Preliminary Issues
Barrett & Sons, Inc.	12/77		DEQ			Dept		\$500 WQ-PR-77-307	Preliminary Issues
Carl F. Jensen	12/77	1/78	Atty	McS		Prtys		\$18,600 AQ-MWR-77-321 Fld Brn	Discovery
Carl F. Jensen/ Elmer Klopfenstein	12/77	1/78	Atty	McS		Prtys		\$1200 AQ-SNCR-77-320 Fld Brn	Discovery
Steckley	12/77	12/77	DEQ	McS	6/9/78	Hrngs		\$200 AQ-MWR-77-298 Fld Brn	Decision Due
Wah Chang	1/78	2/78	Atty	Cor		Dept		\$5500 WQ-MWR-77-334	Preliminary Issues
Gray	2/78	3/78	DEQ			Dept		\$250 SS-PR-78-12	Settlement Action
Hawkins	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
Avery	4/78	5/78	DEQ	McS	9/13/78	Hrngs		\$500 AQ-SNCR-78-05	Decision Out
Wah Chang	4/78	4/78	Atty	McS		Prtys		NPDES Permit	Settlement Action
Abiqua	5/78		DEQ			Resp		P-SS-WVR-78-01	Preliminary Issues
Stimpson	5/78		Atty	McS		Dept		Tax Credit Cert. T-AQ-PR-78-01	Set for Hearing
Vogt	6/78	6/78	DEQ	Cor	11/8/78	Dept		SSD Permit	Set for Hearing
Hogue	7/78		Atty			Dept		P-SS-SWR-78	Preliminary Issues
B & M	8/78	8/78	DEQ	Cor	8/78	Hrngs		SSD License	Set for Hearing
St. Helens	7/78		Atty	McS		Resp		P-WQ-SWR-78-03	Preliminary Issues
Champion	8/78	8/78	DEQ			Prtys		P-WQ-CR-78-04	To be Scheduled
Welch	10/78	10/78	Atty			Resp		P-SS-CR-78-134	Settlement Action
Vaara	10/78	10/78	DEQ			Resp		\$100 SS-SWR-78-116	Preliminary Issues
Carter	10/78		DEQ			DEQ		\$50 AQ-WVR-78-140	To Be Scheduled
Holst	10/78		DEQ			DEQ		P-SS-WVR-78-05	To Be Scheduled
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



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, October 27, 1978, EQC Meeting

TAX CREDIT APPLICATIONS

Attached are 14 requests for tax credit action.

Director's Recommendation

1. Issue Pollution Control Facility Certificates to applications T-998R, T-1007, T-1012, T-1013, T-1015, T-1016, T-1019, T-1020, T-1021, T-1024, T-1025, and T-1029.
2. Be informed of Director's intent to issue Preliminary Certification for Tax Credit Relief to Apollo Metal Finishing, Inc., and Teledyne Wah Chang Albany (review reports attached).

Michael Downs
for
WILLIAM H. YOUNG

MJDowns:cs
229-6485
10/25/78
Attachments



Contains
Recycled
Materials

Proposed October 1978 Totals

Air Quality	\$ 138,111
Water Quality	5,526,064
Solid Waste	<u>21,307</u>
	\$5,685,482

Calendar Year Totals to Date
(excluding October 1978 Totals)

Air Quality	\$2,052,699
Water Quality	6,666,656
Solid Waste	<u>13,653,159</u>
	\$22,372,514

Total Certificates Awarded (monetary values)
Since Beginning of Program (excluding October 1978 Totals)

Air Quality	\$114,239,784
Water Quality	85,961,822
Solid Waste	<u>28,081,788</u>
	\$228,283,294

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

1. Applicant

The Amalgamated Sugar Company
Nyssa, Oregon Factory
First Security Bank Building
Ogden, Utah 84401

The applicant owns and operates a sugar extracting and refining plant at Nyssa, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is an addition of spray nozzles and a modification to the three pulp drier scrubbers. The facility cost consists of the following:

Spray nozzle system addition	\$ 2,248
Replacement with stainless steel	50,846
Labor	41,011

Request for Preliminary Certification for Tax Credit was made on June 6, 1976, and approved on July 15, 1976.

Construction was initiated on the claimed facility in July, 1976, completed in September, 1976, and the facility was placed into operation in October, 1976.

Facility Cost: \$94,105.00 (Accountant's Certification was provided).

3. Evaluation of Application

The original scrubber system was unable to achieve compliance with the Department's regulations. A spray nozzle system was added to improve performance and achieve compliance. In addition, the original system was built out of mild steel and because of the sulfur in the coal, which is used to fire the drier, the mild steel was corroding away. To stop this corrosion, the piping was replaced with stainless steel pipes and the scrubber was lined with stainless steel.

The entire cost of the spray nozzle system is allocable to air pollution control. Since the labor cost was not accounted for according to the different aspects of the project, the Department has allocated the labor costs in proportion to the cost of the materials. Therefore, the cost allocable for air pollution control for the spray nozzle system is \$3984 (\$2248 + \$1736).

It is the Department's determination that the replacement with stainless steel is partially maintenance and partially an upgrading of the scrubber system, because the mild steel would have had to be replaced and the stainless steel will resist corrosion and extend the life of the system.

The cost of the labor for installing the stainless steel replacement parts and lining the scrubber is not allocable to air pollution control because this expense is considered to be a maintenance item. If the system were replaced with mild steel, this cost would have occurred.

To arrive at the cost of the material allocable to air pollution control, the Department compared the current cost of the stainless steel replacement and lining items with the current cost of the same mild steel items. Therefore, the current mild steel cost was calculated by a ratio to the current stainless steel cost and multiplied by the actual stainless steel cost. This number was then subtracted from the actual cost. The cost of the stainless steel replacement parts and lining allocable to air pollution control is \$39,660.

The total project cost allocable to air pollution control is \$43,644. Therefore, the percent allocable to air pollution control should be 46 percent.

The systems have been tested for particulate and are in compliance with the Department's regulations.

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 air pollution.
- D. The facility was required by the Department and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The Department has concluded that 46 percent of the cost is allocable to air pollution control. It was determined that 54 percent of the cost of the project was for maintenance and not allocable to pollution control.

5. Director's Recommendation

Based upon the summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$94,105 with 40% or more, but less than 60% allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-998R.

FAS:km
229-6414
10-10-78

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

1. Applicant

Boise Cascade Corporation
Paper Group
P. O. Box 14201
Salem, Oregon 97308

The applicant owns and operates a pulp and paper mill in Salem, Oregon. Treated waste water is discharged to the Willamette River.

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

2. Description of Claimed Facility

The claimed facility consists of improvements recommended by the company's consulting engineer. They are as follows:

- a. acid filter pump-out system
- b. spill prevention retaining walls
- c. improved effluent ph control system
- d. new primary effluent pump
- e. cooling water discharge line
- f. spare aerator installation

Written request for Preliminary Certification for Tax Credit was not made, however Preliminary Certification for Tax Credit was granted through verbal communications. The Waste Treatment Improvement Program was approved by DEQ letter of August 16, 1976. Construction was initiated on the claimed facility in September 1976, completed and placed into operation in June 1977.

Facility cost: \$432,239.00 (Certified Public Accountant's statement was provided.)

3. Evaluation

Staff has been generally pleased with the improved performance of waste water treatment facilities at the Salem mill. The applicant claims that the improvements contributed to the reduction of BOD from 8,000 pounds per day to 5,000 pounds per day and the reduction of ammonia nitrogen in the effluent to 6,000 pounds per day.

4. Summation

- A. Facility was constructed after receiving approval to construct and Preliminary Certification pursuant to ORS 468.175.
- B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).

Appl T-1007
Date 10/25/78
Page 2

- 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, with the exception of the Preliminary Certification Requirement.
- E. Applicant claims 100% of costs allocable to pollution control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1007, such Certificate to bear the actual cost of \$432,239.00 with 80% or more allocable to pollution control.

MJDowns:cs
229-6485
10/25/78

**General Offices****Boise Cascade Corporation**

Legal Department
One Jefferson Square
Boise, Idaho 83728
(208) 384-6450

October 9, 1978

Management Services Div.
Dept. of Environmental Quality

RECEIVED
OCT 12 1978

Mr. Mike Downs
Department of Environmental Quality
Yeon Building
522 S. W. Fifth Avenue
Portland, OR 97201

Re: Tax Relief Applications Nos. T-1007 and T-1006

Dear Mike:

Several weeks ago I asked you not to present Tax Relief Applications T-1007 and T-1006 to the Environmental Quality Commission until I had an opportunity to review the facts regarding the applications.

As you may recall, these applications relate to water pollution control projects at our Salem mill. T-1007 concerns certain spill control equipment installed pursuant to a condition in our Air Containment Discharge Permit. T-1006 deals with additional aerators for our secondary treatment system installed in anticipation of low flow conditions last year.

In both cases the Department has recommended denial of the applications based upon our failure to request and receive a Preliminary Certification for Tax Credit before commencing construction. From my review of the facts, neither recommendation is appropriate because in each instance we did request and receive approval of the project prior to beginning construction, even though, admittedly, our requests were not made on forms provided by the Department.

Indeed, it is my understanding that although the Department has statutory authority since 1973 to "prescribe" a form of "notice" or later, "request," it was not until January 1976, that the Department adopted any such form for water pollution control projects. Accordingly, a water pollution control project prior to that time was approved for tax credits through a series of informal oral or written communications before the project was constructed.

Further, it seems clear that even after the adoption of a "request form," the Department not only approved projects where no request form had been filed, but advised the public through instructions for applications for tax relief that "a preliminary certification and/or approval to construct must have been obtained from the Department prior to construction." (See Instructions for Completing Application for Certification of Pollution Control Facility for Tax Relief Purposes DEQ-TC- 7/1/76.) Since the statute does not specify that the Department shall prescribe a single format for preliminary certification requests, it would appear reasonable to infer from these facts that the Department had, in effect, prescribed alternate methods for making the necessary request.

This impression is further reinforced by the fact that the Department made little or no effort to publicize the adoption of the request form. Accordingly, persons who, in the past, had filed tax credit applications with the Department, had little reason to assume that past procedures were no longer applicable. Given the importance the Department now attaches to the filing of the prescribed form, it appears that a good case could be made that the form should have been adopted in accordance with formal rule making procedures which would have called public attention to this change in procedure.

From the above analysis it would appear that it was not necessary to request a preliminary tax certification on any particular form or to receive a specific document labeled "Preliminary Certification for Tax Credit" before beginning construction in order to be eligible for tax credits. Rather, at least until the time the Department took formal action to make the request form an exclusive means for obtaining preliminary tax certification (and perhaps until a much later date in the event formal rule making procedures were applicable to such action), it appears that a request for approval followed by a statement from the Department that the project was approved, was sufficient to satisfy the statutory prerequisites for tax certification.

With respect to application T-1007, it is clear that: (1) the company did request approval of the project by letter dated July 27, 1976, from C. J. Fahlstrom, Resident Manager; (2) the company did receive approval of the project by letter dated August 16, 1976, from Charles K. Ashbaker, Supervisor, Water Pollution Control Section; and (3) construction did not begin until after approval of the project. Copies of the referenced documents are attached.

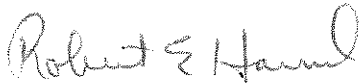
Mr. Mike Downs
Page 3
October 9, 1978

With respect to application T-1006, it is equally clear that:
(1) the company did request and receive approval for the project (which consisted of the simple addition of two aerators to the existing 18 aerators in the secondary treatment system) in a telephone call between William R. Spurgeon, Environmental Engineer, Department of Environmental Quality, in April 1977; and (2) construction did not begin until after approval of the project.

Therefore, it appears that our applications for tax certification should be granted.

Needless to say, I would appreciate your further thoughts on this matter in advance of the next Commission meeting.

Very truly yours,



Robert E. Hamel
Associate General Counsel

REH/mai

Attachments



Paper Group

Boise Cascade

P. O. Box 2089
Salem, Oregon 97308
(503) 362-2421

RECEIVED

JUL 29 1976

C. E. D.

July 27, 1976

Department of Environmental Quality
796 Winter Street, N.E.
Salem, Oregon 97310

ATTENTION: Russell H. Fetrow, Jr.

Dear Russ:

Section A-5 of our Air Permit specified that Bryan Johnson conduct a study of waste collection and treatment system and that his recommendations be approved by the Department before pulp production could be increased to 310 ADT/day. Enclosed is a copy of Bryan Johnson's report.

We wish to apologize for the delay in sending you this report, but Mr. Johnson was unable to present it earlier and we, too, have not had time to digest its contents.

We would, therefore, appreciate the opportunity of meeting with you and Mr. Johnson to review his recommendations and to discuss the proposed compliance schedule for your approval.

Very truly yours,

C. J. Fahlstrom
Resident Manager

CJF/mt

Enclosure



ESTABLISHED 1969
DEPARTMENT OF ENVIRONMENTAL QUALITY

DEPARTMENT OF
ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229- 5374

August 16, 1976

Boise Cascade Paper Group
P. O. Box 2089
Salem, Oregon 97308

Attention: Mr. C. J. Fahlstrom, Resident Manager

Gentlemen:

Re: W. Q. - Boise Cascade, Salem
Marion County

This letter will refer to the report and recommendations developed by Mr. Bryan Johnson (Consulting Engineer for your Company), for improvements to the waste water control system at Boise Cascade's Salem Mill. It will also refer to the meeting, August 10, 1976, between Messrs. Steve Downs and Dick Nichols of the Department and representatives of Boise Cascade, including Mr. Johnson.

We concur with Mr. Johnson's report and recommendations and believe implementation of his recommendations will significantly improve the performance of your mill's secondary treatment system and other waste control systems. We request that you submit a time schedule by September 30, 1976, for implementing all of the recommendations by June 1, 1977. We believe control of the acid plant filter backwash should be given primary emphasis in planning priorities, though we realize, due to the technical problems associated with this task, other projects may be completed earlier. Review of the neutralization facilities should be given second priority. We also believe improvements to the aeration capabilities of the secondary treatment system are vitally important. However, investigation of this can only be logically undertaken following completion of the improvements to the acid filters.

If you have questions or comments relative to this matter, please feel free to contact Mr. Dick Nichols in this office (229-5374) or Mr. Steve Downs in our Salem office (378-8240).

Very truly yours,

LOREN KRAMER
Director

Charles K. Ashbaker
Charles K. Ashbaker, Supervisor
Water Pollution Control Section

RJN:em

cc: Salem Region Office - DEQ

Mr. Joe Kulberg - Boise Cascade, Portland

BOISE CASCADE/Paper Group
Salem, Oregon
AFE Request #P01-76-023

BRYAN M. JOHNSON & ASSOCIATES

110 N.W. ORCHARD DRIVE • PORTLAND, OREGON 97229
TELEPHONE: OFFICE 503-226-3921 • HOME 503-646-5882

July 1, 1976

Mr. C. J. Fahlstrom
Resident Manager
Boise Cascade Paper Group
P. O. Box 2089
Salem, Oregon 97308

Dear Mr. Fahlstrom

This letter contains my report and recommendations for improving the quality of the mill effluent being discharged to the Willamette River. In developing this information, I have visited the plant, met with your quality control personnel, analyzed mill data, and reviewed technical literature on effluent treatment, aeration, and nitrification.

Contained herein are discussions and recommendations on spill control, pumping capacities, neutralization, and effluent treatment.

SPILL CONTROL (Refer to BOISE CASCADE Drawing PC-132 for locations)

Recommendation

Curb the area around pump pit one, the bleach plant seal boxes, and the acid plant to prevent spills from entering Pringle Creek. Divert the portion of this flow that may contain fiber to pump pit one, with the flow from the acid plant going to pump pit two.

Implementation of this recommendation will accomplish the same goal as provided by the curb recently installed around pump pit two.

Recommendation

Conduct routine inspection trips under the machine room building to locate leaks; and when located, institute immediate repair.

Several pipes are hung below the floor of this building and occasionally they leak untreated water into Pringle Creek. Not all leaks are contaminated, as clean water and steam lines are also under the building.

Recommendation

Divert all leaks under the pulp mill and bleach plant into a collection system. This flow should be diverted to pump pit one as it should pass through the clarifier. (It may be possible to construct a facility that will provide gravity flow to pump pit one.)

Flow from the machine room building crosses the railroad tracks in a hanging gravity steel sewer pipe and enters pump pit one. An open flume under the pulp mill and bleach plant collects discharges from the pulp and overflows from the bleach plant. (The bleach plant sewer goes directly to pump pit two.) The flume then enters a head box connected on the downstream end to a gravity sewer entering pump pit one at about 9 feet above the low water level in Pringle Creek. Untrapped spills and leaks from this area enter Pringle Creek. A more detailed engineering evaluation of this specific area will be needed in order to develop the best corrective approach.

Recommendation

Purchase and have on hand a spare vertical pump for pump pit one or provide an equivalent safeguard.

Pumping capacity of pump pits one and two were reviewed as overflows from both pits occurred in 1975.

Pump pit one pumps paper mill effluent and pulp mill white water through the clarifier. Yeast plant effluent, recovery discharges, and boiler blowdown go directly to pump pit two.

Peak flow entering pump pit one was estimated at 10,000 gpm. It will require all three vertical pumps at pump pit one to handle this flow if the horizontal pump is inoperative. A spare vertical pump should be available at all times.

Pump pit two peak flows were recorded at approximately 15,280 gpm at the Farshall flume. Each pump at pump pit two will handle 8,750 gpm, and two of the three pumps will meet the requirement. If each of these pumps is carefully maintained, an additional pump is not required.

Plant water supply will not be increased with increased production. Therefore, present flows are valid for future operations.

MILL EFFLUENT

The following summary of mill effluent characteristics was developed from mill data.

August through December, 1975

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
Flow in MGD	19.5	11	14.7	1.822
pH	9.3	5.8	6.6	.365
FBI	34,500	5,100	12,300	5,900
BOD ₅ in lb/day	102,300	16,300*	42,109	13,385

* Mill down approximately 10 days in September resulted in minimum values.

March through May, 1976

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
Flow in MGD :	18.6	7.4	14.8	1.8
pH	10.8	5.2	7.0	.7805
FBI	26,300	1,000	7,897	4,106
BOD ₅ in lb/day	81,201	8,390	37,180	13,565

March through May 1976 indicates better control of BOD₅ losses in that the maximum and average of both BOD₅ and FBI discharges were lower than the previous period. pH control appeared to suffer, however, as shown by the wider range in values and the larger standard deviation.

Recommendation

Review the lime system and, if necessary, install a secondary feed system to use when the first system fails to operate properly. Do not use ammonia for neutralization.

Malfunctions in the lime neutralization facility have caused the wide pH fluctuations, and breakdowns have required neutralization to be accomplished by using ammonia. Use of ammonia increases the ammonia concentration in the effluent from approximately 7,000 lb/day to over 16,000 lb/day.

Recommendation

Prepare a detailed engineering report with proposed corrective measures to significantly reduce the discharge of acid from the acid filters to the sewer system.

Losses of soluble SO₂ to the sewer exert a high oxygen demand in pond one. Mill personnel report that under optimum design operation, the SO₂ contribution to the sewer will utilize 12,500 pounds of oxygen per day. Immediate O₂ demand tests on the total effluent have demonstrated that the immediate oxygen demand to pond one may reach 20,000 pounds per day, and most of that demand begins at the acid plant. Review

of poor efficiencies in pond one can often be traced back to inefficient operation of the acid filters.

LAGOON OPERATION - POND ONE

Pond one holds approximately 50 million gallons and covers 16 acres (average depth - 10 feet). Pond one now holds eleven 100 horsepower aerators. At an average flow of 15 MGD, the detention time in pond one is approximate 3.3 days. With 1,100 horsepower, pond one is a completely mixed basin. Very high loads entering pond one show in the sample taken between ponds on the following day. Following is an analysis of the data collected on the effluent from pond one during two time periods.

August through December, 1975

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	7.7	5.6	6.6	0.8
FBI	24,000	6,700	11,600	3,070.5
S.S. in lb/day	40,330	12,251	23,614	5,179.1
BOD ₅ in lb/day	38,866	4,436*	19,223	7,181
BOD ₅ % reduction	85	3	53.5	15.9

*Mill down approximately 10 days in September resulted in minimum values.

March through May, 1976

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	7.8	4.1	6.3	.5507
FBI	16,100	3,600	8,104	2,845
S.S. in lb/day	28,240	8,696	17,522	4,154
BOD ₅ in lb/day	36,916	6,485	17,523	7,447
BOD ₅ % Reduction	79	-7	51.1	17.1

Recently oxygen uptake studies have been run on pond one effluent samples. As these samples are aerated to saturation prior to measuring the uptake rate, the immediate O₂ demand in pond one, if any, is not measured. Two tests conducted on June 14 and 16 showed 2.7 and 3.3 mg/l of O₂ uptake in 20 minutes. An uptake rate of 3.3 mg/l in 20 minutes

indicates a total O_2 demand in pond one of 99,000 lbs per day, or 3.75 pounds per horsepower hour, not counting the immediate demand imposed by SO_2 from the acid filters. These minimum data cannot be correlated to BOD_5 data

Recommendation

Measure dissolved oxygen, immediate oxygen demand, and oxygen uptake in pond one in addition to test currently run. These tests need not be run on weekends unless the pond performance appears to be subnormal.

Pond one must operate efficiently if the discharge permit limitations are to be met. It must satisfy the immediate O_2 demand and the three day BOD demand. BOD_5 reduction through this pond must consistently approach 60% to accomplish that goal. Additional data on the oxygen required to meet that demand is needed to be sure there are sufficient aerators in the pond to satisfy that demand.

Recommendation

Install aeration capacity in pond one to satisfy the oxygen demand. Determine when this demand is satisfied by maintaining a minimum D.O. concentration in pond one of 0.5 mg/l at all times.

Oxygen transfer efficiency of surface aerators is reported in literature to vary between 1.75 lb/hp-hr in aerated ponds to 18 lb/hp-hr in high rate activated sludge plants. Only by adding aerators until oxygen is always available in the pond can the final number of aerators required be determined. A significant reduction in SO_2 losses will reduce the number of aerators required.

LAGOON OPERATION - POND TWO

Pond two holds approximately 100 million gallons and covers 50 acres (average depth - 6.5 feet). Pond two now holds three aerators and is not completely mixed. Theoretical detention time is 6.6 days at 15 MGD, but peak PEI inputs to pond two show in the discharge within two days. Following is an analysis of effluent data from pond two covering two time periods.

August through December, 1975

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	7.8	6.0	6.9	.3316
PBI	14,700	6,100	10,600	2,285
S.S. in lb/day	20,176	5,029	11,778	3,480
BOD ₅ in lb/day	18,737	2,252	9,299	3,125
BOD ₅ % Reduction	72	0	50	16

March through May, 1976

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	6.9	5.7	6.5	.2620
PBI	14,500	4,500	8,521	2,594
S.S. in lb/day	16,157	4,103	8,985	2,943
BOD ₅ in lb/day	19,416	4,773	9,898	3,948
BOD ₅ % Reduction	74	-9	39.6	18.8

Recent oxygen uptake tests on pond two effluent indicate a total oxygen demand of 0.7 mg/l in 20 minutes or 42,000 lbs per day for the total pond. Oxygen surveys around the pond show available oxygen throughout most of it.

Performance of pond two during March through April was disappointing. BOD₅ and PBI input to pond two during this period was lower than during the August through December period, but the BOD₅ reduction through the pond was down to 39% from 50%. Data observation indicates that when pond two performs poorly pond one is not efficient. Pond two is not physically suited to act efficiently as an aerated lagoon because of its depth. Aerators seem to provide little mixing.

Recommendation

Conduct surveys on a two week schedule of D.O. throughout pond two. Conduct sludge deposit surveys on an established grid basis on a two month schedule. Continue to conduct oxygen uptake measurements in the effluent.

BOD₅ reduction in pond two is dependent on having O₂ available, sufficient nutrient for bacteria, and mixing adequate to get bacteria in contact with dissolved organics. One of these is not occurring on a regular basis.

Recommendation

Concentrate on making pond one operate at its maximum potential efficiency. If pond two is found to be oxygen deficient (less than 0.5 mg/l) in some areas, add aerators to correct this deficiency. Until pond one performs correctly, it will be difficult to determine a correct course of action for pond two, or even if improvements are needed.

Pond one should be able to (and did so over 30% of the time during the August-December period) provide over 60% BOD₅ reduction. When the recommendations regarding the acid filters and aeration in pond one are carried out, the loading to pond two should drop to 14,000 lbs/day of BOD₅. It will then need to provide only 43% BOD₅ reduction to meet permit limitations.

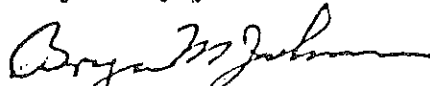
NITRIFICATION

When plant ammonia discharges are maintained in the 7,000 pound per day range, nitrification should not cause a D.O. problem in the Willamette River. It is my opinion that the nitrification problem has been overstated, even under higher loadings.

Promoting nitrification in a biological treatment system is difficult and costly. Pilot studies have developed criteria under which nitrification may be initiated in biological systems. Further study at this time does not appear to be necessary unless some new data is developed to further define the problem in the river and the need for further reduction from your mill.

If you have any questions regarding this report, please contact me.

Very truly yours



Bryan M. Johnson, P. E.

BIBLIOGRAPHY

- Metcalf & Eddy, Inc., Wastewater Engineering, New York: McGraw-Hill Book Company, 1972.
- Zajic, J. E., Water Pollution, Disposal and Reuse, Volume I, New York: Marcel Dekker, Inc., 1971.
- Parker, Homer W., Wastewater Systems Engineering, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1975.
- Nitrification and Denitrification Facilities, Wastewater Treatment, Environmental Protection Agency, Technology Transfer Seminar Publication, August 1973.
- Multi-System Biological Treatment of Bleached Kraft Effluents, Environmental Protection Agency, Water Pollution Control Research Series, 12040 EMY, December, 1971.
- Aerated Lagoon Treatment of Sulfite Pulping Effluents, Environmental Protection Agency, Water Pollution Control Research Series, 12040 ELM, December, 1971.
- Beak, T. W. Consultants Ltd, Biological Treatment Study, Government of Canada, Ottawa, Ontario, September, 1972.
- Rickert, David A. et al, Planning Implications of Dissolved Oxygen Depletion in the Willamette River, Oregon, Reprinted from Urbanization and Water Quality Control, American Water Resources Assn., June 1975.
- Water Quality Control in Oregon, A Status Report by the Oregon Department of Environmental Quality, April, 1975.
- Kormanik, Richard A., "Design of Two-Stage Aerated Lagoons," Journal Water Pollution Control Federation, March, 1972, pp. 451-458.
- Hutton, W. C. and S. A. LaRocca, "Biological Treatment of Concentrated Ammonia Wastewaters," Journal Water Pollution Control Federation, May, 1975, pp. 989-997.

August through December, 1975

TABLE I
MILL EFFLUENT

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>Stand. Dev.</u>
Flow in MGD	19.5	11	14.7	1.822
pH	9.3	5.8	6.6	.365
FBI	34,500	5,100	12,300	5,900
BOD ₅ in lb/day	102,300	16,300	42,109	13,385

TABLE II
POND 1 EFFLUENT

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>Stand. Dev.</u>
pH	7.7	5.6	6.6	0.8
FBI	24,000	6,700	11,600	3,070.5
S.S. in lb/day	40,330	12,251	23,614	5,179.1
BOD ₅ in lb/day	38,866	4,436	19,223	7,181
BOD ₅ % reduction	85	3	53.5	15.9

TABLE III
POND 2 EFFLUENT

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>Stand. Dev.</u>
pH	7.8	6.0	6.9	.3316
FBI	14,700	6,100	10,600	2,285
S.S. in lb/day	20,176	5,029	11,778	3,480
BOD ₅ in lb/day	18,737	2,252	9,299	3,125
BOD ₅ % reduction	72	0	50	16

TABLE IV
DISTRIBUTION OF BOD₅ REDUCTION VALUES

RANGE	POND ONE		POND TWO	
	No. of Observations	%	No. of Observations	%
0-9	3	2.6	1	1.1
10-19	2	1.7	3	3.2
20-29	5	4.4	4	4.3
30-39	8	7.0	13	14.0
40-49	24	20.2	16	17.2
50-59	35	30.9	32	34.4
60-69	25	21.8	23	24.7
70-79	12	10.4	1	1.1
80-89	1	1.0	0	0
90-99	0	0	0	0
Total	115	100%	93	100%

Date 10/18/78

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

1. Applicant

Tru-Mix Construction Company
1111 E. Vilas Road
Medford, OR 97501

The applicant owns and operates a ready-mix concrete batch plant at Medford, Oregon.

Application was made for tax credit for solid waste pollution control facility.

2. Description of Claimed Facility

The facility described in this application is a Wemco aggregate reclaimer and consists of:

1. Pumps (two 5 h.p; one 10 h.p.) and 25 h.p. motor	\$1,931.29
2. Steel fabrication	2,310.00
3. Wiring	2,610.41
4. Concrete	3,481.93
5. Miscellaneous parts	815.87
6. Contract labor	10,157.73

Total \$21,307.23

Request for Preliminary Certification for Tax Credit was made November 1, 1977, and approved December 30, 1977.

3. Evaluation of Application

Concrete truck wash material was previously landfilled. The claimed facility reclaims aggregate from the cement/wash water mixture. Reclaimed material is stockpiled (2 cubic yards per day) and sold (presently \$2.00/cu.yd.) to various contractors for construction and fill.

Construction was initiated on the claimed facility November 1, 1977, completed April 28, 1978, and the facility was placed into operation May 15, 1978.

Facility Cost: \$21,307.23 (Accountant's certification was provided.)

4. Summation

Facility was constructed after receiving approval to construct and preliminary certification issued pursuant to ORS 468.175.

Facility was under construction on or after January 1, 1973 as required by ORS 468.165 (1) (c).

App1 T-1012
Date 10/18/78
Page 2

Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing solid waste.

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 \$21,307.23 with 100% allocated to pollution control be issued for the facility claimed in Tax Credit Application Number T-1012.

EAS:mt
229-5356
October 17, 1978

Appl T-1013
Date 10/3/78

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

1. Applicant

WALTER WELLS & SONS
1802 Wells Drive
Hood River, Oregon 97031

The applicant owns and operates an apple, pear, and cherry orchard at Hood River, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is two (2) Orchard Rite Wind Machines, serial numbers E309 and E310. These machines, orchard fans, provide approximately 10 acres each of frost damage protection.

Request for Preliminary Certification for Tax Credit was made on 2-24-78, and approved on 3-27-78.

Construction was initiated on the claimed facility on 3-1-78, completed on 4-11-78, and the facility was placed into operation on 4-11-78.

Facility Cost: \$22,006.63 (Accountant's Certification was provided).

3. Evaluation

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees even though the heaters produce a significant smoke and soot air pollution problem in the City of Hood River. The orchard farmers desire a secure, long range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance. Each orchard fan reduces the number of heaters required for frost protection from 340 heaters to 100 perimeter heaters, a 70% reduction.

An orchard fan blows warmer air from above the trees--when there is a temperature inversion--down into the trees. There is also a second mode of operation using perimeter heaters when there is no inversion. The fans have proven effective in the Hood River area where frost control is needed on an average of 30 hours per year.

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 air pollution.
- D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The operating cost of the claimed facility is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fan, depreciation over 10 years and no salvage value plus the average interest at 9 percent on the undepreciated balance.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$22,006.63 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-1013.

FASKirvin:as
(503) 229-5414
10/3/78

Appl T-1015
Date 10/2/78

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

GREGORY H. OATES
6320 Old Parkdale Road
Parkdale, Oregon 97041

The applicant owns and operates a pear orchard at Parkdale, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is one Orchard Rite Wind Machine fan model GP-455 used for frost damage protection.

Request for Preliminary Certification for Tax Credit was made on 7-5-77, and approved on 7-11-77.

Construction was initiated on the claimed facility on 1-78, completed on 1-21-78, and the facility was placed into operation on 4-78.

Facility Cost: \$9,000.00 (Accountant's Certification is not required since the cost of the facility is less than \$10,000 and copies of the sales transactions were provided.)

3. Evaluation of Application

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees even though the heaters produce a significant smoke and soot air pollution problem. The orchard farmers desire a secure, long-range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance.

An orchard fan blows warmer air from above the trees--when there is a temperature inversion--down into the trees. There is a second mode of operation on poor inversion nights which uses the perimeter heaters along with the fan to provide frost protection. The fans have proven effective in the Hood River area where frost control is needed on an average of 30 hours per year. One orchard fan serves 10 acres and reduces the number of heaters required for frost protection from 340 heaters to 100 perimeter heaters, a 70 percent reduction.

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 air pollution.
- D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The operating cost of the claimed facility is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fan, depreciation over 10 years and no salvage value plus the average interest at 9 percent on the undepreciated balance.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$9,000.00 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-1015.

FASkirvin:as
(503) 229-6414
10/2/78

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

1. Applicant

RAYMOND A. WILHITE ORCHARD
3316 Thomsen Road
Hood River, Oregon 97031

The applicant owns and operates a pear and apple orchard at Hood River, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is two Tropic Breeze Wind Machines, Tower Serial Numbers 38068 and 38113.

Request for Preliminary Certification for Tax Credit was made on 3-10-78, and approved on 3-27-78.

Construction was initiated on the claimed facility on 3-27-78, completed on 4-7-78, and the facility was placed into operation on 4-11-78.

Facility Cost: \$13,000.00 (Accountant's Certification was provided).

3. Evaluation of Application

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees even though the heaters produced a significant smoke and soot air pollution problem in the City of Hood River. The orchard farmers desire a secure, long-range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance.

An orchard fan blows warmer air from above the trees--when there is a temperature inversion--down into the trees. There is a second mode of operation on poor inversion nights which uses perimeter heaters along with the fan to provide frost protection. The fans have proven effective in the Hood River area where frost control is needed on an average of 30 hours per year. One orchard fan serves 10 acres and reduces the number of heaters required from 340 heaters to 100 perimeter heaters, a 70 percent reduction.

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 air pollution.
- D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The operating cost of the claimed facility is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fan, depreciation over 10 years and no salvage value plus the average interest at 9 percent on the undepreciated balance.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$13,000.00 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-1016.

FASkirvin:as
(503)229-6414
10/3/78

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

1. Applicant

Publishers Paper Company
419 Main Street
Oregon City, OR 97045

The applicant owns and operates a pulp and paper mill at Oregon City, manufacturing news print.

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

2. Description of Claimed Facility

The claimed facility is a foam suppression system at the secondary lagoon in West Linn and consists of:

- A. Lagoon perimeter and center divider piping and sprinklers.
- B. Sprinkler water supply pump (Gorman-Rupp, 4 x 4, 40Hp, Model 4B3B) and filter at lagoon discharge.
- C. Defoaming Chemical Addition.
- D. Sprinkler control system.

Request for Preliminary Certification for Tax Credit was made April 20, 1976 and approved April 22, 1976. Construction was initiated on the claimed facility on April of 1976, completed in March of 1977, but placed into operation prior to final completion in November of 1976.

Facility Cost: \$19,781 (Certified Public Accountant's statement was provided.)

3. Evaluation

Prior to installation of the claimed facility foam from the lagoon was airborne to areas adjacent to publishers property. The applicant claims that with the claimed facility foam has been effectively controlled on the surface of the lagoon and airborne carry-over has been minimal. Staff substantiates this.

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.

There is no recoverable material of value and in addition there is the cost of operating the facility.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T1019, such Certificate to bear the actual cost of \$19,781.00 with 80% or more allocable to pollution control.

C. K. Ashbaker
W. D. Leshner:bp
229-5318
October 5, 1978

Appl T1020

Date September 28, 1978

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

1. Applicant

Publishers Paper Company
419 Main Street
Oregon City, OR 97045

The applicant owns and operates a pulp and paper mill in Oregon City Manufacturing news print.

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

2. Description of Claimed Facility

The claimed Facility consists of the installation of one model MSAH 100/900 mechanical surface high speed aerator equipped with a 100 Hp motor, deflector core and float.

Request for Preliminary Certification for Tax Credit was made January 7, 1977 and approved January 10, 1977. Construction was initiated on the claimed facility in January of 1977, completed and placed into operation on January 12, 1977.

Facility Cost: \$16,346 (Certified Public Accountant's statment was provided.)

3. Evaluation

Staff confirms Publishers contention that the installation of the additional aerator has reduced BOD and improved treatment efficiency and assisted, along with other measures, in compliance with NPDES permit limitation.

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.

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

- 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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T1020, such Certificate to bear the actual cost of \$16,346 with 80% or more allocable to pollution control.

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

1. Applicant

Publishers Paper Company
419 Main Street
Oregon City, OR 97045

The applicant owns and operates a pulp and paper mill manufacturing news print.
Application was made for tax credit for water pollution control facility.

2. Description of Claimed Facility

The claimed facility consists of the installation of a 600 Hp centrifugal waste water transfer pump including fittings, piping, electrical and foundation. Pump discharge ties into existing pipe line to secondary treatment system.

Request for Preliminary Certification for Tax Credit was made June 16, 1977 and approved June 22, 1977. Construction was initiated on the claimed facility on July 4, 1977, completed and placed into operation in September 6, 1977.

Facility Cost: \$96,964 (Certified Public Accountant's statement was provided.)

3. Evaluation

Staff has documented need for the claimed facility in numerous memos regarding primary effluent spills to the river and has expressed the need for a reliable main transfer pump for several years prior to this installation. The existing vertical pumps remain for standby purposes. Staff also confirms the installation of the pump is complete and operating as designed.

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.

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

- 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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T1021, such Certificate to bear the actual cost of \$96,964 with 80% or more allocable to pollution control.

App# T-1024

Date October 4, 1978

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

1. Applicant

Champion International Corporation
Champion Building Products Division
P.O. Box 10228
Eugene, OR 97440

The applicant owns and operates a plant on Rifle Range Road in Roseburg, manufacturing plywood from peeler log to finished panel.

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

2. Description of Claimed Facility

The claimed facility; a steam vat hot water recirculation system, consists of:

- a. Chopper Pump (30 Hp motor) and sump (2,000 gal.)
- b. Screen, Sweco Sta-Sieve
- c. Centrifugal Pump (50 Hp motor)
- d. Tanks, Steel, 12 ft. diameter x 8 ft. high - 3
- e. Pipe, Valves and Fittings
- f. Electrical and Controls

Request for Preliminary Certification for Tax Credit was made on March 25, 1977 and approved on March 31, 1977. Construction was initiated on the claimed facility on May 15, 1977, completed on July 21, 1977, and placed into operation on September 4, 1977.

Facility Cost: \$106,995.00. (Certified Public Accountant's statement was provided)

3. Evaluation

Special condition S2 of NPDES permit 2247-J required that steam vat condensate waters be recirculated or otherwise handled such that no direct or indirect discharge to the log pond or public waters occur. The claimed facility was necessary to comply with this condition. Staff confirms that the facility was completed and operating as designed.

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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1024, such Certificate to bear the actual cost of \$107,995.00 with 80% or more allocable to pollution control.

C. K. Ashbaker
W. D. Leshner:em
229-5318
October 4, 1978

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

1. Applicant

Champion International Corporation
Champion Building Products Division
P.O. Box 10228
Eugene, OR 97440

The applicant owns and operates a plant on Rifle Range Road in Roseburg manufacturing plywood from peeler log to finished panel.

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

2. Description of Claimed Facility

The claimed facility, a veneer dryer washdown water recirculation system consists of:

- a. Chopper Pump, Vaughn #330, 10 Hp Motor
- b. Screen, Door Oliver DSM, 6 ft.
- c. Pump, Paco Type L, 25 Hp Motor and Wash Water Tanks
- d. Excavation, Concrete and Steel Construction
- e. Electrical Controls and Power Equipment
- f. Piping Material and Labor

Request for Preliminary Certification for Tax Credit was made on March 1, 1977 and approved on March 15, 1977. Construction was initiated on the claimed facility on April 1, 1977, completed and placed into operation in July 1977.

Facility Cost: \$98,334.42 (Certified Public Account's statement was provided)

3. Evaluation

Before installation of the claimed facility, wash water from four veneer dryers discharged directly into the log pond and thence to Deer Creek. Veneer dryer washdown water is high in C.O.D. and caustic.

The washdown water from the four dryers is now collected, screened, stored and reused for dryer washdown. Staff confirms that the system is operating as designed and instrumental in improving water quality.

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 468.175 (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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1025, such Certificate to bear the actual cost of \$98,334.42 with 80% or more allocable to pollution control.

C. K. Ashbaker
W. D. Leshner:em
229-5318
October 4, 1978

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

1. Applicant

Gilmore Steel Corporation
Oregon Steel Mills Division
P.O. Box 2760
Portland, OR 97208

The applicant operates a steel mill and pollution control facilities at Rivergate and has made application for tax credit for water pollution control facility. A portion of these facilities are leased to Gilmore by the Port of Portland. A letter to the Department from the Port, dated 9/19/78 authorizes Gilmore to take any allowable credit on the facility. A remaining 53% undivided interest in the water recirculation system is owned by Midland-Ross for the Midrex Plant which has been leased to Gilmore pursuant to a lease dated 12/30/74, and a supplement agreement, 8/1/75. Midland-Ross letter of 10/10/78 describes the lease arrangement and states that Gilmore is entitled to take the tax credit relative to Midland-Ross's 53%.

2. Description of Claimed Facility

The claimed facility is a water treatment and reuse system and consists of the following main components:

- a. Spray cooling system - four 75 hp floating spray coolers installed on the existing secondary settling pond.
- b. Collection sump with four 12 inch Lawrence DKE 4,000 gpm pumps with 125 hp motors.
- c. Filter plant with ten Dravo/Bamos 12 foot 6 inch diameter deep bed filter tanks, Media and Sutorbuilt air back washing. A 30,000 gallon tank with agitator serves as backwash surge.
- d. Sludge thickener tank with Dorr Oliver Ax mechanism with underflow pumps, two sludge dewatering presses, mixer units and polymer addition.
- e. Neutralization system for oxide top gas scrubber effluent with 50,000 lime storage tank, 5,000 gallon neutralization tank and agitator.
- f. Recirculation sump and pump to dock for iron ore unloading and plant recirculation tank with four Gould 3405 pumps with 200 hp motors
- g. Upgrade effluent collection system from rehear furnace, rolling and strip mill, rolling mill scale pit, standby cooling tower pump, melt shop cooling water and pellet plant cooling water and effluent.
- h. Site preparation for treatment plant including relocation of dikes piping, drainage, grading, and piling work.
- i. Electrical power equipment control.
- j. Instrumentation.

2. Description of Claimed Facility - continued

k. General construction labor.

Notice of Intent to Construct dated April 18, 1975 and June 12, 1975, was approved on June 2, 1975 and August 12, 1975. Preliminary Certification for Tax Credit was not required, but was requested by Gilmore on June 11, 1975 and acknowledged by the Department of Environmental Quality on June 12, 1975.

Construction was initiated on the Claimed Facility in October 1975, although site preparation had commenced in April. The facility was completed and placed into operation in August 1977.

Facility Cost: \$4,755,405.33 (Certified Public Accountant's statement was provided)

3. Evaluation

The applicant states that from 1969 to 1976 that once through water use at the steel complex resulted in an effluent in excess of 20 MGD. The new effluent treatment reuse system provides cooling, filtration and reuse so that an 85% reduction in effluent has resulted, to comply with NPDES Permit 2234-J. (July 1977 limits). Suspended Solids in the effluent have been reduced to less than 10 mg/l.

Staff verifies that the plant is operating for the purpose as designed.

4. Summation

- A. Facility was constructed after receiving approval to construct 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. 100% of the facility cost is claimed allocable to pollution control. The facility is solely for the purpose of Water Pollution Control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1029, such certificate to bear the actual cost of \$4,755,405.33, with 80% or more of the cost allocable to pollution control.

Charles K. Ashbaker
W. D. Leshner:em
229-5318
October 17, 1978

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

REQUEST FOR PRELIMINARY CERTIFICATION FOR TAX CREDIT
REVIEW REPORT

1. Applicant

Apollo Metal Finishing, Inc.
7525 S. E. Johnson Creek Blvd.
Portland, Oregon 97206

The applicant owns and operates an electroplating metal finishing works at 7525 S. E. Johnson Creek Blvd. in Portland, Oregon.

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

2. Description of Claimed Facility

The facility described in this application includes two ion exchange units and necessary plumbing to affect proper flow of wastewaters.

It is estimated the facility was placed in operation on July 7, 1978. The estimated cost of the facility is \$11,089.49.

3. Evaluation of Application

The application was made in accordance with the permittee's NPDES permit. The treatment works are required by Schedule C of their NPDES permit issued to the applicant by the Department. The treatment works are sound.

4. Summation

Erection, construction or installation of the facility was commenced before a written request for Preliminary Certification was filed with the Department pursuant to ORS 468.175(1). However, since there have been many discussions concerning the need for the facility, including a negotiated Compliance Schedule, the request and approval is implied.

5. Director's Recommendation

Having studied the letter from Ray Underwood regarding Preliminary Certification based on unwritten requests, it is the Director's intent to issue preliminary certification. Therefore, no Commission action is necessary at this time.

SCC:ahe
10/19/78
229-5297

Attachment: (1)

6/14/78 Department of Justice Letter

Red
5/2/8

REDMAN, CARSKADON & KNAUSS

ATTORNEYS AT LAW

11050 S E. 21ST AVENUE

MILWAUKIE, OREGON 97222

JAMES E. REDMAN
JAMES R. CARSKADON, JR.
ARTHUR B. KNAUSS
JOHN H. KELLEY

TELEPHONE
659-5335
AREA CODE 503

October 6, 1978

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

ATTENTION: CAROL A. SPLETTSTASZER
Management Services Division

Re: Tax Relief Application No. T-1023

Dear Ms. Splettstaszer:

This letter is written on behalf of Apollo Metal Finishing, Inc., an Oregon corporation (the Corporation) and is to be treated by the Environmental Quality Commission (the Commission) as the Corporation's request to the Commission that the Commission accept an oral preliminary notice of intent to apply for tax relief as satisfying its regulations.

Through a misunderstanding, the Corporation failed to file a written application advising the Commission of its intent to apply for tax relief, however, from the outset of this matter in 1977 and until the present time, the concern of the Corporation has not been the installation of the pollution control equipment requested by engineers from Department of Environmental Quality, but rather the cost to this small corporation.

On March 6, 1978, I met with Mr. Carter, an engineer for DEQ, Mr. Wixom who is also with that Department, Mr. Godon the president of the Corporation, and Darrell Rich, an engineer working on the recycling procedure for the Corporation. I have previously, on behalf of the Corporation, discussed with Steve Carter the inability of the Corporation to financially stand the installation that was being recommended by the Department. In that early conversation Mr. Carter indicated that a tax credit could be obtained.

Management Services Div.
Dept. of Environmental Quality

RECEIVED
OCT 09 1978

Carol A. Splettstaszer

Management Services Division, DEQ

October 6, 1978

Page 2

Early in our conversation during the meeting of March 6, the matter of the tax credit was again discussed and it was my impression, as well as that of the president of the Corporation, Mr. Godon, that by working closely with the Department in each phase of the design as well as installation of the pollution control equipment, we would be eligible for the tax credit benefit. I was never made aware of the administrative rule requiring the filing of the preliminary application, and in discussing this matter recently with Mr. Godon, he advised that though he had received a preliminary application from the Department, he did not complete it because it contained matters which we had already verbally reviewed with the Department and it was his impression, as well as mine, that we had already qualified for the tax credit allowance.

At no time did the Corporation ever intend to violate any Commission requirement for allowance of a tax credit and at all times the Corporation, acting in good faith, assumed that a tax credit allowance would be given to it.

The entire plant equipment has now been installed and the Corporation has been advised that their application for a tax credit cannot be processed because a written application for preliminary approval was never submitted and that it is now too late to request preliminary approval, and I am asking that the Commission accept the oral notice of the Corporation for preliminary approval as complying with the spirit of the administrative rule and allow our application for the tax credit to be processed.

Very truly yours,



James R. Carskadon, Jr. *js*

JRC:jan

cc: client

JAMES A. REDDEN
ATTORNEY GENERAL



DEPARTMENT OF JUSTICE

PORTLAND DIVISION
500 Pacific Building
520 S.W. Yamhill
Portland, Oregon 97204
Telephone: (503) 229-5725

Management Services Div.
Dept. of Environmental Quality

RECEIVED
JUN 15 1978

June 14, 1978

Mr. Mike Downs
Department of Environmental
Quality
Yeon Building
522 S.W. Fifth Avenue
Portland, Oregon 97204

Re: Applications for Preliminary Tax Credit Certification

Dear Mike:

This letter responds to your June 6, 1978 memorandum to me requesting an informal legal opinion as to the questions stated therein.

1. ORS 468.175 provides that the request by an applicant for preliminary tax credit certification "shall be in a form prescribed by the department." In view of this provision, it seems to me that the Department has some flexibility in determining what constitutes a "request." If the Department is satisfied with a verbal request or a written request not on Form No. DEQ/TC-1-10/77, I believe that request may satisfy the statute, though the better administrative practice may be to see that said form is used by each applicant. Such request, in form satisfactory to the Department, would then be followed by the submission by the applicant of the necessary information leading to consideration of the preliminary tax credit certification by the Department pursuant to ORS 468.175.

2. It is my opinion that the statute requires, as a jurisdictional matter, the filing of a request for preliminary certification with DEQ before commencement of erection, construction or installation of the facility. ORS 468.175(1).

Thus, if the request, whether oral or written or on the DEQ form, is given after such commencement, there can be no preliminary tax credit certification.

You asked me to consider the following circumstances when responding to the questions above:

- (a) Applicant was unaware of the requirements of ORS 468.175(1). Ignorance of the law by the applicant would be no excuse for not meeting the requirements of ORS 468.175(1).
- (b) Applicant verbally requested agency staff for preliminary certification. As indicated above, this might be acceptable by the Department as a "request."
- (c) Applicant filed a written request for preliminary certification on the wrong form or in a letter. As indicated above, it would be within the discretion of the Department under the statute to determine whether a satisfactory "request" had been made.
- (d) Agency staff has mistakenly told applicant that he didn't need to file a request for preliminary certification. If the applicant's action did not constitute a "request," as indicated above, the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of request prior to commencement of erection, construction or installation of the facility. Nor would it eliminate the requirement of ORS 468.170 for preliminary tax credit certification prior to final certification.

3. Yes, sec 2, ch 831, Or Laws 1973 (now a part of ORS 468.175) did apply to solid waste pollution control facilities constructed after the effective date of that 1973 Act, unless the erection, construction or installation of

Mr. Mike Downs

-3-

June 14, 1978

the pollution control facility was begun before the effective date of that 1973 Act. Secs 3 and 4, ch 831, Or Laws 1973.

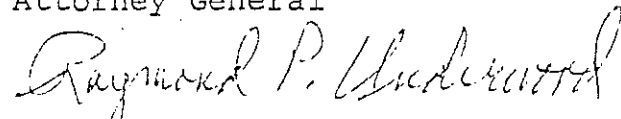
4. Sec 2, ch 831, Or Laws 1973, provided that the notice of construction required to be filed with the Department of Environmental Quality "shall be in a form prescribed by the department." Therefore, the same reasoning which I have applied to previous questions would apply here and I believe it would be within the discretion of the Department to determine whether what the applicant filed was a "notice of construction" within the meaning of the statute. However, if the applicant's action did not constitute a "notice of construction," the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of prior notice of construction.

Both under sec 2, ch 831, Or Laws 1973, and ORS 468.175 the Department must determine whether to issue a preliminary tax credit certification following its receipt of the proper notice or request.

Please let me know if you have further questions regarding this matter.

Very truly yours,

JAMES A. REDDEN
Attorney General



Raymond P. Underwood
Chief Counsel

ej

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

REQUEST FOR PRELIMINARY CERTIFICATION FOR TAX CREDIT
REVIEW REPORT

1. Applicant

Teledyne Wah Chang, Albany
P. O. Box 580
Albany, Oregon 97312

The applicant owns and operates a primary zirconium refining plant at 1600 Old Salem Highway, Millersburg, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a 400,000 gallon wooden storage tank and spill containment berm to store ammonium chloride (V-2) liquor.

It is estimated the facility will be placed in operation by September 1, 1978. The estimated cost of the facility is \$220,000.

3. Evaluation of Application

The application was made in accordance with the permittee's NPDES permit. The tank construction is required by a Stipulation and Final Consent Order issued to the applicant by the Department. The tank and berm designs are sound.

4. Summation

Erection, construction or installation of the facility was commenced before a written request for Preliminary Certification was filed with the Department pursuant to ORS 468.175(1). However, since there have been many discussions concerning the need for the facility, including a negotiated Consent Order, the request and approval is implied.

5. Director's Recommendation

Having studied the letter from Ray Underwood regarding Preliminary Certification based on unwritten requests, it is the Director's intent to issue preliminary certification. Therefore, no Commission action is necessary at this time.

CKAshbaker:cs

10/19/78

229-5325

Attachment: (1) 6/14/78 Department of Justice Letter

JAMES A. REDDEN
ATTORNEY GENERAL



DEPARTMENT OF JUSTICE

PORTLAND DIVISION
500 Pacific Building
520 S.W. Yamhill
Portland, Oregon 97204
Telephone: (503) 229-5725

Management Services Div.
Dept. of Environmental Quality

RECEIVED
JUN 15 1978

June 14, 1978

Mr. Mike Downs
Department of Environmental
Quality
Yeon Building
522 S.W. Fifth Avenue
Portland, Oregon 97204

Re: Applications for Preliminary Tax Credit Certification

Dear Mike:

This letter responds to your June 6, 1978 memorandum to me requesting an informal legal opinion as to the questions stated therein.

1. ORS 468.175 provides that the request by an applicant for preliminary tax credit certification "shall be in a form prescribed by the department." In view of this provision, it seems to me that the Department has some flexibility in determining what constitutes a "request." If the Department is satisfied with a verbal request or a written request not on Form No. DEQ/TC-1-10/77, I believe that request may satisfy the statute, though the better administrative practice may be to see that said form is used by each applicant. Such request, in form satisfactory to the Department, would then be followed by the submission by the applicant of the necessary information leading to consideration of the preliminary tax credit certification by the Department pursuant to ORS 468.175.

2. It is my opinion that the statute requires, as a jurisdictional matter, the filing of a request for preliminary certification with DEQ before commencement of erection, construction or installation of the facility. ORS 468.175(1).

Thus, if the request, whether oral or written or on the DEQ form, is given after such commencement, there can be no preliminary tax credit certification.

You asked me to consider the following circumstances when responding to the questions above:

- (a) Applicant was unaware of the requirements of ORS 468.175(1). Ignorance of the law by the applicant would be no excuse for not meeting the requirements of ORS 468.175(1).
- (b) Applicant verbally requested agency staff for preliminary certification. As indicated above, this might be acceptable by the Department as a "request."
- (c) Applicant filed a written request for preliminary certification on the wrong form or in a letter. As indicated above, it would be within the discretion of the Department under the statute to determine whether a satisfactory "request" had been made.
- (d) Agency staff has mistakenly told applicant that he didn't need to file a request for preliminary certification. If the applicant's action did not constitute a "request," as indicated above, the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of request prior to commencement of erection, construction or installation of the facility. Nor would it eliminate the requirement of ORS 468.170 for preliminary tax credit certification prior to final certification.

3. Yes, sec 2, ch 831, Or Laws 1973 (now a part of ORS 468.175) did apply to solid waste pollution control facilities constructed after the effective date of that 1973 Act, unless the erection, construction or installation of

Mr. Mike Downs

-3-

June 14, 1978

the pollution control facility was begun before the effective date of that 1973 Act. Secs 3 and 4, ch 831, Or Laws 1973.

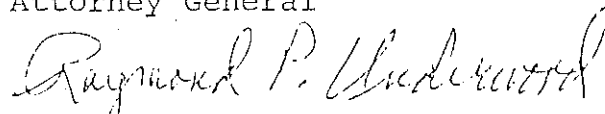
4. Sec 2, ch 831, Or Laws 1973, provided that the notice of construction required to be filed with the Department of Environmental Quality "shall be in a form prescribed by the department." Therefore, the same reasoning which I have applied to previous questions would apply here and I believe it would be within the discretion of the Department to determine whether what the applicant filed was a "notice of construction" within the meaning of the statute. However, if the applicant's action did not constitute a "notice of construction," the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of prior notice of construction.

Both under sec 2, ch 831, Or Laws 1973, and ORS 468.175 the Department must determine whether to issue a preliminary tax credit certification following its receipt of the proper notice or request.

Please let me know if you have further questions regarding this matter.

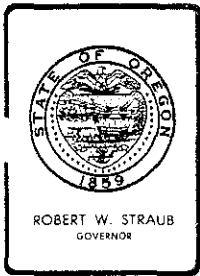
Very truly yours,

JAMES A. REDDEN
Attorney General



Raymond P. Underwood
Chief Counsel

ej



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, October 27, 1978, EQC Meeting

TAX CREDIT APPLICATIONS

Attached are 14 requests for tax credit action.

Director's Recommendation

1. Issue Pollution Control Facility Certificates to applications T-998R, T-1007, T-1012, T-1013, T-1015, T-1016, T-1019, T-1020, T-1021, T-1024, T-1025, and T-1029.
2. Be informed of Director's intent to issue Preliminary Certification for Tax Credit Relief to Apollo Metal Finishing, Inc., and Teledyne Wah Chang Albany (review reports attached).

Michael Downs
for
WILLIAM H. YOUNG

MJDowns:cs
229-6485
10/25/78
Attachments



Contains
Recycled
Materials

Proposed October 1978 Totals

Air Quality	\$ 138,111
Water Quality	5,526,064
Solid Waste	<u>21,307</u>
	\$5,685,482

Calendar Year Totals to Date
(excluding October 1978 Totals)

Air Quality	\$2,052,699
Water Quality	6,666,656
Solid Waste	<u>13,653,159</u>
	\$22,372,514

Total Certificates Awarded (monetary values)
Since Beginning of Program (excluding October 1978 Totals)

Air Quality	\$114,239,784
Water Quality	85,961,822
Solid Waste	<u>28,081,788</u>
	\$228,283,294

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

1. Applicant

The Amalgamated Sugar Company
Nyssa, Oregon Factory
First Security Bank Building
Ogden, Utah 84401

The applicant owns and operates a sugar extracting and refining plant at Nyssa, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is an addition of spray nozzles and a modification to the three pulp drier scrubbers. The facility cost consists of the following:

Spray nozzle system addition	\$ 2,248
Replacement with stainless steel	50,846
Labor	41,011

Request for Preliminary Certification for Tax Credit was made on June 6, 1976, and approved on July 15, 1976.

Construction was initiated on the claimed facility in July, 1976, completed in September, 1976, and the facility was placed into operation in October, 1976.

Facility Cost: \$94,105.00 (Accountant's Certification was provided).

3. Evaluation of Application

The original scrubber system was unable to achieve compliance with the Department's regulations. A spray nozzle system was added to improve performance and achieve compliance. In addition, the original system was built out of mild steel and because of the sulfur in the coal, which is used to fire the drier, the mild steel was corroding away. To stop this corrosion, the piping was replaced with stainless steel pipes and the scrubber was lined with stainless steel.

The entire cost of the spray nozzle system is allocable to air pollution control. Since the labor cost was not accounted for according to the different aspects of the project, the Department has allocated the labor costs in proportion to the cost of the materials. Therefore, the cost allocable for air pollution control for the spray nozzle system is \$3984 (\$2248 + \$1736).

It is the Department's determination that the replacement with stainless steel is partially maintenance and partially an upgrading of the scrubber system, because the mild steel would have had to be replaced and the stainless steel will resist corrosion and extend the life of the system.

The cost of the labor for installing the stainless steel replacement parts and lining the scrubber is not allocable to air pollution control because this expense is considered to be a maintenance item. If the system were replaced with mild steel, this cost would have occurred.

To arrive at the cost of the material allocable to air pollution control, the Department compared the current cost of the stainless steel replacement and lining items with the current cost of the same mild steel items. Therefore, the current mild steel cost was calculated by a ratio to the current stainless steel cost and multiplied by the actual stainless steel cost. This number was then subtracted from the actual cost. The cost of the stainless steel replacement parts and lining allocable to air pollution control is \$39,660.

The total project cost allocable to air pollution control is \$43,644. Therefore, the percent allocable to air pollution control should be 46 percent.

The systems have been tested for particulate and are in compliance with the Department's regulations.

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 air pollution.
- D. The facility was required by the Department and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The Department has concluded that 46 percent of the cost is allocable to air pollution control. It was determined that 54 percent of the cost of the project was for maintenance and not allocable to pollution control.

5. Director's Recommendation

Based upon the summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$94,105 with 40% or more, but less than 60% allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-998R.

FAS:km
229-6414
10-10-78

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

1. Applicant

Boise Cascade Corporation
Paper Group
P. O. Box 14201
Salem, Oregon 97308

The applicant owns and operates a pulp and paper mill in Salem, Oregon. Treated waste water is discharged to the Willamette River.

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

2. Description of Claimed Facility

The claimed facility consists of improvements recommended by the company's consulting engineer. They are as follows:

- a. acid filter pump-out system
- b. spill prevention retaining walls
- c. improved effluent ph control system
- d. new primary effluent pump
- e. cooling water discharge line
- f. spare aerator installation

Written request for Preliminary Certification for Tax Credit was not made, however Preliminary Certification for Tax Credit was granted through verbal communications. The Waste Treatment Improvement Program was approved by DEQ letter of August 16, 1976. Construction was initiated on the claimed facility in September 1976, completed and placed into operation in June 1977.

Facility cost: \$432,239.00 (Certified Public Accountant's statement was provided.)

3. Evaluation

Staff has been generally pleased with the improved performance of waste water treatment facilities at the Salem mill. The applicant claims that the improvements contributed to the reduction of BOD from 8,000 pounds per day to 5,000 pounds per day and the reduction of ammonia nitrogen in the effluent to 6,000 pounds per day.

4. Summation

- A. Facility was constructed after receiving approval to construct and Preliminary Certification pursuant to ORS 468.175.
- B. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).

Appl T-1007
Date 10/25/78
Page 2

- 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, with the exception of the Preliminary Certification Requirement.
- E. Applicant claims 100% of costs allocable to pollution control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1007, such Certificate to bear the actual cost of \$432,239.00 with 80% or more allocable to pollution control.

MJDowns:cs
229-6485
10/25/78



2240

General Offices

Boise Cascade Corporation

Legal Department
One Jefferson Square
Boise, Idaho 83728
(208) 384-6450

October 9, 1978

Management Services Div.
Dept. of Environmental Quality

RECEIVED
OCT 12 1978

Mr. Mike Downs
Department of Environmental Quality
Yeon Building
522 S. W. Fifth Avenue
Portland, OR 97201

Re: Tax Relief Applications Nos. T-1007 and T-1006

Dear Mike:

Several weeks ago I asked you not to present Tax Relief Applications T-1007 and T-1006 to the Environmental Quality Commission until I had an opportunity to review the facts regarding the applications.

As you may recall, these applications relate to water pollution control projects at our Salem mill. T-1007 concerns certain spill control equipment installed pursuant to a condition in our Air Containment Discharge Permit. T-1006 deals with additional aerators for our secondary treatment system installed in anticipation of low flow conditions last year.

In both cases the Department has recommended denial of the applications based upon our failure to request and receive a Preliminary Certification for Tax Credit before commencing construction. From my review of the facts, neither recommendation is appropriate because in each instance we did request and receive approval of the project prior to beginning construction, even though, admittedly, our requests were not made on forms provided by the Department.

Indeed, it is my understanding that although the Department has statutory authority since 1973 to "prescribe" a form of "notice" or later, "request," it was not until January 1976, that the Department adopted any such form for water pollution control projects. Accordingly, a water pollution control project prior to that time was approved for tax credits through a series of informal oral or written communications before the project was constructed.

Further, it seems clear that even after the adoption of a "request form," the Department not only approved projects where no request form had been filed, but advised the public through instructions for applications for tax relief that "a preliminary certification and/or approval to construct must have been obtained from the Department prior to construction." (See Instructions for Completing Application for Certification of Pollution Control Facility for Tax Relief Purposes DEQ-TC- 7/1/76.) Since the statute does not specify that the Department shall prescribe a single format for preliminary certification requests, it would appear reasonable to infer from these facts that the Department had, in effect, prescribed alternate methods for making the necessary request.

This impression is further reinforced by the fact that the Department made little or no effort to publicize the adoption of the request form. Accordingly, persons who, in the past, had filed tax credit applications with the Department, had little reason to assume that past procedures were no longer applicable. Given the importance the Department now attaches to the filing of the prescribed form, it appears that a good case could be made that the form should have been adopted in accordance with formal rule making procedures which would have called public attention to this change in procedure.

From the above analysis it would appear that it was not necessary to request a preliminary tax certification on any particular form or to receive a specific document labeled "Preliminary Certification for Tax Credit" before beginning construction in order to be eligible for tax credits. Rather, at least until the time the Department took formal action to make the request form an exclusive means for obtaining preliminary tax certification (and perhaps until a much later date in the event formal rule making procedures were applicable to such action), it appears that a request for approval followed by a statement from the Department that the project was approved, was sufficient to satisfy the statutory prerequisites for tax certification.

With respect to application T-1007, it is clear that: (1) the company did request approval of the project by letter dated July 27, 1976, from C. J. Fahlstrom, Resident Manager; (2) the company did receive approval of the project by letter dated August 16, 1976, from Charles K. Ashbaker, Supervisor, Water Pollution Control Section; and (3) construction did not begin until after approval of the project. Copies of the referenced documents are attached.

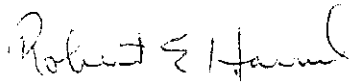
Mr. Mike Downs
Page 3
October 9, 1978

With respect to application T-1006, it is equally clear that:
(1) the company did request and receive approval for the project (which consisted of the simple addition of two aerators to the existing 18 aerators in the secondary treatment system) in a telephone call between William R. Spurgeon, Environmental Engineer, Department of Environmental Quality, in April 1977; and (2) construction did not begin until after approval of the project.

Therefore, it appears that our applications for tax certification should be granted.

Needless to say, I would appreciate your further thoughts on this matter in advance of the next Commission meeting.

Very truly yours,



Robert E. Hamel
Associate General Counsel

REH/mai

Attachments



Boise Cascade

Paper Group

P. O. Box 2069
Salem, Oregon 97308
(503) 362-2421

RECEIVED
JUL 29 1976

C. E. D.

July 27, 1976

Department of Environmental Quality
796 Winter Street, N.E.
Salem, Oregon 97310

ATTENTION: Russell H. Fetrow, Jr.

Dear Russ:

Section A-5 of our Air Permit specified that Bryan Johnson conduct a study of waste collection and treatment system and that his recommendations be approved by the Department before pulp production could be increased to 310 ADT/day. Enclosed is a copy of Bryan Johnson's report.

We wish to apologize for the delay in sending you this report, but Mr. Johnson was unable to present it earlier and we, too, have not had time to digest its contents.

We would, therefore, appreciate the opportunity of meeting with you and Mr. Johnson to review his recommendations and to discuss the proposed compliance schedule for your approval.

Very truly yours,

C. J. Fahlstrom
Resident Manager

CJF/mt

Enclosure



DEPARTMENT OF
ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229- 5374

August 16, 1976

Boise Cascade Paper Group
P. O. Box 2089
Salem, Oregon 97308

Attention: Mr. C. J. Fahlstrom, Resident Manager

Gentlemen:

Re: W. Q. - Boise Cascade, Salem
Marion County

This letter will refer to the report and recommendations developed by Mr. Bryan Johnson (Consulting Engineer for your Company), for improvements to the waste water control system at Boise Cascade's Salem Mill. It will also refer to the meeting, August 10, 1976, between Messrs. Steve Downs and Dick Nichols of the Department and representatives of Boise Cascade, including Mr. Johnson.

We concur with Mr. Johnson's report and recommendations and believe implementation of his recommendations will significantly improve the performance of your mill's secondary treatment system and other waste control systems. We request that you submit a time schedule by September 30, 1976, for implementing all of the recommendations by June 1, 1977. We believe control of the acid plant filter backwash should be given primary emphasis in planning priorities, though we realize, due to the technical problems associated with this task, other projects may be completed earlier. Review of the neutralization facilities should be given second priority. We also believe improvements to the aeration capabilities of the secondary treatment system are vitally important. However, investigation of this can only be logically undertaken following completion of the improvements to the acid filters.

If you have questions or comments relative to this matter, please feel free to contact Mr. Dick Nichols in this office (229-5374) or Mr. Steve Downs in our Salem office (378-8240).

Very truly yours,

LOREN KRAMER
Director

Charles K. Ashbaker
Charles K. Ashbaker, Supervisor
Water Pollution Control Section

RJN:em

cc: Salem Region Office - DEQ

Mr. Joe Kulberg - Boise Cascade, Portland

BOISE CASCADE/Paper Group
Salem, Oregon
AFE Request #P01-76-023

BRYAN M. JOHNSON & ASSOCIATES

110 N. W. ORCHARD DRIVE • PORTLAND, OREGON 97229
TELEPHONE: OFFICE 503-226-3921 • HOME 503-446-5881

July 1, 1976

Mr. C. J. Fahlstrom
Resident Manager
Boise Cascade Paper Group
P. O. Box 2089
Salem, Oregon 97308

Dear Mr. Fahlstrom

This letter contains my report and recommendations for improving the quality of the mill effluent being discharged to the Willamette River. In developing this information, I have visited the plant, met with your quality control personnel, analyzed mill data, and reviewed technical literature on effluent treatment, aeration, and nitrification.

Contained herein are discussions and recommendations on spill control, pumping capacities, neutralization, and effluent treatment.

SPILL CONTROL (Refer to BOISE CASCADE Drawing PC-132 for locations)

Recommendation

Curb the area around pump pit one, the bleach plant seal boxes, and the acid plant to prevent spills from entering Pringle Creek. Divert the portion of this flow that may contain fiber to pump pit one, with the flow from the acid plant going to pump pit two.

Implementation of this recommendation will accomplish the same goal as provided by the curb recently installed around pump pit two.

Recommendation

Conduct routine inspection trips under the machine room building to locate leaks; and when located, institute immediate repair.

Several pipes are hung below the floor of this building and occasionally they leak untreated water into Pringle Creek. Not all leaks are contaminated, as clean water and steam lines are also under the building.

Recommendation

Divert all leaks under the pulp mill and bleach plant into a collection system. This flow should be diverted to pump pit one as it should pass through the clarifier. (It may be possible to construct a facility that will provide gravity flow to pump pit one.)

Flow from the machine room building crosses the railroad tracks in a hanging gravity steel sewer pipe and enters pump pit one. An open flume under the pulp mill and bleach plant collects discharges from the pulp and overflows from the bleach plant. (The bleach plant sewer goes directly to pump pit two.) The flume then enters a head box connected on the downstream end to a gravity sewer entering pump pit one at about 9 feet above the low water level in Pringle Creek. Untrapped spills and leaks from this area enter Pringle Creek. A more detailed engineering evaluation of this specific area will be needed in order to develop the best corrective approach.

Recommendation

Purchase and have on hand a spare vertical pump for pump pit one or provide an equivalent safeguard.

Pumping capacity of pump pits one and two were reviewed as overflows from both pits occurred in 1975.

Pump pit one pumps paper mill effluent and pulp mill white water through the clarifier. Yeast plant effluent, recovery discharges, and boiler blowdown go directly to pump pit two.

Peak flow entering pump pit one was estimated at 10,000 gpm. It will require all three vertical pumps at pump pit one to handle this flow if the horizontal pump is inoperative. A spare vertical pump should be available at all times.

Pump pit two peak flows were recorded at approximately 15,280 gpm at the Farshall flume. Each pump at pump pit two will handle 8,750 gpm, and two of the three pumps will meet the requirement. If each of these pumps is carefully maintained, an additional pump is not required.

Plant water supply will not be increased with increased production. Therefore, present flows are valid for future operations.

MILL EFFLUENT

The following summary of mill effluent characteristics was developed from mill data.

August through December, 1975

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
Flow in MGD	19.5	11	14.7	1.822
pH	9.3	5.8	6.6	.365
FBI	34,500	5,100	12,300	5,900
FOD ₅ in lb/day	102,300	16,300*	42,109	13,385

* Mill down approximately 10 days in September resulted in minimum values.

March through May, 1976

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
Flow in MGD :	18.6	7.4	14.8	1.8
pH	10.8	5.2	7.0	.7805
FBI	26,300	1,000	7,897	4,106
EOD ₅ in lb/day	81,201	8,390	37,180	13,565

March through May 1976 indicates better control of EOD₅ losses in that the maximum and average of both EOD₅ and FBI discharges were lower than the previous period. pH control appeared to suffer, however, as shown by the wider range in values and the larger standard deviation.

Recommendation

Review the lime system and, if necessary, install a secondary feed system to use when the first system fails to operate properly. Do not use ammonia for neutralization.

Malfunctions in the lime neutralization facility have caused the wide pH fluctuations, and breakdowns have required neutralization to be accomplished by using ammonia. Use of ammonia increases the ammonia concentration in the effluent from approximately 7,000 lb/day to over 16,000 lb/day.

Recommendation

Prepare a detailed engineering report with proposed corrective measures to significantly reduce the discharge of acid from the acid filters to the sewer system.

Losses of soluble SO₂ to the sewer exert a high oxygen demand in pond one. Mill personnel report that under optimum design operation, the SO₂ contribution to the sewer will utilize 12,500 pounds of oxygen per day. Immediate O₂ demand tests on the total effluent have demonstrated that the immediate oxygen demand to pond one may reach 20,000 pounds per day, and most of that demand begins at the acid plant. Review

of poor efficiencies in pond one can often be traced back to inefficient operation of the acid filters.

LAGOON OPERATION - POND ONE

Pond one holds approximately 50 million gallons and covers 16 acres (average depth - 10 feet). Pond one now holds eleven 100 horsepower aerators. At an average flow of 15 MGD, the detention time in pond one is approximate 3.3 days. With 1,100 horsepower, pond one is a completely mixed basin. Very high loads entering pond one show in the sample taken between ponds on the following day. Following is an analysis of the data collected on the effluent from pond one during two time periods.

August through December, 1975

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	7.7	5.6	6.6	0.8
FBI	24,000	6,700	11,600	3,070.5
S.S. in lb/day	40,330	12,251	23,614	5,179.1
BOD ₅ in lb/day	38,866	4,436*	19,223	7,181
BOD ₅ % reduction	85	3	53.5	15.9

*Mill down approximately 10 days in September resulted in minimum values.

March through May, 1976

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	7.8	4.1	6.3	.5507
FBI	16,100	3,600	8,104	2,845
S.S. in lb/day	28,240	8,696	17,522	4,154
BOD ₅ in lb/day	36,916	6,485	17,523	7,447
BOD ₅ % Reduction	79	-7	51.1	17.1

Recently oxygen uptake studies have been run on pond one effluent samples. As these samples are aerated to saturation prior to measuring the uptake rate, the immediate O₂ demand in pond one, if any, is not measured. Two tests conducted on June 14 and 16 showed 2.7 and 3.3 mg/l of O₂ uptake in 20 minutes. An uptake rate of 3.3 mg/l in 20 minutes

indicates a total O_2 demand in pond one of 99,000 lbs per day, or 3.75 pounds per horsepower hour, not counting the immediate demand imposed by SO_2 from the acid filters. These minimum data cannot be correlated to BOD_5 data

Recommendation

Measure dissolved oxygen, immediate oxygen demand, and oxygen uptake in pond one in addition to test currently run. These tests need not be run on weekends unless the pond performance appears to be subnormal.

Pond one must operate efficiently if the discharge permit limitations are to be met. It must satisfy the immediate O_2 demand and the three day BOD_5 demand. BOD_5 reduction through this pond must consistently approach 60% to accomplish that goal. Additional data on the oxygen required to meet that demand is needed to be sure there are sufficient aerators in the pond to satisfy that demand.

Recommendation

Install aeration capacity in pond one to satisfy the oxygen demand. Determine when this demand is satisfied by maintaining a minimum D.O. concentration in pond one of 0.5 mg/l at all times.

Oxygen transfer efficiency of surface aerators is reported in literature to vary between 1.75 lb/hp-hr in aerated ponds to 18 lb/hp-hr in high rate activated sludge plants. Only by adding aerators until oxygen is always available in the pond can the final number of aerators required be determined. A significant reduction in SO_2 losses will reduce the number of aerators required.

LAGOON OPERATION - POND TWO

Pond two holds approximately 100 million gallons and covers 50 acres (average depth - 6.5 feet). Pond two now holds three aerators and is not completely mixed. Theoretical detention time is 6.6 days at 15 MGD, but peak PEI inputs to pond two show in the discharge within two days. Following is an analysis of effluent data from pond two covering two time periods.

August through December, 1975

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	7.8	6.0	6.9	.3316
FBI	14,700	6,100	10,600	2,285
S.S. in lb/day	20,176	5,029	11,778	3,480
BOD ₅ in lb/day	18,737	2,252	9,299	3,125
BOD ₅ % Reduction	72	0	50	16

March through May, 1976

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>St. Dev.</u>
pH	6.9	5.7	6.5	.2620
FBI	14,500	4,500	8,521	2,594
S.S. in lb/day	16,157	4,103	8,985	2,943
BOD ₅ in lb/day	19,416	4,773	9,898	3,948
BOD ₅ % Reduction	74	-9	39.6	18.8

Recent oxygen uptake tests on pond two effluent indicate a total oxygen demand of 0.7 mg/l in 20 minutes or 42,000 lbs per day for the total pond. Oxygen surveys around the pond show available oxygen throughout most of it.

Performance of pond two during March through April was disappointing. BOD₅ and FBI input to pond two during this period was lower than during the August through December period, but the BOD₅ reduction through the pond was down to 39% from 50%. Data observation indicates that when pond two performs poorly pond one is not efficient. Pond two is not physically suited to act efficiently as an aerated lagoon because of its depth. Aerators seem to provide little mixing.

Recommendation

Conduct surveys on a two week schedule of D.O. throughout pond two. Conduct sludge deposit surveys on an established grid basis on a two month schedule. Continue to conduct oxygen uptake measurements in the effluent.

BOD₅ reduction in pond two is dependent on having O₂ available, sufficient nutrient for bacteria, and mixing adequate to get bacteria in contact with dissolved organics. One of these is not occurring on a regular basis.

Recommendation

Concentrate on making pond one operate at its maximum potential efficiency. If pond two is found to be oxygen deficient (less than 0.5 mg/l) in some areas, add aerators to correct this deficiency. Until pond one performs correctly, it will be difficult to determine a correct course of action for pond two, or even if improvements are needed.

Pond one should be able to (and did so over 30% of the time during the August-December period) provide over 60% BOD₅ reduction. When the recommendations regarding the acid filters and aeration in pond one are carried out, the loading to pond two should drop to 14,000 lbs/day of BOD₅. It will then need to provide only 43% BOD₅ reduction to meet permit limitations.

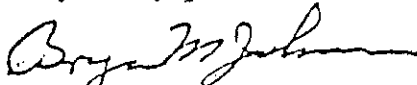
NITRIFICATION

When plant ammonia discharges are maintained in the 7,000 pound per day range, nitrification should not cause a D.O. problem in the Willamette River. It is my opinion that the nitrification problem has been overstated, even under higher loadings.

Promoting nitrification in a biological treatment system is difficult and costly. Pilot studies have developed criteria under which nitrification may be initiated in biological systems. Further study at this time does not appear to be necessary unless some new data is developed to further define the problem in the river and the need for further reduction from your mill.

If you have any questions regarding this report, please contact me.

Very truly yours


Bryan M. Johnson, P. E.

BIBLIOGRAPHY

- Metcalf & Eddy, Inc., Wastewater Engineering, New York: McGraw-Hill Book Company, 1972.
- Zajic, J. E., Water Pollution, Disposal and Reuse, Volume I, New York: Marcel Dekker, Inc., 1971.
- Parker, Homer W., Wastewater Systems Engineering, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1975.
- Nitrification and Denitrification Facilities, Wastewater Treatment, Environmental Protection Agency, Technology Transfer Seminar Publication, August 1973.
- Multi-System Biological Treatment of Bleached Kraft Effluents, Environmental Protection Agency, Water Pollution Control Research Series, 12040 EMY, December, 1971.
- Aerated Lagoon Treatment of Sulfite Pulp Mill Effluents, Environmental Protection Agency, Water Pollution Control Research Series, 12040 ELW, December, 1971.
- Beak, T. W. Consultants Ltd, Biological Treatment Study, Government of Canada, Ottawa, Ontario, September, 1972.
- Rickert, David A. et al, Planning Implications of Dissolved Oxygen Depletion in the Willamette River, Oregon, Reprinted from Urbanization and Water Quality Control, American Water Resources Assn., June 1975.
- Water Quality Control in Oregon, A Status Report by the Oregon Department of Environmental Quality, April, 1975.
- Kormanik, Richard A., "Design of Two-Stage Aerated Lagoons," Journal Water Pollution Control Federation, March, 1972, pp. 451-458.
- Hutton, W. C. and S. A. laRocca, "Biological Treatment of Concentrated Ammonia Wastewaters," Journal Water Pollution Control Federation, May, 1975, pp. 989-997.

August through December, 1975

TABLE I
MILL EFFLUENT

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>Stand. Dev.</u>
Flow in MGD	19.5	11	14.7	1.822
pH	9.3	5.8	6.6	.365
PFI	34,500	5,100	12,300	5,900
BOD ₅ in lb/day	102,300	16,300	42,109	13,385

TABLE II
POND 1 EFFLUENT

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>Stand. Dev.</u>
pH	7.7	5.6	6.6	0.8
PFI	24,000	6,700	11,600	3,070.5
S.S. in lb/day	40,330	12,251	23,614	5,179.1
BOD ₅ in lb/day	38,866	4,436	19,223	7,181
BOD ₅ % reduction	85	3	53.5	15.9

TABLE III
POND 2 EFFLUENT

	<u>Maximum</u>	<u>Minimum</u>	<u>Mean</u>	<u>Stand. Dev.</u>
pH	7.8	6.0	6.9	.3316
PFI	14,700	6,100	10,600	2,285
S.S. in lb/day	20,176	5,029	11,778	3,480
BOD ₅ in lb/day	18,737	2,252	9,299	3,125
BOD ₅ % reduction	72	0	50	16

TABLE IV
DISTRIBUTION OF BOD₅ REDUCTION VALUES

RANGE	POND ONE		POND TWO	
	No. of Observations	%	No. of Observations	%
0-9	3	2.6	1	1.1
10-19	2	1.7	3	3.2
20-29	5	4.4	4	4.3
30-39	8	7.0	13	14.0
40-49	24	20.2	16	17.2
50-59	35	30.9	32	34.4
60-69	25	21.8	23	24.7
70-79	12	10.4	1	1.1
80-89	1	1.0	0	0
90-99	0	0	0	0
Total	115	100%	93	100%

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

1. Applicant

Tru-Mix Construction Company
1111 E. Vilas Road
Medford, OR 97501

The applicant owns and operates a ready-mix concrete batch plant at Medford, Oregon.

Application was made for tax credit for solid waste pollution control facility.

2. Description of Claimed Facility

The facility described in this application is a Wemco aggregate reclaimer and consists of:

1. Pumps (two 5 h.p; one 10 h.p.) and 25 h.p. motor	\$1,931.29
2. Steel fabrication	2,310.00
3. Wiring	2,610.41
4. Concrete	3,481.93
5. Miscellaneous parts	815.87
6. Contract labor	10,157.73

Total \$21,307.23

Request for Preliminary Certification for Tax Credit was made November 1, 1977, and approved December 30, 1977.

3. Evaluation of Application

Concrete truck wash material was previously landfilled. The claimed facility reclaims aggregate from the cement/wash water mixture. Reclaimed material is stockpiled (2 cubic yards per day) and sold (presently \$2.00/cu.yd.) to various contractors for construction and fill.

Construction was initiated on the claimed facility November 1, 1977, completed April 28, 1978, and the facility was placed into operation May 15, 1978.

Facility Cost: \$21,307.23 (Accountant's certification was provided.)

4. Summation

Facility was constructed after receiving approval to construct and preliminary certification issued pursuant to ORS 468.175.

Facility was under construction on or after January 1, 1973 as required by ORS 468.165 (1) (c).

Appl T-1012
Date 10/18/78
Page 2

Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling or reducing solid waste.

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 \$21,307.23 with 100% allocated to pollution control be issued for the facility claimed in Tax Credit Application Number T-1012.

EAS:mt
229-5356
October 17, 1978

Appl T-1013
Date 10/3/78

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

1. Applicant

WALTER WELLS & SONS
1802 Wells Drive
Hood River, Oregon 97031

The applicant owns and operates an apple, pear, and cherry orchard at Hood River, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is two (2) Orchard Rite Wind Machines, serial numbers E309 and E310. These machines, orchard fans, provide approximately 10 acres each of frost damage protection.

Request for Preliminary Certification for Tax Credit was made on 2-24-78, and approved on 3-27-78.

Construction was initiated on the claimed facility on 3-1-78, completed on 4-11-78, and the facility was placed into operation on 4-11-78.

Facility Cost: \$22,006.63 (Accountant's Certification was provided).

3. Evaluation

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees even though the heaters produce a significant smoke and soot air pollution problem in the City of Hood River. The orchard farmers desire a secure, long range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance. Each orchard fan reduces the number of heaters required for frost protection from 340 heaters to 100 perimeter heaters, a 70% reduction.

An orchard fan blows warmer air from above the trees--when there is a temperature inversion--down into the trees. There is also a second mode of operation using perimeter heaters when there is no inversion. The fans have proven effective in the Hood River area where frost control is needed on an average of 30 hours per year.

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 air pollution.
- D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The operating cost of the claimed facility is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fan, depreciation over 10 years and no salvage value plus the average interest at 9 percent on the undepreciated balance.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$22,006.63 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-1013.

FASkirvin:as
(503) 229-6414
10/3/78

Appl T-1015
Date 10/2/78

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

1. Applicant

GREGORY H. OATES
6320 Old Parkdale Road
Parkdale, Oregon 97041

The applicant owns and operates a pear orchard at Parkdale, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is one Orchard Rite Wind Machine fan model GP-455 used for frost damage protection.

Request for Preliminary Certification for Tax Credit was made on 7-5-77, and approved on 7-11-77.

Construction was initiated on the claimed facility on 1-78, completed on 1-21-78, and the facility was placed into operation on 4-78.

Facility Cost: \$9,000.00 (Accountant's Certification is not required since the cost of the facility is less than \$10,000 and copies of the sales transactions were provided.)

3. Evaluation of Application

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees even though the heaters produce a significant smoke and soot air pollution problem. The orchard farmers desire a secure, long-range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance.

An orchard fan blows warmer air from above the trees--when there is a temperature inversion--down into the trees. There is a second mode of operation on poor inversion nights which uses the perimeter heaters along with the fan to provide frost protection. The fans have proven effective in the Hood River area where frost control is needed on an average of 30 hours per year. One orchard fan serves 10 acres and reduces the number of heaters required for frost protection from 340 heaters to 100 perimeter heaters, a 70 percent reduction.

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 air pollution.
- D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The operating cost of the claimed facility is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fan, depreciation over 10 years and no salvage value plus the average interest at 9 percent on the undepreciated balance.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$9,000.00 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-1015.

FASkirvin:as
(503) 229-6414
10/2/78

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

1. Applicant

RAYMOND A. WILHITE ORCHARD
3316 Thomsen Road
Hood River, Oregon 97031

The applicant owns and operates a pear and apple orchard at Hood River, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is two Tropic Breeze Wind Machines, Tower Serial Numbers 38068 and 38113.

Request for Preliminary Certification for Tax Credit was made on 3-10-78, and approved on 3-27-78.

Construction was initiated on the claimed facility on 3-27-78, completed on 4-7-78, and the facility was placed into operation on 4-11-78.

Facility Cost: \$13,000.00 (Accountant's Certification was provided).

3. Evaluation of Application

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees even though the heaters produced a significant smoke and soot air pollution problem in the City of Hood River. The orchard farmers desire a secure, long-range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance.

An orchard fan blows warmer air from above the trees--when there is a temperature inversion--down into the trees. There is a second mode of operation on poor inversion nights which uses perimeter heaters along with the fan to provide frost protection. The fans have proven effective in the Hood River area where frost control is needed on an average of 30 hours per year. One orchard fan serves 10 acres and reduces the number of heaters required from 340 heaters to 100 perimeter heaters, a 70 percent reduction.

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 air pollution.
- D. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- E. The operating cost of the claimed facility is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fan, depreciation over 10 years and no salvage value plus the average interest at 9 percent on the undepreciated balance.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$13,000.00 with 80% or more allocated to pollution control be issued for the facility claimed in Tax Credit Application No. T-1016.

FASkirvin:as
(503)229-6414
10/3/78

Appl T1019

Date October 4, 1978

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

1. Applicant

Publishers Paper Company
419 Main Street
Oregon City, OR 97045

The applicant owns and operates a pulp and paper mill at Oregon City, manufacturing news print.

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

2. Description of Claimed Facility

The claimed facility is a foam suppression system at the secondary lagoon in West Linn and consists of:

- A. Lagoon perimeter and center divider piping and sprinklers.
- B. Sprinkler water supply pump (Gorman-Rupp, 4 x 4, 40Hp, Model 4B3B) and filter at lagoon discharge.
- C. Defoaming Chemical Addition.
- D. Sprinkler control system.

Request for Preliminary Certification for Tax Credit was made April 20, 1976 and approved April 22, 1976. Construction was initiated on the claimed facility on April of 1976, completed in March of 1977, but placed into operation prior to final completion in November of 1976.

Facility Cost: \$19,781 (Certified Public Accountant's statement was provided.)

3. Evaluation

Prior to installation of the claimed facility foam from the lagoon was airborne to areas adjacent to publishers property. The applicant claims that with the claimed facility foam has been effectively controlled on the surface of the lagoon and airborne carry-over has been minimal. Staff substantiates this.

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).

T1019
October 4, 1978
Page 2

- 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.

There is no recoverable material of value and in addition there is the cost of operating the facility.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T1019, such Certificate to bear the actual cost of \$19,781.00 with 80% or more allocable to pollution control.

C. K. Ashbaker
W. D. Leshner:bp
229-5318
October 5, 1978

Appl T1020

Date September 28, 1978

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

1. Applicant

Publishers Paper Company
419 Main Street
Oregon City, OR 97045

The applicant owns and operates a pulp and paper mill in Oregon City Manufacturing news print.

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

2. Description of Claimed Facility

The claimed Facility consists of the installation of one model MSAH 100/900 mechanical surface high speed aerator equipped with a 100 Hp motor, deflector core and float.

Request for Preliminary Certification for Tax Credit was made January 7, 1977 and approved January 10, 1977. Construction was initiated on the claimed facility in January of 1977, completed and placed into operation on January 12, 1977.

Facility Cost: \$16,346 (Certified Public Accountant's statment was provided.)

3. Evaluation

Staff confirms Publishers contention that the installation of the additional aerator has reduced BOD and improved treatment efficiency and assisted, along with other measures, in compliance with NPDES permit limitation.

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.

Appl T1020

Date September 28, 1978

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

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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T1020, such Certificate to bear the actual cost of \$16,346 with 80% or more allocable to pollution control.

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

1. Applicant

Publishers Paper Company
419 Main Street
Oregon City, OR 97045

The applicant owns and operates a pulp and paper mill manufacturing news print.
Application was made for tax credit for water pollution control facility.

2. Description of Claimed Facility

The claimed facility consists of the installation of a 600 Hp centrifugal waste water transfer pump including fittings, piping, electrical and foundation.
Pump discharge ties into existing pipe line to secondary treatment system.

Request for Preliminary Certification for Tax Credit was made June 16, 1977 and approved June 22, 1977. Construction was initiated on the claimed facility on July 4, 1977, completed and placed into operation in September 6, 1977.

Facility Cost: \$96,964 (Certified Public Accountant's statement was provided.)

3. Evaluation

Staff has documented need for the claimed facility in numerous memos regarding primary effluent spills to the river and has expressed the need for a reliable main transfer pump for several years prior to this installation. The existing vertical pumps remain for standby purposes. Staff also confirms the installation of the pump is complete and operating as designed.

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.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

TAX RELIEF APPLICATION REVIEW REPORT

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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T1021, such Certificate to bear the actual cost of \$96,964 with 80% or more allocable to pollution control.

Appl T-1024

Date October 4, 1978

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

1. Applicant

Champion International Corporation
Champion Building Products Division
P.O. Box 10228
Eugene, OR 97440

The applicant owns and operates a plant on Rifle Range Road in Roseburg, manufacturing plywood from peeler log to finished panel.

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

2. Description of Claimed Facility

The claimed facility; a steam vat hot water recirculation system, consists of:

- a. Chopper Pump (30 Hp motor) and sump (2,000 gal.)
- b. Screen, Sweco Sta-Sieve
- c. Centrifugal Pump (50 Hp motor)
- d. Tanks, Steel, 12 ft. diameter x 8 ft. high - 3
- e. Pipe, Valves and Fittings
- f. Electrical and Controls

Request for Preliminary Certification for Tax Credit was made on March 25, 1977 and approved on March 31, 1977. Construction was initiated on the claimed facility on May 15, 1977, completed on July 21, 1977, and placed into operation on September 4, 1977.

Facility Cost: \$106,995.00. (Certified Public Accountant's statement was provided)

3. Evaluation

Special condition S2 of NPDES permit 2247-J required that steam vat condensate waters be recirculated or otherwise handled such that no direct or indirect discharge to the log pond or public waters occur. The claimed facility was necessary to comply with this condition. Staff confirms that the facility was completed and operating as designed.

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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1024, such Certificate to bear the actual cost of \$107,995.00 with 80% or more allocable to pollution control.

C. K. Ashbaker
W. D. Leshner:em
229-5318
October 4, 1978

Appl T-1025

Date October 4, 1978

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

1. Applicant

Champion International Corporation
Champion Building Products Division
P.O. Box 10228
Eugene, OR 97440

The applicant owns and operates a plant on Rifle Range Road in Roseburg manufacturing plywood from peeler log to finished panel.

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

2. Description of Claimed Facility

The claimed facility, a veneer dryer washdown water recirculation system consists of:

- a. Chopper Pump, Vaughn #330, 10 Hp Motor
- b. Screen, Door Oliver DSM, 6 ft.
- c. Pump, Paco Type L, 25 Hp Motor and Wash Water Tanks
- d. Excavation, Concrete and Steel Construction
- e. Electrical Controls and Power Equipment
- f. Piping Material and Labor

Request for Preliminary Certification for Tax Credit was made on March 1, 1977 and approved on March 15, 1977. Construction was initiated on the claimed facility on April 1, 1977, completed and placed into operation in July 1977.

Facility Cost: \$98,334.42 (Certified Public Account's statement was provided)

3. Evaluation

Before installation of the claimed facility, wash water from four veneer dryers discharged directly into the log pond and thence to Deer Creek. Veneer dryer washdown water is high in C.O.D. and caustic.

The washdown water from the four dryers is now collected, screened, stored and reused for dryer washdown. Staff confirms that the system is operating as designed and instrumental in improving water quality.

Appl. T-1025
October 4, 1978
Page 2

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 468.175 (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.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1025, such Certificate to bear the actual cost of \$98,334.42 with 80% or more allocable to pollution control.

C. K. Ashbaker
W. D. Leshner:em
229-5318
October 4, 1978

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

1. Applicant

Gilmore Steel Corporation
Oregon Steel Mills Division
P.O. Box 2760
Portland, OR 97208

The applicant operates a steel mill and pollution control facilities at Rivergate and has made application for tax credit for water pollution control facility. A portion of these facilities are leased to Gilmore by the Port of Portland. A letter to the Department from the Port, dated 9/19/78 authorizes Gilmore to take any allowable credit on the facility. A remaining 53% undivided interest in the water recirculation system is owned by Midland-Ross for the Midrex Plant which has been leased to Gilmore pursuant to a lease dated 12/30/74, and a supplement agreement, 8/1/75. Midland-Ross letter of 10/10/78 describes the lease arrangement and states that Gilmore is entitled to take the tax credit relative to Midland-Ross's 53%.

2. Description of Claimed Facility

The claimed facility is a water treatment and reuse system and consists of the following main components:

- a. Spray cooling system - four 75 hp floating spray coolers installed on the existing secondary settling pond.
- b. Collection sump with four 12 inch Lawrence DKE 4,000 gpm pumps with 125 hp motors.
- c. Filter plant with ten Dravo/Bamos 12 foot 6 inch diameter deep bed filter tanks, Media and Sutorbuilt air back washing. A 30,000 gallon tank with agitator serves as backwash surge.
- d. Sludge thickener tank with Dorr Oliver Ax mechanism with underflow pumps, two sludge dewatering presses, mixer units and polymer addition.
- e. Neutralization system for oxide top gas scrubber effluent with 50,000 lime storage tank, 5,000 gallon neutralization tank and agitator.
- f. Recirculation sump and pump to dock for iron ore unloading and plant recirculation tank with four Gould 3405 pumps with 200 hp motors
- g. Upgrade effluent collection system from rehear furnace, rolling and strip mill, rolling mill scale pit, standby cooling tower pump, melt shop cooling water and pellet plant cooling water and effluent.
- h. Site preparation for treatment plant including relocation of dikes piping, drainage, grading, and piling work.
- i. Electrical power equipment control.
- j. Instrumentation.

2. Description of Claimed Facility - continued

k. General construction labor.

Notice of Intent to Construct dated April 18, 1975 and June 12, 1975, was approved on June 2, 1975 and August 12, 1975. Preliminary Certification for Tax Credit was not required, but was requested by Gilmore on June 11, 1975 and acknowledged by the Department of Environmental Quality on June 12, 1975.

Construction was initiated on the Claimed Facility in October 1975, although site preparation had commenced in April. The facility was completed and placed into operation in August 1977.

Facility Cost: \$4,755,405.33 (Certified Public Accountant's statement was provided)

3. Evaluation

The applicant states that from 1969 to 1976 that once through water use at the steel complex resulted in an effluent in excess of 20 MGD. The new effluent treatment reuse system provides cooling, filtration and reuse so that an 85% reduction in effluent has resulted, to comply with NPDES Permit 2234-J. (July 1977 limits). Suspended Solids in the effluent have been reduced to less than 10 mg/l.

Staff verifies that the plant is operating for the purpose as designed.

4. Summation

- A. Facility was constructed after receiving approval to construct 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. 100% of the facility cost is claimed allocable to pollution control. The facility is solely for the purpose of Water Pollution Control.

5. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate be issued for the facility claimed in Application T-1029, such certificate to bear the actual cost of \$4,755,405.33, with 80% or more of the cost allocable to pollution control.

Charles K. Ashbaker
W. D. Lesh:em
229-5318
October 17, 1978

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
REQUEST FOR PRELIMINARY CERTIFICATION FOR TAX CREDIT
REVIEW REPORT

1. Applicant

Apollo Metal Finishing, Inc.
7525 S. E. Johnson Creek Blvd.
Portland, Oregon 97206

The applicant owns and operates an electroplating metal finishing works at 7525 S. E. Johnson Creek Blvd. in Portland, Oregon.

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

2. Description of Claimed Facility

The facility described in this application includes two ion exchange units and necessary plumbing to affect proper flow of wastewaters.

It is estimated the facility was placed in operation on July 7, 1978. The estimated cost of the facility is \$11,089.49.

3. Evaluation of Application

The application was made in accordance with the permittee's NPDES permit. The treatment works are required by Schedule C of their NPDES permit issued to the applicant by the Department. The treatment works are sound.

4. Summation

Erection, construction or installation of the facility was commenced before a written request for Preliminary Certification was filed with the Department pursuant to ORS 468.175(1). However, since there have been many discussions concerning the need for the facility, including a negotiated Compliance Schedule, the request and approval is implied.

5. Director's Recommendation

Having studied the letter from Ray Underwood regarding Preliminary Certification based on unwritten requests, it is the Director's intent to issue preliminary certification. Therefore, no Commission action is necessary at this time.

SCC:ahe
10/19/78
229-5297

Attachment: (1)
6/14/78 Department of Justice Letter

Handwritten initials: RKS, SLC

REDMAN, CARSKADON & KNAUSS
ATTORNEYS AT LAW
11050 S. E. 21ST AVENUE
MILWAUKIE, OREGON 97222

JAMES E. REDMAN
JAMES R. CARSKADON, JR.
ARTHUR B. KNAUSS
JOHN H. KELLEY

TELEPHONE
659-5385
AREA CODE 503

October 6, 1978

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

ATTENTION: CAROL A. SPLETTSTASZER
Management Services Division

Re: Tax Relief Application No. T-1023

Dear Ms. Splettstaszer:

This letter is written on behalf of Apollo Metal Finishing, Inc., an Oregon corporation (the Corporation) and is to be treated by the Environmental Quality Commission (the Commission) as the Corporation's request to the Commission that the Commission accept an oral preliminary notice of intent to apply for tax relief as satisfying its regulations.

Through a misunderstanding, the Corporation failed to file a written application advising the Commission of its intent to apply for tax relief, however, from the outset of this matter in 1977 and until the present time, the concern of the Corporation has not been the installation of the pollution control equipment requested by engineers from Department of Environmental Quality, but rather the cost to this small corporation.

On March 6, 1978, I met with Mr. Carter, an engineer for DEQ, Mr. Wixom who is also with that Department, Mr. Godon the president of the Corporation, and Darrell Rich, an engineer working on the recycling procedure for the Corporation. I have previously, on behalf of the Corporation, discussed with Steve Carter the inability of the Corporation to financially stand the installation that was being recommended by the Department. In that early conversation Mr. Carter indicated that a tax credit could be obtained.

Management Services Div.
Dept. of Environmental Quality

RECEIVED
OCT 09 1978

Carol A. Spletstaszer
Management Services Division, DEQ
October 6, 1978
Page 2

Early in our conversation during the meeting of March 6, the matter of the tax credit was again discussed and it was my impression, as well as that of the president of the Corporation, Mr. Godon, that by working closely with the Department in each phase of the design as well as installation of the pollution control equipment, we would be eligible for the tax credit benefit. I was never made aware of the administrative rule requiring the filing of the preliminary application, and in discussing this matter recently with Mr. Godon, he advised that though he had received a preliminary application from the Department, he did not complete it because it contained matters which we had already verbally reviewed with the Department and it was his impression, as well as mine, that we had already qualified for the tax credit allowance.

At no time did the Corporation ever intend to violate any Commission requirement for allowance of a tax credit and at all times the Corporation, acting in good faith, assumed that a tax credit allowance would be given to it.

The entire plant equipment has now been installed and the Corporation has been advised that their application for a tax credit cannot be processed because a written application for preliminary approval was never submitted and that it is now too late to request preliminary approval, and I am asking that the Commission accept the oral notice of the Corporation for preliminary approval as complying with the spirit of the administrative rule and allow our application for the tax credit to be processed.

Very truly yours,

A handwritten signature in cursive script, reading "James R. Carskadon, Jr." with a small "jr" monogram at the end.

James R. Carskadon, Jr.

JRC:jan

cc: client

JAMES A. REDDEN
ATTORNEY GENERAL



DEPARTMENT OF JUSTICE

PORTLAND DIVISION
500 Pacific Building
520 S.W. Yamhill
Portland, Oregon 97204
Telephone: (503) 229-5725

Management Services Div.
Dept. of Environmental Quality

RECEIVED
JUN 15 1978

June 14, 1978

Mr. Mike Downs
Department of Environmental
Quality
Yeon Building
522 S.W. Fifth Avenue
Portland, Oregon 97204

Re: Applications for Preliminary Tax Credit Certification

Dear Mike:

This letter responds to your June 6, 1978 memorandum to me requesting an informal legal opinion as to the questions stated therein.

1. ORS 468.175 provides that the request by an applicant for preliminary tax credit certification "shall be in a form prescribed by the department." In view of this provision, it seems to me that the Department has some flexibility in determining what constitutes a "request." If the Department is satisfied with a verbal request or a written request not on Form No. DEQ/TC-1-10/77, I believe that request may satisfy the statute, though the better administrative practice may be to see that said form is used by each applicant. Such request, in form satisfactory to the Department, would then be followed by the submission by the applicant of the necessary information leading to consideration of the preliminary tax credit certification by the Department pursuant to ORS 468.175.

2. It is my opinion that the statute requires, as a jurisdictional matter, the filing of a request for preliminary certification with DEQ before commencement of erection, construction or installation of the facility. ORS 468.175(1).

Thus, if the request, whether oral or written or on the DEQ form, is given after such commencement, there can be no preliminary tax credit certification.

You asked me to consider the following circumstances when responding to the questions above:

- (a) Applicant was unaware of the requirements of ORS 468.175(1). Ignorance of the law by the applicant would be no excuse for not meeting the requirements of ORS 468.175(1).
- (b) Applicant verbally requested agency staff for preliminary certification. As indicated above, this might be acceptable by the Department as a "request."
- (c) Applicant filed a written request for preliminary certification on the wrong form or in a letter. As indicated above, it would be within the discretion of the Department under the statute to determine whether a satisfactory "request" had been made.
- (d) Agency staff has mistakenly told applicant that he didn't need to file a request for preliminary certification. If the applicant's action did not constitute a "request," as indicated above, the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of request prior to commencement of erection, construction or installation of the facility. Nor would it eliminate the requirement of ORS 468.170 for preliminary tax credit certification prior to final certification.

3. Yes, sec 2, ch 831, Or Laws 1973 (now a part of ORS 468.175) did apply to solid waste pollution control facilities constructed after the effective date of that 1973 Act, unless the erection, construction or installation of

Mr. Mike Downs

-3-

June 14, 1978

the pollution control facility was begun before the effective date of that 1973 Act. Secs 3 and 4, ch 831, Or Laws 1973.

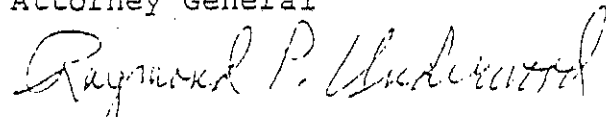
4. Sec 2, ch 831, Or Laws 1973, provided that the notice of construction required to be filed with the Department of Environmental Quality "shall be in a form prescribed by the department." Therefore, the same reasoning which I have applied to previous questions would apply here and I believe it would be within the discretion of the Department to determine whether what the applicant filed was a "notice of construction" within the meaning of the statute. However, if the applicant's action did not constitute a "notice of construction," the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of prior notice of construction.

Both under sec 2, ch 831, Or Laws 1973, and ORS 468.175 the Department must determine whether to issue a preliminary tax credit certification following its receipt of the proper notice or request.

Please let me know if you have further questions regarding this matter.

Very truly yours,

JAMES A. REDDEN
Attorney General



Raymond P. Underwood
Chief Counsel

ej

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

REQUEST FOR PRELIMINARY CERTIFICATION FOR TAX CREDIT
REVIEW REPORT

1. Applicant

Teledyne Wah Chang, Albany
P. O. Box 580
Albany, Oregon 97312

The applicant owns and operates a primary zirconium refining plant at 1600 Old Salem Highway, Millersburg, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a 400,000 gallon wooden storage tank and spill containment berm to store ammonium chloride (V-2) liquor.

It is estimated the facility will be placed in operation by September 1, 1978. The estimated cost of the facility is \$220,000.

3. Evaluation of Application

The application was made in accordance with the permittee's NPDES permit. The tank construction is required by a Stipulation and Final Consent Order issued to the applicant by the Department. The tank and berm designs are sound.

4. Summation

Erection, construction or installation of the facility was commenced before a written request for Preliminary Certification was filed with the Department pursuant to ORS 468.175(1). However, since there have been many discussions concerning the need for the facility, including a negotiated Consent Order, the request and approval is implied.

5. Director's Recommendation

Having studied the letter from Ray Underwood regarding Preliminary Certification based on unwritten requests, it is the Director's intent to issue preliminary certification. Therefore, no Commission action is necessary at this time.

CKAshbaker:cs
10/19/78
229-5325

Attachment: (1) 6/14/78 Department of Justice Letter

JAMES A. REDDEN
ATTORNEY GENERAL



DEPARTMENT OF JUSTICE

PORTLAND DIVISION
500 Pacific Building
520 S.W. Yamhill
Portland, Oregon 97204
Telephone: (503) 229-5725

Management Services Div.
Dept. of Environmental Quality

RECEIVED
JUN 15 1978

June 14, 1978

Mr. Mike Downs
Department of Environmental
Quality
Yeon Building
522 S.W. Fifth Avenue
Portland, Oregon 97204

Re: Applications for Preliminary Tax Credit Certification

Dear Mike:

This letter responds to your June 6, 1978 memorandum to me requesting an informal legal opinion as to the questions stated therein.

1. ORS 468.175 provides that the request by an applicant for preliminary tax credit certification "shall be in a form prescribed by the department." In view of this provision, it seems to me that the Department has some flexibility in determining what constitutes a "request." If the Department is satisfied with a verbal request or a written request not on Form No. DEQ/TC-1-10/77, I believe that request may satisfy the statute, though the better administrative practice may be to see that said form is used by each applicant. Such request, in form satisfactory to the Department, would then be followed by the submission by the applicant of the necessary information leading to consideration of the preliminary tax credit certification by the Department pursuant to ORS 468.175.

2. It is my opinion that the statute requires, as a jurisdictional matter, the filing of a request for preliminary certification with DEQ before commencement of erection, construction or installation of the facility. ORS 468.175(1).

Thus, if the request, whether oral or written or on the DEQ form, is given after such commencement, there can be no preliminary tax credit certification.

You asked me to consider the following circumstances when responding to the questions above:

- (a) Applicant was unaware of the requirements of ORS 468.175(1). Ignorance of the law by the applicant would be no excuse for not meeting the requirements of ORS 468.175(1).
- (b) Applicant verbally requested agency staff for preliminary certification. As indicated above, this might be acceptable by the Department as a "request."
- (c) Applicant filed a written request for preliminary certification on the wrong form or in a letter. As indicated above, it would be within the discretion of the Department under the statute to determine whether a satisfactory "request" had been made.
- (d) Agency staff has mistakenly told applicant that he didn't need to file a request for preliminary certification. If the applicant's action did not constitute a "request," as indicated above, the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of request prior to commencement of erection, construction or installation of the facility. Nor would it eliminate the requirement of ORS 468.170 for preliminary tax credit certification prior to final certification.

3. Yes, sec 2, ch 831, Or Laws 1973 (now a part of ORS 468.175) did apply to solid waste pollution control facilities constructed after the effective date of that 1973 Act, unless the erection, construction or installation of

Mr. Mike Downs

-3-

June 14, 1978

the pollution control facility was begun before the effective date of that 1973 Act. Secs 3 and 4, ch 831, Or Laws 1973.

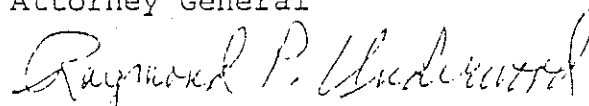
4. Sec 2, ch 831, Or Laws 1973, provided that the notice of construction required to be filed with the Department of Environmental Quality "shall be in a form prescribed by the department." Therefore, the same reasoning which I have applied to previous questions would apply here and I believe it would be within the discretion of the Department to determine whether what the applicant filed was a "notice of construction" within the meaning of the statute. However, if the applicant's action did not constitute a "notice of construction," the fact that the applicant had been misled by the agency staff would not eliminate the statutory requirement of prior notice of construction.

Both under sec 2, ch 831, Or Laws 1973, and ORS 468.175 the Department must determine whether to issue a preliminary tax credit certification following its receipt of the proper notice or request.

Please let me know if you have further questions regarding this matter.

Very truly yours,

JAMES A. REDDEN
Attorney General



Raymond P. Underwood
Chief Counsel

ej



DEPARTMENT OF JUSTICE

PORTLAND DIVISION
500 Pacific Building
520 S.W. Yamhill
Portland, Oregon 97204
Telephone: (503) 229-5725

October 24, 1978

Mr. William H. Young, Director
Dept. of Environmental Quality
522 S. W. Fifth Avenue
Portland, OR 97201

HAND-DELIVERED

Re: DEQ v. Henderson
Before the Environmental Quality
Commission, No. SS-CR-77-136
(Hood River County)

Dear Bill,

Enclosed for the Commission's consideration in the
subject case are:

- (1) The original of our proposed Final Order; and
- (2) The original of Department's Memorandum in Support
of its Proposed Form of Final Order.

Please call me if you have any questions.

Sincerely,

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

Robert L. Haskins
Assistant Attorney General

pm
Enclosures

cc/enc: Joe B. Richards, EQC
Grace Phinney, EQC
Ronald Somers, EQC
Jacklyn Hallock, EQC
Albert Densmore, EQC
✓ Carol Splettstaszer, DEQ, Portland (hand-delivered copy)
Fred Bolton, DEQ, Portland
T. Jack Osborne, DEQ, Portland
Dick Nichols, DEQ, Bend
Ladd Henderson
Larry Henderson
Scott Fitch

1 BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
2 OF THE STATE OF OREGON

3	DEPARTMENT OF ENVIRONMENTAL	)	No. SS-CR-77-136
4	QUALITY of the State of Oregon,	)	Hood River County
		)	
5	Department,	)	DEPARTMENT'S MEMORANDUM
		)	IN SUPPORT OF ITS
6	v.	)	PROPOSED FORM OF
		)	FINAL ORDER
7	LADD G. HENDERSON and	)	
8	LARRY R. HENDERSON, dba	)	
	EVERGREEN TERRACE PARK,	)	
		)	
9	Respondents.	)	

10 Pursuant to the Commission's request made on the record
11 during its consideration of the subject case at its September 22,
12 1978, meeting, attached hereto as an exhibit is a copy of a
13 proposed form of Final Order for the Commission's considera-
14 tion. Among other things, it recites the pertinent history
15 of the case, including the Commission's action at that meeting
16 where the Commission adopted Hearing Officer Wayne Cordes'
17 proposed findings of fact, conclusions of law, opinion, etc.,
18 but deferred action on the portion of the ruling which would
19 require specific action by Respondents to remedy their violation.

20 Regarding the contents of the remedial action portion of
21 the proposed order, the Department suggests that the Commission
22 merely order Respondents to forever cease and desist from using
23 the illegally constructed system and to abandon it, as required
24 by the Commission's rules.

25 ///

26 ///

1 It should be recalled that the violation which the
2 Commission found Respondents had committed was the construction
3 of a subsurface sewage disposal system without having first
4 obtained a permit from the Department authorizing same. In
5 this proceeding the Commission is authorized to issue a final
6 order "requiring remedial action which, if taken within the
7 time specified in the order, will effect compliance with the
8 rule . . . violated." ORS 454.635(3). Ordinarily, if it were
9 possible for a respondent to obtain such a permit, the order
10 would allow the respondent a reasonable amount of time to apply
11 for and to receive such a permit, after the fact, or in the
12 alternative, in the respondent's discretion, to abandon the
13 illegally installed system.

14 However, here the Commission has found that even if
15 Respondents had paid the permit application fee and actually
16 filed an application for the system (which the Commission
17 found they had not) (Hearing Officer's proposed finding of
18 fact No. 13, p. 12), they would not be able to obtain a
19 permit because sewers are available (Hearing Officer's
20 proposed conclusion of law No. 5, p. 13) and because the
21 constructed system was undersized (Hearing Officer's proposed
22 finding of fact No. 12, p. 12). Both those rule violations
23 would prevent the Department from issuing a standard permit
24 to Respondents for the constructed system. Therefore, it

25 ///

26 ///

1 appears that the only reasonable alternative action available
2 to remedy the violation would be abandonment. Furthermore,
3 the Commission's rules require this result. OAR 340-71-018(2) (d)
4 provides as follows:

5 "(2) Each and every owner of the real property
6 upon which is situated a subsurface . . . sewage
7 disposal system shall abandon the system in the
8 following circumstances:

9 ****

10 (d) When the system has been constructed,
11 installed . . . without a required permit autho-
12 rizing same, and permit could not be issued
13 in conformance with the substantive rules in
14 this division." (Emphasis added.)

15 Therefore, Respondents should be ordered to forever
16 cease and desist from using the system and should be given
17 a reasonable amount of time, which we propose as 20 days,
18 in which to abandon the system in the manner required by
19 your rule OAR 340-71-018(4), which provides as follows:

20 "(4) Each and every owner of the real property
21 upon which is situated a subsurface sewage disposal
22 system which is required to be abandoned . . .
23 unless otherwise authorized by the Department,
24 shall have all the sludge from the septic tank
25 . . . removed . . . and shall fill same with
26 clean bank-run gravel or other material approved
27 by the Director or his authorized representative."

28 It should be recalled that the Department provided
29 no direct proof that the system had been used. Therefore,
30 we have drafted the proposed final order such that if there
31 is no sludge to pump, then the order will not require

32 ///

33 ///

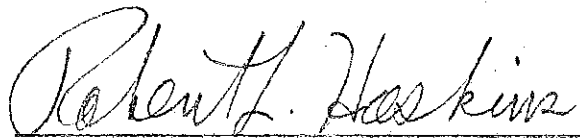
1 pumping. This deals effectively with Respondents' claims
2 of impossibility.

3 For all the above reasons, the Commission should execute
4 the original of the attached proposed Final Order.

5 DATED this 24th day of October, 1978.

6 Respectfully submitted,

7 JAMES A. REDDEN
8 Attorney General

9 

10 ROBERT L. HASKINS
11 Assistant Attorney General
12 Of Attorneys for the
13 Department of Environmental
14 Quality

CERTIFICATE OF SERVICE

I hereby certify that on the 24th day of October, 1978,
I served true copies of the foregoing "Department's Memorandum
in Support of its Proposed Form of Final Order" upon the fol-
lowing respondents, by then depositing in the United States Mails
at Portland, Oregon, certified true copies thereof, in sealed
envelopes with postage prepaid, and addressed to each respondent
at his last-known mailing address, as follows:

Mr. LADD G. HENDERSON
Evergreen Terrace Park
135 Country Club Road
Hood River, OR 97031

Mr. LARRY R. HENDERSON
Evergreen Terrace Park
135 Country Club Road
Hood River, OR 97031

Kathleen T. Holton
KATHLEEN T. HOLTON
Secretary

1 BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
2 OF THE STATE OF OREGON

3	DEPARTMENT OF ENVIRONMENTAL	)	No. SS-CR-77-136
	QUALITY of the State of Oregon,	)	Hood River County
4		)	
	Department,	)	FINAL ORDER
5		)	
	v.	)	
6		)	
	LADD G. HENDERSON and	)	
7	LARRY R. HENDERSON, dba	)	
	EVERGREEN TERRACE PARK,	)	
8		)	
	Respondents.	)	
9			

10 This matter came regularly before the Commission at its
11 regular monthly meeting in Portland, Oregon, on September 22,
12 1978, pursuant to Respondents' request to review Hearing
13 Officer Wayne Cordes' Proposed Findings of Fact, Conclusions
14 of Law, and Final Order in the subject case. Hearing Officer
15 Cordes filed his proposed ruling on July 26, 1978, following
16 a contested case hearing held in Hood River, Oregon, on
17 December 20 and 21, 1977.

18 Respondents filed timely exceptions to Hearing Officer
19 Cordes' proposed ruling and filed arguments and proposed alter-
20 native findings, conclusions and final order. The Commission
21 heard oral arguments by Ladd G. Henderson on behalf of Respondents
22 and by Assistant Attorney General Robert L. Haskins on behalf
23 of the Department.

24 At its September 22, 1978, meeting the Commission announced
25 its decision to adopt Hearing Officer Cordes' ruling in its
26 entirety except regarding the remedial action which Respondents

1 would be ordered to take. The Commission deferred issuing the
2 final remedial action order until its next regular monthly
3 meeting.

4 This matter came regularly before the Commission at
5 its next regular monthly meeting in Salem, Oregon, on October
6 27, 1978, for consideration of the appropriate final remedial
7 action order. The parties were provided adequate notice and
8 were given an opportunity to be heard.

9 Now therefore, the Commission being fully apprised hereby

10 ORDERS that Hearing Officer Cordes' Proposed Findings
11 of Fact, Conclusions of Law, and Final Order dated July 26,
12 1978, which is on file with the Commission and which previously
13 has been served upon the parties, is hereby adopted in its
14 entirety (20 pages) as the Final Order of the Commission in
15 this contested case, except as it is hereby modified by the
16 following. The Commission

17 FURTHER ORDERS that Respondents shall forever cease and
18 desist from using Respondents' illegally constructed subsurface
19 sewage disposal system and shall within 20 days of the date of
20 this order abandon that system pursuant to OAR 340-71-018(2)(d)
21 and in the manner set forth in OAR 340-71-018(4) in that
22 Respondents shall not allow any septic tank to remain in the
23 ground unless it (a) is substantially free of sludge and (b)

24 ///

25 ///

26 ///

1 is filled with clean, bank-run gravel or other material approved
2 by the Director or his authorized representative.

3 ENVIRONMENTAL QUALITY COMMISSION

4
5 _____, 1978
6 (date)

JOE B. RICHARDS, Chairman

7 _____, 1978
8 (date)

GRACE PHINNEY, Member

9 _____, 1978
10 (date)

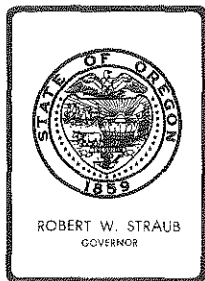
RONALD SOMERS, Member

11 _____, 1978
12 (date)

JACKLYN HALLOCK, Member

13 _____, 1978
14 (date)

ALBERT DENSMORE, Member



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, October 27, 1978 EQC Meeting

Clatsop Plains - City of Gearhart Modification to the
Subsurface Sewage Moratorium, Oregon Administrative
Rules (OAR) 340-71-020 (7)

Background

On April 1, 1977 the EQC adopted Oregon Administrative Rule (OAR) 340-71-020 (7) which placed a subsurface sewage moratorium on certain areas of Clatsop County including the City of Gearhart, City of Hammond and City of Warrenton.

On October 21, 1977 the EQC modified the moratorium to allow a single family unit equivalent density subsurface sewage disposal system for one (1) acre, except in the following areas where the moratorium was not altered:

1. City of Gearhart
2. City of Hammond
3. City of Warrenton
4. Fort Stevens State Park
5. Five existing high density areas
6. Three "prime aquifer" areas

In March 1978 the Department received from the City of Gearhart a report (Attachment 1) entitled "Wastewater Facilities Planning Study - Gearhart, Oregon", prepared for the City by R.W. Beck and Associates. The proposed sewage disposal alternative selected for the City was continued use of septic tank-drainfield systems with implementation of an on-site waste management plan. Correspondence regarding this proposal is attached and includes the following:



Contains
Recycled
Materials

1. DEQ letter dated May 8, 1978 (Attachment 2)
2. R.W. Beck and Associates letter dated May 16, 1978 (Attachment 3)
3. R.W. Beck and Associates letter dated June 7, 1978 (Attachment 4)
4. DEQ letter dated June 29, 1978 (Attachment 5)
5. City of Gearhart letter dated July 7, 1978 (Attachment 6)

In summary, based on the available literature and present monitoring data, a range of assumptions may be used in estimating the nitrate-nitrogen ($\text{NO}_3\text{-N}$) concentrations in the groundwater; therefore, the Department could not agree that continued use of on-site waste disposal in excess of one dwelling/acre density in Gearhart will not result in excessive nitrate-nitrogen concentrations in the groundwater and would not create a public health hazard. Upon review it was determined that some of the past monitoring data may be suspect and that there was a lack of information, particularly in the more densely developed areas in Clatsop Plains.

Several meetings were held with Clatsop County, City of Gearhart, City of Hammond and City of Warrenton to explore the subject of applying for a 208 grant to expand the Gearhart and Clatsop County studies presently funded or underway. It was felt a coordinated effort between the cities and County with an intensive sampling effort would result in a refined but most important, an implementable plan. On July 14, 1978 Clatsop County submitted a request (Attachment 7) for 208 Wastewater Management Planning funds. This study would take approximately 18-24 months to complete.

Recognizing the time element, the City of Gearhart by their July 7, 1978 letter (Attachment 6) has requested modification of the moratorium to permit an average dwelling unit density of one unit per acre within the city limits. This request is submitted to the EQC for approval and adoption of a temporary rule modifying the subsurface sewage moratorium as it affects the present boundaries of the City of Gearhart.

Statement of Need for Rule-Making

1. Under ORS 183.335 (5) the EQC has the authority to adopt, amend or suspend a rule without notice if the EQC finds that its failure to act promptly will result in serious prejudice to the public interest or the interest of the

parties concerned and sets forth the specific reasons for its findings. In addition, under ORS 454.615 and 454.685 the EQC has the authority to adopt by rule standards which prescribe minimum requirements for the design and construction of subsurface sewage disposal systems and to adopt an order or rules limiting or prohibiting construction of subsurface sewage disposal systems.

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 and June 30, 1978. There is a need for the rule to permit the City of Gearhart to implement its land-use decisions without endangering waters of the state.
3. In considering the need for and in preparing the temporary rule, the Department has utilized:
 - a. the information provided by the City of Gearhart in Attachments 1, 3, 4 and 6;
 - b. the Clatsop County report entitled "Carrying Capacity of the Clatsop Plains Sand Dune Aquifer, August 20, 1977" by H.R. Sweet;
 - c. The DEQ's report on Clatsop Plains, Agenda Item No. G, October 21, 1977 EQC meeting.

Summation

1. The City of Gearhart has submitted a request to the DEQ to be allowed to continue use of septic tank-drainfield systems together with an on-site waste management plan.
2. Based on the available information and monitoring data the Department cannot agree that continued use of on-site waste disposal exceeding one acre/dwelling density would not result in excessive nitrate-nitrogen concentrations in the groundwater and would not create a public health hazard.
3. The City of Gearhart, City of Hammond, City of Warrenton and Clatsop County have agreed to participate in a 208 study to expand and refine previous groundwater studies by establishing a comprehensive series of water quality monitoring wells on Clatsop Plains. Water quality data

with emphasis on nitrate-nitrogen concentrations would be obtained for a complete year. The results of the monitoring program will be used to design a compatible land-use management system and evaluate the feasibility of various wastewater disposal alternatives.

4. Since the plan will take approximately two years to develop, the City of Gearhart has requested that the EQC modify the moratorium to permit an average dwelling unit density of one dwelling per acre within the city limits. This proposal would coincide with the currently approved density figure for areas of Clatsop Plains no longer under the moratorium. Presently there are 628 dwelling units in Gearhart, which consist of 685 acres; therefore, this approach would permit up to 57 single family residence units or equivalent to be constructed.
5. Based on the Carrying Capacity Study (Sweet), the City of Gearhart's study (Beck) and in the Department's judgement, development of Gearhart to a total of 685 single family residence or equivalent units will not cause unacceptable degradation of groundwater quality or surface water quality.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the EQC take the following actions:

1. Enter findings that:
 - a. Failure to act would result in serious prejudice to the public interest or the interest of the parties concerned in that the City of Gearhart has at its own expense completed a study. While not acceptable to the Department, the City has requested an interim modification of the subsurface sewage moratorium which is acceptable. Development in the City of Gearhart will continue to be held up unless a modification to the moratorium is made. The City asserts that its citizens generally will be affected and beneficially affected by the temporary rule and subsequent permanent amendment to OAR 340-71-020 (7).
 - b. The attached proposed temporary rule amendment (Attachment 8) will continue to prevent unacceptable degradation of groundwater while allowing such development as at present appears to be compatible with preserving the quality of the groundwater or surface waters.

- c. At the time the Clatsop County study presently underway and the proposed 208 study are completed and a comprehensive plan and appropriate zoning are accomplished, further review will be appropriate.
2. Adopt the attached temporary rule amendment to OAR 340-71-020 to take effect upon prompt filing with the Secretary of State pursuant to ORS 183.355 for a period of not longer than 120 days.
3. Authorize the hearing officer to proceed with the appropriate hearings for permanent rule amendment to OAR 340-71-020. The hearing officer's report to the EQC will be scheduled for the January 1979 EQC meeting.

Bill

WILLIAM H. YOUNG

REG:mkw
229-5292
10/12/78

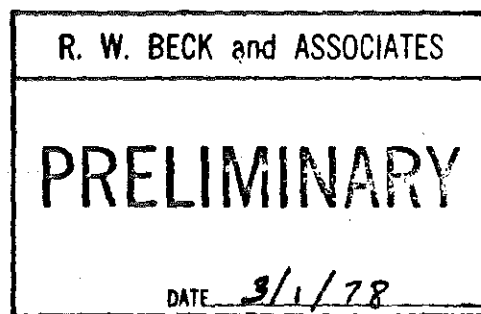
Attachments:

1. Report - "Wastewater Facilities Planning Study - Gearhart, Oregon" by R.W. Beck and Associates
2. DEQ letter dated May 8, 1978
3. R.W. Beck and Associates letter dated May 16, 1978
4. R.W. Beck and Associates letter dated June 7, 1978
5. DEQ letter dated June 29, 1978
6. City of Gearhart letter dated July 7, 1978
7. Clatsop County request of July 14, 1978 for 208 Wastewater Management Planning funds
8. Proposed temporary rule amendment
9. Proposed Procedure for issuance of subsurface sewage disposal permits or favorable reports of evaluation of site suitability

WASTEWATER FACILITIES PLANNING STUDY

GEARHART, OREGON

March 1978



R. W. BECK AND ASSOCIATES

ENGINEERS AND CONSULTANTS

200 TOWER BUILDING
SEATTLE, WASHINGTON 98101

R. W. BECK AND ASSOCIATES

ENGINEERS AND CONSULTANTS

PLANNING
DESIGN
RATES
ANALYSES
EVALUATIONS
MANAGEMENT

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SEATTLE, WASHINGTON 98101
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SEATTLE, WASHINGTON
DENVER, COLORADO
PHOENIX, ARIZONA
ORLANDO, FLORIDA
COLUMBUS, NEBRASKA
WELLESLEY, MASSACHUSETTS
INDIANAPOLIS, INDIANA
MINNEAPOLIS, MINNESOTA

FILE NO. WW-1448-WP2-MA
3023

February 28, 1978

City of Gearhart
Drawer D
Gearhart, Oregon 97138

Attention: Mr. Bruce Maltman

Gentlemen:

Subject: Gearhart Wastewater Facilities
Planning Study

I am enclosing 6 copies of a draft Wastewater Facilities Study for the City of Gearhart. After considering the City's situation and likely course of action to resolve the wastewater facilities requirements and to lift the present Moratorium, I have decided that the best step would be to prepare a Wastewater Facilities Planning Study following EPA guidelines. The study is perhaps not as rigorous as might be conducted if an EPA grant were available, due to budget limitations, but I do believe that it contains the essential elements of the facilities plan and provides the information necessary to present the State and Federal authorities with the alternatives and proposed course of action. The plan does not include an environmental assessment, but this will be added at a later date. A negative declaration is planned.

This Wastewater Facilities Planning Study presents three alternatives for Gearhart: (1) the regional system proposed in the Clatsop Plains Sewer Plan prepared by CH₂M Hill with treatment at Seaside; (2) a conventional sewer collection and treatment system for Gearhart alone; and (3) on-site waste management relying primarily upon septic tank systems. Considering the City's comprehensive planning goals, which aim at retaining the low density residential nature of the community and the limited growth potential within the present City limits, it appears that on-site waste management is feasible for the City. It is the least expensive of the three alternatives evaluated and will result in the least environmental impact. A proposed on-site waste management system is described in Section IV of the report.

City of Gearhart

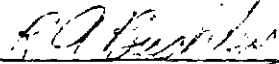
-2-

February 28, 1978

The apparent success of septic tanks in Gearhart to date, the good soil conditions and proposed improvements in their maintenance, should make septic tanks an acceptable solution for Gearhart's wastewater treatment needs. There are a number of questions which must be answered before on-site waste management can be implemented, not the least of which is the present dichotomy between the Federal and Oregon State approach to waste management alternatives to conventional collection and treatment systems. I look forward to meeting with the Gearhart City Council to present this Facilities Plan and to discuss further action towards meeting Federal and State pollution control requirements and obtaining a repeal of the current building moratorium.

Very truly yours,

R. W. BECK AND ASSOCIATES



R. A. Bushley
Executive Engineer

RAB:lkb

Enclosures

OUTLINE OF REPORT
CITY OF GEARHART, OREGON
WASTEWATER FACILITIES PLANNING STUDY

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APPENDIX A - Adopted Rule OAR 340-71-020(7)

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SECTION I

SUMMARY

1. INTRODUCTION

This report is a wastewater facilities planning study for the City of Gearhart, Oregon. It has been prepared following the guidelines of the U.S. Environmental Protection Agency pursuant to Section 201 of the Public Law 92-500, although the project was not funded by the EPA but was prepared with limited funds made available to the City of Gearhart from the Oregon State Land Conservation and Development Commission.

2. BACKGROUND

The City of Gearhart, Oregon is a small residential community of approximately 850 located along the Pacific Coast in the northwest corner of the State. Wastewater disposal in the City is presently provided by individual septic tank systems.

The Oregon State Department of Environmental Quality (DEQ) is responsible for water pollution control in the State and has been implementing a program to meet the pollution control requirements of the Federal Water Pollution Control Act (PL 92-500) and appropriate Oregon State legislation and administrative decisions. In pursuit of this goal, the Department extended a loan to Clatsop County in 1972 for the preparation of a comprehensive sewer plan for the Clatsop Plains. This study was completed in 1975 and proposed regional wastewater management with a treatment plant at Seaside to serve Seaside, Gearhart, and unincorporated areas north of Gearhart. The proposed sewer system is designed for essentially the ultimate saturation population within Gearhart and in the surrounding area. The sewer interceptors passing through Gearhart would be capable of serving an estimated 14,000 population which

*System not designed
- proposal only
- size not determined*

is roughly equivalent to the population projected for the total Clatsop Plains by the year 2000. The estimated population within the service area at the present time is approximately 1,500.

There was considerable local opposition to the proposed Comprehensive Sewer Plan due to its cost and for environmental reasons due to the large-scale growth it would encourage in the Clatsop Plains. A number of meetings and hearings were held on the sewerage problems of the Clatsop Plains without resolution of the issue and in April of 1977 the Oregon State Environmental Quality Commission issued a building moratorium in the Clatsop Plains by Rule OAR340-71-020 (see Appendix A) and set forth in an Intergovernmental Directive the requirements for a local unit of government seeking to lift the moratorium.

INTERGOVERNMENTAL DIRECTIVE

"Should a local unit of government desire to petition to modify or repeal the moratorium for any particular area, the following information would have to be developed by the local unit of government and be submitted to the Department and Commission prior to modification or repeal by the Commission:

- A. An identification of the areas that should be protected for present and future development of domestic water supplies;
- B. An identification of areas outside of these areas of domestic water supplies, where density indicated by single-family unit equivalency will not degrade the groundwater;
- C. An identification of those areas presently developed or proposed to be developed to high densities and a description of a program that will prevent further groundwater

"degradation and eliminate existing groundwater contamination.

It is also recommended that:

Assistance be provided by DEQ staff and State Water Resources staff to local agencies to help implement the above studies.

In addition, the remaining money available from the DEQ-Clatsop County loan agreement can be made available to hire a groundwater expert to prepare necessary technical information to be an aid to both the Department and local agencies."

Subsequently, the Department of Environmental Quality allowed Clatsop County to utilize a balance remaining under the original sewer planning grant to conduct a groundwater study in order to determine the location and development which could be allowed using on-site waste disposal without degrading water quality. The Clatsop Plains consists of an accreted sand dune formed by the Pacific Ocean and although this resource is not currently being utilized for municipal water supply, it does have substantial potential for this use. The area covered by the County study did not include Gearhart or the other incorporated cities in the Clatsop Plains. These cities were left on their own to address the issue raised by the Moratorium.

The County Environmental Geology and Groundwater Study was completed in August 1977 and included recommendations for areas to be set aside for groundwater development and recommended that residential densities in other areas be restricted to one dwelling unit per 1.2 acres in order to maintain nitrate levels in the receiving groundwater below 5 mg/l. This limit was an administrative decision by the Department of Environmental Quality.

One of the main purposes of the present study as already mentioned, is to address the Moratorium issue by presenting a proposed waste management system that fulfills the intent of the Federal Water Pollution Control Act and satisfies State requirements.

3. THE PROPOSED PLAN

Three alternative waste management schemes are considered in this wastewater facilities planning study. They consist of (1) the regional system using the Seaside treatment facility as proposed in the Clatsop Plains Comprehensive Sewer Plan; (2) a conventional sewer system and treatment facility for Gearhart; and (3) on-site waste management. These alternatives are presented and evaluated in Section III of this report. The conclusions are that the on-site waste management will achieve the objectives of the State and Federal Water Pollution Control Legislation at the least cost to the citizens of Gearhart. The proposed on-site waste management system will continue to rely upon the Clatsop County Public Health Department for issuance of permits for septic tank installation; repair permits; and, if necessary, for enforcement action. The City of Gearhart would set up a Waste Services Department and would assume the responsibility for insuring that all existing systems are brought up to current State standards and will maintain these systems by pumping them on a three-year cycle. Alternative on-site systems such as the composting toilet can be installed by the homeowner and maintained by the owner subject to State public health requirements. Other alternative systems will be considered on their merits for particular applications as authorized by the State of Oregon. The proposed on-site waste management system is described in detail in Section IV of this report.

The City of Gearhart has been involved in an extensive comprehensive planning effort which has confirmed the proposed residential nature of the community. The City Council recently enacted Resolution _____ which increases the minimum lot size from 5,000

to 10,000 square feet. The potential residential dwelling units density within the City limits is approximately 2 dwelling units per acre due to the large area set aside for the golf course, City park and because a number of the private lots in the City cannot be developed due to groundwater limitations.

A careful review of available research on the nitrogen content of household wastes and its discharge, retention, and release in septic tanks and drainfield installations indicates that the dwelling unit density in Gearhart should not result in nitrate concentrations exceeding the 5 mg/l set by DEQ. The County sponsored groundwater study utilized older, less comprehensive research results which predicted much higher nitrogen contributions from household wastes in arriving at a density limit of one dwelling unit for each 1.2 acres.

The nitrate concentration in groundwater is only relevant if the groundwater is utilized as a source of potable water. The current EPA drinking water standards state that the nitrogen in a domestic water supply should not exceed 10 mg/l. The water supply in Gearhart is from the Warrenton system which utilizes the Lewis and Clark River as a source. The City's Comprehensive Water Plan indicates that the Warrenton supply is the most economic source for the City and recommends that the City continue to be supplied by the Warrenton system. All residences within the City are served by the water system and the City has adopted a resolution requiring connection to the municipal system for residents within the City and prohibiting the use of individual well sources. There are several shallow wells in Gearhart that are used for irrigation purposes. The County groundwater study identifies Gearhart as being situated in the Neacoxie Groundwater Subbasin which is separated from the remainder of the Clatsop Plains Aquifer. This study and previous studies show that the general flow of groundwater in this Subbasin is predominantly towards the Pacific Ocean where it discharges across a broad area. The earlier studies further conclude that

Gearhart does not lie over a prime aquifer area for purposes of water supply.

Based upon the findings of this Study, on-site waste management appears to be an environmentally sound and implementable system meeting water pollution control objectives. The 1977 amendments to the Federal Water Pollution and Control Act emphasize alternative approaches to water quality management due to the high cost of conventional systems for small communities. Septic tanks and other means of on-site waste management fall within this category and the law further states that 4% of all construction grant funds must be set aside for alternative wastewater management. The Oregon State Department of Environmental Quality and the Oregon Environmental Quality Commission have cited Oregon State Administrative Code which forbids any degradation of groundwater quality and the administrative decision of the Department of Environmental Quality setting a 5 mg/l limit for nitrate-nitrogen in the groundwater of the Clatsop Plains as reasons for precluding on-site management. The nitrate-nitrogen concentrations should not exceed for growth in Gearhart 5 mg/l as discussed in this report and the posture of DEQ appears to be contrary to the Federal Water Pollution Control Act as amended since the proposed on-site waste management system for Gearhart will not degrade local groundwater quality in a manner that will in any way detract from present or future beneficial uses. It is appreciated that the concern over nitrate is a real one and the proposed waste management plan includes a groundwater monitoring program to establish the groundwater quality and to measure any changes over time. If it should be found that the on-site waste management practices are adversely affecting groundwater and/or if it is decided to use local groundwater in the future as a source of municipal water supply, the results of this testing program could be used to take appropriate action. The current residence time of water in the aquifer is relatively short (estimated 5 or 6 years) so that if a sewer system were deemed necessary at a later date, nitrate levels in the groundwater would abate within a relatively short period of time.

SECTION II

PLANNING BACKGROUND

1. INTRODUCTION

The City of Gearhart is a small community located on the northwestern Pacific Ocean coast of the State of Oregon. The City is almost entirely residential in nature with no industry and little commercial development. It is situated near the southern end of the Clatsop Plains which consists of an accreted sand dune formation. This section presents general planning information relevant to the wastewater facilities requirements for the City of Gearhart.

a. Population

The population of the City of Gearhart has grown at a faster rate than Clatsop County since 1950. Table II-1 summarizes relevant population information for Gearhart including the results of a 1976 special census conducted by the Population Research Center at Portland State University. A review of building permits in Gearhart shows that a total of 93 permits were issued from 1970 through 1976, although the total population of the City grew by only 13 during this 6-year period. This suggests that the family sizes in Gearhart are becoming smaller and approaching the Clatsop County average of 2.4 persons per dwelling unit.

Activity in Gearhart is oriented towards the ocean beaches and the population is highly seasonal. An examination of the yearly census report for 1970 shows that approximately 40% of the dwelling units in Gearhart are only seasonally occupied. The new building starts since 1970 maintain this percentage. The following is a summary of the housing units in Gearhart:

	<u>Permanent Dwellings</u>	<u>Seasonal Dwellings</u>	<u>Total</u>
1970	286	145	431
1976	352	173	524

Future population growth in Gearhart is limited unless the City expands its geographical area. It is estimated that there are approximately 75 buildable lots remaining in Gearhart although this number is probably reduced to approximately 50 by a recent resolution of the City Council which increases the minimum building lot size from 5,000 to 10,000 square feet. Table II-1 projects the 1985 and year 2000 population within the City.

b. Land Use

Figure II-1 outlines the generalized land use within Gearhart. As already stated, the predominant land use is residential. There is some highway-oriented commercial enterprise along U.S. Highway 101 and very limited commercial development which can best be characterized as neighborhood commercial uses at the intersection of Pacific Way and Cottage Avenue. There are approximately 100 condominium units at the extreme northwestern corner of the City and there is a combined grade school/high school along Pacific Way with an enrollment of approximately 200.

Figure II-1 shows that there are extensive greenbelt areas within the City limits. The Gearhart Golf Course occupies a total of approximately 40 acres within the City limits, the Gearhart City Park occupies approximately 5 acres and the grounds around the school another 10 acres. In addition, Neacoxie Creek runs through the City and some of the ground adjacent to the creek is extremely low which precludes development even though some is platted. Those areas which cannot be developed due to the high groundwater table appear on Table II-1. The portion of the City east of Highway 101 is low, currently in large parcels, and not likely to be intensively

developed. In total, approximately 120 acres out of the 640 acres within Gearhart are open space and are not expected to be developed. This leaves approximately 390 acres which can be developed in urban uses.

c. Topography

The topography in the City of Gearhart is typical of dune formations. The fore dune facing the Pacific Ocean rises in elevation to as high as 60 feet above sea level and forms a protective barrier from the ocean winds and spray. The land slopes down behind this dune barrier to Neacoxie Creek which runs north-south through Gearhart. It drains Sunset Lake and flows into the Necanicum River which enters the Pacific Ocean south of Gearhart and separates Gearhart from Seaside.

d. Soils/Geology

Gearhart rests on a sand dune formation consisting of fine textured sands. The fine to medium textured sand ranges up to 150 feet in depth. Some soil horizon has formed on the top of the sand to support grasses and in some locations trees. The sand-dune formation is underlain by the Astoria Formation which consists of shale and sandstone which forms a plateau sloping towards the Pacific Ocean.

e. Hydrology

The sand dune formation underlying Gearhart is saturated with water. The groundwater forms a lense which is found at a depth of from 7 to 30 feet in the populated areas of the City. The groundwater table generally follows the overlying deposit and is recharged from local rainfall. The average annual rainfall in Gearhart is approximately 80 inches and it has been estimated that as much as 60 inches percolates into the soil to recharge the groundwater table.

The groundwater moves generally west to discharge into the Pacific Ocean although in Gearhart, there is a lesser local discharge towards Neacoxie Creek and the Necanicum River. The groundwater table varies seasonally according to the rainfall, being the highest during the winter months and falling somewhat during the drier summer. The groundwater resources in the Gearhart area have been identified as being almost entirely from the sand dune aquifer since the underlying Astoria Formation is generally impervious.

Groundwater quality in the Clatsop Plains Sand Dune Aquifer is good although there has been some concern over the level of nitrates in the water. The nitrate levels are generally low, i.e., less than 1 mg/l in unpopulated areas. The Oregon State Health Department has conducted some spot tests of wells in the Clatsop Plains and several wells in the Gearhart area recorded readings as high as 8.9 mg/l. The EPA drinking water standards state that nitrate-nitrogen levels should not exceed 10 mg/l. The well tests in Gearhart were not from domestic water supplies, but rather from irrigation wells. They cannot be considered conclusive since they were only "grab" samples and there was no effort to identify possible nitrogen sources such as the close proximity of a septic tank. In addition, the tests were conducted in July and September of 1976. With few exceptions, the September readings were much lower than the July readings. There is an extreme range in the nitrate readings in many of the wells. For instance the well with the highest reading of 8.9 mg/l on 7/27/76 recorded 1.53 mg/l on 9/27/76.

There is considerable interest in development in the Clatsop Plains and the Clatsop County Commissioners retained a groundwater geologist, H. Randy Sweet, in the summer of 1977 to investigate the groundwater quality within the Clatsop Plains Aquifer and to make recommendations regarding acceptable development densities without jeopardizing groundwater quality for domestic water supply. Unfortunately, this study did not include Gearhart, or any of the other incorporated cities along the Clatsop Plains. The Oregon State Department of Environmental Quality established an

administrative guideline for planning purposes that the maximum nitrate-nitrogen concentrations should be limited to 5 mg/l. The consultant, considering both natural and man-caused nitrate sources concluded that the dwelling density of 1 unit per 1.2 acres could be allowed while maintaining the nitrate-nitrogen level within the 5 mg/l figure.

The significant findings of the groundwater study for the Clatsop County Commissioners affecting Gearhart are as follows:

(1) The City of Gearhart does not lie within the most productive portion of the Clatsop Plains Aquifer.

(2) The Study identifies drainage divides for the groundwater table and, coincidentally, the north Gearhart City limits define the boundary for what is referred to in the report as the Neacoxie Groundwater Drainage Area. The direction of groundwater flow within the Neacoxie Creek drainage is shown to be principally to the west with some tendency of flow towards the south. This is significant because it indicates that changes in groundwater quality within Gearhart will not affect the groundwater quality in other portions of the Clatsop Plains.

Population Trends
Gearhart and Clatsop County, Oregon

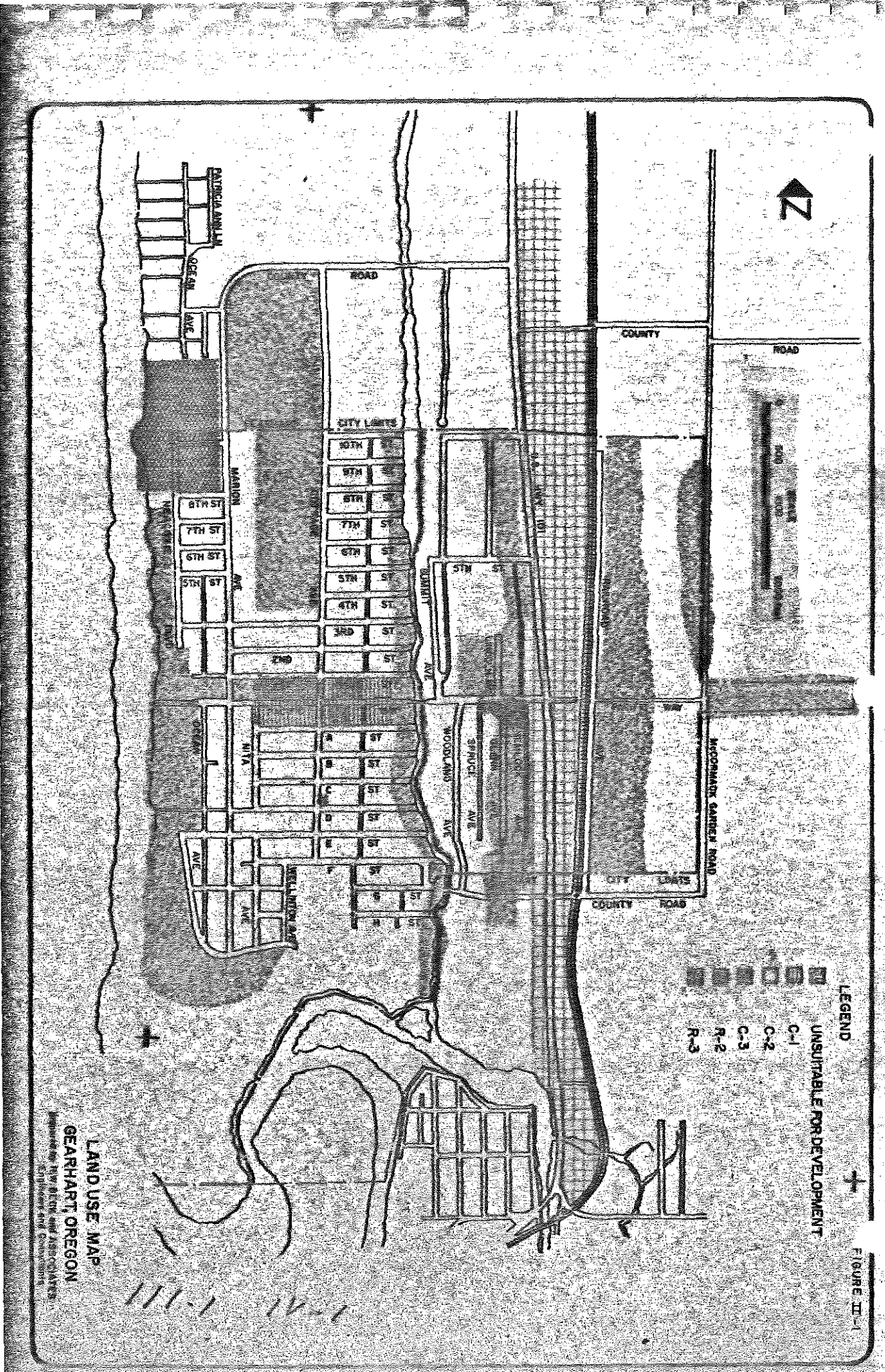
<u>Clatsop County</u>		<u>Date</u>					
<u>Historical</u>	<u>Projection</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
1940... 24,697	B.P.A.	30,700	32,600	34,500	36,100	-	-
1950... 30,776	CPRC	29,500(*)	30,400	32,000	33,200	34,400	35,100
1960... 27,380	PNW Bell . . .	29,400	30,100	31,600	32,500	-	-
1970... 28,473	S.O.M.	-	30,000	-	31,700	-	-

<u>Gearhart</u>							
<u>Historical</u>	<u>Projection</u>						
1940..... 319							
	High	842(*)		940			1,120
1950..... 568							
	Middle	842(*)		900			1,020
1960..... 725							
	Low	842(*)		870			930
1970..... 829							

Source of Projections/(Date)

B.P.A. = Bonneville Power Administration (1972)
 CPRC = Center for Population Research and Census,
 Portland State University (1976).
 PNW Bell = Pacific Northwest Bell Telephone Company (1975)
 S.O.M. = Skidmore, Owings, and Merrill - Clatsop County
 Plan, Phase I (1973)

(*) - 1976 Population estimate by CPRC for Clatsop County
 and 1976 special census by CPRC for Gearhart.



LEGEND

- UNSUITABLE FOR DEVELOPMENT
- C-1
- C-2
- C-3
- R-2
- R-3

LAND USE MAP
GEARHART, OREGON
Prepared by: REY, BROWN and ASSOCIATES
Engineers and Planners

FIGURE II-1

SECTION III

WASTEWATER PLANNING ALTERNATIVES

1. EXISTING WASTEWATER MANAGEMENT

All residential and commercial development in Gearhart is currently served by septic tanks. It is possible that some of the older dwellings do not have approved septic tank installations. The condominium units have large community septic tanks serving the individual buildings or complexes.

All new structures must be served by an acceptable septic tank installation. The septic tank design must be approved by the Clatsop County Public Health Department which issues an environmental health permit for its construction and also makes a site inspection of the system while it is under construction.

The Public Health Department and local residents report few if any septic tank failures in Gearhart. Failure to pump septic tanks when necessary creates plugging problems but the porous sand apparently results in few failures of the drainfields. The City of Gearhart does not have an operating sewer utility, and it is difficult to know the experience of the individual property owners because any septic tank maintenance is handled on an individual basis.

2. SEWAGE LOADING

The existing and projected sewage flows for the City of Gearhart can be derived using the population and dwelling number information presented in Section II combined with water use records. The City of Gearhart obtains its water supply from the City of Warrenton. The Gearhart system is metered, as is the supply from Warrenton and examination of these records indicates the following

average and estimated maximum water use for 1976. The projected figures are taken from the City's Comprehensive Water Plan:

	Water Requirements - Gallons per Day		
	<u>1976</u>	<u>1985</u>	<u>2000</u>
Average Day	127,000	145,000	170,000
Average Day, Maximum Month	204,000	230,000	270,000
Maximum Day	306,000	350,000	410,000
Peak Hour	612,000	700,000	820,000

The estimated average per capita water use in the Gearhart system is 80 gallons per capita per day. It has been found that domestic sewage flows are generally about 75% of the average winter water use, or approximately 60 gallons per capita per day for Gearhart.

As already stated, the population of Gearhart is highly seasonal with approximately 40% of the dwelling units being seasonally occupied. It has been assumed that these seasonal dwellings and the condominium units are occupied approximately 25% of the year for purposes of estimating sewage volumes. A somewhat conservative approach has been used in estimating peak sewage flows. It has been estimated that approximately 75% of the seasonal dwelling units and condominium units are occupied during the peak months and 100% on a maximum daily basis:

	Waste Volumes - Groundwater Disposal Gallons per Day		
	<u>1976</u>	<u>1985</u>	<u>2000</u>
Average Day	50,000	57,000	68,000
Average Day, Maximum Month	69,000	77,000	92,000
Maximum Day	76,000	86,000	101,000

The above flows are representative of the sewage quantities that will enter the groundwater if on-site wastewater disposal is practiced in Gearhart. If a central waste treatment plant is constructed, the sewage would be conveyed to this plant by a sewer collection system and sewer interceptors. There is typically infiltration into sewer systems from groundwater and storm inflow from either roof drains or street drains. The Gearhart system would be new and would be constructed according to modern sewer construction standards so that every effort would be made to minimize infiltration/inflow. Still, it is considered prudent to add an allowance of 500 gallons per acre per day for infiltration/inflow when designing the sanitary sewer and the waste treatment facility. Some of the sewers will be installed below the groundwater table. This yields the estimated wastewater flow shown below:

	Waste Volumes - Conventional Sewer System Gallons per Day		
	1976	1985	2000
Average Day	175,000	205,000	260,000
Average Day, Maximum Month	195,000	225,000	290,000
Maximum Day	205,000	235,000	300,000
<u>Design Organic Loading (lbs/day)</u>			
BOD	250	280	330
Suspended Solids	250	280	330

The infiltration/inflow estimate is approximate, but does demonstrate that it can constitute a majority of the waste flow in Gearhart.

The organic content of the wastewater for a conventional wastewater treatment facility is on the order of .2 pounds of BOD and suspended solids per capita per day. Using this criteria yields

the estimated design loadings for the waste treatment plant as shown above.

For subsurface waste discharge, the nitrates in the groundwater are the principal item of concern. There have been studies to estimate the nitrate contribution from household waste.

The most recent and most rigorous investigation of household waste characteristics was conducted by Robert Siegrist, Michael Witt, and William C. Boyle as part of the Small Scale Waste Management Project at the University of Wisconsin. This study included extensive monitoring and sampling of household events contributing to domestic waste for rural homes. These events include (1) toilet usage; (2) clothes washing; (3) bathing; (4) dishwashing; and (5) water softening. The findings of the Study are that the average per capita nitrogen discharges are approximately 5 pounds per capita annually. Earlier investigations by Ligman and Laak (independent studies) resulted in the finding that total nitrogen in domestic wastewater is approximately three times this amount or on the order of 75 pounds per capita annually. It was these earlier investigations as used by W. G. Walker, in another research effort at the University of Wisconsin that is used as the basis for the recent Clatsop Plains Environmental Geology and Groundwater Study for the Clatsop County Commission. Walker's research was principally into the movement of nitrogen in the groundwater in the vicinity of septic tank seepage fields rather than in a strict accounting of the quantities of nitrates discharged in household wastes. His findings are that the ammonia-nitrate which predominates in urine and feces is readily oxidized to nitrates within a few feet from the seepage beds, in aerobic sandy soils similar to Gearhart. He found nitrate-nitrogen concentrations as far as 20-30 meters "downstream" from seepage beds in excess of the 10 mg/l standard set by the drinking water standards. However, he suggested that the high nitrates appear to be a surface phenomena and are not extensively distributed to any depth in the groundwater so that a deep well would draw good

quality water. This theory is corroborated by several other research efforts and may account for the highly variable nitrate readings sampled in wells in the Gearhart area. Siegrist comments on the disparity between his findings and those by Ligman and Laak, in his report as follows:

"The results of this study for the fecal and nonfecal flushes combined are compared with the results of earlier investigators (Table 10). The mean milligram per capita per day values reported by Ligman (9) and Laak (7) are very similar to each other, but are substantially higher than the results determined by this study. The values reported by the earlier investigators were based largely on small-scale analyses of individual samples of urine and feces and the information available in the literature regarding human waste products. The mass per capita per day contributions determined, represented the total daily quantity of pollutants generated by an average adult. The mean milligram per capita per day contributions determined in this study were based on actual on-site sampling of toilet wastewater from rural homes. The results represent the mean daily quantity of pollutants to be expected from an average resident of a rural home through the use of the toilet facility in the home. Since the average resident in this study (including children, teenagers, and adults) most likely produced less waste than an "average adult" and since a portion of this waste was most likely disposed of through the use of toilet facilities outside of the home, the milligram per capita per day values obtained in this study were expected to be lower than those determined by Ligman and Laak. The results of this study were found to be similar to values obtained by the earlier investigators when the comparison was made on a milligram per event basis (Table 11)."

Properly-designed septic tanks retain much of the solid material in domestic sewage including approximately 40% of the nitrogen. Therefore, the estimated nutrients discharged to the

groundwater from a well-designed septic tank system are approximately 3 pounds per capita annually rather than approximately 18 pounds per capita annually used in the Clatsop Plains Environmental Geology and Groundwater Study or approximately 1/6 the amount.

3. WASTEWATER FACILITIES ALTERNATIVES

There are three basic options available to Gearhart for managing wastewater generated within the City. These are (1) a regional wastewater system; (2) a conventional wastewater collection and treatment system serving only Gearhart; and (3) on-site waste management.

4. REGIONAL SYSTEM

The Clatsop County Commission authorized the Clatsop Plains Sewerage Study to prepare a comprehensive sewer plan for the Clatsop Plains in 1972. The resulting Plan which was issued in 1975 proposed a regional solution to wastewater management within the Clatsop Plains. Two waste treatment plants were proposed, one at Warrenton and one at Seaside. Wastes from the areas south of Sunset Lake, including Gearhart, would be transported to Seaside for treatment and disposal. The Seaside plant would be upgraded for this purpose. The proposed sewer interceptor system through Gearhart would provide for a capacity to serve the anticipated ultimate population within the area. The sewer interceptors appear to be designed for a population of approximately 14,000 as compared with a present permanent population of approximately 1,200 and the design criteria is generous so that considerably greater population could probably be accommodated.

Cost estimates presented for this plan were updated in 1976 to present a preliminary allocation of construction costs for the interceptor and treatment facilities. The cost presented for a typical Gearhart residence is \$1,250, based upon an average assessed property value of \$30,000. Escalating this cost to an estimated 1980 construction date gives a cost of \$2,000. In addition,

it is questionable whether or not EPA would provide a full 75% construction grant for a system whose design is based upon such high growth speculations.

The cost information presented did not include the substantial costs which would be required for the sewer collection system and for side sewers to connect individual homes. It is estimated that \$2,000 to \$3,000 per lot would be required to construct the collection sewers. For purposes of this report, it is assumed that sewer construction will occur in 1980 and all costs given herein have been escalated to that date.

The total share of the construction cost which must be paid by a Gearhart resident would be approximately \$4,000 to \$8,000. Estimated annual operation and maintenance expenses for the interceptor system would be approximately \$20. It is difficult to estimate the treatment payments to Seaside because the Seaside system and plant would require substantial renovation in order to serve as a regional facility and EPA requirements could result in a substantial restructuring of rates. Seaside Ordinance No. 43-14 sets the sewer rate at 65% of the water rate. The minimum water charge is \$4.00 so the minimum sewer charge on this basis would be \$2.60. In addition, the City imposes a 115% surcharge on customers outside the Seaside City limits, which would make the charge \$5.60. If Seaside were to provide treatment service to Gearhart, it is anticipated that a cost-of-service agreement would be reached between the two cities. It is difficult to estimate what this might be, but for purposes of this study, we have assumed that \$5/month per customer is a reasonable guess. The total annual payments by a typical Gearhart residence for the Regional System would therefore be approximately as follows:

Capital Cost(1)

Interceptors and Treatment	\$180
Collection System	<u>180</u>
Subtotal	\$360

Operation and Maintenance

Interceptors	\$ 20
Treatment Payment to Seaside	<u>60</u>
Subtotal	\$ 80

Total Annual Payment	\$440
Equivalent Monthly Charge	\$ 37

(1) - Based upon amortization of the construction cost at 6-3/8% over 20 years. Cost of collection system assumed equal to \$2,000 per Gearhart residence.

a. Alternative 2 - Gearhart Sewer System

The second alternative would be for the City of Gearhart to construct a sewer system with collection system, interceptors, and treatment facilities to treat the waste from the existing and projected population within Gearhart. A preliminary plan is shown on Figure III-1. The wastewater would be intercepted in a north-south direction from the collector sewers and would direct the wastewater to a treatment plant site near the City park in the south end of Town. The sewer interceptors shown provide for some oversizing should the City choose in the future to extend its City limits and/or sewer service area. An extended aeration type of treatment facility has been used for purposes of cost comparison. The discharge of the treated effluent would be through a submarine outfall to the Pacific Ocean.

Table III-2 presents cost estimates for the proposed Gearhart wastewater systems. The total capital cost is approximately \$2,⁷⁹⁰000,000. The annual operation and maintenance cost is approximately \$29,100 and the total annual costs including debt service on the local share of the construction would be approximately \$179,100. The estimated monthly sewer charge would be approximately \$28.00 and the total annual cost/customer \$340

b. Alternative 3 - On-Site Management

In view of the high cost of conventional methods of wastewater collection, treatment and disposal, serious consideration was given to alternative methods of wastewater disposal. The most readily apparent alternative method is septic tank disposal as practiced at the present time. The sandy soils underlying Gearhart are an excellent media for septic tank drainfields. The only potential problem is that the sand, although it is an excellent filter for pathogens, freely passes nitrates from the wastewater. There is little vegetative cover and the fast percolation of the wastewater through the sand would not allow sufficient time for nitrogen uptake by vegetation.

The County Environmental Health Specialist responsible for septic tank installations in the Gearhart area reports on estimated 15-20 septic tank failures annually in Gearhart. The problems are generally due to structural failure of older systems or plugging due to a lack of maintenance. Drainfield failure is extremely rare due to the permeable nature of the sands.

The Oregon State Legislature in 1977 authorized the use of composting toilets. There is interest among Gearhart's citizens in the composting toilet. It provides an opportunity for sequestering the urine and fecal wastes from households frequently termed "black waters." These wastes reportedly account for approximately 90% of the nitrogen content of household wastes so that the use of

composting toilets could substantially reduce the quantities of the nitrogen otherwise entering the groundwater. In addition, toilet flushing accounts for 25 to 50% of the total volume of household waste as reported in various research investigations.

Other alternative methods of wastewater collection such as pressure sewers were not given serious consideration. Our experience with other communities indicates that the individual household sewage pumps in a fairly concentrated area such as Gearhart with the associated capital and operation and maintenance costs would tend to eliminate cost savings which might otherwise be realized.

The Environmental Geology and Groundwater Study authorized by the Clatsop County Commission in 1977 provides some background information for evaluating nitrate concentrations within the groundwater. The study attempts to quantify the nitrates from natural sources, i.e., vegetation and quoting from Table II-1 in the report gives the following annual nitrate concentrations. This background on nitrogen totals approximately 0.5 mg/l based upon the annual rainfall volume which goes to recharge the aquifer.

The groundwater study goes on to quantify the nitrate loading from municipal septic tank waste. It quotes research conducted by Walker at the University of Wisconsin as estimating the per capita nitrate contributions to be on the order of 18 pounds of nitrates per year per capita. As discussed earlier in this section, the latter studies by Robert Siegrist et al provide a more reliable estimate of per capita nitrate-nitrogen generation of approximately 5 pounds per capita annually. Roughly 40% of this amount is "captured" in a septic tank leaving approximately 3 pounds per capita annually as the discharge to the groundwater. Assuming a density of approximately 2 dwelling units per acre which is reasonable for Gearhart considering the large percentage of open spaces or undevelopable land and 2.5 persons per dwelling unit. Using the

above criteria, nitrate-nitrogen discharged to the groundwater is approximately 15 pounds per acre per year.

Referring to the information presented in Table 10 of the Environmental Geology and Groundwater Report for the Clatsop Plains, the theoretical annual nitrate-nitrogen contribution from natural vegetation in the Neacoxie Creek Subbasin which is essentially synonymous with Gearhart is 13,871 pounds per year from vegetation. The report assumes a land area of 563 acres within the Subbasin which yields a contribution of roughly 25 pounds of nitrate-nitrogen annually from natural sources.

The assumed induced amount is apparently shown only for dwelling units in the County. Using a dwelling unit density of 2/acre as discussed above, the total nitrate-nitrogen contribution is 15 pounds/acre/annually from the septic tank wastes. In the Environmental Geology and Groundwater Report, it was further assumed that the nitrate-nitrogen contribution from fertilizer application was 5 pounds/dwelling unit annually. The total nitrogen per acre can therefore be summarized as follows by source:

Natural	25 lbs.
Induced Domestic Waste	15 lbs.
Fertilizer	<u>10</u> lbs.
	50 lbs.

Again, using the same criteria presented in the Environmental Geology and Groundwater Report, the resulting total resulting nitrate-nitrogen concentration is 5 mg/l. This corresponds with the administrative guideline issued by DEQ for the maximum permissible nitrate concentrations in the Clatsop Plains. It is noteworthy that the nitrate-nitrogen contributed by household waste is only 30% of this amount.

The typical dwelling unit in Gearhart does not have a formal yard and it is reported that there is minimal use of fertilizer.

There is no fertilizer used at the City park and the Gearhart Golf and Country Club uses only a nominal amount of fertilizer on the greens. The fairways are not fertilized.

The only nitrate standard for water pertains to its use as a domestic water supply. The City of Gearhart does not now use, or intend to use, the groundwater for domestic water supply. The City has passed a resolution whereby all the residents within the City limits must connect to the City's water supply system. The City obtains its source from the City of Warrenton, which uses a remote surface source as its source of supply.

The groundwater geology setting of the Clatsop Plains sponsored by Clatsop County identifies Gearhart as an independent groundwater basin indicating changes in water quality within this area will not affect other portions of the Clatsop Plains. The above figures indicate that even with on-site disposal that development in accordance with the City comprehensive land-use plan would not result in general nitrate concentrations in the groundwater in excess of 5 mg/l. The natural flow of groundwater in the Gearhart area is primarily towards the Pacific Ocean with localized flow towards Neacoxie Creek and the Necanicum River. A slight rise in the nitrate levels of this groundwater discharge would not adversely impact the beneficial uses of these waters.

The management of an on-site wastewater system is relatively simple although it involves fairly new concepts since it has only recently come to be accepted as a desirable permanent solution to wastewater management in small communities. The major issue is the degree of control which a City or other public agency should exercise over waste treatment. The management can run the gamut from retaining owner responsibility for on-site disposal to complete public control of the operation. A study has been conducted in Lane County, Oregon on the management of on-site waste disposal as part of the local 208 planning effort and the City of Coberg, Oregon conducted a facilities plan and elected to proceed

with on-site waste management. In both instances, the public management of on-site wastes will consist essentially of providing information to homeowners on the operation of their systems. This does not appear to offer much hope for improved wastewater management since the individual homeowner, if left to his own devices, will probably neglect his waste disposal problems, much as has been the case in the past, until a crisis such as a plugged septic tank or a failing drainfield brings it to his attention. In California, there are several instances where septic tank maintenance districts have been created with the District having the responsibility for the care and the maintenance of the system. Pierce County, Washington has been following a somewhat similar approach for new subdivision development. A subdivision too far from existing sewer systems but within an urban sewer service area may be served initially by a community septic tank. The County takes the responsibility for maintaining the septic tank and collects a monthly sewer charge for this service. When sewers become available, the development is tied into the sewers.

The proposed on-site management scheme for Gearhart is built around optimization of the existing septic tank installations as follows:

(1) All existing septic tank installations would be inspected and repaired or replaced as necessary at the cost of the homeowner.

(2) The City would undertake the responsibility to periodically pump the septic tank and to dispose of the waste. The City could either contract the septic pumping or alternatively could purchase a septic tank pumper for this purpose. It is proposed, after the initial inspection, that the septic tank would be pumped approximately once every three years on a recurring basis and the estimated current cost for this service is approximately \$120.

(3) Any failure of a septic tank could be repaired by the owner or he could request the City to make the repairs and be billed for this service. The initial cost for the on-site waste management system would range from approximately \$150 for the inspection to approximately \$1,400 if a complete septic tank system requires replacement.

5. PLAN SELECTION

Comparison of system costs shows that on-site waste management is by far the least expensive of the three alternatives, both in terms of the initial capital costs and the recurring annual operating and maintenance expense. This solution is also environmentally sound based upon the residential nature of Gearhart and the overall low development densities. This alternative results in the least environmental impacts both during construction and once the system is placed in operation. Implementation of on-site waste management will increase the nitrate levels in the groundwater but based upon available information should not preclude its use as a source of domestic water supply from properly developed wells, should this be necessary in the future. Otherwise, the estimated nitrate levels should not adversely impact water quality to any measurable degree or detract from the current beneficial uses of the receiving waters.

A possible drawback of continued reliance on on-site disposal is the restriction which it could place upon future growth within Gearhart and in the areas north of the City. On-site disposal would not be satisfactory for the high density residential development such as the condominiums to the north of Gearhart nor for large commercial developments, hotel sites and motel complexes. The presence of a sewer system in Gearhart would facilitate large-scale growth in the surrounding vicinity. It is not the purpose of this study to extoll the economic benefits of such development or to criticize it for destroying the natural ecology of the ocean

dunes, but merely to identify potential limitations which on-site waste disposal places upon development in Gearhart and the surrounding areas.

TABLE III-1

ALTERNATIVE NO. 2
GEARHART SEWER SYSTEM

Construction Cost

8-Inch Sewer	- 44,150' @ \$20/ft. =	\$ 883,000
10-Inch Sewer	- 7,000' @ \$23/ft. =	161,000
6-Inch Force Main	- 1,600' @ \$15/ft. =	24,000
10-Inch Force Main	- 1,000' @ \$20/ft. =	20,000
10-Inch Outfall	=	230,000
1 Pump Station @ 100 gpm		25,000
1 Pump Station @ 300 gpm		50,000
0.3 mgd Waste Treatment Plant		<u>600,000</u>
Total Construction Costs		\$1,993,000
Indirect Costs @ 40%(1)		<u>197,000</u>
Total Project Costs		\$2,790,000

Annual Costs

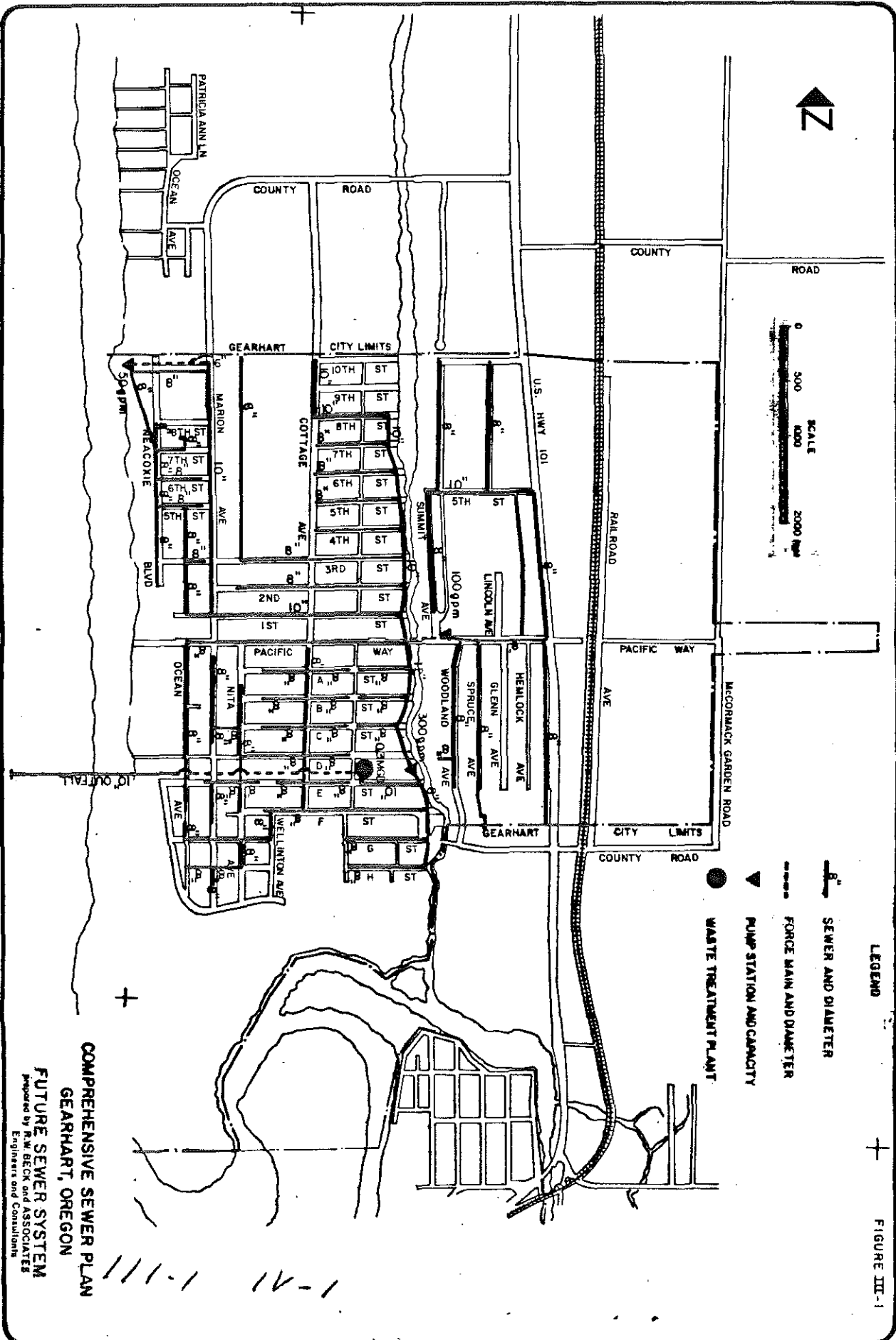
Operation and Maintenance:

Sewer System	\$ 6,600
Pump Stations	4,500
Treatment Plant	<u>18,000</u>
	\$ 29,100
Debt Service(2)	<u>150,000</u>
Total Annual Cost	\$ 179,100

$$\text{Annual Cost/Customer} = \frac{\$179,100}{250} = \$340$$

- (1) - Indirect costs include engineering, contingencies, sales tax, legal and administrative costs.
- (2) - Debt service @ 6-3/8% for 20-year term of local share costs. It is assumed that 10-inch sewers, 300 gpm pump station, treatment plant, and outfall will be eligible for 75% EPA grant assistance.

NOTE: All costs are 1978 price levels.



LEGEND + FIGURE II-1

COMPREHENSIVE SEWER PLAN
 GEARHART, OREGON
 FUTURE SEWER SYSTEM
 Prepared by R.W. BECK and ASSOCIATES
 Engineers and Consultants

SECTION IV

PROPOSED SEWER FACILITIES PLAN

1. INTRODUCTION

The Wastewater Facilities Plan selected for the City of Gearhart is on-site waste disposal as described in general terms under Alternative 3 in the previous section. The proposed on-site waste management scheme will rely primarily upon septic tanks while permitting alternative types of on-site waste disposal to the extent that they are acceptable and appropriate for the particular situation. The Clatsop County Public Health Department will continue to issue septic tank permits, inspect installations, issue repair permits, and take enforcement action if necessary. The proposed system will, therefore, be a cooperative effort between the Public Health Department and the City of Gearhart.

The management of on-site waste systems can be divided into several functions as follows: (1) design; (2) installation; (3) maintenance; (4) repair; and (5) enforcement. The proposed Gearhart Waste Management System will be discussed under these general headings.

a. System Design

The State of Oregon has design standards for the construction of septic tank systems. A septic tank permit is required prior to the issuance of a building permit for new construction and for major repairs to existing septic tank systems. Actually, the septic tank permit is a two step process. The homeowner first notifies the Public Health Department and makes arrangement for the percolation tests in two holes in the proposed drainfield area. If the site passes this test, the property owner next submits a plot plan of the proposed septic tank and drainfield installation and is issued a septic tank permit. This permit is issued by the

Clatsop County Public Health Department, through its Environmental Services Division and it is proposed that the Health Department continue to provide this function.

b. Installation

Septic tank and other on-site waste disposal systems in Clatsop County must be installed by a licensed installer certified by DEQ. The exception is that an individual homeowner may install his own system. In addition, the representative from the Environmental Services Division of the County Health Department makes an on-site inspection of the septic tank system before it is buried. A file of the inspection report and a copy of the plot plan of the septic tank system is maintained with the permit in the Health Department Office. It is recommended that a record drawing be prepared for each septic tank or other on-site waste management system and provided to the City of Gearhart as well.

c. Maintenance

It is proposed that the City of Gearhart take the responsibility for the maintenance of on-site disposal systems. Initially, this will consist of pumping and inspecting all existing septic tanks and installations. Owners will be notified in cases where systems require repair or replacement and given a cost estimate and the option of having the City accomplish the work and bill them or having the owner contract directly with a licensed installer for the work. An acceptable manhole will be installed on all the septic tank systems at the time of inspection to facilitate the periodic pumping of the septic tank.

Information on septic tank management in other locations indicate that the septic tanks should be pumped on a 2-4 year cycle to prevent the excessive accumulation of solids in the tank with possible plugging of the septic tank and carryover problems into

the drainfield. It is proposed that the City, following the initial inspection will pump all septic tanks on a 3-year cycle. However, in order to phase the pumping, the City will be split into thirds with the first maintenance being at the 2, 3, and 4 years for the individual sections of the Town.

Composting toilets would be accepted as an alternative for the "black" water and may be installed and maintained by a property owner at his expense. In addition, the owner must provide for a septic tank for other approved on-site system for the gray waters from such sources as sinks, laundry and wash basins. This system can be appropriately reduced in size due to the reduced solid and liquid volumes. A 40% reduction in the size of the septic tank and drainfield is reasonable.

All on-site waste management systems shall remain the property and responsibility of the private property owner. The owner shall grant the City an easement for the purposes of maintaining the on-site system.

d. Repair

The initial repair or improvement to an existing septic tank has been discussed under Maintenance above. Subsequent inspections would be made each time the septic tank is pumped and if repairs are found necessary, the owner will be so advised. Again, the owner can elect to have the City perform the work and bill him for these services or can contract with a licensed installer for this purpose.

e. Enforcement

The Clatsop County Public Health Department through its Environmental Services Division has authority from the Oregon State Department of Environmental Quality to enforce corrective action

on malfunctioning septic tanks or other on-site waste management systems. Under the present system, where individual owners are entirely responsible for on-site waste disposal, problems are brought to the attention of the Health Department by complaints from neighbors or sometimes as the result of an on-site inspection one of the County Environmental Health Specialists. Another source is the report by owners of a plugged or failing septic tank system. Otherwise, problems are not visible and they cannot be identified once the septic tank system is installed.

Under the proposed Management Scheme, the City of Gearhart would also become involved to the extent that it discovers problems or failing systems during its routine pumping and inspection or obtains the information reported from another source.

Usually, owners are willing to correct septic tank problems and enforcement action is not required. Under the proposed on-site management system for Gearhart, the County Public Health Department would continue to be responsible for enforcement and any problems turned over by City personnel to the Health Department. As a measure of last resort, the City of Gearhart is the municipal agency with responsibility for its incorporated area and since it does supply water service as well as the proposed on-site waste management, water service could be cut off, if a customer refuses to pay the wastewater service charge or to make corrections to his on-site system.

2. WASTE SYSTEM MANAGEMENT

It is recommended that the City establish a Waste Services Department under the supervision of the City Utilities Supervisor. The water and sewer operations can probably reasonably be the responsibility of a single individual. This department would be established by resolution and given the necessary authority to manage the on-site waste management system.

a. Cost and Service Charges

The cost for implementing the on-site waste management system as described above will include the overall administration of the program and the cost to maintain the on-site system by pumping the septic tanks every three years. It is estimated that the administrative cost will be approximately \$1 a month and the cost for pumping will depend on whether or not the City contracts for this service or purchases its own pumper truck. Local licensed septic tank haulers have indicated that it will cost approximately \$120 to pump a residential septic tank. Some cost savings might be achieved if the City contracts for this service. The alternative would be for the City to purchase a pumper truck and to perform the operation with City personnel. The truck is a grant eligible expenditure so that the actual cost would include primarily the operation and maintenance of the truck and salary cost plus the cost to dispose of the waste at the City dump. It is estimated that this would cost approximately \$80 for each unit to pump and dispose of the sludge to the Astoria treatment facility. The truck would not be in use full time and it is estimated that it would take a City Utility employee approximately 4-5 months each year to perform the pumping operation. Spreading the pumping cost over a three-year period indicates that the charge would be \$2.50-\$3.50 per month for this service depending on whether the City or a licensed hauler provided the service. The monthly sewer service charge would therefore be approximately \$3.50-\$4.50.

The billing of the wastewater service charge could be included on the water bill. There are currently an estimated 525 households in Gearhart, so the total system revenue would be approximately \$22,000 to \$28,000 per year with roughly \$6,300 of this amount for the City's administrative cost.

b. Public Information

On-site waste management as proposed for Gearhart is different from a conventional wastewater system and will require citizen participation if it is to be successful. It is therefore recommended that the public be kept informed through newspaper releases, neighborhood meetings, and public information on the program. The City should prepare public information on on-site waste management and alternative on-site systems for both prospective and existing homeowners. This information should be kept current and be readily available to the public.

c. Water Quality Monitoring

A water quality monitoring program is proposed in conjunction with on-site waste management as described below. This program is designed to provide good information of groundwater quality and indications of any change in this quality over time.

"Establish a groundwater monitoring program to better identify the groundwater quality in Gearhart and to observe its changes on a seasonal basis and over time.

a. Establish seven (7) wells for groundwater monitoring within Gearhart. These wells should ideally consist of:

- (1) A shallow dug well in a developed area of the City.
- (2) A deep cased well in a developed area of the City.
- (3) A shallow cased well in a lesser developed area.
- (4) A deep cased well in a lesser developed area.
- (5) A well which is sealed off into several zones to permit sampling at several depths.

(6) A well in an area of potential nonpoint sources of pollution.

(7) A well in an area outside the influence of point and nonpoint waste sources.

It is hoped that Gearhart residents can identify existing wells which could be used for monitoring purposes. It is possible that it may be necessary to drill the well with the seal between zones to permit samples at various depths.

b. Obtain samples from the test wells on a quarterly basis following the water year (October through September) and test for nitrate and coliform concentrations. Continue the testing over a three-year period.

c. Obtain 2 complete chemical analyses on each well on an annual basis to detect any changes in the chemical quality of the water. The samples will be collected before and after the high use periods.

d. Issue interim and a final report on the findings of the groundwater monitoring program.

APPENDIX A

ADOPTED RULE OAR 340-71-020(7)

(A) Pursuant to ORS 454.685, neither the Director nor his authorized representative shall issue either construction permits for new subsurface sewage disposal systems or favorable reports of evaluation of site suitability within the boundaries of the following geographic areas of Clatsop County where there are unconsolidated sands or unconsolidated loamy sands:

- (1) All areas located south of the Columbia River, west of the Skipannon River (or Skipannon Waterway), and north of the southernmost part of Cullaby Lake,
- (2) All areas within the Shoreline Estates Sanitary District, and
- (3) All areas south of the southernmost part of Cullaby Lake and north of the northernmost part of Neawanna Creek at its confluence with the Necanicum River, save and except those lands more than one half mile due east of U. S. Highway 101.

(B) The restriction set forth in Subparagraph (A) above is subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. Such petition either shall provide reasonable evidence that development using subsurface sewage disposal systems in accordance with single family unit equivalent densities specified in the local land use plan for the area will not cause degradation of groundwater quality or surface water quality or shall provide equally adequate evidence that degradation of groundwater or surface water quality will not occur as a result of such modification or repeal.

(C) The restriction set forth in Subparagraph (A) above shall not apply to any construction permit application based on a favorable report of evaluation of site suitability issued by the Director or his authorized representative pursuant to ORS 454.755 (1)(b) where such report was issued prior to the effective date of this Subsection (7).

Adopted by EQC April 1, 1977
Effective April 4, 1977

APPROVED RECOMMENDATIONS:

1. It is recommended that the Environmental Quality Commission acknowledge the Clatsop Plains report sent to them by the Director on March 4, 1977 and enter it into the record of this hearing.

2. It is recommended that the Environmental Quality Commission recognize the Clatsop Plains Sewerage Study, Clatsop County, Oregon, completed by CH₂Hill on March 6, 1975, as the initial master sewerage plan for the Clatsop Plains area, subject to revision as necessary to conform to existing and future land use designations.

This action will provide a reasonable basis for continued funding of needed projects at Seaside and at Hammond/Fort Stevens.

3. It is recommended that the City of Seaside be required to proceed immediately to improve its sewage treatment facilities to meet minimum standards. The necessary improvements cannot be in operation by the July 1, 1977 federal deadline. Since the city's permit cannot be modified to extend the compliance date beyond July 1,

1977, it will be necessary to return to the Commission at a later date to consider entering a stipulated order establishing a reasonable and attainable schedule.

4. It is recommended that the town of Hammond be placed on a formal schedule by Commission order for completing its on-going efforts toward eliminating the present raw sewage discharges. Such an order is considered necessary with respect to the time that will be necessary for completion beyond the July 1, 1977 federal deadline. This matter is on the Commission agenda for April 1, 1977.
5. It is recommended that Fort Stevens State Park be required to install sewage facilities to connect their wastes to the City of Warrenton sewage treatment plant. The schedule for completion must yet be determined since it may be dependent on legislative funding.
6. It is recommended that the Environmental Quality Commission act to protect and enhance the natural ground water and surface waters in the Clatsop Plains area by adopting a rule prohibiting issuance of permits for new construction of subsurface sewage

disposal systems. The recommended rule is contained in Exhibit A. The rule prohibiting new permit issuance would be subject to modification or repeal on an area-by-area basis upon petition by the appropriate local agency or agencies. The petition would be expected to provide reasonable technical evidence that development using subsurface sewage disposal in accordance with single family unit equivalent densities specified in the local land use plan for the area would not cause further ground water or surface water quality degradation. This rule would not prohibit construction of sewer systems or connection to existing approved sewers or sewage systems.

7. It is recommended that the Department be instructed to make written demand upon Clatsop County on October 1, 1977 for repayment of the planning loan and accrued interest by not later than October 1, 1980, unless prior to October 1, 1977 a program is worked out with the Department for coordinating repayment with any anticipated federal grant payments. This should give the local agencies reasonable time to decide on the course of action they wish to pursue.

5209

P.O. Box 1760, Portland, Oregon 97207

May 8, 1978

Mr. R.A. Bushley
Executive Engineer
R.W. Beck & Associates
200 Tower Building
Seattle, Washington 98101

Re: WQ - Gearhart -
Clatsop County

Dear Mr. Bushley:

We have reviewed the preliminary draft entitled "Wastewater Facilities Planning Study" prepared for the City of Gearhart by R.W. Beck & Associates. The proposed sewage disposal alternative selected for the City was an on-site waste management plan.

Because the Environmental Quality Commission (EQC) has determined that the Clatsop Plains groundwater aquifer must be protected for future domestic water supply purposes, we must be assured that the $\text{NO}_3\text{-N}$ levels in the receiving groundwater will be maintained below 5 mg/l. The information and data provided do not fully justify that the 5 mg/l of $\text{NO}_3\text{-N}$ will not be exceeded; therefore, additional information must be provided before we can complete our review.

Please provide the following additional details:

1. A bibliography listing the literature or studies utilized in your calculations of $\text{NO}_3\text{-N}$. In particular, at least the following statements should be referenced:
 - a. The most recent and most rigorous investigation of household waste characteristics was conducted by Robert Siegrist....(p. III-4).
 - b. These wastes reportedly account for approximately 90% of the nitrogen content of household wastes....(p. III-9).

Mr. R.A. Bushley
Page 2
May 8, 1978

- c. As discussed earlier in this section, the latter studies by Robert Siegrist et al provide a more reliable estimate of per capita nitrate-nitrogen(p. 111-10).
- d. Roughly 40% of this amount is "captured" in a septic tank(p. 111-10).
2. The reasons for assuming a density of approximately two dwelling units per acre and 2.5 persons per dwelling unit. (p. 111-10).
3. The number of lots to be developed within Gearhart. (p. 11-2).

It should be noted that we have reviewed a recent paper by Robert L. Siegrist, "Waste Segregation to Facilitate On-Site Wastewater Disposal Alternatives", Proceedings of the Second National Home Sewage Treatment Symposium, Dec. 12, 13 1977 ASAE Publication 5-77. Utilizing the range of nitrogen levels included in that paper, we have calculated that the $\text{NO}_3\text{-N}$ levels covered range from 4.2 to 10.5 mg/l. For this reason, additional justifications for your calculations are most important.

We are looking forward to our meeting with you and the City of Gearhart on May 16, 1978 at 1:30 p.m. in my office in Portland. I am hoping we can work together to resolve the sewage disposal issue in Gearhart.

Sincerely,

Robert E. Gilbert
Regional Manager
Northwest Region

REG/mlw

cc: Clatsop County Health Department
Clatsop County Planning Department
Environmental Protection Agency, Oregon Operations Office
City of Gearhart
Northwest Region/North Coast Branch, DEQ
Water Quality Division, DEQ

R. W. BECK AND ASSOCIATES

ATTACHMENT 3

ENGINEERS AND CONSULTANTS

PLANNING
DESIGN
RATES
ANALYSES
EVALUATIONS
MANAGEMENT

200 TOWER BUILDING
SEATTLE, WASHINGTON 98101
TELEPHONE 206-622-5000

SEATTLE, WASHINGTON
DENVER, COLORADO
PHOENIX, ARIZONA
ORLANDO, FLORIDA
COLUMBUS, NEBRASKA
WELLESLEY, MASSACHUSETTS
INDIANAPOLIS, INDIANA
MINNEAPOLIS, MINNESOTA

FILE NO. WW-1448-WP2-MA
3104

May 16, 1978

Department of Environmental
Quality
Post Office Box 1760
Portland, OR 97207

Attention: Mr. Robert E. Gilbert
Northwest Regional Manager

Gentlemen:

Subject: Gearhart Wastewater Facilities
Planning Study

We are in receipt of your letter dated May 8, 1978, commenting on the preliminary draft of the Gearhart Wastewater Facilities Planning Study. We are enclosing with this letter responses to the specific requests for additional details noted in your letter. The following items are numbered corresponding to your letter.

1. Please see the attached bibliography for our study.
 - a. The comment regarding the most rigorous investigation of household waste characteristics is our conclusion based upon a review of the available studies. The quotation included on Page III-5 of the Gearhart Wastewater Facilities Planning Study comments on the difference between the findings of Siegrist and earlier investigators. To summarize, there are a number of research efforts to determine the nitrate contributions from septic tanks which have been conducted by different investigators for various purposes. As stated in our report, Walker was primarily interested in the movement of nitrogen in the vicinity of septic tank seepage fields and did not conduct rigorous investigations into the quantity and quality of wastes actually generated within households. Siegrist, et al, on the other hand, monitored events from household plumbing fixtures and analyzed representative samples of the discharges from these fixtures.

- b. The "black waters" from urine and fecal wastes account for the majority of the nitrogen content of household waste. The following cites several references listed in the bibliography and reported percentages.
 - 15) 68.1%. . . Page 547.
 - 9) Range of 67-99% with mean of 82%. . .Page 48.
 - 6) Approximately 90%. . .Page 10.
 - c. Please refer back to the discussion under (a).
 - d. The estimate that 40% of the nitrates captured in a septic tank is taken from Reference 24); Page 21. Reference 6), Page 35 states that "the usual reductions across the treatment device (septic tank) range from 20 to 40% (Winneberger, 1973). Absorption of nitrogen discharged to the soil mantle will occur and will be followed by biological effects. Thus, the total removal efficiency of nitrogen from septic tank disposal systems is about 40 to 72%, as estimated by Winneberger (1973)."
2. The City of Gearhart is engaged in a comprehensive planning program and recently conducted a special survey of land use within the City, the existing number of building units by type, and the lots available for development. These statistics are attached for your information. The following figures are particularly relevant.
- 1. Total existing dwelling units - 628;
 - 2. Total acres within the City Limits - 685;
 - 3. Dwelling units per acre - 0.92;
 - 4. Available building lots within the City - 338;
 - 5. Potential total dwelling units within the City - 966;
 - 6. Potential dwelling densities in dwelling units per acre - 1.41.

The above figures show that the assumption of two dwelling units per acre used in the draft Wastewater Facilities Plan is higher than will actually occur in the City. The above figures do not make any allowance for the fact that approximately 40% of the dwelling units are only seasonally occupied.

The figures of 2.5 persons per household used in the report is based upon 1970 U.S. Census and building permit information for subsequent years available from the City of Gearhart. The

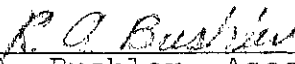
May 16, 1978

1970 census shows that the average number of persons per occupied dwelling unit in Clatsop County was 2.4. The corresponding census figure for the City of Gearhart was 2.8 per dwelling unit. Between 1970 and 1976, there were 65 building permits issued for permanent residences within Gearhart, although the population of the City increased by only 13. We concluded that the small population gain is due to a decrease in the number of persons per occupied dwelling unit. This calculates out to 2.5 persons per unit.

The above information should provide a basis for our discussions on May 16, 1978, and we will be happy to supplement the information as necessary based upon the results of our discussion.

Very truly yours,

R. W. BECK AND ASSOCIATES



R. A. Bushley, Associate and
Executive Engineer

RAB/eb

Enclosures

cc: City of Gearhart

MAXIMUM BUILDABLE HOUSING UNITS
IN CITY BY INDIVIDUAL LOT
CITY OF GEARHART

<u>ZONE</u>	<u>BUILDABLE HOUSING UNITS</u>
R - 1	232
R - 2	33
R - 3	76
C - 1	9
C - 2	30
C - 3	0
R - A	10
RCPD	58
Golf Course (Presently Zone R - 1)	<u>77</u>
Total Buildable Housing Units	525
Less Golf Course - due to deed restriction	<u>-77</u>
Sub-Total	448
Less 25% of buildable lots as individual owner acquired open space	<u>-112</u>
Adjusted Total	336

GEARHART HOUSING UNITS
Actual Survey 3-31-78Water Tap Survey of Housing

Permanent Residents	283
Howarth Condos	<u>+ 3</u>
Total Permanent Single Family Units	286
Condos and Multi-family Units	<u>+90</u>
Total Permanent Units	376
Less Condos	<u>-71</u>
Total Permanent Units (single and multi-family units)	305
Total Seasonal Dwelling Units	<u>+252</u>
Total Dwelling Units (permanent and seasonal)	557
Total Condos	<u>+71</u>
Total Existing Dwelling Units	<u>628</u>

Breakdown of Dwelling Units

71	- Condos
29	- Permanent Multi-family Units (all rentals)
252	- Seasonal Single Family Units
<u>276</u>	- Permanent Single Family Units
<u>628</u>	Total Dwelling Units

LAND USE SUMMARY
CITY OF GEARHART

<u>Land Use Category</u>	<u>Acres</u>	<u>% of total</u>
Residential/ Agriculture	38.10	5.56
Single Family Residential	106.47	15.55
Multi-Family Residential	7.00	1.02
Commercial	31.78	4.64
Planned Development	10.03	1.47
Streets	94.90	13.86
Public and Quasi-Public	15.28	2.23
Parks and Golf Course	129.18	18.86
Water Surface Area	14.16	2.07
*Vacant Not Buildable	139.11	20.31
Vacant Buildable	<u>98.84</u>	<u>14.43</u>
Totals	684.85	100.00

* The VNB figure includes 32.95 acres, or 25% of the original Vacant Buildable total of 131.79 acres. This estimated amount represents past and current trends of land acquisition for open space, garden plots, etc., by individual owners.

4/6/78

OPEN SPACE SUMMARY
CITY OF GEARHART

<u>Land Use Category</u>	<u>Acres</u>	<u>% of Total</u>
Streets	94.90	13.86
Parks and Golf Course	129.18	18.86
Water Surface Area	14.16	2.07
Vacant Not Buildable	139.11	20.31
TOTALS	<u>377.35</u>	<u>55.10</u>

4/6/78

ACREAGE BY ZONE SUMMARY
CITY OF GEARHART

<u>ZONE</u>	<u>ACRES</u>	<u>% of TOTAL</u>
Residential/ Agriculture	99.99	14.60
R-1	241.69	35.29
R-2	11.31	1.65
R-3	10.21	1.49
C-1	13.72	2.00
C-2	48.02	7.01
C-3	1.55	0.23
RC-PD	34.28	5.01
Parks and Golf Course	129.18	18.86
Streets	94.90	13.86
TOTALS	<u>684.85</u>	<u>100.00</u>

ACREAGE BY ZONE
CITY OF GEARHART

<u>ZONE</u>	<u>ACRES BUILT</u>	<u>ACRES VACANT BUILDABLE</u>	<u>ACRES VACANT NON-BUILDABLE</u>
R - 1 (W. of Cottage)	49.48	39.24	22.42
R - 1 (E. of Cottage)	56.99	32.39	19.29
R - 2	1.59	3.17	6.55
R - 3	5.41	4.80	
C - 1	6.71	3.89	1.16
C - 2	23.93	21.65	2.30
C - 3	1.14	.41	
RCPD	10.03	14.42	9.83
RA	<u>38.10</u>	<u>11.82</u>	<u>44.61</u>
Totals	193.38	131.79	106.16
Golf Course			<u>+25.81</u>
			131.97 = 457.14 Acres

Private Acreage	457.14
Parks and Open Space	103.37
Quasi Public and Public	15.28
Water	14.16
Right of Way	<u>94.90</u>
Total Acreage	<u>684.85</u>

4/6/78

VACANT LANDS SUMMARY
CITY OF GEARHART

<u>Land Use Category</u>	<u>Acres Built</u>	<u>Acres Vacant Buildable</u>	<u>Acres Vacant Not Buildable</u>
Residential/ Agriculture	38.10	11.82	44.61
Single Family Residential	106.47	71.63	41.71
Multi-Family Residential	7.00	7.97	6.55
Commercial	31.78	25.95	3.46
Planned Development	<u>10.03</u>	<u>14.42</u>	<u>9.83</u>
SUB-TOTALS	193.38	131.79	106.16
Public and Quasi-Public	15.28		
Open Space Less Vacant Not Buildable			238.24
TOTALS	208.66	131.79	344.40
25% adjustment for acquisition of individual owner open space		-32.95	+32.95
ADJUSTED TOTALS	<u>208.66</u>	<u>98.84</u>	<u>377.35 = 684.85</u>

WATER SERVICE TAPS
CITY OF GEARHART

	<u>IN CITY</u>	<u>OUT OF CITY</u>	<u>TOTAL</u>
Permanent Residents	283	103	386
Seasonal Residents	252	35	287
Commercial Taps	20	31	51
Public Taps	7	1	8
Taps not in use	<u>15</u>	<u>4</u>	<u>19</u>
TOTALS	577	174	751

MULTI-FAMILY UNITS
CITY OF GEARHART

<u>No. of Taps</u>	<u>In City Limits</u>	<u>No. Units</u>
0	Gearhart House Condos	22
0	Pacific Terrace Condos	16
1	Windward Condos	30
1	372 South Cottage	2
1	67 North Cottage	4
1	99 North Cottage	4
1	78 North Cottage	2
1	94 South Cottage	4
1	Rasmussen - South Park Drive	3
1	Light House Motel (Permanent residents)	4
1	101 Apartments - South Park Drive	6
1	H. Howarth Condos - H Street	3
<u>10</u>		<u>100</u>

<u>No. of Taps</u>	<u>Out of City Limits</u>	<u>No. Units</u>
1	Gearhart Green Condos	24
1	Surfside Condos	21
3	Pacific Palisades Condos	20
1	Pacific View Condos	27
1	Gearhart House Condos	76
1	Pacific Terrace Condos	30
1	Pine Ridge Drive (Beneke)	4
1	Pine Ridge Drive (Chisholm)	8
1	2741 Hwy. 101 North	4
1	Four Winds Trailer Park	41
<u>12</u>		<u>255</u>

Condo Units Northwest Section of City

In City Limits	68
Out of City Limits	<u>198</u>
Total Condo Units	266

Footnotes to Buildable Lands: Methodology
City of Gearhart

1. For R-3, the proposed density of 16 dwelling units¹⁷ per acre was used since present code has no density standard for R-3 zone.
2. 25% of buildable acreage was subtracted for individual owner acquisition of open space.
3. C-2 zone on Highway 101 should be computed on the basis of 40% residential and 60% commercial.
4. Golf course as buildable, but note its continuous use as open space. For present use, consider the golf course as open space. (Note - Deed restriction) Thus, the golf course is considered vacant non-buildable.
5. RCPD zone should all be considered as R-1 PD, flood plain eliminated commercial portion.
6. Assume ocean front as non-buildable. Open space will be more accurate due to state and federal coastal zone laws.
7. Assume flood plain (100 year level) as non-buildable.
8. Assume present C-1 as 50% residential and 50% commercial.
9. Note that all R-1 buildable lands are computed on the basis of the City's 10,000 square foot minimum lot size. Hence, a slight discrepancy may exist between acreage within the zone density and actual maximum buildable lots within the zone.
10. Private ownerships from Pacific Way to E Street west of Ocean Avenue were estimated at a 200 foot lot depth with an additional 300 foot depth placed in R-1 vacant non-buildable category.
11. Flood plain estimates were revised upwards in the RCPD zone and RA zones after on site analysis in the specified zones adjacent to the north city limits.

Process for determination of land use, buildable and non-buildable land within the the City of Gearhart

1. Windshield survey of every lot within the city boundaries to determine present use and enter this data on the county assessor maps.
2. Determine letter code and color code for present use designation.
3. Transfer this information to 1/200 scale single map of city in appropriate letter and color codes.
4. Enter 100 year flood plain levels on master map.
5. Determine vacant buildable and vacant non-buildable lands on basis of minimum lot size, flood plain, and allowable density per acre per zone. (See footnotes to acreage table for specific assumptions related to problem areas.)
6. Total buildable lands and acreage by zones.
7. Overall totals for entire city for all present use categories with percentages.

BIBLIOGRAPHY

1. Brown and Caldwell. 208 Project Individual Waste Disposal Management Program. A report prepared for the Lane Council of Governments. Eugene, Oregon. September, 1977.
2. CH₂M/Hill. Clatsop Plains Sewerage Study. A report prepared for the Clatsop County Board of Commissioners. Portland, Oregon. March, 1975.
3. Hershafft, Alex, Ph.D. "The Plight and Promise of On-Site Wastewater Treatment." Compost Science.
4. Kreissl, J. F. Status of Pressure Sewer Technology.
5. National Sanitation Foundation. Second National Conference on Individual On-site Wastewater Systems. Ann Arbor, Michigan, 1976.
6. Monogram Industries, Inc. Manual of Grey Water Treatment Practice, Part II; Characterization of Grey Water and Soil Mantle Purification. Santa Monica, California, 1975.
7. McGuinness, Jr., W.V., and Pitchai, R. Integrated Water Supply and Waste Water Disposal on Long Island. Prepared for the Marine Resource Council, Nassau-Suffolk Regional Planning Board under Sea Grant Project GH-63, National Oceanic and Atmospheric Administration, U.S. Department of Commerce by the Center for the Environment and Man, Inc. Hartford, Connecticut. February, 1972.
8. Oregon State, Department of Environmental Quality. Proposed Rules Pertaining to Standards for Subsurface Sewage and Nonwater-Carried Waste Disposal. Portland, Oregon. January, 1974.
9. Otis, R. J., Boyle, W. C., Converse, J. C., and Tyler, E. J. On-Site Disposal of Small Wastewater Flows. A paper prepared for the Environmental Protection Agency Technology Transfer Program. University of Wisconsin, Madison, Wisconsin. March, 1977.
10. Plews, G., R. S. Management Guidelines for Conventional and Alternative On-Site Sewage Systems. A paper presented at the Third National Conference on Individual On-Site Waste Water Systems National Sanitation Foundation. Ann Arbor, Michigan. November, 1976.

11. Preul, H.C. Underground Movement of Nitrogen. Groundwater Contamination.
12. R. W. Beck and Associates. Comprehensive Sewer Plan. A report prepared for the City of Gearhart, Oregon. Seattle, Washington. June, 1977.
13. R. W. Beck and Associates, Comprehensive Water Plan. A report prepared for the City of Gearhart, Oregon. Seattle, Washington. July, 1977.
14. Schweitzer, Suzanne and Staff, G. C. Coburg Sewerage Facilities Plan. A report prepared for the Lane Council of Governments and funded by the Environmental Protection Agency. Eugene, Oregon. September, 1977.
15. Siegrist, Robert, et al. "Characteristics of Rural Household Wastewater." Journal of the Environmental Engineering Division. American Society of Civil Engineers. Volume 102, No. EE3. June, 1976.
16. Sweet, H. R. Carrying Capacity of the Clatsop Plains Sand-Dune Aquifer. A report prepared for the Clatsop County Commission and the Oregon Environmental Quality Commission. August, 1977.
17. U.S. Environmental Protection Agency, Office of Water Supply, Office of Solid Waste Management Programs. The Report to Congress, Waste Disposal Practices and their Effects on Ground Water. April, 1975.
18. University of Washington Departments of Civil Engineering and Environmental Health, The U.S. Housing and Urban Development Agency, Washington State Department of Social and Health Services. Edited by David A. Lenning, R.S. Proceedings of Northwest On-Site Waste Water Disposal Short Course. Seattle, Washington. December, 1976.
19. Walker, W. G., Keeney, D. R., and Magdoff, F. R. "Nitrogen Transformations During Subsurface Disposal of Septic Tank Effluent in Sands: 1. Soil Transformations." Journal of Environmental Quality. Volume 2, No. 4, 1973.

20. Walker, W. G., Keeney, D. R., and Olcott, P.G. "Nitrogen Transformations During Subsurface Disposal of Septic Tank Effluent in Sands; (2) II. Ground Water Quality." Journal of Environmental Quality. Volume 2, No. 4, 1973.
21. Washington State, King County Board of Health. Rules and Regulations No. III and IV Relating to On-Site Sewage Disposal Systems. May, 1976.
22. Washington State, Department of Social and Health Services, Office of Environmental Health Programs, Health Services Division. Rules and Regulations of the State Board of Health for On-Site Sewage Disposal Systems. Olympia, Washington. June, 1974.
23. Washington State, Department of Social and Health Services, Office of Environmental Health Programs. Guidelines for the Formation and Operation of On-Site Waste Management Systems.
24. Washington State, Department of Social and Health Services. On-Site Sewage Disposal Program. A preliminary status report prepared for the State Legislature. February, 1977.

CLATSOP PLAINS WELL DATA

Sampling Station	Nitrates	
	29 June 77	28 Feb. 78
Golf Course Road @ Hwy. 101	N.I.	0.03
Golf Course Road @ Golf Course	N.I.	0.80
Tenth Street @ Gearhart	N.I.	1.85
Del Ray Beach	0.06	0.10
Surf Pines	1.22	0.06
Sunset Beach @ Turnaround	0.04	0.04
Sunset Beach Road (Southwest of Store)	1.85	0.03
Sunset Beach (Remington)	N.A.	0.99
Golf Course No. 3 @ Hwy. 101, Sunset Beach	2.50	1.39
Perkins Road Trailer House	0.02	< 0.02
Burma Road 1 1/2" Case	16.9	0.04
Burma Road 6" Case	0.01	0.07
Ft. Stevens Park Section "N" (Drainfield)	28.9	11.9
Ft. Stevens Park Entrance	0.43	0.59
Ft. Stevens-Peter Iredale Rd. junction	N.I.	2.45
Camp Rilea	0.11	< 0.02

N.I. = Not Installed

N.A. = Not Available

R. W. BECK AND ASSOCIATES

ATTACHMENT 4

ENGINEERS AND CONSULTANTS

PLANNING
DESIGN
RATES
ANALYSES
EVALUATIONS
MANAGEMENT

200 TOWER BUILDING
SEATTLE, WASHINGTON 98101
TELEPHONE 206-622-5800

SEATTLE, WASHINGTON
DENVER, COLORADO
PHOENIX, ARIZONA
ORLANDO, FLORIDA
COLUMBUS, NEBRASKA
WELLESLEY, MASSACHUSETTS
INDIANAPOLIS, INDIANA
MINNEAPOLIS, MINNESOTA

FILE NO. WW-1448-WP2-MA
3104

June 7, 1978

Mr. Robert Gilbert
Northwest Regional Manager
Oregon State Department of
Environmental Quality
Post Office Box 1760
Portland, OR 97207

Dear Mr. Gilbert:

Subject: Wastewater Disposal for Gearhart, Oregon

I am writing this letter to follow up on our meeting of May 16, 1978, regarding the suitability of on-site waste disposal for Gearhart, Oregon. Since the meeting, we have conducted additional investigations in an effort to resolve issues discussed at the meeting.

1. Nitrate Levels

Several investigators have attempted to quantify the nitrogen introduced into the groundwater from septic tank disposal of typical households. The paper by R. L. Siegrist, "Waste Segregation to Facilitate On-Site Wastewater Disposal Alternatives" from the Proceedings of the Second National Home Sewage Treatment Symposium, December 12-13, 1977, ASAE Publication 5-77 referenced in your letter of May 8, 1978, quotes a range of nitrogen contributions from 5.4 to 19.7 lbs./capita/year from four different research efforts. The mean of these values is shown as 11.2 lbs./capita/year.

It is our conclusion, based upon a review of the available literature, that the lower values are probably more appropriate for Gearhart. As presented at our meeting, approximately 40% of the households in Gearhart are only seasonally occupied. Also, since Gearhart is a residential community with no economic base, its residents are employed elsewhere and therefore spend their

working hours outside the community. Although not a major contributor of nitrogen, few households in Gearhart have garbage grinders since these units are not particularly compatible with on-site waste disposal. All of these factors tend to reduce the per capita nitrogen discharged to septic tanks and the quantity entering the groundwater.

We spoke with Robert Siegrist, the author of the above referenced paper, following our meeting. He confirmed our conclusion that the higher nitrogen generation figures reported by earlier investigators at the University of Wisconsin are primarily due to the fact that these investigators were concerned with the movement of nitrogen in the vicinity of septic tank drain fields and did not carefully monitor the quantities of pollutants discharged into the septic tank system. We described the City of Gearhart to Mr. Siegrist and he indicated that Gearhart should be at the lower end of the range of per capita nitrogen contribution.

Due to the wide range in the quantity of nitrogen in wastewater from typical residential units estimated by various researchers, we have used an alternative approach to estimating the amount. A number of researchers have conducted studies of the nitrogen contained in effluent from septic tanks by measuring the concentrations under and adjacent to drain fields. The findings are reported in Exhibit A and indicate reasonable consistency with about 40 mg/l appearing to be a reasonable average. It is interesting that whereas Walker, et al, concluded that the annual per capita nitrogen contribution to septic tanks is 18 lbs./capita that the nitrogen content of groundwater below a septic tank drain field in well drained sandy soil was about 40 mg/l. Also, the test results from the DEQ groundwater sampling in the Clatsop Plains include a station adjacent to the Fort Stevens Park drain field. The highest reading of the effluent from the septic tank is 43 mg/l nitrate-nitrogen.

It is estimated that the average permanent resident in Gearhart generates approximately 60 gallons of wastewater daily. Multiplying this flow by the nitrogen concentration in the effluent yields a per capita nitrogen quantity of approximately 7.3 lbs./capita/year. This method should provide a reasonable estimate of the quantities of nitrogen introduced into the groundwater and the research results appear to agree more closely with one another than the estimates of nitrogen based upon household plumbing events. Since this measure is of the effluent from the septic tank, it does not include nitrogen retained in the septic tank.

2. Septic Tank Retention of Nitrates

We have been unable to locate definitive information on the quantity of nitrogen retained in septic tank drain fields. The

references that we have checked indicate retention ranging from 10% to 40% of the total. Mr. Siegrist indicated that he did not know of anyone who had conducted specific research to quantify the amount of nitrogen captured in the septic tank. Two sources, Dr. Timothy Winneberger and the Washington State Department of Social and Health Services report that approximately 40% of the nitrogen is captured in the septic tank. Gary Plewes of the Department of Social and Health Services stated that this figure is based upon research conducted by the National Science Foundation but we have been unable to locate this source.

An article by Marek Brandes of the Ontario Ministry of the Environment entitled "Accumulation Rate and Characteristics of Septic Tank Sludge and Septage" published in the May, 1978, issue of the Journal of the Water Pollution Control Federation shows the total nitrogen content of septage from a typical residence as approximately 400 mg/l. This septage consisted of approximately one-half sludge and half liquid within the septic tank. Thus, for a 1,000 gallon septic tank the quantity of nitrogen would be approximately 3.33 lbs. Assuming that the tank was pumped once every three years, less than 10% of the nitrogen is retained in the septic tank. This study therefore contradicts the references to 40% nitrogen removal in septic tanks and indicates that any removal is probably relatively insignificant.

3. Health Hazards from Nitrates

We have checked with EPA and with the Oregon State Epidemiologist in order to try to find more specific information on the public health aspects of nitrate-nitrogen in groundwater. The standard of 10 mg/l nitrogen (45 mg/l nitrate) is a guideline to protect against the possibility of methemoglobinemia in infants. When water for feeding formula is boiled, nitrates are converted into nitrites which in the infants intestinal tract cause the hemoglobin in the blood to be oxidized to methemoglobin. A depletion of oxygen occurs in the blood and the baby becomes cyanotic. There is no evidence that the presence of nitrates in drinking water is hazardous to children and adults although nitrates used as preservatives in processed foods are under scrutiny for possible adverse health effects. Mr. Gordon Robeck, the head of EPA's research programs advises us that there are many water supplies in the Midwest and Southwest with nitrogen concentrations greatly exceeding 10 mg/l with no apparent adverse effects. It is suspected that pollution of the water supply may be a factor in some of the few reported cases of methemoglobinemia.

One of the difficulties in ascertaining whether or not there are incidences of methemoglobinemia is that it is not a reportable disease so that health authorities do not maintain records of the disease. The Oregon State Epidemiologist does not know of any incidences in the State of Oregon.

4. Nitrogen Contributions to Groundwater in Gearhart

In view of the above findings and in accordance with our discussions, we are summarizing below an estimate of the quantity of nitrogen that would be added to the groundwater by on-site waste disposal in Gearhart using this new information. The figures represent the average residential density of 1.41 dwelling units per acre at full development reported in the community survey attached to our letter dated May 16, 1978. We have reduced the amount of nitrogen contributed by natural vegetation since most of developed area is covered only by dune grass. We have also neglected the amount of nitrogen "captured" in the septic tank as being insignificant.

1.	Contribution from 1.41 dwellings at 2.5 persons per dwelling and 7.3 lbs/capita nitrogen contribution	25.7 lbs.
2.	Fertilizer @ 5 lbs/dwelling unit.	7.0 lbs.
3.	Natural vegetation.	<u>10.0 lbs.</u>
	Total.	42.7 lbs.

It therefore appears that the resulting nitrogen concentrations in the groundwater would be on the order of 4 mg/l.

5. Conclusions

It remains our conclusion that on-site waste disposal in Gearhart will not result in excessive nitrate-nitrogen concentrations in the groundwater and will not create a public health hazard due to the low-density residential development which characterizes the City. It appears that the average nitrate-nitrogen concentrations should not exceed 4 to 5 mg/l with the existing and proposed land uses. Groundwater in the Gearhart area is not used as a source of domestic water supply and it is not proposed as a source of supply for the future. If the aquifer should ever be used for water supply, a sewer system could be constructed and the nitrate level would decrease quickly to background levels. Mr. F. J. Frank of the U. S. Geological Survey and author of "Ground-Water Resources of the Clatsop Plains Sand Dune Area, Clatsop County, Oregon" has stated that groundwater recharge renews the aquifer water approximately once every five to six years.

We appreciate the concern that the Department of Environmental Quality has for the quality of the groundwater resource under Gearhart. It is difficult to know precisely the quantity of nitrate-nitrogen in the groundwater without a water quality sampling program.

June 7, 1978

Clatsop County has initiated a groundwater study in the portion of the Clatsop Plains north of Gearhart and the City of Gearhart has requested funding from the Oregon State Land Conservation and Development Commission (LCDC) for a groundwater monitoring program. We concur that any decision to use on-site waste disposal for Gearhart should be accompanied by a water quality study to determine groundwater quality and specifically the nitrate-nitrogen concentrations as a basis for evaluating the continued validity of on-site disposal. The City of Gearhart has proceeded through the Step 1 Wastewater Facilities Planning phase without funding from the Department of Environmental Quality and we feel that it is only fair that the City receive financial assistance for the further development of its wastewater management program.

I will be happy to discuss any of the comments in this letter with you in greater detail. Your suggestion of another meeting with Gearhart and possibly including Clatsop County is a good one and we will appreciate it if you can set such a meeting at an early date. Representatives of the City of Gearhart are looking forward to an early resolution of the on-site waste disposal issue and the repeal of the present building moratorium.

Very truly yours,

R. W. BECK AND ASSOCIATES



R. A. Bushley, Associate
and Executive Engineer

RAB/eb

Enclosure

cc: Bruce Maltman,
City of Gearhart

CONCENTRATIONS OF NITROGEN
IN GROUNDWATER UNDER OR ADJACENT TO
SEPTIC TANK SEEPAGE FIELDS

<u>References</u>	<u>Nitrogen Concentration</u>
1. Underground Movement of Nitrogen by Herbert C. Preul	40 to 60 mg/l
2. Telephone Conversation with Robert Siegrist (May 23, 1978)	32 to 38 mg/l
3. Nitrogen Transformations During Subsurface Disposal of Septic Tank Effluent in Sands by W. G. Walker, J. Bouma, D. R. Keeney, and P. G. Olcott, <u>Journal of Environmental Quality</u> , Volume 2, No. 4, 1973	Appr. 40 mg/l (3)
4. On-Site Disposal of Small Wastewater Flows by Richard J. Otis, William C. Boyle, James C. Converse, and E. Jerry Tyler, prepared for EPA, 1977	23.9 mg/l
(3) Septic tank system 3 with septic tank drain field located in well-drained sandy soil. Sample taken from ponded water on top of a clay layer at a depth of eight meters below the bot- tom of the seepage bed.	



Department of Environmental Quality

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229- 5209

June 29, 1978

Honorable Mayor and City Council
City of Gearhart
Drawer D
Gearhart, Oregon 97138

Re: WQ - Gearhart -
Clatsop County

Gentlemen:

We have reviewed your consulting engineers, R.W. Beck and Associates, preliminary report entitled "Wastewater Facilities Planning Study - Gearhart, Oregon - March 1978" and the additional information provided by letters dated May 16, 1978 and June 7, 1978. Based on the information and data presently available we cannot agree that continued use of on-site waste disposal in Gearhart will not result in excessive nitrate-nitrogen concentrations in the groundwater and will not create a public health hazard.

We do agree that some of the past data may be suspect and that there is a lack of information, particularly in the more densely developed areas in Clatsop Plains.

At a meeting with representatives from the cities, Clatsop County and CTIC on June 22, 1978 we discussed the subject of applying for a 208 grant to expand the Gearhart and Clatsop County studies presently funded or underway. A coordinated effort between the cities and County with an intense sampling effort would result in a refined but most importantly, implementable plan.

We realize this places Gearhart in the position of being under a moratorium until the study and plan are completed. We would be willing to explore allowing a limited number of buildings to be constructed over the next 18 to 24 months until the plan is completed. Any suggestions on an interim controlled growth strategy that you may have would be most welcomed.

It should be clearly understood that even partial lifting of the moratorium would require Environmental Quality Commission (EQC) action. Any controlled growth plan must be consistent for all areas where the moratorium presently exists.

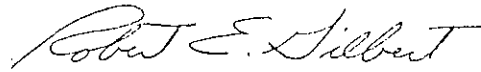


Contains
Recycled
Materials

City of Gearhart
Page 2
June 29, 1978

If you have any questions, please contact either Mr. Don Bramhall at 842-6637 or me at 229-5209.

Sincerely,



Robert E. Gilbert
Regional Manager
Northwest Region

REG/mkw

cc: R.W. Beck and Associates
Clatsop County Commissioners
Clatsop County Health Department
Clatsop County Planning Department
Clatsop-Tillamook Intergovernmental Council (CTIC)
Environmental Protection Agency, Oregon Operations
Land Conservation and Development Commission (LCDC)
North Coast Branch Office, DEQ
Water Quality Division, DEQ

CITY OF GEARHART

"Gearhart By The Sea"

Drawer "D"

Gearhart, Oregon 97138

Phone 738-5501

ATTACHMENT 6

July 7, 1978

Dept. of Environmental Quality

RECEIVED
JUL 11 1978

Mr. Robert Gilbert
Oregon State Department of
Environmental Quality
Post Office Box 1760
Portland, Oregon 97207

NORTHWEST REGION

Dear Mr. Gilbert:

We are in receipt of your letter dated June 29, 1978 advising us that the on-site waste management program proposed in the City's Wastewater Facilities Planning Study cannot be approved based on presently available information regarding the potential for nitrate pollution of the ground water. You state that DEQ proposes to sponsor a Section 208 study for the Clatsop Plains to resolve the groundwater pollution issue which will then be used as the basis for determining whether or not Gearhart can proceed with on-site waste management.

We are extremely disappointed in your reply because it has been more than three months since we submitted the City's Wastewater Facilities plan to you and because your reply does not permit the City to proceed with the implementation of its comprehensive planning program of which the on-site waste management program is a part. We believe that the on-site waste management program proposed by the City is environmentally sound and in compliance with Federal and State water quality objectives and again request permission to proceed with this program.

If DEQ is adamant against this proposal, we are agreeable to participating in the Section 208 study for the Clatsop Plains if DEQ will allow an interim modification of the sewer moratorium to permit an average dwelling unit density of one unit per acre within the city limits, which would accord with the currently approved density figure for areas of Clatsop Plains no longer under the moratorium. In accordance with the information which we have provided to you and which we discussed at the meeting on June 14, this would permit up to 57 new residential units to be constructed. There are presently 628 dwelling units whereas the minimum planning area within the city limits is 685 acres.

Mr. Robert Gilbert
Oregon State Department
of Environmental Quality
July 7, 1978
Page 2

We are, however, concerned about the effects of a sudden major influx of septic tank permits which might result from any limited relaxation of the moratorium. The E.Q.C. would probably not wish to appear responsible for promoting a speculative rush resulting in the artificial escalation of land values in the area. In addition, the City is staffed to process only a limited number of building permits per month, and must carefully monitor the capacity of its water supply system to serve additional units.

We therefore suggest a work session among yourselves, your local representative (Clatsop County Sanitarian), and the City of Gearhart to arrive at an equitably phased (monthly ?) quota, including an accelerated expiration date on approvals where construction is delayed. Furthermore, we feel that septic approval should be made contingent upon the submission of a full and detailed set of building plans, to insure that construction actually follows issuance of a sanitation permit, and that sanitation permits are not obtained merely for speculative purposes.

We also propose that exceptions from the overall numerical total be made for (a) installation of split systems as authorized by the Oregon State Legislature in 1977 (HB 2858), and (b) commercial structures, with the rationale that water usage and nitrate output would be drastically reduced in both cases. Such an exception would have the added advantage of allowing some slack over and above the fixed limit on septic systems, and would thus help to discourage intense speculation.

We are participating in the development of the scope of work for the Section 208 study and our decision to participate in the study will also depend on the acceptability of the proposed scope to the City of Gearhart.

We look forward to your early reply and will be happy to discuss this matter with you in greater detail.

Sincerely,

CITY OF GEARHART

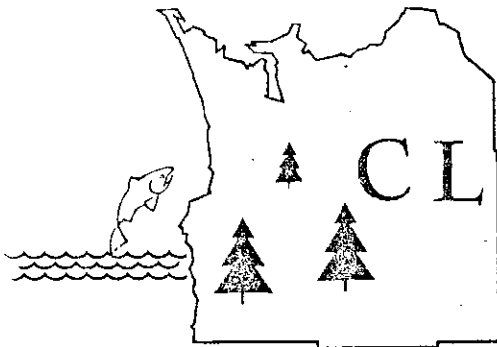


Orren A. Kulland, Mayor

OAK:jv

cc: Clatsop County Board of Commissioners
Clatsop County Health Department
Clatsop County Planning Department
Wastewater Operations Branch, EPA Region X (W/Encl.)
Oregon Operations Office, EPA (W/Encl.)
LCDC
Senator Charles Hanlon (W/Encl.)
Alan Bushley, R.W. Beck and Associates

CEL North Cont-down



CLATSOP COUNTY

Courthouse . . . Astoria, Oregon 97103
July 14, 1978

Mr. Donald Dubois
Regional Administrator
U.S. Environmental Protection Agency
1200 6th
Seattle, Washington 98101

Attention: Cecil Ouelette, Oregon Project Officer

Re: 208 Areawide Grant Request

Dear Mr. Dubois:

In accordance with discussions Clatsop County has held with the Oregon Department of Environmental Quality and in response to priorities identified by the DEQ concerning the protection of groundwater, we are submitting this application for \$259,050 of FY 1978-79 208 Wastewater Management monies to pursue an in-depth study of groundwater in the Clatsop Plains which would include monitoring wells and septic tanks, design of a compatible land use management system and to evaluate the feasibility of various wastewater disposal alternatives.

We request your consideration of this request at your earliest convenience.

If you have any questions please contact Curt Schneider, our Planning Director (telephone 325-7441 ext. 73).

Sincerely,

Don O. Corkill, Chairman
Board of Commissioners

CJS:mlb

Enclosure

PREAPPLICATION REQUEST
TO THE
U.S. ENVIRONMENTAL PROTECTION AGENCY
FOR
208 WASTEWATER MANAGEMENT PLANNING FUNDS

BY
CLATSOP COUNTY
CITY OF GEARHART

CITY OF WARRENTON
TOWN OF HAMMOND

July 13, 1978

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I. SUMMARY

The following Preliminary Grant Request narrative outlines a request for federal assistance under Section 208 of Public Laws 92-500 and 95-217. Included are statements of purpose, authority, background, objectives, task elements and budget categories.

The budget summary indicates both the amount requested in federal funds and that required as a local match (25%) through in-kind services. A grant of \$340,040 is being requested, federal share \$259,050 and local share \$86,350.

II. PURPOSE

The purpose of this study is to expand and refine previous groundwater studies by establishing a comprehensive series of water quality monitoring wells on the Clatsop Plains. Water quality data would be obtained for a complete year. Particular emphasis would be placed on the level of nitrate-nitrogen. The results of the monitoring program will be used to design a compatible land-use management system and evaluate the feasibility of various wastewater disposal alternatives.

III. DESIGNATION, AUTHORITY, GRANT ADMINISTRATION

Grant administration will be performed by Clatsop County. Grant performance and technical services will be provided by private consultants and the planning staffs of Clatsop County; Warrenton, Gearhart, Hammond, and the Clatsop-Tillamook Intergovernmental Council.

IV. BACKGROUND

The Clatsop Plains is located in Northwest Oregon in the western portion of Clatsop County and is bounded by the Columbia River to the north, Pacific Ocean to the west, the Necanicum River on the south, and Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east. The study area includes about 23 square miles.

Past Effort

The U.S. Geological Survey Water Supply Paper 1899-A (1970) identified a large area with substantial amounts of developable groundwater in the Clatsop Plains. Due in part to the findings of that study and the prospect of high density development utilizing septic tanks which would contaminate the groundwater, a partial moratorium on the installation of septic tanks was placed on the Clatsop Plains in 1970 by the Oregon Environmental Quality Commission (EQC). The moratorium did allow some new housing on existing developed subdivisions and tax lots.

Between 1969 and 1976 the Oregon Department of Environmental Quality (DEQ) conducted water quality surveys of the groundwater and selected lakes and streams in the Clatsop Plains. The survey data showed a few wells approached the U.S. Public Health Service drinking water standards of 10 mg/l nitrate-nitrogen ($\text{NO}_3\text{-N}$).

Based on this data the DEQ concluded that groundwater degradation would become more acute with continued construction of new housing at urban densities with on-site disposal systems. Therefore, on April 1, 1977, the Oregon Environmental Quality Commission (EQC) passed a resolution which prohibited any development utilizing septic tanks in the Clatsop Plains area. The EQC stipulated that the moratorium could be lifted on an area by area basis if local government provided sufficient evidence.

Clatsop County retained Randy Sweet, a consulting hydrogeologist, to analyze the groundwater in the unincorporated portions of the Clatsop Plains and to make recommendations that would lead to a partial lifting of the EQC moratorium. His report, The Carrying Capacity of the Clatsop Plains Sand-Dune Aquifer, recommended that 1.6 square miles of aquifer be set aside for possible future use as a water supply source, that six densely developed areas remain under the moratorium, and that the remainder of the area be permitted to develop at a density of one dwelling unit per acre. In conjunction with the study, a groundwater monitoring program was begun. The results of this monitoring will be used to reevaluate the accuracy of the 1 dwelling unit/acre figure.

On October 27, 1977 the Environmental Quality Commission lifted the moratorium on a portion of the Clatsop Plains, as described in the Sweet study, and permitted development to proceed at a density of 1 dwelling unit/acre.

The Clatsop County Board of Commissioners authorized a Clatsop Plains Sewer Study in 1972. The report, prepared by CH₂M Hill, was published in 1975 and proposed a long-range master sewer plan for the entire Clatsop Plains from Warrenton to Seaside. There has been much controversy over the recommendations contained in this study. The study was not adopted by Clatsop County until 1977. The study for the unincorporated Clatsop Plains is going to be updated to full "Step 1" status by CH₂M Hill, under contract to Clatsop County. This proposal would be fully coordinated with that study for unincorporated portions of the Clatsop Plains.

In 1977, the City of Gearhart hired R.W. Beck to prepare a comprehensive sewer plan for the City. The study recommended that an on-site wastewater management system was feasible. Subsequent to this study, a complete wastewater facilities plan was prepared, March 1978. The study recommends an on-site wastewater management system for Gearhart.

In June of 1978 the City of Gearhart received a grant from the Land Conservation and Development Commission to conduct a groundwater investigation and water quality monitoring program for the portion of the Clatsop Plains aquifer within its City limits. This proposal would be coordinated with this study.

The City of Hammond, in the fall of 1977, passed a bond issue authorizing the construction of a sanitary sewer within its City limits, with treatment at the City of Warrenton sewage treatment plant.

The Oregon Department of Military, at its Camp Rilea facility, is beginning construction on a spray irrigation treatment system to serve the Camp. The plant site is available for expansion to serve other areas if need be.

Sewer improvements for Fort Stevens State Park may be authorized by the 1979-80 biennium of the Oregon legislature.

V. SPECIFIC OBJECTIVES

The funds requested will be used to provide local staff(s) support and consultant services to complete the following items:

1. To develop land use control and development standards based on the results of the water quality monitoring and analysis.
2. To research, analyze and make recommendations on the existing Department of Environmental Quality (DEQ) policy concerning the discharge of wastewater to the ocean.

3. To develop and evaluate water resource alternatives and select a cost effective water resource management plan to serve the future land use needs of the area.
4. To coordinate the 208 Study with present ongoing facilities planning (201) on the Clatsop Plains (to include DEQ's technology evaluation program).
5. To examine waste loading into the aquifer especially those attributed to septic tanks.

VI. TASK ELEMENTS

A. Study design review and site selection.

1. Test Wells.

- a. Preliminary site selection for new monitoring wells (12).
- b. Describe existing wells suitable for sampling.
- c. Description of test well construction and development.
- d. Selection of parameters for quality testing and analysis.
- e. Description of testing frequency.
- f. Description of available mathematical models and analysis of monitoring results.
- g. Detailed requirements for associated information:
 - (1) Inventory of waste sources for Gearhart.
 - (2) All other specific inventory requirements.
- h. Provide coordination with state, local and federal agencies.
- i. Provide brief report describing findings and recommendations.

2. Marine Discharge.

- a. Selection of quality parameters for marine discharge of wastewater and groundwater to the ocean.

3. Waste Loading Stations.
 - a. Preliminary site selection of waste loading stations.
 - b. Describe septic tanks to be used for sampling.
 - c. Description of equipment to be used in sampling.
 - d. Selection of parameters for quality testing and analysis.
- B. Site Acquisition.
 1. Obtain right-of-entry, when required for selected new well site and waste loading monitoring station locations.
- C. Monitoring Equipment Installation.
 1. Supervise installation and development of up to 12 test wells of which 5 would be multiple depth testing wells and 30 waste loading stations.
 2. Provide detailed description of all test sites and waste loading stations.
- D. Sample Collection and Analysis.
 1. Collect samples monthly.
 2. Perform laboratory analysis.
 3. Provide written findings on sample results and correlate with other aquifer studies.
 4. Coordinate with state, local and federal agencies as required.
- E. Pollutant Inventory.
 1. Expand Randy Sweet study for City of Gearhart and refine existing developed information for Warrenton and Hammond.
- F. Coordinate with existing wastewater studies.
 1. DEQ pilot alternative wastewater control studies.
 2. All Clatsop Plains wastewater facilities plans.
 3. Review and update Gearhart Comprehensive Sewer Plan.

G. Analysis/Report/Management Plan Preparation Tasks.

1. Analyze the information developed during the monitoring period and other appropriate data.
2. Provide a detailed evaluation of the extent of shallow aquifer contamination.
3. Provide a detailed description of the relationship of the shallow aquifer contamination to various pollution sources.
4. Develop a land use strategy based on the above analysis.
5. Examine potential for development of groundwater resource.
6. Provide state, federal and local coordination.
7. Provide information to citizens, the Board of County Commissioners in Clatsop County and other agencies.
8. Distribute draft report for review and comments. Draft report to include a summary of findings and remedial action planning recommendations. Receive review; incorporate appropriate comments. Prepare final report, including recommendations for remedial action planning. Publish final report.

H. Citizen Involvement.

1. Develop and distribute information regarding the project.
2. Participate in meetings with recognized citizens' committees within the study area.
3. Present interim and final reports to interested groups.

I. Project Administration.

1. Schedule staff to achieve project tasks.
2. Select consultants and administer consultant contracts.
3. Administer EPA grant regulations.
4. Coordinate public information program.

BUDGET CATEGORIES

TASK ELEMENT	DESCRIPTION	PROJECT COST			MAN WEEKS
		FEDERAL (75%)	LOCAL (25%)	TOTAL	
A	Study Design/ Site Selection	\$ 3,000	X		2
B	Site Acquisition	4,000	X		?
C	Monitoring Installation	32,000*			?
D	Sample Collection and Analysis	117,000**			?
E	Pollutant Inventory	4,500			3
F	Coordinate with Existing Wastewater Technology Studies	10,500	X		?
G	Analysis/Report/Management Plan Tasks	46,500	X		36
H	Citizen Involvement	3,000	X		2
I	Project Administration	17,550	X		5
J	Contingency 10% of A-I	21,000			-
	TOTAL	\$259,050	\$86,350	\$345,400	47+

*See Note 1 next page.

**See Note 2 next page.

NOTES

1. Monitoring Installation.....\$32,000

waste loading stations, 30
per devise, \$400

\$ 12,000

multi depth wells--100' depth, 5
per well, \$3500

17,500+

test wells--24' & 50' depth, 7
per well, \$350

2,450

\$ 31,950

2. Water Quality Testing (only if DEQ or other "in-kind"
lab work cannot be obtained).....\$117,000

Well Analysis

12 collections X 25 wells X \$150/well \$ 45,000

12 collections X 5 wells (5 samples
each) X \$150/well 45,000

Waste Loading Station

12 collections X 30 stations X \$75/sta. 27,000

\$ 117,000

CITY OF WARRENTON

WARRENTON, OREGON 97146

P. O. BOX 250 • PHONE 861-2233

JUL 10 REC'D



6 July 1978

Rainmar Bartl, Coordinator
Clatsop-Tillamook Intergovt. Council
Post Office Box 488
Cannon Beach - OREGON - 97110

Dear Mr. Bartl:

At the regular meeting of the Warrenton City Commission held 5 July 1978, a motion was passed to participate in the Section 208 ground water study on Clatsop Plains.

It is our understanding the administration of the grant will be performed by Clatsop County with the cities of Gearhart, Seaside and Warrenton taking part in this comprehensive review of ground water and various waste water disposal alternatives.

We would appreciate being kept informed as to the progress of this application.

Sincerely,

CITY OF WARRENTON

Gilbert G. Gramson
Auditor & Police Judge

GG:jwb

CITY OF GEARHART

"Gearhart By The Sea"

Drawer "D"

Gearhart, Oregon 97138

Phone 738-5501

July 6, 1978

Board of Commissioners
Clatsop County
Astoria, Oregon 97103

Gentlemen:

At its July 5, 1978 meeting, the Gearhart City Council approved the preapplication request to the U.S. Environmental Protection Agency for 208 Wastewater Management Planning Funds for Clatsop Plains (with the revisions suggested on July 3rd), and voted to participate in the proposed ground water study with Clatsop County, Seaside, Warrenton, and Hammond.

Our approval was based on the understanding that the City of Gearhart will have full participation in the decision making process relating to the study, including final revisions of the proposed scope of work, and selection of consultants.

We look forward to continued cooperation with Clatsop County in this area of mutual concern.

Sincerely yours,

CITY OF GEARHART

Orren A. Kulland, Mayor

OK:jv

cc: Rainmar Bartl, C.T.I.C. ✓
Alan Bushley, R.W. Beck

CITY of SEASIDE

OREGON'S
FAMOUS
ALL-YEAR
RESORT

RECEIVED

JUL 14 1978

BOARD OF COMMISSIONERS

SEASIDE, OREGON
BURTON M. LOWE
CITY MANAGER

July 13, 1978

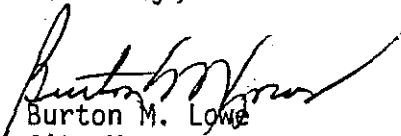
Board of County Commissioners
Clatsop County Courthouse
Astoria, OR 97103

Gentlemen:

At its July 10, 1978, meeting, the Seaside City Council reviewed the preapplication request to the U. S. Environmental Protection Agency for a "208 Water Quality Management Study for the Clatsop Plains".

The City of Seaside looks forward to cooperating in this endeavor with Clatsop County, Gearhart, Warrenton, and Hammond.

Sincerely,



Burton M. Lowe
City Manager
City of Seaside

BML:sh

13 July 1978

U. S. Environmental Protection Agency
Region X
Seattle, Washington

Attention: 208 Pre-application

Dear Sirs:

The Town of Hammond's common council while in public session July 12, 1978, voted to participate in and endorse the pre-application request to the U. S. Environmental Protection Agency for 208 Wastewater Management planning funds of June 29, 1978.

Cordially yours,

T O O W N O F H A M M O N D

R. T. Carruthers
Mayor

jcs

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's city limits as exist on October 27, 1978 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.

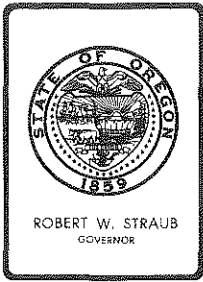
Proposed Procedure

Purpose

The City is concerned that some sort of "use it or lose it" time limit be placed on the septic tank permits so that people don't just sit on a permit once it is issued. The permit will be tied to the building permit, which is issued for a six-month period. The building permit can be renewed.

Procedure

- 1) County does lot site evaluation prior to any permit issuance. This would include a review by the City to insure that the proposal conforms to City requirements. Site must meet all current rules.
- 2) Septic permit will be issued in conjunction with the building permit.
- 3) Septic permit will be nonrenewable and will expire 12 months after date of issuance.
- 4) A maximum of 57 single family equivalent units will be permitted during this two-year interim period. DEQ should be involved in flow determination and on any proposals other than single family dwellings.



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, October 27, 1978 EQC Meeting

Bonneville Power Administration, McLoughlin Substation,
Clackamas County - Consent Agreement to obtain compliance
with noise standards as set forth in Oregon Administrative
Rules 340-35-035 (1)(f), Table J.

Background

By letter (Attachment 1) dated May 26, 1977 the Bonneville Power Administration (BPA) was notified that BPA's McLoughlin Substation was in violation of the octave band sound pressure level standards, OAR 340-35-035 (1)(f) Table J. Since that date the Department, BPA and EPA have discussed several compliance programs for abating noise violations at the McLoughlin Substation. During the summer BPA installed a three-sided acoustical wall around the transformer bank. This barrier is providing some measurable noise reduction for the interim. Due to the lengthy period necessary to comply with the Department's standards, a proposed consent agreement has been developed and is being submitted to the EQC for approval.

Summation

1. BPA owns and operates a portion of the McLoughlin Substation in Clackamas County. A portion of the facility is comprised of three 300 MVA 500/230 KV single-phase transformers.
2. These transformers operate in excess of the sound pressure levels set forth in Oregon Administrative Rules 340-35-035 (1)(f) Table J.
3. For the interim BPA has installed around the transformer bank a three-sided barrier which is providing some measurable noise reduction.
4. For final compliance BPA proposes, based on their load forecasts, to either:
 - a. replace the existing bank with larger capacity, but quiet, units; or,
 - b. install a noise attenuation system.



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If the load forecasts call for replacement, the earliest the new transformer could be installed is September 1, 1982. If on the other hand, forecasts reveal no need for replacement, the alternate noise attenuation system could be installed in a more expeditious manner.

Director's Recommendation

Based upon the Summation, it is recommended the EQC instruct the Director to enter into a Consent Agreement (Attachment 2) with BPA to comply with OAR 340-35-035 (1)(f) Table J.

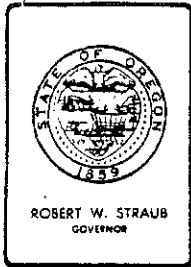
Bill

WILLIAM H. YOUNG

REG/mkw
229-5292
10/12/78

Attachments:

1. Letter dated 5/26/77 from Bill Young to BPA
2. Consent Agreement



ATTACHMENT 1

DRC
Jep
GEC

Department of Environmental Quality

1234 S.W. MORRISON STREET, PORTLAND, OREGON 97205 PHONE (503) 229- 5395

May 26, 1977

Mr. Donald Hodel
Administrator
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Re: NP - Bonneville Power Administration
McLoughlin Substation
Clackamas County

Dear Mr. Hodel:

The Department has received complaints of excessive noise from the BPA McLoughlin Substation located in Oregon City. Measured noise levels indicate that certain of the Department's noise regulations are being exceeded.

We notified your staff of the McLoughlin Substation noise problem in January. BPA's February 3rd response stated that a noise consultant had identified the noise problem and alternative methods of decreasing sound emissions were being studied. An action decision was to be made within the next one to two months.

Your May 13th letter submitted a proposal to reduce the noise levels at the McLoughlin Substation. You also enclosed a copy of the McLoughlin Substation Noise Study by Bolt, Beranek and Newman, Inc. This study includes field data, analysis and recommendations to comply with Oregon noise regulations.

The following is a summary of noise data measured near the Substation and the appropriate noise levels given in Table J of the attached noise regulations, which restrict octave band sound pressure levels.

Octave Band Center Frequency, Hz	Allowable Noise Levels, dB		Measured Noise Levels, dB
	7 a.m. - 10 p.m.	10 p.m. - 7 a.m.	
31.5	68	65	55
63	65	62	59
125	61	56	72
250	55	50	50
500	52	46	48
1000	49	43	42
2000	46	40	40
4000	43	37	33
8000	40	34	24

C O P Y

Mr. Donald Model
Page 2
May 26, 1977

We have chosen to apply the above standards as we believe that the statistical noise levels in Table 6 (attached) do not adequately protect the welfare of the nearby residences. Therefore, a reduction of 16 to 20 dB in the 125 Hertz octave band will be necessary. Note that BPA's noise consultant seemed certain that the Department would impose the octave band standards on substations. They also recommended a "full wall enclosure," providing attenuation in the range from 15 to 20 dB at a frequency of 120 Hertz.

BPA's proposal to construct "freestanding barriers" providing noise reduction on the order of 10 dB will not correct the noise problem with the McLoughlin Substation. We believe compliance with the appropriate standards should be reached as soon as possible. The proposal to reduce noise levels further in about 1985 or 1986 by the replacement of transformers is not a timely solution to this problem.

Please submit to this office, in writing, no later than June 15, a schedule to comply with these standards. If you or your staff have any questions regarding this matter, we would be happy to meet and discuss them with you. Please contact Mr. John Hector, at 229-5989, to schedule a meeting or to provide any other assistance you may need to resolve this problem.

Sincerely,

Original Signed By
William H. Young

JUN 3 1977

WILLIAM H. YOUNG
Director

JH:dro

Attachments

cc: Portland Region, DEQ ✓
Noise Pollution Control, DEQ
Portland General Electric
Clackamas County Planning Commission

RECEIVED
JUN 6 1977
PORTLAND REGION

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region X

1200 Sixth Avenue
Seattle, Washington 98101

IN THE MATTER OF

Department of Energy	)	
Bonneville Power Administration	)	No.
Portland, Oregon	)	CONSENT AGREEMENT

Preliminary Statement

1. This consent agreement is entered into by and between the United States Environmental Protection Agency and the Department of Energy acting by and through the Bonneville Power Administrator.

The State of Oregon has been fully apprised of this action.

Findings of Fact

1. The Bonneville Power Administration (hereinafter referred to as the Administration) owns and operates a portion of the McLoughlin substation in Clackamas County in the State of Oregon. One element of the facility owned and operated by the Administration (the transformers) is comprised of three 300 MVA 500/230KV single-phase transformers.
2. The transformers as operated by the Administration are a noise source which are in excess of the sound pressure levels set forth in Oregon Administrative Rules 340-35-035 (1)(f), Table J.
3. Executive Order 11752 (as amended), Section 4, and the Federal Noise Act of 1972 (PL 92-574) Section 4(42 USC 4903) require that each department, agency and instrumentality of the Federal government having jurisdiction over any property or facility or engaged in any activity resulting or which may result in the emission of noise shall comply with Federal, state, interstate and local requirements respecting control and abatement of environmental noise to the same extent that any person is subject to such requirements.

Conclusions of Law

1. The Administration, as an agency of the United States Government, is required by Section 4(b) of the Noise Control Act of 1972 to comply with the sound pressure levels set forth in Oregon Administrative Rules 340-35-035 (1)(f), Table J.
2. The Administration is presently causing and/or permitting sound pressure levels from the transformers in excess of the limit set forth in Oregon Administrative Rules 340-35-035 (1)(f), Table J.

Agreement

And now, it is hereby agreed between the United States Environmental Protection Agency and the Bonneville Power Administration, that the Administration, its successors and assigns, shall comply with the following:

1. In order to comply with Oregon Administrative Rules 340-35-035 (1)(f), Table J, the Administration shall complete the installation and place in operation the necessary noise reduction equipment as expeditiously as practicable, but in no event later than the dates specified in the following compliance schedule:
 - a. Complete engineering of a replacement transformer bank or an alternate noise attenuation system for the transformers which will meet the State's noise standards
Dec. 1, 1979
 - b. Let contracts/issue purchase orders for the replacement transformer bank or alternate noise attenuation system
Jan. 1, 1980
 - c. Submit progress reports on the status of manufacturing and procurement of the new transformer bank or alternate noise attenuation system
June 1, 1980
Jan. 1, 1981
June 1, 1981
Jan. 1, 1982
 - d. Commence construction
Mar. 1, 1982
 - e. Complete construction and achieve compliance with applicable regulations
Sept. 1, 1982
2. No later than fifteen (15) days after each compliance date in the above mentioned schedule (i.e., a, b, c, d and e), the Administration shall notify the EPA regional office in writing of the Administration's achievement or nonachievement of those compliance dates. Notification shall be made to:

U.S. Environmental Protection Agency
1200 Sixth Avenue M/S 533
Seattle, Washington 98101

Attn: Deborah J. Yamamoto

A copy of the notification shall be sent to:

Director
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

3. In the event that the Administration anticipates that it will be unable to meet any of the above compliance dates (i.e., a,b,c,d and e), the Administration shall notify the EPA at the earliest possible date in writing of this situation and the reasons therefore. A copy of this notification shall be sent to the Department of Environmental Quality. This anticipated inability to meet the schedule for compliance may be subject to the provisions of paragraph 4 below.
4. If after making its best efforts the Administration is unable to comply with a substantial portion of this agreement due to circumstances beyond the control of the Administration, or if the State of Oregon amends the applicable noise standards, then the terms of this agreement shall be renegotiated.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED THIS AGREEMENT IN SEVERAL COUNTERPARTS

For the Administration:

Sterling Monroe
Administrator
Bonneville Power Administration

Dated _____

For the Environmental Protection Agency:

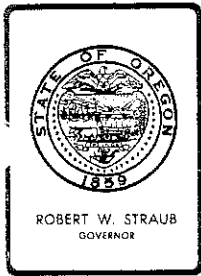
Donald P. Dubois
Regional Administrator
Environmental Protection Agency

Dated _____

Acknowledged As an acceptable compliance schedule pursuant to
OAR 340-35-035 (2).

William Young
Director
Department of Environmental Quality

Dated _____



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. G, October 27, 1978, EQC Meeting

Noise Control Rules - Consideration of Adoption of Proposed Amendments to Noise Control Regulations for New Automobiles and Light Trucks, OAR 340-35-025

Background

Oregon Revised Statute Chapter 467 directs the Environmental Quality Commission to establish maximum permissible levels of noise emissions. In 1974 the Commission adopted noise standards and associated procedure manuals for new motor vehicles. These standards began at a regulatory level of 83 dBA for 1975 models, 80 dBA for model years 1976 through 1978 and 75 dBA for subsequent models.

In June, 1976 the Department received a petition from General Motors Corporation to amend OAR 340-35-025, Noise Control Regulations for the Sale of New Motor Vehicles. This petition proposed to delete the 75 dBA requirement for passenger cars and light trucks that was scheduled to be effective for 1979 and subsequent models. After public hearings, the Commission adopted an amendment that did not rescind the 75 dBA standard but postponed its implementation two years, until 1981.

In May, 1978 General Motors again petitioned to amend Noise Control Regulations to delete the 75 dBA standard, now scheduled to be effective for model years after 1980.

A public hearing to consider the General Motors petition was authorized by the Commission at its June 30, 1978 meeting. This hearing was held in Portland on October 10, 1978. Testimony was presented by representatives of the motor vehicle industry and other interested parties.

Statement of Need for Rule Making

1. The proposed rule may be promulgated by the EQC under authority granted in ORS. 467.030.
2. New automobiles and light trucks significantly contribute to excessive environmental noise levels in Oregon.



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3. Principle documents relied upon in considering the need for this rule include:

- a) Petition for Rule Amendment, submitted by General Motors Corporation dated May 19, 1978.
- b) Hearing Report: October 10, 1978, Public Hearing on Petition to Amend Noise Control Regulations.
- c) "Determination of Urban Acceleration Rates for Light Vehicles", Environmental Activities Staff, General Motors Corporation.
- d) "Manual Transmission Shift Point Study", Environmental Activities Staff, General Motors Corporation.
- e) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety", U.S. EPA, March 1974.
- f) "Transportation Noise and Noise from Equipment Powered by Internal Combustion Engines", U.S. EPA, December 31, 1971.
- g) Other materials entered into the record of the October 10, 1978 public hearing.

Evaluation

In 1971 California adopted new vehicle standards for automobiles and light trucks to meet progressively tougher standards over a 15-year period. By 1977 the requirement would have been 75 dBA and by 1987 a 70 dBA standard was to be met. Many other states and some local governments followed California by establishing similar standards. However, in the last few years the major automobile manufacturers, specifically General Motors and Ford Motor Company, have successfully persuaded regulatory agencies, local governments, and state legislators that any standard below 80 dBA was not needed.

At this time the few remaining jurisdictions with standards more restrictive than 80 dBA are Florida with 75 dBA by 1985, Maryland with 77 dBA by 1982, and Chicago with 75 dBA by 1981.

The major points made by the automobile industry representatives at the October 10, 1978 hearing were as follows:

- a) The current "wide-open throttle" compliance test procedure does not correlate with real traffic conditions.
- b) The costs to achieve the 75 dBA standard are greater than any environmental benefit.
- c) The Federal EPA is currently studying this product and may preempt state and local regulations by 1982 or possibly 1983.

Other issues raised by the Industry were:

- a) Motor vehicle noise is caused by in-use vehicles with defective or modified exhaust systems.
- b) The national energy goal to meet fuel consumption standards supersedes vehicle noise standards as the noise control package adds excessive weight.

Issues raised by non-industry testimony and supportive of the existing 75 dBA standard were as follows:

- a) Noise reductions gained under the present compliance test procedure are reflected in real traffic situations.
- b) Median noise levels near many urban streets are in excess of ambient limits established for commercial and industrial noise sources. Autos and light trucks are accountable for these high levels and should share the burden to achieve protective ambient noise levels.
- c) The motor vehicle industry should be held to the two-year "compliance schedule" granted during its 1976 petition on this matter. Industry did not consider the extension as a schedule but only as a delay.

Since the receipt of the General Motors petition, staff has been reviewing the large amounts of test information that GM believes supports its petition. It is obvious there are some deficiencies in the present compliance test procedure and the Industry and the federal government have been working to develop new procedures. The federal EPA, after two years of development, is ready to publish a proposed procedure. General Motors has not yet proposed a new procedure. The European Common Market countries have developed a new procedure, however, it has not been proposed for adoption.

The present test procedure is most accurately described as a method to measure the maximum noise capacity of the vehicle at relatively low speeds (to eliminate the effects of tire generated noise). Thus, this procedure is not designed to measure real traffic or "real world" situations. It does provide a method to accurately compare one vehicle with another and measure the noise capabilities of each.

Industry contends that this method discriminates against some classes of vehicles in real traffic situations. For example, an automobile with a large engine and relatively low weight (high horsepower to weight ratio) seldom operates at or near the conditions required during the compliance test, and may be "over soundproofed."

Industry contends that the conditions under which the vehicles are certified are seldom duplicated in real traffic situations, however, it has not proven that there is no correlation between the compliance test and typical urban traffic operations. In 1972 Ford Motor Company conducted a demonstration with three vehicle classes--a compact, a full sized car, and a pickup truck.

Ford brought to Portland current production models meeting the 80 dBA standard and retrofitted models that were quieted to achieve the 75 dBA standard. Although the ideal difference between the 80 and 75 decibel models should have been 5 decibels (80-75) during a compliance test, the measured values ranged from approximately 3 to over 6 decibels.

A second test typical of urban accelerations was also performed to provide correlative data.

The quiet (75 dBA) compact vehicle was 3.7 dBA quieter in the compliance test and 3.1 dBA quieter in the typical acceleration test than its 80 dBA counterpart. The pickup data showed a compliance test difference of 6.5 dBA and a typical acceleration difference of 4.5 decibels. The full size car data was not as impressive; the compliance test difference was 4.2 dBA and typical acceleration difference was 2.4 decibels. In a percentage form, these data show the following correlation between the compliance test and the typical acceleration test for these vehicles:

Compact	84%
Pickup	69%
Full Size	57%

The Cost of Control

The petitioner has stated that the public would not pay added costs for quieter vehicles that the Industry has estimated at approximately \$10 to \$260 for automobiles and light trucks. Data from a Florida survey was offered in testimony as an indication that the public would not support noise control efforts. The survey in fact showed that the average citizen polled favored having approximately 3 of his tax dollars spent on noise control. The most recent statistics available indicate that the Florida noise control program receives less than \$.02 for every citizen in the state. It should be noted that Florida has one of the most active noise control programs in the nation.

The Federal Role

Part of the motor vehicle manufacturing industry's argument for the deletion of tougher standards is that these products should be regulated at the federal level and that EPA is moving toward the adoption of preemptive standards for automobiles and light trucks.

While it is true that EPA regulations in this area would be preemptive, EPA is moving slowly on the path toward establishing standards for light duty vehicles. It has been investigating the health and welfare impacts of noise produced by these products since 1975 and has been developing a compliance test procedure since early 1977. When the Commission heard General Motors Corporation's petition in 1976, the Industry believed that federal standards would be adopted and applicable to model years 1980 or 1981. Now the Industry estimates that the earliest federal standards might become effective will be 1982 or 1983.

EPA's role in the regulation of automobiles and light trucks has been cautious. It has not yet identified this vehicle class as a "major noise source" because that would initiate the rule adoption timetable that it must maintain by law. EPA has expended much effort toward the development of a better compliance test procedure, but this process has been slow. It is doubtful that a procedure will be accepted in the near term, although EPA is now prepared to ask for comments on a proposed procedure.

EPA has determined some significant facts in its investigation of light vehicles:

- a) The major deficiency of the present test procedure is that it fails to properly rank vehicles according to typical urban traffic operation conditions. It does properly rank vehicles by noise producing capability.
- b) Sub-compact and diesel powered cars and light trucks are the major contributors to real world traffic noise due to their low power to weight ratio.
- c) Many current model vehicles, measured during the compliance test procedure, emit levels of 75 dBA or less.

It is anticipated that increasingly stringent fuel economy standards will alter the composition of the light motor vehicle fleet. Gasoline V8 engine equipped cars currently comprise 56% of the current market, but these vehicles will represent no more than 18% of the total by 1985. Conversely, the percentage of diesel and 4-cylinder vehicles will double.

Diesel and 4-cylinder vehicles are approximately 5 dBA and 7 dBA, respectively, noisier than the average V8 engine vehicle when compared during a typical acceleration, and 1 dBA and 3 dBA noisier during cruise.

An EPA conducted test of representative 1977 model vehicles demonstrated that over 80% of the 76 vehicles tested would pass the 75 dBA test without any modification. Of those vehicles in excess of 75 dBA, nearly half (40%) were 4-cylinder.

EPA tests indicated that engine radiated noise in diesels and 4-cylinder vehicles was a significant contributor during the compliance test, and that engine radiated noise was the primary noise source during typical acceleration and cruise conditions. This indicates that until engine noise is more effectively controlled, the compliance test is an effective indicator of the noise that 4-cylinder vehicles will produce under typical operating conditions.

It appears that the 4-cylinder and diesel vehicles should be the focus of our interest. These vehicles are rapidly becoming the dominant segment of the "on-road" population, and they make more noise in all modes of operation than the vehicles they are replacing. Finally, 4-cylinder and diesel vehicles yield an acceptable correlation between the compliance test and typical urban driving.

New vs. In-Use Control

The ambient noise levels measured near streets and roads in terms of "median" and "average" noise descriptors are not greatly impacted by those relatively few excessively loud vehicles. To achieve reductions in ambient noise near these traffic corridors, all vehicles must become quieter, and the light duty vehicles (due to their high volumes) are responsible for most of the noise that makes up the average ambient noise level.

The fact remains that motor vehicles significantly contribute to the ambient noise measured near streets and roads. The standards established for industrial and commercial noise sources are believed to achieve acceptable noise levels at noise sensitive uses, but near many streets and roads the noise caused by traffic is in excess of these desirable ambient levels.

Testimony was presented by an engineering consultant that calculated the effects of light duty vehicle noise on a typical heavily traveled arterial. The calculated distance from the road at which the median noise level equaled 55 dBA was 400 feet. However, if the light duty vehicle source strength were reduced by an amount gained under the 75 dBA standard, the distance to the 55 dBA point would move toward the road 200 feet. Thus, all noise sensitive property between 200 feet and 400 feet from the road would be brought within acceptable ambient noise levels.

The question of energy consumption was not fully addressed by the industry. Although noise controls would tend to add weight to the vehicle and therefore raise its fuel consumption, no quantitative data has been submitted for evaluation.

Summation

Drawing from the background and evaluation presented in this report, the following facts and conclusions are offered:

1. The present light duty vehicle compliance test procedure, although not reflective of real traffic conditions, is an acceptable method to establish noise standards that effectively reduce "real world" traffic-caused noise.
2. The development of a new test procedure may more effectively identify vehicles needing additional noise controls, however such a procedure has not been proposed or fully developed.
3. Motor vehicles, specifically light duty vehicles, are responsible for establishing the median ambient noise level near major traffic corridors. The noise levels at noise sensitive properties near these streets and roads are often in excess of standards with which industrial sources must comply.
4. Implementation of the 75 decibel standard could reduce impacted land by as much as one-half near major traffic corridors.

5. EPA is slowly moving toward the adoption of standards for light duty vehicles, but it may fail to identify this category as a major noise source if state and local standards are continued to be rescinded.
6. The U.S. Environmental Protection Agency should exercise its authority to regulate the noise emissions of new light motor vehicles nationwide to ensure consistency of regulation, fairness to the automotive industry, and meaningful protection of the public from the effects of motor vehicle noise.

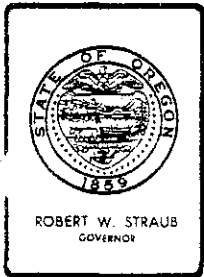
Director's Recommendation

Based on the Summation, it is recommended that the effective date for the 75 dBA noise level for automobiles and light trucks be amended from "models after 1980" to read "models after 1982."



WILLIAM H. YOUNG

John Hector:dro
229-5989
10/16/78



Environmental Quality Commission

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

To: Environmental Quality Commission
From: Hearing Officer
Subject: Hearing Report: October 10, 1978 Hearing Regarding Proposed Amendments to Noise Regulations

Background

DEQ Noise Regulations, OAR 340-35-025 Table A, specify in part that new automobiles and light trucks of model years 1976-1980 shall not exceed 80 dBA when measured according to the SAE J987a test. Model years subsequent to 1980 shall not exceed 75 dBA.

When Noise Control Regulations for new automobiles were first adopted in July 1974, the 75 dBA requirement was to apply to model years after 1978. Before adoption, General Motors Corporation filed a statement commenting on the proposed rules, and criticizing the 75 dBA standard.

In 1976 General Motors petitioned the Commission to amend the rules to delete the 75 dBA standard, and the Commission subsequently amended the rule to defer the effective date of the 75 dBA requirement until model year 1981.

On May 19, 1978, General Motors petitioned the Commission for a further amendment and deletion of the 75 dBA standard.

Summary

Pursuant to Commission authority, a public hearing was held on the proposed rule amendment on October 10, 1978, in the Commission Room of the Fish and Wildlife Building, 508 S.W. Mill, Portland, Oregon. Approximately 15 persons attended the hearing, and both written and oral testimony was offered. Some written testimony was received shortly after the hearing.

Summary of Testimony

Representatives of General Motors, Ford, and Chrysler were present at the hearing and presented written and oral testimony. The comments immediately following can be ascribed to each of those representatives.

Bruce Greig, GM; John Damian, Ford; A. E. Davis, Chrysler

The SAE test procedure requires the throttle of the subject vehicle to be "rapidly and fully opened" during the sound level measurement. Motor vehicles are driven wide open throttle less than .5% of the time. The SAE test is not

meant to measure the actual noise the motor vehicle contributes in the real traffic environment, and using this test as a measure of environmental noise contribution is not valid.

There is no measurable difference in the sound levels of vehicles emitting 80 dBA during the SAE test and vehicles emitting 75 dBA during the SAE test when those vehicles are in typical operating modes. The sound levels of these vehicles during typical operating modes is well under the 75 dBA limit scheduled for 1981.

If the 75 dBA standard remains, manufacturers will have to build special vehicles to meet the Oregon requirements. The Oregon vehicles will cost substantially more (Ford estimates an increase of \$76 for passenger cars), some options will not be available, and some models might not be offered within the state.

Oregon is the only state that retains a 75 dBA standard for 1981. California has deleted the 75 dBA requirement entirely, and Florida has postponed its 75 dBA requirement. Other states and cities have followed suit.

The U.S. EPA may subject cars and light trucks to federal regulation, which would preempt all state and local regulations. The EPA is presently investigating other test procedures that may more accurately reflect the noise output of a car as it is typically operated.

There is now considerable ongoing research relative to community noise measurement. It would be inappropriate to institute more stringent standards than those presently being met before some of these studies are completed.

Further Comments by Bruce Greig, General Motors

The SAE test measures the sound output of vehicles at maximum engine speeds. A General Motors study shows vehicles are typically operated at 55-60% of rated engine speeds.

A study of the shift speed of vehicles with manual transmissions showed that the mean 1-2 shift speed was 60-70% of rated engine speed. (Fifty-five to sixty percent for automatic transmissions.) The engine speeds and sound levels for manual transmissions are still well below those generated using the regulatory test.

An attitudinal study conducted in Florida shows 93% of the citizens do not think more than 10 of their tax dollars should be spent on noise control.

With the 75 dBA standard, tire noise will become a more significant factor in overall vehicle noise, and a number of popular tread styles would have to be withheld from the Oregon market.

There will be a larger population of subcompact and diesel vehicles in the future to meet federally mandated fuel economy standards. It is more difficult to reduce noise levels on these vehicles and under certain conditions they will be noisier, but the overriding national priority for automobiles is fuel economy.

Annoyance from noise of motor vehicles can best be reduced by in-use enforcement. Data from California and Florida shows that modified, defective, and otherwise inadequate exhaust systems constitute the majority of vehicles cited (84% in Florida; virtually 100% in California). Reducing the wide open throttle sound levels of new passenger vehicles would not change the impact of modified or defective vehicles.

Further Comments by John Damian, Ford

Ford has constructed a number of prototype motor vehicles designed to meet 80 dBA and 75 dBA standards. As a result of tests performed with these vehicles, Ford concluded that the 75 dBA standard would not result in meaningful community noise reductions. These prototype vehicles were displayed for DEQ staff in April, 1976, and testing by DEQ staff was permitted.

No reliable assessments indicate that 80 dBA adversely affects community noise levels, thus a lower standard is inappropriate.

Merle Royce, Manager, Georgia Pacific Truck Division

Mr. Royce concurred with previous testimony of General Motors, Ford, and Chrysler. He stated that a required 2 dBA decrease for trucks implemented at the first of last year increased overall cost of trucks by 1% and no noticeable noise reduction occurred.

Glen Odell, Seton Johnson and Odell, Inc.

The SAE test provides a reasonable common basis for the evaluation of mechanical noise. Industry's contention that the proposed reduction for the SAE test will result in no significant difference in other operational modes is based on comparisons between different models, not differently equipped versions of similar models.

There was no test data presented on the noise characteristics of cars modified to meet a 75 dBA standard. The EQC should demand more authoritative data before amending its rules. DEQ staff was not allowed to test all of the modified cars Ford used in its April 1976 demonstration. Subjective evaluation by Tom Arnold, chief acoustical consultant for Seton Johnson and Odell, during the Ford demonstration was that the cars modified to meet the 75 dBA standard were noticeably quieter.

A 5 dBA reduction by the SAE test method will result in an average reduction of source strength of 4 to 4.5 dBA for vehicles operating under 35 mph.

In 1984, Cedar Hills Boulevard will carry 1300-1900 vehicles per hour during the daytime, and will produce L₅₀ noise levels of 63-65 dBA 100 feet from the edge of the paving. Anyone within 400 feet of the roadway would be exposed to excessive noise levels according to DEQ industrial and commercial source standards. A reduction of source strength of 4-5 dBA would reduce to 200 feet this excessive noise exposure area.

If ambient standards have any value they must be enforced with respect to all sources. To enforce strict standards against industrial and commercial sources while ignoring the automobile is grossly unfair.

The City of Portland allows purchase of products with reduced noise characteristics if those products are 110% of the cost of similar, non-reduced noise products. According to this standard, the added cost attributable to the 75 dBA vehicles is not unreasonable.

Kirk Roberts, OSPIRG

A presumption of validity should be given to established standards until independent studies are carefully studied. Data obtained and presented by the Industry should be questioned, if not held suspect.

The control emphasis on new rather than in-use vehicles is reasonable because the new vehicles can be more easily controlled. The argument that the Industry is locked into long-term plans and re-tooling dates flies in the face of DEQ as regulator of the Industry.

Mr. Roberts was not convinced that the cost attributed to the 75 dBA vehicles would be excessive, nor did he feel that the fact that Oregon is the only state with a 75 dBA standard for 1981 should be held against it.

Molly O'Reilly

Two years ago DEQ granted an extension to the auto industry but did not require a compliance schedule for meeting the 75 dBA standard. Testimony indicated that present plans for re-tooling and production do not include an expectation of meeting the 75 dBA standard. Ms. O'Reilly would suggest that if further variance is given, a compliance schedule be required of the auto manufacturers.

Thomas Fender

ORS 483.449 (1)(c) is in substantial conflict with the proposed rule. The statute limits the Department to the establishment of "equivalence ratings" for the near field techniques. It is Mr. Fender's opinion that statutory interpretation and construction would render the proposed rule invalid.

K. H. Faber, Mercedes Benz of North America

Mercedes Benz agrees that more noise reduction should be accomplished to create an environment with the least possible adverse effect on the public. The test procedure presently used, however, is not suited to maximum noise reduction. Experience has shown that the test used for certification in Oregon is atypical for a city driving pattern and thus atypical for real noise emission in cities.

A lower standard will mainly affect high-performance vehicles with good acceleration. In typical city driving these vehicles are very quiet because the needed acceleration can be obtained while the vehicle is operating in the lower part-load range.

The first task before lowering any standard should be the development of an appropriate test procedure.

A study by the Committee of Common Market Automobile Constructors shows that only 2% of the usual driving in European city traffic is full throttle

acceleration. This study resulted in a proposal for a new test procedure for manual transmission vehicles. A proposal for automatic transmission vehicles will follow. A new procedure would yield better results and a better cost/benefit ratio.

N. A. Miller, International Harvester

International Harvester supports the General Motors petition. IH is a limited production manufacturer of a four-wheel drive sport utility vehicle (scout) and does not have the ability to develop advanced noise reduction technology and remain competitive in the market. If the 75 dBA requirement were to be continued, IH may discontinue sale of the scout in Oregon. Anticipated sales for 1981 are 1000 units and would represent a sizeable loss to franchised IH dealers in Oregon.

Edwin Chestnut

Mr. Chestnut submitted testimony stating that he felt further noise reductions from 80 to 75 dBA would incur excessive costs for the public while providing no appreciable public benefit.

Dietmar K. Haenchen, Volkswagenwerk Aktiengesellschaft, Audi Auto Union Ag, and Volkswagen of America, Inc.

Mr. Haenchen provided a letter stating that the above companies support the deletion of the 75 dBA standard because a wide open throttle noise reduction would result in little if any change in the noise emitted during normal vehicle operation.

Comments by Charles Elkins, Environmental Protection Agency

It is not true that light vehicles with stock exhaust systems in good repair are not a problem. These vehicles contribute about one-fourth of urban traffic noise energy.

Four-cylinder and diesel light vehicles are 5 dB and 7 dB noisier during typical acceleration and 1 dB and 3 dB noisier during cruise than average V8 gasoline engine automobiles. The 4-cylinder and diesel vehicles are expected to increase from the current 25% of the auto market to about 50%.

Vehicles exhibiting similar sound levels as measured by the full throttle test procedures do not necessarily contribute equally to community noise.

Small 4-cylinder and diesel engine vehicles have a significant amount of engine radiated noise under full throttle acceleration, and engine radiated noise is generally dominant under partial throttle acceleration. Thus, treatment of the engine radiated noise to reduce the vehicle's noise level under a full throttle noise test could bring about even greater benefits under more typical operating conditions.

Mr. Elkins's submitted testimony also included a detailed discussion of the EPA's proposed test procedure.

The following documents are of record and available to the Commission for further study.

Three attachments to the Ford testimony discuss the nature and scope of research presently ongoing under the auspices of the U.S. EPA to assess tire noise in relation to total community noise. Bolt Beranek, and Newman is the contractor for this project.

Two attachments to the Ford testimony discuss research carried out at McMaster University, entitled "Community Response to Road Traffic Noise." These documents, prepared with Ford support, question the assumptions that:

- 1) Community reaction to noise does not vary significantly across noise sources, and
- 2) The degree of annoyance one experiences may not be directly related to noise levels.

Attachments to General Motors testimony document research performed by GM. They are entitled:

- 1) Manual Transmission Shift Point Study
- 2) Determination of Acceleration Rates for Light Vehicles

These studies address the RPM levels at which vehicles typically operate, and the rates at which vehicles typically accelerate in an urban environment. The conclusions made by the researchers were cited by General Motors in its written testimony.

An attachment to Mercedes Benz testimony is entitled, "Proposals for a New Test Procedure for the Measurement of Exterior Noise of Passenger Cars."

This document offers test data to show that noise emissions from cars are a function of engine power and engine RPM. The document concludes that the ISO test (a European, "maximum noise potential" test) should be replaced by a procedure in which the regulatory level is determined by a weighted average of sound levels produced during cruise conditions and acceleration conditions. These two levels, in turn, are determined from an operational profile of that particular automobile model.

Written rebuttal to Mr. Glen Odell's testimony has been received from General Motors Corp., Ford Motor Co., and International Harvester. Copies of the rebuttal are attached.

Recommendation

Your Hearing Officer makes no recommendations in this matter.

Respectfully Submitted,


Peter W. McSwain



Dept. of Environmental Quality
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October 13, 1978 **Noise Pollution Control**

Mr. John Hector
Supervisor
Noise Control Program
Department of Environmental Quality
1234 S.W. Morrison
Portland, Oregon 97205

Dear Mr. Hector:

This letter is a rebuttal to the testimony given on October 10th by Seton, Johnson, and Odell, Inc. concerning Proposed Revisions to Noise Regulations. Mr. Odell, who testified, has blatantly misrepresented available and public information and drawn totally erroneous conclusions.

The conclusion that "The SAE test procedure which is specified by EQC rules is a valid measure for urban conditions" is contrary to all data presented in Oregon, other states, and to the U.S. EPA concerning the subject of passenger car noise test procedures. If the SAE Test Procedure had been valid for urban traffic conditions, U.S. EPA would have selected it as opposed to the multi-million dollar project conducted by them to evaluate and develop an urban acceleration test procedure. I believe that Mr. Odell has confused wide open throttle operation with maximum engine speed. Wide open throttle is required by both SAE and the EQC Test Procedures, and wide open throttle is not representative of how passenger cars are driven under urban conditions.

Secondly, the contention that "The reduction from 80 to 75 dB(A) will result in an important environmental improvement in most urban areas" is erroneous and not supported by any of the information provided by Mr. Odell. The data presented by Ford and measured by DEQ at the demonstration in 1976 conclusively demonstrated that the measures required to reduce the wide open throttle noise level from 80 to 75 dB(A) had little effect on noise during the typical urban acceleration (.15G). It must be realized that vehicles meeting the 80 dB(A) limitation under wide open throttle conditions, emit noise levels of less than 65 dB(A) at 50 ft. under normal or urban accelerations (see Ford data from 1976 demonstration). There are a large number of passenger cars, but reduction beyond an impact of 65 dB(A) would have very little effect on the overall community noise level. The much higher levels of other sources, such as construction equipment, buses, motorcycles, aircraft, tires and trucks, mask the low noise levels of passenger cars. As an "acoustical expert", Mr. Odell must be familiar with the masking effect of sound levels.

October 13, 1978

Thirdly, the allegation that "It is grossly unfair and inequitable for Oregon to continue to enforce stringent noise regulations on industrial and commercial sources and ignore the most pervasive noise source in urban areas, the automobile" is not supported. U.S. EPA has, of yet, been unable to identify passenger automobiles as a major noise source and, therefore, has not been able to justify the promulgation of noise regulations for passenger cars. Secondly, all of the major noise abatement areas, such as Chicago, Florida, Maryland, and California have removed new passenger car noise standards lower than 80 dB(A). This was done after much deliberation and consideration in each of those areas. Such a move could only be justified by the conclusion that passenger cars manufactured to a standard lower than 80 dB(A) (J-986a) do not significantly contribute to unacceptable community noise levels.

The fourth claim made by Mr. Odell was that "the economic costs of compliance with the 75 dB(A) standard is reasonable." This claim is no more correct than the grammar used in the sentence. Obviously, the environmental impact is zero. Since no benefit exists, no increase in costs can be justified; the benefit-cost ratio is zero.

Mr. Odell's argument about what the city allows for the cost of equipment selected on a noise emission basis may or may not be fact, but I do know that Mr. John Q. Public will not pay for equipment that serves no purpose. In addition, adding noise abatement material increases weight and decreases fuel economy. This is adverse to the desires of new car purchasers, who are becoming very energy conscious.

After reviewing Mr. Odell's testimony, it can only be concluded that either he honestly does not understand automobiles, acoustics and the test procedures involved, or that he has intentionally distorted the facts. International Harvester, therefore, requests that you carefully consider this rebuttal, set Mr. Odell's testimony aside, and decide to act in accordance with the GM petition and remove the 75 dB(A) requirement.

Should you have questions concerning this rebuttal, please don't hesitate to contact me.

Very truly yours,



N. A. Miller (219/461-5211)
Staff Engineer - Sound & Energy

GENERAL MOTORS CORPORATION

October 12, 1978

Mr. Joe B. Richards, Chairman
Environmental Quality Commission
State of Oregon
522 S.W. 5th Street
P. O. Box 1760
Portland, Oregon 97207

Dear Mr. Richards:

During the public hearings regarding the General Motors Corporation petition to rescind further reduction of sound level for passenger cars and light trucks, testimony was presented by Mr. Odell of Seton, Johnson and Odell, Inc. recommending that the General Motors petition be denied. In support of his recommendations, representations were made by Mr. Odell that are clearly incorrect. It is the purpose of this statement to respond to these inaccuracies.

Mr. Odell claims the SAE test procedure specified by EQC roles is a valid measure for urban conditions and that GM is inaccurate and misleading in referring to this test as a WOT test procedure. The claim that the procedure calls for 3/4 of rpm associated with peak horsepower is in error.

Section 4.5.7.3 of the Oregon procedure states:

(3) Acceleration. The vehicle shall proceed along the vehicle path at a constant speed of 30 mph in the selected gear for at least 50 feet before reaching the acceleration point. When the vehicle reference point reaches the acceleration point, the throttle shall be rapidly and fully opened. The throttle shall be held open until the vehicle reference point reaches the end point or until maximum rpm is reached within the end zone. At maximum rpm, the throttle shall be closed sufficiently to keep the engine just under maximum rpm until the end point, at which time the throttle shall be closed (emphasis added).

General Motors Building 3044 West Grand Boulevard Detroit, Michigan 48202

Management Services Div.
Dept. of Environmental Quality

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Mr. Joe B. Richards, Chairman
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Maximum rpm is elsewhere defined 4.5.2.9 as:

a. Maximum RPM. "Maximum rpm" means the maximum governed engine speed, or if ungoverned, the rpm at maximum engine horsepower as determined by the engine manufacturer in accordance with the procedures in Society of Automotive Engineers Standard, Engine Rating Code - Spark Ignition - SAE J245, April, 1971, or Engine Rating Code Diesel - SAE J270, September, 1971 (emphasis added).

This is clearly a WOT, maximum rpm test and not representative of normal urban acceleration as Mr. Odell claims. Figure 2 of the GM petition was not submitted as evidence that a reduction from 80 to 75 dBA will give no significant difference in other modes of operation, as contended by Mr. Odell. They have misread and misinterpreted Figure 2 because Figure 1 shows the comparison between 75 and 80 dBA vehicles. All the vehicles were built to an 80 dBA WOT standard and Figure 2 depicts the sound level of these vehicles under normal driving conditions.

Mr. Odell says, in the section of his testimony headed "validity of SAE Test", that the "only comparison valid as a determinant of effectiveness of the 75 dBA rule is what happens when a given vehicle is modified to comply with it. We are told by GM that significant hardware changes will be needed, but are given no test data on the noise characteristics of modified cars." Mr. Odell has evidently overlooked Figure 1 of GM's petition of May 19, 1978 to the Commission. Figure 1 contains side-by-side comparisons of 75 dBA and 80 dBA cars. Those comparisons show basically no noise difference between 80 dBA vehicles and 75 dBA vehicles at 35 mph cruise and a typical acceleration from rest. These are vehicles built to an 80 dBA standard tested and then modified to a 75 dBA standard and tested again.

Mr. Odell attempts to refute arguments about adverse economic impact by citing Title 18, Section 18.08.030 Portland noise

7
Mr. Joe B. Richards, Chairman
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regulation which allows the city to select equipment on the basis of noise emission at a total cost of 110% of the cost of comparable equipment without special noise abatement treatment. Therefore, Mr. Odell concludes that the residents of Oregon would be willing to pay \$500.00 extra for a \$5,000.00 motor vehicle for a measure of noise control that is imperceptible during normal driving conditions. This speculation is contrary to the impartial attitudinal survey conducted by the University of Florida as to the willingness of citizens to pay for noise control. They determined that ninety three percent of the citizens are not willing to pay more than ten dollars for noise control. This information is included in the GM petition.

Furthermore, a \$500.00 increase in the price of passenger cars would cost the residents of Oregon over 50 million dollars in a typical year with no measurable benefits. ?

The heart of Mr. Odell's reasoning appears to be his incorrect assumption that "a 5 dBA reduction by the SAE test method will result in an average reduction of source strength of 4 to 4.5 dBA for vehicles operating under 35 mph" and that "a source strength reduction of 4 to 5 dBA for speeds under 35 mph will have the effect of reducing to 200 ft. the area next to Cedar Hills Boulevard which is in violation of state noise rules (emphasis added)." The quoted remarks of Mr. Odell are contained in a section of his testimony headed "DEQ's Rule a Significant Environmental Improvement."

Mr. Odell points out that vehicles operating on Cedar Hills Boulevard travel at speeds of 18 to 27 mph, presumably for the most part in a "cruise" or steady speed mode. As is pointed out in Figure 1 included with GM's petition to the Commission of May 19, 1978, the 35 mph cruise mode noise levels of 80 dBA and 75 dBA vehicles are the same, a range from 61 to 63 dBA. The 5 dBA average reduction which Mr. Odell sees as the advantage in lowering the standard from 80 to 75 dBA does not occur. Therefore, his only reason for retaining the 75 dBA standard is invalid.

- 1 - 4.5

Mr. Joe B. Richards
Page Four
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General Motors takes exception to the projections made by Seton, Johnson and Odell regarding the L50 noise levels on Cedar Hills Boulevard carrying vehicular traffic at the rate of 1300 to 1900 vehicles per hour at speeds of 18 to 27 mph. The L50 levels projected by Mr. Odell are excessive. We base our objections not on projections, but on hard factual test data.

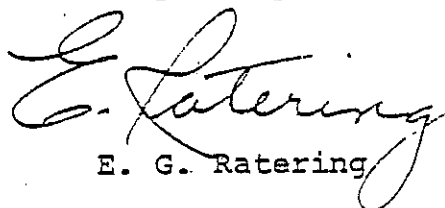
In October, 1975, General Motors and the EPA conducted a test program to determine the extent of sulphate pollution, if any, from heavy concentrations of traffic. As part of these tests, we made measurements of the noise emanating from the traffic.

At 50 feet at an actual traffic rate of 3700 vehicles per hour, which is more than double the Odell projections, the peak noise levels measured were 64 to 66 dBA. At 100 feet, the peak sound level would be in the order of 61 to 63 dBA. The average sound level would be something less than this. It should be noted that the sound is tire noise and reducing vehicle WOT levels from 80 dBA to 75 dBA would not change these figures one bit. It is clear that Mr. Odell has overstated the projections.

?
assume
line
source
(3 dBA)

Since Mr. Odell has presented no data to verify his assertion that a 5 dBA reduction from 80 dBA will produce a similar reduction in other driving modes, and his assertion is contradicted by hard data contained in the GM petition, we believe Mr. Odell's position is invalid.

Very truly yours,


E. G. Ratering

For
date



Dept. of Environmental Quality

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OCT 17 1978

Noise Pollution Control

Ford Motor Company

The American Road
Dearborn, Michigan 48121

October 13, 1978

Mr. Peter McSwain, Hearing Officer
State of Oregon
Environmental Quality Commission
P.O. Box 1760
Portland, Oregon 97207

Dear Mr. McSwain

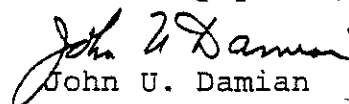
Subject: Petition on Proposed Revision to Noise Regulations
(OAR 340-35-025 Table A - Relating to Automobiles,
Light Trucks and other Road Vehicle Noise Emission
Standards

On October 10, 1977 Ford testified in support of the petition to delete the 75 dB(A) noise level for 1981 model light vehicles. We believe that our testimony provides ample substantiation for acting affirmatively on the petition. From our analysis, the questionable benefits associated with the imposition of more stringent noise standards on light vehicles simply do not justify the costs to the Oregonians.

Mr. F. Glen Odell was the only witness who presented a formal statement at the hearing in favor of the reduction of light vehicle noise levels to 75 dB(A). His statement contained, in our opinion, unsupported technical assumptions and many technical inaccuracies. The Attachment and appended Exhibits contain Ford's response to his statement. It is requested that our response be included as part of the official record of the hearing on this matter.

In our view, the record clearly reflects overwhelming technical and economic substantiation for deleting the 75 dB(A) noise level requirement from the Oregon regulations. Your thoughtful consideration of this request is respectfully solicited.

Sincerely yours,


John U. Damian

Attachments

cc Mr. John Hector
Mr. F. Glen Odell

FORD COMMENTS ON F. GLEN ODELL
TESTIMONY PRESENTED BEFORE THE
ENVIRONMENTAL QUALITY COMMISSION
HEARING OFFICE ON OCTOBER 10, 1978

Odell Statement:

"1) The SAE test procedure specified by EQC rules is a valid measure for urban conditions."

Ford Comment:

Ford disagrees with the foregoing statement and technically concludes that the SAE J986a WOT test does not replicate the urban driving modes. As was pointed out in my statement to you on October 10, 1978, we had serious misgivings about the meaningfulness of future reductions under a WOT test procedure. In attempting to quantify community noise levels perceived by the public, as far back as 1975, Ford constructed a number of prototype vehicles meeting a 75 dB(A) noise level and compared them with current production vehicles complying with a current 80 dB(A) noise level during a variety of driving modes. When the vehicles were subjected to urban type driving, the consensus of the observers was that little or no perceptable difference in sound level was evident.

A copy of the text accompanying the demonstration given to Oregon officials on April 13, 1976 and our statement before you as hearing officer on August 6, 1976 on a previous petition for indefinite carryover of the 80 dB(A) noise level is attached as Exhibit 1 and 2 respectively. Supplementing the sound level test data, we have added the decibel numbers generated at the Oregon demonstration to those obtained on the same vehicles during testing at a Michigan test site.

The United States Environmental Protection Agency (EPA) has been engaged in community noise studies and test procedure evaluation for the past several years. The Agency's findings substantiate our statement that the SAE J986a test does not replicate urban driving. A letter from Mr. Henry E. Thomas, Director, Standards and Regulations Division, U.S. EPA to Mr. Ron Wasko, Motor Vehicle Manufacturers Association and others, dated June 9, 1977, describes EPA's rationale for coming to this conclusion. A copy of Mr. Thomas' letter and the relevant part of the EPA attachment referenced in that letter is enclosed as Exhibit 3. We believe these documents adequately refute Mr. Odell's contention that the SAE WOT test is a valid representation of the manner in which light vehicles are driven and generate noise in the urban community.

Odell Statement:

- "2) The reduction from 80 to 75 dBA will result in an important environmental improvement in most urban areas."

Ford Comments:

Unfortunately, Mr. Odell has neglected to quantify in terms of sound energy or in any other terms the alledged environmental improvement. We believe our demonstration clearly documents the imperceptible difference in sound levels between light vehicles designed to comply with 80 and 75 dB(A) per SAE J986a. Moreover, as stated above, the severe WOT test procedure is simply not representative of urban driving. Furthermore, "according to most noise-rating schemes, people do not descriminate noise levels finer than about 5 dB(A).^{*} State acoustical experts from California, Maryland, and a number of local governments also agreed with our contention that the reduction will not result in a meaningful decrease in community noise.

Odell Statement

- "3) It is grossly unfair and inequitable for Oregon to continue to enforce stringent noise regulations on industrial and commercial sources, and ignore the most pervasive noise source in urban areas--the automobile."

Ford Comments:

In our opinion, Mr. Odell's statement is very general in nature and without any factual substantiation whatsoever. Many sources contribute to community noise including aircraft, industrial machinery, commercial installations and a multiplicity of surface transportation vehicles such as trucks, buses and passenger cars. Noise emanating from these latter vehicles is primarily generated by the powertrain and the tire/road surface interface. In alledging that the automobile is the most pervasive noise source in urban areas, Mr. Odell apparently doesn't understand that no meaningful reduction in overall noise levels would result in the urban community from further reduction of powertrain noise levels as measured by the WOT SAE J986a procedure.

^{*}Background Document for Product Noise Labeling, General Provisions, EPA 550/9-77-253, dated April 1977

EPA has recognized the fact that noise generated by the tire/road surface interface predominates at cruising speeds over 20-25 mph. It is for this reason that EPA has embarked on an extensive tire noise program. As a matter of fact, testing has already begun at the Automotive Proving Ground, Pecos, Texas.

From our data as reflected by Exhibit 4, powertrain noise becomes a subordinate source during light vehicle cruise and coast operating modes of operation at speeds above 18 mph. Consequently, the predominate source of light vehicle noise on the arterial highway referred to by Mr. Odell would emanate from the tire/road interface, not from the powertrain. It would seem that Mr. Odell has erroneously lumped together all noise generated by surface transportation without endeavoring to identify the sources of such noise and its contribution to community noise levels.

Odell Statement:

"4) The economic costs of compliance with the 75 dBA standard is reasonable."

Ford Comments:

Here again, Mr. Odell has failed to define what is meant by "reasonable". We think such statements border on irresponsibility. For example, in 1977 approximately 115,000 new passenger cars and trucks were sold in Oregon. Based on Ford's estimated retail price increase of at least \$73.00 for passenger cars this amounts to an annual cost to Oregon purchasers of over \$8 million for a dubious reduction in sound levels. On this basis, Oregon residents would be unnecessarily spending well over \$80 million dollars over a 10-year period without a distinguishable difference in the sound levels of such vehicles vs today's models.

In a statement to the EPA relating to Motorcycle Noise Standards and on the approach to transportation noise abatement, the Federal Council on Wage and Price Stability(*) made the following statement:

*Comments on Page 29 of the Council on Wage & Price Stability on Motorcycle Noise Standards and on the Environmental Protection Agency's Approach to Transportation Noise Abatement signed by Barry P. Bosworth, Director et al. dated June 22, 1978.

"To find an efficient scheme for a noise control program, one would like to find that set of regulations which would maximize net benefits to society. Because constructing an optimal policy would be extremely complex in its informational requirements, a good approximation would be to concentrate on reducing pollution from the source which has the greatest impact on society (noise level times exposure) down to the next greatest contributor, etc., if the marginal costs of abatement were equal. This would provide a cost-effective path of regulations. The next step would be to decide how far to go along that path. The most efficient policy would be to continue regulating until net benefits to society are maximized (that is, as long as marginal benefits exceed marginal costs).

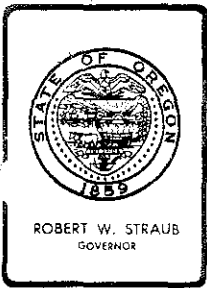
"Given that EPA has already selected an 80 dBA level for trucks, it would appear that as an approximation to the optimal policy an 83 dBA level for motorcycles may be justified. However, no further tightening on trucks or motorcycles is called for, and any standard for buses would be unjustified. 2/ The next step for EPA would be to consider the contribution of other transportation vehicles to the noise pollution problem to see whether the marginal benefits of regulating any other vehicle class (given current regulations) outweighs the marginal costs of regulation." (Underlining added)

We believe the foregoing statements from the analysis of EPA's proposed motorcycle regulations by the Council on Wage and Price Stability supports our position that the imposition of more stringent noise standards on light vehicles would not be cost effective.

* * * * *

Ford Motor Company
October 13, 1978

2/ Since marginal costs exceed marginal benefits in each of those cases."



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, October 27, 1978, EQC Meeting

Field Burning Regulations and Amendment to the Oregon
State Implementation Plan, Proposed Permanent Rule
Revision to Agricultural Burning Rules, OAR Chapter 340,
Sections 26-005 through 26-030 -- Request for Public Hearing

Background

The 1977 Oregon Legislative Assembly passed House Bill 2196 which mandated certain changes to the existing field burning law including establishing a maximum acreage limitation for 1978 of 180,000 acres. The law further required that acreage limitations would be thereafter determined by the Environmental Quality Commission (EQC). The new acreage schedule, and other substantial changes in the law, required the Environmental Quality Commission to amend Oregon Administrative Rule (OAR) Chapter 340, Sections 26-005 to 26-030. Due to the limited time period between legislative authorization and the 1977 field burning season, these rules were adopted as temporary in the absence of the required 30-day public notice for permanent rule adoptions. Additionally, in October 1977, the Department submitted to the Environmental Protection Agency (EPA) revisions to the State Implementation Plan (SIP) reflecting the new legislation and rules.

The revision request was returned by the EPA in January 1978 for correction of procedural and substantive deficiencies. Inadequate public notice prior to adoption of the 1977 season rules was identified as a procedural deficiency, while lack of continued reasonable progress toward attainment of federal air quality standards (particularly in the Eugene-Springfield area) was identified as a substantive deficiency. Without EPA approval, the 1977 limitation of 95,000 A established by 1975 law remained in effect and burning in excess of this amount was cause for EPA to issue a non-discretionary Notice of Violation to the Department in February. The EPA offered two alternatives to the enforcement of the 50,000A SIP limitation scheduled for 1978: 1) the Department would resubmit a SIP revision including a control strategy and analysis that would guarantee air quality standards attainment in the Eugene-Springfield non-attainment area, or 2) the Department would develop a one-year control strategy which would incorporate "all reasonable measures" to alleviate the air quality problem in the Willamette Valley and satisfy interested parties.



Contains
Recycled
Materials

Though research and monitoring programs were scheduled for the 1978 season, data and analysis would not be available until early 1979. Consequently, the Department could not develop strategies to guarantee air quality standards attainment in the absence of necessary data. The Department then negotiated with the City of Eugene and the Oregon Seed Council the "reasonable measures" alternative yielding a compromise which culminated in the EQC adoption of the May 26, 1978, temporary field burning rules and subsequent EPA approval of a one year interim control strategy.

The temporary rules adopted by the EQC at its May 26, 1978 meeting contained four new changes which promised to significantly affect air quality (smoke) impact and burning accomplishment. These may be summarized as follows:

1. An acreage restriction of 180,000A which could be reduced to 150,000A based on cumulative smoke intrusions as recorded in the Eugene-Springfield Air Quality Maintenance Area,
2. A loose straw moisture content (12% wet weight basis) restriction on burning after August 15, 1978, except under "Unlimited Ventilation Conditions",
3. A prohibition on burning acreages within the permit jurisdictions of several east Marion County fire districts and greater restrictions on burning south priority acreages when these areas are upwind of the Eugene-Springfield area; and
4. A requirement for into-the-wind strip burning or backfire burning of annual grass seed crops and cereal crops except under "Unlimited Ventilation Conditions".

When assessing the impact of these rule revisions, it is important to consider this summer's weather. During July and early August typically hot, dry weather conditions prevailed. However, beginning August 12, a long succession of rainy, high humidity days persisted until late September preventing burning. This period was interrupted by a brief drying episode from August 31 through September 2 during which time some burning was accomplished under favorable southerly winds and unlimited ventilation conditions. This long period of dampness delayed not only field burning but also harvesting of later maturing crops such as wheat, bentgrass, late perennial ryegrasses, and some row crops. Finally, beginning in late September, a stable high pressure system over the Pacific Northwest resulted in dry weather. Harvesting and burning operations resumed, although under generally poorer atmospheric ventilation conditions.

As of August 15, 1978, field burning smoke intrusions resulted in approximately eight hours of nephelometer readings above 2.4×10^{-4} B-scat, averaging the Eugene and Springfield totals. Consequently, the 150,000A limitation was not invoked by the EQC when it conferred on August 16, 1978.

Due chiefly to the weather patterns described above, the only significant burning period affected by the moisture content rule was that from August 31 through September 2. However, good ventilation existed throughout

this period and the moisture content rule was invoked only during the early afternoon hours when vertical mixing was insufficient to declare Unlimited Ventilation Conditions to exist.

The 1978 rules provided for burning in "Special Priority Areas" upwind of Eugene-Springfield. Though daily quotas were small, smoke concentrations were sufficient to send nephelometer readings above the "2.4" value. As a result, this burning was curtailed and all south priority burning was conducted under wind flow patterns protective of Eugene. Burning opportunities were accordingly reduced.

Due to what staff believes to be an unusually large number of days of Unlimited Ventilation Conditions sandwiched between wet days of no burning, into-the-wind striplighting and backfire burning requirements were not invoked as often as was predicted prior to the season. From strictly visual observations of such burns, three facts have become evident:

1. Backfire burning (as well as any fire with insignificant plume rise) has substantial ground level smoke impact downwind,
2. Smoke and plume develop from striplight burning is not significantly different than more typical ring or headfire burning except the last 10-15% of the acreage burns as a back-fire with its attendant smoke problem,
3. Backfires burn very slowly while striplights require more manpower (using traditional lighting equipment) to produce burning rates comparable to a headfire.

Though the Eugene-Springfield area fared well under this summer's program, the Lebanon-Sweet Home area again experienced significant smoke intrusions on south Valley burn days. Very high levels of fine particulate were identified by DEQ particulate samplers and nephelometers, as well as visual observation. Sweet Home also received a significant amount of smoke (which eventually impacted Eugene-Springfield too) on July 27th under northerly winds.

Smoke problems resulting in accidents on Interstate 5 occurred on two occasions this year. The first, on August 11, resulted from an uncontrolled burn which escaped from an authorized burning operation while the second, on October 5, was associated with an uncontrolled burn resulting from a propane flaming operation. In the second instance, there was an apparent violation of DEQ rules regarding field preparation for flaming.

Statement of Need

The Environmental Quality Commission is requested to consider adoption, as permanent rules, proposed, revised Agricultural Field Burning Rules (OAR, Chapter 340, Section 26-005 to 26-030).

1. Legal Authority: ORS 468.020, 468.460, and 468.475
2. Need for Rule:
 - a. To provide permanent operating rules to comply with 1977 Law, Chapter 650 (HB 2196) and federal law.

- b. To provide rules to facilitate improvements in smoke management and air quality.
- c. To establish acreage for which permits may be issued during 1979 and 1980.

3. Documents Relied Upon:

- a. Staff report from William H. Young, Director, Department of Environmental Quality, presented at March 31, 1978 EQC meeting.
- b. Memorandum and attachments regarding "Field Straw and Stubble Moistures," Thomas R. Miles, May 23, 1977.
- c. Staff report from William H. Young, Director, Department of Environmental Quality, presented at May 26, 1978, EQC Meeting.
- d. Draft report on south Willamette Valley grass straw moisture content measurements during summer 1978, Department of Environmental Quality, October 9, 1978.
- e. Preliminary results of Department of Environmental Quality open field burning emission test program, 1978 -- not published as of time of this writing, October 16, 1978.
- f. Personal communication with various representatives of the Oregon Seed Council, September 29 and October 5, 1978.
- g. Preliminary results of the Department of Environmental Quality field burning air quality monitoring program, October 19, 1978.
- h. Personal communication with various representatives of the City of Eugene, September 29 and October 6, 1978.

Evaluation

The 1978 field burning season operated under rules, some of which may be classified as experimental due to their temporary nature and the fact that they represented a significant departure from previous seasons' operations. These rule changes as well as some specific 1978 season problems are analyzed below.

In general, burning operations under these rules were satisfactory. In fact, it is the Department's evaluation that the 1978 acreage limitation as well as other rules were sufficient to prevent any measureable impact on federal health and welfare standards for Total Suspended Particulate in the Willamette Valley. Consequently, the attached proposed rules (Attachment 1) would retain the 1978 temporary rules with minor changes.

1. Acreage Limitations

As stated previously, the 180,000 acre limitation in conjunction with the 1978 burning rules resulted in no measureable impact on federal particulate standards due to field burning. Though this seems to indicate greater annual acreage limitations are feasible from the standpoint of meeting federal standards, two factors may argue in favor of continued limitations on burning. First, DEQ results are preliminary and staff could not, based on these results, justify major relaxations in burning rules or limitations and guarantee continued compliance. Second, the need to minimize the nuisance effects of field burning is a far more stringent operational criterion than compliance with federal standards. (The fact that health related complaints are received without violations of federal standards highlights the apparent inadequacy of the present standards and may argue in favor of continued acreage limits. However, it should be noted that the initiation of complaints is much more affected by daily smoke management decisions, or lack thereof, than annual acreage allowances.) Because of the uncertainty with regard to continued compliance with federal standards at higher acreage limitations, based on present preliminary results, the proposed rules would maintain the current 180,000A limitation.

The use of smoke intrusion incidents as a controlling factor in smoke management was beneficial in reducing smoke intrusions both in number and severity into Eugene-Springfield, though results are not readily quantifiable. Staff would propose to retain this rule. Though not identifiable as a useful smoke management tool, the potential for severe acreage reductions led to a somewhat more conservative posture in smoke management program operations which may have helped limit smoke problems. It is likely that the more conservative approach precluded some acreage from being burned even though its impact on Eugene-Springfield would have been near zero.

The nephelometer was used much more extensively than in previous years and anticipated nephelometer readings became a major factor in formulating burn releases. In general, burning releases, including times, places, and acreages, were more highly specified than in previous seasons to insure minimum Eugene-Springfield impact. This greater detail in releases necessitated more overall staff time than was utilized in past seasons.

2. Restrictions on Loose Straw Moisture Content

The Department supports the moisture content rule to control the burning of damp fields as analysis of data accumulated during the 1978 season indicates fuel moisture content to be a significant variable affecting total particulate production from field fires. However, further analysis of 1978 data may support a change away from the 12% moisture content value to a different value. A field testing program was conducted this summer to search for a relationship between grass straw physical characteristics and moisture content. Though some moisture content/physical property relationships were identified, no simple "crackle test" or other test were adequate to help facilitate a moisture content rule.

It should be pointed out that the loose straw moisture content (MC) does not reflect the overall MC of the fuel. Green regrowth adds significantly to overall MC as has been determined before and verified this summer. It is believed that the high moisture content in regrowth contributes to higher particulate emission. Analysis of emission testing data collected this summer will help determine more specifically the effect of regrowth on emissions.

Perhaps more important than total emissions is the adverse effect of regrowth (high MC fuel) on plume rise. Smoke from such fires has a much greater impact especially near the burn area.

Though the problem of high moisture content fuel is easily recognized, a solution that can be reasonably implemented by the industry does not appear to be available at this time. The Department believes a solution may be approached through:

- a. Promotion and/or prioritization of early season burning so that it is accomplished as soon after harvest as is practicable,
- b. Promotion of chopping and drying treatments by growers after the onset of green regrowth, and
- c. Drafting a general rather than field-by-field regulation to eliminate the burning of fields with excessive regrowth.

The Department would propose to follow-up on all three points before next season. However, development of the regulation in c. above should proceed based on the analysis of this summer's emission testing and its implementation should consider the scheduling of new equipment purchases or other requirements of seed growers.

3. Restrictions on Burning Upwind of Eugene-Springfield

Staff believes the new restrictions on burning in eastern Marion County and south Valley priority areas to have been instrumental in reducing field burning related smoke problems in the Eugene-Springfield area. It also limited burning opportunities and resulted in less burning being accomplished in these areas. Reports from south Valley fire districts with significant priority acreage in particular, indicated reduced burning. (However, wet weather was a much more significant factor in all areas.)

The Special Priority Areas identified in the 1978 temporary rules allowed some south Valley acreages to be burned upwind of the Eugene-Springfield area. However, burning in the areas could not be accomplished under northerly winds without exceeding the smoke intrusion (nephelometer) limitations in effect. These areas like other south priority areas must be burned under wind conditions that prevent surface level smoke impacts in Eugene and vicinity.

In adopting rules for 1978, provisions were made for burning upwind of highways previously protected by priority areas. This change was negotiated as a compromise off-setting to some degree, restrictions on burning upwind of Eugene-Springfield. This rule change did not contemplate uncontrolled burns such as those which resulted in traffic accidents this season.

On August 22, DEQ staff met with State Representative David Frohnmeier and representatives of various state agencies, the Oregon Seed Council, local fire districts, and the Governor's office to discuss the August 11 accident on Interstate 5. In summarizing that meeting, the Oregon Seed Council agreed to: 1) distribute warning signs to affected fire districts, 2) install an Oregon Seed Council radio in the State Police offices, and 3) work with the Department of Transportation to develop safety signs for warning of freeway burning situations. Local fire chiefs in attendance agreed to notify the State Police and the Oregon Department of Transportation offices when specific fields near the freeway would be burned. This information would include the specific location and approximate time. The Oregon Department of Transportation offered to 1) provide temporary signs for the rest of the season when smoke situations were expected, 2) review permanent sign design for use next season, and 3) review their present mowing schedules with an eye toward increasing their mowing efforts. The DEQ committed to 1) the use of test fires in priority areas near the major highways so that these areas may be burned under the safest, most controlled conditions, 2) to make field inspectors available for assistance whenever it is needed with regard to traffic problems, 3) contact the local CB REACT groups in an effort to gain their assistance in warning of bad traffic situations, and 4) carefully review the current field burning rules for changes which would potentially improve the safety along the highway during burning periods. The Department will follow-up on these agreements.

The attached rules would propose a return to the pre-1978 regulations regarding burning in highway priority areas. That is, no burning upwind of and within one-quarter mile of, protected highways. Such a restriction should not only minimize the direct impacts of regulated burns on these highways but would also reduce the likelihood of smoke from uncontrolled burns impacting the highway. Wildfires would have to spread across the one-quarter mile priority strip before causing serious smoke problems. Though possible, such fire spread is not likely under most south wind burning conditions.

Due to prevailing wind directions and the need to protect both the highways and the City of Eugene from smoke impact, burning in certain south Valley priority areas is likely to be severely restricted. To allow some relief of this situation, staff would propose to allow closely controlled burning upwind of the City of Eugene. Under proposed procedures, burning would be conducted using rapid ignition techniques demonstrated successfully by researchers at Oregon State University and by others and would only be allowed when:

- a. Burning conditions and techniques would be utilized such that under existing weather conditions smoke is expected to miss the cities of Eugene and Springfield or effectively pass over these cities at an altitude of at least 3000 feet above mean sea level,
- b. DEQ personnel, after being apprised of proposed lighting techniques, field location, and conditions, etc., specifically authorize the burn, and
- c. Surface level smoke impact is not expected to result in nephelometer measurements greater than 2.4×10^{-4} B-scat.

Such burning activities are analogous to those contemplated under "Special Priority Area" burning during the 1978 season except, due to better preparation, less

smoke impact is expected. Because of the close control by DEQ staff, these burns will be regulated in a manner similar to closely observed experimental burns.

Since this burning is proposed for concentration along highways, an added benefit of this approach, if successful, will be the development of a burned buffer strip adjacent to the highways thus contributing to improved fire and highway safety.

Unless unexpectedly successful, staff would anticipate less than 3000A to be burned under this program during 1979.

4. Requirements for Striplighting of Annuals and Cereals

As stated previously, weather conditions produced an unusually large number of "Unlimited Ventilation Conditions" days and wet days. As a result, striplight and backfire burning techniques were not used extensively. When these techniques were observed it was apparent that backfires produced excessive amounts, in staff's estimation, of ground level smoke and smoke impact, at some level, was assured for all areas along the plume trajectory.

Striplights were observed to have markedly better plume rise than backfires and, for cases observed, appeared in all respects much like fields that had been headfired under similar conditions. However, as a striplit field nears completion, it approximates a backfire burn and produces a similar smoke distribution. Roughly ten percent of the field is burned under these conditions.

Both backfire and striplight burns are slower than headfire burns reducing the amount of burning accomplished in a given time period. The time for completion of a striplit field can be reduced by increasing the total length of the flame front in the field. This usually requires more manpower and as lines of fire are spaced more closely, flame front movement begins to approximate that of a headfire. As a headfire is more closely approximated, particulate emission would be expected to increase.

The DEQ field burning emission test program this summer conducted tests of both headfires and backfires but because of the rain-shortened season, was unable to test striplighting methods. (It is hoped striplighting may be computer simulated using data from backfires and headfires). Preliminary results indicate the expected lower emissions of the backfire as compared with a headfire. Extrapolation to striplights (based on University of California research) would also predict lower emissions than those produced by headfires.

Staff believes, from general observation, that the essentially zero plume rise effected by a backfire burn is unacceptable even if measured emissions are low. It would therefore be withdrawn as a suggested burning technique. (Being the slowest of burning methods, and therefore easiest to control, backfires will of necessity be used to establish fire breaks. Extensive backfiring beyond the need for firebreak establishment has always been discouraged by staff.) Striplights, because of their potentially reduced emission and good plume rise, would be retained in the proposed rules as a requirement on annual and cereal fields under average or poor ventilation conditions.

The Department is awaiting final results from its own emission test program and a plume evaluation study conducted, under contract, by Oregon State University. These studies, coupled with further in-house analysis, may support revisions to the proposed striplight requirement. Such analysis will be completed as part of the Department's SIP development.

5. Other Rule Changes

Two rule revisions are proposed to expedite burning and simplify record-keeping operations. First, the requirement for written permits at the burn site would be dropped, and second, the requirement for record-keeping by local fire districts of approved alternatives to open field burning would be eliminated.

6. Procedural Changes

Three areas of concern within the smoke management program which staff proposes to address through operational changes are continued smoke problems in Lebanon and Sweet Home, public notification of proposed burning activities, and improved coordination with seed growers during burning operations. Major attention has traditionally focused on the protection of Eugene and Springfield from smoke intrusion while serious smoke intrusions have occurred in both Lebanon and Sweet Home. Lebanon, in particular, is downwind of perhaps 100,000A of grass seed fields on a south burn day and, though protected by a three-mile wide priority area, smoke concentrations are high during intrusions.

To reduce smoke intrusions in this area is expected to involve planning with Lebanon and all adjacent fire districts, the Seed Council, and local growers, and may involve the development priority zones, acreage transferrals, and more specific siting of burning operations. Discussions with affected agencies will begin this fall.

As requested by the Commission at its August meeting, staff investigated public disbursement of field burning information through the Associated Press and United Press International. Unfortunately, neither wire service expressed an interest in the information nor indicated they would use it.

Staff is investigating, and would propose to adopt if feasible, the use of commercial radio, either through public service or paid announcements to disburse daily burning plans. It is proposed that the program would be in operation next season.

For the past two years DEQ and the Oregon Seed Council have operated the field burning radio network. Communication between fire districts, the Seed Council offices, and DEQ staff members have thus been facilitated. Starting this season active communication with members of the Seed Council Smoke Management Committee added to the overall information available to the staff meteorologist.

Unfortunately, this season communications broke down during a period when many seed growers were asking for burning to be stopped by DEQ. To avoid this situation in the future, staff members will communicate regularly during burning periods with Seed Council members in affected areas. After equipment acquisition, staff will receive local surface meteorological information as part of these communications.

Summation

The Department requests a public hearing after which the Commission shall by order indicate the number of acres for which permits may be issued for the burning of such acreage as it considers appropriate and necessary, upon finding that open burning the acreage will not substantially impair public health and safety and will not substantially interfere with compliance with relevant state and federal laws regarding air quality.

Results from special monitoring programs established to determine the impact of field burning on Willamette Valley air quality, indicate field burning has no measureable impact on federal health and welfare particulate standards under the rules and acreage limitations in effect during the 1978 burning season.

Effects of other specific rules adopted for the 1978 season and proposed revisions for the 1979 season are summarized as follows:

1. Regulation of total acreage based on cumulative hours of smoke intrusion appeared effective in limiting smoke intrusions. Since the nephelometer is also a useful smoke management tool this rule is proposed to be retained.
 2. Preliminary results show increased straw moisture content (MC) to result in increased particulate emissions. Since the 1978 MC rule did not significantly restrict burning, the rule restricting fields to be burned only when loose straw MC is 12% or below (except under Unlimited Ventilation Conditions) is proposed to be retained.
 3. Rules restricting burning upwind of Eugene effectively reduced smoke intrusions in that city. However, since the burning of Special Priority areas and quotas routinely caused nephelometer readings to exceed 2.4×10^{-4} B-scat, Special Priority definitions and quotas would be dropped. Proposed rules would allow burning in this area only under close Department supervision. Rules restricting the burning of eastern Marion County when that area is upwind of Eugene-Springfield are proposed to be retained.
- Because of the threat to traffic safety which burning upwind of a highway represents, temporary rules allowing the practice are proposed to be eliminated.
4. Backfire burning causes extensive ground level smoke under all circumstances. Striplighting appears to develop adequate plume rise though both it and backfiring are slower than headfire techniques. DEQ preliminary analysis indicates backfires and, by extrapolation from other data, striplights, to have lower emissions than headfires. Because of its extremely poor plume rise, backfiring is proposed for elimination from the rules as an acceptable burning techniques. The rule requiring striplighting of annual and cereal grains is proposed to be retained and studied further.
 5. In order to simplify fire district record-keeping and expedite the permitting process, two rules are proposed for elimination. The first, requiring local fire districts to keep records of burning accomplished by approved alternatives to open field burning, and the second, requiring written authorization to burn at the burn site. Authority to burn, however, must be readily demonstrable upon request.

The Department proposes through operational procedures to address smoke problems in the Lebanon-Sweet Home area. This will be accomplished this fall through better fire district coordination and planning, possible adoption of special priority burning zones, and more specific siting of major burn operations. Additionally, operating procedures are proposed to give the public better notice of intended burning activities (using commercial radio) and improve DEQ-Seed Council Smoke Management Committee communications.

It is the staff's belief that the Commission can make the finding that the open burning of 180,000A as regulated by the attached proposed rules, will not substantially impair public health and safety and will not substantially interfere with compliance with relevant state and federal laws regarding air quality.

Director's Recommendation

Based on the findings in the Summation, it is recommended that a public hearing before the Environmental Quality Commission on November 17, 1978, be authorized to receive testimony regarding the establishment of open field burning acreage limitations for 1979 and 1980, findings required of the Commission regarding the effect of such limitations on public health and safety and compliance with state and federal air quality laws, and revisions to the Agricultural Burning Rules, OAR, Chapter 340, Sections 26-005 through 26-030, to be submitted as a revision to the State of Oregon Clean Air Act State Implementation Plan. The hearing is scheduled for 9:00 a.m. at the Eugene City Council Chamber, 777 Pearl Street, Eugene, Oregon.

Michael Downs
for
WILLIAM H. YOUNG

Scott A. Freeburn
686-7837
10/22/78

Attachment 1: Proposed Field Burning Rules, OAR, Chapter 340, Sections
26-005 through 26-030

Attachment I

DEPARTMENT OF ENVIRONMENTAL QUALITY
Chapter 340

Subdivision 6
Agricultural Operations
AGRICULTURAL BURNING

26-005 DEFINITIONS. As used in this general order, regulation and schedule, unless otherwise required by context:

- (1) Burning seasons:
 - (a) "Summer Burning Season" means the four month period from July 1 through October 31.
 - (b) "Winter Burning Season" means the eight month period from November 1 through June 30.
- (2) "Department" means the Department of Environmental Quality.
- (3) "Marginal Conditions" means conditions defined in ORS 468.450(1) under which permits for agricultural open burning may be issued in accordance with this regulation and schedule.
- (4) "Northerly Winds" means winds coming from directions in the north half of the compass, at the surface and aloft.
- (5) "Priority Areas" means the following areas of the Willamette Valley:
 - (a) Areas in or within 3 miles of the city limits of incorporated cities having populations of 10,000 or greater.
 - (b) Areas within 1 mile of airports servicing regularly scheduled airline flights.
 - (c) Areas in Lane County south of the line formed by U. S. Highway 126 and Oregon Highway 126.
 - (d) Areas in or within 3 miles of the city limits of the City of Lebanon.
 - (e) Areas on the west side of and within 1/4 mile of these highways; U. S. Interstate 5, 99, 99E, and 99W. Areas on the south side of and within 1/4 mile of U. S. Highway 20 between Albany and Lebanon, Oregon Highway 34 between Lebanon and Corvallis, [Oregon] Oregon Highway 228 from its junction south of Brownsville to its rail crossing at the community of Tulsa.
- (6) "Prohibition Conditions" means atmospheric conditions under which all agricultural open burning is prohibited (except where an auxiliary fuel is used such that combustion is nearly complete, or an approved sanitizer is used).

"[----]" represents material deleted
Underlined material represents proposed additions

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

(8) "Ventilation Index (VI)" means a calculated value used as a criterion of atmospheric ventilation capabilities. The Ventilation Index as used in these rules is defined by the following identity:

$$VI = \frac{\text{Mixed depth (feet)}}{1000} \times \text{Average wind speed through the mixed depth (knots)}$$

(9) [~~8~~] "Willamette Valley" means the areas of Benton, Clackamas, Lane, Linn, Marion, Multnomah, Polk, Washington and Yamhill Counties lying between the crest of the Coast Range and the crest of the Cascade Mountains, and includes the following:

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

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

(10) [~~9~~] "Commission" means the Environmental Quality Commission.

(11) [~~10~~] "Local Fire Permit Issuing Agency" means the County Court or Board of County Commissioners or Fire Chief of a Rural Fire Protection District or other person authorized to issue fire permits pursuant to ORS 477.515, 477.530, 476.380 or 478.960.

(12) [~~11~~] "Open Field Burning Permit" means a permit issued by the Department pursuant to ORS 468.458.

(13) [~~12~~] "Fire Permit" means a permit issued by a local fire permit issuing agency pursuant to ORS 477.515, 477.530, 476.380 or 478.960.

(14) [~~13~~] "Validation Number" means a unique three-part number issued by a local fire permit issuing agency which validates a specific open field burning permit for a specific acreage of a specific day. The first part of the validation number shall indicate the number of the month and the day of issuance, the second part the hour of authorized burning based on a 24 hour clock and the third part shall indicate the size of acreage to be burned (e.g., a validation number issued August 26 at 2:30 p.m. for a 70 acre burn would be 0826-1430-070).

(15) [~~14~~] "Open Field Burning" means burning of any perennial grass seed field, annual grass seed field or cereal grain field in such manner that combustion air and combustion products are not effectively controlled.

(16) "Backfire Burning" means a method of burning fields in which the flame front does not advance with the existing surface winds. The method requires ignition of the field only on the downwind side.

(17) "Into-the-Wind Strip Burning" means a modification of backfire burning in which additional lines of fire are ignited by advancing directly into the existing surface wind after completing the initial backfires. The technique increases the length of the flame front and therefore reduces the time required to burn a field

(18) [~~15~~] "Approved Field Sanitizer" means any field burning device that has been approved by the Department as an alternative to open field burning.

(19) [~~16~~] "Approved Experimental Field Sanitizer" means any field burning device that has been approved by the Department for trial as a potential alternative to open burning or as a source of information useful to further development of field sanitizers.

(20) [~~17~~] "After-Smoke" means persistent smoke resulting from the burning of a grass seed or cereal grain field with a field sanitizer, and emanating from the grass seed or cereal grain stubble or accumulated straw residue at a point 10 feet or more behind a field sanitizer.

(21) [~~18~~] "Leakage" means any smoke resulting from the use of a field sanitizer which is not vented through a stack and is not classified as after-smoke.

(22) [~~19~~] "Approved Pilot Field Sanitizer" means any field burning device that has been observed and endorsed by the Department as an acceptable but improvable alternative to open field burning, the operation of which is expected to contribute information useful to further development and improved performance of field sanitizers.

(23) [~~20~~] "Approved Alternative Method(s)" means any method approved by the Department to be a satisfactory alternative method to open field burning.

(24) [~~21~~] "Approved Interim Alternative Method" means any interim method approved by the Department as an effective method to reduce or otherwise minimize the impact of smoke from open field burning.

(25) [~~22~~] "Approved Alternative Facilities" means any land, structure, building, installation, excavation, machinery, equipment or device approved by the Department for use in conjunction with an Approved Alternative Method or an Approved Interim Alternative Method for field sanitation.

26-010 GENERAL PROVISIONS. The following provisions apply during both summer and winter burning seasons in the Willamette Valley unless otherwise specifically noted.

(1) Priority for Burning. On any marginal day, priorities for agricultural open burning shall follow those set forth in ORS 468.450 which give perennial grass seed fields used for grass seed production first priority, annual grass seed fields used for grass seed production second priority, grain fields third priority and all other burning fourth priority.

(2) Permits required.

(a) No person shall conduct open field burning within the Willamette Valley without first obtaining a valid open field burning permit from the Department and a fire permit and validation number from the local fire permit issuing agency for any given field for the day that the field is to be burned.

(b) Applications for open field burning permits shall be filed on Registration/Application forms provided by the Department.

(c) Open field burning permits issued by the Department are not valid until acreage fees are paid pursuant to ORS 468.480(1)(b) and a validation number is obtained from the appropriate local fire permit issuing agency for each field on the day that the field is to be burned.

(d) As provided in ORS 468.465(1), permits for open field burning of cereal grain crops shall be issued only if the person seeking the permits submits to the issuing authority a signed statement under oath or affirmation that the acreage to be burned will be planted to seed crops (other than cereal grains, hairy vetch, or field pea crops) which require flame sanitation for proper cultivation.

(e) Any person granted an open field burning permit under these rules shall maintain a copy of said permit at the burn site or be able to readily demonstrate authority to burn at all times during the burning operation and said permit shall be made available for at least one year after expiration for inspection upon request by appropriate authorities.

(f) At all times proper and accurate records of permit transactions and copies of all permits shall be maintained by each agency or person involved in the issuance of permits, for inspection by the appropriate authority.

(g) Open field burning permit issuing agencies shall submit to the Department on forms provided, weekly summaries of field burning activities in their permit jurisdiction during the period July 1 to October 15. Weekly summaries shall be mailed and postmarked no later than the first working day of the following week.

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

~~[(i)-No substance or material which normally emits dense smoke or [ob]noxious odors may be used for auxiliary fuel in the igniting of debris, cuttings or prunings.]~~

~~[(j)-Use of approved field sanitizers shall require a fire permit and permit agencies or agents shall keep up-to-date records of all acreages burned by such sanitizers.]~~

(3) Fuel conditions shall be limited as follows:

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

(b) No substance or material which normally emits dense smoke or [ob]noxious odors may be used for auxiliary fuel in the igniting of debris, cuttings or prunings.

(c) After August 15, 1978, no field shall be burned having a loose straw moisture content exceeding 12% wet weight basis except such moisture content restrictions may be waived by the Department when unlimited ventilation conditions exist. If the Department finds that under this moisture content rule, enforcement has caused or is likely to cause a reduction in excess of 50% of the acreage that remains to be burned in compliance with the remaining rules, this moisture content rule shall not be enforced. The Department may, on a field by field basis, prohibit burning of fields containing high moisture content stubble and/or regrowth material which, when burned, would result in excessive low level smoke.

(4) [(3)] In accordance with ORS 468.450 the Department shall establish a schedule which specifies the extent and type of burning to be allowed each day. During the time of active field burning, the Department shall broadcast this schedule over the Oregon Seed Council radio network operated for this purpose, on an as needed basis, depending on atmospheric and air quality conditions.

(a). Any person open burning or preparing to open burn under these rules shall conduct the burning operation in accordance with the Department's burning schedule.

(b) Any person open burning or preparing to open burn fields under these rules shall monitor the Department's field burning schedule broadcasts and shall conduct the burning operations in accordance with the announced schedule.

(5) [(4)] Any person open field burning under these rules shall actively extinguish all flames and major smoke sources when prohibition conditions are imposed by the Department. Normal after smoulder excepted.

(6) No person shall conduct open burning which results in a direct smoke and/or ash nuisance for adjacent residential communities, schools, or other smoke sensitive areas.

26-011 CERTIFIED ALTERNATIVE TO OPEN FIELD BURNING.

(1) Approved pilot field sanitizers, approved experimental field sanitizers, or propane flammers may be used as alternatives to open field burning subject to the provisions of this section.

(2) Approved Pilot Field Sanitizers.

(3) Procedures for submitting application for approval of pilot field sanitizers.

Applications shall be submitted in writing to the Department and shall include, but not be limited to, the following:

- (i) Design plans and specifications;
- (ii) Acreage and emission performance data and rated capacities;
- (iii) Details regarding availability of repair service and replacement parts;
- (iv) Operational instructions.

(b) Emission Standards for Approved Pilot Field Sanitizers.

(A) Approved pilot field sanitizers shall be required to demonstrate the capability of sanitizing a representative harvested grass or cereal grain field with an accumulative straw and stubble fuel load of not less than 1.0 ton/acre, dry weight basis, and which has an average moisture content not less than 10%, at a rate of not less than 85% of rated maximum capacity for a period of 30 continuous minutes without exceeding emission standards as follows:

- (i) Main stack: 20% average opacity;
- (ii) Leakage: not to exceed 20% of the total emissions.
- (iii) After-smoke: No significant amounts originating more than 25 yards behind the operating machine.

(B) The Department shall certify in writing to the manufacturer, the approval of the pilot field sanitizer within thirty (30) days of the receipt of a complete application and successful compliance demonstration with the emission standards of 2(b)(A). Such approval shall apply to all machines built to the specifications of the Department certified field sanitation machine.

(C) In the event of the development of significantly superior field sanitizers, the Department may decertify approved pilot field sanitizers previously approved, except that any unit built prior to this decertification in accordance with specifications of previously approved pilot field sanitizers shall be allowed to operate for a period not to exceed seven years from the date of delivery provided that the unit is adequately maintained as per (2)(c)(A).

(c) Operation and/or modification of approved pilot field sanitizers.

(A) Operating approved pilot field sanitizers shall be maintained to design specifications (normal wear expected) i.e., skirts, shrouds, shields, air bars, ducts, fans, motors, etc., shall be in place, intact and operational.

(B) Modifications to the structure or operating procedures which will knowingly increase emissions shall not be made.

(C) Any modifications to the structure or operating procedures which result in increased emissions shall be further modified or returned to manufacturer's specifications to reduce emissions to original levels or below as rapidly as practicable.

(D) Open fires away from the sanitizers shall be extinguished as rapidly as practicable.

(3) Experimental field sanitizers not meeting the emission criteria specified in 2(b)(A) above, may receive Department authorization for experimental use for not more than one season at a time, provided:

(a) The operator of the field sanitizers shall report to the Department the locations of operation of experimental field sanitizers.

(b) Open fires away from the machines shall be extinguished as rapidly as practicable.

(c) Adequate water supply shall be available to extinguish open fires resulting from the operation of field sanitizers.

(4) Propane Flamers. Propane flaming is an approved alternative to open field

burning provided that all of the following conditions are met:

- (a) Field sanitizers are not available or otherwise cannot accomplish the burning.
- (b) The field stubble will not sustain an open fire.
- (c) One of the following conditions exist:
 - (A) The field has been previously open burned and appropriate fees paid.
 - (B) The field has been flailchopped, mowed, or otherwise cut close to the ground and loose straw has been removed to reduce the straw fuel load as much as practicable.

26-012 REGISTRATION AND AUTHORIZATION OF ACREAGE TO BE OPEN BURNED.

- (1) On or before April 1 of each year, all acreages to be open burned under this rule shall be registered with the local fire permit issuing agency or its authorized representative on forms provided by the Department. A nonrefundable \$1.00 per acre registration fee shall be paid at the time of registration.
- (2) Registration of acreage after April 1 of each year shall require:
 - (a) Approval of the Department.
 - (b) An additional late registration fee of \$1.00 per acre if the late registration is determined by the Department to be the fault of the late registrant.
- (3) Copies of all Registration/Application forms shall be forwarded to the Department and the Executive Department promptly by the local fire permit issuing agency.
- (4) The local fire permitting agency shall maintain a record of all registered acreage by assigned field number, location, type of crop, number of acres to be burned and status of fee payment for each field.
- (5) Burn authorizations shall be issued by the local fire permit issuing agency up to daily quota limitations established by the Department and shall be based on registered fee-paid acres and shall be issued in accordance with the priorities established by subsection 26-010(1) of these rules, except that fourth priority burning shall not be permitted from July 15 to September 15 of any year unless specifically authorized by the Department.
- (6) No local fire permit issuing agency shall authorize open field burning of more acreage than may be suballocated annually to the District by the Department pursuant to Section 26-013(5) of these rules.

26-013 LIMITATION AND ALLOCATION OF ACREAGE TO BE OPEN BURNED.

- (1) Except for acreage to be burned under 26-013(6) and (7), the maximum acreage to be open burned under these rules:
 - (a) ~~[During 1978;]~~ Shall not exceed 180,000 acres.
 - (b) If by August 15 of each year, the average of total cumulative hours of nephelometer readings exceeding 2.4×10^{-4} 8-scat units at Eugene and Springfield, which have been determined by the Department to have been significantly caused by field burning, equals or exceeds 13 hours, the maximum acreage to be open burned under these rules shall not exceed 150,000 acres and the sub-allocation to the fire permit issuing agencies shall be reduced accordingly, subject to the further provisions that:
 - (A) Unused permit allocations may be validated and used after the 150,000 acre cut-off only on unlimited ventilation days as may be designated by the Department, and
 - (B) If by August 15 of each year, the acreage burned exceeds 120,000 acres the Commission may establish a further acreage limitation not to exceed 15,000 acres over and above the 150,000 acre limitation and authorize permits to be issued pursuant thereto, in order to provide growers of bentgrass seed crops

and other late maturing seed crops opportunity to burn equivalent to that afforded growers of earlier maturing crops.

(c) ~~[(b)]~~ During 1979 and each year thereafter shall be determined and established by the Commission ~~[by January 1 of 1979 and]~~ by January 1 of each odd year ~~[thereafter]~~. ~~[This determination]~~ The Commission shall ~~[be made]~~ after taking into consideration the factors listed in subsection (2) of ORS 468.460, ~~[shall]~~ by order indicate the number of acres for which permits may be issued for the burning of such acreage as it considers appropriate and necessary, upon finding that open burning of such acreage will not substantially impair public health and safety and will not substantially interfere with compliance with relevant state and federal laws regarding air quality.

(2) Any revisions to the maximum acreage to be burned, allocation procedures, permit issuing procedures or any other substantive changes to these rules affecting the open field burning program for any year shall be made prior to June 1 of that year. In making these rule changes the Commission shall consult with Oregon State University (OSU) and may consult with other interested agencies.

(3) Acres burned on any day by approved field sanitizers and approved experimental field sanitizers and propane flamers shall not be applied to open field burning acreage allocations or quotas, and such equipment may be operated under either marginal or prohibition conditions.

(4) In the event that total registration is less than or equal to the acreage allowed to be open burned under section 26-013(1) all registrants shall be allocated 100 percent of their registered acres.

(5) In the event that total registration exceeds the acreage allowed to be open burned under 26-013(1) the Department may issue acreage allocations to growers totaling not more than 110 percent of the acreage allowed under Section 26-013(1). The Department shall monitor burning and shall cease to issue burning quotas when the total acreage reported burned equals the maximum acreage allowed under section 26-013(1).

(a) Each year the Department shall suballocate 110 percent of the total acre allocation established by the Commission, as specified in Section 26-013(1), to the respective growers on a pro rata share basis of the individual acreage registered as of April 1 to the total acreage registered as of April 1.

(b) Except as provided in sub-section (1)(b) of this section, ~~[Each year]~~ the Department shall suballocate the total acre allocation established by the Commission, as specified in Section 26-013(1) to the respective fire permit issuing agencies on a pro rata share basis of the acreage registered within each fire permit issuing agency's jurisdiction as of April 1 of each year to the total acreage registered as of April 1 of each year.

(c) In an effort to insure that permits are available in areas of greatest need, to coordinate completion of burning, and to achieve the greatest possible permit utilization, the Department may adjust, in cooperation with the fire districts, allocations of the maximum acreage allowed in Section 26-013(1).

(d) Transfer of allocations for farm management purposes may be made within and between fire districts on a one-in/one-out basis under the supervision of the Department. Transfer of allocations between growers are not permitted after the maximum acres specified in Section 26-013(1) have been burned within the Valley.

(e) Except for additional acreage allowed to be burned by the Commission as provided for in ~~[(7)]~~ (6) and ~~[(8)]~~ (7) of this subsection no fire district shall allow acreage to be burned in excess of their allocations assigned pursuant to (b), (c) and (d) above.

(6) [~~7~~] Notwithstanding the acreage limitations under 26-013(1), the Department may allow experimental open burning pursuant to Section 9 of the 1977 Oregon Laws, Chapter 650, (HB 2196). Such experimental open burning shall be conducted only as may be specifically authorized by the Department and will be conducted for gathering of scientific data, or training of personnel or demonstrating specific practices. The Department shall maintain a record of each experimental burn and may require a report from any person conducting an experimental burn stating factors such as:

1. Date, time and acreage of burn.
2. Purpose of burn.
3. Results of burn compared to purpose.
4. Measurements used, if any.
5. Future application of results of principles featured.

(a) Experimental open burning, exclusive of that acreage burned by experimental open field sanitizers, shall not exceed 7500 acres during 1978.

(b) For experimental open burning the Department may assess an acreage fee equal to that charged for open burning of regular acres. Such fees shall be segregated from other funds and dedicated to the support of smoke management research to study variations of smoke impact resulting from differing and various burning practices and methods. The Department may contract with research organizations such as academic institutions to accomplish such smoke management research.

(7) [~~8~~] Pursuant to ORS 468.475(6) and (7) the Commission may permit the emergency open burning under the following procedures:

(a) A grower must submit to the Department an application form for emergency field burning requesting emergency burning for one of the following reasons;

(A) Extreme hardship documented by:

An analysis and signed statement from a CPA, public accountant, or other recognized financial expert which establishes that failure to allow emergency open burning as requested will result in extreme financial hardship above and beyond mere loss of revenue that would ordinarily accrue due to inability to open burn the particular acreage for which emergency open burning is requested. The analysis shall include an itemized statement of the applicant's net worth and include a discussion of potential alternatives and probable related consequences of not burning.

(B) Disease outbreak, documented by:

An affidavit or signed statement from the County Agent, State Department of Agriculture or other public agricultural expert authority that, based on his personal investigation, a true emergency exists due to a disease outbreak that can only be dealt with effectively and practically by open burning.

The statement must also include at least the following:

- i) time field investigation was made,
- ii) location and description of field,
- iii) crop,
- iv) infesting disease,
- v) extent of infestation (compared to normal),
- vi) necessity and urgency to control,
- vii) availability, efficacy and practicability of alternative control procedures,
- viii) probable damages or consequences of non-control.

(C) Insect infestation, documented by:

Affidavit or signed statement from the County Agent, State Department of Agriculture or other public agricultural expert authority that, based on his personal investigation, a true emergency exists due to an insect infestation that can only be dealt with effectively and practicably by open burning. The statement must also include at least the following:

- i) time field investigation was made,
- ii) location and description of field,
- iii) crop,
- iv) infesting insect,
- v) extent of infestation (compared to normal),
- vi) necessity and urgency to control,
- vii) availability, efficacy, and practicability of alternative control procedures,
- viii) probable damages or consequences of non-control.

(D) Irreparable damage to the land documented by an:

An affidavit or signed statement from the County Agent, State Department of Agriculture, or other public agricultural expert authority that, based on his personal investigation, a true emergency exists which threatens irreparable damage to the land and which can only be dealt with effectively and practicably by open burning. The statement must also include at least the following:

- i) time of field investigation,
- ii) location and description of field,
- iii) crop,
- iv) type and characteristics of soil,
- v) slope and drainage characteristics of field,
- vi) necessity and urgency to control,
- vii) availability, efficacy and practicability of alternative control procedures,
- viii) probable damages or consequences of non-control.

(b) Upon receipt of a properly completed application form and supporting documentation the Commission shall within 10 days, return to the grower its decision.

(c) An open field burning permit, to be validated upon payment of the required fees, shall be promptly issued by the Department for that portion of the requested acreage which the Commission has approved.

(d) Application forms for emergency open field burning provided by the Department must be used and may be obtained from the Department either in person, by letter or by telephone request.

(8) [~~9~~] The Department shall act, pursuant to this section, on any application for a permit to open burn under these rules within 60 days of registration and receipt of the fee provided in ORS 468.480.

(9) [~~10~~] The Department may on a fire district by fire district basis, issue limitations more restrictive than those contained in these regulations when in their judgment it is necessary to attain and maintain air quality.

26-015 WILLAMETTE VALLEY SUMMER BURNING SEASON REGULATIONS

As provided for in Section 6 of Oregon Law 1977, Chapter 650, the Department shall conduct a smoke management program which shall include in addition to other provisions covered in these rules the following provisions:

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

(a) Marginal Class N conditions: Forecast northerly winds, a mixing depth greater than 3500 feet and relative humidity less than 50 percent.

(b) Marginal Class S conditions: Forecast southerly winds.

(c) Prohibition conditions: Forecast northerly winds, a mixing depth of 3500 feet or less, and/or relative humidity greater than 50 percent.

(d) Unlimited Ventilation conditions: A mixing depth of 5000 feet or greater and a ventilation index of 32.5 or greater.

(2) Quotas.

(a) Except as provided in this subsection, the total acreage of permits for open field burning shall not exceed the amount authorized by the Department for each marginal day. Daily authorizations of acreages shall be issued in terms of basic quotas or, priority area quotas as listed in Table 1, attached as Exhibit A and incorporated by reference into this regulation and schedule, and defined as follows:

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

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

(b) Willamette Valley permit agencies or agents not specifically named in Table 1 shall have a basic quota and priority area quota of 50 acres only if they have registered acreage to be burned within their jurisdiction.

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

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

(3) Burning Hours.

(a) Burning hours may begin at 9:30 a.m. PDT, under marginal conditions but no open field burning may be started later than one-half hour before sunset or be allowed to continue burning later than one-half hour after sunset.

(b) The Department may alter burning hours according to atmospheric ventilation conditions when necessary to attain and maintain air quality.

(c) Burning hours may be reduced by the fire chief or his deputy when necessary to protect from danger by fire.

(4) Extent and Type of Burning.

(a) Prohibition. Under prohibition conditions, no fire permits or validation numbers for agricultural open burning shall be issued and no burning shall be conducted, except where an auxiliary liquid or gaseous fuel is used such that combustion is essentially complete, or an approved field sanitizer is used.

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

(A) North Valley: one basic quota may be issued in accordance with Table 1[.] except that no acreage located within the permit jurisdictions of Aumsville, Drakes Crossing, Marion County District 1, Silverton, Stayton, Sublimity, and the Marion County portions of the Clackamas-Marion Forest Protection District shall be burned upwind of the Eugene-Springfield non-attainment area.

(B) South Valley: one priority area quota for priority area burning may be issued in accordance with Table 1.

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

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

(B) South Valley: One basic quota may be issued in accordance with Table 1.

(d) Special Restrictions on Priority Area Burning.

(A) No priority acreage may be burned on the upwind side of any city, airport, or highway within the same priority areas.

(B) No south priority acreage [may] shall be burned upwind of [any-city; airport;-or-highway-within-a-priority-area-unless-the-mixing-height-is-forecast greater-than-4,000-feet:] the Eugene-Springfield non-attainment area unless when burned the resultant smoke is effectively passed over the city at no less than 3000 feet above mean sea level.

[~~(C)~~-All south-priority-acreages-located-upwind-of-the-Eugene-Springfield priority-area-shall-be-burned-using-backing-fire-or-into-the-wind-strip[+ighting techniques;-except-as-provided-by-26-015(4)(c):-]

(e) Restrictions on burning techniques.

(A) All annual grass seed crops, cereal crops, and if so directed by the Department, bentgrass crops shall be burned using into-the-wind strip burning methods except when unlimited ventilation conditions exist.

(B) [~~(e)~~] The Department shall require acreages to be burned using [back-fire] backfire or into-the-wind strip[+ighting] burning techniques when, in the Department's judgment, use of such techniques will reduce adverse effects on air quality.

[(5) - After September 1, 1978, no field shall be burned which has an average fuel moisture content greater than 20 percent wet weight basis, as determined by using the Department of Environmental Quality fuel moisture test procedures.]

TABLE 1
FIELD BURNING ACREAGE QUOTAS
NORTH VALLEY AREAS

<u>County/Fire District</u>	<u>Quota</u>	
	<u>Basic</u>	<u>Priority</u>
<u>North Valley Counties</u>		
<u>Clackamas County</u>		
Canby RFPD	50	0
Clackamas County #54	50	0
Clackamas - Marion FPA	[50] <u>100</u>	0
Estacada RFPD	75	0
Molalla RFPD	50	0
Monitor RFPD	50	0
Scotts Mills RFPD	<u>50</u>	<u>0</u>
Total	[375] <u>425</u>	0
<u>Marion County</u>		
Aumsville RFPD	[50] <u>100</u>	0
Aurora-Donald RFPD	50	50
Drakes Crossing RFPD	[50] <u>100</u>	0
Hubbard RFPD	50	0
Jefferson RFPD	225	50
Marion County #1	[100] <u>200</u>	50
Marion County Unprotected	50	50
Mt. Angel RFPD	50	0

TABLE I
(continued)

<u>County/Fire District</u>	<u>Quota</u>	
	<u>Basic</u>	<u>Priority</u>
<u>North Valley Counties</u>		
<u>Marion County (continued)</u>		
St. Paul RFPD	125	0
Salem City	50	50
Silverton RFPD	[300] <u>600</u>	0
Stayton RFPD	[+50] <u>300</u>	0
Sublimity RFPD	[250] <u>500</u>	0
Turner RFPD	50	50
Woodburn RFPD	<u>125</u>	<u>50</u>
Total	[+675] <u>2575</u>	[200] <u>350</u>
<u>Polk County</u>		
[Polk-County-Non-District] <u>Amity #2</u>	50	0
Southeast Rural Polk	400	50
Southwest Rural Polk	<u>125</u>	<u>50</u>
Total	<u>575</u>	<u>100</u>
<u>Washington County</u>		
Cornelius RFPD	50	0
Forest Grove RFPD	50	0
Forest Grove, State Forestry	50	0
Hillsboro	50	0
Washington County RFPD #1	50	50
Washington County FPD #2	<u>50</u>	<u>50</u>
Total	<u>300</u>	<u>150</u>

TABLE 1
(continued)

<u>County/Fire District</u>	<u>Quota</u>	
	<u>Basic</u>	<u>Priority</u>
<u>North Valley Counties</u>		
<u>Yamhill County</u>		
Amity #1 RFPD	125	50
Carlton RFPD	50	0
Dayton RFPD	50	50
Dundee RFPD	50	0
McMinnville RFPD	150	75
Newberg RFPD	50	50
Sheridan RFPD	75	50
Yamhill RFPD	<u>50</u>	<u>50</u>
Total	<u>600</u>	<u>325</u>
<u>North Valley Total</u>	<u>4475</u>	<u>875</u>

TABLE 1
(continued)
SOUTH VALLEY AREAS

<u>County/Fire District</u>	<u>Quota</u>	
<u>South Valley Counties</u>	<u>Basic</u>	<u>Priority</u>
<u>Benton County</u>		
County Non-District & Adair	350	175
Corvallis RFPD	175	125
Monroe RFPD	325	50
Philomath RFPD	125	100
Western Oregon RFD	<u>100</u>	<u>50</u>
Total	<u>1075</u>	<u>500</u>
<u>Lane County</u>		
Coburg RFPD	175	50
Creswell RFPD	75	100
Eugene RFPD		
(Zumwalt RFPD)	50	50
Junction City RFPD	325	50
Lane County Non-District	100	50
Lane County RFPD #1	350	150
Santa Clara RFPD	50	50
Thurston-Waltermville	50	50
West Lane RPD	<u>50</u>	<u>0</u>
Total	<u>1225</u>	<u>550</u>
<u>Linn County</u>		
Albany RFPD (inc. N. Albany, Palestine, Co. Unprotected Areas)	625	125
Brownsville RFPD	750	100

TABLE 1
(continued)

<u>County/Fire District</u>	<u>Quota</u>	
<u>South Valley Counties</u>	<u>Basic</u>	<u>Priority</u>
<u>Linn County (continued)</u>		
Halsey-Shedd RFPD	2050	200
Harrisburg RFPD	1350	50
Lebanon RFPD	325	325
Lyons RFPD	50	0
Scio RFPD	175	50
Tangent RFPD	<u>925</u>	<u>325</u>
Total	<u>6250</u>	<u>1225</u>
 <u>South Valley Total</u>	 <u>8550</u>	 <u>2275</u>

26-020 WINTER BURNING SEASON REGULATIONS.

(1) Classification of atmospheric conditions:

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

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

(2) Extent and Type of Burning.

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

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

(c) Priority for Burning on Marginal Days. Permits for agricultural open burning may be issued on each marginal day in each permit jurisdiction in the Willamette Valley, following the priorities set forth in ORS 468.450 which gives perennial grass seed fields used for grass seed production first priority, annual grass seed fields used for grass seed production second priority, grain fields third priority and all other burning fourth priority.

26-025 CIVIL PENALTIES. In addition to any other penalty provided by law:

(1) Any person who intentionally or negligently causes or permits open field burning contrary to the provisions of ORS 468.450, 468.455 to 468.480, 476.380 and 478.960 shall be assessed by the Department a civil penalty of at least \$20, but not more than \$40 for each acre so burned.

(2) Any person planting contrary to the restrictions of subsection (1) of ORS 468.465 shall be assessed by the Department a civil penalty of \$25 for each acre planted contrary to the restrictions.

(3) Any person who violates any requirements of these rules shall be assessed a civil penalty pursuant to OAR Chapter 340, Division 1, Subdivision 2, CIVIL PENALTIES.

26-030 TAX CREDITS FOR APPROVED ALTERNATIVE METHODS, APPROVED INTERIM ALTERNATIVE METHODS OR APPROVED ALTERNATIVE FACILITIES.

(1) As provided in ORS 468.150, approved alternative methods or approved alternative facilities are eligible for tax credit as pollution control facilities as described in ORS 468.155 through 468.190.

(2) Approved alternative facilities eligible for pollution control facility tax credit shall include:

(a) Mobile equipment including but not limited to:

(A) Straw gathering, densifying and handling equipment.

(B) Tractors and other sources of motive power.

(C) Trucks, trailers, and other transportation equipment.

(D) Mobile field sanitizers (approved models and approved pilot models)

and associated fire control equipment.

- (E) Equipment for handling all forms of processed straw.
- (F) Special straw incorporation equipment.
- (b) Stationary equipment and structures including but not limited to:
 - (A) Straw loading and unloading facilities.
 - (B) Straw storage structures.
 - (C) Straw processing and in plant transport equipment.
 - (D) Land associated with stationary straw processing facilities.
 - (E) Drainage tile installations which will result in a reduction of acreage burned.

(3) Equipment and facilities included in an application for certification for tax credit under this rule will be considered at their current depreciated value and in proportion to their actual use to reduce open field burning as compared to their total farm or other use.

(4) Procedures for application and certification of approved alternative facilities for pollution control facility tax credit.

(a) Preliminary certification for pollution control facility tax credit.

(A) A written application for preliminary certification shall be made to the Department prior to installation or use of approved alternative facilities in the first harvest season for which an application for tax credit certification is to be made. Such application shall be made on a form provided by the Department and shall include but not be limited to:

- (i) Name, address and nature of business of the applicant.
- (ii) Name of person authorized to receive Department requests for additional information.
- (iii) Description of alternative method to be used.
- (iv) A complete listing of mobile equipment and stationary facilities to be used in carrying out the alternative methods and for each item listed include:
 - (a) Date or estimated future date of purchase.
 - (b) Percentage of use allocated to approved alternative methods and approved interim alternative methods as compared to their total farm or other use.

(v) Such other information as the Department may require to determine compliance with state air, water, solid waste, and noise laws and regulations and to determine eligibility for tax credit.

(B) If, upon receipt of a properly completed application for preliminary certification for tax credit for approved alternative facilities the Department finds the proposed use of the approved alternative facilities are in accordance with the provisions of ORS 468.175, it shall, within 60 days, issue a preliminary certification of approval. If the proposed use of the approved alternative facilities are not in accordance with provisions of ORS 468.175, the Commission shall, within 60 days, issue an order denying certification.

(b) Certification for pollution control facility tax credit.

(A) A written application for certification shall be made to the Department on a form provided by the Department and shall include but not be limited to the following:

- (i) Name, address and nature of business of the applicant.
- (ii) Name of person authorized to receive Department requests for

additional information.

(iii) Description of the alternative method to be used.

(iv) For each piece of mobile equipment and/or for each stationary facility, a complete description including the following information as applicable:

(a) Type and general description of each piece of mobile equipment.

(b) Complete description and copy of proposed plans or drawings of stationary facilities including buildings and contents used for straw storage, handling or processing of straw and straw products or used for storage of mobile field sanitizers and legal description of real property involved.

(c) Date of purchase or initial operation.

(d) Cost when purchased or constructed and current value.

(e) General use as applied to approved alternative methods and approved interim alternative methods.

(f) Percentage of use allocated to approved alternative methods and approved interim alternative methods as compared to their farm or other use.

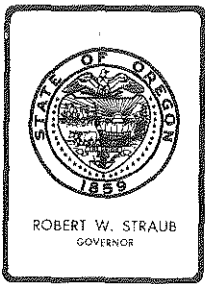
(B) Upon receipt of a properly completed application for certification for tax credit for approved alternative facilities or any subsequently requested additions to the application, the Department shall return within 120 days the decision of the Commission and certification as necessary indicating the portion of the cost of each facility allocable to pollution control.

(5) Certification for tax credits of equipment or facilities not covered in OAR Chapter 340, Section 26-030(1) through 26-030(4) shall be processed pursuant to the provisions of ORS 468.165 through 468.185.

(6) Election of type of tax credit pursuant to ORS 468.170(5).

(a) As provided in ORS 468.170(5), a person receiving the certification provided for in OAR Chapter 340, Section 26-030(4)(b) shall make an irrevocable election to take the tax credit relief under ORS 316.097, 317.072, or the ad valorem tax relief under ORS 307.405 and shall inform the Department of his election within 60 days of receipt of certification documents on the form supplied by the Department with the certification documents.

(b) As provided in ORS 468.170(5) failure to notify the Department of the election of the type of tax credit relief within 60 days shall render the certification ineffective for any tax relief under ORS 307.405, 316.097 and 317.072.



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. J . October 27, 1978, EQC Meeting

Request for Authorization to hold a Public Hearing
Regarding a Request for an Emission Regulation Change
by Weyerhaeuser Co.

Background

Weyerhaeuser Co. operates a sawmill and plywood plant in Coos Bay. The steam necessary to operate these facilities is generated by three hogged fuel boilers. The emissions from these boilers do not comply with either the 40% opacity limit or the 0.2 grains per standard cubic foot limit. The Department and Weyerhaeuser have agreed to a compliance schedule for the boilers which requires compliance by June 30, 1979.

Source tests have shown that the major reason that the boilers do not comply with Department limits is the salt in the boiler fuel. Currently, excluding the salt, the boilers do not comply with the 0.2 gr/SCF limit. However, they are close to compliance and attaining compliance, excluding the salt, is not a difficult problem technologically.

The fuel has a high salt content because the bay is used for log transport and storage. The salt in the water is absorbed in the bark. The amount of salt absorbed is dependent upon the salinity of the bay and the length of time the logs are stored in the bay.

In addition to proceeding with their control strategy, Weyerhaeuser Co. has requested that the Department change the grain loading standard from 0.2 gr/SCF for all emissions to 0.2 gr/SCF for the non-salt emissions plus 0.4 gr/SCF for the salt emissions and exempt the boilers from the opacity limit for one year to gather data on the opacity resulting from compliance with the proposed grain loading limit.

Evaluation

Weyerhaeuser Co. has provided the results of studies which indicate that the salt portion of the emissions does not create a health hazard, has little impact on ambient air quality and does not cause visibility problems. These studies consist of a report on the environmental impact of the salt



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emissions by Drs. Junge and Boubel of Oregon State University and a modeling study of the emissions by Weyerhaeuser Co. staff. In addition Weyerhaeuser has done extensive testing and study in an attempt to correlate the grain loading and opacity.

The Department concurs that the salt portion of the boiler emissions is responsible for the gross opacity violations. The particle size of the salt is less than 1 micron. The existing multiclone control equipment has a low collection efficiency for sub-micron particles. That is coupled with the fact that particles in that size range are more visible.

The Department has reviewed the studies submitted by Weyerhaeuser and has not found any significant discrepancies in their methods or conclusions. In addition, Weyerhaeuser has contended that the high opacity from the boiler stack is not a concern of the populace of Coos Bay and North Bend. Weyerhaeuser has based their contention on the lack of formal complaints recorded by the Department or Weyerhaeuser.

The Department has not received formal complaints, but during inspections and enforcement activities with other sources and individuals, the plume from Weyerhaeuser's stack has been cited as an example of compliance inequity. The Southwest Regional Office staff feels that the obvious lack of compliance by Weyerhaeuser hinders enforcement activities with other sources.

Therefore, the Department is requesting authorization to hold a public hearing in Coos Bay to gather additional input about Weyerhaeuser's requests for a rule change to allow higher opacity and grain loading for their boilers.

In addition to studies on environmental impacts, Weyerhaeuser has submitted their estimates of the costs of controls to meet current regulations and the proposed regulations. See Attachment "Control Alternatives--Annual Cost Basis".

Weyerhaeuser is proceeding with a control program to reduce the non-salt emissions to meet a limit of 0.2 gr/SCF. This control effort is expected to cost approximately \$750,000 and will be completed by 7/1/79. To reduce all emissions, salt and non-salt, to meet the 0.2 gr/SCF limit could cost over \$2,000,000.

The current program to reduce non-salt emissions will not result in an observable decrease in opacity. However, non-salt emissions would be reduced by approximately 40% and total emissions by 20%.

There are some other aspects of this situation which the Environmental Quality Commission should be aware of before a final decision is made. The recent Clean Air Act Amendments have essentially eliminated the option of granting a variance from a regulation as a means of avoiding the mandatory non-compliance penalties, and therefore a rule change would be necessary to relieve the source from being subject to mandatory penalties

by EPA.

Should a regulation which exempts all or a portion of the salt emissions from grain loading limits be adopted, these limits may be applicable to three or four other facilities with salt bearing emissions. These other sources generally operate in compliance and the new regulation could allow an increase in current emissions. Due to time constraints, the Department has not yet determined the impact of Weyerhaeuser's proposed regulation on these other sources. This will be done before the Department recommends final action on Weyerhaeuser's proposal.

Time is a factor in reviewing Weyerhaeuser's proposal. The Clean Air Act requires compliance with the existing regulation on or before July 1, 1979 in order to avoid non-compliance penalties. It is doubtful that Weyerhaeuser can attain compliance with the existing regulation by that date. The lead time for equipment delivery for a source this size is getting longer as more sources try to meet the July 1, 1979 deadline.

Because the non-compliance penalties are based on the cost of compliance, Weyerhaeuser faces significant penalties based upon the high cost of controlling their boilers to meet the existing regulation. Therefore, the Department should act as soon as possible so Weyerhaeuser can proceed with appropriate controls, or the Department can proceed with a rule change.

Summation

1. Weyerhaeuser conducted a study that concluded salt emissions are insignificantly influencing ambient air quality, are not causing visibility problems, or damage to vegetation, and are not adding to corrosion problems in the area. Therefore, the company requested that salt be exempted from hog fuel boilers emission regulations in coastal areas.
2. The Department reviewed the Weyerhaeuser consultant's report and agreed with the findings. In addition, The Department requested Weyerhaeuser to conduct a study on correlation of opacity with salt in fuel, grain loading,, and salinity in the bay and 2) to determine if process or operating mode changes could reduce salt emissions.
3. Weyerhaeuser conducted the requested study and concluded there was no feasible way to reduce salt emission levels to meet current regulatory limits by changes in operating mode.
4. Weyerhaeuser is proceeding on a compliance schedule to meet a non-salt 0.2 grains per standard cubic foot limit.
5. Weyerhaeuser proposed a regulatory limit of 0.2 grains non-salt, 0.4 grains salt and a total grain loading of 0.6 grains.
6. Weyerhaeuser has found based upon current data that within a 95% confidence level the opacity will periodically read 95% on an hourly average.

7. The staff concludes, based upon current information, an interim rule change would essentially require exempting the source from visible emission limits.
8. Any proposed regulatory change would require sources subject to the rule to install an opacity monitor and recorder and require periodic reporting to the Department. The purpose of this requirement is to gather enough data to determine if a practicable opacity limit can be established.
9. In order to ascertain the aesthetic impact and public testimony of Weyerhaeuser's boiler emissions and the impact of the proposed regulation change on the residents of Coos Bay and North Bend, the Department proposed to hold a public hearing in that area.
10. Should testimony received as a result of the public informational hearing support Weyerhaeuser's request and the proposed rule change, the Department would proceed to draft a detailed rule and to hold a public hearing before a hearings officer in the Coos Bay-North Bend area relative to rule adoption.
11. A draft of the proposed action is Attachment 1.

Director's Recommendation

Based upon the Summation, it is recommended that the Environmental Quality Commission authorize the Department to hold a public hearing in the Coos Bay area for the rule change, should the information received as a result of the public informational hearing support Weyerhaeuser's request for a rule change.


WILLIAM H. YOUNG

FASKirvin:as
(503) 229-6414
10/9/78

Attachments

- 1) Proposed Action Summary
- 2) Weyerhaeuser's 9/19/78 letter to DEQ
- 3) Summary of the costs of various control strategies

PROPOSED ACTION

The Department is considering a rule change to essentially exempt the salt portion of particulate emissions and seeks public input, especially from residents of the North Bend / Coos Bay area concerning the proposed action. The proposed rule changes are generalized as follows:

1. The Rule would be applicable in Coastal areas only.
2. The particulate emission limit of 0.2 grains per standard cubic foot for boilers would be changed to 0.2 grains per standard cubic foot for non-salt emissions and 0.6 grains per standard cubic foot for total particulate emissions.
3. Boiler facilities subject to the proposed rule would, at least for the interim, be essentially exempt from opacity (white emissions) limits. (The objective of the Department is to evaluate if an applicable opacity limit or an instack limit can be established and to establish such limits when additional information is gathered.)
4. Facilities to be subject to these emission limits would be required to install an instack opacity measuring device to continuously monitor emissions and periodically report such instack opacity data and grain loading data to the Department.
5. Black Smoke, as dark or darker in shade as that designated as No. 2 on the Ringlemann Chart would be prohibited except for a period or periods not aggregating more than 3 minutes in any one hour.



Weyerhaeuser Company

270 Cottage Street, N.E.
Salem, Oregon 97301
(503) 588-0311

September 19, 1978

Harold M. Patterson, Manager
Air Pollution Control
Department of Environmental Quality
522 S.W. 5th Avenue
Portland, Oregon 97201

Dear Mr. Patterson:

On Thursday, September 7, Messrs. Halvor, Sjolseth, Nelson and I met with you and members of your staff to present the results of Weyerhaeuser Company's North Bend Hog Fuel Boiler Opacity Study. This study was conducted during July and August of 1978 at your agency's request to determine the influence of fuel salt content on stack opacity.

The purpose of this letter is to confirm the results of that study. First, however, in way of a brief historical review, Weyerhaeuser Company in early 1978 retained Richard Boubel and David Junge of Oregon State University to determine the impact that salt emissions from our North Bend facility have on ambient air quality and on other environmental concerns. The results of this study, which was completed in March, 1978, conclusively demonstrated that the salt emissions from this facility are insignificantly influencing ambient air quality, are not causing visibility problems, are not creating a health hazard, do not damage vegetation and do not add to corrosion problems in the area. As a result of this study, we, by letter dated April 5, 1978, requested that salt be exempted from the hog fuel boiler regulations.

Subsequently, on May 8, Chuck Ward and I met with agency representatives to present the results of Mr. Ward's particulate modeling study for the North Bend-Coos Bay area. This study confirmed Boubel and Junge's findings and showed only minor impact on ambient air quality in the most highly affected locations. This study also confirmed that total emissions, including salt, did not cause violations of either the 24 hour or annual air quality standards.

On May 1, 1978, several representatives of Weyerhaeuser Company met with you and members of your staff to present the results of extensive investigations which had been undertaken both to evaluate potential actions that could be taken to reduce salt emission levels and to determine control alternatives to achieve emission compliance under both the existing regulations and if the regulations were amended to exclude salt. As you remember, our investigation

concluded that there was no feasible way to reduce the emission salt level by modifying our current operating mode. With respect to control alternatives, the attached document, which was previously submitted to your agency, shows the cost comparison between salt and non-salt compliance. As you know, we have proceeded with the boiler modification project at a capital cost of \$750,000 to accomplish compliance with a non-salt 0.2 grain loading and 40% opacity. The required equipment has been ordered for this project, and we are on schedule with your agency's required compliance schedule.

Finally, we have previously indicated that should the regulations be revised, we could commit ourselves to meet a particulate requirement of 0.2 grains non-salt, 0.4 grains salt and a total grain loading of 0.6.

The purpose of the recent opacity study, therefore, was to evaluate the impact of salt on opacity and to determine anticipated maximum opacity levels when the current project has been completed. In this regard, the information we presented on September 7 showed that within a 95% confidence level, in-stack opacity will periodically reach 95% on an hourly average. This is based on a 0.4 salt grain loading and a 40% non-salt opacity. As we indicated, a non-salt opacity of 40% adds only 4 to 5 percentage points to the total opacity level since it is a log function.

Although the following are only estimated values which we simply could not commit to in a regulation, the data obtained during this study, as well as other previous source test data, would also indicate that:

1. 100% of the time, in-stack opacity would be less than 95%.
2. 83% of the time, in-stack opacity would be less than 86%.
3. 67% of the time, in-stack opacity would be less than 80%.
4. 25% of the time, in-stack opacity would be less than 74%.

With respect to the opacity issue and based on the results of this recent study, we would respectfully request your consideration of the following approach:

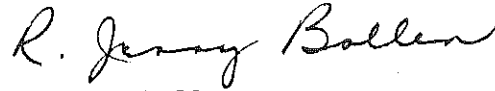
1. By regulation, specify black color except for period of grate cleaning as non-compliance.
2. Require installation of an in-stack opacity meter.
3. Following completion of the current boiler project and demonstration of compliance with particulate limits, require that we continuously monitor opacity for a years period to accurately determine opacity variations.
4. Based on the results of this monitoring program, amend the air discharge permit as appropriate to define allowed opacity level variations as a permit provision.

Harold M. Patterson
September 19, 1978

Page 3

We have sincerely appreciated your cooperation and consideration in this matter. Please call us should you have any questions.

Yours very truly,

A handwritten signature in cursive script that reads "R. Jerry Bollen".

R. Jerry Bollen
Oregon Public Affairs Manager

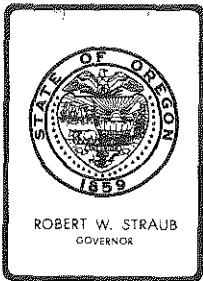
Enclosure

cc: Bob Abel

WEYERHAEUSER COMPANY
NORTH BEND POWERHOUSE
CONTROL ALTERNATIVES - ANNUAL COST BASIS

	<u>Boiler Modifications</u>	<u>Boiler Modifications Plus Baghouse</u>	<u>Boiler Mods Plus High Energy Wet Scrubber</u>	<u>High Energy Wet Scrubber (Alone)</u>
Capital Cost	\$750,000	\$2,063,000	\$1,820,000	\$1,214,000
Annual Costs/(Credit)				
Depreciation (15 Yr. Life)	\$ 50,000	\$ 137,533	\$ 121,333	\$ 80,933
Tax Credit (5%)	(37,500)	(103,150)	(91,000)	(60,700)
Operating & Maintenance	-	116,400	207,600	279,000
Solid Waste Disposal (1)	-	27,000	-	-
Total Annual Costs	<u>\$ 12,500</u>	<u>\$ 177,783</u>	<u>\$ 237,933</u>	<u>\$ 299,233</u>

(1) Assumes we do not have to open a new site.



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. K, October 27, 1978, EQC Meeting
Teledyne Wah Chang Albany, NPDES Permit

Background

The Company has had a history of difficulty attaining compliance with its NPDES permit(s). That fact has been brought before you on several occasions in the form of permit addendum requests, a Stipulation and Final Order, and an amendment to that order.

Teledyne Wah Chang Albany (TWCA) applied on December 30, 1977 for renewal of its NPDES permit (OR-1001-11-2) which expired on June 30, 1978. Department staff has involved the Company's environmental control staff in the permit drafting process (perhaps to an unprecedented degree) and DEQ staff members have spent a great deal of time investigating the technical details of the TWCA process as a part of the permit drafting procedure.

Subsequent to the preparation of a preliminary draft NPDES permit, a public hearing was held (on August 17, 1978). And follow-up meetings with individuals presenting technical testimony, as well as with the Company, have occurred.

As a result of the hearing testimony and later meetings, a final draft of the permit (which you see before you) was prepared. This permit draft is quite different from the expired NPDES permit. Historically, the quantity of ammonia discharged has been the major point of contention in permit proceedings. The present draft deals with other areas which arose during the technical evaluation/negotiation phase of the process (i.e., sludge disposal, production limitation/expansion, indirect discharges, Total Organic Carbon, flow, fluoride ion control, toxicity, and upset conditions).

Evaluation

The following is a point-by-point evaluation of effluent limitations that would be imposed by the draft permit if issued and of the upset provision contained therein:



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- I. The following section pertains to a production level of 50,000 pounds of total oxide per day:

A. Ammonia: 30 day average daily maximum
 400 lbs/day 800 lbs.

In its renewal application, the Company requested ammonia nitrogen effluent limits of 1000 pounds per day as a monthly average with a daily maximum of 2000 pounds (1000/2000). That request was later modified to 750/1500 by TWCA.

The present permit, in Addendum #2 (which has been contested), establishes an effluent limit of 400/800. The NPDES permit, prior to amendment, limited ammonia nitrogen discharges to 300/600 after July 1, 1977. The draft before you contains the limit 400/800.

The 400/800 limit is a technology based standard. It was derived from two recent USEPA investigations in which Best Practicable Treatment (BPT) was established for the industry. BPT was determined to be single stage steam stripping for the zirconium industry.

The Company rejected the BPT determination by USEPA. Company testimony at the public hearing stated that two steam strippers are employed at TWCA -- implying advanced waste water treatment technology. In fact, TWCA employs the conventional BPT technology of single stage steam stripping. The nature of the waste stream being stripped and the limited waste storage capacity at the plant necessitates that a spare stripper be kept ready for use in case the one operating plugs with solids.

The Company has also disagreed with USEPA's evaluation of the potential efficiency of their steam stripper. In meetings with former TWCA Environmental Control Director, Ken Bird, discussions of the technical details of the USEPA proposals led to a theoretical alternative for increasing stripper efficiency. The Company hired a consultant with expertise in steam stripping and implemented his suggested mechanical improvements. The stripper efficiency of removal of ammonia nitrogen at TWCA now exceeds that goal set in the USEPA study. Monitoring data indicates that, barring upset conditions, TWCA can comply with the 400/800 ammonia nitrogen limit which has been defined as BPT.

B. Thiocyanate Ion (SCN^-): 30 day average daily maximum
 350 lbs/day 700 lbs.

This parameter (and limit) is a new addition to the TWCA permit. Thiocyanate ion is used as a complexation agent in the separation of zirconium from hafnium. Levels of SCN^- discharged are a

factor in effluent toxicity. Like ammonia, SCN^- will combine with residual chlorine (generated by air pollution control equipment) to form toxic compounds.

The Company has always operated a system to recycle SCN⁻ back through the separation process. Last year, as a catbox odor control measure, the SCN⁻ treatment system was redesigned. A direct result of the redesigned system has been a stabilization of SCN⁻ levels in the effluent. Prior to the installation of the redesigned system, it would not have been possible to set an SCN⁻ limit because of wide fluctuations in levels discharged.

In the past, the Department used Total Organic Carbon (TOC) measurements to limit, if indirectly, SCN (along with MIBK and Oil and Grease). However, now that it is possible to set a limit for SCN itself, it is our best engineering judgment that the method of limiting discharges of SCN directly is preferable to doing so through the medium of TOC limits. Whereas the TOC limit for SCN limit established would have allowed an SCN discharge of 700/1400 (with permitted discharges of MIBK and Oil and Grease at average flows), a review of the SCN discharge monitoring data for 1978 shows that a limit of 350/700 is reasonable for TWCA.

It is our best engineering judgment that the Company can meet the 350/700 SCN limit with the existing thiocyanate recovery/regeneration system and that that system and effluent limitation is BPT for TWCA.

- | | | |
|----|--|---------------|
| C. | Methylisobutyl Ketone (MIBK): 30 day average | daily maximum |
| | 100 lbs/day | 200 lbs. |

This parameter remains unchanged from the past permit. It is our best engineering judgment that the 100 lb/day as a monthly average/200 lb. daily maximum MIBK limit is BPT for TWCA. The steam stripping/reclamation systems for MIBK recovery are (in our judgment) BPT for the Company.

- D. Total Suspended Solids (TSS): 30 day average 300 lbs/day daily maximum 600 lbs.

The Company operates a mechanical clarifier and settling pond for separation of TSS. It is our best engineering judgment that the limits 300/600 are BPT for TWCA. This corresponds to a concentration of less than 30 mg/l.

The proposed monthly average discharge level is identical to that in the present permit. The daily maximum level has been adjusted (from 450 lbs. to 600 lbs.) to conform with the Department's statewide policy on daily maximum values.

E. pH:

This parameter is limited to the range 6.0 - 8.0. The limit is more restrictive than the "normal" range of 6.0 - 9.0 due to the nature of toxicants produced at TWCA. There is a proportional relationship between ammonia toxicity and pH, and there is an inverse proportional relationship between cyanide toxicity and pH.

The Company maintains two main pH control systems within its waste water treatment system and several in other portions of the plant. It is our best engineering judgment that the 6.0 - 8.0 pH limit is BPT for TWCA.

F. Oil and Grease:

It is our judgment that the oil and grease limit of 10 mg/l is BPT for TWCA.

G. Total Residual Chlorine:

Chlorine is contributed to the waste water system at TWCA as sodium hypochlorite generated in the scrubbing of chlorine from the sand and pure chlorination air emissions with sodium hydroxide. Chlorine reacts with ammonia to form toxic agents known as chloramines. Thiocyanate also reacts with chlorine to form toxic compounds.

Toxicity data reported in accordance with NPDES permit requirements have given a clear indication that toxicity improvement resulted from the installation of the dechlorination system. In fact, there was an algae bloom in TWCA's treatment system this summer. It is our best engineering judgment that the 0.2 mg/l chlorine residual is BPT for TWCA.

H. Toxicity:

It is the staff's best engineering judgment that the toxicity limit -- the 96 hour TLM shall not be less than 25% effluent by volume at a pH of 6.5 to 7.5 -- is BPT for TWCA. With present in-plant controls, the Company is capable of complying with this condition.

II. Mixing Zone.

The mixing zone is the same as in the previous permit. When the effluent discharges from TWCA become uniform (upsets are minimized) and the leakage from sludge ponds ceases, the Department will entertain a petition for direct discharge to the Willamette River. Presently, we see no advantage to direct discharge to the Willamette River and feel the stream system provides a buffer zone where wastes resulting from severe upset could be further treated before entering the River.

III. Effluent limits for 20% production increase if and when allowed.

These limits are based on flow in the Willamette River, and they reflect a unique interpretation of the seasonal flow policy which the Department applies to other dischargers to the River. The seasonal flow scheme was suggested by the Company on May 11, 1978, in a letter from Admiral DuPoix to the Director. The Company has since changed their minds and now oppose a seasonal limitation.

Requiring the effluent limitations for the expanded facility during low stream flow periods, to remain as they were is in line with OAR 340-41-026, which states that growth and development must be accommodated by increased efficiency and effectiveness of waste treatment. This means that after expansion better than BPT will be required during summer low flow periods.

The Department recommends that an increase in effluent limits commensurate with the increase in production be allowed during high stream flow period. At that time the effect should be negligible. Commission approval for the increased discharge rate associated with the expansion is required.

For flows (of the Willamette River measured at Salem) of less than 10,000 cfs, the limitations and logic cited under #1 apply, but for flows of 10,000 cfs and greater, a 20% increase in levels of $\text{NH}_3\text{-N}$, MIBK, SCN and TSS is allowed. Other parameters are as in #1.

- IV. At this point it should be noted that there is no limit mentioned for fluoride ion. The fluoride ion limitation has been removed, and condition D9 has been drafted to ensure that the fluoride ion recycling systems at TWCA are utilized to their most practicable efficiency level. The condition prohibits the Company from utilizing spent pickle acid for pH control. In the staff's best engineering judgment, this level of control for fluoride ion is BPT for TWCA.
- V. The remainder of Schedule A specifies that the outfall weir is the only authorized point of discharge and sets conditions upon which the Department's authorization for a production increase may be granted.
- VI. Schedule B sets up monitoring requirements for all parameters limited in Schedule A, and for TOC, fluoride ion, cyanide, HCN, flow, conductivity, and production as well. Schedule B also contains a monitoring program for Truax Creek downstream of the weir.
- VII. Schedule C calls for a study of toxic materials in the waste water and for a sludge management plan. The sludge management plan must be approved prior to granting any production increase at TWCA.
- VIII. Schedule D contains standard language in all conditions except D9 and D10. D9, as discussed, deals with fluoride ion handling systems. D10 deals with upset conditions, and is in response to the Company's

repeated petition. It reflects language drafted by the USEPA (with some changes) in response to the "Marathon Oil Case".

IX. The general conditions are the same as in all NPDES permits.

Summation

1. The effluent limits in the proposed permit embody the staff's best engineering judgment of BPT for TWCA at both current and proposed expanded production rates.
2. Conditions for approval of production expansion are detailed. Commission approval for increased, high streamflow limits after expansion is necessary pursuant to OAR 340-41-026.
3. A thorough monitoring program is established both for the outfall and for Truax Creek. A study to evaluate unidentified TOC sources is required.
4. A study is called for of toxicant origin and entry into the waste stream.
5. Long range waste water sludge management plans are required.
6. Provision for bonafide upset conditions is proposed.

Director's Recommendation

Based on the Summation, it is recommended that the Commission approve TWCA's proposed expansion along with the increased discharges during high stream flow periods. Upon that approval, the Director will issue the permit as drafted.

Bill

WILLIAM H. YOUNG

John E. Borden:wjr/em

378-8240

October 18, 1978

Attachment (1)

Draft NPDES Permit for Teledyne Wah Chang Albany

PUBLIC NOTICE AND FACT SHEET
and
NOTICE OF PUBLIC HEARING

Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207
Telephone: (503) 229-5696

Date: JUL 14 1978

File No. 87645

County: Linn

Application No. OR-100111-2

This public notice and fact sheet has been prepared to provide public information concerning the following application for renewal of a National Pollutant Discharge Elimination System Permit to discharge pollutants to navigable waters pursuant to the provisions of Oregon Revised Statutes (ORS) 468.740 and the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, October 18, 1972.

APPLICANT: Teledyne Wah Chang Albany
1600 Old Pacific Highway
Albany, Oregon 97321

DESCRIPTION OF FACILITY AND DISCHARGE

The permittee operates a primary zirconium manufacturing plant at Millersburg near Albany. About 1.5 million gallons per day of treated process wastewater are discharged to the Willamette River via Truax Creek. The principal pollutants discharged average about 400 pounds per day ammonia, 250 pounds per day total organic carbon, and 100 pounds per day methylisobutyl ketone. Over the past few years the quantity of pollutants discharged has decreased and the toxicity of the waste has been reduced.

The permittee has requested a 20% increase in oxide production. Under certain conditions the Department could recommend approval of the increase provided discharges of the major pollutants is not increased during low flow periods. A small increase during high stream flow periods should not have an unacceptable impact.

TENTATIVE DETERMINATION, APPLICABLE EFFLUENT LIMITATIONS AND WATER QUALITY STANDARDS

The Department of Environmental Quality has reviewed the application and has tentatively determined to renew a permit to discharge subject to lawful rules and regulations, water quality standards for the Willamette River contained in OAR 340-41-445 applicable effluent guidelines and limitations and certain special conditions. A final determination will not be made until after all comments received, pursuant to the public notice, have been evaluated.

In order to give all interested persons a chance to be heard, the Department intends to hold a public hearing. The hearing will be held Thursday
August 17, 7:00p.m., Linn-Benton Community College, Forum, 6500 S.W.
Pacific Blvd., Albany.

Since a hearing was recently held regarding most of the limits in the permit, the main issue to be considered is the proposed expansion and resultant increase in discharge of pollutants. Of course, testimony may be given on any aspect of the proposed permit renewal.

All interested persons are invited to be present or to be represented to express their views on the proposed permit. The hearing will be held before a hearings officer appointed by the Director. Oral statements will be heard, but for the accuracy of the record all important testimony should also be submitted in writing. Oral statements should summarize any extensive written material in the interest of time.

BASIS FOR SETTING THE LIMITS

The Willamette River has been classified for the following beneficial uses: domestic, industrial and agricultural water supply; fish spawning and rearing; boating, swimming and other water contact sports; navigation and aesthetic quality.

The ammonia, TOC and MIBK are based on Best Practicable Technology as determined by EPA. The total suspended solids, oil and grease, fluoride, total chlorine residual and hydrogen cyanide are Department requirements based on existing capabilities of treatment facilities. The toxicity standards are based on water quality needs in the receiving stream.

PROPOSED EFFLUENT LIMITATIONS (Monthly Average)

<u>Parameter</u>	<u>Initial Limit</u>	<u>Limit After Expansion</u>	
		<u>Summer</u>	<u>Winter</u>
Total Organic Carbon	250 lbs/day	250 lbs/day	300 lbs/day
Ammonia Nitrogen	400 lbs/day	400 lbs/day	480 lbs/day
Fluoride Ion	100 lbs/day	100 lbs/day	100 lbs/day
MIBK	100 lbs/day	100 lbs/day	100 lbs/day
Total Suspended Solids	300 lbs/day	300 lbs/day	300 lbs/day
Hydrogen Cyanide	0.25 mg/l	0.25 mg/l	0.25 mg/l
Oil and Grease	10 mg/l	10 mg/l	10 mg/l
pH	6.0 - 8.0	6.0 - 8.0	6.0 - 8.0
Total Chlorine Residual	0.1 mg/l	0.1 mg/l	0.1 mg/l
Toxicity	96 hr TLm 25%	96 hr TLm 25%	96 hr TLm 25%

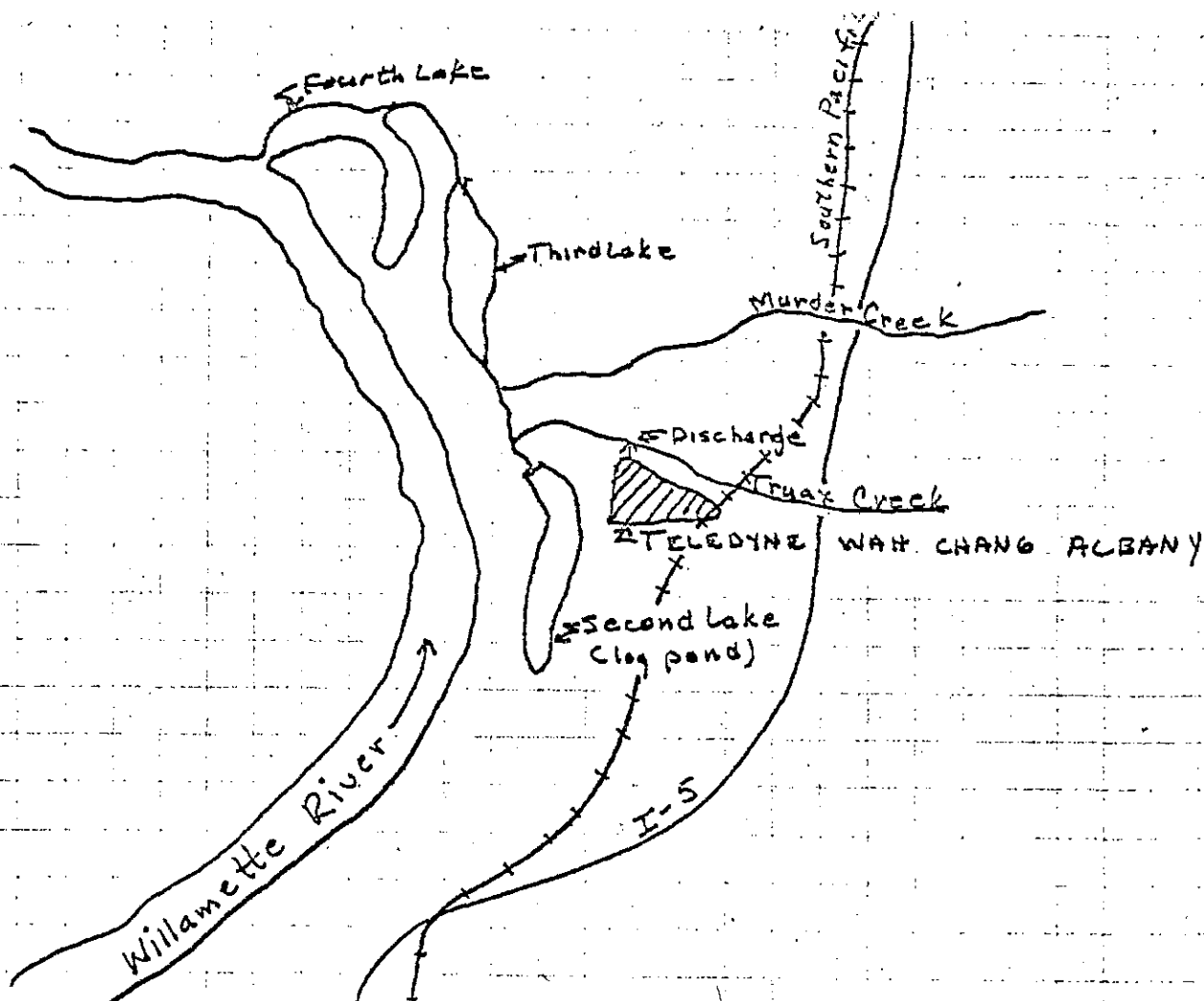
PROPOSED SCHEDULE OF COMPLIANCE

1. In order to achieve what the Department considers BAT, the toxicity must be reduced to achieve a 96 hr TLm in 100% effluent by July 1, 1983.
2. Study all parameters affecting toxicity and report findings by January 31, 1979.
3. Submit a detailed plan for long term management of sludges by July 1, 1979.
4. Submit a plan and time schedule by October 31, 1979, for disposing of all existing stored sludges and residues.

PROPOSED SPECIAL CONDITIONS

1. Extensive daily monitoring of effluent will be required.
2. Weekly monitoring of creek will be required.
3. No expansion will be approved until the following conditions have been met:
 - a. Resolution of contested permit conditions.
 - b. Compliance with effluent limitations for four consecutive months.
 - c. Compliance with radioactive materials license.
 - d. Long range sludge management plan is approved.
 - e. Program and time schedule for disposing of existing sludges is approved.
4. The mixing zone will remain as it is in the existing permit.
5. The permit is proposed to be a five year permit.

SKETCH



DEPARTMENT OF ENVIRONMENTAL QUALITY
1234 S. W. Morrison Street
Portland, Oregon 97205
Telephone: (503) 229-5696

Permit Number: _____
Expiration Date: 7/31/81
File Number: 87645
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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT

Issued pursuant to ORS 468.740 and U.S.P.L. 92-500

ISSUED TO: Teledyne Wah Chang Albany P.O. Box 460 Albany, Oregon 97321 PLANT TYPE AND LOCATION: Primary Zirconium Production 1600 Old Pacific Highway Millersburg, Oregon Issued in response to Application number <u>OR-100111-2</u> received <u>1/4/78</u>. _____ William H. Young Director _____ Date	SOURCES COVERED BY THIS PERMIT: <table><thead><tr><th>Type of Waste</th><th>Outfall Number</th><th>Outfall Location</th></tr></thead><tbody><tr><td>Process Wastewater</td><td>001</td><td>Truax Creek at weir on treatment pond #2</td></tr></tbody></table> RECEIVING STREAM INFORMATION: Major Basin: <u>Willamette</u> Minor Basin: <u>Truax Creek</u> Receiving Stream: <u>Truax Creek</u> County: <u>Linn</u> Applicable Standards: <u>OAR 340-41-445</u>	Type of Waste	Outfall Number	Outfall Location	Process Wastewater	001	Truax Creek at weir on treatment pond #2
Type of Waste	Outfall Number	Outfall Location					
Process Wastewater	001	Truax Creek at weir on treatment pond #2					

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate waste water treatment, control and disposal facilities and discharge adequately treated waste waters in conformance with requirements, limitations and conditions set forth in attached schedules as follows:

Schedule A - Waste Discharge Limitations not to be Exceeded	<u>Page</u> <u>2-4</u>
Schedule B - Minimum Monitoring and Reporting Requirements	<u>5-6</u>
Schedule C - Compliance Conditions and Schedules	<u>7</u>
Schedule D - Special Conditions	<u>8-10</u>
General Conditions	<u>11-13</u>

All other direct and indirect waste discharges to public waters are prohibited.

This permit does not relieve the permittee from responsibility for compliance with other applicable Federal, state or local laws, rules or standards.

PERMIT CONDITIONS

Teledyne Wah Chang Albany

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance Date

Outfall Number 001 (Process Wastewater)

Parameters	Concentrations		Loadings			
	Monthly Ave. mg/l	Daily Max. mg/l	Monthly Ave. kg/day (lb/day)	Daily Max. kg/day (lb/day)		
1) Ammonia Nitrogen (NH ₃)	--	--	182 (400)	364 (800)		
Thiocyanate Ion	--	--	159 (350)	318 (700)		
Methylisobutyl Ketone	--	--	45 (100)	90 (200)		
2) TSS	--	--	136 (300)	272 (600)		

Other Parameters

Limitations

pH	Shall not be outside the range 6.0 - 8.0
Oil and Grease	Shall not exceed 10 mg/l
Total Residual Chlorine	Shall not exceed 0.2 mg/l
Toxicity	The 96 hour TLM shall not be less than 25% effluent by volume at a pH of 6.5 to 7.5

- 1) Note: Background ammonia nitrogen (NH₃) levels in the raw water supply may be subtracted from measured levels at Outfall Number 001 (process Wastewater) to demonstrate compliance with ammonia limitations. This method is permitted only if background ammonia analyses are conducted on each and every day so claimed, and subject to DEQ notification the previous calendar day. Only river intake water not subjected to ammonia removal can be claimed.
- 2) Note: TSS limitations may be reevaluated subject to findings resulting from Schedule C, Condition 2c (monthly reports) and compliance with Schedule C, Conditions 2a and 2b.

2. Notwithstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which will violate Water Quality Standards as adopted in OAR 340-41-445 except in the following defined mixing zone:

The mixing zone shall include Truax Creek and those bodies downstream starting at the point of discharge and extending 100 feet in radius from the point of confluence with the Willamette River.

Prior to the beginning of the next permit period (8/1/81), the Department will evaluate whether direct discharge to the Willamette River will result in net environmental improvements. This analysis may affect subsequent mixing zone descriptions.

PERMIT CONDITIONS
Teledyne Wah Chang Albany

SCHEDULE A (continued)

3. Waste Discharge Limitations not to be Exceeded After Production Increase
Addressed in Condition 6 of this Schedule

Outfall Number 001 (Process Wastewater)

Parameters	Concentrations		Loadings			
	Monthly Ave. mg/l	Daily Max. mg/l	Monthly Ave. kg/day (lb/day)		Daily Max. kg/day (lb/day)	
1) Flows less than 10,000 cfs						
2) Ammonia Nitrogen (NH ₃)	--	--	182	(400)	364	(800)
Thiocyanate Ion	--	--	45	(350)	318	(700)
Methylisobutyl Ketone	--	--	45	(100)	90	(200)
3) TSS	--	--	136	(300)	272	(600)
1) Flows greater than 10,000 cfs						
2) Ammonia Nitrogen (NH ₃)	--	--	218	(480)	437	(960)
Thiocyanate Ion	--	--	190	(420)	381	(840)
Methylisobutyl Ketone	--	--	45	(100)	90	(200)
3) TSS	--	--	136	(300)	272	(600)

Other Parameters

pH
Oil and Grease
Total Residual Chlorine
Toxicity

Limitations

Shall not be outside the range 6.0 - 8.0
Shall not exceed 10 mg/l
Shall not exceed 0.2 mg/l
The 96 hour TLM shall not be less than
25% effluent by volume at a pH of 6.5
to 7.5

- 1) NOTE: The effluent limitations for flows of Willamette River measured at Salem greater than 10,000 cfs shall apply from December 1 through April 30 each year regardless of flow.
- 2) NOTE: Background ammonia nitrogen (NH₃) levels in the raw water supply may be subtracted from measured levels at Outfall Number 001 (Process Wastewater) to demonstrate compliance with ammonia limitations. This method is permitted only if background ammonia analyses are conducted on each and every day so claimed, and subject to DEQ notification the previous calendar day. Only river intake water not subjected to ammonia removal can be claimed.
- 3) NOTE: TSS limitations may be reevaluated subject to findings resulting from Schedule C, Condition 2c (monthly reports) and compliance with Schedule C, Conditions 2a and 2b.

P E R M I T C O N D I T I O N S

Teledyne Wah Chang Albany

SCHEDULE A (continued)

4. The only authorized discharge location for process wastewater is at the outfall weir, identified as 001 in the application. No other discharge of process wastewater, either direct or indirect, is permitted.
5. The permittee shall limit production to fifty thousand (50,000) pounds per day of total oxide ($ZrO_2 + HfO_2$) and meet the effluent limits of Condition 1 of this schedule until production has been expanded in accordance with written approval from the Director.
6. The effluent limitations in Condition 3 of this schedule shall not apply until written approval for an increase in production to sixty thousand (60,000) pounds per day of total oxide and has been received from the Director and the production increase has taken place. Written approval to increase production will not be granted until the following conditions have been demonstrated:
 - a. The permittee is operating under a current non-contested NPDES permit.
 - b. Compliance with effluent limitations contained in this permit for a period of four consecutive months.

PERMIT CONDITIONS

Teledyne Wah Chang Albany

SCHEDULE B

Minimum Monitoring and Reporting Requirements
(unless otherwise approved in writing by the Department)

1. Outfall Number 001 (Process Wastewater)

<u>Item or Parameter</u>	<u>Minimum Frequency</u>	<u>Type of Sample</u>
Total Organic Carbon	Daily	24 hour composite
Ammonia Nitrogen	Daily	24 hour composite
Fluoride Ion	3 per week	24 hour composite
Methylisobutyl Ketone	Daily	24 hour composite
Total Suspended Solids	3 per week	24 hour composite
Cyanide Ion	3 per week	24 hour composite
Hydrogen Cyanide	3 per week	Calculations
Thiocyanate Ion	Daily	24 hour composite
Total Residual Chlorine	5 days per week	Grab
Oil and Grease	Once per week	Grab
Flow	Continuous	Monitor
pH	Continuous	Monitor
Temperature	Continuous	Monitor
Conductivity	Continuous	Monitor
Production of Oxide (ZrO ₂ and HfO ₂)	Monthly report of daily production	
Bioassay	Monthly	

- a. Report all results. Report high, low and average results on EPA Discharge Monitoring Report Form.
- b. Using Willamette River water or equivalent diluent, report the 96 hour TLM. Bioassay graphs shall be submitted along with the results. Aquatic organisms used and bioassay procedures followed must be approved by the Department.
- c. Analyses for Oil and Grease, MIBK, TSS, TOC, Ammonia Nitrogen, and Cyanide shall be performed on the same or analogous samples.
- d. The permittee shall continue studies to evaluate unidentified TOC sources and submit findings to the Department by no later than January 31, 1981.

PERMIT CONDITIONS

Teledyne Wah Chang Albany

SCHEDULE B (continued)

2. Monitoring of Truax Creek and Sludge Pond Contents

<u>Location</u>	<u>Parameter</u>	<u>Minimum Frequency*</u>	<u>Type of Sample</u>
100 feet below outfall	Total Organic Carbon	Once per week	Grab
	Ammonia Nitrogen	Once per week	Grab
	Flow	Once per week	Estimate
Lower sludge pond contents near old overflow point	Total Organic Carbon	Once per week	Grab
	Ammonia Nitrogen	Once per week	Grab
At pipebridge near fresh water intake	Total Organic Carbon	Once per week	Grab
	Ammonia Nitrogen	Once per week	Grab
	Flow	Once per week	Estimate
At road culvert above Murder Creek confluence	Total Organic Carbon	Once per week	Grab
	Ammonia Nitrogen	Once per week	Grab
	Flow	Once per week	Estimate

*When stream flows at the culvert above Murder Creek exceed 20 MGD, the monitoring can be reduced monthly.

3. Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar month. Reports must be submitted to the Department by the 15th day of the following month.

PERMIT CONDITIONS
Teledyne Wah Chang Albany

SCHEDULE C

Compliance Conditions and Schedules

1. The permittee shall study the parameters affecting the permittee's effluent toxicity and report findings to the Department by January 31, 1979. The study shall consist of at least the following:
 - a. Inventory all toxic substances identified in the NRDC v. Russel E. Train court order, more specifically referenced in Schedule D, Condition 8.
 - b. Pinpoint process segments responsible for entry of toxic materials into the waste stream.
 - c. Identify areas where immediate control is possible.
 2. As soon as practicable, but not later than:
 - a. July 1, 1979, the permittee shall submit to the Department a detailed plan for long term management of process sludges and residues, including an implementation schedule and an operational plan for management of any disposal sites in Oregon;
 - b. October 31, 1979, the permittee shall submit a plan and time schedule for disposing of existing stored sludges and residues.
 - c. Progress reports for meeting a & b shall be submitted monthly.
- NOTE: Plans submitted in accordance with a & b above shall not be implemented until written approval has been received from the Department.

3. The permittee is expected to meet the compliance dates which have been established in this schedule. Either prior to or no later than 14 days following any lapsed compliance date the permittee shall submit to the Department a notice of compliance or non-compliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

SCHEDULE D

Special Conditions

1. The total discharge shall be controlled to maintain a reasonably constant flow rate throughout each 24 hour operating period.
2. Sanitary wastes shall be disposed of to a septic tank and subsurface disposal system (or by other approved means) which is installed, operated and maintained in accordance with the requirements of the Department of Environmental Quality and the local health department and in a manner which will prevent inadequately treated waste water from entering any waters of the state or from becoming a nuisance or health hazard.
3. Sanitary wastes shall be disposed of to an approved regional sewerage system when that system becomes available. Connection to the system will be accomplished according to a schedule negotiated with the regional sewerage system owner.
4. Filter backwash, solids, sludges, dirt, sand, silt or other pollutants separated from or resulting from the treatment of intake or supply water shall not be discharged to state waters without first receiving adequate treatment (which has been approved by the Department) for removal of the pollutants.
5. An adequate contingency plan for prevention and handling of spills and unplanned discharges shall be in force at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good inplant control and quick and proper action in the event of a spill or accident. The plan is to be updated every 2 years.
6. A continuing program shall be initiated to reduce total fresh water consumption by increased utilization of soiled waters.
7. An environmental supervisor shall be designated to coordinate and carry out all necessary functions related to maintenance and operation of waste collection, treatment and disposal facilities. This person must have access to all information pertaining to the generation of wastes in the various process areas.
8. This permit shall, in accordance with procedures in OAR 340-45-055, be modified to comply with any applicable effluent limitation issued pursuant to the order of the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et. al. v. Russell E. Train, 8 RRC 2120 (D.D.C. 1976), if the effluent limitation so issued is different in conditions or more stringent than any effluent limitation in the permit, or controls any pollutant not limited in the permit.

PERMIT CONDITIONS

Teledyne Wah Chang Albany

SCHEDULE D (continued)

9. The permittee shall at all times operate pickle acid recovery systems as efficiently as practicable. Hydrofluoric acid or mixture containing hydrofluoric acid shall not be used for pH control or air contaminant scrubbing.

10. Upsets

(a) An upset is an exceptional incident (not a normal component of the production process) which causes a temporary noncompliance with permit effluent conditions, provided that the incident was caused by factors beyond the reasonable control of the permittee. Noncompliance shall not constitute an upset to the extent caused by improperly designed or inadequate treatment facilities, poor maintenance, or careless or improper operation.

(b) An upset may constitute an affirmative defense to an action brought for noncompliance with permit effluent limitations, to the extent that the upset incident caused the noncompliance, if the permittee demonstrates through properly signed, contemporaneous operating logs and other relevant evidence timely submitted in the written report referred to in condition G12c:

(i) That an upset occurred, the nature and the specific causes(s) of the upset;

(ii) The relative quantitative and qualitative effect the upset had on the discharge of each pollutant which exceeded an effluent limitation;

(iii) That the permitted facility at the time of the incident was being operated in a prudent and workmanlike manner and in compliance with applicable operation and maintenance procedures including a description of the design features and operation and maintenance procedures which were in effect and were intended to prevent the upset and an explanation of why they failed to prevent the upset;

(iv) That the upset could not have been prevented; and

(v) That the permittee submitted the information and took or is taking the remedial action required by condition G12:

(A) Condition G12 shall be deemed to apply to each claimed upset;

(B) Notice under condition G12b shall be given immediately but in no event later than 24 hours of first becoming aware of the upset condition;

(C) The written report required by condition G12c shall be filed with the Department as soon as possible, but in no event later than 10 days following the first day of the upset incident;

(D) The action required by condition G12a shall include any accelerated or additional monitoring necessary to determine the nature and impact of the noncomplying discharge;

P E R M I T C O N D I T I O N S

SCHEDULE D (continued)

(c) It is the primary responsibility of the permittee to prevent upsets. However, nothing in this permit shall prevent the Department from imposing schedules requiring specific actions to eliminate or reduce the likelihood of upsets.

(d) In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset shall have the burden of pleading as affirmative defense and proving the occurrence and effect of an upset, including each criterion specified in subparagraphs (i) through (v) of paragraph (b) of this condition.

(e) Nothing in this permit shall be construed as relieving permittee of any criminal or civil liability for any actual damage to any person or property caused by the permittee, including liability for damage to fish or wildlife or habitat pursuant to ORS 468.745.

State of Oregon
Department of Environmental Quality
P E R M I T C O N D I T I O N S

Permit Number: _____
Expiration Date: 7/31/81
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Teledyne Wah Chang Albany

GENERAL CONDITIONS

- G1. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.
- G2. Monitoring records:
- a. All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records, shall be retained by the permittee for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or when requested by the Director.
 - b. The permittee shall record for each measurement or sample taken pursuant to the requirements of this permit the following information: (1) the date, exact place and time of sampling; (2) the dates the analyses were performed; (3) who performed the analyses; (4) the analytical techniques or methods used and (5) the results of all required analyses.
 - c. Samples and measurements taken to meet the requirements of this condition shall be representative of the volume and nature of the monitored discharge.
 - d. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless approved otherwise in writing by the Department, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136.
- G3. All waste solids, including dredgings and sludges, shall be utilized or disposed of in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state and such that health hazards and nuisance conditions are not created.
- G4. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (a) where unavoidable to prevent loss of life or severe property damage or (b) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Department in writing of each such diversion or bypass in accordance with the procedure specified in Condition G12.

State of Oregon
Department of Environmental Quality
P E R M I T C O N D I T I O N S

Teledyne Wah Chang Albany

Permit Number: _____
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- G5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
- G6. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, a new application must be submitted together with the necessary reports, plans and specifications for the proposed changes. No change shall be made until plans have been approved and a new permit or permit modification has been issued.
- G7. After notice and opportunity for a hearing this permit may be modified, suspended or revoked in whole or in part during its term for cause including but not limited to the following:
- a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the Commission;
 - b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
 - c. A change in the condition of the receiving waters or any other condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- G8. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee shall be so notified.
- G9. The permittee shall, at all reasonable times, allow authorized representatives of the Department of Environmental Quality:
- a. To enter upon the permittee's premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this permit;
 - b. To have access to and copy any records required to be kept under the terms and conditions of this permit;
 - c. To inspect any monitoring equipment or monitoring method required by this permit; or
 - d. To sample any discharge of pollutants.

State of Oregon
Department of Environmental Quality
PERMIT CONDITIONS

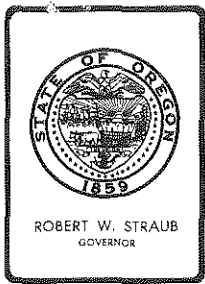
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Teledyne Wah Chang Albany

- G10. The permittee shall maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.
- G11. The Department of Environmental Quality, its officers, agents and employees shall not sustain any liability on account of the issuance of this permit or on account of the construction or maintenance of facilities because of this permit.
- G12. In the event the permittee is unable to comply with all of the conditions of this permit because of a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, the permittee shall:
- a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.
 - b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.
 - c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

- G13. Definitions of terms and abbreviations used in this permit:
- a. BOD means five-day biochemical oxygen demand.
 - b. TSS means total suspended solids.
 - c. mg/l means milligrams per liter.
 - d. kg means kilograms.
 - e. m³/d means cubic meters per day.
 - f. MGD means million gallons per day.
 - g. Composite sample means a combination of samples collected, generally at equal intervals over a 24-hour period, and apportioned according to the volume of flow at the time of sampling.



Environmental Quality Commission

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

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item L , October 27, 1978, EQC Meeting

Indirect Source Program - Status Report

Background

At the September 22, 1978 EQC meeting, the Department proposed a change in administering the Indirect Source Rules as follows:

"To approve parking lot projects provided all reasonable and practicable mitigating measures are employed when the project has a projected greater than 0.5 mg/m³ 8 hour carbon monoxide incremental impact in an area which would exceed carbon monoxide air quality standards after December 31, 1982, and the project is in conformance with local land use and zoning requirements."

The EQC deferred action on this request and asked that: 1) mitigating factors be identified; and 2) broad input be solicited on the above proposed change.

Evaluation

1. The Department believes that the fourteen possible elements of an ISECP, which are listed under OAR 340-20-110(16(a)-(n), and are shown in Attachment 1, specify what are mitigating measures in as much detail as possible without knowing the specifics about an individual project.
2. The proposal to change administration of the Indirect Source Rules will be taken to a rule hearing to insure getting input from all interested parties.
3. Because of the potentially significant amount of time that could be demanded by such a rule change, the Department will pursue it after January 1, 1979 so that maximum manpower can remain available for critical Transportation Control Strategy (TCS) work, which is needed for the SIP revisions due January 1, 1979.
4. In the interim, the Department will follow current policy and bring any potential project denials (projects which exceed the 0.5 mg/m³ 8 hour CO impact in a 1982 non-attainment area) to the EQC for resolution.



Contains
Recycled
Materials

Summation

1. At the September 22, 1978 EQC meeting, the Department proposed a change in administering the Indirect Source Rules. The EQC requested that: 1) mitigating factors be identified; and 2) broad input be solicited on the proposed change.
2. The Department believes that the fourteen possible elements of an Indirect Source Emission Control Program (ISECP) listed under OAR 340-20-110(16)(a)-(n) clarify what are mitigating measures.
3. The proposed change in administering the Indirect Source Rules will be taken to a Rule Hearing to get input from all interested parties. However, because of the potentially significant time demanded by a rule change, the Department will pursue it after January 1, 1979 to keep maximum manpower available for transportation Control Strategy (TCS) work.
4. In the interim, the Department will follow current policy and bring any project denials to the EQC for resolution.

Director's Recommendation

Based upon the Summation, I recommend that present administrative policy be continued and that any future changes, other than those arising from the proposed Settlement Agreement, be pursued through rule hearing after January 1, 1979.



WILLIAM H. YOUNG

J.F.Kowalczyk:h
229-6459
October 10, 1978
Attachment (1) - OAR 340-20-110(16)(a)-(n)

(16) "Indirect Source Emission Control Program (ISECP)" means a program which reduces Mobile Source emissions resulting from the use of the Indirect Source. An ISECP may include, but is not limited to:

(a) Posting transit route and scheduling information.

(b) Construction and maintenance of bus shelters and turn-out lanes.

(c) Maintaining mass transit fare reimbursement programs.

(d) Making a car pool matching system available to employees, shoppers, students, residents, etc.

(e) Reserving parking spaces for car pools.

(f) Making parking spaces available for park-and-ride stations.

(g) Minimizing vehicle running time within parking lots through the use of sound parking lot design.

(h) Ensuring adequate gate capacity by providing for the proper number and location of entrances and exits and optimum signalization for such.

(i) Limiting traffic volume so as not to exceed the carrying capacity of roadways.

(j) Altering the level of service at controlled intersections.

(k) Obtaining a written statement of intent from the appropriate public agency(s) on the disposition of roadway improvements, modifications, and/or additional transit facilities to serve the individual source.

(l) Construction and maintenance of exclusive transit ways.

(m) Providing for the collection of air quality monitoring data at Reasonable Receptor and Exposure Sites.

(n) Limiting facility modifications which can take place without resubmission of a permit application.

EQC BREAKFAST AGENDA
OCTOBER 27, 1978

1. SUBSURFACE FEES - DOUGLAS COUNTY
2. DISCUSSION DRAFT OF ENFORCEMENT LEGISLATION
3. TAX CREDITS
4. LCDC COORDINATION PROGRAM STATUS
5. EQC/DEQ CONFERENCE STATUS
6. ITEMS OF LOCAL INTEREST - BORDEN
7. BUDGET STATUS

EQC BREAKFAST AGENDA

October 27, 1978

Subsurface Fees - Douglas County

At the August 25, 1978 EQC meeting the Commission authorized a public hearing to amend two subsurface rules; (340-71-020(1)(i) and 340-72-010(5)). That hearing has not been held.

Since the Department's assumption of the subsurface program in Douglas County in September a need for an additional rule amendment has resulted. This proposed amendment pertains to fees charged by Douglas County. The County charged less than the maximum fees; the Department is required to charge the maximum.

The proposed amendment is attached. It is requested that the Commission authorize this proposed amendment to be heard at the public hearing authorized on August 25, 1978.

TJO:nrj

Attachment

PROPOSED AMENDMENT TO OREGON ADMINISTRATIVE RULES
CHAPTER 340, DIVISION 7

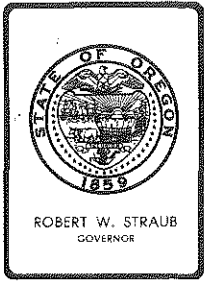
340-72-010(4)

- (a) The fees to be charged by the Counties of Clatsop, Crook, Curry, Deschutes, [Douglas,] Hood River, Jefferson, Josephine, Lincoln, Malheur, Polk, Sherman, Tillamook, and Wasco shall be as follows:

- | | |
|--|------|
| (A) New construction installation permit: | \$50 |
| (B) Alteration repair or extension permit: | \$15 |
| (C) Evaluation reports | \$25 |
- [Except that in Douglas County the fee for alteration, repair or extension permit shall be \$5] and

- (b) The fees to be charged by the County of Clackamas shall be as follows:

[] Material bracketed to be deleted.



Department of Environmental Quality

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

OCT 26 1978

MEMORANDUM

TO: Environmental Quality Commission

FROM: William H. Young, Director *Michael Young for*

SUBJECT: Status Report on 79-81 Budget Request

The Department's budget request was submitted to the Executive Department on September 22. A few days prior to that time, I learned that one effect of the Special Session was for the Governor's budget directions to be revised to incorporate more strict limitation on General Fund demands in the agencies' budgeting. The agencies were told that a growth of fifteen percent in General Funds should be considered the maximum for their requests.

The Department's management staff immediately revised our budget request to assure that most critical items were included within that budget constraint. Some portions of the RLB were cut and moved into Decision Packages. More liberal Federal Fund projections were made, offsetting General Fund request. A review of the adequacy of fees to support various activities was made. Three fee programs were recommended for possible increase:

1. Water permit fees (within the authority of the EQC) were recommended for an increase in application review fee, generating about \$62,000 in additional revenue. This change would be in line with Legislative Budget Notes to increase fees to cover inflation and the comments of the committee assisting the establishment of the initial fee schedule, noting the application review fee was low.
2. Increased subsurface sewage fees appeared needed to fund a greater portion of the costs of that program, and three staff were shifted from General Funds to Other Funds (\$138,000) and will be contingent upon Legislative action to increase the statutory fee rates.
3. A new fee was proposed to cover the cost of processing tax credit applications, at levels generating over \$150,000--the costs of that activity in the agency.

The result of these revisions was to cover only the RLB within the 115% of General Funds and projected increases in Federal and Other Funds.



Contains
Recycled
Materials

In subsequent meetings with the Department's budget analyst, most of the proposed revisions were accepted. His comments regarding likely recommendations appear to be following three simple guidelines:

1. Recommend against all General Funds above 115%, making all our Decision Packages with General Funds the target for denial. See Attachment B for an analysis of the impact of this guideline on DEQ. Those Decision Packages funded by Federal and Other Funds will likely be approved.
2. Recommend against all out-of-state travel above that which is currently authorized in the present biennium. This would cut even the revised budget portion below the 115% level.
3. Recommend against fee increases except those within the EQC's authority; deny those requiring statutory change until such time as the Legislature has acted upon them. (One exception to this appears to be the tax credit fee proposal which he might recommend in favor of, with the fallback position that the Department should absorb the cost of that effort and continue the activity even if the new fee is not ultimately approved by the Legislature.)

The implications of these guidelines to our budget request are summarized in Attachment A. You should understand that these are our own estimates of the likely recommendations to be made by October 27, by the budget analyst. They are appealable and do not reflect the Executive Department's nor the Governor's final recommended budget. We must appeal by November 3.

The management staff and I will meet Tuesday to decide upon the items for appeal. I would benefit from your views on which items carry the highest priority.

JAS:eve

cc: Division Heads

10/25/78

ATTACHMENT A

SUMMARY OF REVISED BUDGET REQUEST*- REDUCED LEVEL BUDGET PORTION:

	General	Other	Federal	Total
Staff Offices and Director	\$ 307,260	\$ 315,623	\$	\$ 622,883
Air Administration & LRAPA grant	671,398		207,000	878,398
Water Administration	708,351			708,351
Solid Waste Administration	195,503			195,503
Management Services	968,143	1,157,895		2,126,038
Air Program Planning and Development	460,122	9,872	292,079	762,073
Air Data Acquisition, Reporting and Analysis	1,080,221	123,929	519,465	1,723,615
Air Source Compliance	815,061	327,638	304,624	1,447,323
Smoke Management		308,468		308,468
Vehicle Inspection Program		2,134,100		2,134,100
Noise Control	443,541		10,000	453,541
Water Source Control	890,603	254,200	893,834	2,038,637
Subsurface Sewage Program	816,140	624,389		1,440,529
Water Monitoring	329,934		254,778	584,712
Water Planning and Analysis	163,120		432,897	596,017
Solid Waste Planning and Control	1,034,013		262,940	1,296,953
Hazardous Waste Minimum State Program	199,062		37,662	236,724
TOTAL REDUCED LEVEL BUDGET	\$ 9,082,472	\$ 5,256,114	\$ 3,215,279	\$17,553,865

*Represents Department's proposals to change Budget Request to meet Budget Analyst's guideline of 115% General Fund request limit. Does not yet reflect any further cuts to be made by the Analyst; e.g., reduce out-of-state travel request from \$107,948 to \$54,913; increase laboratory rent per latest information (+\$84,498).

Note: As revised the total budget request contains 32.13 existing positions in Decision Packages; 8.06 new positions are contained within the RLB.

10/25/78

ATTACHMENT A

SUMMARY OF REVISED BUDGET REQUEST AND PROBABLE BUDGET ANALYST CUTS:
DECISION PACKAGES

	General	Other	Federal	Total
REDUCED LEVEL BUDGET	\$ 9,082,472	\$ 5,256,114	\$ 3,215,279	\$17,553,865
Experimental Systems	283,078*	8,446*	68,198*	359,722*
Portland Data Base Continuation	84,178*		13,652*	97,830*
Contract Control and Accounting Improvements	125,197*			125,197*
Development and Support of Local Noise Programs	101,756*		26,477	128,233*part
Environmental Engineer, Southwest Region	54,990*			54,990*
Restore Support Services	31,698*			31,698*
Restore Water Source Control	402,134*			402,134*
Water Quality Planning Studies		11,412	255,691	267,103
Water Planning Contract Adminis.			130,294	130,294
Programs Coordination and Analysis	318,736*			318,736*
Graphic Artist	45,277*			45,277*
Sanitarian, Eastern Region		138,533#		138,533
LCDC Local Plan Review and Technical Assistance	396,147*			396,147*
Solid Waste Restore and Improve	95,948*	42,400*	102,341	240,689*part
Field Burning Research and Dev.		726,532	104,761	831,293
Tax Credits		156,383#		156,383
Hazardous Waste Authorization Under RCRA			177,398	177,398
Gas Chromatograph/Mass Spectrophotometer (GCMS)	223,762*			223,762*
Additional Hearings Offider	65,627*			65,627*
Air Laboratory Quality Assurance	47,106*			47,106*
RCRA Requirements in Solid Waste			53,428	53,428
Increase Willamette Valley Region	45,636*			45,636*
Millersburg Special Monitoring	15,199*			15,199*
Management of Spill Response	61,521*			61,521*
Assist Grant Projects to Reduce Cost			258,872	258,872
Eugene Air Strategy Coordinator	63,245*			63,245*

*Probable Budget Analyst Cut

#Requires Legislative change in fee rates.

	General	Other	Federal	Total
Increase Water Source Control	410,522*			410,522*
Air Monitoring Improvements	64,432*			64,432*
Sanitarian South west Region	48,293*			48,293*
Indirect Source Permit Program	51,561*			51,561*
Buy-Out Word Processing Leases	161,735*			161,735*
Airshed Study - The Dalles	180,000*			180,000*
LCDC Goal Compliance	95,272*			95,272*
CETA	29,292*		53,980	83,272*part
 TOTAL IN DECISION PACKAGES	 \$ 3,502,342	 \$ 1,083,706	 \$ 1,245,092	 \$ 5,831,140
 TOTAL AGENCY REQUEST	 \$12,584,814	 \$ 6,339,820	 \$ 4,460,371	 \$23,385,005

* Probable Budget Analyst Cut

October 24, 1978

BACKGROUND TO DEQ 79-81 BUDGET APPEAL

Trends in Revenues

Since 73-75, General and Federal Funds have made up declining portions of the total DEQ budget, as fee revenues became a larger share. This condition reflects a deliberate legislative preference to increase the level of fees in the last two biennia as well as the advent of two large fee-supported programs (vehicle inspection and field burning research). The fees are now projected to stabilize while Federal Funds remain similarly static.

	Portion of Total Agency Budget				
	73-75 Actual	75-77 Actual	77-79 Leg.Appr.	79-81 Request	79-81 Analyst Rec.*
TOTAL BUDGET (millions)	\$ 7.9	\$13.9	\$18.4	\$23.5	\$19.9
General Funds	50%	46%	44%	54%	46%
Other Funds	22%	28%	33%	27%	32%
Federal Funds	28%	26%	23%	19%	22%

*Estimated

We conclude that the Department exerts a greater demand for future General Funds in light of static fee and Federal revenues--unless significant legislative change in fixed fees is authorized.

Impact of 15% Growth Limit

If the budget were allowed to increase 15% to cover inflation, the Department would realize \$1.2 million more in authorized spending than is recommended by the budget analyst at this date.

	77-79 Legis. Appr. + 15%	79-81 Analyst Rec.*	Difference
General Funds	\$9,246,831	\$9,120,162	- 126,669
Other Funds	7,039,807	6,339,820	- 699,987
Federal Funds	4-815,772	4,460,371	- 355,401
*Estimated			-\$1,182,057

The Department concludes that, since less than half the budget is General Funds and since Other-Federal Funds do not increase by 15%, the State's environmental programs are arbitrarily disadvantaged by the limit of 15% growth on General Funds. The resulting cut reduces the existing program levels and staffing rather than providing for maintenance of program.

Are Other-Federal Funds Projections Too Low?

Combined, the Other and Federal Funds for 79-81 are projected to be \$750,000 more than estimated to be spent in the current biennium, as a comparison. They are projected to be almost half a million dollars more than authorized for the current biennium.

	<u>Budget Analyst Recommendations* Compared to:</u>	
	<u>77-79-Legis. Approved</u>	<u>77-79 Estimated</u>
Other Funds	+ \$218,249 104%	+\$239,513 104%
Federal Funds	+ <u>\$272,743</u> 107%	<u>+\$511,871</u> 113%
	+ \$490,992	+\$750,384
*Estimated		

The Other Funds projections include increases in Water Permit Fees (within the EQC's authority) and Subsurface Sewage Fees (requiring Legislative approval), as well as the addition of a new tax credit application fee (again, requiring Legislative approval). Air permit fees are not recommended for increase since current rates will generate revenues which meet a Legislative Budget Note to cover inflation over a base year of 1975.

Federal Funds projections reflect an extension of current levels in all formula program grants, and go further in some cases. Estimates are made of air programs' "special project funding" which has, in the past, occurred in the interim portion of the biennium; those funds are now programmed. Neither

is Federal air funding reserved to maintain historic levels of "Federal assignee" employment . The water program grant funding is estimated to decline somewhat since we do not expect to repeat a large one-time increase in funding received in the current biennium. That increase was the result of Congressional increases in the total funds available; those levels have since stabilized. Additional funding for DEQ from 208 water planning grants is projected--prior to agreement with EPA on eligible activities for that special nature grant. Finally, solid wastes' formula grant has had but one year's history and, while an increase over prior years is projected, likely future Congressional handling of this grant is yet unpredictable.

The Department concludes that our efforts to overcome the disadvantage of insufficient General Fund growth have resulted in liberal Other-Federal Fund projections--in contrast to the opinion that we under-project these revenues.